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GIZ Support to Climate Change Mitigation:

Climate Sensitive Waste Management in Serbia

CCAC Workshop 21/22 June 2018
Novi Sad
Phong Giang, GIZ Serbia

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Overview GIZ in Serbia

- Bilateral cooperation started in 2000, to date the commission of 1.8 billion EUR > Germany is the biggest bilateral donor
- Early 2000 focus on emergency assistance and reconstruction, followed by support for modern municipal infrastructure (water, energy, central heating)
- Today 3 sectoral areas: environmental friendly infrastructure/energy, sustainable economic development, good governance,
- Focus for all projects: creation of jobs and a special focus on employment of vulnerable groups

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Climate Sensitive Waste Management in Serbia (DKTI)

- Duration: 01/2018 - 12/2020 (3 years)
- German contribution: 5.000.000 EUR
- Target group: Serbian population in the partner regions with emphasis on vulnerable groups/ minorities and women
- Political partner: Ministry of Environmental Protection

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Deutsche Klimatechnologie Initiative DKTI

- Instrument under the umbrella of BMZ to contribute toward fulfilling international climate policy commitments with a particular technology focus
- DKTI promotes the development of climate friendly and energy efficient technological solutions in partner countries to strengthen international market development for innovative technologies and industries.
- It combines technical and financial cooperation implemented by GIZ und KfW.

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Project history

GIZ IMPACT:

Improving pre-conditions for introduction of the circular economy in waste and wastewater management.

Project period:

01/2012 – 12/2017

Budget: 6 million EUR

5 partner municipalities and one region supported in waste and wastewater planning and services provision

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Project Map / Pilot WM Regions

Kruševac

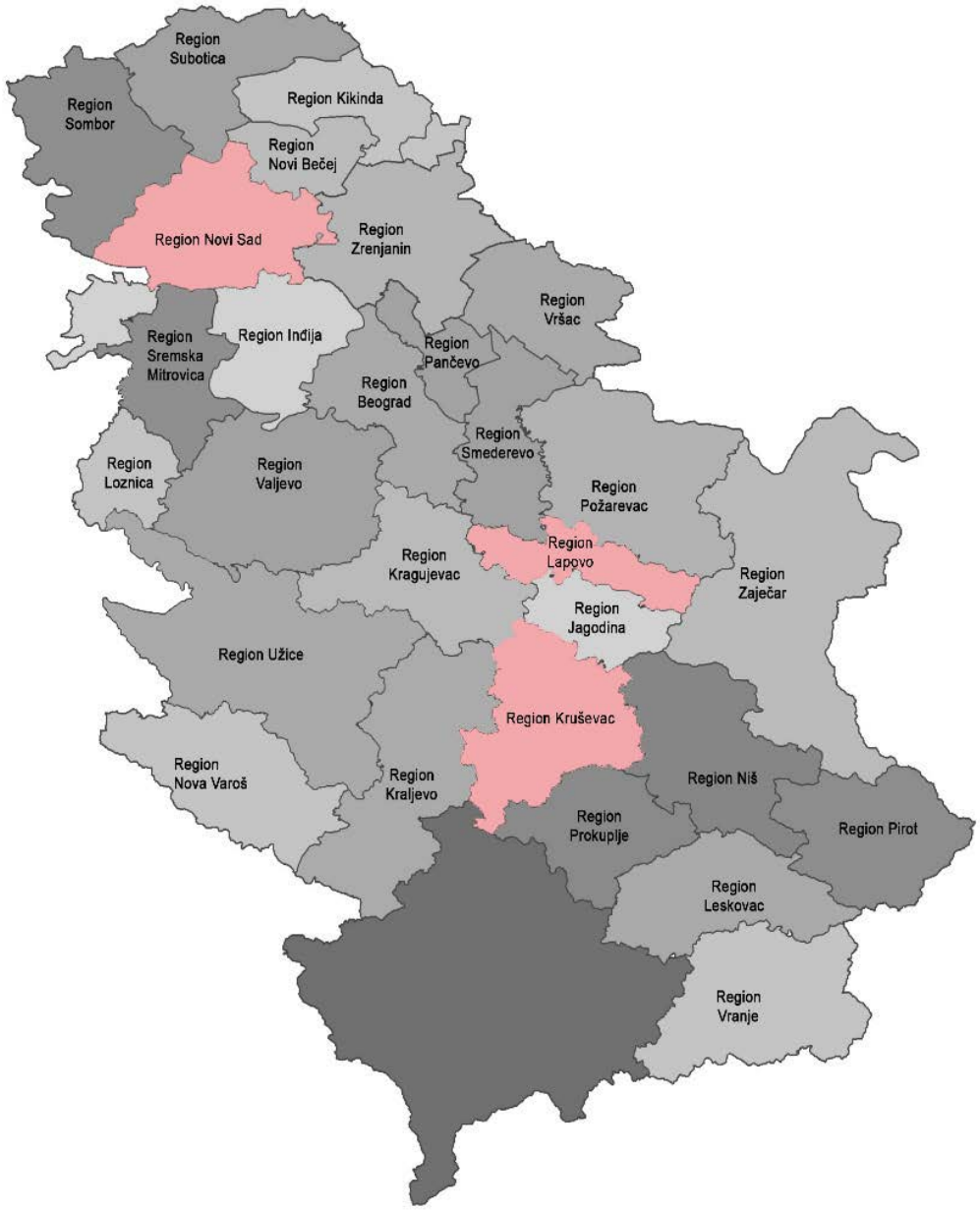
Aleksandrovac, Brus, Varvarin, Ćićevac

Novi Sad

Bački Petrovac, Bačka Palanka, Vrbas, Beočin, Temerin, Srbobran, Žabalj

Lapovo

Batočina, Rača, Despotovac



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Climate Sensitive Waste Management in Serbia (DKTI)

A waste circular economy contributing to climate change mitigation is introduced in selected regions of Serbia.

Output A

The national strategic frame conditions for a climate sensitive waste CE management are improved.

Output B

Circular Economy approaches are piloted at regional level.

Output C

Best practices of a circular economy-oriented waste management to mitigate greenhouse gas emissions are introduced at local / communal level.

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National level: Framework conditions for CE are improved

- **Policy advice**
- Further development and implementation of the **CE strategy**
  - Implementation of **Capacity Development measures** - key stakeholders on national and local level from government, private sector and civil society
  - Review of existing **ministerial working group** (investment opportunities in environment) and establishment of new WG (for CE) incl. representatives from CCIS - MoEP, CCIS and other ministries
  - Promotion of the CE approach – CCIS
- Development of **guidelines** for introduction of value chains in private sector

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Regional level: Regional CE approaches are piloted

- **Development/revision of regional SWM plans**
  LSGs, PUCs, Intermunicipal WG, local Civil Society Organisations
- Facilitation of the **inter-municipal cooperation** process
- Development and promotion of regional value chains in the waste sector (recycling market) - CCIS, private sector, MoPALG, SDG
- Assistance to SMEs in elaboration and implementation of **CE action plans**

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Local level: Best practises in CE with GHG reduction potential are introduced

- **Development/ revision of local SWM (CE) plans**
- **Introduction of separation at source systems** and other climate change mitigating SWM/ CE practices, including provision of:
  - Training of local (formal and informal) waste collectors - Informal Resource Collector, LSGs, PUCs, Media, local Civil Society Organisations
  - Provision of equipment and the implementation of pilot treatment facilities, e.g. for composting
- **Inclusion of Informal Collectors**
- Identification of value adding SWM/ CE practices with **creation of gender-equal job opportunities** (target: 100) and up-scaling

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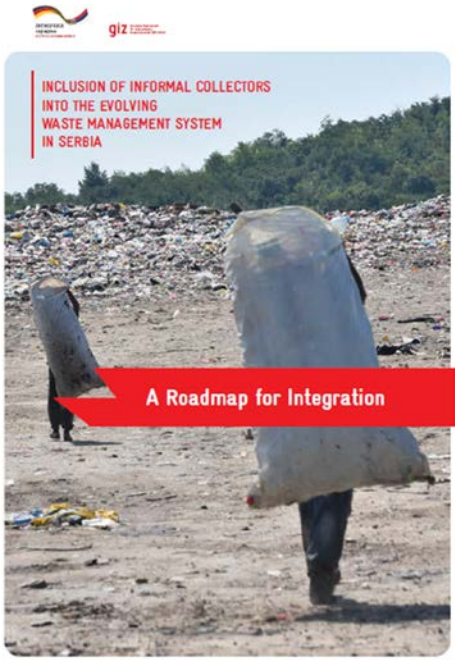
GIZ recent publications

Inclusion of informal collectors into the evolving waste management system in Serbia



Solid waste management and informal sector

- Field work research
- Provides information about current working environment of informal collectors and their point of view on their status and eventual integration.
- It outlines recommendations to overcome barriers and a roadmap for integration.
- Link: ***http://www.pks.rs/Vesti.aspx?IDVestiDogadjaji=24457***

Sectoral implementation of Nationally Determined Contributions (NDCs)

Solid waste management and climate change

- Part of a series of NDC sectoral overviews.
- Objective: To highlights the potentials of a CE approach to implement NDC targets related to the waste sector.
- Outlines sources of GHG emissions, mitigation options as well as related policy and implementation measures.
- Provides prospects for implementing NDCs in the waste sector.
- Link: http://bit.ly/2m4lf8k

Marine Litter. Causes, impacts and potential solutions

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Marine Litter

Causes, impacts and potential solutions

The challenge

In the last decades marine litter, especially from plastic waste, has become a major public health and environmental concern in many countries.

Marine litter or debris describes any solid material that has found its way to the marine environment – whether via transportation by rivers, drainage overflow and sewage systems, by wind or through deliberate disposal. Besides posing substantial problems for the environment and human health, it also bears great adverse effects on a country's socio-economic situation. Particularly the fishing and tourism industries are affected by economic losses caused by marine pollution. As a result of marine debris' potential to travel long distances, also remote places are affected by its pollution, making marine litter and its prevention an issue of global importance.

Causes and quantities

Increasing amounts of litter end up in the world's oceans. Improper waste management is one major cause of this problem. However, there are other causes, such as increased consumption of consumer goods, inadequate design and production processes of goods and their packaging as well as irresponsible littering behaviour.

The quantity of marine debris in the oceans can only be approximated. UNEP estimates that worldwide about 8 million items enter the oceans every day. The world's largest waste dump was found in the northern Pacific Ocean in 1997: the Great Pacific Garbage Patch (GPGP) covers an area comparable to the size of Germany and France together and is estimated to contain one million plastic particles per square kilometer.

Sources of marine litter are divided into land-based and sea-based sources. Land-based sources account for around 80 per cent of marine litter globally. The majority of land-based debris has been found to come from tourism and other recreational activities. For each of these groups the main activities generating litter are:

Land-based sources	Sea-based sources
Public litterbins	Fishing vessels
Tourism activities along the coast	Merchant shipping, ferries and cruises
Municipal landfills or waste dumps along the coast	Aquaculture installations
Improper waste management activities	Recreational activities
Discharge of untreated municipal sewage and storm water	Offshore platforms

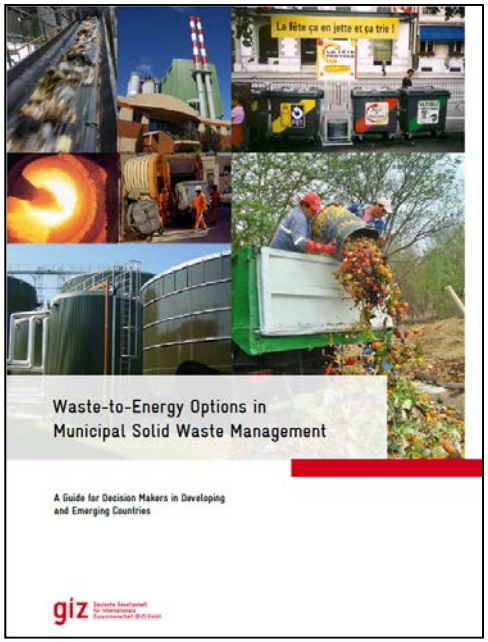
The data collected in 2013 at the International Coastal Clean-ups conducted by Ocean Conservancy in 92 countries has shown that the most common items washed up on shore were in the following descending order: cigarette butts, food wrappers, plastic beverage bottles, bottle caps, straws and plastic bags.

Plastic items make up for the majority of marine litter worldwide: the German Environmental Protection Agency (UBA) estimated that around 140 million tonnes of plastic are floating in and lying on the grounds of oceans already today. Increased production and consumption of plastic

Lessons learned from a pilot project in Benin

- Gives a quick overview of the problematic around marine litter
- Overview of land-based and sea-based sources and their impacts
- Gives recommendations to tackle the problem.
- Link: ***http://bit.ly/2zqcEBF***

WtE Decision-Makers Guide



Waste-to-Energy Options in Municipal Solid Waste Management

A Guide for Decision Makers in Developing and Emerging Countries

- Understanding WtE as part of integrated waste management system
- Financial, legal, ecological and institutional requirements which have to be met before WtE is applied
- Provides a decision matrix
- Link: ***http://bit.ly/2zkyiI7***

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Training concept on GHG emissions in the waste sector

Calculation of GHG emissions in the waste management sector

A modular training concept for the preparation of GHG inventory

- Policy and Institutional Framework
- GHG inventories in the waste sector
- Waste data management
- In depth GHG calculation methods
- Mitigation actions in the waste sector
- Instructions for trainers

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Thank you for your attention!

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