

# Landfill Project

## Projeto “Aterros”



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

*Project Leader: Romano Ruggeri*

<https://www.impel.eu/projects/landfill-inspections-project/>

# Enquadramento

- [Diretiva Aterros](#) (1999/31/CE do Conselho de 26 de abril de 1999) relativa à deposição de resíduos em aterros

Estabelece requisitos operacionais e técnicos a observar na conceção, construção, exploração, encerramento e pós-encerramento de aterros.

A eliminação de resíduos, nomeadamente a sua deposição em aterro, constitui a última opção de gestão

# Objetivos



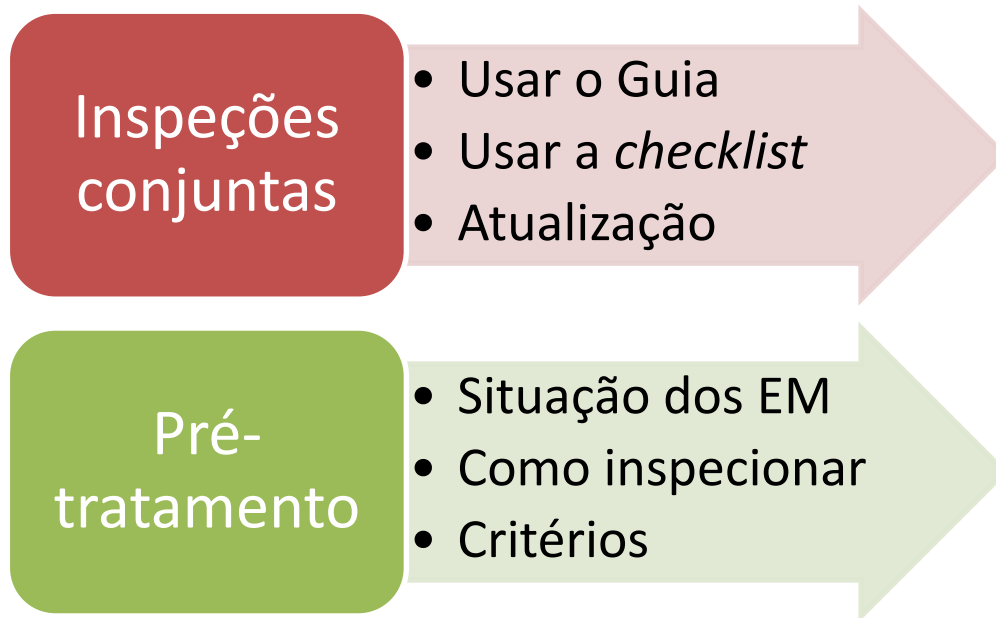
**Cooperação** (e interajuda) entre os países membros da IMPEL para trabalharem em prol de um regime regulatório e de execução consistentes

**Feedback** aos decisores políticos sobre a eficácia das várias abordagens e práticas relativas ao licenciamento e inspeção de aterros nos países membros da IMPEL

Identificação de boas práticas de inspeção

# Antecedentes

- Início em 2011
- 2017 - pré-tratamento de resíduos



- 2018 - economia circular



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## Inspeções conjuntas e formação



# Guia e Checklist



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## IMPEL LANDFILL PROJECT Inspection guidance book for Landfill inspection

*A practical book with guidance on activities on landfills  
(2016)*



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November 2016

### Annex 2: Checklist ON SITE inspection

#### Landfill permitting and inspection

#### Reinforcement program in inspection skills according to landfill directive in IMPEL member countries

#### NON HAZARDOUS WASTE LANDFILL ENVIRONMENTAL INSPECTIONS: CHECKLIST

1. WASTE ACCEPTANCE CRITERIA FOR LANDFILLS
2. GAS CONTROL
3. PROTECTION OF SOIL AND GROUNDWATER
4. SURFACE WATER CONTROL AND LEACHATE MANAGEMENT
5. BUILDING AND CLOSING LANDFILL

# Relatórios 2016



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## IMPEL LANDFILL PROJECT Landfill Directive Implementation

*Analysis of the gaps found during the running of the Landfill Project*  
(DECEMBER 2016)



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Reinforcement Programme on inspection  
skills according to Landfill sites in IMPEL  
Member Countries

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(HOLLAND) Zaandam 16-18 November 2016  
Omgevingsdienst Noordzeekanaalgebied, Zaandam



Headquarter building Avvalzorg on landfill



Reinforcement Programme on inspection  
skills according to Landfill sites in IMPEL  
Member Countries; Joint inspections

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Malta 5-6 May 2016  
Environment and Resources Authority (Malta)





# Questionário



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

## INVENTORY



| MEMBER STATE         | England                                                                                              | Italy                                                                          | Austria                                                                   | Sweden                                                 | Netherlands                                                                                                                                   | Czech Republic                                                   | Croatia                                                          | Malta                                                                    | Poland                                                                             | Portugal (Azores)                                                                            | Portugal                                                                                                                                     | Spain                                                                                                                 |
|----------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| INSTITUTION          | ENVIRONMENT AGENCY                                                                                   | SARDINIAN ENVIRONMENTAL PROTECTION AGENCY                                      | FEDERAL MINISTRY of AGRICULTURE, FORESTRY, ENVIRONMENT & WATER MANAGEMENT | The Administrative Board of Kalmar County              | ENVIRONMENTAL SERVICE NORTH SEA CANAL AREA                                                                                                    | Czech Environmental Inspectorate                                 | Ministry of Environmental and Nature Protection                  | MALTA ENVIRONMENT AND PLANNING AUTHORITY                                 | Chief Inspectorate for Environmental Protection                                    | INSPETÇÃO REGIONAL DO AMBIENTE                                                               | APA (Parque Natural do Peneda-Gerês) and IGAMOT (General Inspectorate for Agriculture, Forestry, Environment and Spatial Planning, Portugal) | Xefe do Serviço de Protecção e Controluladores de Contaminação - Serviço Nacional de Qualidade e Realização Ambiental |
| DRAFTERS             | Mr Max Falkenh/ Mr Peter Elliott                                                                     | Mr Renato Ruggeri                                                              | MR Franz Waldner (MSc M. Dr. phil. M. Sc. R. Krenn)                       | MISS Nina Hansson                                      | STUART GUNPUT / ARJEN SHUDDER                                                                                                                 | Mr Vojtek Hamelek (Mr Martin Zemek)                              | Mr Ivan Puzić                                                    | ALVIN SPITERI DE BONO                                                    | Miroslava Popelucka                                                                | Elisabete Vieira                                                                             |                                                                                                                                              | Maria Diégua Gomes                                                                                                    |
| ROLE OF THE DRAFTERS | Landfill Sector Leads                                                                                | INSPECTOR                                                                      | MANAGER / EXPERT                                                          | INSPECTOR                                              | INSPECTOR / LICENSE PROVIDER                                                                                                                  | INSPECTOR                                                        | INSPECTOR                                                        | ENVIRONMENT PROTECTION OFFICER                                           | Head of Waste Management Division                                                  | Chief of Division of Inspection and Audit for the                                            |                                                                                                                                              | Head of the Department                                                                                                |
| EMAIL                | <a href="mailto:peter.elliott@environment-agency.gov.uk">peter.elliott@environment-agency.gov.uk</a> | <a href="mailto:rruggeri@regione.sardegna.it">rruggeri@regione.sardegna.it</a> | <a href="mailto:franz.waldner@bmf.gv.at">franz.waldner@bmf.gv.at</a>      | <a href="mailto:n.hansson@mil.se">n.hansson@mil.se</a> | <a href="mailto:S.Gunput@ec.europa.eu">S.Gunput@ec.europa.eu</a> / <a href="mailto:arjen.shudder@ec.europa.eu">arjen.shudder@ec.europa.eu</a> | <a href="mailto:hamelek_vojtech@ul.cz">hamelek_vojtech@ul.cz</a> | <a href="mailto:ivan.puzic@mep.gov.mt">ivan.puzic@mep.gov.mt</a> | <a href="mailto:CONTACT.WASTE@MPEA.ORG.MT">CONTACT.WASTE@MPEA.ORG.MT</a> | <a href="mailto:miroslava.popelucka@pau.gov.pl">miroslava.popelucka@pau.gov.pl</a> | <a href="mailto:elisabete.vieira@insp.azores.gov.pt">elisabete.vieira@insp.azores.gov.pt</a> |                                                                                                                                              | <a href="mailto:maria.diegua.gomes@ceda.es">maria.diegua.gomes@ceda.es</a>                                            |

### LIST OF TOPICS

1. WASTE ACCEPTANCE
2. SAMPLING PLAN
3. GROUNDWATER TRIGGER LEVELS
4. TREATMENT OF WASTE
5. STABLE NON REACTIVE WASTE
6. LEACHATE MANAGEMENT
7. REQUIREMENTS ON TOP AND BOTTOM LAYERS
8. METEORIC AND SURFACE WATER
9. MONITORING REPORT

### Disclaimer:

This survey is the result of a project within the IMPEL network. The views expressed in this document are solely of the individual participating within the project at the time and do not represent in any way may be applied, used or assumed, as the views and attribution of the whole Country being represented within the project. The content does not necessarily represent the view of national administrations or the European Commission.



# Relatórios 2017



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## Landfill Project 2017

*Treatment of waste before landfilling according to art. 6 of the Landfill  
Directive: first analysis*

*Date of report: 10/11/2017*

*Report number: 4/2017*

## Principais conteúdos:

- Procedimento para avaliação da necessidade de pré-tratamento
- Critérios e tecnologias
- Sugestões para a realização de inspeções:
  - Resíduos urbanos
  - Resíduos industriais

<https://www.impel.eu/wp-content/uploads/2018/01/Report-on-Treatment-of-waste-before-landfilling-according-to-art.-6-of-the-Landfill-Directive.pdf>

# Relatórios 2017



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## Landfill Project 2017

*Report of the meeting in RIGA (Latvia) 11th and 12th of April 2017*

*State Environmental Service*

**Riga**



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## Landfill Project 2017

*Report of the meeting in BRATISLAVA (Slovak Republic)  
27th and 28th of June 2017*

*Slovak Environmental Service*

*Date of report: 18/09/2017*

**Bratislava**



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## Landfill Project 2017

*Report of the meeting in Brussels (Belgium)  
18th of October 2017*

*Department Environment - Brussels*

*Date of report: 13 November 2017*

*Report number: 2017/3*

**Bruxelas**



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## Landfill Project 2017

*Report of the JOINT INSPECTION in RIGA (Latvia) 11th - 12th of April 2017*

*Installation: DAIBE Landfill*



*Date of report: May of 2017*



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## Landfill Project 2017

*Report of the JOINT INSPECTION in Bratislava (Slovak Republic)  
27th - 28th of June 2017*

*Installation: FCC Slovensko, Zohor Landfill plant*



*Date of report: July 2017*

1/18

<https://www.impel.eu/projects/landfill-inspections-project/>

