



Analysis on Public Infrastructure Bulgaria



**BALKAN
MONITORING
PUBLIC
FINANCES**

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CREDITS

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This document has been produced as a part of the project “CSOs as equal partners in the monitoring of public finance“ which started beginning of 2016 and is implemented by a consortium of 10 organizations from 7 countries and will last for four years.

The aim of the project is to improve the transparency and accountability of policy and decision making in the area of public finances through strengthening the role and voice of NGOs in monitoring the institutions that operate in the area of public finances. In this way, the project will strengthen CSO knowledge of public finance and IFIs and improve CSO capacities for monitoring. Additionally, it will help advocate for transparency, accountability and effectiveness from public institutions in public finance. Moreover, this project will build know-how in advocating for sustainability, transparency and accountability of public finance and IFIs. This project will also increase networking and cooperation of CSOs on monitoring of public finance at regional and EU level. Lastly, it will increase the understanding of the media and wider public of the challenges in public finance and the impacts of IFIs.

Key project activities are research and monitoring, advocacy, capacity building and transfer of knowledge/practices and networking in the field of the 4 specific topics: public debt, public-private partnerships, tax justice and public infrastructure.

More information about the project can be found on <http://wings-of-hope.ba/balkan-monitoring-public-finance/> and on the Facebook Page Balkan Monitoring Public Finances





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1. OVERVIEW OF THE TRENDS IN PUBLIC INFRASTRUCTURE PROJECTS

Definition of public infrastructure There is no legal definition of the term 'public infrastructure' in Bulgaria. The Law on Spatial Planning contains definitions of subtypes of infrastructure, such as 'technical infrastructure, and 'municipal projects of paramount importance', 'project of regional importance, 'social infrastructure'.

1.1. Recent trends and public financial flows for infrastructure

As part of the European Union, Bulgaria has a seven-year programming period under the EU Budget, the current one being for the period 2014-2020. There are Operational Programmes, which have budgeted EC funding for commonly agreed priorities, among which OP Transport, renamed into OP Transport infrastructure, OP Environment, and other five operational programmes.

According to the Minister of Transport, there has been 280 km motorways built for the 2007-2013 period, 50km first class roads, 20 metro stations and 21 km metro lines in Sofia, as well as 500 km rehabilitated railway lines. The priority project under the new OP Transport and transport infrastructure is Struma motorway, alongside with other 5 major railway projects.

The Cohesion Fund is the main source for the current **OP Transport infrastructure** (also hinting in its name what the priorities are) and **OP Environment**. It provides for the transport projects, water treatments projects and waste management. What this actually means in practice is that every seven years the Bulgarian government focuses on building road infrastructure, particularly **motorways**. This has been the trend both in the previous and the current programming period. In practice, the Cohesion fund translates into motorways, landfills, and wastewater plants projects.

Keeping down the minimum wage, and hence - all income; refraining from investments in health, education and culture, were all explained by the need for construction of hard infrastructure, mostly motorways - a prerequisite for attracting foreign investment. At the same time, the government continues to neglect the railway, which is the most environmentally friendly and energy-efficient mode of transport. The state-owned railway company, **BDZ**, has accumulated losses, which, although they declined last years, are still critically high. Passenger train services to remote locations that are not



profitable are being discontinued without much do. The Commission has recently announced that it allows the Government to support the Bulgarian State Railway company with 224 million BGN (close to 112 mln euros), however it is important to note that this has been the **third time** that this has been done. The previous two times have been under the same Prime Minister back in 2009 and 2011 and there were no funding made available for the almost bankrupt state company.¹ NGOs doubt that the Government will undertake any actions towards the railways and highlighted that the Transport strategy until 2030 has been adopted with no public consultation.

The 2016 State Budget Act stipulates the concession of **Sofia Airport**², the initial amount of which is to be used to pay BDZ's debts. Once the railway company's obligations have been paid, its privatization would become possible.

Meanwhile, the national strategies envisage increased traffic along rail freight routes in Bulgaria. One obstacle to the stabilization of the sector is the high relative price of freight. The vignettes used for charging motor cars are significantly cheaper than the fees charged by the NRIC - the National Railway Infrastructure Company.

Passage through the road network in Bulgaria is significantly cheaper in comparison with road tolls charged in neighbouring countries and the EU as a whole. For that reason, the government had a plan to introduce tolls for the use of motorways and primary roads. For the time being this cannot happen because the motorways are built using European funds, on the one hand, and on the other, often there are no alternative roads – which is one of the prerequisites for introducing additional fees for motorways.

The Bulgarian strategy for allocating the available resources in Axis II – **Waste management of Operational Programme Environment (OPE)** for both 2007-2013 and the current period heavily leans towards large-scale **'hard' infrastructure**, instead of promoting innovative waste management approaches. Most funds in the first period went for facilities operating at the least preferred level of the waste hierarchy stipulated in the Waste Framework Directive: **regional landfills**, as well as for **sorting facilities** that pre-treat mixed solid waste before it is sent to **landfill or cement kilns for incineration**. The current plan involves **large-scale facilities for treating biowaste** – centralized composting and anaerobic digesters, which recycle organic waste and produce energy. Still, the greatest part of the money is dedicated to **co-funding the final third phase of the Integrated Sofia Waste management**

¹ The three cases for admittance of state subsidy for the railway company from the side of the EC are available at the official site of the Commission: http://ec.europa.eu/competition/elojade/isef/index.cfm?clear=1&policy_area_id=3

² Law for the state budget 2016 <http://dv.parliament.bg/DVWeb/showMaterialDV.jsp?idMat=99252>



project – an RDF incinerator – the second least-preferred option in the waste hierarchy and an operation that not in line with the principles of the circular economy.

Many **stadiums and cultural centres were built in rural areas** using EU funds. The plan was to have them inaugurated before the last local elections. This would not be a problem if there was a need for these facilities. In many cases, however, they were constructed for their own sake - because of the depopulation of small settlements often the total number of residents is far smaller than the spectator seats available at the new stadium. Nobody is practising ballet or taking lessons in the cultural centres, as there simply aren't any children around.

Social infrastructure is neglected. Probably the reason is the need for additional funds for its operation. The depopulation of peripheral areas and small towns, as well as the failure of health-care facilities, have led to the closure of many schools and hospitals. By contrast, there are many private hospitals that have contracts with the National Health Insurance Fund. The problem is that the purpose of medical professionals is no longer to treat patients, but to draw in money from the National Fund, including by performing unnecessary operations. Private hospitals often specialize in areas that are more highly paid and, unlike the state, have no obligation to carry out loss-making activities, such as emergency medical care, for example.

Challenges in the sphere of energy. In relation to pollution reduction measures, many of the thermal power plants are to be closed in the next 10 years. On the one hand this will lead to increased unemployment, on the other – to a shortage of electricity. That does not mean that we should extend the life of coal mines, but it is imperative to adopt consensual national decisions about alternative ways to meet energy demand.



2. CASE STUDIES

2.1. Sofia Waste Management Project	
Name of the project	Waste incinerator at Sofia district heating plant - Phase III of Integrated system of solid waste treatment facilities of Sofia Municipality – Bulgaria
Location of project	Sofia, Bulgaria
Short description	<p>Sofia is the largest city and capital of Bulgaria with steadily growing population and waste quantities. The project is implemented in 3 phases:</p> <ol style="list-style-type: none">1) landfill, biogas and composting plants (operational since 2013 and 2014)2) mechanical-biological treatment plant (MBT) (operational since 2015)3) incineration unit for refuse-derived fuel (RDF) output from MBT in step 2 at local district heating plant. (in pre-approval phase).
Technical details	<ul style="list-style-type: none">• ‘Sadinata’ Landfill capacity of 3.2 million tonnes, projected lifetime of 21 years.• ‘Han Bogrov’ biological treatment site: capacity of composting plant for green waste: 24 000 t/y (ca. 60% of generated amounts om 2014) and capacity of anaerobic digester for food waste: 20 000 t/y (ca. 27% of generated amounts in 2014).• ‘Sadinata’ Mechanical biological treatment plant capacity for mixed waste treatment: 410 000 t/y (107% of generated



	<p>mixed waste in 2014), rate of recovery of recyclable materials: ca. 4% of mixed waste input.</p> <ul style="list-style-type: none">• ‘TEC Sofia’ RDF incinerator unit at existing district heating plant in Sofia, capacity for RDF incineration: 180 000 t/y (ca. 45% of mixed waste in 2014). <p>The proposed waste management system currently yields ca. 35% recycling, formal separate collection is low (3% for packaging and 2% for biowaste) and most recyclables (25%) are acquired via informal pickers from waste containers in the street against payment or directly from business waste generators.</p>
The benefits of the project?	<p>Sofia Municipality claims that the third phase of the project – the RDF incineration unit will improve the efficiency of the district heating supplier, financially-troubled Toplofikacia Sofia, by replacing 10% of the natural gas fuel used with ‘alternative fuel’ derived from Sofia’s mixed waste stream, while also meeting legal waste management requirements to reduce biodegradable waste (food, garden, paper, cardboard) going to landfill. The hypothetical beneficiaries of the project are district heating customers (expected lower bills due to natural gas substitution) and all Sofia inhabitants due to extended landfill lifetime, as well as the global climate benefit of reducing methane emissions from landfilled biowaste.</p>
The costs of the project?	<p>Phase 1 (landfill, biowaste treatment): ca. 70 million euro Phase 2 (mechanical-biological treatment): ca. 107 million euro Phase 3 RDF incinerator: ca. 135 million euro.</p>
Who is financing the project?	<p>Funding for phases I and II of the project is provided by Operational Programme Environment (European Regional Development Fund)</p>



	<p>and loans from the European Investment Bank and co-financing from national government. The same funding sources are expected for Phase III for which the application form and accompanying cost-benefit, options, state-aid and other analyses are to be submitted to the European Commission in 2018.</p>
Key actors	<ul style="list-style-type: none">• Sofia Municipality – project proponent• Toplofikacia Sofia – operator of TEC Sofia district heating plant, where the RDF incinerator is planned, the largest municipal company in Sofia and largest district heating plant in Bulgaria and the Balkans, servicing ca. 70% of households in the city.• Managing authority of Operational programme Environment 2020 in Bulgaria – funding-related procedures• European Commission / DG Regio – funding decision• EIB and JASPERS – loan and expertise for application form and accompanying required analyses• Ramboll – Danish engineering consultancy providing technical assistance and design of the RDF incinerator. <p>Key opposing parties (local groups, NGOs...): Environmental association “Za Zemiata” (For the Earth), Citizens’ initiative for public and rail transport, Bulgarian Association of Asthma Sufferers, etc.</p>
Key problems with the project?	<p>The most problematic environmental / health aspect of the project is additional load of air pollutants – in a situation where particulate matter emissions in Sofia are already consistently over the limit, subject to an infringement procedure initiated by the European</p>



Commission against the Bulgarian state. Key dangerous pollutants resulting from RDF incineration are dioxins and furans – a large family of some of the most toxic known substances, persistent organic pollutants that take a long time to decompose, bioaccumulate in body tissues and damage the immune system, a known human carcinogen.

The project goes against the waste management hierarchy, in which waste incineration is the second least-preferred waste treatment method after landfill. The plan is **to invest a major portion of available EU funding for waste management into this project**, which does not contribute at all to achieving mandatory recycling targets (50% by 2020, upcoming new target of at least 60% by 2030). The **socio-economic aspects** span over the entire population of the city:

- Local taxpayers will pay for increasing costs of waste management, potentially subsidizing lower bills for district heating customers.
- Incinerators need a guaranteed constant inflow of waste with specific characteristics (moisture, calorific value) in order to be efficient. Installing such an inflexible facility means a ‘lock-in’ effect in which potentially recyclable / compostable materials are diverted to incineration instead.
- Informal street collectors of recyclables may lose access to materials and / or buyers (only source of income for many), in case mixed waste collected yields insufficient amounts of RDF (which is typically composed of plastics, paper, textile).



	<p>It directly affects all inhabitants of the city whose health and budget will be affected by the project.</p> <p>It will affect people depending on picking reusable objects and recyclable materials from the waste bins in the streets of Sofia – who are the main contributors towards recycling in the city.</p> <p>The proposed project is very costly and risky.</p> <p>The entire process of decision-making and preparation for financing of the project has been non-transparent and largely conducted in a comfortable lack of public involvement.</p>
<p>Alternative solutions?</p>	<p>An alternative vision by Za Zemiata following the Zero Waste approach proposes instead of capital investment in large inflexible infrastructure, such as the RDF incinerator, to invest in more vehicles and bins and overhaul waste collection logistics towards intensive source separation of recyclables and biowaste. As the waste collection system improves, the MBT will be able to process more separately collected waste flows and extract more recyclables, instead of contaminated waste used as alternative industrial fuel (RDF). This course of action would also create more jobs, generate additional income from recyclables and realise savings from diverting waste from landfill and incineration, both of which represent net costs.</p>



2.2. Struma motorway project – Kresna gorge, Lot 3.2

Name of the project	E79 Struma motorway, part of the Trans-European Corridor 4 linking Hamburg in Germany with Thessaloniki in Greece; E79 links Sofia with the Greek border (Kulata).
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Location of project	The project is a continuation of another controversial EU funded motorway – Lyulin motorway, south from Sofia, in the west part part of Bulgaria, which continues into Struma motorway.
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Short description	<p>The Kresna Gorge is situated on a small territory in the southwest of Bulgaria. It is 16 kilometres long and is very narrow. The steep, upright slopes are a home to a variety of rare and threatened animal and plant species. The gorge is located on the border between the continental and Mediterranean climatic zones, which is the reason for the concentration of more animal and plant species here than in any other part of Bulgaria. The Kresna Gorge is an incredible natural treasure for Bulgaria as well as being an area where local people have the potential to develop tourism and sustainable agriculture.</p>
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International traffic between Sofia and Thessaloniki (in Greece) currently already passes along an existing smaller road through the Gorge. The Kresna gorge is a Natura 2000 site, a spectacular natural conservation haven in Bulgaria is a habitat for 92 EU protected species, such as land tortoises, Leopard and Fourlined snakes, 12 species of bats, golden eagles, griffon vultures, peregrine falcons, and a hotspot containing 35 EU protected habitats. It is also a crucial migratory bio-corridor for bears, wolves and other species, and a geographical border of distribution and/or very narrow migration corridor for many other species. The steep 15.6 km-long north-south Gorge covers an area equal to 14 000 ha, it is the richest biodiversity site in Bulgaria, as well as being part of a network of bigger and complex Natura 2000 sites.



Kresna gorge has two NATURA 2000 sites “Kresna” site (BG0002003) and the "Kresna – Ilindentsi" site (BG0000366). The latter one is a strict reserve area according to the Bulgarian law.

The initial feasibility study and the design of the motorway were financed by the EU PHARE – Cross Border Co-operation Programme Bulgaria – Greece. With financial memoranda '98 and '99 the Bulgarian government, represented by the Ministry of Regional Development and Public

Works (MRDPW) received from the EU budget the total amount of EUR 3,342,450 for the project.

Since the EU accession of Bulgaria in 2007 Struma motorway project has been officially part of the indicative list of major transport projects for consideration under Operation Programme on Transport 2007-2013 supported by EU Structural and Cohesion funds under Reg. (EC) 1083/2006. The project consists of 4 Lots. From 2007 until 2011 when the application form for EU financial assistance was submitted, Bulgarian authorities conducted different studies and procedures such as EIA and Appropriate Assessment (2008), procurement of Lots 1, 2 & 4.

On 9.06.2009 the Monitoring Committee of OP Transport took a decision to decrease the amount reserved for the programming period 2007-2013 for the construction of the Struma Motorway by shifting “the most controversial and difficult to construct part of the motorway, Lot 3 through the Kresna Gorge” to the next financial period 2014-2020. (Za Zemiata 148/23.07.2009 see also EC Answer – REGIO I2/JVO/vg/D(2009) 930292*7882 from 07.09.2009).

Technical details

The benefits of the project?

The project is considered one of the key transport accesses, linking Bulgaria with Greece, however initially it was supposed to be planned in parallel with constructing the railway link as well. The motorway



will in no way be useful for the local economic development of the region, however, constructing a motorway outside of the gorge and the Kresna town, through which currently all transport including freight passes, would decrease the road accidents and deaths of people in the town, which in the last years have increased drastically, as the road is cutting the town in two. Local residents have organised protests to ask road authorities and the local municipality to take measures for the security of the people. Constructing the motorway outside of the gorge and the town will also keep the lands of people and would allow for the development of alternative tourism, such as the more developing rafting and kayaking along the Struma river, biodiversity tourism, biking and hiking, leaving the local road available for them.

The costs of the project?

In total the Struma motorway – encompassing the Kresna Natura 2000 site in question – received and will expected to receive around EUR 756 million of EC funding through structural funds between 2007 and 2021.

Who is financing the project?

The EU PHARE – Cross Border Co-operation Programme Bulgaria – Greece provide 3,342,450 Euro for the project E-79 Detailed Design Studies for Motorway Sofia-Kulata (Struma motorway) with (financial memoranda '98 and '99). The Italian company SPEA Ingegneria Europea was contracted in April 2000 for the design, feasibility study and planning.

Operational Program (OP) Transport 2007-2013 funded Major project 'Construction of Struma Motorway lots 1,2 and 4, and preparation of lot 3' with EUR 274 million (out of EUR 324 million total investments).

The Struma Motorway Lot 3 is the only road priority project listed in the Bulgarian OP Transport 2014-2020 and the DG Regio is informed since 2014 on the progress of this project as member of the OP Transport Monitoring Committee.

EUR 4 million was the EU technical assistance grant provided for the preparation of section 3 of the motorway through Kresna gorge and construction should have started 2015 with funds allocated in new EU budget period.

Related funding:



The first section of Sofia-Kulata Motorway (called Ljulin Motorway, 19 km between Sofia and Daskalovo) was financed by the EU pre-accession program ISPA (Instrument for Structural Policy for Pre-accession) in November 2002 with EUR 114 million.

The section right after Ljulin Motorway, currently called Struma Motorway Lot 0 (Daskalovo road junction – Dupnica) was financed with a EUR 41 million loan from the European Investment Bank (EIB) under the misleading title of the project “Rehabilitation, strengthening and improvement of road Daskalovo road junction – Dupnica”. No proper EIA report and no public consultations were undertaken for that section. The EIB denied that there is a serious violation of the Bulgarian and EU EIA legislation.

Key actors

Where the EU Commission stands

In conflict with its duty to ensure sound management of EU funds, DG REGIO has so far declined responsibility for appraising whether the progress of the motorway project is in compliance with Bern Convention and the recommendations and requirements stipulated by EC in its letters cited above which reads: “The Commission is aware of NCSIP exploring alternatives to the long tunnel option but it has neither competence nor any reason to prevent NCSIP from studying alternative routes for lot 3 of the Struma motorway.So far the Commission has not received an official application to approve lot 3 of the Struma motorway. The application and its approval by the Commission are a prerequisite for EU co-financing. While the Commission is following the development of the entire Struma motorway it will only be able to assess lot 3 after it has received the official application including all necessary documentation from the Managing Authority.”³

The design of the tunnel and completion of the section through Kresna Gorge in the budget period 2014-2020 was a precondition in the 1st grant from the EU. The EC is also turning a blind eye on potential violation of EU law with construction of Lot 3.1 and Lot

³ 11 On 26 January 2016 in response to letter of Bankwatch and Save Kresna gorge coalition we received an answer signed by Władysław Piskorz Head of Unit - Competence Centre Inclusive Growth, Urban and Territorial Development, DG Regional and Urban Policy.



3.3 – which has bypassed formal application for EC approval for a Major project.

NGOs

The NGO coalition “Save the Kresna Gorge” has been established already in 1997, 20 years ago, when the first intentions to build the motorway through the gorge appeared. The Coalition acts through its members: BALKANI Wildlife Society, Wilderness Fund, Za Zemiata (Friends of the Earth Bulgaria), Bulgarian Society for the Protection of Birds (BSPB), Green Policy Institute (GPI), Centre for Environmental Information and Education (CEIE), Association “ECOFORUM”, and the international networks CEE Bankwatch Network and Friends of the Earth Europe.

Local people:

Back in 2008, the local people proposed themselves the adopted by the EIA alternative for a long tunnel bypassing the gorge. However, media and the governments have continuously ensured that the public opinion thinks that this tunnel is dangerous and expensive. Now, local people are expecting yet another decision. They have announced their will through a petition that they would like the motorway out of the gorge and far from the town of Kresna.

National authorities:

In the core of the conflict for the motorway route are national authorities, such as the Ministry of Regional development, Transport, the Road Infrastructure Agency, and most importantly, the lobby of the road constructions.

Key problems with the project?

*** Environmental destruction and breaching EU environmental legislation**

Construction of the motorway through the gorge means more traffic, more pollution, more animals killed.

International traffic between Sofia and Thessaloniki currently passes through the gorge. The existing nine-metre wide road is already responsible for the deaths of around 70 vertebrate animals per day, Feeding, reproduction and hibernation sites for most of the rare species will be destroyed, and some of them will completely disappear. The



migration route along the river valley will also be cut off. Already by the construction of the sections on both sides of the motorway, the Bulgarian Government has presided over a significant deterioration of the Natura 2000 protected natural habitat and designated species, and has failed to take appropriate avoidance steps, in violation of Article 6(3) of the Habitats Directive;

*** Preventing any further local economic development**

The people of Kresna will lose their most fertile agricultural lands, their clean air and the possibilities for tourism development in the region.

The town of Kresna and the most fertile agricultural lands in the region are situated in the southern part of the Kresna Gorge, in the Struma river valley. The motorway will pass 30 metres from the school and the outlying homes of the town of Kresna and will either destroy or contaminate part of the gardens and vineyards of the local people. Kresna gorge is the producer of the endemic Keratzuda wine mark, which grows only in this region. People have no alternatives for other agricultural land if this is taken or destroyed.

People further fear noise and air pollution from the motorway, as well as safety.

According to the local authorities, currently around 300 people depend on the shop and restaurant business along the existing E-79 road. Those will be lost if the motorway passes through the gorge.

*** Financial: unnecessary costs and waste of EU funding, breaching of EU laws**

The Bulgarian Road Infrastructure Agency on 20 April 2017 decided to advance the design of motorway construction routed partially through the Gorge (Lot 3.2), without giving equal weight to assessing alternative solutions fully outside of the Gorge. It thus pre-empted the results of a new EIA/AA (currently being carried out – itself lacking clear legal grounds to avoid legal uncertainties vis-à-vis the existing AA 2008), and pre-empted the decision on the selection of the motorway routing based on economic and technical criteria without regard to impacts on Natura 2000 – this is a prospective violation of Article 6(3)



that would contravene the AA 2008 decision and would likely have very negative effects on the Natura 2000 site and protected species, that could not be mitigated;

The actions of the Bulgarian Government have increased trans-national motorway traffic routed through the Gorge, by completing other connecting sections of the Struma motorway first, creating a bottleneck through the Gorge, and this is in violation of the compulsory AA 2008 mitigation measure to divert all motorway traffic outside the Gorge and to complete the Kresna section (Lot 3) before other sections in order to avoid an increase in traffic on the existing road – thus a violation of Article 6(3).

The consequences of the first and third of these breaches of the Habitats Directive for Kresna’s wildlife have been grave. Over the past ten years, measured road killings of protected species have rapidly increased in line with the 44% (from 4000-4500 vehicles per day in 2003 to 7 969 vehicles in 20135) increase in motorway traffic through the Gorge, resulting in a significant adverse effect on 4 reptile species.

Alternative solutions?

An alternative route is possible

1. A “full eastern alternative” is proposed in the scoping report and is what local people and NGOs are advocating for. It is known as G20. In 2016, the Road Infrastructure Agency initiated a new scoping for a new EIA procedure. NGOs submitted letters and studies proposing a full bypass of the motorway outside of the Kresna gorge. As a result, the road authorities included in the scoping procedure this full alternative.

This is the only possible at the moment alternative, provided that the tunnel option is declined by the authorities, despite the fact that it is the only still legal option selected and a the one that was a precondition for EU funding.

2. A long tunnel option, with a 13 kilometer tunnel was adopted as the only solution and a precondition for the EU funding of the other sections of the motorway. This option is selected by the still in place 2008 EIA decision. However, it becomes clear that despite this option was selected already in 2008, until 2014 there have been no studies, or actions to study further this option. It turned out that there is no



Bulgarian construction company that has the technical capacities to build the tunnel, which put this option under threat due to the heavy road transport lobby. Letters have been sent to the Ministries in charge, as well as media campaign by the road construction lobby heavily undermined the possibility of realising this option.

2.3. The role of civil society in decision-making on public infrastructure

The Operational Programmes have established monitoring committees, part of which are nominated NGO representatives. Such is the case with the monitoring committee to OPE. The NGO representatives participate in voting procedures on issues, such as approving project selection criteria, OPE annual work plans and reports. Civil society organisations were also involved in developing the OPE strategic document, but are not involved in the selection of projects. Overall, compared to the previous programming period, the visibility and transparency has improved, with established website for EU funds www.eufunds.bg, however, the access to participation has not shown any significant change.

As a means of accounting for public opposition to some infrastructure projects, public hearings for environmental impact assessment (EIA) procedures are not as effective as litigation. Public hearings are frequently poorly announced and held at inconvenient times, resulting in very low public participation levels. This was the case in the Sofia RDF incinerator public hearings, which were scheduled during working hours in the middle of summer when many people are away from the city.

2.4. Cross-case analysis

As in other cases, the waste and transport-related strategic documents, which frame where funds and policies are focused undergo formal public consultation. However, more often than not, **NGO input fails to make a difference and in many cases remains without an official response.** Stakeholder consultations on many more specific waste-related policies take place almost exclusively between the Ministry of Environment and Water and industrial and business representatives, e.g. ‘eco-tax’ on plastic bags or deposit return schemes for plastic bottles. When the public are invited to participate, this is when strategic priorities and goals have already been set. **Public participation** in waste-related and transport issues is typically sparse, while business lobbies appear to have close access to decision-makers. This results in a non-ambitious/’laggard’ approach to implementing EU waste legislation, settling for the least demanding measures and aiming to maintain the status quo.



This is exemplified in the choice to continue collection of mixed waste which is typically done by private companies on long-term contracts which preclude flexibility – a positive quality in waste management. Instead of changing the logistics of waste collection to more resource-efficient source separation of recyclables and organic materials, Bulgaria’s current poor recycling performance is perpetuated by investing funds in facilities for treating mixed waste. Such investments naturally predetermine the pathways of waste for at least two decades ahead (lifetime of facilities) and can effectively block improvements at the source of the waste management system. **Locking public resources into inefficient resource management** makes poor economic sense, as materials and their value are permanently lost to the economy, while also producing public disseminates, such as pollution from landfills and waste incineration.

Bulgaria has been made dependent heavily on road freight and passenger transport, which resulted in the existence of monopoly in the transport system and the economy whose negative consequences are trivial round: traffic accidents are a major factor in mortality among economically active population. Often this results in paralyzed main roads and access routes to major cities, resulting in significant economic losses, social pressure due to fuel prices and last but not least - systematic contamination of the environment by gas emissions and other harmful physical factors.

The OPs have been focusing financial resources on carbon intensive projects, not solving any of the fundamental transport problems.



2.5. Negative example of public infrastructure projects - Sofia Waste Management Project

Name of the project	WASTE INCINERATOR AT SOFIA DISTRICT HEATING PLANT - PHASE III OF INTEGRATED SYSTEM OF SOLID WASTE TREATMENT FACILITIES OF SOFIA MUNICIPALITY – BULGARIA
Location of project	Sofia, Bulgaria
Short description	<p>Sofia is the largest city and capital of Bulgaria with steadily growing population and waste quantities. The project is implemented in 3 phases:</p> <ol style="list-style-type: none">1) landfill, biogas and composting plants (operational since 2013 and 2014)2) mechanical-biological treatment plant (MBT) (operational since 2015)3) incineration unit for refuse-derived fuel (RDF) output from MBT in step 2 at local district heating plant. (in pre-approval phase).



<p>Technical details</p>	<ul style="list-style-type: none"> ➤ ‘Sadinata’ Landfill capacity of 3.2 million tonnes, projected lifetime of 21 years. ➤ ‘Han Bogrov’ biological treatment site: capacity of composting plant for green waste: 24 000 t/y (ca. 60% of generated amounts om 2014) and capacity of anaerobic digester for food waste: 20 000 t/y (ca. 27% of generated amounts in 2014). ➤ ‘Sadinata’ Mechanical biological treatment plant capacity for mixed waste treatment: 410 000 t/y (107% of generated mixed waste in 2014), rate of recovery of recyclable materials: ca. 4% of mixed waste input. ➤ ‘TEC Sofia’ RDF incinerator unit at existing district heating plant in Sofia, capacity for RDF incineration: 180 000 t/y (ca. 45% of mixed waste in 2014). <p>The proposed waste management system currently yields ca. 35% recycling, formal separate collection is low (3% for packaging and 2% for bio-waste) and most recyclables (25%) are acquired via informal pickers from waste containers in the street against payment or directly from business waste generators.</p>
<p>The benefits of the project?</p>	<p>Sofia Municipality claims that the third phase of the project – the RDF incineration unit will improve the efficiency of the district heating supplier, financially-troubled Toplofikacia Sofia, by replacing 10% of the natural gas fuel used with ‘alternative fuel’ derived from Sofia’s mixed waste stream, while also meeting legal waste management requirements to reduce biodegradable waste (food, garden, paper, cardboard) going to landfill. The hypothetical beneficiaries of the project are district heating customers (expected lower bills due to natural gas substitution) and all Sofia inhabitants due to extended landfill lifetime, as well as the global climate benefit of reducing methane emissions from landfilled bio-waste.</p>
<p>The costs of the project?</p>	<p>Phase 1 (landfill, bio-waste treatment): ca. 70 million euro Phase 2 (mechanical-biological treatment): ca. 107 million euro Phase 3 RDF incinerator: ca. 135 million euro.</p>



Who is financing the project?	Funding for phases I and II of the project is provided by Operational Programme Environment (European Regional Development Fund) and loans from the European Investment Bank and co-financing from national government. The same funding sources are expected for Phase III for which the application form and accompanying cost-benefit, options, state-aid and other analyses are to be submitted to the European Commission in 2018.
Key actors	<ul style="list-style-type: none">➤ Sofia Municipality – project proponent➤ Toplofikacia Sofia – operator of TEC Sofia district heating plant, where the RDF incinerator is planned, the largest municipal company in Sofia and largest district heating plant in Bulgaria and the Balkans, servicing ca. 70% of households in the city.➤ Managing authority of Operational programme Environment 2020 in Bulgaria – funding-related procedures➤ European Commission / DG Regio – funding decision➤ EIB and JASPERS – loan and expertise for application form and accompanying required analyses➤ Ramboll – Danish engineering consultancy providing technical assistance and design of the RDF incinerator. Key opposing parties (local groups, NGOs...): Environmental association “Za Zemiata” (For the Earth), Citizens’ initiative for public and rail transport, Bulgarian Association of Asthma Sufferers, etc.
Key problems with the project?	The most problematic environmental / health aspect of the project is additional load of air pollutants – in a situation where particulate matter emissions in Sofia are already consistently over the limit, subject to an infringement procedure initiated by the European Commission against the Bulgarian state. Key dangerous pollutants resulting from RDF incineration are dioxins and furans – a large family of some of the most toxic known substances, persistent organic pollutants that take a long time to



decompose, bioaccumulate in body tissues and damage the immune system, a known human carcinogen.

The project goes against the waste management hierarchy, in which waste incineration is the second least-preferred waste treatment method after landfill. The plan is **to invest a major portion of available EU funding for waste management into this project**, which does not contribute at all to achieving mandatory recycling targets (50% by 2020, upcoming new target of at least 60% by 2030).

The **socio-economic aspects** span over the entire population of the city:

- Local taxpayers will pay for increasing costs of waste management, potentially subsidizing lower bills for district heating customers.
- Incinerators need a guaranteed constant inflow of waste with specific characteristics (moisture, calorific value) in order to be efficient. Installing such an inflexible facility means a ‘lock-in’ effect in which potentially recyclable / compostable materials are diverted to incineration instead.
- Informal street collectors of recyclables may lose access to materials and / or buyers (only source of income for many), in case mixed waste collected yields insufficient amounts of RDF (which is typically composed of plastics, paper, textile).

It directly affects all inhabitants of the city whose health and budget will be affected by the project.

It will affect people depending on picking reusable objects and recyclable materials from the waste bins in the streets of Sofia – who are the main contributors towards recycling in the city.

The proposed project is very costly and risky.

The entire process of decision-making and preparation for financing of the project has been **non-transparent and largely conducted in a comfortable lack of public involvement.**



Alternative solutions?

An alternative vision by Za Zemiata following the Zero Waste approach proposes instead of capital investment in large inflexible infrastructure, such as the RDF incinerator, to invest in more vehicles and bins and overhaul waste collection logistics towards intensive source separation of recyclables and biowaste. As the waste collection system improves, the MBT will be able to process more separately collected waste flows and extract more recyclables, instead of contaminated waste used as alternative industrial fuel (RDF). This course of action would also create more jobs, generate additional income from recyclables and realise savings from diverting waste from landfill and incineration, both of which represent net costs.



RECOMMENDATIONS

Regarding transport infrastructure, it is key that the Government focus resources for low carbon transport infrastructure and transport schemes and for the development. NGOs have long advocated that grids that connect Europe in combination with smart grids (the local green solution) should be supported by Cohesion policy, including the Cohesion fund. Under OP Environment, the government should decrease funding for gray infrastructure and start to provide support the green infrastructure.

What is crucial is an inclusive and genuine public participation in formulating the strategic documents and actual implementation.



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REFERENCES

