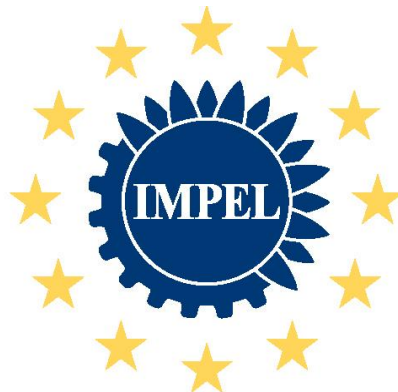


**Reinforcement program on inspection skills
according to the landfill directive in
IMPEL member countries**

Final report: March 19th 2013



European Union Network for
the Implementation and Enforcement
of Environmental Law

Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the EU Member States, acceding and candidate countries of the European Union and EEA countries. The association is registered in Belgium and its legal seat is in Bruxelles, Belgium.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building and exchange of information and experiences on implementation, enforcement and international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation.

During the previous years IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the 6th Environment Action Programme and the Recommendation on Minimum Criteria for Environmental Inspections.

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation.

Information on the IMPEL Network is also available through its website at:

www.impel.eu

Title report: Reinforcement program on inspection skills according to the landfill directive in IMPEL member countries	Number report: 2012/03
Project manager: John Visbeen, Netherlands Romano Ruggeri, Italy	Report adopted: June 2013
Authors: John Visbeen, Netherlands	Number of pages: [57] Report: [31] Annexes: [5]
Project team John Visbeen, Netherlands; Romano Ruggeri, Italy; Jana Miklavcic, Slovenia; Corina Rotaru, Romania; Bianca Schijven, Infomil.	
Executive summary: During 2011 and 2012 we have been working on the project: <i>Reinforcement program on inspections skills according to the landfill directive</i> . The Council Directive 1999/31/EC on the landfill of waste and the Council Decision of May 2002 establishing criteria and procedures for the acceptance of waste at landfills (2003/33/EC) set standards for the authorisation, design, operation, closure and aftercare of landfills. Improving implementation of EU law is a high priority objective of both the European Commission and IMPEL. Recent reports on implementation of EU waste legislation have shown that <i>“implementation and enforcement of EU waste law remain poor particularly regarding the waste framework directive, the landfill directive and the waste shipment regulation”</i> . The project Landfill inspection started in 2011. The objectives of the project: <ul style="list-style-type: none"> - identification of good inspection practices, developing guidance; - improve cooperation between IMPEL member countries to work towards a consistent regulatory and enforcement regime; - to give feedback to policy makers on (effectiveness) of the various approaches and practices in the field of permitting and inspection of landfill sites in the IMPEL member countries. In 2011 an information exchange forum was organised in base camp and a workshop was organised in Sardinia (Italy). The aim of the project in 2012 has been to improve inspections skills for landfills by: <ul style="list-style-type: none"> - Two joint inspections in Slovenia and Romania. Guidance and inspection tools that are available from the different EU member states have been used and checklists to be used during the inspections were developed. During a workshop in October 2012 the joint inspections were evaluated and the practicability of guidance’s and tools used was discussed. 	

As an inspection at a landfill has to cover different subjects, the inspection team decided to choose certain subjects to focus on during the joint inspections. The results of the 2011 workshop and the information exchange forum showed that the activities, on which the project will focus, to begin with, are:

- (1) Criteria and procedures for the acceptance of waste.
- (2) Gas control.
- (3) Protection of soil and water (underground water).
- (4) Water control and leachate management.

This report gives an overview from all activities. The guidance document is a separate document.

Disclaimer:

This report is the result of a project within the IMPEL network. The content does not necessarily represent the view of the national administrations.

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1 Scope

1.1 Project Background

Improving implementation of EU law is a high priority objective of both the European Commission and IMPEL. Recent reports on implementation of EU waste legislation have shown that “implementation and enforcement of EU waste law remain poor particularly regarding the Waste Framework Directive, the Landfill Directive and the Waste Shipment Regulation” (See Commission note for IMPEL Board/Clusters on EU Waste Legislation: consolidated summary of main implementation gaps, August 2010).

A questionnaire that was sent out in December 2010 to national IMPEL coordinators showed that there are countries (50%) who have a lack of knowledge to fulfil inspection requirements, especially with regard to new-to-build landfill sites, (but also new build on existing locations). There are also several countries who can offer the required technical knowledge. It was also shown that there was significant support for the exchange of knowledge and experiences because the inspection of landfill sites are complex and challenging. (see annex one for results of questionnaire)

Some countries, (for instance Romania), say that the best moment for support for inspection landfill sites they need is now, because these sites are being built at this moment,

On European projects of landfill construction (based on European funding) it is obligatory to have special technical assistance (TA) by an independent consultant. However often public administration lacks the required expertise. As a result the European Commission has organised significant assistance in recent years. Nevertheless there is still need for training measures to reach a certain minimum level of expertise in order to guarantee a good standard and quality of inspections (and also to verify or check the work of the independent consultants). IMPEL is in a position to organise knowledge exchange platforms, training measures and inspection tools for inspectors (and also permitters).

1.2 Objectives

The main objectives of the current project are:

-Identification of good inspection practices

-Cooperation (and helping each other) between IMPEL member countries to work towards a consistent regulatory and enforcement regime

-Feedback to policy makers on the (effectiveness of) the various approaches and practices in the field of permitting and inspection of landfill sites in IMPEL Member countries,

The core team intended to achieve these main project objectives by an discussion of the item with an expert group during a workshop. First we wanted to build up a forum where project information was exchanged. It was also possible to address questions and answers regarding landfill issues.

1.3 Foreseen Activities 2011

The objectives will be achieved by:

-organising Basecamp under the IMPEL website for experts in all IMPEL member countries as an exchange platform for information and specific questions, discussions etc.

-carrying out joint inspections in at least two impel member countries who need knowledge by inspection teams with inspectors who has the knowledge, (there should be a match on the topics mentioned in the questionnaire or additional information will be asked - this line-out for inspections will be developed in first project team meeting)

-organising a workshop, including a site visit, to exchange information and experiences, discuss the findings of the joint inspections and to determine further need of training measures (for instance a train-the-trainer programme), to develop guidance or inspection tools or to develop follow-up programme for more joint inspections.

-drafting of project report containing findings, conclusions and recommendations and proposal for TOR 2012,

2 Organisation of the project in 2011

2.1 Participants core team

The activities were prepared by a small core-team. Members: Romano Ruggeri (ARPAS, Italy), John Visbeen (Province Utrecht, Netherlands), Bianca Schijven (senior consultant Infomil, Netherlands).

2.2. Project team – participants workshop

The project team in 2011 consists of 12 representatives of 11 member states:

- Darren Cordina; Malta
- Judite Dipane; Latvia
- Maria Dieguez Gomez; Spain
- Vojtech Hamernik; Czech Republic
- Nina Hansson; Sweden
- Latif Latifi; Macedonia
- Jana Miklavcic; Slovenia
- Corina Rotaru; Romania
- Romano Ruggeri; Italy
- Bianca Schijven; Netherlands
- Bruno Simplicio; Portugal
- John Visbeen; Netherlands
- Karmen Zeleznik, Slovenia

During the workshop at about 15 colleagues from Romano Ruggeri of ARPAS attended (parts of) the meeting.

2.3 Consultant

According to the TOR it was foreseen that in 2011 a representative of a consulting agency with profound knowledge of permitting and inspection and directives according to landfill should support the project by:

- preparing the draft documents for the expert group
- preparing the workshop meeting
- documenting the results of the presentations and the discussions during the workshop
- preparing a draft interim report with the results of the workshop, recommendations and proposal for the TOR for the follow up in 2012,

Infomil was identified as the most suitable and most qualified consultant for the task.

2.5 Milestones

- June 2011 preparation basecamp and identification of a consultant

- June 2011 first core team meeting in Utrecht, start development and sending out questionnaire for preparation workshop,
- August-September preparation workshop by using basecamp, (exchange information about programme, making appointments for presentations)
- August-September contact with Romania and Slovenia because of organising joint inspections,
- 19-21 October workshop in Cagliari Sardinia
- After workshop: draft interim report and TOR 2012

2.6 Dissemination of results

The final project report with the template for documents and data required regarding landfill-inspections will be made available on the IMPEL website end of 2012. It will be sent to the national IMPEL coordinators. The report will also be sent to other target groups (via IMPEL Secretariat at the European level, via national coordinators at the national level).

The results of the project will be reported in professional and technical journals. On top of that they could be used for inspector trainings and presented at conferences.

3.0 Work done in 2011

3.1 Project plan

First activity of the core team was working on a project-plan. The project-plan is annex 1 to this interim-report. Outcome of the discussion was to make an change in activities. While making the TOR it seemed better to organise the joint-inspections before the workshop. The core team decided first to send out a questionnaire to collect more in depth information that should be discussed in a workshop. The core-team decides that is also would be better to prepare the joint inspections during the workshop.

3.2 Questionnaire.

Together with participants the core team developed a questionnaire. The basecamp from the IMPEL website was very useful for this activity. The consultant collected the questionnaires, made an overview that was used for preparation of the workshop.

In the questionnaire we made distinction between:

- 1-Annex I of the Directive 1999/31 EC: General requirements,
- 2-Annex III of the Directive 1999/31 EC: Control and monitoring procedures,
- 3-Annex III of the Directive 1999/31 EC and Council Decision 19/12/2002: acceptance of waste,

An example of the questionnaire is added as Annex 2 to this interim-report.

3.3 Workshop 19 October – 21 October 2011 in Cagliari Sardinia



3.3.1. Day 1: 19 October 2011

The meeting is hosted by Sardinian Environmental Protection Agency (ARPAS).

During the first day presentations were given by (presentations will be available in base camp):

- Romano Ruggeri: IMPEL Network presentation. This was a presentation in Italian. The aim of the presentation was to explain IMPEL to the Italian colleges of Romano;
- Bianca Schijven: Presentation of the results of the questionnaire;
- Jana Miklavcic: Experience with landfill inspections in Slovenia;
- Nina Hansson: Experience with landfill inspections in Sweden;
- John Visbeen: IMPEL projects and activities, Landfill project.

The purpose of the meeting is to determine:

- the scope of the project (what kind of landfills to focus on);
- which subject of the Council Directive 99/31/EC of 26 April 1999 on the landfill of waste to focus on;
- the kind of tool that is needed and which tools already exist in different member states and can be useful in this project.

Everybody was encouraged to use the IMPEL basecamp as an information exchange forum. During the presentation about the Industrial Emission Directive and article 23 of this directive, about environmental inspections, member states give examples of systems they use for the systematic appraisal of environmental risks. A IMPEL project about these systematic appraisal of environmental risks is the project Easy tools. More information on the Industrial Emission Directive can be found on the [webpage of the European Commission](#).

The results of the questionnaire show for each annex of the directive possible subjects to focus on. Being:

- Annex I General requirements for all classes of landfills: water control and leach ate management, protection of soil and groundwater, gas control, stability;
- Annex II: Procedure waste acceptance criteria and procedure/ council decision 2002: procedure for acceptance of waste on landfills, waste acceptance criteria, sampling and test methods;
- Annex III: closure and after-care procedure, sampling and lab analysis.

During the meeting the different subjects were discussed in discussion groups. For each subject the following points were discussed:

- Scope;
- Permit conditions;
- The way the subject is checked during an inspection;
- The parts that make inspection on this topic difficult;
- Possibility to give example of tool being: checklist, guidelines, best available techniques etc in the project.

On the first day the subject "*water control and leach ate management,*" was discussed in a round table discussion. Results of this discussion are given in the table in chapter 3.3.4.

List of participants

- Darren Cordina; Malta
- Judite Cordina; Latvia
- Maria Dieguez Gomez; Spain
- Vojtech Hamernik; Czech Republic
- Nina Hansson; Sweden
- Latif Latifi; Macedonia
- Jana Miklavcic; Slovenia
- Corina Rotaru; Romania
- Romano Ruggeri; Italy
- Bianca Schijven; Netherlands
- Bruno Simplicio; Portugal
- John Visbeen; Netherlands
- Karmen Zeleznik, Slovenia
- Colleagues Romano Ruggeri of ARPAS

During the workshop at about 15 colleagues from Romano Ruggeri of ARPAS attended (parts of) the meeting.

3.3.2. Day 2: 20 October 2011

The day started with a presentation of Romano on the ARPAS permitting and inspection system. After this presentation the subject protection of soil and groundwater, gas control and stability were discussed. The results of these discussions are given in the table in chapter 3.3.4.

In the afternoon we visited a landfill on Sardinia in the region Carbonia-Iglesias. At this landfill we visited the closed part of the landfill, the installation for gas use, the installation for composting of waste and an installation for the anaerobic digestion of waste.

3.3.3 Day 3: 21 October 2011

We started with the discussion on procedure for acceptance of waste on landfills, waste acceptance criteria, sampling and test methods. The results of these discussions are given in the table in 3.3.4.

3.3.4 Results of discussion

	water control and leachate management	gas control	stability	protection of soil and groundwater	criteria and procedures for the acceptance of waste
Scope	<p>In the project we will focus on existing and new landfills that have to apply with the Council Directive 99/31/EC of 26 April 1999 on the landfill of waste</p> <p>The difference between landfills can be influenced by the different topics, especially:</p> <ul style="list-style-type: none"> - the position of the landfill in the landscape; - the kind of waste that is being land filled. The amount of biodegradable waste that is being land filled is of influence on the amount of landfill gas. 				
Permit conditions	<p>obligations for operator landfill to have monitoring and control procedures</p> <p>obligation operator landfill to report (at least annually) results of monitoring to competent authority</p> <p>For all member of IMPEL project please give examples of permit conditions in base camp</p>	<p>obligations for operator landfill to have monitoring and control procedures</p> <p>obligation operator landfill to report (at least annually) results of monitoring to competent authority</p> <ul style="list-style-type: none"> - no limit values to air - conditions on flaring in permit <p>For all member of IMPEL project please give examples of permit</p>	<ul style="list-style-type: none"> - project approval - maximum % steepness in permit conditions <p>For all member of IMPEL project please give examples of permit conditions in base camp</p>	<p>obligations for operator landfill to have monitoring and control procedures</p> <p>obligation operator landfill to report (at least annually) results of monitoring to competent authority</p> <p>For all member of IMPEL project please give examples of permit conditions in base camp</p>	<p>operator landfill is obligated to have a acceptance procedure</p> <p>operator landfill is obligated to have records on acceptance procedure and registration of accepted waste</p> <p>For all member of IMPEL project please give examples of permit conditions in base camp</p>

		conditions in base camp			
How is topic checked during inspection	<ul style="list-style-type: none"> - checking results of monitoring of the landfill operator; - control plan of landfill <p>Please provide example of checklist on this topic</p>	<p>Checked in office monitoring report and during site visit</p> <p>Please provide example of checklist on this topic</p>	<p>visual inspection self-monitoring system notification checked</p> <p>Please provide example of checklist on this topic</p>	<ul style="list-style-type: none"> - checking results of monitoring of the landfill operator; - control plan of landfill <p>Please provide example of checklist on this topic</p>	<p>control of registration and administration of landfill</p> <p>Please provide example of checklist on this topic</p>
What are part that make inspection in this topic difficult	<p><u>For different member states it is not clear if leach ate may be recycled into the landfill.</u></p> <p>(In Spain this is allowed; In Italy and Sweden not allowed on land filled waste but on composting waste).</p> <p>Is the directive clear on the recycling of leach ate; or is this up to the member states?</p>	<p>No specific limit values for methane emissions</p> <p>How can we check that gas is being collected efficiently</p> <p>In directive (4.2 annex I) landfill gas must be treated and used. How to asses that is can be used or not?</p>	<p>no existing measurement method for checking</p>	<p>difference between old and new landfill</p> <p>action to take when groundwater is polluted</p>	<p>when during an inspection it becomes clear that waste has been accepted (and land filled) that was not allowed it is difficult to decide what action to take</p> <p>Taking samples of sludge's</p> <p>Difference between inert waste and hazardous waste</p> <p>The sampling of waste and the method is difficult, more information on problem</p>

<p>Can we in the project give example/ methods used in inspection that can be used in other member states</p>	<p>If recycling of leach ate is allowed are their best available techniques descriptions? Method used in Sweden for monitoring surface water (determination of electrical conductivity of surface water more info Sweden) EPA: Monitoring landfill leach ate, groundwater and surface water Environment Agency - Landfill guidance</p>	<p>Guidelines exist; EPA, Netherlands, Sweden The committee is currently looking at this subject check what part. Measurement methods for diffuse emissions of landfills (IR-camera and other methods) Add information on measurement methods</p>	<p><i>Before construction</i> Good protecting Good operation plant <i>Disposal</i> Manual procedure Competence needed Compaction <i>Control</i> Geophysics investigations (drilling) settlements waste characterisation (tube method) Netherlands knowledge on stability (John) Spain has a checklist that can be used during inspection</p>	<p>Guideline for groundwater monitoring: Environment Agency - Landfill guidance</p>	<p>Sweden. TFS project guideline on waste and composition End-of-waste criteria European Commission - Environment</p>
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3.3.5 Conclusions/recommendations and actions

Conclusions and recommendations:

In 2011 the basecamp is organised and a lot of information is collected and discussed. During workshop we made focus to the topics that are basis for joint inspections.

As a result of the discussions, we agreed that the follow up project in 2012 will focus on the following subjects of the directive:

criteria and procedures for the acceptance of waste;
gas control;
water control and leach ate management;
stability;
soil and groundwater

Important decision for TOR 2012

Because of unforeseen organisational reasons and also because of probably to bad weather conditions it was discussed it is better not to organise joint inspection late November. The proposal is to have the inspection in Slovenia and Romania in 2012.

Also in 2011 the European Commission (DG ENV) initiated a study regarding permitting and inspection practices related to waste legislation in EU Member States. The overall aim of the study is to support and improve in particular the implementation of the following EU waste legislation:

Waste Framework Directive (2008/98/EC), Landfill Directive (1999/31/EC) together with WAC Decision (2003/33/EC), RoHS Directive (2002/95/EC to be replaced by 2011/65/EU), WEEE Directive (2002/96/EC to be replaced in short notice).

The specific study objectives are to prepare guidance documents and a manual for permitting (including classification issues) and inspections (including monitoring) of waste management operations.

It is important also to use the information in this document while making preparations for the joint inspections in 2012.

Actions:

In the IMPEL base camp a frame will be made with the different subjects of the project. Everybody is asked to add questions and information on the different subjects in the IMPEL base camp.

It may be useful that more than one person from each member state may have access to base camp. Request for additional user access in base camp can be sent to John Visbeen.

In the project we are going to develop a checklist which can be used when performing an inspection at a landfill. The purpose is to develop a draft checklist which can be tested at the joined inspections in Slovenia and Romania. It is important to use the information from the report mentioned above. **It is important to focus on the aim of this project: cooperation (and helping each other) between IMPEL member countries to work towards a consistent regulatory and enforcement regime**

4.0 Work done in 2012

4.1 Joint inspections Romania and Slovenia

In 2012 the joint inspections in Slovenia and Romania were carried out. After preparation the inspection in Slovenia was carried out on September 17th and 18th. The inspection in Romania was carried out in Romania on September 27th and 28th. As well on the basecamp as in e-mail there was a lot of activity for making the programme, to send information about the landfill site and information about permit.

The programme for inspection in Slovenia is added as annex 4.

The programme for inspection in Romania is added as annex 5.

The results of both joint inspections contribute to a guidance document. This is a separate document, and also a document in progress. During workshop in Utrecht this guidance document is going to be adopted.



4.2 Workshop 10 – 12 October 2012

17 Participants:

Janis Lapsins
Rene Rajasalu
Franz Waldner
Vojtech Hamernik
Stuart Gunput
Corina Rotaru
Romano Ruggeri
Maria Dieguez Gomez
John Visbeen
Hans Versteeg
Jana Miklavcic
Karmen Zeleznik
Ronald Smalenburg
Lukasz Tandesk
Pauline Agius Farrugia
Nina Hansson
Biance Schijven
Samantha Hogervorst

First day 10 October 2012:

Location: Province of Utrecht

This day there were a few presentations:

- The welcome presentation was held by John. In his welcoming speech he told something about the city Utrecht and the past year.
- The presentation about **the joint inspection in Slovenia** was held by Bianca. The content of the presentation was:
 - o Preparation of the inspection
 - o Inspection
 - o Results of inspection
 - o Conclusions
 - o Recommendation

Bianca started with some information about the preparation of the inspection. She told us that before the inspection could start they first made an (draft) inspection guidance book for the inspection of Slovenia. In this inspection guidance book, you can find a checklist in annex, a translation of permit rules and a clarification of Slovenia's implementation of Landfill directive. The focus during the preparation was on waste acceptance paragraph 3.2 of the guidance and the protection of soil and groundwater paragraph 3.4 of the guidance. During the inspection itself, the group selected one waste stream. They also checked all the steps in the checklist they made.

After Bianca told us something about the inspection itself, she began to tell us something about the results of the inspection. First about the waste acceptance criteria. In Slovenia there was no registration of category in which waste has been categorised. There was also a discussion in the inspection team if the difference between A, B and C should be made for each waste code that a

producer of waste wants to bring to a landfill or for each waste code of the waste list. In the Netherlands, Sweden and Austria it is clear that waste should be categorised for each waste code that a producer of waste wants to bring to a landfill. At least once a year, the operator must ensure that compliance testing is carried out in the scope and frequency determined by basic characterisation.

In Slovenia sampling shall be done by persons who are qualified and have a certificate of the national authority and analysis shall be done by laboratories which are qualified and have a certificate of the national authority. Implementation of sampling and testing criteria by member states are very different. Sampling should have more attention, European standard must be a part of the basic characterisation.

About the protection of soil and groundwater Bianca said the following. The greater negative impact is in the outer layers above the first gravel and in the gravel layer. In the upper level of groundwater is less impact. The impact is evident in the parameters of TOC, Fe, NH₄⁺, Boron, nitrite, arsenic and manganese.

After the story about the inspection itself, Bianca started to tell us about the conclusions of the inspection.

- The sampling of waste is an important part of the acceptance of waste (need more attention in the guideline and information on the sampling plan should be available)
- There must be pre-treatment of municipal waste
- There must be a waste code / name of waste
- There should be more attention for mirror codes, such waste should always be extra checked
- There must be measures to reduce harmful effect on groundwater more information exchange needed on this subject in the guidance (especially in case of old and new landfill on one location)
- By using checklist implementation of legislation and differences between member states become more clear
- Such differences (maybe) are necessary due to the differences in the development of waste handling

Last but not least Bianca told us something about the recommendations the inspection group made. Information exchange through using guidance and basecamp and translation of already useful existing guidance. Training of inspectors in the BAT member state. And more focus on the pre-treatment of municipal waste in the treatment installations for example bio-gas installation. There must also be a project for more focus on the sampling plans for waste, or a guideline. The last recommendation is to make an inventory of available hours per year for landfills inspections in different member states, purpose what knowledge and minimum time is needed to be able to perform inspections at landfills.



Landfill Barje Snaga



Landfill Barje Snaga



Landfill owner



The group



Protection of soil and groundwater



Inspection team in Slovenia

The last presentation of that day was also held by Bianca, about the inspection in Romania.. The content of this presentation was:

- Preparation of inspection
- Inspection
- Results of inspection
- Conclusions
- Recommendations

Before the inspection team could start, they had to make a (draft) inspection guidance book for the landfill inspection in Romania and a checklist in annex. The focus of this inspection was on waste acceptance paragraph 3.2 in the guidance and gas control paragraph 3.3 in the guidance.

After some pictures of the inspection itself, Bianca told us the results of the inspection. The focus was on two selected subjects but through visual inspection on landfill also attention to steepness of slopes, top layer on landfill (composition) and bottom layer of the landfill. About gas control there are two relevant permit rules. Specific indicators in the environmental air of the landfill influence area- at the landfill fermentation gas collecting system. It has to be checked quarterly. Pollutant concentrations in the combustion gas resulting from the combustion of landfill gas in the equipment (dust, CO, SO_x, NO_x at 3%). They team came to the conclusion that the permit rule is not clear enough and some member states have conditions about measurements of diffuse emission. It is very important to have a visual inspection since the competent authority must carried out a final on-site inspection and has assessed all the reports submitted by the operator and ha communicate to the operator and has communicate to the operator its approval for the closuretion

Last but not least Bianca told us the recommendations of the inspection. Information exchange through the guidance and base camp must be regularly, translating of the products can be very useful. There must be more training for the inspectors in BAT member states. There must also be a project to focus on a system for quality and performance control for construction of the bottom layer and top cover.



Weighbridge



Torch for landfill gas



Steepness of slopes



Top layer of the landfill



Bottom layer of the landfill



Bottom layer of the landfill



Treated leachate



Inspection team in Romania

Second day 11 October 2012

Location: Air force museum Soesterberg and Smink Hoogland (Amersfoort)

This day was marked by a work visit at Smink Hoogland, but first the bus picked us up at the Apollo Hotel in Utrecht. The bus chauffeur drove us to the Air Force Museum, where Stuart and Hans told us more about the site visit to Smink. They also told us some more details about how they work at Smink and what kind of landfill Smink is. Landfill Smink is located between the highway A1 and the city of Amersfoort. The location is easy to reach, but it makes the complaints rise. Smink has several activities like separating/sorting waste, recycling of debris, wood recycling, green recycling, re-use of soil bank, soil cleaning for re-use, etc. Smink is under the following permit; article 21 of the industrial emission directive (IED). It is an IPPC company, which is implemented in Wabo permit and water permit. They also have a groundwater abstraction permit. In article 23 of the IED stands the annual inspections. The Province of Utrecht has four meetings concerning obligations environmental permit and state of affairs, this takes about 120 hours. They have four inspections on site, this takes about 80 hours. They have inspections due to complaints which take about 32 hours and they have joint inspections with a water quality inspectors, which take about 16 hours. In total they spend about 351 hours a year.

Smink has the following waste acceptance criteria; they have a special policy for waste acceptance, the check at the gate and on the landfill. In case of doubt, sampling of the load or correction has to be made, this has a different tariff. Contact is taken by the acceptant with the legislative authority.

Also Ronald had a presentation about Smink, but he told some more about the water treatment at Smink. After the presentation of Stuart and Hans, we had a lunch.

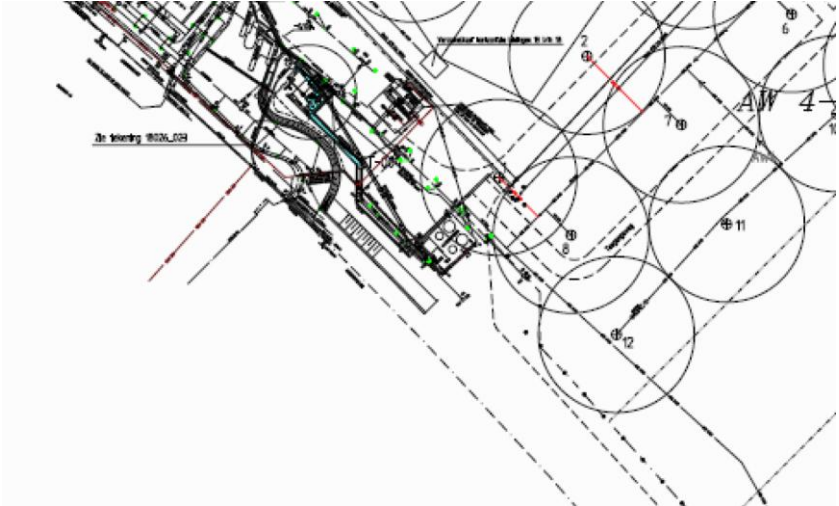
After the lunch, the bus chauffeur drove us to Smink Hoogland. When we arrived at Smink, we were welcomed with a cup of coffee or tea. One of the managers of Smink told us some more details about Smink in a short presentation. After the presentation the manager showed us the whole

company, with every new thing that we saw, the manager gave us an extensive explanation so everything was very clear.

When the tour was over, we stepped again in the bus and the bus chauffeur drove us back to the hotel. After a short break at the hotel, we walked to the restaurant where we ate that evening. John made for us a reservation in a lovely restaurant called “De Beleving”. De Beleving is a famous restaurant in de city of Utrecht, because of the students which sing the whole evening.



Smink Hoogland



Gas extraction



Gas extraction and utilization



Gas extraction and utilization



Gas extraction and utilization



Gas extraction and utilization



Gas extraction and utilization



Safety aspects



Safety aspects



Safety aspects



Safety aspects



Safety aspects



Protection of soil and groundwater



Protection of soil and groundwater



Protection of soil and groundwater

Third and last day of the workshop 12 October 2012

Location: Province of Utrecht.

The next day we started a little later, because the night before had become rather late. Today there was just one thing on the program, guidance and report. Adaption of guidance, discussion about final and discussion about how to make results available for inspectors in member states. This was a big discussion because the draft report should be completed that day. After the discussion we had a lunch in de meeting room, before everyone wended home.

Next steps:

<p>Information exchange guidance and checklist</p> <p>Update</p> <p>Translation of existing Guidelines</p> <p>How to stimulate use by more inspectors</p>	<p>Training inspectors in BAT member states</p> <p>How and what is needed</p>	<p>Subjects related to landfill</p> <p>Pre-treatment of waste</p> <p>Sampling of waste</p>
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Annex 1: Project plan

PROJECT PLAN

**“Reinforcement Programme on inspection skills
according to Landfill sites in IMPEL Member
countries”**

June 2011

Content

1. Introduction
2. Objectives
3. Project Organisation
4. Project Phases
5. Reporting
6. Internal communication

1. Introduction

Recent reports on implementation of EU Waste legislation have shown that implementation and enforcement of EU Waste law remain poor particularly regarding the Waste Framework Directive and the Landfill Directive. A questionnaire that was sent out in December 2010 to national Impel coordinators, show that there are countries who have a lack of knowledge to fulfil inspection requirements, especially with regard to new –to-build landfill sites. Even if European Commission has organised significant assistance in recent years, there is still need for training measures, to reach a certain minimum level of expertise in order to guarantee a good standard and quality of inspections.

By carrying out such a programme IMPEL members will learn from each other, exchange experiences and know-how and identify good and, where possible, best practices.

2. Objectives

The main objectives of this project are:

1. Exchange of information and experiences on key inspection issues.
2. Define and spread best practice for landfill inspections and share common tools (guidelines, procedures).
3. Cooperation between IMPEL member countries to work towards a consistent regulatory and enforcement regime
4. Feedback to policy makers on the (effectiveness of) the various approaches and practices in the field of permitting and inspection of IPPC landfill sites in IMPEL Member Countries, also in relation to the EU legislative framework (IPPC and BREF).

3. Project organisation

The Province of Utrecht will take the lead in this project.

The Project team is formed by the team leader and by 4 experts from 4 IMPEL member countries (two with a need for additional knowledge and two countries with available knowledge)

Lead: Mr. John Visbeen, Province of Utrecht, The Netherlands.

Co-Lead: Mr. Romano Ruggeri, ARPA Sardegna, Italy (staging at Province of Utrecht)

4. Project phases

Phase 1: Set up Information exchange network

In the first phase, an information exchange network will be set up.

IMPEL will provide an internet Basecamp, a forum where questions and answers regarding landfill issues can be recorded.

At least one specialist from IMPEL Member Countries will take part to Basecamp. Experts (permitting and/or inspection) on IPPC landfills can exchange information via this workspace.

Technical topics will be defined and other should be suggested by national experts. Current practices to assess common problems and needs will be reviewed.

Landfill permitting and inspection practices in the IMPEL Member Countries will be collected.

Time period: June 2011

Executed by: Province of Utrecht (with assistance of IMPEL).

Phase 2: Workshop and Guidelines

In the second phase the information and findings from the reviews will be discussed by experts from authorities in different IMPEL Member Countries in a workshop to assess common problems and needs and identify what practical tools could be developed.

A training programme can also be one of the tools to be elaborated.

Main differences in prescriptions included in permits will be assessed as well as monitoring and control different approaches.

Via the experts of the information exchange network (see phase 1), the Member Countries will be asked to identify which are the key environmental issues in IPPC landfills inspections.

Relevant technical aspects indicated in Landfill EU Directive will be discussed.

Contents of a Landfill Inspection Guideline will be defined and a draft will be drawn up. Guidelines go through the main technical topics that have to be faced during a landfill control. A report with the relevant environmental keys discussed in the workshop will be drawn up.

During the workshop, a summary preparation of the joint inspections will be discussed.

The workshop will be held in Sardinia (Italy) or in the Netherlands.

As part of the workshop a site visit will be organized to IPPC landfill.

Time period: 12-14 October 2011 or 19-21 October 2011

Executed by: Province of Utrecht (with assistance of IMPEL).

Phase 3: Joined inspections

In this phase at least two joined inspections will be carried out at installations in two IMPEL member countries who need knowledge. The inspections will focus on the different environmental key issues that were identified in the workshop and will be carried out following the guidelines indications.

The aim of the joined inspections is to get insight in:

- Objective data to check Landfill Directive-compliance (measurement results, complaints);
- Steps to be followed and topics to be faced during an inspection;
- Guidelines review.

The inspections will be held in:

- Slovenia,
- Romania.

The following participants will be invited (proposal):

- Inspector of the member country visited,
- 2 Inspectors from other countries who give knowledge,
- Lead or co-lead,
- Expert from InfoMil.

The host countries will be asked to prepare the visit (permitter and inspector). The time schedule could be as follows: day 1: arrival, day 2: morning briefing on content of guidelines and inspection procedure in regard to selected key environmental issues, afternoon site visit. In the planning of the visits, hygiene precautions of the plants will of course be respected.

Time period preparation: August 2011 – October 2011

Time period site visits: November 2011

Executed by: Province of Utrecht.

Phase 4: Meeting and Guidelines

A Project Team meeting will be scheduled, to discuss about the findings of the joint inspections.

The meeting will be held after the second joint inspections.

The outcome of the meeting will be the final draft of the Guidelines for inspection in IPPC landfill sites including a report on:

- Information and experiences on key regulatory issues.
- A representative overview of differences in inspections practices and projecting criteria in the IMPEL Member Countries.
- Good permitting and inspection practices identified.
- Recommendations for IMPEL Member Countries to work towards a consistent enforcement regime.
- Feedback to policy makers on the (effectiveness of) the various approaches and practices in the field of inspection of IPPC landfill installations in IMPEL Member countries also in relation to the EU legislative framework (IPPC and landfill Directive).
- Recommendations for follow up of this project (development of guidance inspection tools, and/or training programme).

The following participants will be invited:

- Representatives of Member Countries who give knowledge in IPPC landfill inspections, preferably the experts of the information exchange network.

Time period: November 2011 (after second joint inspection)

Executed by: Province of Utrecht.

Phase	Objective	Actions	Date
1	Basecamp	Collect information and needs from the network	June 2011
2	Workshop	Discuss on the outcome of the basecamp and first draft of guidelines	October 19-21
3	Joined inspections	Use of guidelines and check inspection conduction and topics to face	November 2011
4	Meeting and Guidelines	Final discussion on	November 2011

		results and final draft of guidelines	
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5. Reporting

The progress will be reported in IMPEL Cluster 1. Reports will be put on the IMPEL website and disseminated to the authorities in the Member States. Reports will also be submitted to the EU institutions.

6. Internal communication

The Project team and all participants will make use of Basecamp in IMPEL website. All relevant documents will be available on this project website. The participants will be invited by IMPEL to share this website.

Annex 2: questionnaire (filled in example Czech Republic)

“Reinforcement Programme on inspection skills according to Landfill sites in IMPEL Member countries”

Questionnaire to focus the lack of knowledge to fulfil inspection requirements in landfills

Country: **Czech Republic**

Filled in by: **Dvořáková Pavlína**

Please, try to fill out the questionnaire highlighting the critical situation you have to face, and the main technical topics in which you think to have a lack of knowledge.

1) What do you expect from the IMPEL project?

Achieve/gain new experience from other countries; inspiration to complete, supplement and quality improvement inspection in the CR; detection differences or dissimilarities of particular countries.

2) Which tool you consider to be useful to develop in the project?

Useful can/could be joined inspections, also create guidelines, too workshop and basecamp.

3) Which of the following products do you think it would be useful to draw up?

landfill inspection guideline, training programme, checklist, **best practices framework**, meeting to knowledge delivery

4) Do you think that a guideline for landfill inspections could be a useful tool to be developed?

Yes No

5) In which aspect of the inspection do you think to specifically need knowledge (referring to Council Directive 1999/31 EC)?

Administrative aspects (art. 11, Annex II - Waste acceptance procedures)

Technical-managerial aspects (Annex I – General Requirements for all classes of landfills)

[Analytic measurements - sampling and monitoring \(art. 12, 13, Annex III – Control and Monitoring procedures in operation and after-care phases\)](#)

- 6) What kind of conditions are you asked to check during an inspection as they are included in landfill permits (protect the soil, [protect the groundwater](#), [protect the air](#), protect surface water)?
- 7) When performing an inspection on an existing landfill (which has permit in accordance with the directive and the council decision) which are the topic you check and on which topic would you like to have more information/knowledge?

TOPIC	YES	NO (or not regularly)	Need more knowledge	Main critical situations that you are hardly able to carry out
	Annex I of the Directive 1999/31 EC: General requirements			
Location				
Water control and leachate management				Sectors without separated water management
Protection of soil and groundwater				
Gas control				Overlap body of landfill with biodegradable waste
Nuisances and hazards				
Stability				Hold water In body of landfill
Barriers				
<i>Dust</i>				
<i>Accidents and emergencies procedures</i>				
<i>Odour control</i>				
<i>Surface water management</i>				
Annex III of the Directive 1999/31 EC - Control and monitoring procedures.				
Do you check if the operator is acting in agreement with the monitoring conditions in his permit on the subjects?				
Meteorological data				
Emission data (water, leachate and gas control)				
Groundwater monitoring and sample				
Topography of the site (data on landfill body)				
Closure and after-care procedures				Until follow-up (subsequent, consecutive) re-cultivation after closure
Sampling and lab analysis				Legal/statutory limit take or not take into

consideration the
uncertainty of
measurement

Annex III of the Directive 1999/31 EC and Council Decision 19/12/2002

Procedure for the acceptance of waste
landfills

Waste acceptance criteria

Simplified procedure for
the acceptance

Sampling and test methods

In *italics* topics not explicitly mentioned in the Directive.

- 8) Which are the steps planned in your inspections? Do you think to have a lack of knowledge in inspection planning too?

We advance often under/according to requirements of permit.

No.

But sometimes we haven't knowledge from operation order (set of rules).

- 9) Do you take samples (leachate, waste, water, air, ecc) for lab analysis during an inspection in landfills?

Sometimes yes.

Always no, it is no rule, but frequent occurrence.

- 10) Has the Council Directive on landfill of waste (1999/31/EC of 26 April 1999) been implemented in your national legislation?

Yes.

Also Council Decision 19/12/2002 has implemented into legislation of the Czech Republik.

Over scope (requirements) of the decision is national legislation even more strict, only in exceptional case.

- 11) How many landfills are located in your area?

In the Czech Republic are located overall 278 landfills.

12) Can you state how many of these are for hazardous waste, non-hazardous waste (and municipal waste) and inert waste?

For hazardous waste are currently 26 landfills or sectors of landfill.

For municipal waste (non-hazardous waste) are presently 148 landfills or sectors of landfill.

For inert waste are currently 68 landfills.

13) How many of these landfills have a permit in accordance to IPPC Directive ?

All of these, which need the permit accordance to IPPC Directive and national IPPC-law.

Landfill for inert waste do not need the IPPC-permit. Be changing to facilities for exploit of waste on surface of terrain.

14) How many of these landfills have a permit in accordance to the Council Directive on landfill of waste (1999/31/EC of 26 April 1999)?

All of these presently in operation. Landfills without accordance to the Council Directive on landfill of waste were already closed (to date 16.7.2009).

15) Which document includes what you consider as BAT for landfills project and management?

Technical standards-norms.

16) How often (per year) does the inspector carry out an integrated inspections (as described in the IPPC Directive) of the landfill?

The inspector yearly carries out about 4, at most 8 integrated controls.

/Per year inspectors carry out approximately 40 to 50 integrated controls./

Annex 3: Meeting Programme

IMPEL-Landfill Project meeting

19-20-21 October 2011

Cagliari (Sardinia-Italy)

Objective:

The purpose of the meeting is to determine the scope of the project (new and/or existing and/or closing landfills) and determine on which topics of the directive the project will focus on. (This depends on the need of the member states). And finally what kind of tool is needed and which tools already exist in different member states and can be useful in this project.

This will be done by:

- discussing the results of the questionnaire
- exchange information about current practices at landfill inspections in the different member states.

Hosting Organization:

Sardinian Environmental Protection Agency (ARPAS):

<http://www.sardegnaambiente.it/arpas/>

Site of the meeting:

Cagliari, Sardinia: <http://visit-cagliari.it/en.html>

Hotel Caesar: <http://www.caesarshotel.it/>

Participants: 12 experts from IMPEL Member Countries + 15 Sardinian Environmental Protection Agency employees (auditors) Take care that only a few employees of the ARPAS may take part in the discussion to get good results for the project.

Programme

Wednesday 19 October		
Time	Subject	Organization
15-15.20	Welcome greetings of Region Sardegna and ARPAS Directors	Regione Sardegna - ARPAS
15.20-15.40	IMPEL Network Presentation	Italian Environmental Ministry
15.40-16.00	Presentation of the results of the questionnaire	Province of Utrecht/Infomil
16.00-16.30	Experiences with landfill inspections in (new)member states	Romania-Slovenia?
16.30-17.00	Presentation of a member state about their best practices on landfill inspections.	Sweden-England?
17.00-17.15	<i>Coffee break</i>	
17.15-19.30	Round table:	

	Discussion on scope (new and/or existing and/or closing landfills) and topics (part of directive and subjects for example water control and leachate management) to be involved in the project.	
	ARPAS question time	
Thursday 20 October		
Time	Subject	Organization
9.00-9.30	Feedback day 1	
9.30-10.00	ARPAS permitting and inspections procedure	ARPAS
10:00-11.30	Round table: discussion on pre-defined topics of Landfill Directive (to be defined), or coming out from previous discussion, that should be described and given best practices of in the project	
11.30-11.45	<i>Coffee break</i>	
11.45-13.00	Round table: discussion on pre-defined topics of Landfill Directive (to be defined), or coming out from previous discussion, that should be described and given best practices of in the project Discussion on what kind of product (guideline, training programme, checklist, best practices framework etc) is needed	
13.00-14.00	<i>Lunch</i>	
14.00-15.00	Bus trip to landfill	
15.00-17.30	Landfill visit	
17.30-18.30	Bus trip to Hotel	
20.00-21.00	City tour	
21.00	<i>Social Dinner</i>	
Friday 21 October		
Time	Subject	
9.00-10:15	Round table: Feedback day 2 ARPAS question time	
10:15-10:30	<i>Coffee break</i>	
10.30 13.30	Round table: Presentation of conclusions of meeting (do we agree on these conclusions) - What tool will be developed - And which topics will be described and provided best practices of Who will do what Agreement on joint inspections (Romania-Slovenia ?) in which a first draft of the tool will be used Further meeting	
13.30-14.30	<i>Lunch</i>	

Annex 3: Programme joint inspection Slovenia



- Project Reinforcement Programme on Inspection skills according to landfill sites in IMPEL Member Countries, phase 2

Inspection Slovenia 18 and 19 September 2012

Time	Activity	Location	Apparatus	Who	What
<p>Monday 17 September</p> <p>Arrival of Project team staying in City Hotel in Ljubljana, Address: Dalmatinova 15 in Ljubljana Si-1000</p> <ul style="list-style-type: none"> - Romano Ruggeri, Sardinian Regional Environmental Protection (ARPAS) co-project leader - Jana Miklavcic, Head of the Environment and Nature Inspection Service - Franz Waldner of the Federal Ministry of Agriculture, Forestry, Environment and Water management of Austria, Division Waste Logistics, Avoidance and Waste related Waste Management - Nina Hansson, Senior administrative Officer of Environmental protection at the Administrative board of Kalmar Country; - Inspection team Netherlands Stuart Gunput (Province of Utrecht, senior inspector) and Bianca Schijven (Knowledge centre InfoMil consultant/expert) <p>Members joint inspection of Slovenia:</p> <ul style="list-style-type: none"> - Mrs. Nevenka Zvokelj environmental inspector from Regional Unit Ljubljana - Mrs. Karmen Zeleznik, environmental inspector from Regional Unit Celje - Mr. Milan Bizjak, environmental inspector from Regional Unit Celje - Mrs. Erika Kompara, environmental inspector from Regional Unit Nova Gorica 					
<p>Tuesday 18 September 2012</p>					
09:00	Welcome	Address: Head office of Inspectorate of the RS for Agriculture, Forestry, Food and Environment, Parmova Street (ulica) 33 in Ljubljana Conference room no. 1017 for 10-15 persons See also maps	Laptop and beamer are available	Jana Miklavcic	
09:10	IMPEL Project in 2012			Romano / Bianca	
09:20	Inspection organisation in			Jana Miklavcic	

	Slovenia				
09:40	Inspections on Landfills in the Netherlands			Stuart Gunput	
10:00	Inspections on Landfills in Austria			Franz Waldner	
10:20-10:40	Legislation basis in Slovenia of <ul style="list-style-type: none"> - criteria and procedures for acceptance of waste; - protection of soil and groundwater 			Jana Miklavcic	
10:40-11:10	Coffee break				
11:10-12:30	Permit conditions of Landfill Barje And history of compliance of landfill			Jana Miklavcic	
12:30-13:00	Travelling to Landfill	By inspection cars			
13:00-18:00	Presentation of landfill Barje Ljubljana During which coffee break with snack			Operator of Landfill	
	Joint inspection on landfill	Members inspection team bring own personal safety equipment (no obligation but to bring shoes is maybe a good idea)		Inspection team	

Wednesday 19 September 2012

09:00-10:40	If necessary follow up of joint inspection if not Evaluation of inspection		If this is not necessary presentations of day 1 can be given on this day (Netherlands and Austria) when not enough time is available on day 1		
10:40-11:10	Coffee break				
11:10-12:30	If necessary follow up of joint inspection if not Evaluation of inspection - What has been observed; - Experience with checklist; - Experience of Slovenia inspectors; - Experience of Netherlands /Austria and Sweden.			All who were involved in joint inspection	
12:30-13:00	Lunch				
13:00-15:15	Evaluation of inspection - What has been observed; - Experience with checklist; - Experience of Slovenia inspectors; - Experience of Netherlands /Austria and Sweden.				
15:15-16:00	Conclusions of joint inspection			Jana and Romano	

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Annex 4: Programme joint inspection Romania



Project Reinforcement Programme on Inspection skills according to landfill sites in
IMPEL Member Countries, phase 2

Inspection in Romania 27 and 28 September 2012

ime	Activity	Location	Apparatus	Who	What
Wednesday arrival of : (staying in Hotel Savoy, Spl. Tudor Vladimirescu No.2, Timisoara 300193) <ul style="list-style-type: none"> - Romano Ruggeri, Sardinian Regional Environmental Protection (ARPAS) co-project leader - Inspection team Netherlands Hans Versteeg (Province of Utrecht, senior inspector) and Bianca Schijven (consultant/expert) - Nina Hansson, Senior administrative Officer of Environmental protection at the Administrative board of Kalmar Country (Wednesday evening meeting with Corina in Hotel)					
Inspection team Romania <ul style="list-style-type: none"> - Corina Rotaru lead inspector Romania - Sarbu Dorin inspector Romania - Lucian inspector Romania 					
Time	Activity	Location	Apparatus	Who	What
Thursday 27 September 2012					
8.00-09.00	Breakfast	hotel			
		Transport to Landfill by cars of regional inspection organisation			
10.00-10.10	Welcome	landfill conference room	retro projector	Corina Rotaru,	
10:10	IMPEL project in 2012 Guideline and checklist Experience in Slovenia	(internet is available)		Romano Ruggeri/ Bianca Schijven	
10:40	Presentation of local			Corina Rotaru	

	inspection organisation				
11:00	Landfill permit and history of non-compliance and legislation basis in Romania (especially for): <ul style="list-style-type: none"> - criteria and procedures for acceptance of waste; - gas control 			Corina Rotaru/ Local inspection organisation	
12.00-13.30	Lunch				
14.00-17.00	Landfill visit Using the checklist for (1) criteria and procedures for the acceptance of waste and (2) gas control	ASA Arad		IMPEL team project, inspectors	
Friday 28 September 2012					
08.00-09.00	breakfast				
09.00-13.00	Inspection evaluation <ul style="list-style-type: none"> - What has been observed; - Experience with checklist; - Experience of Romanian inspectors; - Experience of Netherlands/ Sweden inspectors 	Conference room At Regional inspection organisation Timisoara		IMPEL team project inspectors	

13.30-14.30	lunch				
14.30-16.00	Presentations of how inspections are performed on selected subject in the Netherlands, Sweden and Italy	Conference room At Regional inspection organisation Timisoara		Hans Versteeg, Nina Hansson and Romano Ruggeri	

Annex 5: TOR Landfill project 2012

TERMS OF REFERENCE FOR IMPEL PROJECT

No	Name of project
2012/03	Reinforcement Programme on inspection skills according to Landfill sites in IMPEL Member countries, phase 2

1. Scope

1.1. Background	<p>-Improving implementation of EU law is high priority objective of both the Commission and IMPEL. Recent reports on implementation of EU waste legislation have shown that “implementation and enforcement of EU waste law remain poor particularly regarding the waste framework directive, the landfill directive and the waste shipment regulation” (See Commission note for IMPEL Board/Clusters on EU Waste Legislation: consolidated summary of main implementation gaps, August 2010).</p> <p>- Questionnaires that were sent out in December 2010 and June 2011 showed that there are countries (50%) who have a lack of knowledge to fulfil inspections, especially on new-to-build landfill sites, (also new build on existing locations) but also countries who can offer this knowledge. Also was shown a big support of the idea to exchange knowledge and to learn from each other because inspection of landfill sites is pointed out as more complex and difficult. (see annex one for results of questionnaire)</p> <p>-In European projects of landfill construction (based on European funding) it is obligatory to have special technical assistance (TA) by an independent consultant. The problem remains that public administration is lacking expertise. Therefore the Commission organised a lot of assistance in the last years. Nevertheless there is still need for training measures to reach a certain minimum level of expertise in order to guaranty good standard and quality of inspections (and also to verify or check the work of the independent consultants) IMPEL will be able to organise knowledge exchange platforms, training measures and inspection tools for inspectors (and also permitters).</p> <p><u>Outcomes of this project in 2011:</u></p>
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	<ol style="list-style-type: none"> 1. Basecamp site as part form the IMPEL-website especially for questions and answers according landfill issues, was organised. We point out at least one specialist form each country to take part on the Basecamp. 2. 2 questionnaires were developed and answered by participants, they delivered important information for workshop In a workshop the results of the questionnaires were discussed, topics for guidance were identified. <p>In the proposal for 2011 two joint inspections were foreseen in the end of November. After discussion during workshop in the end of October 2011 all participants concluded that, according to useful timeline (f.i. first to take time to work out results of workshop and to make a good preparation) and because of probably bad weather conditions, it is better to organise these inspections in the spring of 2012.</p> <p><u>This project aims in 2012 to improve environmental outcomes to strengthen inspection skills according to landfill sites by:</u></p> <ol style="list-style-type: none"> 3. 2 <u>joint inspections</u> in Slovenia and Romania, (the inspection in Romania will take place during workshop in Romania). Guidance or inspection tools that are available will be used. During the workshop in 2011 a network was build up so we decided to prepare the joint inspections by using the basecamp. Therefore we skipped the project team meeting. 4. During <u>workshop</u> we evaluate the joint inspections and discuss about practicability of used guidance an tools working further need of training measures (for instance a train-the-trainer programme, on-line training tool) can possibly be determined,.
<p>1.2. Link to MAWP and IMPEL’s role and scope</p>	<p>Strategic Goal I – Capacity building Strategic Goal III – Development of good practices Strategic Goal V - Providing feedback to policy makers Strategic Goal Improved implementation of waste framework directive and landfill directive</p>
<p>1.3. Objective (s)</p>	<ul style="list-style-type: none"> • Identification of good inspection practices, developing guidance • <u>Cooperation</u> (and helping each other) between IMPEL Member Countries to work towards a consistent regulatory and enforcement regime, • Feedback to policy makers on the (effectiveness of) the various approaches and practices in the field of permitting and inspection of landfill sites in IMPEL Member countries

1.4. Definition	<p>The objectives will be achieved by:</p> <ol style="list-style-type: none"> 1. continuing base-camp under IMPEL website for experts in all IMPEL member countries as exchange platform for information and specific questions, discussions etc. 2. Based on appointments in 2011 to work together and make a guidance document and inspection tools, 3. organising a workshop, including a site visit, to exchange information and experiences, to make decision on guidance document and to discuss the further need of training measures (for instance a train-the-trainer programme, on-line training tool), 4. to make the guidance document available by internet (IMPEL website) for all inspectors in the landfill-sector, 5. drafting of project report containing findings, conclusions and recommendations and proposal for TOR 2013,
1.5. Product(s)	<p>Project report containing findings, conclusions and recommendations TOR 2012 for follow up,</p>

2. Structure of the project

2.1. Participants	<ol style="list-style-type: none"> 1) Project Team: project team leader and 4 experts from 4 IMPEL member countries (Netherlands, Italy, Romania, Slovenia) 2) Workshop participants: 10 participants from IMPEL member
2.2. Project team	<p>Lead country: The Netherlands, Province of Utrecht, Co-lead country, Italy, Sardinia - ...</p>
2.3. Manager Executor	<p>Mr. John Visbeen, Province of Utrecht, The Netherlands Mr. Romano Ruggeri, ARPA Sardinia, Italy</p>
2.4. Reporting arrangements	<p>Adoption TOR in General Assembly (autumn 2011), Draft final reports to Cluster 1 (autumn 2012) and General Assembly (winter 2012)</p>
2.5 Dissemination of results/main target groups	<p>The report will be put on the IMPEL website and disseminated to the authorities in the Member States. The report will also be submitted to the EU institutions.</p>

3. Resources required

3.1 Project costs and budget plan		2012		
	<u>1. Overhead (organisation) cost (€) :</u>			
	<u>2 Project meeting costs (€)</u>		13.060	
	<u>Meeting 1</u> ¹ Joint inspection Slovenia			
	No of Participants:	1x4		
	Travel ² :		1.440	
	Accommodation ³ : 2 nights		800	
	Catering:		100	
	Meeting venue:		100	
	<u>Meeting 2</u> Workshop (incl. joint inspection Romania)			
	No of Participants:	14		
	Travel:		5.040	
	Accommodation: 3 nights		3.780	
	Catering:		800	
	Meeting venue:		900	
	<u>3. Other costs (€):</u>			
	Consultant:		10.000	
	Translation:			
	Dissemination:			
	Other (specify):			
TOTAL cost per year €		23.060		
TOTAL project cost €				
3.2. Fin. from IMPEL budget	<u>2. Project meeting costs (€):</u>	13.060		
3.3. Co-financing by MS (and any other)	<u>1. Overhead costs (€):</u> as co-financing contribution, committed by The Netherlands, provinces	10.000		
	<u>3. Other costs (€):</u> <u>Meeting venue joint inspections and workshop hosting countries</u>	PM		
3.4. Human from MS	1) Project leader: 10 days 2) Other Project Team members (4): each 5 days 3) Workshop Participants (14, each 3 days (workshop), 3 days working on guidance-document) Total: 114 days.			

¹ specify, like Review Group Meetings, Workshop etc.

² normative: €400/person

³ normative: €125/person/night

4. Quality review mechanisms

Quality review by Core Team and Cluster 1

5. Legal base

5.1. Directive/Regulation/Decision	<ul style="list-style-type: none"> - IPPC Directive - Landfill Directive - Waste framework directive <p>Other relevant material:</p> <ul style="list-style-type: none"> - RMCEI - Industrial Emissions Directive
5.2. Article and description	<ul style="list-style-type: none"> - Annex 1, article 6.6 IPPC
5.3 Link to the 6th EAP	More effective implementation and enforcement of environmental legislation is one of the priorities of the 6 th EAP.

6. Project planning

6.1. Approval	The TOR is presented for review at Cluster One and then adoption at the Warsaw General Assembly
(6.2. Fin. Contributions)	
6.3. Start	January 2012
6.4 Milestones	<ol style="list-style-type: none"> 1. January 2012: preparation joint inspection by basecamp 2. April/May 2012: Joint inspections and Workshop 3. Jul-Sept 2012: Draft final Project Report
6.5 Product	Final Report in November-December 2012
6.6 Adoption	By IMPEL-General Assembly, Winter 2012