

Municipal Solid Waste Update

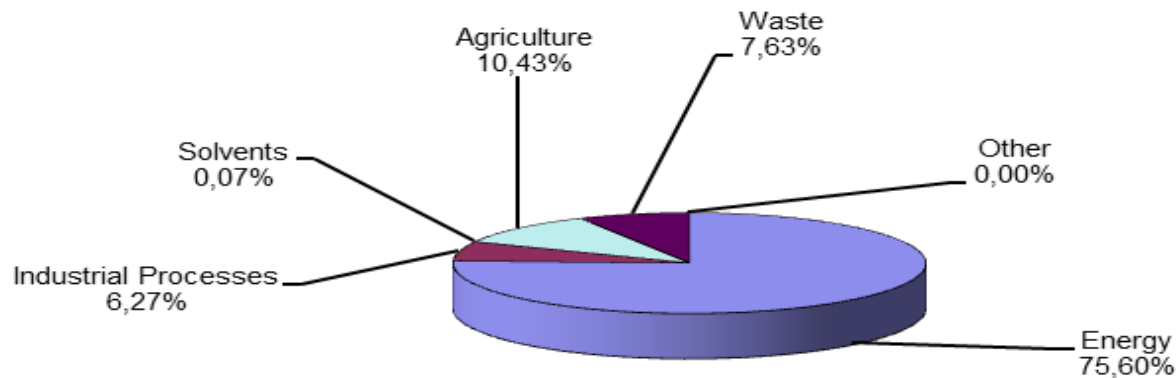
[BULGARIA]

**[MINISTRY OF ENVIRONMENT AND WATER OF BULGARIA]
GMI Municipal Solid Waste Subcommittee Meeting
Vancouver, Canada, 13 March 2013**



COUNTRY BACKGROUND AND OVERVIEW OF METHANE EMISSIONS

Share of GHG emissions in Bulgaria by source for 2010, based on the annual national report on the inventory of GHGs.



COUNTRY BACKGROUND AND OVERVIEW OF METHANE EMISSIONS

Share of methane emissions from landfills compared to methane emissions from all other sources in Bulgaria, 2010.



DRIVERS AND CHALLENGES

Directive 2008/98/EC on waste:

- ❑ Targets for recycling of 50 % of generated municipal waste until 2020

Directive 1999/31/EC on landfills:

- ❑ National strategy for biodegradable waste management (2010 – 2020)
- ❑ Targets for diversion of 65 % of biodegradable waste going to landfills until 2020

NATIONAL LEGISLATIVE MEASURES

- ❑ Implementation of ban for landfilling of none treated waste
- ❑ Obligation for recovery of the methane, generated on the landfills
- ❑ Obligations for local authorities and the business
- ❑ Implementation of economical instruments to encourage re-use and waste recycling (*landfill tax, legislative relaxations, incentives*)

NATIONAL LEGISLATIVE MEASURES

National Waste Management Plan 2009 – 2013

- ❑ Closure and reclamation of all illegal landfills and building a system of 55 regional waste treatment (recycling) systems
- ❑ Optimization of the current separate collection systems;
- ❑ Increasing of the quantities of re-used, recycled, recovered waste;
- ❑ Significant decrease of landfilled waste - aiming to become zero waste society

“WASMAP” SHELL BE THE INTEGRATED PART OF
NWMP 2014 – 20202

DRIVERS AND CHALLENGES OF THE “WASTE SECTOR METHANE ACTION PLAN”

Despite the number of regulations, strategies, and action plans in place there appear to be a number of challenges to the implementation of effective landfill gas control.

- ❑ Knowledge and capacity development
- ❑ Enforcement
- ❑ Business Models

OBJECTIVE, GOALS AND TARGETS OF THE WASTE SECTOR METHANE ACTION PLAN

The overall objective of this Waste Sector Methane Action Plan is to ensure that actions are taken to control the emissions of methane from landfills across Bulgaria.

The WasMAP has three goals:

1. Improving Knowledge
2. Enforcing compliance
3. Developing business opportunities

OBJECTIVE, GOALS AND TARGETS OF THE WASTE SECTOR METHANE ACTION PLAN

Targets:

Target no.	Year	Action to be completed
1	2014	Flare installations implemented at 6 new and existing regional landfills and 5 old landfills.
2	2016	Flare installations implemented at 22 new and existing regional landfills and 31 old landfills
3	2016	Gas utilisation schemes implemented at 4 regional landfills
4	2018	Flare installations are implemented at 30 new and existing regional landfills
5	2018	Gas utilisation schemes are implemented at 12 regional landfills.
6	2020	Flare installations are implemented at 54 new and existing regional landfills
7	2020	Gas utilisation schemes are implemented in all sites for which feasibility is assessed as positive

MEASURES ENVISAGED IN THE WASTE SECTOR METHANE ACTION PLAN

Capacity Building

Period	Action	Target Audience	Objective Target
2012/13	Selection of sites for first tranche of flare installation		Tranche 1 of flare installation 2014
2013/14	Initial awareness workshops for landfill gas management, resource potential, and roles and responsibilities	MOEW, local officers, municipalities, operators, potential contractors	Tranche 1 of flare installation 2014
2013	Production of gas management guidance documents	MOEW, designers, local officers, municipalities, operators, potential contractors	Tranche 1 of flare installation 2014 and ongoing
2013	Presentation of guidance documents/practical implementation workshops. Landfill integrated practices.	local officers, designers, state expertise, municipalities, operators, potential contractors	Tranche 1 of flare installation 2014 and ongoing
2013/14	Demonstration scheme for interim and final system installations – suitable site to be selected	MOEW, local officers, municipalities, operators, potential contractors	Tranche 1 of flare installation 2014 and ongoing
2013	Demonstration scheme for utilization potential – improved Suhodol scheme	MOEW, local officers, municipalities, operators, potential contractors	Preparation of potential schemes on conclusion of gas potential evaluation from landfills to be closed and operating flare systems
2013/4	Technology transfer missions to other European states with developed integrated landfill systems		

MEASURES ENVISAGED IN THE WASTE SECTOR METHANE ACTION PLAN

Sector Development

Period	Activity	Responsible stakeholders
2013	Develop range of PPP models appropriate for LFGE sector	MOEW, municipalities
	Promote business links and investment opportunities in Bulgarian LFGE sector	MOEW
	Consult with responsible ministries on streamlining the administrative process for LFGE project development	MOEW, other Ministries
2014	Implement pilot LFGE PPPs, stimulated as appropriate by competitive allocation of grant funding from OPE	MOEW, Managing authority
	Develop necessary implementing instructions or guidelines which facilitate the emergence and sustainability of PPPs	MOEW

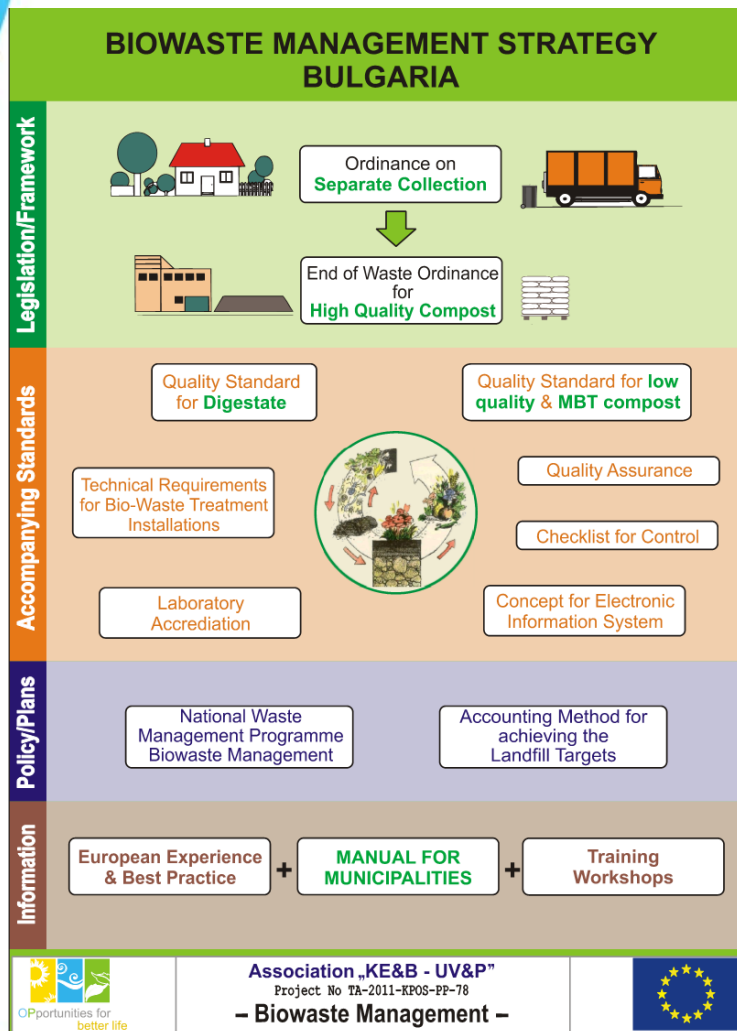
SCENARIOS FOR GMI SUPPORT AND PRIVATE INVESTMENT

Activities to Promote Methane Mitigation and Abatement

- ❑ International Best Practices Guide
- ❑ ECN and ISWA Collaboration
- ❑ Regional model
- ❑ Direct Use Resource Packet
- ❑ International Landfill Database

Nationally Appropriate Mitigation Action (NAMA)

Biowaste Management Project



EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND
COHESION FUND



OPERATIONAL PROGRAMME
ENVIRONMENT 2007 – 2013



Nationally Appropriate Mitigation Action (NAMA)

- ❑ PLOVDIV - SHISHMANTSI – 120 t/h capacity;
- ❑ VARNA – BELOSLAV – 450 t/d capacity;



- ❑ **Pilot project on implementation of decentralized biowaste recycling infrastructure in WMR**

Nationally Appropriate Mitigation Action (NAMA)

No	region	composting facilities	capacity, tons
1	Burgas	Composting facilities	36 206,49
2	Byala	Composting facilities	1 487,77
3	Varna	MBT; Composting facilities	41 157,27
4	Veliko Tarnovo	Composting facilities	13 407,22
5	Vidin	Composting facilities	10 116,18
6	Gabrovo	Composting facilities	3 154,43
7	Dobrich	Composting facilities	19 312,06
8	Kostenets	Composting facilities	2 034,19
9	Kostinbrod	Composting facilities	1 797,74
10	Kocherinovo	Composting facilities	17 209,29
11	Levski	Composting facilities	7 297,78
12	Lukovit	Composting facilities	2 156,31
13	Pazardjik	Composting facilities	22 604,46
14	Pernik	Composting facilities	11 250,19
15	Pleven	Composting facilities	16 395,54
16	Provadia	Composting facilities	7 239,52
17	Razlog	Composting facilities	1 384,44
18	Sofia	MBT; Composting facilities	106 603,61
19	Stara Zagora	Composting facilities	29 032,16
20	Yambol	Composting facilities	23 878,43

THANK YOU FOR ATTENTION!



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