

Integrated Solid Waste Management System in SIBIU County

Volume V

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

2009

All the requests for assistance for funding from ERDF or CF are deemed to include an Environmental Impact Assessment, according the provisions of Council Directive 85/337/CEE, amended by 97/11/CE (Directive regarding Environmental Impact Assessment).

The procedure shall consider the provisions of Romanian Legislation:

- Governmental Decision 1213/2006 on the establishment of a framework for environmental impact assessment for certain public and private projects;
- Governmental Decision 1076/2004 establishing the environmental assessment procedure for plans and programs;
- Governmental Decision 445/2009 regarding the environmental impact assessment of certain public or private projects
- Ministerial Order 860/2002 on the approval of the procedure for environmental impact assessment and for issuing the environmental agreement, as amended by Ministerial Orders 864/2002, 210/2004 and 1037/2006;
- Ministerial Order 863/2002 on the approval of methodological guidelines applicable to the stages of environmental impact assessment framework procedure;
- Ministerial Order 864/2002 on the approval of the procedure for environmental impact assessment in transboundary context and in the context of public participation in decision-making for projects with transboundary impact, amending Ministerial Order 860/2002

“Prior to obtaining the development consent (building permit or other form of permit to proceed with the project), the “Integrated Solid Waste Management System in Sibiu County” has to develop the EIA procedure.

According to the current Romanian EIA legislation, the environmental authorities coordinate the stages of the EIA procedure (i.e. screening, scoping and reviewing of the EIA Report) and, when an EIA is completed, are issuing the Environmental Agreement, which represents the “administrative document issued by the environmental protection competent authority, in order to establish the conditions and measures, as applicable, regarding protection of environment that shall be respected, if decision is taken to proceed with the project”¹.

According to the provisions of GD 1213/2004, the Environmental Authority is proceeding with the site inspections and, as a results draws up an Inspection Memorandum for every site where new investments are envisaged.

Based on the documentation provided by the Beneficiary (with the support of the TAPPP team) and the findings of site inspections, the Environmental Authority propose to the members of Technical Committee a solution regarding the screening of the project.

¹ Definition of the “environmental agreement”, according to the Emergency Ordinance of Government (EOG) no. 164/2008, modifying EOG no. 195/2005 on environmental protection.

If the project has components included in the Annex 1 of GD 1213/2004, the Environmental Agreement can be issued after the performance of a full EIA procedure (including EIA Report). Before the assessment is made, the Environmental Authority should establish during a “scoping stage” the fields of EIA assessment.

If the project components are included in the Annex II of GD 1213/2004 a screening stage is performed, in order to establish if the project is likely to have impact on the environment. The result of such a screening could be either the decision to request a EIA for the project or to consider the project as not generating a significant impact to the environment.

In all the stages of the EIA procedure (the Beneficiary request of the Environmental Agreement, the decision of the screening stage, the EIA Report, and also the decision regarding the issue of Environmental Agreement), the Environmental Authority and the Beneficiary should inform the public about the status of the procedure and all relevant aspects. The participation of the citizens, of other institutions not involved in the Technical Committee or of non-governmental organization has to be encouraged. In case of full EIA procedure, a public debate has to be organized and the Beneficiary shall present the Non-Technical Report. The questions or the suggestions coming from the participants shall be addressed, and answers submitted. The answers shall present how the documentation or the project could be modified to cope with the issues in question.

The proposed project contributes directly to the achievement of one of the four major priorities established by the Sixth Community Environment Action Programme (6EAP)² by “ensuring the sustainable management of natural resources and wastes” and indirectly to the other priorities of the 6EAP’s (tackling climate change; nature and biodiversity; environment and health).

The present project is part of the SOP Environment that falls under SEA procedure, which was performed accordingly. SEA procedure for SOP ENV started on 23rd of January 2006. A public hearing was organized on 17th of January 2007 with the aim to discuss both the draft SOP and the Environmental Report. Following SEA procedure, the Environmental License was issued on 31st of January 2007.

The project results also from the Regional Waste Management Plan (RWMP) Region 7. The Regional Waste Management Plan was subject to SEA procedure in accordance with EU Directive 2001/42/EC and adopted by the Romanian GD 1076 (2004). A SEA Working Group was established in June 2006, comprising representatives of relevant authorities -, REPA Sibiu,

2 DECISION No 1600/2002/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 July 2002 laying down the Sixth Community Environment Action Programme

LEPAs, technical departments of the Ministry of Environment and NGOs, external consultants. The working group, with the support of the external consultants elaborated the Environmental Report in September 2006. The public debate was organized in Sibiu, on 6 October 2006. The meeting was attended by 24 participants. The comments made by the public and relevant stakeholders during consultation process were taken into account in the final RWMP.

Following SEA procedure, the environmental license was issued in November 2006.

Based on the RWMP, Sibiu County Waste Management Plan (CWMP) was prepared as required by current legislation. The CWMP was also the subject to SEA Procedure. The Decision (SEA) regarding the Waste Management Plan of Sibiu County was issued by REPA Sibiu on 17.12.2008 (No. 1629).

For reference, it is underlined that the CWMP (requested and prepared in a later stage) is fully consistent with the RWMP while the proposed SOP project is consistent with both documents.

As to the design of the integrated waste management system for Sibiu County, the specific legal provisions as well as the existing planning documents at national, regional and county levels are taken into account. The new integrated solid waste management system shall have to provide better services and will certainly contribute tackling the climate change, improvement of the quality of the environment and health of the population, enhancing the biodiversity and protecting the natural habitats. Also, implementing the project, the following shall be achieved:

- Closure of all non-compliant landfills in the county in accordance with the requirements of the Directive, reduction to 50 % in 2013 of the quantity of biodegradable municipal waste going to landfill compared to the quantity of biodegradable municipal waste generated in 1995 through separate collection and recovery of paper, cardboard and wood waste and the separate collection and composting of green waste and biodegradable municipal waste in Sibiu and Medias municipalities are all measures which shall lead to compliance with the requirements of Directive 1999/31/EC on the landfill of waste transposed into Romania legislation through GD 349/2005 and by doing so will contribute to the achievement of EU policy with regard to tackling of the climate change, and protecting the natural habitats;
- Implementation of separate collection of recyclable waste from the population, both in urban and rural areas is a measure which shall contribute to the reaching of the packaging waste recovery targets envisaged in Directive 94/62/EC on Packaging and Packaging Waste, as amended by Directive 2004/12/EC. Further, the implementation of the separate collection, as envisaged within the Integrated Waste Management System, shall also contribute to the compliance with the requirements of Article 11 of the new Framework Waste Directive (Directive 2008/98/EC on waste and repealing certain Directives). Through this measure a significant quantity of raw materials will be saved (especially oil and gas) as a contribution to the EU policy with regard to tackling of the climate change and protection of the environment.

- By providing systematic collection of waste in all the areas of the county and replacing the uncontrolled disposal of municipal waste with adequate disposal the health risk for the population and the pollution of water, air and soil will be significantly reduced, the quality of environmental factors will increase as well as the areas where biodiversity will be able to develop undisturbed.

The strategy of Sibiu County regarding waste management and implicitly, the investments which shall be carried out within the Integrated Waste Management System were established taking into account the waste management hierarchy set within the Thematic Strategy on the prevention and recycling of waste and Directive 2008/98/EC on waste and repealing certain Directives. Thus, the plan envisages waste generation prevention as a priority, objective that may be found within the Integrated Solid Waste Management System, by promoting home composting in rural area. Further, the public information and awareness activities shall have a component regarding waste generation prevention.

Other investments proposed to be carried out within the project consider:

- closure of all non-compliant landfills in the county and thus, significant reduction of the impact of these landfills on the soil, air and biodiversity in the respective areas;
- implementation of separate collection of recyclable waste both in urban and rural areas and provision through sorting of suitable quality for recycling;
- treatment of biodegradable municipal waste at the composting plants which shall ensure the biological stabilization of waste to be landfilled, thus reduction of the quantity of leachate and landfill gas

Even not being among the investment objectives the existing compliant landfill Cristian will allow through its exclusive use and operation in accordance with the requirements of MO 757/2004, to reduce the impact on the environment so far generated by the uncontrolled landfilling in 80 areas (75 rural dumpsites and 5 municipal landfills) with a total surface exceeding 65 ha, spread across the whole County. This is another way of applying the EU policy regarding the tackling of the climate change and protection of the environment and human health.

The project is applying the “polluter pays” principle. For this purpose IDA ECOSIBIU intends to introduce a unified individual tax value. In the proposed waste management system it is not yet possible to measure the individual waste generation per household as this would result in a very expensive collection system. Therefore the unified waste tax will be applied to the average production of waste in urban and rural areas respectively (urban household on average produce more waste as compared to rural households and therefore pay a higher fee per household).

EIA procedure for the Integrated Solid Waste Management System in Sibiu County

The steps made for the EIA procedure are listed and described below.

No.	Steps of environmental procedure followed for environmental permit issuance	Documents/ Announcements/ Information about environmental procedure steps
1.	<p>- Submission to competent authority for environmental protection (Sibiu County EPA) of the request for Environmental Agreement together with the Technical Memorandum describing the project</p> <p>- Media announcement of the beneficiary's request for environmental permit and publication on Sibiu LEPA's web site (according with Order 860/2002).</p> <p>- Publication by the beneficiary of the request for environmental agreement on own web sites and at the headquarters of the County Council and Local Councils.</p>	<ul style="list-style-type: none"> • Sibiu County Council submitted the technical report to Sibiu County EPA registered under no. 3297/26.05.2009. • Public announcement of the request for environmental agreement published in/at: <ul style="list-style-type: none"> - "Tribuna" newspaper on 09.06.2009 and "De Toate pentru Toti" weekly on 09.06.2009; - Sibiu County Council web site starting with 09.06.2009; - LEPA Sibiu website since 09.06.2009; - Agnita Municipality headquarters since 27.05.2009; - Avrig Municipality headquarters since 27.05.2009; - Cisnadia Municipality headquarters since 27.07.2009 - Sibiu Municipality headquarters since 27.05.2009; - Talmaciu Municipality headquarters since 27.05.2009; - Tarnava Municipality headquarters since 27.05.2009 <p>All the announcements have been maintained for at least 10 days.</p>
2.	<p>ISWMS in Sibiu County sites' verification by the project beneficiary and LEPA Sibiu</p>	<p>-Site Verification of Sura Mica composting plant and sorting station site on 24.06.2009;</p> <p>-Memorandum no. 3140 of 25.06.2009 and corresponding control list related to site verification;</p> <p>- Site Verification of Tarnava composting plant site on 24.06.2009;</p> <p>-Memorandum no. 3139 of 25.06.2009 and corresponding control list related to site verification.</p>
3.	<p>Decision for Screening stage issued</p>	<p>- TAC issued a draft decision on</p>

	within TAC (Technical Analysis Committee) of Sibiu REPA.	05.08.2009 and the Minute of Meeting has been registered under no. 3180/06.08.2009; - The beneficiary was informed about TAC draft decision by address 3180/06.08.2009.
4.	Public announcement of screening decision in local newspapers and on Sibiu REPA's web site. Publication by the beneficiary of the screening decision on own web sites and County Council,	- Screening decision media announcement in "Romania Libera" newspaper on 10.08.2009 and "Tribuna" newspaper on 13.08.2009 - Public announcement of screening decision published on REPA Sibiu and Sibiu County Council web sites
5.	Public announcements of the screening decision at Local Councils headquarters.	- Public announcement of screening decision published at Sibiu County Council headquarters - Public announcement of screening decision published at Agnita, Avrig, Cisnadia, Sura Mica, Sibiu, Tarnava and Talmaciu local Councils headquarters between 10.08 and 28.08.2009
6.	Environmental Impact Assessment Study	Not the case
7.	Public debate announcement	Not the case
8.	Minute of public debate and participants list	Not the case
9.	Minute of TAC Meeting of EIA report analysis – Reviewing Stage	Not the case
10.	Final decision for issuance of Environmental Agreement	3180/14.09.2009
11.	- Public announcement of Environmental Agreement issuance decision in local newspapers and on Sibiu REPA's web site.	Public announcement of final decision published on Sibiu REPA web site on 07.10.2009
12.	- Publication by the beneficiary of environmental permit issuance decision on own web sites and County Council headquarters	Public announcement of final decision published on Sibiu County Council web site and at its headquarter on 12.10.2009
13.	Issuance of Environmental Agreement by REPA Sibiu	Notification type B 4509 on 28.09.2009

Sibiu County Environmental Protection Agency (LEPA Sibiu) has refrain to conduct the preliminary screening for the “Integrated Solid Waste Management System in Sibiu County” during the Technical Committee Meeting on 25.06.2009, upon the decision to transfer the documentation to REPA Sibiu.

As a result the coordination of the EIA procedure for the project “Integrated Municipal Waste Management System for Sibiu County” is within the competence of Sibiu Regional Environmental Protection Agency Waste Management Region 7 Centre, which is located at the following address: 2A Hipodromului Street, Sibiu, 550360, Sibiu County.

Attached copies of the public notices and the Site Inspection Memoranda can be found.

REPA Sibiu has issued on 05.08.2009 a draft Decision after the screening procedure considering the project as subject for a environmental procedure not requiring a Environmental Impact Assessment.

This decision has been submitted to Sibiu County Council on 06.08.2009. Both institutions, as well as the involved Municipalities have published the draft of the screening decision on their web-sites and/or at their headquarters for more than 10 days (copies of this announcements are attached to Vol. V – EIA Procedure).

After not receiving any comment from the public or interested organizations, on 14.09.2009 REPA Sibiu has issued the Screening Stage Decision 3180/14.09.2009 and the Controll List for the Screening stage (documents attached to Vol. V – EIA Procedure).

On 28.09.2009 REPA Sibiu has issued the Notification type B no. 4509/28.09.2009 regarding the result of the request for Environment Agreement submitted by Sibiu County Council on 29.06.2009. The Notification states that the project “Integrated Solid Waste Management System in Sibiu County is subject of an environmental procedure – without Environmental Agreement, but with a mandate to request and obtain at the end of the investments an Environmental Permit.

The Notification type B issued by REPA Sibiu imposes certain measures to mitigate the risks during the construction phase but also for monitoring of the facilities afterwards.

The Notification type B imposes the following measures:

During the works carried out at the construction sites, the following measures shall be taken:

Air Protection:

- measures shall be taken to limit dust emissions through a better organization of the construction sites, so as to ensure compliance with the provisions of the standard STAS 12574/87 concerning air protection,
- minimization of emissions associated with mobile sources shall be ensured through the use of technically appropriate vehicles,
- covered means of transport shall be used in case of materials that may cause dust emissions.

Water Protection:

- for the works designed nearby watercourses, all measures shall be taken to take out the equipment in case of high water and avoid pollution incidents,
- construction sites shall be equipped with eco-toilets,
- storage of raw materials, materials or waste is prohibited, as well as machinery standing in the water bed,
- during the execution of works, equipment and vehicles repair shall be made in specialized units,
- waste water, residues or waste discharge into surface waters is forbidden,
- no fuel storage shall be carried out within the construction sites,
- water shall have a limited use during construction, most construction materials are supposed to be prepared outside the sites.

Protection against noise and vibrations:

- the provisions of GD 1756/2006 on limiting environmental noise levels generated by equipment for use outdoors shall be complied with,
- transport operations that can increase the noise level at night shall be avoided,
- activities shall take place so as to ensure compliance with quality standard for ambient noise.

Soil and subsoil protection:

- only transport vehicles meeting the specific technical standards shall be used,
- companies performing the works and specific installations assembly are required to collect and dispose of or reuse construction waste, no unorganized outside storage areas shall be carried out; after works have been completed, the land must be cleared from such storage areas,
- temporary storage of excavated soil shall take place on small surfaces,
- land restoration (if necessary) in areas where it was temporarily affected by the excavation works, material storage or machinery standing, in order to return it for the initial land-use category,
- operational management plans and specific requirements for constructor addressing the remediation of pollution caused by accidental oil spill shall be made.

Waste Management:

- waste management will be carried out in accordance with the laws in force,

- construction waste will be disposed by giving it on a contract basis to a service provider or it will be taken even by the constructor,
- special areas for temporary storage of waste, by categories, will be organized within the construction site; containers for storage of waste will be appropriate to each type of waste,
- licensed companies will perform recovery and disposal of waste,
- excavated fertile soil will be used as earth fill in new investment on-site constructions,
- the constructor has the obligation to draft a Waste management plan for the entire duration of the construction site works; this plan shall ensure compliance with legal requirements.

Toxic and hazardous substances management:

- the constructor has to prepare an Environmental and Work Safety Management Plan for the site and works, which shall include control and remedial actions need to be implemented during the execution and detail the hazardous substances management method,
- these substances shall be stored in original packages, in covered areas, on impermeable surfaces; excess storage of these materials shall be avoided by providing a steady supply stream according to need.

Requirements for the new investment (sorting stations, composting plants) operating phase:

Air quality protection:

- dust-generating processes will take place in closed spaces equipped with extraction and air purification systems,
- compliance with the proposed technology is required for composting plants, i.e. composting in piles, intensive composting phase in membrane-covered windrows and maturation phase in open windrows;
- Vehicles used for waste transportation shall be technically proper.

Water quality protection:

- solutions for water supply and wastewater discharge of the water management authority shall be met,
- sanitary protection zone for drilled wells shall be organized and used,
- compliance with conditions stipulated in the permits issued by the competent authority for water management is required, namely: Water Management Permit no. SB 61 of 24/07/2009 Sibiu Water Management System and Water Management Permit no. SB 376 of 07.09.2009 issued by Mures Waters Directorate.

Protection against noise and vibrations:

- reduction in the speed limit and control access to the sites,
- creation of perimeter vegetation belts,
- dimensioning of the premises so that they can provide access to reduce engine noise (transport vehicles shall not be standing outside sites),

- use of platform and road construction materials to reduce noise generation.

Soil and subsoil protection:

- collection and discharge systems for rain water, domestic water and industrial water shall be completed according to the project, so that they do not result in contamination of soil and subsoil,
- making interior roads and technology platforms impermeable by concreting,
- proper organization of waste disposal area within the construction site.

Terrestrial and aquatic ecosystems protection:

- creation of perimeter vegetation belts,
- fencing of the premises to prevent access of animals to the site.

New investment sites are not located near the protected areas of national or international interest or Natura 2000 sites. Also, in the sites location area there are no habitats of plant and animal species included in Red Book, migration routes and shelters of animals for breeding, food, recreation and wintering.

Human settlements and other objects of public interest protection:

- fencing of the premises and creation of perimeter vegetation belts.

Sites are located at a distance from human settlements and objects of public interest.

Waste Management:

- waste management shall be carried out as described in the project (section III.8.2.1) in compliance with the legislation in force.

Toxic and hazardous substances management:

- facilities operation does not involve chemicals or dangerous substances storage or handling on sites.

Monitoring:

Monitoring program for facilities at both construction sites will include:

- quantities of waste received (by the daily record of all vehicles bringing waste and reception tickets for each transportation),
- quantities of sorted waste and quantities of recyclable waste to be recovered,
- quantities of biodegradable waste to be composted and the quantity of compost produced,
- quality periodic (monthly) characterization of waste water transported to treatment plants,
- regular (annual) monitoring of noise level generated by technological facilities at the premise edge.

Requirements for closing the non-compliant municipal landfills:

- the deadlines for ceasing landfill activity and enforcing legal provisions with a view to the closure and post-closure monitoring according to Annex no. 5 to G.D. no. 349/2005 on the landfill of waste, namely:
 - Landfill Agnita: 2010
 - Landfill Avrig: 2010
 - Landfill Cismădie: 2010
 - Landfill Talmaciu: 2010
 - Landfill Remetea (Dealul Daii - Sibiu): landfill activity ceased in 2004.
- areas occupied by waste landfills shall be registered in the land register and shall be marked clearly in cadastral documents,
- the land shall be conferred landscape classification code through the technical works execution for the closing of landfills,
- the landfill closure system will be designed according to the project, in compliance with technical prescriptions for the design of such system as specified in the Order no. 757/2004 on the approval of Technical Norms on the landfill of waste:
 - Waterproofing system shall meet the following requirements:
 - to be landfill gas-proof in the long run,
 - to retain and drain rainfall water,
 - to form a stable and lasting basis for vegetation,
 - to be safe from damage caused by erosion,
 - to be resistant to large variations in temperature (frost, high temperatures),
 - to prevent animal breeding (mice, mole),
 - to be passable,
 - to be easily maintained.
 - Existing waste and a soil layer of 30 to 50 cm, considered contaminated, will be gathered from the currently occupied surface area in a body having a geometric shape of truncated pyramid type with polygonal base, afterwards the surface area is leveled,
 - Support layer. On the leveled areas it shall be applied a support layer with a thickness of 50 cm, homogenous and uniformly resistant to efforts, and the surface will be leveled again. The support layer should allow the gas permeation and permeability coefficient value should be $\geq 1 \times 10^{-4}$ m/s. Surface elastic modulus should be at least 40 MN/m². Construction and demolition waste, excavated soil, ash, waste, suitable minerals or natural materials can be used as material for the support layer. The content of calcium carbonate cannot exceed 10% (mass). The support layer is not allowed to contain organic components (wood), plastics, tar containing asphalt, iron/steel and metals. The maximum size of material grains cannot exceed 10 cm. The support layer should be homogenous and uniformly resistant to efforts, the surface should be flat and leveled. Corrosive material cannot be used.
 - Collection of landfill gas. A gas drainage layer with a thickness ≥ 0.30 m is applied to the support layer. The surface area will be leveled. Drainage material should have a permeability

coefficient of minimum 1×10^{-4} m/s. The project provides the following biogas extraction, collection, transport and combustion systems:

- Landfill Remetea-Sibiu: biogas extraction wells, biogas collection and transportation system including pipelines, dehydration system and gas substation; gas combustion system.
- Landfills Agnita, Talmaciu, Cismădie and Avrig: passive degassing systems. Number of wells provided for each landfill is: Talmaciu-1 well; Agnita- 1 well; Cismădie- 2 wells; Avrig- 4 wells. Testing of gas generation capacity and methane content will be provided for each landfill, the type of gas treatment is to be decided based on data. It is allowed passive degassing only for landfills for which the active phase of gas formation has been ended; this no more can be recovered, treated or controlled burnt. At a methane content of less than 20% or an amount of captured gas $< 100 \text{ m}^3/\text{h}$, the landfill gas can be deviated through the re-cultivation layer. The landfill gas should be able to spread into the rainfall water drainage layer, through perforated pipes or drained directly into the drainage bed.
- Mineral waterproofing. It should have a minimum thickness of 0.50 m and a permeability coefficient $\leq 5 \times 10^{-9}$ m/s. The content of calcium carbonate should be less than 10% (mass), content of clay having granules diameter $< 0.005 \text{ mm}$ to be minimum 20% (mass). The maximum size of the granules is limited to 63 mm. The content of organic components in clay is limited to a maximum of 5% (mass) and wood components (roots, twigs, etc.) are not allowed. Waterproofing using clay material is applied in 2 layers of clay compacted by roller compactor. Waterproofing layer should have a flatness tolerance of more than 2 cm / 4.0 m. Proctor density should be $\geq 92\%$.
- Rainfall water drainage layer. It shall be designed with a minimum thickness of 0.30 m. The permeability coefficient should be $> 1 \times 10^{-3}$ m / s. Drainage material should be stable on slopes and applied evenly over the entire surface of the landfill. Drainage material grain size should be between 4 mm and 32 mm.
- Geo-textiles for use as a separation layer. A separation layer is applied on the rainfall water drainage layer to prevent permeation of the re-cultivation layer components into the drainage layer. Geo-textiles for use are long term resistant materials, such as polypropylene (PP) or high density polyethylene (PEHD), with mass per unit area $\geq 400 \text{ g/m}^2$. Geo-textiles should allow water permeation and meet quality requirements as prescribed in existing standards. Use of recycled materials is not allowed.
- Re-cultivation layer. It is designed with a total thickness $\geq 1.00 \text{ m}$. During the construction of re-cultivation layer, equipment shall be moved only on traffic routes arranged for this purpose. Re-cultivation layer is not compacted. Re-cultivation layer consists of a water retention layer ($d \geq 85 \text{ cm}$), a vegetation-soil layer ($d \geq 15 \text{ cm}$), and vegetation (grass). Planting bushes is allowed only after 2 years of planting grass. Only bush species with short roots can be planted. Material for water retention layer consists of slightly cohesive sand and gravel.
- Special requirements for the closure and rehabilitation of the landfills Avrig and Agnita which are located in protected areas (Agnita in SPA Plateau Hartibaciu (ROSPA0099) and Avrig in SPA - Piedmont Fagaras (ROSPA0098)):

- when setting the works schedule, it will be considered carrying them in the second semester of the year, i.e. after July 1, to eliminate the possibility of damage to the reproductive activity of protected species,
- site works duration shall be as short as possible
- machinery and equipment used for closure works should include, as far as possible, low noise equipment and machinery,
- temporary facilities construction (access ways, site organizations) shall be avoided,
- works schedule, works type, equipment list and responsibilities shall be communicated to custodians, sites administrations and in their absence to environmental protection authorities.
- requirements for monitoring
- landfill post closure monitoring period is at least 30 years and can be extended if through the post closure monitoring program is found out that the landfill is not yet stable and poses a potential risk to the environmental factors. The following shall be monitored in particular:
 - quantity and quality of leachate discharged until its generation stops,
 - analysis of groundwater key quality indicators,
 - soil quality in the influence area and evolution of new biocoenoses developed in areas returned to the natural environment,
 - functioning of gas drainage from the waste stream,
 - determination of the quantitative and qualitative characteristics of landfill gas,
 - determination of specific indicators in ambient air,
 - landfill stability,
 - compaction system and behavior of layers in landfill cover.
- the operator is obliged to effectively notify the competent environmental protection authority on the occurrence of significant adverse environmental effects, as revealed by control procedures, and respect the territorial environmental protection authority decision on remedial action required during the post closure period,
- post closure monitoring will be carried out according to the procedures provided in annex no. 4 to G.D. no. 349/2005, the results of measurements performed by the operator are stored in a register during the entire monitoring period,
- indicators and landfill post closure monitoring frequency.

Monitored indicator	Frequency
<i>Meteorological data</i>	
Amount of precipitation	Daily, as well as monthly average values
Minimum, maximum temperature at 15:00 o'clock	Monthly average
Evapotranspiration	Daily, as well as monthly average values
Atmospheric humidity at 15:00 o'clock	Monthly average
<i>Surface water, leachate and biogas monitoring</i>	
Leachate volume	Semi annual

Leachate composition at the entry to and exit from WWTP	Semi annual
Surface water quality - points upstream and downstream	Semi annual
Gas emissions samples from gas extraction wells (CH ₄ , CO ₂ , H ₂ S, etc.).	Semi annual
Groundwater monitoring	
Groundwater level	Semi annual
Groundwater quality - 1 point upstream and 2 downstream of landfill site	Depending on the flow velocity
Landfill topography monitoring	
Compaction behavior and level monitoring (by installing clamps to monitor compaction)	Annually
Capacity of the landfill surface waterproofing system operation	Regularly
Deformation of landfill surface waterproofing system	Annually
Inspection of decommissioned landfill. The following shall be monitored: state of vegetable layer, state of drainage system, post-closure destination	Semi annual

In the same time a request for the issue of a “Natura 2000” statement was submitted by Sibiu County Council to LEPA Sibiu. None of the new investments are in the proximity of any Special Protection Area (SPA) or Community Importance Site (the shortest distance is 8.5 km). However the non-compliant landfill from Agnita is located within ROSPA0099 “Podisul Hartibaciului”, while the non-compliant landfill or Avrig is located at the limit of ROSPA0112 “Mlaca Tatarilor”.

The current measures considered when preparing the design for the closure of both landfills will lead to a better preservation of the natural environment by reducing the area covered with waste and re-introducing almost 5 ha of land into the healthy natural circuit. The contact between living creatures and waste will be virtually stopped.

For the construction sites located within the “Natura 2000” network (23 rural dumpsites and 2 municipal landfills) specific measures will be taken during the construction stage in order to mitigate the risks to the living environment. Such measures are:

- schedule of the construction works during the second part of the year, after the mating period of protected bird species;
- reducing of the period for works;

- maintaining a low noise level during construction works by use of the machines and other equipment with appropriate noise characteristics;
- avoid building temporary infrastructure (roads, site facilities, etc);
- the schedule of works, the type of works, the list of equipments shall be presented to the site's administrators or LEPA Sibiu.

REPA Sibiu has analyzed the documentation delivered in support and has issued a statement No. 3136/17.08.2009 that the project is not in a position to generate significant effects on the sites belonging to "Natura 2000" network.

The measures considered when preparing the design for the closure of both landfills will lead to a better preservation of the natural environment by reducing the area covered with waste and re-introducing almost 5 ha of land into the healthy natural circuit. The contact between living creatures and waste will be virtually stopped.

In the Partnership Agreement of IDA ECOSIBIU has been introduced a supplementary measure for protection of the environment in the area of the closed municipal landfills. In application of the provisions of the Technical Norms for waste landfilling, every municipality is responsible to cover the costs for the monitoring activities after the closure of the landfill. In this way the municipality or its operator will keep and update the records as requested by the above mentioned Norms, will monitor the behavior in time of the works done and the quality of the environmental factors.