



Action plan to reduce plastic pollution in the city of Stari Grad for the period 2021 - 2026







EDITORS: Tea Kuzmičić Rosandić, Blanka Rakuljić,

Gabrijela Medunić-Orlić

AUTOR: Marijan Galović
PROOFREADER: Maja Golem
GRAPHIC DESIGN: Maja Golem

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This Action Plan includes measures and activities to be implemented in order to achieve short-and long- term objectives with the purpose of limiting plastic leakage into the environment, as well as plastic pollution of the sea. Over time, plastic objects are reduced to tiny plastic particles smaller than five millimetres – microplastics, which when found in the sea or sediment, represent an almost invisible but dangerous form of pollution. Due to the mass use of plastics, microplastics have become ubiquitous part of the marine environment. Various toxic substances accumulate on its surface, while fish and other marine organisms, especially bivalve molluscs, can take it for food. Microplastics thus enter the food chain, that includes humans, too. Globally, the largest source of plastic that we bring into the body is water – both bottled and tapped. There are significant regional differences in the amount of microplastics present in the environment, with twice as many plastic particles found in water in the USA and India, then in Europe and Indonesia. Salt, beer and molluscs have been identified as foods that contain the highest amount of plastic particles. Research results show that the problem of plastic pollution is universal and directly affects people, which is why the City of Stari Grad decided to introduce appropriate measures and activities to prevent plastics from entering the environment and the food chain.

In order to achieve the goals of this Action Plan, the City of Stari Grad must fully embrace the models of the circular economy. The Action Plan proposes measures and activities to reduce the use of unnecessary single-use plastics, promotes alternatives to plastic products, designs activities and ensures the implementation of improvements in plastic waste management processes.

The Action plan consists of three thematic units:

- 1. Reducing the total amount of produced and disposed plastic waste, establishing a system that supports circular economy and remediation of existing pollution prescribing the objectives and activities to be carried out at the City level in order to reduce waste volumes to minimum legally determined rates
- Creating examples of good practice in reducing waste generation and reuse defining the goals
 and activities that need to be implemented within the City of Stari Grad and its institutions to
 become fully plastic free, thus being an example of good practice not only in the Republic of
 Croatia, but also in a wider region
- 3. Edukacija i komuniciranje s javnošću an activity that fully supports the implementation of the previous two units, with the aim of increasing the environmental awareness of citizens and ensuring long-term support for the Action Plan to Reduce Plastic Pollution in the City of Stari Grad 2021 2026.

The action plan was developed as part of the project For Plastic-Free Croatian Islands project implemented by the Association for Nature, Environment and Sustainable Development Sunce from Split and partners Green Action (FoE Croatia), Sali Municipality (Dugi Otok), and Stari Grad City (Hvar Island). The project is funded by The Beyond Med Association (BeMed).

The entire Action Plan and its implementation should be transparent and accessible to the public.



1. REDUCING THE TOTAL AMOUNT OF PRODUCED AND DISPOSED PLASTIC WASTE, ESTABLISHING A SYSTEM THAT SUPPORTS CIRCULAR ECONOMY AND REMEDIATION OF EXISTING POLLUTION

Measures and activities	Responsible partner	Deadline	Results/outputs			
OBJECTIVE 1.1) Reduce the amou year from the adoption of the Pla	OBJECTIVE 1.1) Reduce the amount of disposed of plastic waste by 10% in the city within one year from the adoption of the Plan					
Act. 1.1.1) Implementation of waste collection and management system which provides the greatest impact in terms of quantities and quality of separately collected plastics	Grad and Komunalno Stari Grad	2022	new or updated Waste Management Plan and its implementation in accordance with the Waste Management Act, including the proper collection and management of all types of waste, as well as biodegradable plastics through the composting process			
Act. 1.1.2) Establishment of a door-to-door separate waste collection system	1	2024	10% reduction in the amount of plastic waste disposed of at mixed municipal waste facilities on the city level, compared to the reference year 2022			
Act. 1.1.3) Improving the system of separate waste collection in ports and marinas		2024	improved system of separate waste collection in ports and marinas in the town of Stari Grad			

Description: aiming to develop a Waste Management Plan that can yield significant results within a shorter period of time, the implementation of a door-to-door waste collection in all urban settlements, is envisaged. The system consists of allocating special containers for collecting plastic and paper to all users of the waste collection service, while glass will be collected for street containers. Logistically, separate collection of waste will be organized by small vehicles alongside included re-collection of collected waste at the site to optimize the costs of collecting and transporting separately collected waste. In addition to the infrastructure and the organization of transportation, it is necessary to educate and inform the inhabitants of the settlements about the changes in the waste collection system, as well as to disseminate the waste collection schedule. It is recommended to monitor the amount of waste that is collected separately and delivered for recovery to calculate the efficiency of the system itself. The characteristics of the system being introduced are described in the Analysis of the current state of use of disposable plastics in the City of Stari grad. The implementation of the system has been monitored from the beginning by the municipal warden, who acts preventively and educationally, and if necessary, and in the case of frequent recurrences of irregularities, can fine inappropriate disposal of waste. The results of the implementation of the first phase of the system introduction will be considered in modeling and designing of waste management system as part of new Waste Management Plan and the implementation of a separate collection of biodegradable waste in the following phases. To achieve the goal of reducing the amount of disposed plastic waste, it is necessary to collect 34,06 tons separately by the end of 2022.

Measures and activities	Responsible partner	Deadline	Results/outputs			
OBJECTIVE 1.2) Reduce the amou level by 2025	OBJECTIVE 1.2) Reduce the amount of plastic in disposed municipal waste by 55% at the city level by 2025					
Act. 1.2.1) Comply with the requirements of Directive (EU) 2019/904 of the European Parliament and the Council from June 5th 2019 on reducing the environmental impact of certain plastic products	Grad	2025	new or updated Waste Management Plan and its implementation in accordance with the Waste Management Act, including the proper collection and management of all types of waste, as well as biodegradable plastics by the composting process			
Act. 1.2.2) Continuous improve- ment of existing waste manage- ment models	l	2025	report on the implementation of the Waste Management Plan and implementation of recommenda- tions			

Description: a new waste management system based on the Waste Management Plan developed under Objective 1.1 is introduced. The implementation of the Plan is analyzed on annual basis and recommendations will be adopted for perfecting the model along with introducing all necessary amendments to the waste management system. The amount of disposed of plastic is expected to decrease by 187.35 tons per year.

Measures and activities	Responsi- ble partner	Deadline	Results/outputs	
OBJECTIVE 1.3) Ensure the conditions for the successful application of reuse priorities and sustainable management of alternative plastic substitutes (compostable and recyclable plastics)				
Act 1.3.1) Introduction of separate collection of biowaste and its composting, i.e., ensuring adequate system of collection and management of alternative materials (compostable and biodegradable plastics)	Grad and Komunalno Stari Grad	2023	new or updated Waste Management Plan and its implementation in ac- cordance with the Waste Manage- ment Act, including the proper col- lection and management of all types of waste, as well as biodegradable plastics through the composting process	
Act. 1.3.2) Developing a project for the promotion of stores without packaging and co-financing programs	Grad and	2022	developed program for the promo- tion of packaging waste reduction projects for economic entities	

Description: listed measures are being proposed in order to enable necessary infrastructure taking into account prohibition of certain plastic products within the European market, i.e., process of entrance of biodegradable plastic products on the Croatian market. Electromechanical composting is planned with the purpose of managing biowaste and biodegradable plastics, while the promotion of stores without packaging is planned to reduce the amount of plastic waste in general (waste prevention measures).

Measures and activities	Responsible partner	Deadline	Results/outputs
OBJECTIVE 1.4) Reducing th	e amount of w	aste in the	environment
Act. 1.4.1) Organizing the identification, marking and mapping systems of illegal landfills	Stari Grad	2022	all necessary work orders adopted within the Municipal Service database created for all identified illegal landfills
Act. 1.4.2) Organization of a system for reporting illegal landfills by citizens		2022	system for reporting illegal landfill sites via computers and smartphones established and instructions for citizens published
Act. 1.4.3) Remediation of illegal landfills	Komunalno Stari Grad d.o.o.	continu- ously	all identified illegal landfills remedied
Act. 1.4.4) Organization of an annual clean-up of the sea bed, beaches and/or terrestrial environment	_	continu- ously	clean-up action conducted on at least four locations and results of the action published on the official website of the City of Stari Grad and in the media at least two press releases sent on an an-
			nual basis (action announcement and action results)
			at least one report of the actions published on the official website of the City of Stari Grad
			at least one call for participation was sent annually to citizens, associations, and other relevant stakeholders
Act. 1.4.5) Ensuring control over locations where illegal waste disposal occurs systematically		continu- ously	all necessary work orders for continuous monitoring of identified landfills issued (municipal warden who will regularly visit sites)
			the report on continuous monitoring of illegal landfills is submitted as part of the regular report on the implementation of the waste management plan.
			video surveillance set up, use of new technologies and technical solutions such as video-linking by unmanned aerial vehicle (drone and similar)
Act. 1.4.6) Application of technical and operational measures to reduce the amount of waste ending up in the environment	Stari Grad	continu- ously	replacement of worn-out and damaged containers in the city (torn lids and similar)

Act. 1.4.7) Optimization of working processes of transshipment of separately collected waste at the location of the old landfill (expansion, covering, and fencing of space)	Grad and Komunalno Stari Grad d.o.o.	continu- ously	reduced amount of waste in the environ- ment around the landfill
Act. 1.4.8) Encouraging and/ or participating in research efforts related to micro- particles and nanoparticles pollution	Grad	2024	data on environmental pollution with microparticles and nanoparticles of plastics collected and published

Description: waste present in the environment (including plastic waste) is a result of intentional or unintentional actions, carried out by an individual, who discards waste directly into nature or disposes of waste into a waste management system with inadequate infrastructure which does not prevent waste to leak into the environment via atmospheric or weather conditions. In addition to implementing important measures with regard to identification, remediation and cleaning of illegal landfills and locations polluted by waste, the City of Stari Grad will invest efforts for mitigation of illegal waste disposal and replacement of inadequate containers and coverage of landfills with the purpose of preventing waste leakage into the environment via wind and rain. In order to classify the effects of waste on the environment, data on microparticles and nanoparticles of plastics will be collected and published.

Monitoring the imple- mentation of the Plan and evaluating the results of the project	Sunce Split	2022	continuous filling in of the monitoring pro- tocol prepared and submitted to the City of Stari Grad by Association Sunce Split, in ac- cordance with the activities and deadlines specified in this Action Plan (minimum three completed protocols until the end of the project)
			online evaluation workshop held at the very end of the project with key stakeholders (short narrative report with proposals for improving the implementation of the Action Plan prepared as a results of the workshop)



2. CREATING EXAMPLES OF GOOD PRACTICE IN REDUCING WASTE GENERATION AND REUSING IT

Measures and activities	Responsible partner	Deadline	Results/outputs				
I -	OBJECTIVE 2.1) Limit the use of single-use plastics only to essential and irreplaceable products within City of Stari Grad and institutions and companies (co)owned by the city						
Act. 2.1.1) Development of internal Waste Management Plans for all public institutions and companies		2022	Waste Management Plan developed and internal results on reducing the amount of mixed municipal waste for public institutions and compa- nies				
Act. 2.1.2) Preparation and adoption of the Decision on reducing the use of single-use plastic for all public companies and institutions		October of 2021	Special Decision on reducing the use of single-use plastics for all public companies and institutions was adopted and published all relevant stakeholders notified via official letter				
Act. 2.1.3) Reject on use of all unnecessary disposable plastic products (plastic cups and disposable bags), the same applies to all City institutions and public companies	, ,	2023	full implementation of the Decision on reducing the use of single-use plastics for all public companies and institutions				
Act. 2.1.4) Creating a database of alternative and available solutions, i.e., active market research and publication of results	City of Stari Grad	2021	database of available alternatives/ solutions created and published continuous base replenishment mechanism provided				

Description: the City of Stari Grad and its institutions and public companies will limit the use of disposable plastics only to essential and irreplaceable products and will encourage the use of alternative products for those products that are not necessarily prohibited (the prohibition on the placing in the market is not applicable to plastic cups and very lightweight plastic bags that preserve product hygiene).

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f Stari October of 2021	decision on reducing the use of single-use plastic at public events organized (co)organized or (co) financed by the City of Stari Grad adopted and published all relevant stakeholders notified via official letter mechanism for the inclusion of the Decision in the procurement process, conclusion of new contracts, organization of events and other activities covered by the Decision provided
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3. EDUCATION AND COMMUNICATION WITH THE PUBLIC

Measures and activities	Responsible	Deadline	Results/outputs			
_	partner					
OBJECTIVE 3.1) Raising citizens' awareness of the harmfulness of plastics in nature and the possibilities for reducing plastics in everyday use						
Act. 3.1.1) Development of a Communication Plan aimed at informing the public and key stakeholders about the project and postproject activities, i.e., the harmfulness of plastics in nature and the possibilities for reducing plastics in everyday use	City of Stari Grad and Komunalno Strai Grad d.o.o.	October of 2021	Communication Plan for plastic-free city of Stari Grad and harmfulness of plastic in nature and possibilities for reducing plastic in everyday use for a period of 2 years following the adoption of the Action Plan			
Act. 3.1.2) Cooperation with all involved public and private sector stakeholders	City of Stari Grad	continu- ously	at least one annual meeting/con- ference on the implementation of the Action Plan and the topic of the harmfulness of plastics in nature and the possibilities of reducing plastics in everyday use organized			
Act. 3.1.3) Informing citizens about all key changes in waste management in the area of the City of Stari Grad, including information on the harmfulness of plastic in nature and the possibilities of reducing plastic in everyday use	City of Stari Grad and Komunalno Strai Grad d.o.o.	continu- ously	at least once a month, for a period of two years following the adoption of the Action Plan, provide information to citizens about changes in the waste management system, on the proper classification of waste, the harmfulness of plastics for nature, the possibilities of reducing plastics in everyday use and all key project milestones (leaflets, radio advertisements, posters, websites, social networks, etc.)			
Act. 3.1.4) Involvement of citizens, associations and other relevant stakeholders in clean-up actions of the seafloor, beaches and/or land environment	City of Stari Grad	continu- ously	invitations for participation to citizens, associations and other relevant stakeholders when organizing clean-up actions sent			

Description: this goal represents the involvement of the general public within the project. Systematic education, information and active involvement of the public in every step can achieve quality cooperation and better and more detailed implementation of the activities themselves. In this sense, it will be necessary to devise several educational packages specific for each step, which are interconnected and that can be used over a longer period of time.

Target groups should include kindergartens, schools, the hospitality, and tourism sector, the economic sector, public authorities and utilities, and the general public.

Mayor of City of Stari Grad, Antonio Škrapa





