

Reference practice
UNI/PdR 107:2021
*“Protected
Environment”*

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PdR 107.2021 Protected Environment:

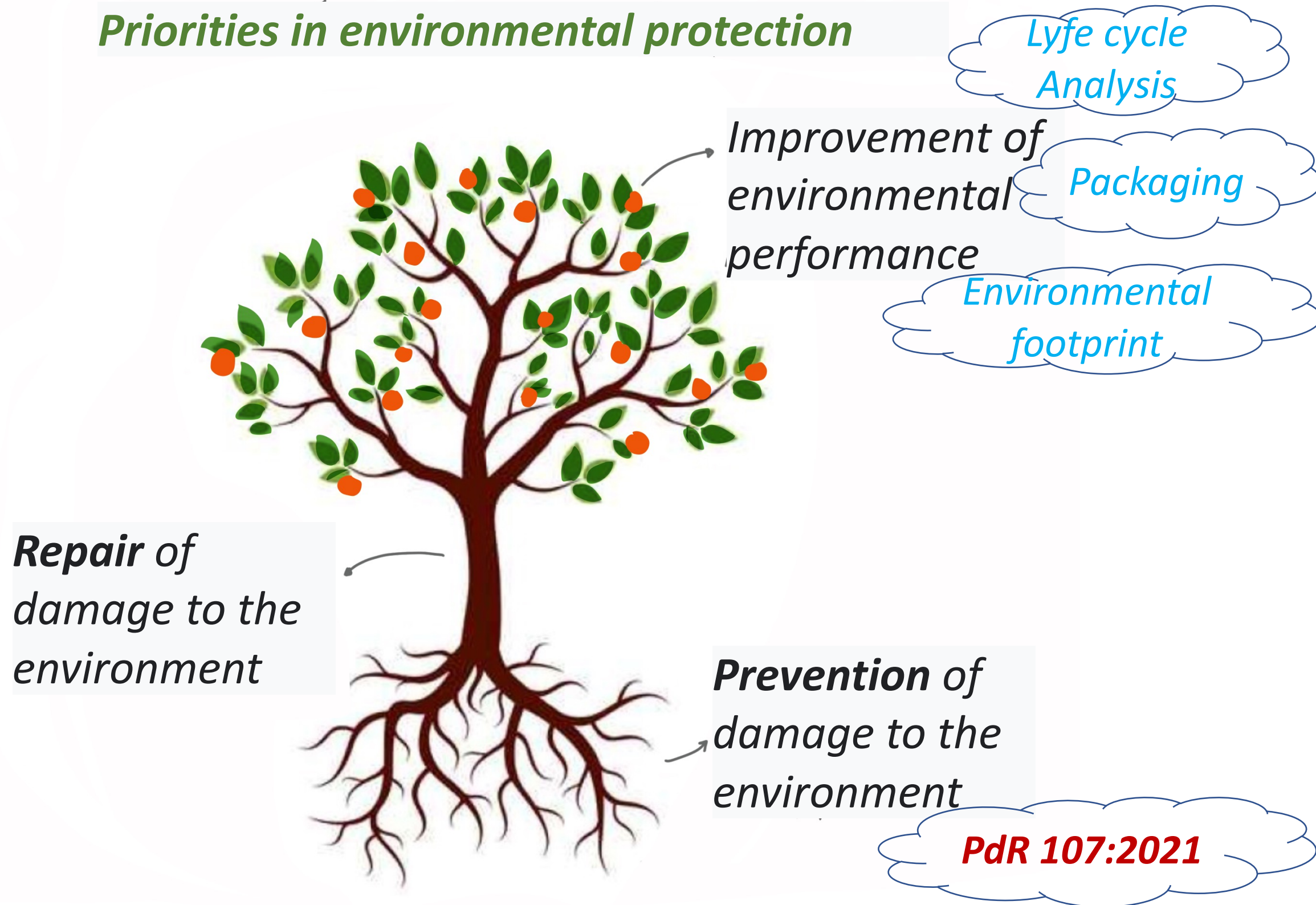
Guidelines for the prevention of damage to the environment –

Technical criteria for effective management of environmental risks



Sustainability Tree

Priorities in environmental protection





Sustainability Tree

Today

Tomorrow

What if the tree has strong roots



What if the tree has NOT strong roots





PdR UNI 107:2021 «*Protected Environment*»

- **First standard in the world** ruling **prevention** and repair of **damage** to the **environment**
- It can be applied by **any type of company** (all sectors and sizes) by a **transversal approach** for Sources / Scenarios of damage to the environment
- **Developed at UNI (Italian Standards Body)** with the contribution of environmental risks and damage experts

Born in 2021, after 2 years of work, lot of interest from operators and sector associations



From the analysis of the claims managed by the Environment Pool (2000-2019)

- **1031 cases** of environmental damage events managed by the Environment Pool
- **104 million Euros** spent and currently reserved for reclamation, restoration and damage to third parties (overall cost much higher for environment, territory, local communities, economic fabric)
- Of these, **more than 73% could have been avoided** with the UNI Environment Protected Certification



What is it?

- It is a list of best practices to be applied to your plants, your staff and your organization in order to **decrease the probability and intensity of any damage** to the environment, due to sudden and / or cumulative exceeding of the ecosystem tolerability thresholds
- It will be updated, commented and if it will become a sector practice it will be converted into an official standard within 5 years





Difference from ISO 14001 and EMAS standards?

- ISO14001 and EMAS focus on information management – “SOFTWARE”
- PdR Protected Environment focuses on the management of plants and human resources – “HARDWARE”

IN FACT, THESE RULES CAN BE INTEGRATED WITH EACH OTHER





Further information

- 3 Levels: Basic, Medium and Advanced
- For sites of **all sizes** and **any production sector**
- It is linked to the single production site
- Three-year duration, annual surveillance
- It is possible to exclude specific branches of activity and / or offices, motivating and explaining



How is it organized?

➤ General part: requirements applicable to all Sites



➤ Specific requirements for sources present in the specific Site



General Part: main aspects

- Source-path-target Model + Calculation of target vulnerability
- Mindfulness and specific training for each role and each resource
- Analysis of regulatory compliance and BAT



General Part: the main aspects

➤ Source-path-target Model + Calculation of target vulnerability

As a production site is inserted in a specific environmental context, The industrial management must acknowledge the potential of impact of its activity

Assess the potential of a possible accident:

- ☐ contextualize the environment surrounding the settlement
- ☐ Assess vulnerability (procedure in appendix B)
- ☐ Understanding potential for any damage



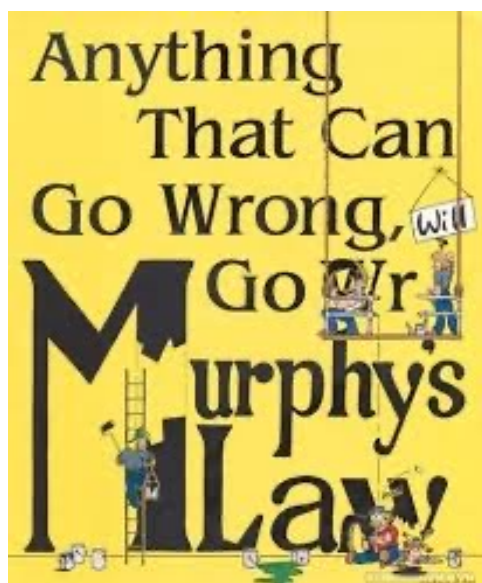


General Part: the main aspects

- Mindfulness and specific training for each role and each resource

Ensure the proper functioning of the system:

- ❑ Specific training: manager and operator, must be **specifically trained** on the topic of preventing damage to the environment
- ❑ Mindfulness: recording of near misses, accidents, anomalies and **analysis of the causes and possible prevention actions**





General Part: the main aspects

- Mindfulness and specific training for each role and each resource

Some examples

- ☐ Annual training for management (8h / y 1st year, 4h / y later)
- ☐ Specific training for maintenance personnel (4h / y for each scenario in the 1st year, 2h / y for the following ones)
- ☐ Specific training for emergency team personnel



**Training is
Everything!**



General Part: the main aspects

- Analysis of regulatory compliance and BAT

Compliance with rules and regulations is the starting point for the prevention of damage to the environment





General Part: the main aspects

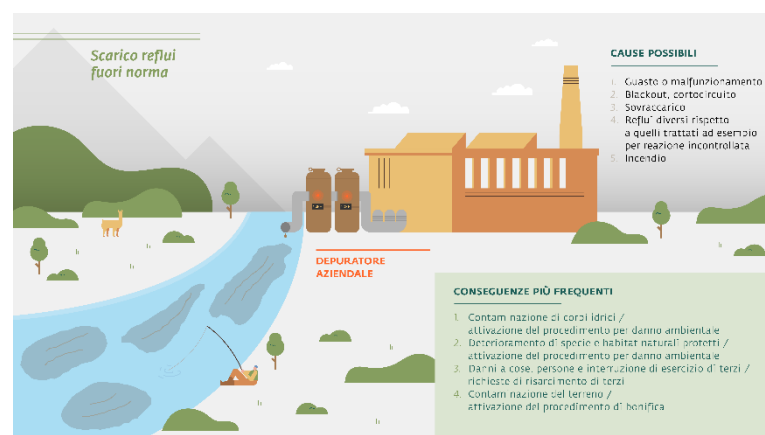
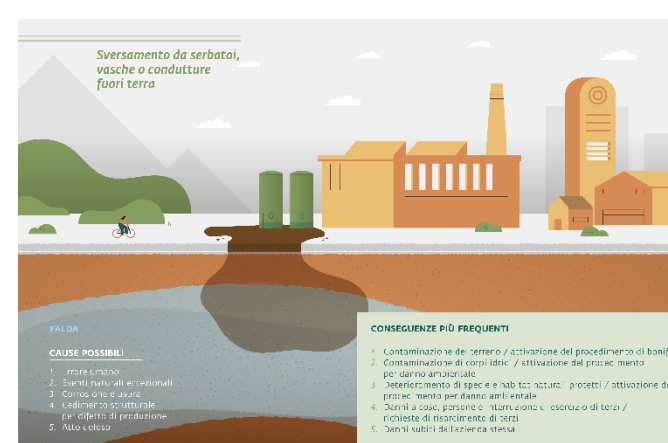
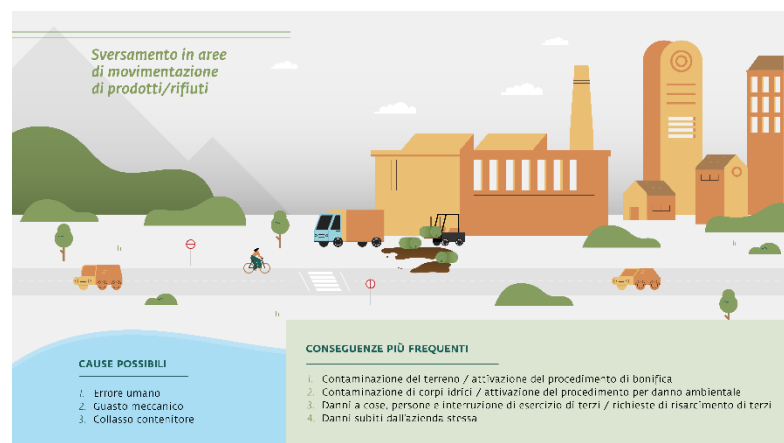
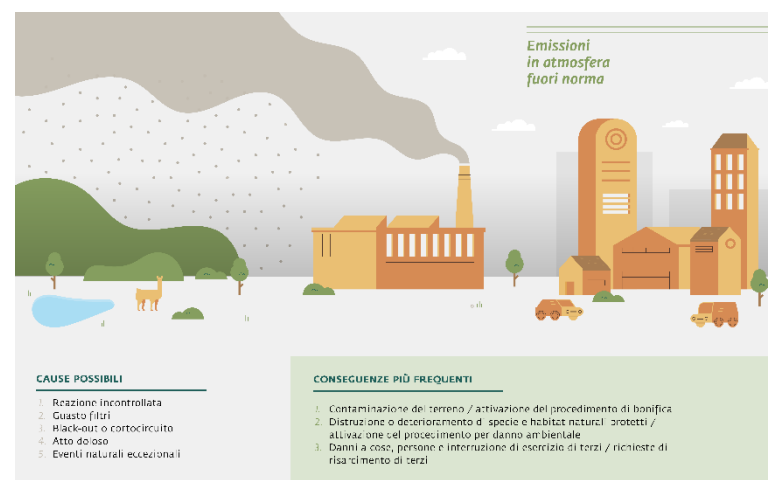
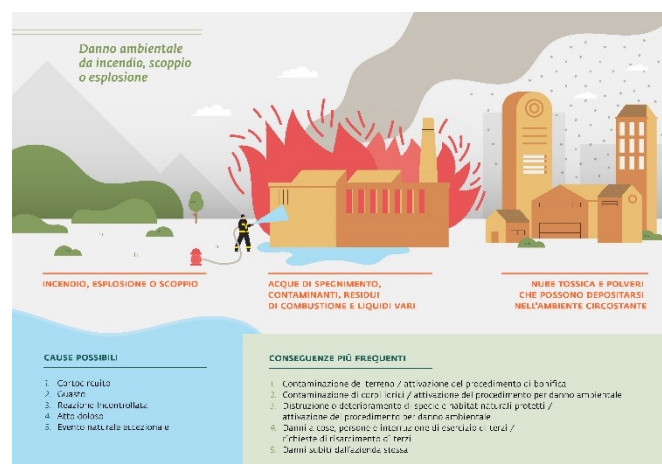
➤ Analysis of regulatory compliance and BAT

- ❑ Regulatory compliance is a **fundamental pre-requisite** that it is NOT subject to verification by the certification inspectors
- ❑ Certification does not imply regulatory compliance, but a **regulatory non-compliance involves the loss of certification**
- ❑ Where any criteria is ruled by sector standards / authorizations / BAT criteria and the Practice, the most stringent criteria must be adopted.





Specific requirements: sources



A1- Fire / explosion

A2 – Spil/Leakage from UST

A3 - Spil/Leakage from pipes (buried or not)

A4 - Spil/Leakage from AST

A5 – Leakage/leachate from storage areas and loading/unloading bays

A6 - Emissions in the atmosphere

A7 - Liquid waste emissions



Specific requirements: for each source

Requirements concerning all phases of a plant's life:

- Design: materials, interaction with the environment, corrosion prevention systems
- Installation: location, basic equipment to prevent damage to the environment (load limiters, level meters, signage, waterproof wells / bays)
- Operation and Maintenance: tests on tightness, corrosion monitoring, corrosion prevention systems, monitoring and alarm systems (e.g. pressure / level drop, liquids in sight wells, etc.),
- Theoretical-practical training for maintenance personnel and plant operation
- Decommissioning: verification of sealing, mapping, removal where possible



Specific requirements

➤ Fire/Explosion scenario –

some examples of requirements and/or equipment involved:

- ☐ Install and maintain efficient fire detectors and / or thermal cameras
- ☐ Automatic extinguishing systems
- ☐ Documented maintenance on fire-fighting devices, specific training for the emergency team on environmental effects
- ☐ Documented periodic maintenance on machinery and systems *



Specific requirements

☐ Documented periodic maintenance on machinery and systems *

** ... at least once a year the inspection and maintenance of machinery permanently connected to electricity In particular ... at least, :*

***tightening** electrical terminals of machinery, electrical panels and any electrical equipment with a power exceeding 7 kW with a torque wrench; six-monthly visual inspection and **annual cleaning** of the air intakes and air filters of motors and electrical panels, as well as annual cleaning of electrical panels; **greasing** of mechanical parts and bearings; check / adjust tension and replace motor **transmission belts** if necessary; six-monthly control of **electrical absorption** of motors.*



Specific requirements

➤ Underground Storage Tanks scenario –

some examples of requirements and/or equipment involved:

- ☐ If they contain dangerous chemicals they must be waterproofed or checked every 5 years
- ☐ Management and Maintenance Plan (focus to corrosion) and execution
- ☐ Periodic monitoring of corrosion protection systems
- ☐ Periodic check of the integrity of the tank, leak test
- ☐ Have at least the basic equipment indicated *



Specific requirements

☐ have at least the basic equipment indicated *

- * - dedicated, clearly visible **signs** showing UST ID and content, ...;
- waterproofed cockpit... of load that reaches the ground level and prevents the dispersion of any spills;
- Buckets or equivalent solutions to **collect dripping** from the flexible product loading / unloading pipes;
- **level indicator** and / or meter;
- 90% load **limiting valve**;
- pressure compensation device....





How is it implemented?

1. Download from UNI Catalog (free of charge)
2. Identify the applicable ones among the 7 Sources / Scenarios envisaged
3. Implement applicable requirements (general + sources)
4. Audit by an accredited Certification Body
5. Obtain the certification and the UNI mark





Main Benefits of implementing PdR UNI 107: 2021

For the company

- a) More effective damage prevention
- b) Strengthen own environmental commitment
- c) Return from Investments in Risk Management
- d) 20% discount on Environmental Policy

For the environment

- a) Effective prevention of severe deterioration of natural resources
- b) Guarantee of repair in case of damage

For the consumer

- a) Truly green purchasing choice (real company's commitment)
- b) Healthier environment
- c) Taxes not used to repair industrial accidents



Assistance offered by your Company (member of the Pool)

- 1) Free assistance by a specialized environmental consultant for the implementation of PdR 107: 2021
- 2) Improvements to coverage terms can be agreed for the implementation of the PdR (warranty extensions, sub-limits increase, retroactivity increase, etc.)
- 3) Automatic 20% discount on the Policy premium upon obtaining the Protected Environment certification (ISO 140001/Emas discount is in the order of 10%)



And more ...

- 1) We are starting a free consulting activity based on the PdR to acknowledge insured of their potential contamination sources and their risks, to provide them a priority list of main prevention activities
- 2) A forecast of some hundreds of companies in the coming year will benefit of this activity



Next steps to increase implementation of PdR UNI 107:2021

- **Tax relief for maintenance, control and renovation** of plants that pose an environmental risk
- **Involvement in ESG** (Environmental Social Governance) criteria
- Equalization of Protected Environment to ISO14001: 2015 and EMAS in order to achieve **at least same benefits** such as:
 - increase in the duration of authorizations,
 - simplified renewals of the authorizations,
 - diversified controls compared to companies that are not certified,
 - reduction of financial guarantees in favor of the state
- Additional tax / authorization / bureaucratic incentives



Where to download it?

<http://store.uni.com/catalogo/uni-pdr-107-2021>



Home > Catalog > Standards Catalog > **UNI/PdR 107:2021**



UNI Standard



UNI/PdR 107:2021

Status	Availability	Withdrawal	Action	Language	Format	Buy
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	6/3/2021			English	PDF (1.78MB)	

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Standard Number : UNI/PdR 107:2021

ICS : [03.100.01] [13.020.10]

Status : CURRENT

Start Validity Date : june 3, 2021

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