

Guide

with the good waste management practices of local authorities and environmental organizations in the Black sea basin

Project: MARLENA – Marine and River Litter Elimination New Approach, BSB 139 Joint Operational Programme Black Sea Basin 2014-2020

www.marlenablacksea.eu







1

INTRODUCTION

The Handbook on Good Practices for Waste Management in the Black Sea Basin presents good governance practices and approaches of local authorities, business and non-governmental organizations in Turkey, Bulgaria, Romania, Moldova, Ukraine. It focuses on approaches and projects that lead to waste reduction at seas and rivers, as well as introduction of separate waste collection systems, and projects that make the transition from "tackling" waste to raw material management. In order to achieve these goals, it is necessary to change the organization of waste collection, launch an effective educational campaign, as well as secure investments. Each of us creates waste: at home, at school, at work, on the street. Therefore, the results of the waste management system depend mainly on the degree of responsibility and awareness of its users, us.

The practices and recommendations in the handbook are based on the experience of local authorities and communities in the Black Sea Basin and aim to reach the biggest possible audience of citizens, authorities, and businesses and encourage them to participate more actively and fully in the already established practices and to seek new partnerships and approaches for nature conservation. The handbook is developed by all partners under the MARLENA project, activity A.T1.3. including surveys in 5 countries and preparation of a guide with the good waste management practices of local authorities and environmental organizations, Deliverables D.T1.3.1. and D.T1.3.2.

The MARLENA project: "Marine and River Litter Elimination New Approach" aims at uniting people and organizations against pollution along the Black Sea coast and rivers, as well as the protected areas and nature reserves near the Black Sea basin. All 5 target regions are in the Black Sea basin and exhibit rich biodiversity and tourism potential. The project aims to create conditions for raising public awareness and educating about pollution in the sea and rivers, the value of marine biodiversity, as well as general environmentalism. The target audience of the project is young people, tourists, businesses, local communities and authorities, educational organizations. Particularly emphasized is the development of responsible civic and environmental behaviour among young people.

MARLENA aims to strengthen community awareness and engage local populations in the promotion and implementation of cross-border campaigns to clean coastal and riverine waters in the Black Sea basin and to share good practices in this area to reduce and eliminate pollution.

The project partners are from 5 countries

- Demirkoy Municipality, Turkey (Lead Partner);
- Zelena Strandja Association, Bulgaria (PP2);
- Galati Association for Sustainable Development "Prut-Dunare" (FLAG Galati), Romania (PP3);
- Cahul Ecological Counseling Center, Republic of Moldova (PP4);
- Institute of Market Problems and Economic & Ecological Research National Academy of Sciences of Ukraine, Ukraine (PP5);
- Malko Tarnovo Municipality, Bulgaria (PP6).









The groups of project activities are as follows:

Group 1 Joint management activities: meetings, reports and coordination of joint activities for the implementation of the project for better cooperation between the organizations on the Black Sea basin. Conduct a study of existing policies and legislations, networks and a cooperative initiative to reduce riverine and marine waste in the Black Sea Basin; Waste Management Good Practices, round tables and thematic conferences between partners, a joint platform for waste reporting and illegal waste disposal sites and the initiation of joint crossborder actions.

Group 2: (GA2) Capacity building of local stakeholders

Small investment projects will be implemented on the territory of Bulgaria and Turkey to solve common environmental problems: to promote the introduction of a good European practice for the use of a separate waste collection system in Malko Tarnovo Municipality, Bulgaria and the elimination of an illegal landfill in Demirköy, Turkey and turning the cleaned place into a beautiful park. Training for capacity building of local authorities and exchange of good practices.

3 group: (GA3) Activities to raise public awareness, which include: A broad awareness



Sea Basin countries, including: press conferences, 2 information meetings, creating guidelines for responsible behavior for children and tourists students, and visitors,

information campaigns for coastal clearing, organizing eco-campaigns and eco-camps for enhancing the ecological culture of youth.

Project approach

The project is build on the basis of shared prosperity and good relationships between European member states and thier neighbouring countries. The common goal is clean sea and rivers in the Black sea region.

The implementation of the project combines complex approaches, as the basis of the project will be the accumulated experience and good practices from previous realized projects, as well as new approaches and methods. One of the major changes faced by the project partners is precisely raising public awareness of the seriousness of the problem of waste pollution, unregulated landfills, lack of habits for separate waste collection, which has a very negative impact on the quality of river waters and of the water basins in general. As the problem is extremely serious and comprehensive, one of the approaches that is planned to be implemented







3

is involving all stakeholders - local and regional authorities, industry, universities, students, undergraduates, tourists, visitors to the participating regions. Within the frames of the project, there will be press-conferences, thematic conferences, round tables in partner countries, etc. organized in order to raise awareness among stakeholders.

The approach that will be implemented is a wide-range information campaign among representatives of all target groups; to organize meetings with them, to develop and disseminate a comprehensive guide, to place information tables, etc. The "good" international practices to address the problem with waste will be examined and presented. The innovative approaches planned to be implemented at the project level are the investment measures for starting the project in two of the participating regions - Demirkoy and Malko Tarnovo. There will be investments made to kickstart the separate collection of waste and the cleaning of unregulated landfills. Besides those investments, all partner regions will implement "light" measures aiming to raise the awareness of students, tourists, local population, etc. about the problem of waste, as well as to aid the development of tourism in the protected areas. Two other innovative approaches that will be used to implement the project are the creation and maintanance of an on-line platform that will be accessible to all partners and will serve to not only to share experiences and good practices, but also as a sustainable method through which the unregulated pollution in the regions will be reported. The organization of eco-camps, including an international one, is also an innovative approach thorough which young people will be educated from early childhood about the seriousness of the problem of water pollution.

Within the MARLENA project, an online platform http://marlenablacksea.eu/ has been developed.



The MARLENA project platform is key to communication not only between project partners but also between the team and the general public. To achieve this goal each project partner maintains their own sub-page, ensuring timely updates and inclusion of local stakeholders.



Waste - basic terminology

The Black Sea is a natural inland water basin situated between Europe and Asia. Six countries share the Black Sea coast: Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine. A population of about 16 million people inhabits the coastal zones of the six countries.

The Black Sea ecosystem is known to be rich and diverse, but it is also considered to be vulnerable as it experiences notably significant pressure from land-based pollution.









Complex of transboundary ecological problems around the Black Sea (decline in living resources, chemical pollution, biodiversity change, habitat destruction, climate-change impacts, and mesoscale variability in the circulation system).

The other major type of problematic pollutants is solid waste, dumped into the sea from ships and some coastal towns. Any floating or semi-submerged waste inevitably ends on the seashore. Therefore the Black Sea beaches tend to accumulate a lot of garbage, which is unsightly and presents a risk to the health of humans and marine species.

Ensuring the sustainable utilization of the marine environment is a prerequisite for the competitiveness of many industries in coastal areas. The key role of seas within the climate system and the continued deterioration of the marine environment demand that we start paying more attention to the oceans and seas.

The EU Marine Strategy Framework Directive proposes a serious approach to addressing the problems in the marine environment arising from misguided usage and depletion of marine and ocean resources. Among other serious problems, measures are also envisaged for managing marine waste.

The waste that falls in the rivers and the Black Sea

Waste is a key environmental, social and economic issue and an increasingly serious problem with the amount of waste generated in Europe continuing to grow annually. 3 billion tonnes of waste - 70 million tonnes of which are hazardous - are annually disposed of in the European Union. This amounts to about 6 tonnes of solid waste per $\frac{5}{2}$ European.

Definitions

Waste

Waste is one of the oldest environmental problems in the EU and its definition is controversial. The revised Waste Framework Directive is defined by the European Commission as an object which is considered by its holder as waste and which he intends to discard.

Prevention of waste generation

The concept of "waste prevention" means reducing the amount of materials used to create products and increasing the efficiency of using the products already created. Extending the life cycle of the product or considering options as re-use are forms of prevention by redirecting waste generation channels.

Quality prevention

Reducing the content of hazardous substances in waste constituents is considered to be a qualitative waste prevention, as this reduces the exposure of humans and the environment to harmful effects.









6

EUROPEAN UNION

Waste management hierarchy in the EU

The hierarchy sets five possible ways for institutions and businesses to deal with waste and gives priority to measures in the following order:



The main objective of the Waste Framework Directive is for the EU to become more of a "recycling society" that seeks to avoid waste and to reuse waste Life Cycle Approach



Possible policies undertaken within the framework of waste prevention are aimed at reducing the overall environmental impact of waste generation and management.

Extended Producer Responsibility (EPR)

is a strategy that encourages manufacturers to take their products' lifecycle into account at the design stage by extending producer responsibility and including reuse or recycling at the end of the life cycle of the products they produce.

The lifecycle concept of product design is part of a wider resource efficiency model - using "natural resources in

the most effective way as many times as possible, reducing the impact of their use on the environment."

Analysis of material flow channles

Material Use Efficiency (ME) describes the use of materials in a way that reduces the consumption, production and release of materials associated with previous processes. ME also prevents waste while helping to avoid waste-related problems by focusing on a lifecycle approach.









7

Waste prevention strategies available to Member States fall into three

broad categories, demanding different levels of public authority involvement: information, promotion and regulation.

Behavioral change strategies and informed decisions include:

- Awareness campaigns;
- Information on waste prevention techniques;
- training programs for competent authorities;
- Eco labelling .

Promotion strategies that stimulate behavioral changes and provide financial and logistical support for beneficial initiatives include:

- Support for voluntary agreements;
- Encouraging re-use and repairs;
- Encouraging environmental management systems;
- Incentives for eco consumption;
- Promoting research and development.

Regulatory strategies requiring compliance with waste generation constraints, the expansion of environmental obligations, and the enforcement of environmental criteria on public contracts include:

• Drafting measures;

- Taxes and incentives;
- Extended Producer Responsibility Policies;
- Environmental Public Procurement Policies;
- Ecodesign requirements.

These strategies are complementary and can be integrated with other relevant existing policies, such as Sustainable Consumption and Production policies, environmental policies, waste management policies, or can constitute an independent national waste prevention program.

A Roadmap for Resource Efficiency in Europe

A Roadmap to a Resource Efficient Europe (COM (2011) 571 final, European Commission) is an initiative that sets out a coherent framework of policies and measures to move towards a resource-efficient economy in line with the EU 2050 vision. , namely:

"By 2050, the EU economy will grow in a way that is consistent with the limited resources and capabilities of the planet, thus contributing to global economic change. Our economy will be competitive, inclusive and capable of delivering a high standard of living with much less environmental impact. All resources will be managed steadily - from raw materials to energy, water, air, land and soil. Important targets will be achieved in combating climate change, and biodiversity and ecosystem dependent services will be protected, valued and largely restored."







Part of the set goals are:

Sustainable consumption and production

Improving products and changing patterns of consumption

Main objective: By 2020, citizens and public authorities will receive appropriate incentives to choose the most resource-efficient products and services through appropriate price signals and clear environmental information. Their consumer choice will stimulate companies to bring innovations and offer more resource-efficient goods and services. Minimum standards for environmental efficiency will be established to remove the least resource-efficient and most polluting products from the market. There will be a high consumer demand for sustainable products and services.

Stimulating efficient production

Main objective: Introduce market and policy incentives to boost business investment efficiency by 2020. These incentives will encourage innovation in widely used production methods aimed at optimal resource efficiency. All companies and their investors will be able to measure and compare resource efficiency throughout their lifecycle. Economic growth and living standards will not be driven by the usage of raw materials, but will depend mainly on the higher value of products and services.

This document is at the heart of the EU's and EU Member States' sustainable development policy.

The Roadmap contains a section on "Turning waste into resources", with the main objective for waste being: "By 2020, waste will be managed as a resource. The waste generated per capita will be in a state of absolute decline. Recycling and reuse will be economically attractive <u>8</u> opportunities for both the public and the private sector due to widespread separate collection and the development of functional secondary raw material markets. More materials will be recycled, including materials that have a significant impact on the environment, and raw materials of utmost importance. Waste legislation will be fully enforced and illegal shipments of waste will be completely eliminated. Energy recovery will be limited to non-recyclable materials, landfilling will virtually be removed and high-quality recycling guaranteed. "

Zero waste means, above all, cultural change. It should go beyond the current EU target for a "recycling society" and include a reduction in the consumption of materials and energy. Raw materials can be recovered, not burned or buried in landfills. We believe that bearing the responsibility that all of us as well as the whole private sector have towards the environment is the key to a world with less waste.

Compilation of Circular Economy Measures

Much of the natural resources are limited and an environmentally and economically sustainable way to use them has to be found. In addition, businesses have an economic interest in making the most effective use of their resources.

In the circular economy, the value of products and materials is kept for as long as possible; waste generation and the use of resources are kept to a minimum and resources are retained in the economy when the product reaches the end of its life cycle and are used repeatedly to create added value. This model can create secure jobs in Europe, promote innovations that provide a competitive edge, and provide a level of protection for both society and the







environment. This model replaces the traditional consumer model and balances economic development with environmental protection. It provides consumers with more durable and, to a greater extent, innovative products that achieve financial savings and quality of life.

A European strategy for protecting the planet, protecting our citizens and providing opportunities for our industries



Under the new strategy, the European Union will:

Make recycling profitable for businesses: New packaging rules will be developed to improve the recyclability of plastics used on the market and to increase the demand for recycled plastic content. With the collection of larger quantities of plastic, improved and expanded recycling facilities should be created, as well as a better and more standardized system for separate collection and sorting of waste across the EU. This will save about one hundred euros per ton of accumulated quantity. Greater added value will be achieved for a more competitive and sustainable plastic industry.

- **Reduced plastic waste:** European legislation has already led to a significant reduction in the use of plastic bags in several Member States. The Commission will also take measures to limit the incorporation of plastic microparticles into products and to create recognizable labels for biodegradable and compostable plastics.
- Stop water contamination: The new rules for port reception facilities will address the problem of marine waste from marine sources through measures to ensure that ship-generated waste or offshore waste is not abandoned but returned to land where they are disposed of in an appropriate manner.

In May 2019, the Council of the European Union adopted the ambitious measures proposed by the Commission to combat marine wastes from the 10 disposable plastic products most commonly found on European beaches as well as abandoned fishing gear and degradable plastics.

The new rules are proportionate and tailored to achieve the best possible results. This means that different measures will apply to different products. New rules will be introduced:







10

• a ban on certain disposable plastic products for which there are alternatives on the market, namely: cotton swabs, cutlery, plates, straws, stirrers and balloon rods, as well as cups, food and beverage containers made from expanded polystyrene, and all products of oxidative degradable plastics;

• measures to reduce the consumption of food containers and beverage mugs made of plastics and the special marking and labeling of certain products;

• extended producer responsibility schemes to cover waste disposal costs for products such as tobacco filters and fishing gear;

• the objective of 90% separate disposal of plastic bottles by 2029 (by 2025 - 77%) and product design requirements according to which the caps must be attached to the bottles; as well as the target from 2025 onwards in PET bottles to have a share of 25% recycled plastic and from 2030 onward - a share of 30% recycled plastic in all plastic bottles.

Tools for reducing marine waste

* Key: P - Plastics, O - Other solid waste, S - Sanitary or medical waste, Sw - Sewerage, N - Nets and boxes, F - Fishing waste

	CATEGORIES OF MARINE WASTE								
TOOLS	Land sources				Sources from coastal enterprises				
	P	0	S	Sw	P	0	Sw	Ν	F
MARKET ORIENTED TOOLS									
Tax on plastic bags									
Tax for collection and recycling of wastes									
Cash deposit for packaging of beverages									
(glass, plastic and aluminum)									
Port tax for accepting									
waste (single charge)									
ncentives for fishermen to register									
and collect marine waste									
Buying damaged/abandoned fishing gear									
Tourist taxes used for cleaning beaches									
Fines for polluting									
ADMINISTRATIVE MEASURES									
Banning smoking on beaches									









EUROPEAN UNION

Ship waste logs					
VOLUNTARY MEASURES					
Increasing awareness					
Behavioural guidelines					
Beach cleaning campaigns					
LEGISLATIVE CHANGES					
Assimilating beaches, rivers, and channels within waste collection systems					
Monitoring					
Allocating designated areas (according to					
MARPOL)					
OTHER TOOLS					
Providing appropriate waste containers, etc.					
Biodegradable plastics					
Strategies for recycling plastics					
(goals, standards)					
Improving waste waters infrastructures					
Relieve procedures for waste disposal in ports					
Marking of floating nets					









BEST PRACTICES FROM BULGARIA

The Municipality of Malko Tarnovo is not a member of regional waste management associations but has its own regional waste management system.

Thus, the Municipality of Malko Tarnovo has developed its own Waste Management Program 2014-2020. During the strategical development of the program, a number of European and national program and methodological documents and studies have been taken into account in addition to the stated legal requirements.

Local Good Practices

Municipality of Malko Tarnovo

Project: "Building a Regional Waste Management System in the Malko Tarnovo Region" implemented with the financial support of the Operational Program "Environment 2007-2013",

The Malko Tarnovo region is one of the 23 priority areas in which landfills for the

disposal of municipal waste were built in implementation of the National Waste Management Program 2009-2013.

The specific goals of the program are:

- To ensure the environmental sustainability of waste management in the region;
- To ensure the possibility of recycling / recovering of the waste at the regional landfill in accordance with the regional objectives;
- To improve the vital indicators of environmental components;

• To build a socially sustainable regional facility for disposal of municipal waste with sufficient capacity for the needs of the region;

Goals of the project

The implementation of the activities designed to provided treatment, recycling / utilization of the waste generated on the territory of the Municipality of Malko Tarnovo and ensure their ecological disposal.

The project activities include preliminary studies, land purchase and construction works, delivery of machines and facilities serving the landfill and delivery of

machinery and separate waste collection facilities. The construction and installation works of













the project include the construction of a Regional Landfill Disposal Facility, as well as transformational infrastructure to the site, including a main road and external power supply. A chain bulldozer, a wheel loader, a tipper, an aquifer, a mobile sorting line, a baling press, a diesel aggregate, a pickup truck, and waste containers were



delivered.

The total cost of the project is BGN 6 482 815.95, distributed as follows:

- European Regional Development Fund - BGN 5 234 873.88

- National co-financing - BGN 923 801.27

- Municipal co-financing - BGN 324 140. 80

The project began on 24.10.2012 with the signing of the financing contract and was executed within a period of 31 months from the date of signing.

Through the MARLENA project, a waste recycling system will be developed in Malko Tarnovo.

Good Practices from the District of Burgas:

Project "Building a Regional Waste Management System in the Bourgas Region"

The Municipality of Burgas, in conjunction with the municipalities of Sredets, Kameno, Nessebar, Pomorie, Aytos, Ruen, Karnobat, Sungurlare and Regional Waste Management - Burgas region, has implemented a project for: "Construction of a regional waste management system in the Burgas region", financed under Priority Axis 2 of the Operational Program "Environment 2007-2013", Grant Agreement № DIR-5102118-C001 / 25.08.2011g.



13







The regional waste management system in the region of Burgas serves a total of 210 settlements with nearly half a million inhabitants. The municipalities of Burgas, Sredets, Kameno, Nessebar, Pomorie, Aytos, Ruen,



Karnobat, Sungurlare are all included within the scope of the system and make up a complex site that includes the "Bratovo - West" Regional Waste Depot, two waste stations in the municipalities of Nessebar and Karnobat and their transportational infrastructure.

Achieved results:

Established infrastructure for the environmentally conscious disposal of all domestic and construction waste generated on the territory of the Burgas region, which meets the requirements of the Directive 1999/31 / EC on waste

disposal, the national legislation, as well as the tasks described in the National Program for waste management including:

• Drastically reducing the amount of waste destined for landfills, thus achieving a reduction in the amount of the fees due under Art. 64 of the WMA.

• Discontinue the use of unlicensed landfills and concentrate the waste stream to a controlled regional landfill;

• Pre-treatment of waste before landfilling;

• Optimization of long-distance transport through the usage of reloading stations (Karnobat and Nessebar) and implementing highly efficient means of transportation for waste disposal;

• Separate collection of specific waste, eg waste oils, spent batteries and accumulators, end-of-life vehicles, electrical and



electronic equipment, sludge from WWTPs and biodegradable waste, as well as construction waste;

• Composting and separating recyclable wastes at landfills;

• Designing ecological decomposition, which offers the possibility of utilization of biogas.

Amount of grant: 40 546 468,00 BGN







Objects:

• "Bratovo - West" Regional Landfill, which is a complex site including: Box 1 and site infrastructure, waste separation separation plant, biodegradable waste composting plant, recycling landfills for household and building waste, eco park for temporary storage of hazardous and other specific household waste as well as equipment necessary for the normal operation of the landfill.

• Nessebar reloading station (including treatment plant for construction and large-scale waste (EGO))

• Karnobat reloading station (including construction treatment plant and EGO)

Total landfill capacity: 400,000 tonnes

Cell capacity: 400,000 tonnes

Composting plant - total capacity: 5 000 t / yr.

Separating installation - total capacity: 10 000 t / yr.

Nessebar reloading station - capacity: 20 t / h

Karnobat reloading station - capacity: 10 tons / hour

Project: Design and construction of anaerobic plants for separately collected biodegradable waste

The Beneficiary is the Regional Association for Waste Management Burgas, which includes the municipalities of Burgas, Aitos, Kameno, Karnobat, Nessebar, Pomorie, Ruen, Sredets and Sungurlare;

The purpose of the procedure is to reduce the amount of landfilled household waste by providing additional capacity for separate collection and recycling of biodegradable waste.

The aim of the project is to provide infrastructure and a system for separate collection of biodegradable municipal waste in the municipalities of Burgas, Nessebar and Pomorie, as announced by the Ministry of Environment and Waters.

The facility has a recycling capacity of 30,652 tonnes per year. The total amount of the investment is over BGN 37.4 million. Operational Program Environment 2014-2020 provides grants amounting to BGN 29.4 million. The project implementation period is 48 months.

The implementation of these projects allows for a more modern and environmentally friendly way of turning waste into a resource.











Headquarters and address of management: Burgas Municipality, 26, Aleksandrovska Str., Tel. 056 843 891,

Chairman of the Board: Dimitar Nikolov - Mayor of Burgas Municipality

Campaigns and good practices for separate waste collection

In 2018 the Municipality of Burgas and the municipal company Chistota Eco started a Campaign for Reporting and Implementation of the Quantities of Separately Delivered by Citizens Waste from the designated 19 mobile centers. The initiative was launched in the period 28.04.2018. December 31st, 2018. As a result, 106 tonnes of waste were

collected, divided into 36 main groups. The campaign continues in 2019

Campaign participants receive various rewards and incentives - for example, 10-liter packaged compost, shopping vouchers, material awards.

http://chistotaeco.com

Burgas, Bulgaria

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The Municipality of Burgas provides a widely publicized service for free transportation of up to 3 cubic meters of household construction wastes. Thus, construction waste is







collected separately, allowing for the easy removal of valuable materials and damaging equipment without causing undue pollution.

A NEW LIFE FOR OLD FURNITURE

An initiative from the business sector

In Burgas a campaign was started - a new life for used wood, by collecting, sorting, treatment and recycling of wood waste.

As part of its strategy for responsible and environmentally friendly development, and as an element of sustainable economy, Kronoshpan launched an initiative with which it can process wood waste from packaging, household, construction, and industry. The resulting raw material will be used in the production of wooden boards, ie its life cycle will be extended to the maximum.



According to their analysis, one tonne of recycled wood waste replaces eight to ten trees. For this purpose, in different points of the city specialized containers ordered by Kronoshpan will be placed, in which old packaging, furniture, paneling, glassworks and all kinds of wood except mattresses and upholstered furniture will be collected.

Cleaning campaigns

National campaign "Let's clear Bulgaria together"

The campaign "Let's Clear Bulgaria Together" was launched in 2012 by bTV Media Group. Today, the campaign is the largest volunteer initiative in Bulgaria that aims to



build public awareness on environmental issues and make Bulgaria cleaner and more beautiful in the long run.

The most famous campaign places Bulgaria at the forefront among the countries with the best voluntary environmental practices in the world.

Public figures such as athletes, actors, politicians, etc. are ambassadors of the

campaign.









Regional Administration Burgas has been a coordinator of the campaign "Let's clean Bulgaria" from the very beginning of the initiative. Over the years, a cleaning organization has been set up in each municipality. The results are impressive, eg. already in 2013. the following indicators have been reached: total number of participants for Burgas region - 25 711; Companies, agencies and administrations involved in the campaign - 192; Schools - 61; Kindergartens - 4; Non-governmental organizations and clubs - 34; 184 places have been cleaned out; 40 more contaminated sites have been cleaned, and so on. every year the number of participants is growing.

Since 2018, the campaign has become part of the global "Let's do it World" initiative.



59 countries have gathered 90,000 tonnes of garbage. According to data from the Ministry of Environment and Waters, another longterm partner of the initiative, on September 16, 2018, 4,123 tons of waste from 2869 locations in Bulgaria were collected. From each polluted site, an average of one tonne and a half of garbage was taken. The Regional Inspectorate of Environment and Water - Burgas reported 350.3 tonnes of waste collected.

In 2019, the campaign will again be part of the world's largest civil initiative - World Clean Up Day 2019. On 14 September, volunteers in Bulgaria will launch the second edition of World Clean Up Day, which will end in Hawaii at night on 21 September 2019.

Regional Administration Bourgas has been recognized as one of the top 50 most successful and loyal supporters of "Let's Clean Bulgaria Together" together with national and regional institutions, business organizations and prominent volunteers.

Other cleaning campaigns

Good initiatives have found a number of followers, and in recent years the number of campaigns, eco-stocks, flashbobs and various other cleaning initiatives has grown. Among the most active initiators in the Burgas region are:

- Burgas Recycle "is a community of active young people, united by the need for reduced and responsible waste management. Their mission is to generate a positive change in attitudes and behavior of people to promote living in a cleaner city. "Burgas Recycles" conducts annual volunteer campaigns, open meetings, educational lectures, creative workshops, beach cleanings, competitions for recycling the most electronic waste and other events. They also offer free advice and guides with good waste disposal and recycling practices.

- Biodiversity Foundation;











- NGO "Green Strandja" and many others

International initiatives for clean beaches and harbors

The Blue Flag program unites the tourism and environmental sectors at the local and national level. It encourages maintaining clean and safe beaches and yacht ports and educates the whole community to protect the environment along the coast, contributing both to its voluntary participation in environmental initiatives and to its daily behavior. The program is very well received in Bulgaria and the best beaches and yachts have been distinguished by the Blue Flag for their successful green management every year since 1995.



The Blue Flag program benefits from national and municipal support, as well as from business partners, and the participation in it is a matter of prestige and competition between resorts, municipalities and regions, that offers ecologically managed beaches, marinas, boats and tourist services with the highest standard, evident by the number of World Blue Flags awarded.

The Blue Flag beach award is based on the fulfillment of criteria that address the following aspects:

Environmental education and information

Water quality

Environment-friendly management

Safety and services

Beaches are awarded a Blue Flag for only one season.

Bulgarian candidates for the award deservedly met the criteria.

Among the best beaches and yachts for the year 2019 on a global scale, 15 are Bulgarian, 11 of them are on the territory of Burgas District and 3 are in the region of Strandja Mountain:

Marina Dinevi - a port

Beach Oasis

Dune beach

Beach Sozopol Harmanite

Beach Pomorie East







EUROPEAN UNION **Beach Nessebar South Beach Sunny Beach South**

Beach Sunny Beach Central

Beach Sunny Beach North

Beach Sveti Vlas New

Elenite Beach





20



International initiatives on environmental education

ECO SCHOOLS NETWORK IN BULGARIA

The Ecocaching Program is an international program initiated and managed by nongovernmental organizations, members of the Foundation for Environmental Education. The program started in 1994 in response to the challenge of uniting the efforts of young people to solve environmental problems and sustainable development issues. This program proposes to implement an integrated environmental management system for schools based on the ISO 14001 / EMAS approach. It encourages the involvement of teachers and pupils in practical activities that reduce the harmful impact on the environment and the consumption of water and energy. The accumulated savings relief to a significant degree the schools' costs for maintenance and the municipal budgets. Priority topics during the first years after the start of the program have been: Water, Waste, Energy, Transport, Noise, Nature and Biodiversity and Healthy Life in School.

https://www.ecoschools.global/how-does-it-work

The Eco Schools program seeks to stimulate children's awareness and responsibility for the environment through classroom and out-of-class activities. The Green Flag award is given to schools that demonstrate the fulfillment of specific eco-rules and an efficient management of school resources: water, energy and waste. The program is a successful tool that effectively transforms each school into an environmentally responsible organism.

In Bulgaria, 108 schools and kindergartens work under the Eco-Schools program. Winners of the Green Flag are 62 schools.

The eco-school program covers 7 mandatory elements that each school can perceive as a work methodology:

1. Establishing an EcoComitet.

2. Environmental review - monitoring of the environment and establishing its current condition.

3. Action Plan.

CROSSBORDER



Common borders. Commo







- 4. Eco codex.
- 5. Control and evaluation.
- 6. Promoting ideas and activities through media.

7. The main topics and activities related to them should be integrated within the curriculum and be offered to pupils in different classes.

LET'S REDUCE WASTE

Eco-Schools - Wrigley Company Foundation 'Litter less' Campaign

The campaign is aimed at reducing waste and pollution.

The campaign "Reduce Waste" takes place in 25 countries, including Bulgaria, and aims to engage and educate children and young people on waste issues and promote



long-term changes in their attitude towards the environment. Students aged 5-18 years manage the waste through the Ecocampaign. Their actions are aimed at reducing waste, such as performing activities like cleaning, bringing and eating food with little or no packaging in school, separate waste collection or creating waste products from the campaign, etc.

Fifteen schools in Bulgaria received initial funding to support the campaign's activities.

Raise awareness about the impact of waste on the environment and the public.

Increase students' knowledge and build practical skills for waste prevention and management.

Cooperate with other schools to promote education for sustainable development.

Report the progress of the campaign within the seven steps of EcoCities. Use media to



Common borders.











https://www.ecoschools.global/

Eco-Schools Program E-mail: petya_j@yahoo.com Programs "Blue Flag", "Learn about the Forest" and "Green Key" E-mail: skgbg2000@yahoo.com

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The photos and text are from the website of the Bulgarian Blue Flag Movement https://www.blueflag.bg









Best practices from Romania

Integrated Waste Management System in Galati County - New coming invetment

A European strategy for plastics in a circular economy

The Strategy on Plastics, adopted by the European Commission in January 2018, is part of the transition towards circular economy. In this document, the Commission has identified plastic as a major priority and has committed itself to develop "a strategy to address the challenges posed by plastics across the value chain and to analyze their entire lifecycle."



The strategy has as its <u>primary objective</u> to lay the foundations for a new plastics economy, in which the design and production of plastics and plastic products fully meet the needs of reuse, repair and recycling, and in which materials are developed and promoted more sustainable.

The priorities of the strategy regarding the collection and sorting of plastic waste, relevant to the design of the Integrated Waste Management System in Galati County, are:

• Changes at the production and design level allow for higher recycling rates for all key applications. In 2030, more than half of the plastic waste generated in Europe will be recycled. The separate collection of plastic waste will reach very high levels. The recycling of plastic packaging waste will reach levels comparable to those of other packaging materials;

• The EU's capacity for recycling of plastics will be significantly expanded and modernized. In 2030, sorting and recycling capacity will increase four times compared to 2015.

To achieve the priorities set out in the strategy, a set of structured measures is proposed on four priority themes:

- Improving the economic aspects and quality of recycling of plastics:
 - design with recycling potential;

- stimulating the demand for recycled plastics;
- 4 a better and more harmonized collection and sorting, namely:







4 To encourage more standardized and effective practices across the EU, the Commission will issue new guidelines on selective collection and sorting of waste. The Commission also strongly supports the EP in its effort to modify waste rules to ensure better implementation of existing obligations on the selective collection of plastic materials.

- Reduction of plastic waste and waste disposal on the public domain:
 - Preventing the generation of plastic waste in the environment by reducing the use of disposable articles and reducing marine waste;
 - establishing a clear regulatory framework for plastics with biodegradable properties;
 - regulation of micro plastics;
- Orientation of innovation and investment to circular solutions;
- Valuing action globally.

The implementation of the Integrated Waste Management System will be carried out in 2 (two) stages:

• 2021

- Valea Marului warehouse will be in operation. It will serve the entire county, less Galati City (served by the existing Tirighina deposit),

- the new sorting station at Valea Marului will be in operation. This will serve the entire county, less the Galați and Tecuci cities,

- the collection and transport contract will be awarded by the Association for Intercommunity Development,

- the separate collection system for recyclable waste will be implemented,

- transfer and composting stations at Tg. Bujor and Tecuci will be operational and temporary storage centers.

• 2023

- Entire SMID system will be operational including the TMB plant and the Galați transfer station,

- Valea Marului Depot will serve the entire county, including Galati city.

SMID Operation:

- Collection of waste (municipal, recyclable, bulky and biowaste);
- Waste transfer;
- Waste treatment;
- Sorting recyclable waste;
- Composting of biowaste;
- Storage of residual waste;











• Treatment of leachate.

Planned investments

• Acquisition of collection equipment for domestic waste for the whole county except for the cities Tecuci and Galati;

• Purchase of equipment for separate collection and transport of domestic recyclable waste for the whole county except for Tecuci;

- Establishment of 3 transfer stations as follows:
 - Fecuci, with a capacity of 23.000 t / year, respectively 81 t / day;
 - **4** Tg. Bujor with a capacity of 10.000 t / year and 32 t / day respectively;
 - **4** Galati with a capacity of 37,000 t / year and 200 t / day respectively.
- Establishing a new sorting station at Valea Marului with the capacity of 6.000 t / year;

• Establishment of 2 centers for the temporary storage of bulky waste and hazardous wastes at the transfer stations at Tecuci and Tg. Bujor;

• Recommissioning of the existing composting plant at Tg. Bujor;

 \bullet Creation of a Tecuci composting plant with the capacity of 700 t / year of green waste in parks and gardens;

- Making an MBA with anaerobic digestion at Galati with the capacity of 120.000 t / year;
- Realization of a new non-hazardous waste landfill at Valea Mărului with a capacity of 1.000.000 cubic meters (with 5 sub-cells);
- Closure of the non-conforming deposit from Rates-Tecuci.















Integrated Waste Management System in Tulcea County

Funding: The European Regional Development Fund (ERDF) under the Sectoral Operational Program - SOP ENV and the Large Infrastructure Operational Program. Phase II of the project aimed to continue the investments made in the solid waste management sector, started by the Sectoral Operational Program Environment.

The objective of the project was to develop a sustainable waste management system at European



standards in Tulcea County by improving services and reducing the number of non-compliant landfills in the county, in line with EU practices and policies.

The purpose of the project: to improve the quality of the environment and the living conditions of the inhabitants of Tulcea County.

The project was implemented by the Tulcea County Council between 03.12.2013-31.12.2017 and consisted mainly of:

Investments made at the Tulcea County level:

- 4 Closure of non-compliant landfills from Măcin, Isaccea, and Sulina.
- 4 Construction of a landfill site in Mihai Bravu locality.
- 4 Building a mechanical-biological treatment plant (TMB) in the Mihai Bravu locality.
- Construction of 10 mooring docks.
- Acquisition of waste transport/transfer equipment as well as waste collection <u>26</u> equipment - bins and containers



Education and Awareness Campaign:

In order to develop appropriate waste management areas, four collection areas were established:

Area 1 Tulcea - consists only of the Municipality of Tulcea which is served by a landfill according to the total storage capacity of 1000000 cubic meters.

Zone 2 Mihai Bravu - includes 2 cities, Isaccea and Babadag and 29 communes; the area covered by the area is 3682 km²;









Area 3 Macin - includes the town of Macin and 10 communes; the area covered by the area is 908 square kilometers;

Zone 4 Danube Delta - includes the city of Sulina and 7 communes; the area covered by the area is 2615 km^2 .

Results:



Three non-conforming landfills were closed, from Isaccea, Macin, and Sulina

4 The waste disposal site was built at Mihai Bravu, which includes: storage area, weighing







27

platforms, stormwater treatment of household facilities and

The treatme

treatment front loaders station.

Construction



leachate collecting network and collecting network, storage and wastewater technology, leachate, wastewater, as well as various related facilities.

mechanical and biological station Mihai Bravu was built with 4 and 6 waste trucks inside the

of mooring docks from the Danube

Delta - 10 mooring docks in the Danube Delta were built within the project, aiming at landing the vessels that will load the Delta waste. Mooring docks are located like this:

- 3 in Sulina;
- 1 in Crişan;
- 1 in Mila 23
- 1 in Gorgova
- 1 in Ilganii de Sus
- 1 in Maliuc
- 1 in Nufăru
- 1 in Partizani
- 4 Construction of access roads to investments in Mihai Bravu, Sulina, and Nufăru.
- Acquisition of collection, transport related to SMID in Tulcea County such as bins, containers, press container, compositors as well as transport equipment and equipment.









Main benefits:

- Increased share of waste recycled/recovered in the total amount of municipal waste collected as a result of investments that provide preparation for recycling and reuse of household and similar waste by 50% according to the Waste Framework Directive 2008/98/EC.
- Improving people's quality of life and health through controlled waste disposal!
- Ensure a more fertile soil and richer and healthier crops by composting biodegradable waste in households with the help of special composting materials available to rural residents.
- Ensure a more attractive landscape by closing non-organic landfills and complying with Directive 99/31/EC on waste disposal.

Contacts:

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Source: http://www.smidjudetultulcea.ro

Integrated Waste Management System in Constanta County

Period: 17.02.2014 - 30.04.2019

Partners:

- Constanța County Council;

- Inter-community Development Association "Dobrogea" - ADI Dobrogea

Financing:

- Sectoral Environmental Policy (SOP ENVIRONMENT): Priority Axis 2 Development of Integrated Waste Management Systems and Rehabilitation of Historically Contaminated Sites
- DMI 2.1. Development of Integrated Waste Management Systems and Extension of Waste



Management Infrastructure

The aim of the project is to complement existing infrastructure and investment equipment that will ensure integrated waste management in the county, which will provide the minimum standards required to comply with EU environmental legislation as well as the achievement of commitments on which Romania has assumed through the Accession Treaty.

Overall objectives of the project:

Raising living and environmental standards in the county of Constanta, aiming mainly at respecting the EU environmental acquis;







Developing a sustainable waste management system in Constanta

County by improving waste management and reducing the number of polluted areas in the county.

The project consists of the closure of non-compliant urban waste dumps from the localities of Hârșova, Cernavodă, Medgidia, Murfatlar and Techirghiol, the construction in Tortoman locality of a new landfill, a sorting station and a mechanical-biological treatment plant, the construction in the localities Hârșova and Deleni of two transfer stations, the construction in Ovidiu of a sorting station and a mechanicalbiological treatment plant - made at the European Union standards, as well as the acquisition of equipment for transport, handling and storage of waste.

In order to streamline waste management activities, six waste collection and transport areas were established in Constanta County. Results:

- Acquisition of containers for selective waste collection
- Purchase of machinery and containers for waste disposal
- Construction of waste transfer stations at Deleni and Hârșova
- Construction of sorting stations at Ovidiu and Tortoman
- Construction of mechanical and biological treatment plants at Ovidiu and Tortoman
- Construction of ecological warehouse at Tortoman
- Closure of non-compliant landfills from Hârșova, Cernavoda, Techirghiol, Murfatlar, Medgidia;
- Population information and environmental education campaign.







Contact details:

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29









30

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Mrs. Ivonne Saghiu - Project Coordinator

E-mail: ysaghiu@cjc.ro

Info source and photo:

www.adidobrogea.ro and http://constanta-judet-curat.ro

Integrated Waste Management System in Braila County

The project is financed under the European Regional Development Fund, according to the Financing Contract no. 4476 / RP / 27.09.2013.

Partners:

The Braila County Council and the "ECO DUNAREA" Inter-community Development Association Braila.

The purpose of the project is to establish a set of measures that gradually lead to a high living standard of the population and to a less polluting environment.



Overall objectives of the project:

• Raising living and environmental standards in Braila County, with the main aim of complying with the EU environmental acquis;

• Developing a sustainable waste management system in Braila County, by improving waste management and reducing the number of polluted areas in the county.

Specific objectives of the project:

- Increasing the coverage of the population that benefits from collecting municipal waste and the corresponding quality management services and at acceptable tariffs;
- Reduce the amount of waste stored;







•





- Increasing the amount of recycled and recovered waste;
- Establishment of efficient waste management structures.
- Reduce the amount of waste stored;
- Increasing the amount of recycled and recovered waste;
- Establishment of efficient waste management structures.

The following activities are planned within the project:

- Closure of the old warehouse and construction according to the sorting station and the lanca sorting station;
- Construction of the transfer station;
- Construction of a sorting station and a mechanicalbiological Vadeni station.
- Procurement of waste collection equipment in Braila county.







Espected results:

- Increase in the amount of biodegradable waste diverted from storage to 47,041 tons per year after the project due to the implementation of selective collection systems for the entire county population, the promotion of individual composting and the construction of biodegradable waste treatment facilities (mechano-biological treatment plant);
- Increasing the quantity of recyclable waste collected selectively from 2.657 tons / year before 2009 to 33.527 tons / year after project;
- Increasing the recycling rate for paper / cardboard from 1.804 tons / year (21%) to 11.663 tons / year (85%);
- Increase in the plastic rate from 653 tons / year (8%) to 10,987 tons / year (85%);
- Increase of the metal rate from 0 tons / year (0%) to 2.476 tons / year (85%);
- increase in glass rate from 86 tons / year (4%) to 3.285 tons / year (85%).Contact

Contact details:

E-mail:ecodunareabraila@yahoo.com E-mail: <u>office@ecodunareabraila.ro</u> , Info source and photo: http://ecodunareabraila.ro







BEST PRACTICES AT NATIONAL LEVEL

STEPS FOR WEEE

The main purpose of this project is to improve the collection of recyclable waste and reduce the negative impact on the environment, in particular waste electrical and electronic equipment (WEEE)

Partnership: ECOTIC, Iasi City Hall, SALUBRIS Iasi, The project consists in the construction of a Municipal Centre for Collection of Recyclable and Dangerous Wastes from the population, the first of its kind in Romania. The centre provides auto and pedestrian access and takes waste from private households, including household waste assimilable from legal persons.

The implemented activities aimed to make this center a local solution for Iaşi and an example of good national practices.

MATERIALS;

Types of waste accepted¹:

✓ WASTE OF PAPER AND PAPER PACKAGING;





✓ PLASTIC
MATERIAL WASTES,
GLASS;
✓ WASTE OF TE



✓ WOOD WASTE, FURNITURE;

- ✓ METAL PACKAGING WASTES;
- ✓ WASTE OF ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE);
- ✓ CONSTRUCTION WASTES;
- ✓ VEGETABLE WASTE;
- ✓ DANGEROUS WASTES (contaminated packaging, oils, paints, food oils, car batteries, etc.);
- ✓ OTHER WASTE CATEGORIES (tires, household items, portable batteries);
- ✓ RENEWABLE GOODS.

There is also an information point within the Center, and the afferent site provides motivating information on the importance of separate collection and the right ways to separate waste.



¹ There are some restrictions on certain categories of waste, for details see<u>http://www.cmciasi.ro/deseuriacceptate/</u>



In order to encourage the citizens to hand over the waste correctly for recycling, there are periodically organized various activities such as: "My Clean Iasu" raffle, student visits etc.

Specific results obtained in 2017:

- Total waste generated: 125 tonnes
- Quantity of waste sent to recycling: 122 tonnes
- Unique generators: 1492
- Single generators per day / day: 5
- Unique generators per day / day during campaigns: 10
- Information and collection campaigns: 4

<u>Contact details:</u> 26 Stradela Gradinari, Iasi Administrator: Gheorghe Pricopoae

E-mail: administrator@cmciasi.ro

Info source and photo: http://www.cmciasi.ro











The day of național clean-up (LET'S DO IT ROMÂNIA)

This program consists of organizing an annual campaign, collecting in a single day, with the help of volunteers, waste disposed of in the public space. The program is implemented nationwide and from 2009 until 2017:

- 25,000 tons of waste (plastic, glass, household waste, textiles, metal) were collected and the recycling rate increased from 17% to 45%.
- engaged over 1,800,000 volunteers and established partnerships with 400 companies.



From 2016 the "Let's Do It, Romania!" Platform has been launched, through which you can report areas of waste from the city or from nature through a mobile app that is available free of charge on the App Store and on Google Play. These reports are transformed by the organization into official notifications to the authorities and their resolution is monitored. So far, 8,200 digital volunteers have downloaded the application, with more than 400 waste areas being cleaned.

The main partner of the campaign, Kaufland Romania, has supported the organization since

2010.

Institutional partners in Romania are the Ministry of Environment, the Ministry of National Education, the Ministry of Waters and Forests, the Ministry of Tourism, the Ministry of National Defense, the Ministry of Internal Affairs, the Ministry of Foreign Affairs, the Ministry of Foreign Affairs, the Ministry of Business, Commerce and Entrepreneurship Emergency Situations, the Romanian Gendarmerie, the National Administration of Penitentiaries, the National Union of County Councils in Romania, the Association of Romanian Communes and the Association of Municipalities in Romania.

At the level of civil society, 150 non-governmental organizations and civic groups in Romania signed the memorandum of cooperation.



Contact details: sustin@letsdoitromania.ro

Info source and photo: https://letsdoitromania.ro











SIGUREC

SIGUREC is a large-scale initiative implemented in Romania following a formal agreement between private companies (the Green Group holding, the Association of Major Retailers in Romania (AMRCR), Ecopaper SA, Romcarbon SA and public authorities - the Ministry of Environment and Climate Change, recyclers.

Simply put, SIGUREC is an intelligent and completely environmentally friendly, easy to use recycling alternative, always close to home and delivering concrete benefits.

Compared to traditional waste collection systems, SIGUREC smart devices have a number of important advantages:

1. It collects most types of waste, whether plastic packaging (including bags and food foils), paper, aluminum cans, glass, batteries, bulbs, neons, waste oil, etc. You will not have to beat your head too much - if something should be thrown at the basket it will almost certainly be "digested" by the SAFETY!



2. They are located in the

premises and parking lots of major retail outlets such as Cora or Carrefour, being easily accessible. Thus, a shopping journey can become an opportunity to get rid of house waste! Also, in some localities you have the opportunity to call a pickup at your home.

3. They are simple to use, being fully automated. Once the waste is inserted into the machine, it will sort, count and weigh them automatically without you doing any other operation.

4. Devices offer rewards depending on the type of waste and its quantities. Rewards are granted in the form of discounts for shopping in the partner store network.



Results:

Contact details: <u>http://sigurec.ro</u> Info source and photo: <u>http://sigurec.ro</u>







Best practices from Ukraine

UKRAINIAN GOOD WASTE MANAGEMENT PRACTICES OF LOCAL AUTHORITIES AND ENVIRONMENTAL ORGANIZATIONS (ODESA REGION)

Project "Inventory, Assessment and Remediation of Anthropogenic Sources of Pollution in the Lower Danube Region of Ukraine, Romania and the Republic of Moldova" MIS-ETC 995 within the framework of the Joint Operational Program "Romania-Ukraine-Republic of Moldova 2007-2013" was aimed at increasing the level of cross-border cooperation, common approaches, control and risk management in the Lower Danube region. The project partners were:

• Applicant (principal partner 1) - Department of Ecology and Natural Resources of Odessa Regional State Administration, Odesa;

• Partner 2 - Ukrainian Scientific Centre of Ecology of the Sea (Ministry of Environmental Protection), Odesa;

• Partner 3 - Institute of Market Problems and Economic and Ecological Research, National Academy of Sciences, Odesa;

• Partner 4 - Danube Delta Biosphere Reserve Authority, Tulcea;

• Partner 5 - Association for Cross border Cooperation "Lower Danube Euroregion", Galati;

Partner 6 - Eco-Consulting Centre, Galati;

• Partner 7 - Environmental Pollution Prevention Office, Ministry of Environment of the Republic of Moldova, Chisinau.

The project included: inventory and assessment of sources of soil and water pollution in the Lower Danube, modernization of the wastewater treatment system in the city of Vylkovo (Ukraine), provision of public information on the quality of water and soil in the Lower Danube area, equipment upgrade, sampling and laboratory analyzes to identify existing sources of soil and water pollution, capacity building and awareness, the establishment of a long-term monitoring system for risk assessment and sources of soil and water pollution, development of a plan to reduce pollution sources and to create a Regional Center for Environmental Research in Ukraine.

As a result of the project, it was possible to intensify relations and increase the level of cross-border cooperation in the field of environmental pollution prevention in the Lower Danube Region region; find common approaches for monitoring, monitoring and managing the risk of pollution in the Lower Danube region (establishing a center for sustainable development and environmental research); to raise awareness of the population in the Lower









Danube border zone about the environmental situation in the region

(information and training events are conducted, the project site is open and functioning with the GIS information map with sources of pollution and the information site of the Center); to





carry out a reconsultation

of the system of treatment facilities in the city of Vylkovo

Within the framework of the Program EaPTC Moldova - Ukraine project "Enhanced capacity for an efficient waste management in "Lower Danube" Euroregion area (CleanTown)" is implemented.

Locations of the action- Lower Danube areas of Moldova and Ukraine. Total duration-12 (twelve) months. Name of the applicant- Cross-border Cooperation and European Integration Agency. Co-applicants:

- NGO Agricola, Ukraine;
- Valeni Town Hall, Republic of Moldova

Overall objective of the project is to contribute to the creation of an integrated and efficient system of waste management and consequently better environmental protection of the Lower Prut and Lower Danube areas of Moldova and Ukraine.

Specific objectives:

- To enlarge the existing cross-border partnerships and intensify the cooperation among local public authorities, environmental protection institutions, NGOs and other stakeholders from Moldova and Ukraine in the field of waste management;
- Extend the waste collecting system in the partner municipalities and procure necessary equipment;
- Awareness raising of the population inhabiting the region regarding the necessity to protect the environment and selective waste collection.

Main activities:



2





- Ensuring procurement of specific endowments for target municipalities aiming to improve waste management;
- Conducting information/awareness activities to promote waste management systems with reduced environmental impact;
- Promoting selective waste collecting in Valeni and Reni communities.



The Department of Ecology and Natural Resources of the Odesa Regional State Administration implemented a comprehensive program for environmental protection, rational use of natural resources and ensuring environmental safety in the Odesa region for 2014-2019, approved by the decision of the Odesa Regional Council of 21.02.2014 No. 1021-VI (with changes) and the Regional program for the conservation and restoration of water resources in the basin of the Kuyalnik firth for 2012-2018, approved by the decision of the Odesa Regional Council of 2012-2018, approved by the decision of the Odesa Regional Council of October 28, 2011. No. 270-VI (with changes).

The Comprehensive Program for Environmental Protection, Rational Use of Natural Resources and Ensuring Ecological Safety in the Odessa Region for 2014-2019, approved by the decision of the Odesa Regional Council of 21.02.2014 No. 1021-VI (as amended), in 2017, the following activities were carried out:

- Reconstruction of the connecting channel between Tiligulsky firth and the Black Sea on the territory of the Kominternovsky district of the Odesa region;

- Inventory, assessment and reduction of the influence of anthropogenic sources of pollution in the Lower Danube Region of Ukraine, Romania and the Republic of Moldova.

-Reconstruction of sewage treatment facilities of Vilkovo, Odesa region (co-financing)

- Overhaul of the existing pressure sewage collector through the streets of Shkolnaya, border guards in the village of Mayaki of Belyaevsky district, Odesa region;

- Construction of external sewerage networks in the village of Fontanka, Limansky district, Odesa region (I, II, III, IV stage);

- Reconstruction of pressure sewers 1 and 2 in the town of Artsiz, Odesa region;

-Reconstruction of the canal of the KNS in the village of Nadlimansk Ovidiopolskiy district;







- Clearing the Chaga river and protection against flooding of the territory of the city of Arziz of the Odesa region;

- Reconstruction of a complex of water throughput and partitioning along the Balanesht baltsy on the territory of the Reni city of Odesa region;

- Production of design and budget documentation "Construction of a flood reservoir at the Balneset Bali to protect against flooding in the city of Reni, Odesa region. Work project";

- Production of design and estimate documentation "Working project: Reconstruction of a complex of culverting and partitioning constructions on the Balneşt bridge on the territory of the city of Reni, Odesa region".

Regional Program for the Conservation and Recovery of Water Resources in the Kuyalnitsky firth Basin for 2012-2018, approved by the decision of the Odesa Regional Council dated October 28, 2011. № 270-VI (as amended) in 2017, 50% of the activity was carried out: "Research works on hydrological, hydrochemical, hydrobiological and medical-biological survey of the Kuyalnitsky estuary and seawater from the Gulf of Odesa.



It is important to say that the waste management reform has been initiated in Ukraine. On November 08, 2018, by Resolution No. 820, the Cabinet of Ministers of Ukraine approved the National Strategy for Waste Management in Ukraine until 2030, according to which regional waste management plans are being developed to facilitate the implementation of this Strategy no later than two years after its approval. The National Waste Management Plan until 2030 (Order of the Cabinet of Ministers of Ukraine Ne117-r of 20.02.2019) also stipulates the development and approval of regional waste management plans in accordance with the established procedure. Implementation term - 2020. Performers: Regional and Kyiv City State Administration, local self-government bodies (by consent), Ministry of Ecology and Natural Resources of Ukraine, Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine.

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39







Best Practices from Turkey

DEMIRKOY



Demirkoy, 400 meters above the mountain range called (Istranca) Strandja (Yıldız Mountains), on the shores of the Black Sea, Igneada Longoz forests within the borders of a small population is a green settlement center.

The (Istranca) Strandja Mountains have been identified as one of the 5th most important areas in Central and Eastern Europe for the protection of European natural heritage. Industrialization is almost none.

The forest products and agricultural production are the most important sources of income for Demirkoy.

The slopes of the Yıldız Mountains facing the Black Sea are covered with a dense forest cover. These forests start from the coast and rise up to 1000 meters along the slopes of the mountains. **Protected Areas of The Region**

Name	Province	District	Area(ha)	
NATIONAL PARK				
İgneada Longoz Forests	Kırklareli	Demirkoy	3155	
NATURE PROTECTION AREAS				
Bay of Kasatura	Kırklareli	Vize	329	
SULAK ALANLAR				
İgneada Longoz	Kırklareli	Demirkoy	3000	







A. <u>SELEDA FERTILIZER</u>

1. Contact Information

Full Title: SELEDA Biogaz Enerji Sanayi Ticaret A.Ş.Address:Kumrular Village No:123Babaeski/KIRKLARELIPhone:0288 427 50 00Website:http://seleda.com.trContact:Muhammet KOLAY / BoardMemberm.kolay@seleda.com.tr

2. About of Operating

Seleda Fertilizer, which has been serving Turkish agriculture since 2018 with its compost source solid and liquid organic, organomineral products obtained from biogas plant. It is the largest integrated biogas fertilizer plant in Europe with an area of 200,000 m2.

a. Capacity Information

1.000 tons/day waste processing,

36.792 MW/Year electricity generation,

60.000 tons/Year granular fertilizer

30.000 tons/Year liquid fertilizer production capacity.

With the capacity increase, it is aimed to increase the electricity production from

4.2 MW/h to 10.6 MW/h and the liquid fertilizer production from 30.000 tons/year to 100.000 tons/year.

b. Explanation of The Process



Animal, plant and industrial organic wastes taken into the facility are taken to the reactors for the digestion process after pretreatment process. After the 30 day digestion process and 21 day compost process, the final product obtained after a total of 51 days process is taken to the packaging plant.

Biogas, liquid and pulp are obtained during the digestion (fermentation) process. Electricity is produced in the cogeneration plant with biogas. Solid fertilizer is produced by composting the pulp and liquid fertilizer is collected in the lagoons. In the process, 100% of the nitrogen in the steam released in the compost tunnel is recovered in the nitrogen recovery facility and delivered to the final product.

3. Positive Impacts of The Operating on The Environment









a. Disposal of Plant and Animal Wastes

Should be disposed of in nature if not processed, 400,000 tons/year of waste is processed at the facility and converted into useful products.

b. Organic Fertilizer

Since organic fertilizer is fully used by plants, it does not leave residue in soil or water. As a result of the widespread use of organic fertilizers, the use of chemical fertilizers is reduced.



4. <u>Result</u>

The plant is a good practice in terms of waste disposal and recycling.

It converts paint and animal wastes into beneficial products and does not have any negative impact on the environment during this process. It generates electricity and fertilizers as output of its activities, which has positive impacts on water, soil, environment and human health when considering its final products.

B. KIRK KAB

1. <u>Contact Information</u>

Full Title: Kirklareli Local Government Union of Construction and Operation of Solid Waste Facilities (KIRK KAB)

Address: Karacaibrahim Quarter Kurtuluş St. Acun Apt. No:2 Center / Kırklareli Telephone: 0288 214 63 00

Website: http://kirkkab1.org

Contact: Gökhan Kaya ATAY (Deputy Mayor of Luleburgaz Municipality) e-mail: <u>gkayaatay@luleburgaz.bel.tr</u>

2. About of Operating

KIRK KAB was established in 2006 under the leadership of Kırklareli Municipality with the participation of seven municipalities and started to receive solid waste in 2009. Today, there are 21 municipalities and Kırklareli Special Provincial Administration members.

a. Capacity Information

Area of Solid Waste Storage ; Installed Area: 150.000 m2 (4 Lot) Capacity of Solid Waste Storage: 1.975.000 m3 Used area: 1. Lot, 425.000 tons of waste collected.

b. Electricity Generation

Since 2018, electricity has been produced from biogas at a biogas collection and electricity generation facility on an area of 3,000 m2. In 2018, 4,874,728 kW of

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42







electricity was generated. The facility has been designed to increase the capacity four times.

It is predicted that biogas production will increase and additional gas turbines (3 gas turbine locations ready) and electricity production will increase to 20.000.000 kW hours annually as other lots belonging to the waste area are commissioned and the amount of waste collected increases.





3. <u>Result</u>

Solid wastes are collected in landfills and their negative impact on the environment is minimized. Electricity is produced from the biogas obtained as a by-product from this activity. The facility is considered a good practice in terms of waste disposal, recycling and recovery.

C. ZERO WASTE

1. Project Informa	ation All
Full Title	: Zero Waste
	Project
Application Area:	Turkey
ContractorAuthorit	:y: Ministry of Environment and Urbanization
Website:	https://sifiratik.gov.tr/
Telephon:	+90 (312) 410 10 00
e-mail:	sifiratik@csb.gov.tr

2. About of The Project

"Zero Waste" is defined as a waste prevention approach that includes more efficient use of resources, reduction of the amount of waste generated, establishment of an efficient collection system, and recycling of waste.

Sustainable development principles to control our waste in the framework of future generations to clean, developed Turkey and to target zero waste principle to leave a livable world, projects to ensure that the management of waste through an integrated approach has been initiated.

Stakeholders and Scope of the Project

Local administrations, government agencies, institution defined in ANNEX-1 list and all participants who want to establish a zero waste management system on a voluntary basis are the stakeholders of the project.









As of 2018, the Zero

Waste Project Stepwise;

- ✓ In public institutions,
- ✓ At terminals (airport, bus station, railway station etc.),
- In educational institutions (university, school, etc.),
- \checkmark In shopping centers,
- \checkmark In hospitals,
- ✓ Fun-rest facilities (hotels,

restaurants, etc.), the implementation of large businesses and aims to put into practice all over Turkey in 2023.

Activities in the Scope of the Project

The "Zero Waste Implementation Guide'' prepared to guide the implementation of zero waste, is available on the website of the Ministry of Environment and Urbanization

(http://www.csb.gov.tr/projects/sifiratik).

Project Leader

The project is carried out by the Ministry of Environment and Urbanization under the leadership of Emine Erdogan, the wife of President Recep Tayyip Erdogan.

a. <u>Education</u>

Participation in the project was based on volunteering. NGOs, private sector and all

relevant institutions have been invited to contribute to the training and awareness raising activities. First of all, informative trainings are organized for all public and public employees and all students are given trainings starting from preschools. Competitions, camps and activities are organized to increase the awareness level of the public.

Within the scope of the project, zero waste application, greening the environment will be identified schools will be given certificates and green flag will be given to these schools.

b. Zero Waste District

The Ministry of Environment and Urbanization will implement pilot district and selecting a district where it can implement the zero waste project.

c. Zero Waste Blue

Within the scope of the Zero Waste movement, the "Zero Waste Blue" project, which aims to support the protection of the seas surrounding our country, was implemented.

3. <u>Result</u>

By simply changing habits and recycling, thousands of trees are cut down, greenhouse gas emissions are reduced, and significant savings are achieved in petroleum and water.











D. ERGENE BASIN CONSERVATION ACTION PLAN

1. Project InformationFull TitleErgene Basin Conservation Action PlanApplication AreaErgene BasinContractorAuthority:Ministry of Forestry and Water ManagemenWebsite:http://ergene.ormansu.gov.trTelephone:0312 207 63 30/37



2. About the Project

a. Ergene Basin

This basin in the Marmara region in Turkey, is located in the sub-region of Thrace. The Thrace Sub-Region covers the area that starts with the Istanbul Province border in the east and ends with the borders of Bulgaria and Greece in the west and transition area from the Marmara Region to Europe. The main source of surface water in the basin; In the Ergene Basin;

Total Area 12.438,2 km², Length of the river 283 km,

Total water potential, per year **1,71 milyar m³**. (78% surface water and 22% ground water)

b. Aim of The Project

- ✓ Unplanned Industrialization,
- ✓ Population Explosion in the Region,
- ✓ Domestic Wastewater Discharge,
- ✓ Unconscious Agricultural Applications

Ergene Basin, which has lost its balance in the environment-development dilemma with the above the problems, is highly polluted and has reached its point of disappearance. Ergene Basin Conservation Action Plan was put into practice with the aim of stopping this problems and making the flow clean of Ergene.

c. <u>Goal</u>

In the Ergene Basin Conservation Action Plan, achieving good water quality in the Ergene River;

- ✓ In 2018 year: III. Class Water Quality (contaminated water)
 - > It can be used in industry and irrigation after available treatment.

✓ In 2023 year: II. Class Water Quality (less contaminated water)

- > It can be used in irrigation, aquaculture, some industries.
- > It can be used as drinking water after available treatment.

d. Activities in the Scope of the Project

Establishment of improvement organized industrial zone (OIZ);

The wastewater flow discharged to Ergene River and its side tributaries from 2037 industrial facilities in the basin is 460.000 m3/day. In order to control wastewater







discharge, scattered industries in the basin were united under the

roof of "Improvement OIZ". With this improvementOIZ, the problems caused by scattered industries will be minimized, waste of time and resources will be prevented and infrastructure and superstructure will be reorganized. A total of 10 breeding OIZs were established in the basin, 8 in Tekirdağ and 2 in Kırklareli.

Establishment of Domestic Wastewater Treatment Plants;

In the scope of the Action Plan, WWTPs of 13 municipalities with a population of more than 10,000 were built and commissioned.

Regulation of Wastewater Treatment Discharge Standards;

In order to improve the water quality, the limitation for the Ergene Basin was made for the first time in the Existing Discharge Standards (Chemical Oxygen Demand) parameter in Regulation on Water Pollution Control and the color standard was introduced.

Establishing Solid Waste Landfills;

6 solid waste unions were established in the basin and space was allocated for regular storage areas.

Improvement Works in Streams;

Of the 28 river rehabilitation works included in the Action Plan, 2 have been completed during the project phase, 5 during the construction phase and 21 have been completed.

3. <u>Result</u>

The results of the activities carried out within the framework of the Ergene Basin Conservation Action Plan are expected to be felt in the coming years.

E. CORINE

1. Contact Information

Full Title : CORINE Project ((Coordination of Information on the Environment)

Application Area : Turkey

Telephone: +90 (312) 207 50 00Website: https://corine.tarimorman.gov.trContractorAuthority:Ministry of Agriculture and Forestrye-mail:

2. <u>What is the CORINE?</u>

CORINE (Coordination of Information on the Environment) is land cover / use data generated by computer-aided visual interpretation method based on satellite imagery according to the Land Cover / Use Classification set by the European Environment Agency.

3. Activities in The Scope of The Project

e. <u>Aim of The Project</u>

The main purpose of CORINE Project is; In the EEA member countries, in accordance with the criteria and classification system set by the European Environment Agency, the establishment of the same basic data and the establishment of a standard database for the determination of environmental changes in the land, the rational management of natural resources and the formulation of environmental policies.







<u>Areas</u>

- f. <u>Usage</u>
- ✓ Determining land changes for environmental monitoring within the scope of the Global Monitoring for Environment and Security (GMES),
- ✓ To develop basic land use inventories such as agricultural
- areas, forest areas and irrigated areas together with their locations,
- \checkmark Monitoring the destruction of forest areas,
- ✓ Product estimation,
- ✓ Agricultural Drought Action Plan,
- \checkmark In the calculation of carbon emissions from land used changes
- \checkmark In combating erosion control, forest fires and desertification,
- ✓ In Natura 2000 Project,
- \checkmark Monitoring wetland changes,
- $\checkmark~$ Preparation of Water and Waste Management Plans,
- \checkmark In the preparation of Basin Action Plans,
- Preparing Environmental Plans
- \checkmark In the creation of the City Atlas,
- ✓ It will be used in the harmonization process of the INSPIRE Directive and many other issues.

g. Studies

For the CORINE 2018 project, image procurement was started on 01.01.2018 and interpretation works as of 01.04.2018 have started. The data, which was checked by the European Environment Agency (EEA) in the middle and at the end of the project, was ready to be shared in May 2019. For our country, CORINE has created database of land cover maps of 1990, 2000, 2006, 2012, 2018 and change between 1990-2000, 2000-2006, 2006-2012, 2012-2018. The data has been submitted to the European Environment Agency and now has been combined with European land cover maps and has been included in the entire European map.

The land cover / use and land cover / use change data set and land cover statistics are published at this adress.

(http://corine.tarimorman.gov.tr/corineportal/index.html).

4. <u>Result</u>

By using land cover statistics, the correct use of resources will be monitored and strategic plans for the future will be made accurately. The project is a good practice for protecting the



Common borders. Common solutions.



47







environment and not destroying resources.



International eco camp held in Kiten, Bulgaria within the MARLENA project activities attended by 50 participants from Bulgaria, Turkey, Moldova, Ukraine, Romania. Eco action was held in the protected area Maslen with participation of children and project staff.

Best Practices from Moldova

MOLDOVA GOOD WASTE MANAGEMENT PRACTICES OF LOCAL AUTHORITIES AND ENVIRONMENTAL ORGANIZATIONS









Ecological Counseling Center Cahul has implemented the project " Improvement of the Integrated Coastal Zone Management in the Black Sea Region". The project was funded by the European Union under the Joint Operational Programme Black Sea, 2007-2013.

This project developed and promoted common instruments and methodologies on Integrated Coastal Zone Management (ICZM) in 5 states, has created a methodological framework possible to be assimilated into the administrative practice of all partner regions, providing a pattern suitable for further multiplication along the entire Black Sea basin. This project supported and brought together the separate national approaches to follow EC recommendations on ICZM. A major input of this project was the strengthening of community, civil society and local public authorities involvement in sustainable development and quality of life improvement along the coastal Project regions.



Regarding the partnership issue, the partnership structure was formed of a range of 6 representative organizations from 5 states - member, partner and candidate states, of which 4 (except for Moldova) have direct access to the Black Sea: Romania, Bulgaria, Ukraine, Moldova and 2 partners from Turkey.

The main scope of the project was improvement of the quality of maritime environment using common innovative methodologies for Integrated Coastal Zone Management plans within the Black Sea region to assure the economical use of the common natural resources in a sustainable manner.







Within the project there was created a Working Group, which provided a

working platform for active involvement of different stakeholders from several BS regions in generating a joint study on ICZM status and common indicators and methodologies meant to support an integrated approach on coastal zone management in project regions.



The results of this project are:

- ✓ one partnership agreement signed for sustainability of the project;
- ✓ A guide with good practices for public authorities on public participation issued;
- ✓ An ICZM Regional Partnership Toolkit within Black Sea area issued (contents: 1 ICZM Regional Partnership Guide and 1 DVD with potential partners and funding opportunities database);
- ✓ A Technical Toolkit Black Sea ICZM issued.

Ecological Counselling Centre Cahul also has implemented the project "Clean Rivers - Clean Sea! NGOs actions for environmental protection within Black Sea area" (CRCS). The project was funded by the European Union under the Joint Operational Programme Black Sea, 2007-2013. The partnership was formed by 7 partners from 5 different countries: Romania, Moldova, Bulgaria, Georgia and Turkey.

The main scope was contribution to the effectiveness of the measures taken by different stakeholders to address the issue of water pollution, as common challenge in the environmental protection of the Black Sea area.

The main activities of the project were









• Creation of the framework for a better cooperation among NGOs, local public authorities and the other stakeholders in the field of water management and pollution combating;

- Strengthened NGO and local public authorities cooperation capacity;
- Increased public participation into water management.



The results of the project implemented are:

- improved and comprehensive knowledge on water management and pollution control status within project regions;
- better outlining of possible NGOs role in environmental issue; partnership tools created;
- increased experience exchange on water management and pollution control;
- Improved information on potential partners; better dissemination of project information and results among different stakeholders;
- Improved conditions for NGOs and local public authorities cooperation; increased level of qualification and information on water management and pollution combating among NGOs;
- Increased level of cooperation between public and private stakeholders;
- Increased knowledge on public participation and increased awareness of public on water management and pollution control.







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52



Ecological Counselling Centre Cahul also implemented the project "Strengthening Civil Society in Moldova for a better environment", implemented by Milieukontakt International. This project was supported financially by the MATRA Program of the Ministry of External Affairs of The Netherlands. The partnership of the project was formed by nine environmental NGO's from Moldova.

Within the above mentioned project was created a joint position paper which was developed by the working group on water with the involvement of experts in the field, representatives from education institutions local public authorities and NGO community members. This working group was supported by the NGOs from the Republic of Moldova active in the environmental field during the Environmental NGO Forum in February 2011, offering information and expertise in the field of water management.

This position paper was divided in three parts: Position Paper of NGO community on surface water, Position paper of the civil society with regard to waste management, Position Paper of NGO community on public participation in environmental decision-making. There were identified the main problems regarding surface water, waste management and environmental decision-making and there were proposed solutions and elaborated recommendations. This position Paper is used also as a guide for local public authorities.





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for a better environment" it was set the aim of stimulating cooperation among interested parties through various activities that were developed locally and nationally.



The civil society by this project had a huge impact on environmental quality not only through intervention, but also through active participation in policy elaboration and in the decisionmaking process on environmental issues.





Joint Operational Programme Black Sea Basin 2014-2020

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