### Country Factsheet Bulgaria (BG)

## Bulgaria [BG MoEW 2012] [BG WMA 2011] [ENVIROPLAN 2011] Recent achievements improvement of separate collection and involvement of private sector progress in waste management in the capital Sofia; having inadequate waste disposal in the past (facing court actions) establishment of first National Waste Management Program 2009-2013 recent improvements in bio-waste policy (establishment of Biowaste Strategy, project on developing bio-waste regulations, establishment of compost quality assurance system and National Organization for Quality Assurance of compost) introduction of landfill tax and progressive increase until 2014 planned (starting from 1,5 €/t in 2011 up to 17,5 €/t in 2014) total population in 2011: 7,504,868 [EUROSAT 2012c] **Population** ~ 71 % of total population living in urban areas in 2010 [CIA 2012] Population density inhabitants per km<sup>2</sup>: 68.9 per km<sup>2</sup> [EUROSTAT 2012c]; [CIA 2012] BG covers an area of 110,879 km². BG has a great variety of topographical features, mostly y mountains with lowlands in north and southeast, but also plains, plateaus, basins, gorges, and deep river valleys. The position of BG is characterised of the strategic interesting location to Turkey with controlling key land Geographical routes from Europe to the Middle East and Asia. particularities In Bulgaria the population is unevenly distributed across the country. About 71 % of the population was living in urban areas Sofia, is the largest city and capital of Bulgaria (1.192 million in 2009) located at the Iskar river [EEA 2010]; [CIA 2012]. Features of the national waste management system The Ministry of Environment and Water (MOEW) is responsible for the development and implementation and drafting of the national waste management policy as well as regulation of the activities in the public and private sectors. The MOEW performs some of the activities by the Executive Environmental Agency (EEA) and a network of 16 Regional Inspectorates of Environment and Water (RIEW) that are specialized control bodies of the Ministry and control the implementation of the waste Competent authorities management activities on their territories. Inspectorates ensure that the 58 waste management regions, set by the National Waste Management Program (2009- 2013) under their supervision comply with environmental standards. However, limited enforcement capacity of the Inspectorates will make closing all of about 200 non-compliant dump sites

challenging.

	Municipalities (264 in total) play an important role in the implementation of the policy in the environmental sector. Municipalities are organised in Regional Municipal Associations, which are responsible to implement the national waste management policy on the regional level.
	Under the new mechanism for development of the waste management infrastructure with the support of the Operational Programme Environment 2007- 2013, which was introduced in 2009, the funds for regional investments in the regional systems are now being allocated by central level decision making. [EIONET 2009]; [WORLD BANK 2011].
Informal sector	Existence of scavengers and rag pickers, picking up recyclables, in urban settlements and landfills. Health and safety risks are posed. [ENVIROPLAN 2011]
State of public awareness	The public awareness regarding environmental concerns of waste is not sufficiently developed. The Recovery Organizations and bodies, which are licensed for individual compliance schemes, are obliged under Ordinance on Packaging and Packaging Waste (2012) to implement information campaigns on annual basis. The fulfilment of this obligation is a subject of control on behalf of the MOEW during the approval of the annual audit reports. One of the priorities of the National Waste Management Programme (2009- 2013) concerns measures to raise awareness of citizens in all fields of waste management through different campaigns. [BiPRO 2008-2011]
Occurrence of structural dumping, fly tipping and littering	There exist a considerable number of non-compliant dump sites and the official deadline of 16 <sup>th</sup> July 2009 for closure is not met. All dumpsites which shall be closed in the 22 waste management regions (without Sofia) are explicitly mentioned in the Table №7 of the Mechanism for development of the waste management infrastructure with the support of the Operational Programme Environment 2007-2013. The estimation shows that the investment cost for their closure is about 53, 707,780 €. Closing and rehabilitation of illegal dumpsites will be done by funds from Operational Programme Environment and the State budget. [BG MoEW 2012] [Ernst & Young 2011]
Legislation	
National	Waste Framework Directive: At the time of writing this report, Bulgaria has transposed the WFD into national law by the Waste Management Act, promulgated in SG 53/13 July 2012.
	The further legislation is also of relevance in regard to the WFD (the first two will be revised, as a consequence of the new WMA)
	<ul> <li>Ordinance No 9 on the conditions and forms for submission of information for waste management activities and the Public Register of closed enterprises and activities (promulgated in SG 95/2004)</li> </ul>
	<ul> <li>Ordinance for definition of the order and amount of the product fee for products which after their use generates widely spread waste (promulgated SG 120/2008, last amended SG 29/2011)</li> </ul>
	Ordinance for construction and demolition waste management and recycled constructional
	materials use (promulgated in State Gazette 89/13 November 2012)
	materials use (promulgated in State Gazette 89/ 13 November 2012)  Landfill Directive and WAC Decision [EIONET 2009, Eur-Lex 2012]:
	Landfill Directive and WAC Decision [EIONET 2009, Eur-Lex 2012]:  Ordinance No 8 on the conditions and requirements for construction and operation of landfills and other facilities and installations for waste disposal and recovery (SG 83/24.09.2004, last amended

**Packaging Directive:** Ordinance on packaging and packaging waste (adopted with CM Decree 271/202012, promulgated in State Gazette 85/06.11.2012)

**Others:** The requirements on waste classification, Decision 2000/532/EC) has been transposed by the ordinance No 3 on waste classification (SG 44/25.05.2004).

The EU requirements on **incineration** have been transposed by Ordinance No 6 on the conditions and requirements for construction and operation of incineration-plants and co-incineration plants (SG 78/07.09.2004).

Further the EU requirements on **shipments** of waste (including financial guarantee), **WEEE**, **batteries** and accumulators, **ELVs** and **waste oils** have been transposed accordingly

Regional

n/a

#### WMP and WPP

#### National

The **National Waste Management Programme** for 2009-2013 (Национална Програма За Управление На Дейностите По Отпадъците За Периода) was published in 2009

In Bulgarian:

http://www3.moew.government.bg/files/file/POS/Strategic\_documents/Programmes/NWMP\_2009-2013\_FINAL.doc

The NWMP 2009-2013 sets specific measures for the following 10 strategic objectives of waste management:

- Waste prevention and minimisation
- Increase of the quantity of recycled and recovered waste
- Improvement of the organisation of separation, temporary storage, collection and transportation of waste
- Environmentally sound waste disposal
- Legal regulation of waste management and acceleration of the implementation of the legislation and policy in this field
- Increase of the investments in the sector and implementation of Producer responsibility and
   Polluter pays principles in the system for integrated waste management
- Provision of database about waste
- Strengthening the administrative capacity of the institutions responsible for waste management
- Public participation
- Development of sustainable management systems for specific waste streams

A **Waste Prevention Programme** is not established as own plan nor integrated into the current WMP yet.

Regional

n/a

Instruments applied in the field of municipal waste and packaging waste

#### Legal instruments

**Landfill ban/restrictions/diversion targets:** Landfill restrictions (other than the ones set in Landfill Directive) or a ban for biodegradable and/or compostable waste is not in place [EC 2012].

**Strategy on the reduction of bio-waste:** There is a National Strategic Plan for the gradual reduction of the amount of biodegradable waste going to landfill

(http://www3.moew.government.bg/files/file/POS/Strategic documents/biowaste strategy 2010.pdf). Under the strategic plan, there is a running project for the development of biowaste regulations, establishment of a compost quality assurance system and a National Organization for Quality Assurance of compost. A first draft of the Ordinance on separate collection of biowaste and Ordinance on compost has been prepared.

**Strategy on C & D waste:** A National Strategic Plan for C&D waste management, of the territory of Bulgaria for 2011-2020

http://www3.moew.government.bg/files/file/POS/Strategic\_documents/NSPUOSR-final.pdf

- Collection, reuse/refill and recycling targets [BG WMP 2009-2013]: In compliance with the WFD, the following indicative targets for reuse and recycling of municipal waste are set in the new Waste Management Act:
- By 2016 at least 25 % of all waste are recycled
- By 2018 at least 40% of all waste are recycled
- By 2020 at least 50% of all waste are recycled

Further targets for the recycling and recovery of C & D waste are set.

The Ordinance on Packaging and Packaging Waste (OPPW) and the Waste Management Act oblige all producers or importers of packaged goods to collect, recycle and recover their packaging waste. The following national targets for recovery and recycling should be achieved in accordance with the Transit and Closing Provisions of the OPPW. Transitional period for target achievement was granted [EC 2012c]:

Year	Recycling (%)	Recovery (%)	Targets by materials %					
	Necycling (70)		paper	glass	metals	plastics	wood	
2012	52	53	60	59,6	50	22	15	
2013	54,9	56	60	60	50	22,5	15	
2014	55	60	60	60	50	22.5	15	

# Economic and fiscal instruments

#### Landfill tax / gate fee/typical charge [EC 2012] [EC 2012f];

- landfill tax has been introduced in 2011 both for municipal and inert waste;
- planning under the Waste Management Act and the Ordinance 207/2010 foresees the gradually increase of the landfill tax; 4.50 €/t in 2012; 7.50 €/t in 2013 and 17.50 €/t in 2014; the level of landfill tax is considered as low
- gate fees are also very low and the typical charge is calculated with 10-20 €/t for municipal waste
- on top of this value, another 5 €/t for future recultivation are added, as well as the applicable landfill tax

Incineration tax / gate fee [EC 2012] no incineration is in place, currently no incineration tax

**PAYT** [EC 2012]; Pay-as-you-throw systems are not implemented; PAYT is partly implemented for companies, institutions, hospitals, etc.; payment is mostly based on generated waste quantities (number of containers, collection frequency)

Packaging waste [EC 2012c] [BG EcoBulpack 2012]; [BG Ecopack 2012]

- any person who puts products on the market generating widespread waste must pay a product

fee, for which the amount and procedure for application are defined

- there are derogation for producer, in case there are member of Recovery Organization or organize the individual schemes for compliance
- relationships between producers/importers and Packaging Recovery Organizations (for example ECOPACK BULGARIA, Ecobulpack, etc.) are regulated by a contract
- amount 'license fee' covers costs of company in relation to establishment of collection systems (buying of containers and trucks, recovery of packaging waste, organisation, administration and reporting to the MOEW and implementation of awareness campaigns)
- In case that obligations for completion of recycling quotas for certain year are not fulfilled, company is obligated to pay the full amount of the product fee to the MOEW (to Enterprise for Management of Environmental Protection Activities, EMEPA)

Packaging Material	Lew/kg	€/kg
Plastics	2.33	1.19
Paper / cardboard	0.67	0.34
Metal	0.13	0.07
Aluminium	0.60	0.31
Glass	0.20	0,10
Composite material	0.20	0,10
Timber	1.73	0,86
Textile	0.80	0.40
Ceramics, porcelain, nacre and other materials	0.80	0.40

- packaging and packaging waste standards BDS EN 13 427-13 432 have been introduced
- for manufacturers and importers marketing multi-use packaging a reduction of fees is introduced;
   further multi-use packaging is only regarded as being marketed the first time it is placed on the market
- for glass, deposit refund system exists

#### Subsidies / Funding;

- Environmentally motivated subsidies: are organised by Enterprise for Management of Environmental Protection Activities: tax bases or sub-schemes for grants, interest free loans and soft loans [OECD/EEA 2012].
- BG is currently implementing its integrated solid waste management system (ISWM) via EU funding and the Operational Programme Environment 2007-2013 with a focus to construction of landfills
- The NWMP envisages in total 58 regional IWMS; At this moment, there are 4 regional IWMS projects (Botevgrad, Vidin, Burgas, Sofia- stage I) running and another 14 under evaluation (Malko Tarnovo, Borovo, Varna, Veliko Tarnovo, Gabrovo, Dobrich, Kostenets (Samokov), Levski (Nikopol), Lukovit, Panagyurishte, Pleven, Razlog, Stara Zagora, Yambol
- The total budget available under Operational Programme Environment for establishment of new waste management infrastructure is 367 million € for 22 project regions (Sofia Municipality Project not included in this number)

#### Municipal waste fee [EIONET 2009];

- the mechanism for financing household waste management obligations of municipalities,
- obligation is provided by the Waste Management Act; is laid down in the Local Taxes and Fees Act (LTFA)

	in principle LTEA provides the apparturity for every household to pay municipal waste fee based
	<ul> <li>in principle LTFA provides the opportunity for every household to pay municipal waste fee based on the amount of waste generated, however, this possibility is not used by the municipalities and they charge the household on the basis of the property value; fee is included in the general municipal tax set on annual basis</li> </ul>
	<ul> <li>the municipal waste fee is meant for covering the costs of household waste collection (storage containers, buckets, transport), treatment; maintaining clean public areas in towns and villages; research, design and construction, maintenance, operation, closing and monitoring of landfills or other facilities; the fee is calculated separately for each service</li> </ul>
	<b>Fines</b> [BG WMA 2011]: Fines for non-compliance with waste regulations are incorporated into the Waste Management Act, describing more than 100 violations of entire waste management legislation (e.g. violation of regulations on trade with hazardous substances, on collection, transportation and treatment, trade with metal waste, of administrative regulations, unauthorised disposal of waste).
	[EC 2011f], [BiPRO 2008-2011], [OECD/EEA 2012] [EC 2012 Annex 1]
Administrative instruments	n/a
Informative instruments	Information campaigns addressing certain target groups (e.g. households, the public, businesses, schools, tourists, industry etc.
	<ul> <li>The LIFE+ BALKWASTE project: "Waste Network for sustainable solid waste management planning and promotion of integrated decision tools in the Balkan Region" was implemented in Romania, Bulgaria, Slovenia, Greece, aiming to promote sustainable waste management planning in the Balkan region: http://www.balkwaste.eu/</li> </ul>
	<ul> <li>The Environment Executive Agency publishes an annual report on the achievement of Bulgaria's packaging waste recycling and recovery targets in its website http://nfp-bg.eionet.eu.int/bul/Output/Reports/index.html</li> </ul>

Municipal waste generation	MS	EU 27					
Total amount of MW generated (in kt)[EUROSTAT 2012b]	3,091	252,095					
Total amount of MW generated per capita (in kg)[EUROSTAT 2012b]	410	502					
Collection infrastructure (municipal waste including bio-waste and packaging waste)							
Collection coverage for MW (in %) [EUROSTAT 2010]	98.15	96.6					

#### **Collection of municipal waste:**

- the Waste Management Act obliges the municipalities to deliver service for collection and transportation of municipal solid waste to each holder of waste
- the coverage of service is about 98.2 % in 2010 according information of the National Statistical Institute
- in most of the cases the activities for collection and transportation of waste are performed by private operators, which are selected under Public Procurement Act
- new obligation for separate collection of at least 4 material streams (paper and cardboard, plastics, metal and glass) from household and similar waste generation sources
- each municipality established its own scheme for collection and transportation of MSW (e.g. different collection frequency)
- in some urban area (e.g. Sofia) this is done 7 times per week; in other areas 2-3 times per week.; in rural areas the optimal

schemes are with collection frequency 2-3 times per month

Separate collection of bio-waste: There are no systems for separate collection of bio-waste:

Separate collection of packaging waste [BG MoE 2012]: There exist 9 authorised packaging waste collective (RO) (of which three have their permit recently revoked) and eight individual compliance schemes. To December 2011 there are 215 covered municipalities with 6,292,512 inhabitants in total, or 84 %. An increasing number of municipalities (also smaller) have signed contracts with the recycling operators. Typically, there are three collection bins for metal & plastic, paper and glass. Some of ROs apply scheme with 3 containers (blue – for paper and cardboards, green – for glass and yellow – for plastics and metals) or 2 containers (yellow – for all recyclable packaging's except of glass and green – for glass). The frequency of collection and transportation of packaging waste depends on the collected quantities and the specific contact with the respective municipality.

#### Treatment infrastructure for municipal waste [EC 2012b]

95\* (2009)

Self-sufficiency for disposal of total waste (in %)

\* 95 % landfill/ 5% temporary storage

With the implementation of the Operational Programme Environment, Bulgaria will have sufficient capacity to dispose of all types of waste generated. However, currently this figure more than likely does not take into account the number of active non compliant landfills.

Treatment rates[EUROSTAT 2012b]	BG	EU 27
Recycling rates of municipal waste (in %)		
* Excluding the total amount of recycled packaging waste due to different	0*	24.9
statistical methodology. A new methodology is being developed.		
Composting rates of municipal waste (in %)	0	14.7
Recovery rates of municipal waste including incineration with energy recovery (in %)	0	17.2
Incineration rates of municipal waste (incineration without energy recovery) (in %)	0	-
Disposal rates of municipal waste (in %)[EUROSTAT 2012b]	100	38.2

#### Information on treatment facilities, compliance/BAT and capacity

Pre-treatment facilities for municipal waste

MBT: For Sofia MBT plant (initially expected to be operational in 2013) funded by EU Funds. The plant has been on hold for about 3 years. Currently it is implemented the first phase of Sofia Waste Project, related with construction of landfill for non-hazardous waste. At the beginning of May, 2012 started the evaluation of tender documentations for Design and Construction of MBT Plant for processing of waste and production of RDF. The MBT will produce RDF for incineration in a nearby thermal plant that provides with district heating the capital. As a transitional solution until the MBT construction, pre- treatment of waste (claimed to be 100 %) is implemented through three separation installations with production RDF and recyclables from separate collection. Two MBT plants have been constructed under PPP in Varna region, (140,000 t/y capacity) and Plovdiv (125 000 t/y capacity).

In general, there is lack of progress and implementation of biodegradable waste reduction measures. [EC 2012e].

#### Recycling facilities

**Recycling of biowaste:** A tender was launched (regional IWMS) for design under Yellow FIDIC and construction of composting installation for green waste and bio- waste, site Han Bogrov.

**Recycling rates of packaging waste :** Under EU funding (development of 58 integrated solid waste management systems) the following Technical Assistance projects are expected to be procured:

Recycling plants for cardboard and paper with an annual overall capacity of 138,000 tons

25 recycling installations for plastic waste with an annual capacity of 74,600 tons Various facilities for glass recycling with an overall recycling capacity of 206,000 tons as well as units with optical separators to remove contaminants up to a 99.94% purity A recycling capacity for waste metals of 1,5 Mio tons/year 29 **separation facilities** for the treatment of packaging waste. The number is not sufficient to cover the territory and another twelve are planned to be constructed with funds from Operational Programme. It appears that the private sector is strong and active recycling private sector, as it seems to be an attractive market. Currently, there are as much as nine (of which 2 dominate the market) authorised PW recycling schemes). An increasing number of municipalities (also smaller) have signed contracts with the recycling operators. [BiPRO 2007-2011] [interview with MoEW] [interview with EcoPack] [interview with EcoBulpack] No waste incineration plant exists in Bulgaria. There are five cement factories for co-incineration of *Incinerators with energy* cardboard/paper, plastics, textiles, wood and waste tyres, as well as RDF produced in Sofia recovery municipality. [EC 2012b] [BiPRO 2007-2011] [interview with MoEW] Incinerators without energy n/a recovery Landfills for non-hazardous In BG exists 32 new regional landfills (out of 58 regions in total); 5 regional landfills are under waste construction (Botevgrad, Kurdjaly, Sofia, Asenovgrad and Zlatitza). There exists 124 active, non compliant landfills and  $\,$  5 private landfills compliant with EU requirements (3 for hazardous and 2 for C&D waste). [BiPRO 2007-2011] [interview with MoEW] Map with all major http://pdbase.government.bg/waste-2010/mapviewer.jsf?width=973&height=655 installations Landfill Treatment Facility Infringement procedures and court cases related to WFD and Landfill Directive

# Number of infringement procedures

and cases brought to the CJEU

- The European Commission is referring BG to the EU Court of Justice for failing to meet the December 2010 deadline to transpose the EU's WFD into national law.
- Seven infringement cases were opened during 2010 in relation to EU legislation in this sector (compared to 32 cases in 2009) and 25 cases were closed. All of these cases were opened as a result of late communication of national measures transposing EU Directives which generally contained technical updates of the acquis two proceedings for Bulgaria. [EC 2011]
- A comitology decision was adopted extending the derogation period for Bulgaria to raise objections to shipments of certain waste to Bulgaria for recovery under the EU waste shipment regulation (OJ L210, 11.8.2010, p.35).[EC 2011]
- No. 2007/2321 non-conformity of Directive 2006/12/EC (Text with EEA relevance). Still pending [EC 2011]

#### Fulfilment of targets related to biodegradable waste going to landfills [EC 2012a]

Fulfilment of target of the Landfill Directive on biodegradable waste going to landfills

70,3% (data from 2008)

This figure probably reflects a decrease of population compared to 1995 or a change in composition of biodegradables in MW

#### Statistics on packaging waste [EUROSTAT 2012d]

	pack	packaging packaging pack		pack	Metal Glass packagi ckaging waste vaste			Total packaging waste (also including wood and other packaging waste)		
	MS	EU	MS	EU	MS	EU	MS	EU	MS	EU
Total amount generated (in kt)	95	14,590	97	29,783	13	4,544	76	16,006	304	76,593
Total amount generated per capita (in kg)	12.6	29.2	12.8	59.5	1.7	9.1	10	32	40.1	153.1
Share of total packaging waste (in %)	31.4	19	31.9	38.9	4,3	5.9	25	20.9	100	100
Recycling rates (in %)	30	32.2	67.3	83.4	50.5	69.5	39.7	67.6	45.9	62.5
Recovery rates including incineration with energy recovery (in %)	30	59.7	67.3	90.7	50.5	69.9	39.7	67.6	45.9	74.6
Disposal rates (in %)	70	40.3	32.7	9.3	49.5	30.1	60.3	32.4	54.1	25.4
Fulfilment of target of the Packaging Directive on recycling	yes	n/a	yes	n/a	yes	n/a	no	n/a	no	n/a

Information on collection and recovery systems for packaging waste There exist nine Recovery Organization for packaging waste are granted permits by the MOEW (three of them have their permit revoked currently by Ministerial decision). Each organization has its own policy for fulfilment of recycling quotas and takes individual decision about the size of licence fees that shall be played by its members. There are also eight authorised individual compliance schemes. Recovery Organization (RO) and respective municipality make a contract. All settlements with a population higher than 5,000 are obliged to have contract with a separate collection scheme.

The recycling/ recovery targets have been achieved for the previous year 2011 (55 %/60% target has been officially derogated for 2013), ii). BG receives imports of packaging waste from neighbouring countries for recycling. Glass pre-treatment and recycling has strongly negative cost and is subsidised by the ROs. For

this reason, it is used in some cases as aggregate for cement rather than for re-melting. Tetrapak is sent for energy recovery. Wood is mainly sent for energy recovery as the market for pallets/MRF is very limited.

#### Initiatives related to improved municipal waste management

#### Government

In BG the establishment of the necessary collection and treatment infrastructure is the major priority for the moment. The focus is put on regional landfills as well as separate collection of packaging waste and (pre)-treatment facilities for biomass and other non-municipal waste. In BG the third (2009-2013) national WMP has been elaborated and needs to be implemented and enforced now over the next years.

BG asked for information transfer and experiences from other Member States as regards permitting of waste treatment installations (e.g. facilitated procedures for recycling plants, duration of permits, etc). [ENVIROPLAN 2011], [BiPRO 2007-2011]

At present, data on municipal waste does not include recycling – recovery of packaging waste, leading to a % decrease in the respective figures. In order to improve the methodology for collecting and reporting data on waste in the country, the Bulgarian Ministry of Environment (EEA) and Water, together with the National Statistics Institute will initiate a change in the methodology for reporting data for waste and packaging waste generated by households.

## Industry and related associations

Bulgarian Association on recycling (http://www.bar-bg.org/)

#### NGOs

Professional Association of municipal environmental experts is established 20 years ago. They are making regular meetings and participate with official statements in implementation of the national waste management policy (http://www.bamee.org/)

Next steps planned by CA	Measures planned	Implementation likely?
Collection	The current figures (2010) of 98.2 % collection and 84 % separate collection are already adequate, but it is expected to be further improved with the implementation of the Operational Programme.	
	In the new Waste Management Act transposing the WFD, stricter obligations for municipalities for separate collection are set comprising the oobligation for separate collection of green waste (garden and park waste from public and commercial sites) and bio-waste.	Yes
Treatment	The Operational Programme Environment is on-going, both for construction and the TA (facing delays in the approvals and procurement of the works).  In the new Operational Programme, there will be no funds for new landfills.  There is an on-going project for the Development of regulations on management of bio-waste and establishing a system for ensuring the quality of compost and the National Organization for Quality Assurance compost.	Yes
Permitting and inspections	Permitting and inspection requirements are set in the new WMA.	Yes
Waste prevention programme	According to the new WMA, the Bulgarian WPP will be part of the new Waste management plan for the period 2014-2020 and will be adopted until 12.12.2013.	Yes

#### **Information Sources:**

[BG EcoBulpack 2012] Interview with EcoBulpak, Mr. Vidio Videv, Executive Director, 15/6/2012

[BG Ecopack 2012] Interview with Ecopack Bulgaria (Bulgarian Green Dot system), Mr T. Bourgoudjov, Executive Director, 13/6/2012

[BG MoEW 2012] Interview with Ministry of Environment and Water, Directorate for Waste Management, Ms Svetlana Bojkova (State Expert), 13/6/2012

[BG WMP 2009-2013] The National Waste Management Programme for 2009-2013, published 2009. http://www3.moew.government.bg/files/file/POS/Strategic documents/Programmes/NWMP 2009-2013 FINAL.doc

[BG WMA 2011] Waste Management Act (Dated 18 September 2003, promulgated in State Gazette 86/2003, last amended SG 99/2011)

[BiPRO 2007-2011] BiPRO. 2007-2011. Awareness Reports on Implementation of EU waste legislation in Member States. http://www.bipro.de/waste-events/index.htm

[CIA 2012] https://www.cia.gov/library/publications/the-world-factbook, accessed in April 2012

[EC 2011] European Commission. 2011. Annual report on monitoring the application of EU law. http://ec.europa.eu/eu law/infringements/infringements annual report 28 en.htm

[EC 2012] European Commission. 2012. Use of economic instruments and waste management performances. The final report from 15 February 2012.http://ec.europa.eu/environment/waste/pdf/final\_report\_10042012.pdf

[EC 2012a] European Commission. 2012. Background data on the fulfilment of targets of the Landfill Directive. Unpublished document.

[EC 2012b] European Commission. 2012. Final implementation Report for the Waste Framework Directive 2006/12/EC (2007-2009) and Triennial Member States' reports on the implementation of waste legislation of (covered by Directive 91/692/EEC) on Directive 2006/12/EC on waste.

[EC 2012c] European Commission. 2012. Final implementation Report for the Packaging and Packaging Waste Directive 94/62/EC.

[EC 2012e] European Commission. 2012. Final Implementation Report for the Directive 1999/31/EC on the Landfill of Waste (2007-2009) and Triennial Member States' reports on the implementation of waste legislation of (covered by Directive 91/692/EEC) on Directive 1999/31/EC on landfills.

[EC 2012f] European Commission. 2012. Internal working document on the annual growth survey possible contribution to waste sector. Version February 2012.Unpublished document.

[EEA 2010] European Environmental Agency.2010. SOER country assessments (section "material resources and waste"). http://www.eea.europa.eu/soer/europe/material-resources-and-waste<sup>2</sup>.

 $\underline{\text{http://www.eea.europa.eu/soer/countries\#c11=CommonalityReport\&c11=DiversityReport\&c11=FlexibilityReport\&c12=all\&c5=waste\&b\_s}$ 

<sup>&</sup>lt;sup>1</sup>Searchable at

**[EEA 2010b]** European Environmental Agency.2010: SOER country assessment (section "country profile").http://www.eea.europa.eu/soer/countries/folder listing

**[EIONET 2009]** European Topic Centre on Sustainable Consumption and Production.Country fact sheets on waste policies – 2009 edition.http://scp.eionet.europa.eu/facts/factsheets waste/2009 edition

**[ENVIROPLAN 2011]** Ministry of Environment and Water. 2012. EuropeAid/124485/D/SV/BG: Preparation of Solid Waste Management Measures in Levski, Borovo, Veliko Tarnovo and Varna Regions, Bulgaria, Task 1.1 Baseline Report

[Ernst & Young 2011] Ernst & Young. 2011. Key issues in municipal waste management in EU-11 countries.

http://www.ey.com/Publication/vwLUAssets/Key issues in municipal waste management in EU-11 countries/\$FILE/Raport eng.pdf, accessed June 2012.

**[EUROSTAT 2010]** EUROSTAT. 2010. Internal working document on collection coverage in MS indicating the rate for collection coverage data for 1995 - 2010. Document unpublished.

**[EUROSTAT 2012b]** Data on municipal waste generation and treatment in 2010. <a href="http://epp.eurostat.ec.europa.eu/statistics">http://epp.eurostat.ec.europa.eu/statistics</a> explained/index.php/Waste statistics and <a href="http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\_database">http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\_database</a>, accessed January 2012.

[EUROSTAT 2012c] Data on population in 2011.http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\_gind&lang=en, accessed April 2012.

**[EUROSTAT 2012d]** Data on packaging waste generation and treatment in 2009. <a href="http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=ten0006">http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=ten0006</a> 3, accessed April 2012.

**[OECD/EEA 2012]**OECD/EEA.2012. OECD/EEA database on environmentally related taxes, fees and charges, other economic instruments and voluntary approaches used in environmental policy and natural resources management. http://www2.oecd.org/ecoinst/queries/index.htm, accessed April 2012.

[RETech 2009]RETech.Waste Management.Made in Germany.Die Exportinitiative Recycling- und Enffizienztechnik. Länderprofil Abfallwirtschaft. <a href="http://www.retech-permany.net/themen/laender">http://www.retech-permany.net/themen/laender</a> und maerkte/laenderprofile/dok/323.php

[WORLD BANK 2011] World Bank.2011. Solid Waste Management in Bulgaria, Croatia, Poland, and Romania. A cross-country analysis of sector challenges towards EU harmonization. <a href="http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/05/24/000356161">http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/05/24/000356161</a> 201105 24005013/Rendered/PDF/600780ESW0WHITOand0candidates0FINAL.pdf, accessed April 2012.

 $\frac{\text{http://www.eea.europa.eu/soer/countries\#c11=CommonalityReport\&c11=DiversityReport\&c11=FlexibilityReport\&c12=all\&c5=waste\&b\_s}{\frac{\text{tart}=0}{\text{tart}=0}}$ 

<sup>&</sup>lt;sup>2</sup>Searchable at