

Improving Access to Green Funding in CEE and Ukraine

Country fiche on Access to Green Funding

ROMANIA

March 2014



REGIONAL ENVIRONMENTAL CENTER

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Overview of financing in the following areas:

1. Financing for Sustainable Energy

Focus: This subsection will cover energy-related dimensions with focus on energy efficiency improvements and investments in renewables.

1.1. Strategies and national financial mechanisms for low-carbon economic development

- The '**National Sustainable Development Strategy: Horizons 2012–2020–2030**' envisages minimum annual reductions of 1.2-1.5% of specific materials and energy consumption rates and production losses in processing industries, power generation, and the residential, transport and construction sectors. This follows increased investment in technology and infrastructure upgrades, and is also as the result of better management of technology and energy (*EEA 2011b*).
- The '**National Energy Strategy for the Period of 2007–2020**' is built on three main pillars: **energy security** (limit dependence on imports; diversify energy resources and transport routes; boost connectivity of national transport, electricity, natural gas and oil networks); **sustainable development** (EE, RES, CHP, decreasing environmental impact of the energy sector; efficient use of primary energy resources); and **competitiveness** (developing competitive markets in electricity, natural gas, oil, green certificates, GHG emissions permits and energy services (*Fifth National Communication*). In 2011, the **National Energy Strategy** was revised for 2011–2020 to include energy efficiency measures.
- The organisation formally responsible for implementing energy efficiency policy is the **Romanian Agency for Energy Conservation (ARCE)** (2001). ARCE's main responsibilities are to prepare and implement EE programmes, enforce EE technical regulations and promote new energy sources. Since 2009, ARCE has been part of the National Authority for Energy Regulation (ANRE) (*Fifth National Communication*).
- Compared to 2001 levels, the **National Strategy for Energy Efficiency for 2004–2015** sees decreased energy intensity of 40% to be a realistic scenario, 50% as being an optimistic scenario, and 30% as a pessimistic scenario. The strategy envisions adopting programmes for energy efficiency and achieving an average GDP growth rate of 5.4% (*Fifth National Communication*).
<http://www.free.org.ro/dmdocuments/National%20Strategy%20for%20Energy%20Efficiency.pdf>
- The **Romanian Energy Efficiency Fund** is a financial institution providing commercial financing for investment projects to promote rational energy use. The Fund assists industrial companies and other energy consumers with adopting and using modern, energy-efficient technologies (*Fifth National Communication*).
- The **Strategy for Using Renewable Energy Sources** was approved in 2003, thereby transposing the European Directive 2001/77/EC. The document establishes targets up to 2015 (*Fifth National Communication*).

- The **National Action Plan for Energy from Renewable Sources (2010)** lays down national and sectoral goals for energy efficiency and measures to increase the availability of biomass, taking into account other biomass users based on agriculture, forestry, etc. (EEA 2011b).
http://ec.europa.eu/energy/renewables/action_plan_en.htm
- Since 2005, the implementation of projects in the RES sector is supported through a **green certificate and mandatory quota system** (Fifth National Communication).
- **Romania's Biomass Master Plan (2010)** will help to reduce the country's CO₂ emissions, will increase the efficiency of various industries, and will create new opportunities for national and international private companies (EEA 2011b).
http://www.enero.ro/en/projects/StudiiBiomasa/doc/Biomass%20Master%20Plan%20Romania_EN.pdf
(Source: DG Romania Country Fiche)

1.2. Public financing schemes and sources for supporting low-carbon development

The programme is a government initiative for:

Rehabilitation of apartment blocks in Sfanti Gheorge

The renovation included:

- thermo-insulation of the terrace with fire-proof polystyrene 16 cm thick;
- thermo-insulation of the external walls with expandable polystyrene 10 cm thick (including thermo-system); and
- the replacing of external woodwork.

Sustainability effects:

- Significant savings on the energy used for heating.
- More efficient energy use.
- Contribution to the overall EU goals for reducing greenhouse gas emissions by 20 percent of 1990 levels, and for reducing energy consumption by 20 percent of the projected 2020 levels.

<http://www.mdpl.ro/index.php?p=1034&lang=en> and

[http://www.eco-](http://www.eco-innovation.eu/index.php?option=com_content&view=article&id=92%3Arehabilitation-of-apartment-blocks-in-sfantu-gheorghe&catid=71%3Aromania&Itemid=71)

[innovation.eu/index.php?option=com_content&view=article&id=92%3Arehabilitation-of-apartment-blocks-in-sfantu-gheorghe&catid=71%3Aromania&Itemid=71](http://www.eco-innovation.eu/index.php?option=com_content&view=article&id=92%3Arehabilitation-of-apartment-blocks-in-sfantu-gheorghe&catid=71%3Aromania&Itemid=71)

National Strategy for Energy Efficiency for 2004–2015

The state budget is supported the investments program for increasing energy efficiency in two ways: directly, by allotments, consolidated transfers, subventions and granted credits, and indirectly, by fiscal and financial incentives provided by the legislation in force (deduction of some expenditures from the tax on income and subvention of interest rates to commercial credits, in case of thermal rehabilitation of buildings). The modalities for buildings supported by the State budget, funds supporting the investment programs for increasing energy efficiency are the following:

- allotments from the State budget, within the limit of the funds approved annually with this destination in the budgets of some ministries;

- allotments from the local budgets, in addition to consolidated transfers from the State budget, in case of annually approved programs therefore, by the local public authorities;
- credits from the State Budget;
- financing by means of public-private partnership

Sector	Action	Period	Responsible	Type of allotments of financial resources	Total resources	
					(mill. €/year)	(mill. €)
Residential Sector						
	Thermal rehabilitation of dwellings Legal base: Law no.211/2003 and GEO no.174/2002	2004 – 2015	MTCT	Allotments from the State budget	99	1.187
	Legal base: Law no.211/2003 and GEO no.174/2002			Credits from the state budget	25	303
					74	707
District Heating						
	Modernisation of co-generation power plants and thermal power plants, rehabilitation of transport and distribution networks, modernisation of thermal sub-stations Legal base: OUG 78/2002	2004 – 2015	MAI	Allotments from the State budget	95	1.137
	Legal base: Law no.199/2000 and OUG no.45/2003		ARCE	Transfers from the State budget	87	1.041
					8	96
Fiscal and Financial Incentives for implementing Energy Efficiency Projects						
	Subsidy with 25% of commercial credit interest Legal base: Law no.199/2000, Law no.314/2003	2004 – 2015	MEC, MFP	Diminishment of State budget incomes will be compensated by the reduction of primary resources acquisition		
	Legal base: Law no.199/2000, Law no.314/2003		ARCE			
	Diminishment of income tax Legal base: OUG no.78/2000, Law no.314/2003	2004 – 2015	MAI, MFP	Diminishment of State budget incomes will be compensated by the reduction of primary resources acquisition		
	Legal base: OUG no.78/2000, Law no.314/2003					
TOTAL FINANCIAL RESOURCES					194	2.324

Covering the financial resource demand:

Sector	Primary resources savings (thousand toe/year)	Total investments (mill. €)	Financial savings from the acquisition of primary resources (mill. €)	Benefits realised by CO ₂ emissions sale (mill. €)
Industry	337	110	540	34
Residential	823	1.187	1.319	83
Transports	303	216	485	31
Tertiary	48	7	76	5
District heating	612	1.137	980	62
TOTAL	2.122	2.659	3.400	215

<http://www.free.org.ro/dmdocuments/National%20Strategy%20for%20Energy%20Efficiency.pdf>

Financing from the State budget

- **Housing sector:**

The thermal rehabilitation of multi-storied buildings represents one of the most important actions for reducing energy consumption in the housing sector. The National Program of thermal rehabilitation of multi-storied apartment buildings passed by the Government in July 2002 provides the rehabilitation in the period 2004-2015 of 25 thousands multistoried buildings (800.000 apartments). In accordance with the estimates of the Ministry of Transports, Constructions, and

Tourism, the financial effort is of **940 millions €** (from which 240 millions € shall be allotted from the State budget, and the rest from other resources constituted under the conditions of the Law), and the annual savings are estimated to 714 thousands toe. The present Strategy provides that for reducing final annual energy consumption in the housing sector, by thermal rehabilitation of multi-storied apartment buildings, a financial effort of **1.187 millions €** is required (from which about **303 millions € allotted from the State budget**, and the rest from resources constituted under the conditions of the Law).

- **District Heating:**

For the first part of 2003, the financial resources allotted from the State budget through the budget of the Ministry of Administration and Internal Affairs were of about 10 millions €. The average annual value of the investments is estimated to **20 millions €**. The present Strategy provides that, for diminishing the annual consumption of primary resources in the district heating systems with approximately 612 thousands toe, a financial effort of **1.137 millions €** is required.

Financing from local budgets' allotments

- **District heating:**

For 2003, the financial resources allotted through consolidated transfers from the State budget by means of the Ministry of Economy and Commerce to the budget of the Romanian Agency for Energy Conservation were of about **3 millions €**. In 2004, there will be allotted **6 millions €**, and for the period 2005-2007 follow to be allotted annual average amounts between **7 and 9 millions €**.

Fiscal and Financial Incentives

The fiscal and financial incentives that may support the realisation of energy efficiency growth projects for all sectors of the economy are:

- **subventions of the interest rates to commercial credits:** the credits for works of energy efficiency growth are granted with an interest rate of maximum 75% from the one stipulated by the banks, the difference following to be insured by annual allotments from the State budget.
- **reduction of tax on income:** there shall be allotted sums deducted from the tax on income to the local budget of the respective administrative-territorial units.

The Romanian Energy Efficiency Fund

The Romanian Energy Efficiency Fund is a financial institution which aims to assist industrial companies and other energy consumers in adopting and utilizing modern technologies for efficient green energy use.

Objective: Involvement of local banks in providing loans for the investment projects evaluated by the fund, and the partnership of the fund with all financial institutions in traditional financing/co-financing arrangements. As of 2008 the Romanian Energy Efficiency Fund was administrating financing agreements amounting to **\$11, 431 million**. It aims to use its expertise and capital to leverage **\$50 million** of investments in the next few years (http://www.sefalliance.org/no_cache/english/resources/global-mapping-of-programmes/organisation-detail.html?tx_x4esefally_pi1%5BshowUid%5D=65&cHash=c50b312ffd).

List of financed projects by the Fund:

Beneficiary	In force from	Investment	Loan (10³US\$)	Annual Energy Savings (toe/year)	Simple Payback Time (years)
Eneas S.R.L. Bucuresti	April 25, 2007	Installation, commissioning and operation of a co-generation unit to a third party (ESCO)	499.0	462*	2.2*
Chimcomplex SA Borzesti	May 07, 2007	Installation of a co-generation system	2,000.0	13,509*	2.8*
A6 Impex SA Dej	November 21, 2007	Installation of a new wooden waste fired boiler	1,594.0	7,743*	5.1*
3Fan Construct SRL Santimbru	March 03, 2008	Installation of a new clay bricks fabrication line	1,000.0	684.0*	6.1*
Omnimpex Hartia SA II Busteni	December 22, 2008	Modernization of micro hydro power unit for electricity generation for exclusively covering the electricity demand of Refinery Steaua Romana	260.0	0	4.4*
Electroprecizia SA Săcele	August 04, 2009	Optimisation of both water and compressed air supply within the manufacturing departments of Electroprecizia SA	203.0	148.0*	4.9*
Mociu Local Council	November 10, 2009	Modernization of public outdoor lighting system	172.0	43.0*	5.6*
Omnimpex Hartia SA III Busteni	March 01, 2010	Modernization of micro hydro power unit for electricity generation for exclusively covering the electricity demand of Refinery Steaua Romana	959.0	688.0*	4.6*
Tarna Mare Local Council	February 02, 2011	Modernization of public outdoor lighting system	173.0	69.0*	4.5*
Sortilemn SA Gherla	July 22, 2011	Biomass fired Combined Heat and Power Plant	500.0	1,851*	5.1*
Meir Energy Services SRL Bucuresti	September 28, 2012	Cogeneration and Power and Heat Supply under ESCO/EPC mechanism for National Institute for Infectious Diseases	775.0	1,024*	4.2*
Zamora Estate	December	Efficiency Increase of power	70.0	32*	6.3*

SRL Busteni	12, 2012	and Heat Generation and End Use			
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http://www.free.org.ro/index.php?option=com_content&task=view&id=63&Itemid=78&lang=en

Detailed description of the first two case studies can be found here:

<http://www.free.org.ro/dmdocuments/Case%20Study%20SC%20ENEAS%20SRL%20Bucuresti.pdf> and

<http://www.free.org.ro/dmdocuments/Case%20Study%20SC%20CHIMCOMPLEX%20SA%20Borzesti.pdf>

Green Certificates Mandatory Quota System

Suppliers are required to purchase an annual quota of electricity produced from renewable sources. Alternatively, suppliers can purchase a number of green certificates equivalent to the product of the value of annual quota of purchase of green certificates set for that respective year and the amount of electricity annually supplied to final consumers, expressed in MWh. Rates for the period 2010-2020 are:

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
%	8,30	10	12	14	15	16	17	18	19	19,5	20

<http://energonatur.ro/de/photo-voltaic-legal-2/green-certificates-mandatory-quota-system-in-romania/>

Suppliers who do not meet their required annual rate, pay a penalty that represents the value of the green certificates not purchased, at the value of 110 EUR per certificate, calculated in LEI, established by the National Bank.

Property Tax Reduction for green buildings

(see below – good practices)

Tax incentive for green electricity

After analyzing the EU-27 energy policies, it can be observed, that the main tax incentive to promote green electricity is the exemption of the payments of excises duties for electricity when the electricity is generated by RES. Romania is among those 7 countries in the EU who have this sort of incentive (http://cdn.intechopen.com/pdfs/24428/InTech-Taxes_incentives_to_promote_res_deployment_the_eu_27_case.pdf).

1.3. The role of international financing of low-carbon development

EIB: European Investment Bank

1. Enel electricity distribution

The project is a multi-annual investment programme aimed at modernising and reinforcing the electricity distribution networks serving the Banat and Dobrogea regions located respectively in south-west and south-east Romania. The project will enable the promoter to reduce technical and commercial losses, to improve the quality and the reliability of electricity supply, and to cater for a moderate demand growth. It is located in convergence regions within a cohesion country. EIB: 105 million EUR, Total: 214 million EUR. Financial intermediary: ENEL DISTRIBUTIE DOBROGEA SAENEL DISTRIBUTIE BANAT SA.

<http://www.eib.org/projects/pipeline/2011/20110517.htm>

2. Enel Green Power

Financing of the investment programme of Enel Green Power Romania for the development, construction and operation of three on-shore wind farms located in the regions of Dobrogea (Salbatica and Corugea) and Banat (Moldova Noua). Furthermore each project will include the electrical grid to connect the different wind turbines, the civil works for foundations and infrastructure (e.g. access roads) as well as the substation and HV cable for the connection to the network. EIB: 200 million EUR, Total: 400 million EUR. Promoter: Enel Green Power S.p.A.

<http://www.eib.org/projects/pipeline/2011/20110247.htm>

3. Bucharest S1 Thermal Rehabilitation II.

The project concerns the thermal rehabilitation of multi-storey residential buildings located in Sector 1 Bucharest. The investments will extend to 433 buildings comprising about 25,800 apartments, which shall be refurbished during 2013-2015. The investment will focus on thermal energy efficiency improvements of the building envelope (wall insulation, windows, roof and cellar insulation). The project follows up on the 1st phase of the energy efficiency programme for residential buildings undertaken by Municipality of Sector 1 Bucharest and financed by the EIB in 2011. The proposed investments aim at reducing energy losses in multi-family lodgments and thus reducing consumption of energy resources. Thermal rehabilitation of multi-storey residential buildings is part of the National Energy Efficiency Action Plan of Romania aimed at bringing environmental benefits by supporting projects that help to reduce air pollution and mitigate climate change. EIB: EUR 157 million, Total: EUR 212 million. Promoter: MUNICIPIUL BUCURESTI - SECTORUL 1.

<http://www.eib.org/projects/pipeline/2012/20120498.htm>

EBRD: European Bank for Reconstruction and Development

The most promising renewable energy resources in Romania appear to be wind, biomass, and hydro. Despite lower energy prices, Romania is considered a strong candidate for wind power development. There are well-documented wind resources, including a large off-shore potential. There are also good opportunities for biomass development, building off a very large base of existing capacity (over 4,000 MWth). District heating systems represent the most immediate and low-cost biomass application. The western region of Romania seems to be a good region for geothermal heat applications, although high enthalpy areas to support electric generation are limited. There are very good opportunities to develop small hydro projects.

1. Petrom Environmental Loan

The EBRD is considering providing a EUR 300 million corporate senior unsecured loan to the Romanian oil company Petrom S.A, the largest company in the country. The proposed project consists of establishing a framework that can be used to finance a series of sub-projects as part of an overall strategic environmental investment programme aiming at rehabilitating or enhancing the environmental and health and safety performance of facilities in the Exploration and Production (E & P) and Refining divisions of Petrom S.A. The scope of the specific environmental investments includes inter alia pollution clean-up, pipeline replacement, health and safety measures, energy efficiency and other environmental remediation investments and specifically excludes production related investments that do not have an over-riding environmental benefit. The investment is a EUR 300 million corporate senior unsecured loan to Petrom to fund the Project, consisting an up to EUR 150 million A loan and an up to EUR 150 million B loan to be syndicated to commercial banks. Project cost: EUR 300 M.
<http://www.ebrd.com/english/pages/project/psd/2009/39977.shtml>

2. Hydroelectric

- **Tarnita-Lapusesti Pumped Hydro**

Sponsor: Hidroelectrica

<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2385>

- **Valcea HPP**

Sponsor: Hidroelectrica

EUR 75 million

<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2386>

- **Robesti Hydro Power Plant**

Sponsor: Hidroelectrica

EUR 75 million

Hidroelectrica is the largest producer of electricity and system technological services in Romania. It uses renewable hydro-power and last year it covered 36 percent of the electricity production in Romania, achieving a record production of 19.5 TWh. The company is owned by the Romanian state through the Ministry of Economy, Trade and Business.

<http://www.romania-insider.com/romanian-hidroelectrica-builds-new-eur-75-mln-hydro-power-plant/44198/#>

- **Rehabilitation of Stejarul HPP**

Sponsor: Hidroelectrica

The EBRD is considering providing a loan up to EUR 110 million to S.C. Hidroelectrica S.A., to finance the rehabilitation of 6 units of Stejarul Bicz Hydro Power Plant (HPP) with a total installed capacity of 210 MW. The Project is developed and will be implemented by the state owned hydro power company, S.C. Hidroelectrica S.A., also the biggest electricity producer in Romania with a market share of between 25-35% on the Romanian energy market. The EBRD is considering providing a loan of up to EUR 110 million (around 80% of the Project's cost) in an A/B loan framework, with the EBRD's A Loan of up to EUR 70m. The total Project cost is estimated at EUR 136.9million (<http://www.ebrd.com/english/pages/project/psd/2010/40034.shtml>).

3. Wind

- **Jimbolia Wind Farm**
Sponsor: Alerion
<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2382>
<http://www.4-traders.com/ALEN-CLEA-76178/news/ALEN-CLEA-Alerion-gets-full-permit-for-a-new-Romanian-wind-farm-with-a-capacity-of-58MW-13939420/>
- **Filasa's Suceava Wind Farms**
Sponsor: Filasa International
EUR 780 million
<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2378>
- **Chirnogeni Wind Farm**
Sponsor: EBRD
EUR 92 million
<http://www.balkans.com/open-news.php?uniquenumber=125455>
<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2371>
- **EPGE Dobrogea Wind Farm**
Sponsor: EPGE/European Bank for Reconstruction and Development
EUR: 135 M (EBRD said it may lend about 93 million euros to EPGE for the project, which also includes the upgrade of about 42 kilometers of electricity transmission lines, according to the statement.)
<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2365>
<http://www.businessweek.com/news/2011-10-28/cyprus-s-epge-plans-to-invest-191-million-in-romanian-wind-farm.html>
- **Salbatica II Wind Farm**
Sponsor: Enel Group
<http://www.newswiretoday.com/news/100031/>,
<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2363>
- **Dorobantu Wind Park**
Sponsor: OMV Petrom
<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2361>
- **Constanta Monsson Wind Farm**
Sponsor: Monsson Alma SRL
EUR 240 M
<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2342>
<http://www.bloomberg.com/news/2011-09-08/monsson-to-invest-338-million-in-romania-wind-park-zf-reports.html>
- **Enel's Dobrogea and Banat Wind Farms**
Sponsor: Enel Green Power Romania
EUR 400 M

<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2326>
<http://business-review.eu/energy/enel-romania-wants-to-invest-eur-400-mln-in-a-260-mw-wind-farm-project-11998/11998/>

- **Edpr Romania Wind Farms (Sarichioi And Vutcani Wpps)**

The EBRD is considering providing a senior loan of €58.2 million to finance the commissioning and operation of Vutcani (24MW) and Sarichioi (33MW) wind farms, located in the Moldova and Dobrogea regions respectively. Both wind farms are expected to start operating by the end of 3Q 2012. The wind farm will be financed through an A/B loan structure of up to €58.2 million. The total project cost is roughly €83 million.
<http://www.ebrd.com/english/pages/project/psd/2012/43647.shtml>

4. Biomass

- **Suceava Biomass CHP**

Sponsor: Adrem Invest
EUR 45 million

20 percent of the financing for this project is gathered by Adrem Invest, while the rest 80 percent will be borrowed from a consortium of two banks. The newly built plant will have an 85 percent efficiency rate and will serve 25.000 apartments connected to the central heating system, together with private homes, companies and state institutions, totaling 60.000 inhabitants of Suceava city. <http://business-review.eu/news/adrem-invest-to-put-eur-45-mln-for-new-cogeneration-power-plant-in-suceava-12696/12696/>

5. Ethanol

- **Remetea Ethanol Plant**

Sponsor: Technical Trade
EUR 6.5 M

<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2355>

6. Solar PV

- **Constana County PV Farm**

Sponsor: Electrawinds

<http://ws2-23.myloadspring.com/sites/renew/Lists/Projects/DispForm2.aspx?ID=2341>

- **Fierbinti PV Farm**

Sponsor: Electrawinds

Belgian company Electrawinds opens a solar farm in Fierbinti, Romania which will have a 10 MW capacity, and the investment amounts at EUR 2.5 to EUR 3 million per every MW installed, most of the amounts coming from bank loans, including institutional creditors.
<http://www.romania-insider.com/belgian-electrawinds-to-build-solar-farm-in-fierbinti-romania/33634/>

1.4. Examples of public-private partnerships in the energy sector

Financing by public-private partnership

The financing by public-private partnership may be done in all sectors where it is necessary to achieve energy efficiency growth. Depending on the types of public-private partnership projects, financing may be ensured either integrally or partially by the investor, together with central and local public authorities. The financial resources made available by the aforementioned may be obtained by allotments from the State or local budget, within the limit of the funds approved annually for this destination in the budget of central or local public authorities concluding public-private partnership contracts. This is the case of the **Ministry of Administration and Internal Affairs**, and of the **local public administration** authorities who may **cover the difference of 897 millions € up to the incidence of the necessary 1.137 millions €** (in relation to an annual allotment of about **20 millions € or 240 millions €, for the entire period 2004 - 2015**).

The former Romanian enactment regulating public-private partnerships (PPP) was repealed in June 2006, only 4 years after its adoption upon the entering into force of a new enactment regarding public procurement. Between 2006 and 2010, the PPP concept was replaced by public works and service concessions. It was recently re-introduced in the form of Law no. 178/2010 ("PPP Law"), which will take effect on 4 November 2010. http://www.wolftheiss.com/tl_files/wolftheiss/Dokumente/Publications%20Archiv/ROMANIA_New_PPP_Law_Client_Alert_2010_October.pdf

All PPP projects are overseen by a Central Unit for PPP Coordination, a public institution under the coordination of the General Secretariat of the government. <http://www.iflr.com/Article/2855516/Romania-Embracing-change.html>

Although PPPs have been regulated ever since 2010, unfortunately, there was a major drawback that blocked the start of such projects: the lack of IT support from ESPP. According to the rules for the implementation of Law no. 178/2010 no other means of publication of selection notices and of the attached document outside the ESPP are allowed. Only in January 2013 the ESPP added this functionality, making it possible to publish selection notices and awarding notices for PPP.

<http://www.ppp-romania.eu/public-private-partnerships-are-set-in-motion/>

Launched projects:

a. Brad Municipality

By Decision no. 169 as of 28 December 2012 the opportunity to start a PPP project to achieve an "Ensuring thermal power project through a Public-Private Partnership" was approved. By reducing the price of the Gcal, significant savings are achieved for the City Hall budget. These savings will be used to rehabilitate the transport of thermal energy and for the thermal rehabilitation of buildings. The new boiler will produce heat for hot water consumption throughout the year, resulting in improvement of the living conditions of the inhabitants of the municipality of Brad. Estimated value of the investment is **18 million Euro**.

PPP Responsible:

Public procurement expert

<http://www.ppp-romania.eu/ppp-opportunities/>

b. Blaj Municipality

By Decision no. 259 as of 23 October 2012 the opportunity to start a PPP project to achieve a "Park photovoltaic/solar farm" on an area of 9 hectares was approved. The

estimated value of the project is **3.4 million Euro**. The resulted electrical power will provide public lighting and energy consumption in public institutions and the surplus will be used in the national energy system on the open market. The land area where the park will be built is 9 ha. Estimated value of project: **4.3 million Euro**.
<http://www.ppp-romania.eu/ppp-opportunities/>

1.5. Examples of good practices on the above points

Property Tax Reduction for green buildings

The Cluj-Napoca City Council delivered a positive example at the national level being the first municipality in Romania to adopt specific measures for encouraging green building development. The City Council voted on May 24 to provide a 50% reduction in property taxes for buildings earning a green certification and achieving the top score on the energy efficiency rating. This decision shall apply only to buildings that are certified by three certification systems recognized worldwide:

- LEED;
- BREEAM;
- DGNB;

<http://www.construction21.eu/articles/h/property-tax-reduction-for-green-building-owners-in-cluj-napoca-romania.html>

1.6. Indicators

i. Energy consumption (toe) per capita

Energy use (kg of oil equivalent per capita)

	2008	2009	2010	2011
Romania	1,838	1,620	1,632	

<http://data.worldbank.org/indicator/EG.USE.PCAP.KG.OE>

ii. Energy intensity (toe/unit of GDP).

Eurostat: http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/data/main_tables

Energy intensity of the economy (kgoe/EUR 1,000 of GDP)

	1990	1995	2000	2004	2006	2007	2008	2009	2010
EU 27	303,744	192,74	171,237	167,837	159,561	153,169	151,974	150,294	152,08
Romania	:	:	609,456	515,721	474,073	443,338	412,171	386,823	395,543

iii. Renewable energy in total energy consumption (toe and percentage).

Eurostat: http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/data/main_tables

Share of renewable energy in gross final energy consumption (%)

	2004	2005	2006	2007	2008	2009	2010	2011	TARGET
EU 27	8,1	8,5	9	9,7	10,4	11,6	12,5	13	20
Romania	17	17,6	17,1	18,4	20,3	22,3	23,4	21,4	24

iv. Energy import dependency/energy resilience (percentage of energy use/TPES).

Eurostat:

Energy dependence (%)

	2004	2005	2006	2007	2008	2009	2010	2011
EU-27	50.24	52.44	53.67	52.99	54.62	53.77	52.65	53.84
Romania	83,91	88,54	82,97	81,96	82,82	81,05	75,44	77,45

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsd cc310&plugin=0>

2. Financing for Sustainable transport

Focus: Urban public transport and intercity road and rail transport. The section presents the sources of financing for the road, railway and public transport sector as well as the blockages for future financing.

2.1. National mechanisms and strategies for public transport development

The approach to the air quality problem involves the use of less polluting fuels, while providing information on fuel consumption and CO₂ emissions from new vehicles, as well as rehabilitating trans-European roads. The following actions will be carried out in the upcoming period:

- reassessing the Transport Strategy so that it factors climate change considerations into key decisions taken on transport infrastructure;
- strengthening cooperation within institutions through the National Commission on Climate Change;
- conducting a capacity building programme for the authorities on policies and measures for managing transport-related GHG emissions; and

- improving GHG inventories and emission scenarios for the transport sector (*Fifth National Communication*).

In order to efficiently perform these actions, the Ministry of Transport has developed **separate strategies to bring the railway system, road infrastructure, naval transport and air transport** in line with EU standards. These strategies aim to rehabilitate inland networks and to develop links with European and international transport networks by:

- modernising 5,701 km of national roads at European standards;
- modernising 1,200 km of railway;
- increasing freight amounts in internal harbours (3.79 mln tonnes, compared with 2004) and maritime harbours (39.47 mln tonnes compared with 2004); and modernising airport facilities.

The estimated cost to develop proper infrastructure in compliance with the EU standards is EUR **14.6 billion** (*Fifth National Communication*).

Law No. 203/2003 established medium and long-term development priorities for transport infrastructure through 2015. During negotiations, Romania committed to complete its road infrastructure by December 31, 2016 and to achieve necessary modernisation and adaptation of the inland waterways fleet in compliance with EU standards by December 31, 2011 (*Fifth National Communication*).

→**Sectoral Operational Programme for Transport Infrastructure (SOPT)** (2007-2013) is the tool to develop the goals of the National Strategic Reference Framework of Romania (NSRF), setting priorities, goals and financial allocations for the development of transport sector in Romania. The total budget of SOP-T for the programming period 2007-2013 is estimated at around 4.9 mild. Euro, representing 18.5% of the overall budget calculated for structural operations in Romania for the period mentioned above. Out of this amount, 4 billion Euro represents the financial support of the European Community, while the national co-financing will reach approx. 0.9 billion Euro.

http://geografie.ubbcluj.ro/ccau/articoleZV/41_ZV_2010.pdf

2.2. Public finance sources for supporting public transport

Car Registration Tax

The specific pollution tax is paid for certain categories of vehicles registered for the first time in Romania. The tax is calculated based on the emission standard, the cylindric capacity and the age of the vehicle. Exemptions apply for hybrid or electrical vehicles.

http://www.pwc.ro/en/publications/assets/assets_2012/tax_pocket_book_eng_2012.pdf

Tax incentives for low biodiesel, and ethanol blends

<http://cdn.intechopen.com/pdfs/24428/InTech->

[Taxes_incentives_to_promote_res_deployment_the_eu_27_case.pdf](http://cdn.intechopen.com/pdfs/24428/InTech-Taxes_incentives_to_promote_res_deployment_the_eu_27_case.pdf)

2.3. The role of international financing of public transport in the area

- **Rehabilitation of the national road of NR6**
EIB: 44 million, Total: 146 million
<http://www.eib.org/projects/pipeline/2011/20110295.htm>

- **Rehabilitation of the national NR1H road**
EIB: 29.2 million, Total: 97.1 million
<http://www.eib.org/projects/pipeline/2010/20100578.htm>

- **Rehabilitation of the NR24 and NR24B national roads**
EIB: 29.2 million, Total: 99.1 million
<http://www.eib.org/projects/pipeline/2010/20100577.htm>

- **Construction of the Lugoj-Deva Motorway**
<http://www.eib.org/projects/pipeline/2011/20110289.htm>

- **Construction of the Timisoara-Lugoj Motorway and bypass**
<http://www.eib.org/projects/pipeline/2011/20110288.htm>

- **Construction of Orastie-Sibiu Motorway**
<http://www.eib.org/projects/pipeline/2011/20110286.htm>

- **Construction of Nadlac-Arad Motorway**
<http://www.eib.org/projects/pipeline/2011/20110287.htm>

- **Railway corridor IV.**
The project consists of the rehabilitation and upgrading of the existing railway line between the Romanian-Hungarian border and km 614 (Pan European Corridor IV) over approximately 41km, increasing line speed from 120 to 160km/h. Co-financing of structural and cohesion funds supported projects in Romania under the Sectoral Operational Programme - Transport (SOPT). – see below. Promoter: Romanian National Railway Company CFR - S.A.
EIB: EUR 50 million, Total: EUR 290 million.
<http://www.eib.org/projects/pipeline/2011/20110290.htm>

EBRD

CFR Financial Restructuring

The EBRD is considering providing a loan of up to €174 million as part of a €1.2 billion equivalent Government balance sheet restructuring programme for CFR SA, the state-owned entity in charge of maintenance of the railroad infrastructure in Romania. The EBRD loan will be linked to sector reform with the aim of improving the financial sustainability of the Company and supporting rehabilitation and maintenance of Romania's railway infrastructure. CFR SA ("CFR" or the "Company") is a joint-stock company incorporated in Romania and wholly owned by the Government of Romania via the Ministry of Transport and Infrastructure. The cost of the project is EUR 1.2 billion. Signed: Nov., 2012.
<http://www.ebrd.com/english/pages/project/psd/2012/44271.shtml>

2.4. Positive examples of public-private partnerships in the transport sector

Launched projects:

Maramures County Council

By Decision no. 65 as of 19 April 2012 the opportunity to start a PPP project that aims to building a road tunnel undercrossing the Gutai Mountains was approved. The estimated value of the project is **92 million Euro** and it represents the building of a 4,330 meters long tunnel. The project objective is to develop the road network in the North-West of Romania.

PPP Responsible:

Florin Coste Madaras

<http://www.ppp-romania.eu/ppp-opportunities/>

2.5. Indicators

Modal split of passenger transportation (also by purpose), measured in passenger-km and percentage. <http://ec.europa.eu/transport/facts-fundings/statistics/doc/2012/pocketbook2012.pdf>

Modal split of passenger transport				
% in total inland passenger-km				
2010				
geo\vehicle	Trains	Passenger cars	Motor coaches, buses and trolley buses	Tram and metro
Romania	5,4	75,5	12	7,1

Modal split of freight transport (also by group of goods), measured in ton-km and percentage.

Eurostat:

<http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tsdtr220&language=en>

Modal split of freight transport - Romania								
	2004	2005	2006	2007	2008	2009	2010	2011
Railways	27,8	21,7	19,4	18,9	19	19,4	23,5	28
Roads	60,8	67,3	70,5	71,3	70,2	60	49,2	50,3
Inland waterways	11,4	11	10	9,8	10,8	20,6	27,2	21,7

GHG emissions from transport (million tons CO₂ equivalents).

Eurostat:

<http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tsdcc210&language=en>

	2004	2005	2006	2007	2008	2009	2010	2011
Romania	20096	19861	19903	19500	19202	19152	18930	17550

3. Financing adaptation to climate change

Focus: on interventions that lead to reduction of the territory's vulnerability to climate change (e.g. measures that aim to reduce and manage the risk of floods, forest fires, droughts and other natural disasters. Despite the fact that this type of financing is still limited in the region and is mainly coming from the Cohesion Funds, this section will make an overview of available efforts.

3.1. National mechanisms and strategies for reducing the vulnerability to climate change

- The first **National Strategy on Climate Change of Romania (NSCC)** (2005) represented the general framework for implementing climate change policies and measures during 2005–2007. Its policies are still in effect (*Fifth National Communication*).
- **Guidelines on Adaptation to Climate Change** (*Fifth National Communication*).
- To improve coordination between ministries, the **National Commission on Climate Change (NCCC)** was established in 1996 as a consultative body supporting the integration of climate change policy within other sectoral policies, and to provide advisory services related to the approval of the National Communications and GHG inventories, as well as the approval of JI projects and emissions trading (*Fifth National Communication*).
- The **Forest Code** (2008) establishes some measures for sustainable use of forest resources, allowing at the same time, and only for certain objectives, land compensation valued at five times larger and area three times larger, and with payment of certain fees (*EEA 2011*).
- The **National Strategy of Flood Risk Management** includes responsibilities for each structure involved in flood risk management and is based on preventive actions and measures, as well as on operational intervention, rehabilitation and return to normal conditions (*Fifth National Communication*).

The objectives mentioned by the National Action Plan for the Environment are detailed as follows:

Water resources:

Ecological restoration of rivers through rehabilitation of destroyed habitat, and assurance of environmental flows of rivers.

Nature Protection:

Conservation of biological diversity, sustainable use of natural habitats, wild flora, fauna and ecological restoration of damaged systems. Enhancing the national network of protected areas and nature reserves, rehabilitation of the Romanian

coastline, sustainable management of forests and supporting their role in social-economic developments, etc. (EEA 2011).

The **Romanian System for Timber Flow Control and for Tracking Wood Sources (SUMAL)** (2008) tracks national levels of wood removal and wood products, and increases public controls to reduce forest crime and combat illegal activities (EEA 2011).

A 2010 ordinance generates additional income for the Environmental Fund by imposing a **EUR 100 fine for each tonne of CO₂ emitted**, to be paid by operators not returning certificates for greenhouse gas allowances on emissions generated in the previous year (RSC 2011).

3.2. Public finance sources for improving adaptation to climate change

Insurance for flood losses:

Type of information	Action
Definition	
Compensation limits	Type A: € 20 000 Type B: € 10 000 There are proposals for introducing 5% and 7% deductibles, but the Government does not agree to introduce such deductibles.
Bundling	No
Pricing	There exists two classes of dwellings: type A (reinforced concrete frames, metal or with outside walls made of burnt brick or wood) and type B (outside walls made of unburnt bricks or other forms of adobe) Type A: € 20 Type B: € 10.
Provisioning Practices	
Insurability Problems? Adverse Selection	
Public Intervention - Non financial - Financial	The Government will fund reinsurance premiums in early years and act as lender of last resort in the event of overwhelming losses.
Financing - Description	Insurers issue policies, assess and settle claims. They are reinsured with the Natural Disaster Insurance Pool (PAID), which is to be a joint stock owned by qualifying insurers.
Other	There exists a compulsory insurance scheme, PRAC Only public and private dwellings are covered. Insurance is compulsory for every dwelling (public and private).

Source: CCS (2008); Guy Carpenter (2005); Badea (2009) and
http://ec.europa.eu/internal_market/insurance/docs/natural-catastrophes/jrc_report_on_nat_cat_en.pdf

In Romania there is insurance system for floods, earthquakes and landslides. As for property, only dwellings are covered. /The Romanian Catastrophe Insurance Scheme – PRAC/
http://www.wfcatprogrammes.com/c/document_library/get_file?folderId=19777&name=DLFE-1521.pdf

Forest Fund

The total surface of the forest fund in Romania is about 6.4 million ha.

- 4. 25 million ha of forest owned by the State
- 2. 15 million ha owned by private landowners

In the next years (2006-2007), after retroceding about 2 million ha from State to owners of forests, the juridical situation will be as follows: forests owned by State: 2 million ha and 4.4 million ha of private forests owned by individual persons, communities, and associative organizations.

In Romania there are about 500,000 individual forest-owners and most of them own only 1 or 2 ha of forest and they need to be supported by the state budget for their forestry work. There is a need to establish Forest Districts, financially sustained by the state in order to create and to strengthen a sense of forestry among the people. In order to save these forests and their owners, and to develop and maintain lasting forests it is necessary to elaborate special laws, the Forest Code which should bring solutions as it was by Romanian foresters.

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&cad=rja&ved=0CEoQFjAE&url=http%3A%2F%2Fwww.european-foresters.org%2FBulgarianGCM%2FFOREST%2520MANAGEMENT%2520AND%2520FORESTRY%2520METHODS%2520IN%2520ROMANIA.ppt&ei=wWfHue_YOaOK4ATrR4CADw&usg=AFQjCNE_m-GY5E4Z9OErly02vGupVM21nw&sig2=GO_BWJm9Ia7FmeJA_qyZMQ&bvm=bv.48293060,d.bGE

National Strategy of Flood Risk Management

Funds for watershed management:

National Budget Funds:

- **21 millions** euro for 108 objectives of watershed management works for period 2008-2010
- 31 objectives of watershed management works finished by December 2008

Refundable Funds:

The Government of Romania contracted **10 million euro** from Council of Europe Development Bank for the period 2008-2010

Non-refundable Funds:

476 millions euro – measure 125 Improving and developing the infrastructure related to development and adaptation of agriculture and forestry within Rural Development Program of Romania 2007 Rural Development Program of Romania 2007-2013.

<http://www.fao.org/forestry/20834-07928835f0c0a858e3684226116d86513.pdf>

3.3. The role of international financing for reducing the vulnerability and increasing adaptive capacity

EIB:

Dasos Timberland Fund

An Investment Fund targeting sustainable forestry and biomass investments mainly in Europe. The fund manager plans to complete six to ten investments. The fund aims to make a commercial return whilst contributing to climate change and other environmental objectives. EIB: EUR 30 million, Total: EUR 300 million. Promoter: Dasis Capital.

<http://www.eib.org/projects/pipeline/2011/20110147.htm>

3.4. The main barriers in terms of adapting to climate change

Some of the main factors enhancing nature's "protest against global warming" are: poor sewage within the towns, illegal deforestation of hills or mountains slopes, dirty river banks, lack of citizens' education and responsibility, slow communication between different authorities, absence of specialized equipment, and in some cases, political or economical interests. Romanian authorities, having in mind the floods of 2005 and 2006, try to prevent these disasters or to mitigate their effects, but up to now there has been a big gap between theory and practice, mainly because of the complexity of the actions to be taken, which require time and money. <http://www.climateadaptation.eu/romania/river-floods/>

3.5. Indicators

- Rate of afforestation/deforestation

Afforestation: http://www.ieep.eu/assets/298/wp4_nd_afforestation_in_europe.pdf

Forest area (1000 ha)			Annual rate of change (1000 ha yr ⁻¹)	
1990	2000	2005	1990-2000	2000-2005
6 371	6 366	6 370	0	1

Deforestation: <http://rainforests.mongabay.com/deforestation/archive/Romania.htm#4-change>

Total forest cover (1000 ha)			Annual rate of change (ha; %)		Change in rate (%)
1990	2000	2005	1990-2000	2000-2005	
6 371	6 366	6 370	-0,01	0,01	-260,13

- Percentage of agricultural land and arable land

	2007
Agricultural Land: % of land area	58,9
Arable Land: % of land area	37,2

Data from 2007: <http://en.worldstat.info/Asia/Romania/Land>

4. Ecosystems protection

Focus: Available mechanisms for different financing options for supporting investments in natural capital including protected areas and wider green infrastructure elements

4.1. Strategies and national mechanisms for nature conservation in the country

- In 2000, the **Environmental Fund** was created as an economic and financial instrument for the support and implementation of environmental priority projects. The Environmental Fund is managed by a public institution with legal personality and is integrally financed from its own revenues under the coordination of the MESD. The revenues are public and comprise taxes, contributions and other duties paid to the consolidated general budget. The funds are directed back to the economic operators that have issued compliance programmes (*EIO 2010*).

Waste

- The **National Waste Management Strategy 2003–2013** (NWMS, 2004) creates a necessary, economically sound framework for developing and implementing an integrated waste management system (*Fifth National Communication*).
- The **National and Regional Waste Management Plan** ensures the implementation of EU waste legislation in Romania (*EEA 2011*).
- The ‘Jalopy’ programme, run by the Environment Fund Administration, was deemed a real success in 2010 and continued in 2011. Around 63,000 new cars were purchased in 2010 and 190,000 were scrapped. The amount allocated for this program in 2010 was more than EUR 170 million. The novelty for 2011, developed through the Environment Fund, is the possibility of acquiring new hybrid or electrical cars without necessarily taking part in the programme: any private or legal person (except companies, whether private or state owned) will benefit from a 10% discount (but not more than EUR 1,800) on the sale price of a hybrid car, and up to 20% discount (but not more than EUR 3,700) on the sale price of an electric car (*EEA 2011*).

Water and wastewater

- The **National Action Plan for the Environment** objectives in the field of water resources include: **sustainable use of water resources** by increasing the share of water energy potential through new hydroelectric plants and waterways transport modernization, and **ecological restoration of rivers** through rehabilitation of destroyed habitat and by ensuring environmental flows (*EEA 2011*).
- In the framework of Axis 1 of the **OP Environment** (‘Extension and modernisation of the water and wastewater systems’), some 30 major projects have been approved with a total value of more than EUR 2.2 billion. By the end of 2011, it is estimated that a further 23 projects will be approved, with a total value of more than EUR 2.5 billion (*RSC 2011*).
- The **National Plan for Infrastructure Development (NPID)** (2010) aims to modernise national infrastructure to European standards and to spur economic growth while also generating positive social and environmental impacts. Implementation of the NPID will lead to the

development of more infrastructure investment projects providing access to sewerage systems and ensuring permanent supplies of potable water (*RSC 2011*).

- Economic stimulus plays an important role in promoting water reuse and conservation, as do financial penalties for those who waste or pollute water resources (*EEA 2010*).

4.2. Public finance sources for supporting eco-systems protection

Environmental Fund

The main contributions that are payable to the Romanian Environmental Fund authorities are as follows:

- 3% rate applied on the income from trading iron and non-iron waste and goods destined to dismantling by the collectors or traders, individuals or entities, is withheld by the collectors/traders;
- Charges paid for air polluting emissions from fixed sources;
- Taxes collected from businesses for the use of new land for storing recyclable waste;
- An amount of RON 2 per kilo of packages introduced on the national market by manufacturers and importers of packaged goods or packaging materials. The fixed amount as established above is payable only if the annual objectives of recovery / recycling are not fulfilled. The amount is due for the difference between the annual objectives and the objectives achieved by the enterprise
- An amount of RON 2 per kilo of new or old tires introduced on the national market by the legal entities;
- 2% of the value of hazardous chemical substances, traded by manufacturers and importers. The chemical substances used for obtaining medicines are exempted, etc.;
- Ecotax of RON 0.1/unit for bags – banana type, with applied handle, or T-shirt type – made out of non-biodegradable materials;
- Environment tax on vehicles – there is a formula depending on various characteristics of the vehicle
- An amount of RON 2 per kilo of oil waste generated on the national market by the legal entities.

http://www.deloitte.com/assets/Dcom-Romania/Local%20Assets/Documents/EN/Tax%20and%20Legal%20Guide/ro_TaxLegalGuide_EnvironmentalFundContributions_053111.pdf

The annual budgeted expenditure and the payments made by the Environmental Fund between 2004 and 2006

- lei -

Year	Budgeted expenditures for projects support	Payments	Payments/Budgeted expenditures
2004	206477200	3605556	1,75%
2005	283796760	66864140	24%
2006	390694800	100323135	25,68%

Source: EFA, Reports on Environmental Fund management for 2004-2006

Relevant Projects	2004 (lei)	2005 (lei)	2006 (lei)
Works for preventing and eliminating the natural calamity effects produced by floods in September 2005 in Costinesti area	-	-	16.879.162,78
Educating and raising people awareness of the importance of the environment protection	-	136.472,60	971.012,28
Works for eliminating the natural calamity effects produced by floods in 2006	-	-	18.250.250,98
Reducing the impact on atmosphere, water and soil	-	-	179.316
Preserving bio-diversity	-	-	10.460

Source: http://mpr.aub.uni-muenchen.de/5983/1/MPRA_paper_5983.pdf

4.3. The role of private financing in supporting eco-systems protection

The Romanian Environmental Partnership Foundation

The Romanian Environmental Partnership Foundation (Fundația pentru Parteneriat) was established as an independent foundation in 1998, and is a member of the Environmental Partnership (EP), dedicated to supporting community based environmental improvement projects in 5 CEE countries. The Foundation develops and implements a wide range of programs and tools including funding, technical assistance, training and specific operational programs. During the years the Foundation has initiated and implemented **10 funding-** and **7 operational programs** in environmental protection and community development.

During the 14 years of funding **775 projects of over 350 organizations received financial and technical support** totaling **13,2 million lei**.

The endowment has enjoyed tremendous growth over the past years, increasing to a current value to **2.1 million RON**. This was possible mainly due to the support of the **C.S. Mott Foundation** (a private, grant making foundation in Flint, Michigan) that offered two challenge grants, each of 200.000 \$ starting with 2004. The condition was to match through fundraising from different sources on a 1:1 basis the amount offered by the MOTT Foundation. <http://www.epce.ro/>

PROGRAM	YEAR	2005	2006	2007	2008	2009	2010	TOTAL
Environmental Partnership	Funded projects	29	16	16	9	10	10	270
	Amount RON	388,368	224,793	265,426	171,001	163,976	180,610	3,364,869
Tisza	Funded project	0	0	0	0	0	0	10

	s							
	Amount RON	0	0	0	0	0	0	135,057
Living Heritage	Funded projects	0	0	0	0	0	0	21
	Amount RON	0	0	0	0	0	0	509,935
Green Spaces	Funded projects	0	12	19	28	59	54	172
	Amount RON	0	23,787	138,014	182,180	651,580	632,641	1,628,203
Ecotourism	Funded projects	0	16	1	0	0	0	17
	Amount RON	0	260,417	33,379	0	0	0	293,796
Greenways	Funded projects	0	3	3	10	7	3	26
	Amount RON	0	41,229	41,399	100,557	37,898	29,112	250,196
Speak Up and Get Involved	Funded projects	0	0	13	11	11	2	37
	Amount RON	0	0	177,944	149,521	185,000	21,878	534,343
NGO Fund	Funded projects	0	0	0	11	19	0	30
	Amount RON	0	0	0	684,628	1,063,081	0	1,747,709
Green Philanthropy	Funded projects	0	0	0	0	0	10	10
	Amount RON	0	0	0	0	0	261,976	261,976
Community Foundations	Funded projects	0	0	0	0	0	2	2
	Amount RON	0	0	0	0	0	60,000	60,000
Other	Funded project	10	4	5	2	2	3	34

	s							
	Amount RON	122,880	93,144	89,318	85,784	63,623	7,800	588,242
TOTAL	Funded projects	39	51	57	71	108	84	629
	Amount RON	511,249	643,372	745,481	1,373,672	2,165,159	1,194,019	9,374,331

<http://www.epce.ro/tamagatasistat.php>

Most important projects:

Green spaces

The "Green Spaces" program was launched in 2006 by the Environmental Partnership Foundation with MOL Romania, through a pilot program called "Schools for the Environment". In 2013 the eighth consecutive call for proposals for the Green Spaces program was launched.

This year the available amount for the two categories of the program - **Natural Protected Areas and Urban Green Spaces** - is almost **150.000 EUR**. The **Natural Protected Areas component** has the goal to promote the protected areas of Romania in order to increase their acceptance level through the involvement of NGOs, schools, local communities and administrators of the protected areas. Through this component there will be funded projects that intend to run the following type of activities:

- Junior Rangers Day of Protected Areas
- Biodiversity Day
- Educational Trail development in protected areas
- Permanent exhibition development in the visitors' center of the protected areas

The amount available for **2013** is **442.300 RON**.
 Maximum amount/project: **20.000 RON**.
 Own contribution must be at least 20% of the project budget.

Within the „**Urban Green Spaces**” component the Foundation offers grants for the creation or rehabilitation of green spaces, run by NGOs in collaboration with different institutions. The amount available for 2012 is **223.880 RON**.
 Maximum amount/project: **9.000 RON**. <http://www.epce.ro/programok.php?id=4>

Launching of the Sustainable Development Component within the NGO Fund

The general objective of the SUSTAINABLE DEVELOPMENT Component is to support sustainable development and the improvement of the environment in Romania through the contribution of the NGOs and through public participation. This Component will support projects under the following main areas: climate change, biodiversity and landscape protection, ecotourism, environmental advocacy and watchdog activities/increased environmental awareness and public participation in environmental decision-making, environmental education.

The total allocation for this Component under the first round of call for proposals is **2,100,000 Euro**. Grants are dedicated to NGOs. An applicant organisation may submit a maximum number of 2 project proposals under sustainable development component for this call for proposals, out of which only 1 proposal for large grants. <http://www.epce.ro/programok.php?id=25>

4.4. Green job creation

Through the 3 years of the '**Green Entrepreneurship**' programme of the Romanian Environmental Partnership Foundation approx. 25-30 green jobs have been created:

Green Entrepreneurship" aims to promote a model of development for regions with untapped economic potential and a tradition of stewardship of natural and cultural resources. This model is centered on clusters of social enterprises-commercial entities whose profits support environmental and local development NGOs which, in turn, serve their communities. During the program's three years, at least five new environment-related social enterprises will be established and 25-30 new jobs created. Additionally, at least 60-100 local producers and service providers connect to a supply and distribution chain, further strengthening local economies. <http://www.epce.ro/programok.php?id=22>

4.5. Indicators

- **Special protection areas as a percentage of the total area of the country**

Terrestrial Protected area (% of total land area) – World Bank

<http://databank.worldbank.org/data/views/reports/tableview.aspx>

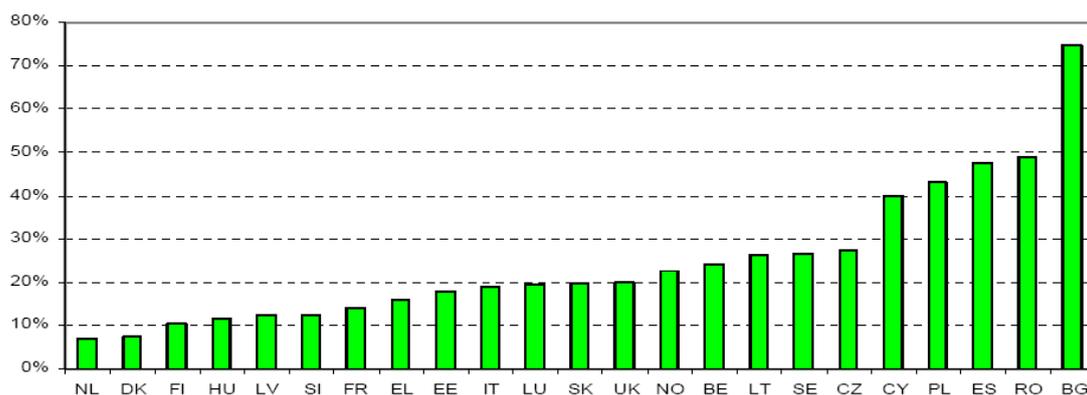
	2003	2004	2005	2006	2007	2008	2009	2010
Romania	5	5	7	7	7	7	7	7

- **Area devoted to organic farming**

Total organic area: 140 132 ha. (2008)

The area under conversion as a percentage of the total organic area can give an indication of the potential growth. In terms of potential for growth Romania (48.9%) has the second place on the list among all EU countries. (see Figure)

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Organic_farming_statistics



(1) DE, IE, MT, AT, PT no data available; CY, LU data 2007

5. Financing of eco-innovation in SMEs

Focus: Eco-innovation and barriers for its financing within SMEs

5.1. National mechanisms and strategies for supporting eco-innovations

- The **National Agency for Mineral Resources (ANRM)**, which is co-ordinated by the Ministry of Economy and Trade, grants authorisation for the prospecting, exploitation and production of hydrocarbons (*Fifth National Communication*).
- The **National Strategy for Research, Development and Innovation 2007–2013** provides the basis for organising an RDI system and defines where and how public investment will be concentrated in R&D to support future innovation (*EIO 2010*).
- The **National Roadmap for the Implementation of the Environmental Technologies Action Plan (ETAP)** was adopted for the period 2008–2009. It mainly comprises information-related activities and market analyses tied to incentives for environmental technologies and the possible creation of new opportunities and niche markets. A main challenge is the lack of consistent statistical and comparable data on environmental technologies and eco-innovation (*REC 2011*).
- The **ECOEMERGE project** (Developing Emergent Ecological Markets in Romania), financed through a bilateral programme with Norway, was based on two sets of interrelated activities: one directed at the private sector for improving technology transfer and the use of eco-innovative technologies and practices in industry; and the other aimed at promoting green public procurement practices within public administration (*RSC 2011*).
- The Ministry of Environment and Forests is currently testing the **industrial symbiosis approach** for sustainable economic development, discussed in greater detail below. The industrial symbiosis pilot project is supported by the EU's LIFE+ programme (*RSC 2011*).
- In 2010, the government launched a **campaign to promote EMAS** (*RSC 2011*).

- The **National Strategy in the Field of Innovation** will also be elaborated, giving special attention to measures that support the set-up of innovative clusters oriented towards advanced technology in strategic fields—e.g. information technology and communication, energy and transport, including the electric vehicles industry and major investment objectives for research (*National Reform Programme 2011–2013*).
- The **Romanian Industrial Symbiosis Pilot Project (ECOREG)** is designed to: encourage segregation of waste collection and increase recycling and efficient waste disposal; to reduce dependence on fossil fuels in the region, stimulating the generation of energy from biomass; to add value to waste by reducing the use of natural resources; and, to generate jobs and create new business opportunities contributing to the creation of new standards and practices (*EIO 2010*).

5.2. The role of international financing for supporting eco-innovation

EIB

Renault sustainable Hi-tech for all

The project concerns the activities for the development of innovative light-weighting platforms, more cost affordable electrified drivetrain and vehicles, and the development and further industrial deployment of a new A segment urban vehicle. The project's R&D activities are mainly located in the promoter's existing R&D premises in France, and to a lesser extent, in Romania and Spain. The project also includes some investments in Slovenia to adapt existing facilities for the production of new vehicles. EIB: EUR 400 million, Total: EUR 812 million. Promoter: Renault.

(The project may be financed under the Risk Sharing Finance Facility (RSFF), which is an innovative credit risk sharing scheme jointly set up by the European Commission and the European Investment Bank to improve access to debt financing for private companies or public institutions promoting activities with a higher financial risk profile in the fields of research, technological development, demonstration and innovation investments.)

<http://www.eib.org/projects/pipeline/2012/20120329.htm>

5.3. The role of partnerships between public and private sectors in increasing eco-innovation

Alternative Fuel Bus Fleet in Suceava

The main objective of this project was to increase the number of public transport vehicles using clean and renewable fuels, thus reducing the use of diesel and leading the way to a sustainable transport system. **Suceava Municipality together with the public transport company** initiated the implementation of a new public transport plan, which included the introduction of 15 new Euro3 buses. The project was implemented in the period 2006 to 2007. The entire public transport fleet was turned into a Euro3 fleet; Project costs totaled **EUR 70,520**. The fleet now includes 30 new LPG buses and two minibuses equipped with FPT systems, reducing emissions and improving energy consumption. These activities were implemented through the

CIVITAS SMILE project with co-financing from **EU funds**. http://www.eco-innovation.eu/index.php?option=com_content&view=article&id=93%3Aalternative-fuel-bus-fleet-in-suceava-romania&catid=71%3Aromania&Itemid=71

Dacia Electra – Research on electric vehicles

In 2008, the Automotive Engineering Research Centre of the University of Pitesti launched the project ECO EV (Ecologic Electric Vehicle) for the realisation of an experimental flexible platform for an ecological electric vehicle. The electric system, developed as part of the EcoMatic Hybrid System, was assembled on an experimental vehicle, the Dacia Electra. The concept car is under construction with financial aid **granted by the Romanian Ministry of Education, Research and Innovation and with the technical support of Dacia Group Renault**, which has a plant near Pitesti. The project uses local research and development infrastructure (University of Pitești). http://www.eco-innovation.eu/index.php?option=com_content&view=article&id=95%3Adacia-electra-research-on-electric-vehicles-&catid=71%3Aromania&Itemid=71

5.4. Indicators

Ranking on the European Innovation Scoreboard — the eco-innovation index includes eco-innovation inputs, eco-innovation activities, eco-innovation outputs, environmental outcomes and socio-economic outcomes.

Overall Scorecard: 78.15

19th on the list among all EU countries.

- Eco-innovation inputs: 39.84
- Eco-innovation activities: 113.98
- Eco-innovation outputs: 101.29
- Environmental outcomes: 60.32
- Socio-economic outcomes: 81.28

Number of companies registered under EMAS — reflects the level of awareness among companies of the fact that environmental management is good for business

No companies are EMAS registered in Romania

http://ec.europa.eu/environment/emas/tools/contacts/ro_en.htm

6. Key areas of interventions of EU funds regarding the above sectors in the 2007-2013 period and the outlook for 2014-2020

Operational Programmes for the 2007-2013 period

Most of the EU funds regarding environment related issues, and the incentive to green the different sectors (such as transport, energy, urban development), are allocated to four main spheres:

- i. upgrading the heating system
- ii. renovating or constructing motorways, main roads, and railways (most of them are part of the TEN-T system)
- iii. waste-, and drinking water treatment and upgrade of the infrastructure
- iv. integrated solid waste treatment (which is especially lacking in rural areas)

I. Operational Programme 'Environment'

Co-funded by the ERDF and CF. The total budget of the programme is around EUR 5.6 billion, and the Community assistance amounts to EUR 4.5 billion (approx. 23 % of the total). The overall objective of the programme is to improve the living standards and the environment, focusing in particular on meeting the European legislation on the environment.

http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=RO&gv_reg=ALL&gv_PGM=1038&LAN=7&gv_per=2&gv_defL=7

Breakdown of finances by priority axes:

Priority Axis	EU Investment	National Public Contribution	Total Public Contribution
Extension and modernization of water and wastewater systems	2 776 532 160	489 976 263	3 266 508 423
Development of integrated waste management systems and rehabilitation of historically contaminated sites	934 079	223 233 555 770	1 167 778 849
Reduction of pollution and mitigation of climate change by restructuring and renovating urban heating systems towards energy efficiency targets in the identified local environmental hotspots	229 644	268 229 268 644	458 537 288
Implementation of adequate management systems for nature protection	171 693	988 42 997 174	214 985 867
Implementation of adequate infrastructure of natural risk prevention in most vulnerable areas	270 139	017 59 128 815	329 145 954

Technical Assistance	130 440 423	43 480 141	173 920 564
Total	4 512 470 138	1 098 406 807	5 610 876 945

The highlighted axes are further examined by topic area below.

II. Operational Programme 'Regional Operational Programme'

The total budget of the programme is around EUR 4.38 billion, the Community assistance amounts to EUR 3.7 billion (approx. 19 % of the total). The overall objective consists in supporting the economic, social, territorially balanced and sustainable development of the Romanian regions, according to their specific needs and resources, focusing on urban growth poles, improving the business environment and basic infrastructure. The Romanian regions, especially the ones lagging behind, could become more attractive places where to live, visit, invest and work. The strategy will give priority to lagging regions and at the same time, a special focus will be given to supporting urban growth poles, which can contribute to a polycentric development of the Romanian territory. http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=RO&gv_reg=ALL&gv_PGM=1041&LAN=7&gv_per=2&gv_defL=7

Breakdown by priority axes:

Priority Axis	EU Investment	National Contribution	Public Contribution	Total Contribution
Support to sustainable development of urban growth poles	1 117 806 529	273 365 256		1 391 171 785
Improvement of regional and local transport infrastructure	758 355 021	118 355 985		876 711 006
Improvement of social infrastructure	558 903 260	98 629 992		657 533 252
Strengthening the regional and local business environment	633 423 700	76 471 117		709 894 817
Sustainable development and promotion of tourism	558 903 264	57 862 924		616 766 188
Technical Assistance	98 629 988	32 876 662		131 506 650
Total	3 726 021 762	657 1 936		4 383 583 698

III. Operational Programme 'Increase of Economic Competitiveness'

The total budget of the programme is around EUR 3 billion and the Community assistance amounts to EUR 2.5 billion (approximately 12.7% of the total EU money invested in Romania under Cohesion

policy 2007-2013). The Programme is under the Convergence objective co-funded by European Regional Development Fund (ERDF).

http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=RO&gv_reg=ALL&gv_PGM=1045&LAN=7&gv_per=2&gv_defL=7

Breakdown of finances by priority axes:

Priority Axis	EU Investment	National Contribution	Public	Total Contribution	Public
An innovative and eco-efficient productive system	928 290	651	151 175 785	1 079 827 075	
Research, Technological Development and Innovation for competitiveness	536 116	395	109 864 060	646 259 176	
ICT for private and public sectors	383 104	170	86 265 570	469 435 674	
Increasing energy efficiency and security of supply, in the context of combating climate change	638 370	475	87 064 824	725 540 194	
Technical Assistance	67 530 229		22 510 078	90 040 307	
Total	2 554 222 109		456 880 317	3 011 102 426	

Priority axis 1.: An innovative and eco-efficient productive system

The objectives under this priority axis reside in the consolidation and sustainable growth of the Romanian productive sector and the establishment of a favourable environment for enterprises' development. It is necessary to transpose the EU legislation into national legislation on small and medium-sized enterprises.

Priority axis 4.: Increasing energy efficiency and security of supply, in the context of combating climate change

Romania aims to improve energy efficiency and to increase the share of electricity produced from renewable resources in the national gross electricity consumption. The share of electricity produced from renewable energy resources in the national gross electricity consumption was about 29% in 2004, close to the target of 33% by 2010, but almost entirely in large hydropower plants. Therefore, the gap should be bridged primarily by other renewable sources, in order to avoid a heavy reliance on hydro energy produced in large capacities.

6.1. Energy

1. Rehabilitating the district heating system in Oradea

The project involves the rehabilitation of the existing urban heating plants and supply networks in Oradea municipality with the aim of reducing CO₂, SO₂, NO_x and dust emission and improving the energy efficiency of the system. The measures taken will help bring the plant in line with relevant EU legislation on the environment and the EU policy to reduce air pollution in an effort to tackle climate change. They will also improve energy efficiency by reducing the heat losses in the district heat supply network. Project tasks include:

- the construction of two hot boilers run on natural gas/fuel oil;
- the construction of one hot boiler run on natural gas;
- the installation of a co-generation unit with a gas turbine and heat recovery boiler in the first plant
- the installation of numerous auxiliary systems;
- the partial rehabilitation of the transport network.

The project is partly funded by the **CF with EUR 38 900 000**, and the **total** investment is **EUR 77 700 000**.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=68&sto=2247&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

2. Rehabilitating the district heating system in the municipality of Iasi

To bring the district heating system in line with EU requirements, this project will rehabilitate the existing urban heating plants and heat supply networks. As well as decreasing SO₂, NO_x and dust emission concentrations from the heating system (which currently exceed authorised levels), the project will also improve energy efficiency in the heating plants and the transport and distribution networks. The project is funded jointly by **ERDF and CF with EUR 30 618 856**; the **total** investment is **61 237 712**.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=68&sto=2266&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

3. Heating system for clean living in Timisoara

Emission concentrations in the area currently exceed authorised thresholds, notably SO₂, NO_x and dust. The project is focused on addressing this issue, in doing so helping improve energy efficiency, ensure compliance with EU environmental standards and reduce primary energy consumption, including fossil resources in the municipality of Timisoara.

The following works will be carried out under the project:

- retrofitting of two hot water boilers in the CET Centre
- upgrading of three lignite steam boilers in the CET South
- installation of a desulphurisation unit in the CET South;
- retrofitting of transport pumps in two plants;
- setting up of online monitoring equipment (hot boilers and steam boilers);
- installation of four new frequency converters.

Total investment: EUR 58 346 700

CF: EUR 27 131 200.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=68&sto=2328&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

4. Limiting urban system's heat losses

Bacau in north-east Romania is updating its district heating system, to deliver better energy efficiency for more than a third of the town’s inhabitants and a cleaner environment for all. Scheduled work includes rehabilitation of existing urban-heating plants and heat-supply networks, including the installation of a combined cycle unit in one plant. Once this is completed, the town will be fully compliant with the EU environmental legislation covering such systems. The project has a **total** eligible budget of **EUR 63 197 300**, with the EU’s **Cohesion Fund** contributing **EUR 31 598 600**.
http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=68&sto=2376&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

5. Clean heating investments in South-West Oltenia

The project to modernise district heating in South-West Oltenia’s Râmnicu Vâlcea municipality will also make sure air pollution standards are in line with EU norms. Energy efficiency improvements will reduce greenhouse gas emissions and so support efforts to tackle climate change. Examples of work to be carried out during the six-year implementation phase include the installation of new ‘low NOx burners’, to cut coal dust emissions. Heating pumps and water pumps will be renovated to improve efficiency, and a new system will be put in place to detect network leaks. A public awareness campaign will also be launched to increase overall understanding of air quality problems. The South-West Oltenia region has agreed to carry out future associated investments in renewable energy to improve air quality standards.

Total investment: EUR 59 332 500; EU: EUR 29 666 250.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2540&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

6.2. Transport

The following projects are co-financed by the ERDF and CF and are implemented under the Operational Programme ‘Transport’ (SOPT). The total budget of the programme is around EUR 5.7 billion and the Community assistance amounts to EUR 4.56 billion (approx. 23 % of the total).

Priority Axis	EU Investment	National Contribution	Public Contribution	Total Contribution	Public Contribution
Modernization and development of TEN-T priority axes aiming at sustainable transport system integrated with EU transport networks	3 276 605 085	578 269 513		3 854 874 598	
Modernization and development of the national transport infrastructure outside the TEN-T priority axes aiming at sustainable national transport system	967 078	662	429 647 576	1 397 309 654	
Modernization of transport sector aiming at higher degree of environmental protection, human health and passenger safety	229 833	640	93 254 972	322 895 805	
Technical Assistance	92 029 299	30 554 949		122 584 248	

Total

4 565 937
295

1 131 727 010

5 697 664 305

Priority axes:

i. Priority axis 1: Modernization and development of TEN-T priority axes aiming at sustainable transport system integrated with EU transport networks

The objective will be achieved through the development and upgrading of motorways and railway, and water transport infrastructure, with a view to improving the quality, efficiency and speed of transport services, door-to-door, and increasing volumes of freight and passenger traffic from eastern to western Romania.

ii. Priority axis 2: Modernization and development of the national transport infrastructure outside the TEN-T priority axes aiming at sustainable national transport system

This priority axis aims at modernizing and developing road, rail, water transport and air transport infrastructure located on the national network outside the TEN-T priority axes.

iii. Priority axis 3: Modernization of transport sector aiming at higher degree of environmental protection, human health and passenger safety

This priority axis aims at implementing the principles of sustainable development of the transport sector in Romania.

http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=RO&gv_reg=ALL&gv_PGM=1039&LAN=7&gv_per=2&gv_defL=7

Most investments go to the refurbishment or construction of motorways. These projects are not included here as highways are in general not considered as sustainable transport methods.

a. Upgraded local rail line strategically vital for Europe

Between the town of Campina and Predeal, scheduled to the end of 2010. The project will improve commercial rail services regionally and develop a combined sea-rail transport. The 48 km section was built in the 19th century and needs extensive work to bring it up to modern international standards. When this is done, the line should yield an economic rate of return of around 11-12%. Such improvement will also promote more intermodal (sea and rail) travel on this TEN-T route. Funded by **Cohesion Fund of EUR 149 610 000**.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=60&sto=1715&lan=7®ion=1561&obj=ALL&per=2&defL=en

b. Refurbishment of railway line between the cities of Coslariu and Simeria

The project includes the renewal of 57 km of electrified double-track railway lines and the construction of 18 km of new track between the cities of Coslariu and Simeria. Once completed, passenger trains will be able to operate on the route at a maximum speed of up to 160 km/h and freight trains will be able to run at 120 km/h.

The upgrade is part of a larger scheme to refurbish the strategically-important railway line between Simeria and Brasov, which forms part of the northern branch of the only trans-European railway route connecting south-eastern Europe and Greece with Germany. Improving this international route is expected to generate wider benefits for Romania and Europe as a whole. The project will not only reduce travel times but also encourage passengers and freight to use rail rather than road transport. Co-financed by **the ERDF: EUR 531 030 245, total investment: EUR 644 262 622**.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=60&sto=2564&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

c. Testing the railway signaling system

Installation and testing of the new railway signalling system ERTMS/ETCS Level 2 (European Rail Traffic Management System/European Train Control System Application Level 2) will be done on a 37 km stretch of the Bucharest to Brasov railway line. It forms part of the TEN-T Priority Axis 22 railway line, which runs from Constanta to the border with Hungary. The project will deliver a modernised railway line fitted with Europe's latest rail traffic management system, creating 30 jobs while the works are being carried out. Vital financial, economic and operational knowledge will be gained from the testing, evaluation and revision of existing Romanian operational rulebooks for trains on this line. This will yield recommendations on everything from planning to maintenance of the new railway signalling system.

Cohesion Fund: EUR 43 507 029

Total: EUR 51 184 740

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=60&sto=2138&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

d. Upgrading Romanian railway line and stations as part of the trans-European transport network

41.185 km of railway line in west Romania will be upgraded bringing improved journey speed as well as improved efficiency for freight transport. Part of the TEN-T programme, it is therefore seen as important for European transport as well as for local transport. As a result of this upgrade, the maximum speed for passenger trains will be increased to 160 km and for freight trains will be increased to 120 km bringing this section of railway in line with European and international standards. **EU investment: EUR 240 124 299; Total: 289 713 030.**

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=60&sto=2555&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

6.3. Adaptation to climate change

e. Extending the northern breakwater in Constanta port

The project extends Romania main national port by 1050 meters in order to fully protect its southern area against waves. The project extends the northern breakwater from 4 850 metres to 5 900 metres so that, along with the southern breakwater, it can reduce the negative impacts of the waves on operations and safety at the port. The protection wall will measure nine metres above sea level, rising to 10 metres with the stone coating. **ERDF: 57 875 480; Total: 121 000 000.**

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=60&sto=2252&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

f. Raising flood protection levels in the Prut Barlad catchments.

The works undertaken include constructing polders, dredging, and stabilizing river beds, and providing flood hazard and flood risk mapping. Some 16 000 local residents will directly benefit from better protection from floods, notably through new alert systems giving 3 to 4 hours warning to those in the risk areas of the Bahlui River basin. Total: EUR 58 521 100; CF: EUR 48 008 200.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2276&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

g. Reducing air-pollution from a city's major power plant

Flue gas desulphurisation (FGD) equipment is being installed at two units of the power plant of the city of Craiova. The main expected outcome is better air quality for this city of some 300 000 people. The goal is in line with the country's commitments to comply with specific EU legislation on air pollution.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2067&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

6.4. Ecosystem protection

Solving a major waste problem for the benefit of the environment and human health in Vrancea

An integrated system for managing waste will be set up for more than 390 000 people in the Sud-East region of Romania. It will reduce the number of local illegal dumpsites and landfills while increasing the waste-recycling rate. Covering all of Vrancea County, the new solid waste system includes modern collecting equipment. A further goal is to raise public awareness, so as to reduce the amount of waste for collection and encourage more sorting of recyclable waste materials. This integrated solid waste project's main goal is to close existing local urban landfills and rural dumpsites, which are unsightly and a source of groundwater pollution. The county has received new equipment – such as containers and hauling vehicles – to collect solid waste from the domestic, commercial, industrial and institutional sectors. Work is also underway to build three transfer stations and six 'bring' stations. Any biogas generated on the sites will be collected and sold, with the added benefit of helping to reduce local greenhouse gases. **Total: EUR 36 510 000; EU: EUR 27 176 20.**

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=77&sto=1832&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

Integrated waste management in Arad

The integrated waste management will benefit 458,000 inhabitants in the county of Arad, as well as contributing to the effort to meet the obligations agreed when Romania entered the EU. The system will incorporate waste separation, collection, transport, transfer and treatment, including recycling and composting, and is supported by an upgraded institutional framework. Meanwhile, existing but non-compliant urban landfills and rural dumpsites will be closed and treated. The project will have a dramatic impact on waste collection rates, particularly in rural areas. It expects to bring the collection rate for mixed waste up to 100% for both the urban and rural population, as opposed to the 93% urban rate and 15% rural rate recorded in 2008. Meanwhile, with biogas being introduced as a substitute for energy otherwise produced from fossil sources, it is hoped that a reduction in greenhouse gas emissions will also be achieved. **Total: EUR 29 187 896; ERDF: EUR 21 838 638.**

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2272&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

Other waste-related programmes:

1. Better waste management for Timis County:

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2533&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

2. Fully integrated system for solid waste in Alba County:

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2552&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

3. Ultra-modern waste management and separate collection in rural areas:

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2142&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

4. Comprehensive system for managing solid waste in Giurgiu County:

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=1931&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

5. Solid waste integrated management system in Bistrita Nasaud County:

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=1599&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

6. Solid waste integrated management system in Sibiu County:

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2296&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

7. Advanced rubbish sorting in Mures County:

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=72&sto=2320&lan=7®ion=ALL&obj=ALL&per=2&defL=EN

6.5. Eco-innovation

Using recycled glass for pressure blasting steel surfaces and the waste produced in firing heavy clay constructed products (greenblast)

Partner institutions:

ULJANIK	BRODOGRADILISTE	DD,	Croatia	
UNIVERSITATEA	OVIDIUS	CONSTANTA,	Romania	
ASTILLEROS	DE	SANTANDER	SA,	Spain
PALLION	ENGINEERING	LTD,	United	Kingdom
RESOURCE UK LMT (RMR), United Kingdom				

Budget: EUR 1 169 917 (EU contribution: 50%)

http://www.eaci-projects.eu/eco/page/Page.jsp?op=project_detail&prid=2181

6.6. Cross-border Investments

I. Operational Programme 'Romania-Bulgaria'

The programme includes community support for bordering regions between the two countries. The **total budget is EUR 262 million, with ERDF assistance of EUR 218.** (approx. 2.5 %)

http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=BG&gv_reg=ALL&gv_PGM=1291&LAN=7&gv_per=2&gv_defL=7

Breakdown of finances by priority axes:

Priority Axis	EU Investment	National Contribution	Public	Total Contribution	Public
Accessibility	80 594 790	14 832 151		95 426 941	
Environment	76 238 315	13 646 018		89 884 333	
Economic and Social Development	47 921 227	8 577 497		56 498 724	
Technical Assistance	13 069 425	7 124 118		20 193 543	
Total	217 823 757	44 179 784		262 003 541	

Priority 2: Environment [approximately 34.3% of total funding]

This priority aims at sustainable use and protection of natural resources and the environment, and promotion of efficient risk management in the cross-border area. The objectives are as follows: to ensure effective protection and use of the area's natural assets through coordinated joint management systems; to increase awareness on environmental protection and management in the cross-border area; and to protect the local population, businesses, environment and infrastructure from the potentially disastrous consequences of natural and human-made crises.

II. Operational Programme 'South-East Europe (SEE)'

The total budget of the programme is EUR 245 million, and the Community assistance through ERDF amounts to EUR 206 million.

http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=RO&gv_reg=ALL&gv_PGM=1323&LAN=7&gv_per=2&gv_defL=7

Priority Axis	EU Investment	National Public Contribution	Total Public Contribution
Innovation	44 051 157	7 773 734	51 824 891
Environment	53 739 828	9 483 499	63 223 327
Accessibility	55 160 834	9 734 265	64 895 099
Sustainable growth areas	41 338 329	7 294 999	48 633 328
Technical Assistance	12 401 497	4 133 832	16 535 329
Total	206 691 645	38 420 329	245 111 974

Priority 2: Protection and improvement of the environment

The priority aims to contribute to the improvement of environmental conditions and better management of protected and other natural/semi natural areas, to override the constraints imposed by national barriers, to foresee future environmental threats and opportunities and to develop common trans-national action for the protection of nature and humans. This can be achieved through integrated water management and flood prevention and management, the prevention of environmental risks, the management of natural resources and the promotion of resources and energy efficiency. Examples of projects would include: common civil protection systems, common alert mechanisms, strategies for rural and maritime tourism, developing networks on "green industries" etc.

III. 'Romania-Serbia' IPA Cross-border co-operation programme

The overall aim of the programme is to use joint cross-border projects and common actions by Romanian and Serbian stakeholders as the basis for achieving more balanced and sustainable socio-economic development in the Romanian-Serbian border area. Funding is **EUR 36 million**, which is supplemented by approx. **EUR 6.3 million of national funding**. **Total value** is approx. **EUR 42.3 million**.

http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=RO&gv_reg=ALL&gv_PGM=1352&LAN=7&gv_per=2&gv_defL=7

Priority Axis	EU Investment	National Contribution	Public	Total Contribution	Public
Economic and Social Development	18 002 843	3 176 972		21 179 815	
Environment and Emergency Preparedness	9 361 478	1 652 026		11 013 504	
Promoting 'people to people' exchanges	5 040 796	889 553		5 930 349	
Technical Assistance	3 600 568	635 395		4 235 963	
Total	36 005 685	6 353 946		42 359 631	

Priority 2: Environment and emergency prevention [approximately 26% of total funding]

This second priority recognises a range of common issues faced on both sides of the border in relation to the environment and emergency prevention, which require joint action in order to produce meaningful and sustainable results. Its aims are as follows:

- **Improve systems and approaches to addressing cross-border environmental challenges, protection and management** (including awareness and information campaigns, training courses in the fields of environment and emergency preparedness). Research and preparatory efforts (e.g. feasibility studies) are being conducted. At the same time, the implementation of national and EU environmental legislative frameworks governing the environment and emergency prevention will be enhanced, as will be the design of specific cross-border emergency procedures and joint management systems (flood, health, food safety).
- **Develop and implement effective strategies for waste and waste water management**. Support is

planned for the development, updating and implementation of joint cross-border strategies/action plans for waste and waste water management.

- **More effective systems and approaches to emergency preparedness** (including aspects such as flood prevention/control, food safety and health issues). Training and educational activities and information campaigns on the environment and emergency preparedness are being developed and implemented. Human-resources skills will be enhanced in order to ensure better responses to environmental emergencies. Feasibility studies and other preparatory efforts for large-scale investment activities, which are to be financed by other programmes, will also be pursued.

Renewable energy:

1. Turning alternative energy use into conventional practice

Hungary and Romania

The aim of the project is to examine resources available at given locations, and see how they can be used to produce renewable energy. It looks towards more economic diversification and greater energy effectiveness, by focusing on certain key areas: thermal energy, solar energy and bioenergy. More than 200 000 people in the region stand to benefit from the alternative energy systems developed under this project. The project is funded by the **ERDF** with **EUR 830 000 000**. The partners involved in the project, from Hungary the Csongrád County Government, Homokkert Public Company, Mórahalom and Local Government of Makó, and from Romania, the Arad County Chamber of Commerce, Industry and Agriculture, have worked together with innovative companies and experts in the energy field.
http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=68&sto=1851&lan=7®ion=1561&obj=ALL&per=2&defL=en

Transport:

2. New Danube bridge to speed up international traffic

Bulgaria and Romania

A new bridge spanning the Danube River along the 430 km border between Bulgaria and Romania was due to open in 2011. Carrying road and rail traffic between Vidin and Calafat, it provides a vital link on a key priority route of the Trans-European Transport Network (TEN-T). The bridge facilitates increased long-distance traffic and trade between south-eastern Europe and Turkey and central Europe. It has 4 lanes of roadway, one railway track, and two walkways. Planners also expect investment in the project to stimulate the local economy and generate employment. Funded by the **Cohesion Fund of EUR 70 000 000**.

http://ec.europa.eu/regional_policy/projects/stories/details_new.cfm?pay=RO&the=60&sto=1721&lan=7®ion=1561&obj=ALL&per=2&defL=en