

# Italian industrial safety approach

First meeting of the Steering Committee to the National Policy  
Dialogue (NPD) for Industrial Safety in Serbia  
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Mr. Gianfranco Capponi,  
ISPRA - Service for Risks and Sustainability of Technologies, Chemicals, Production Cycles and  
Water Services and for Environmental Inspection Activities,

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ISPRA provides technical and scientific support to the Ministry for Ecological Transition (MET).

ISPRA together with other technical bodies support MET in the implementation of European Directives in industrial safety

The “Service for Risks and Sustainability of Technologies, Chemicals, Production Cycles and Water Services and for Environmental Inspection Activities” includes:

- Integrated Analysis of Sustainability of Technologies and Production Cycles
- Environmental Inspections
- Integrated Analysis of Industrial Risks
- Strategic IED establishments

# Integrated Analysis of Sustainability of Technologies and Production Cycles & Environmental Inspections

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Industrial factories require a management system to control both normal operating conditions and anomalies.

Safety measures shall be taken to limit the impact on people and environment (in normal operating conditions) and avoid accidents (prevent) and, if not possible, limit their consequences.

ISPRA and the “National System for the Protection of the Environment” (system composed by all regional environmental agencies) perform activities in order to evaluate and control safety management and pollution emitted into the environment by large industrial factories.

# Industrial Emissions Directive

## 2010/75/EU (IED)

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The IED aims to achieve a high level of protection of human health and the environment, taken as a whole, by reducing harmful industrial emissions, in particular through application of Best Available Techniques (BAT)

◆ **Key instrument for minimising consumption and emissions of industrial activities in Europe**

◆ **General framework:**

- **prevent** and, if not feasible, reduce pollution
- high level of **protection for the environment**
- **permit to operate is based on the adoption of Best Available Techniques (BAT)**

**BAT are determined by a Technical Working Group steered by the JRC (EIPPCB) and documented in BREFs**

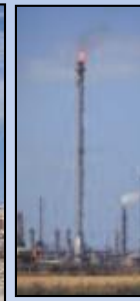
**[\(http://eippcb.jrc.ec.europa.eu/reference/\)](http://eippcb.jrc.ec.europa.eu/reference/)**

**~ 50 000 IPPC installations in Europe**

# IED Directive

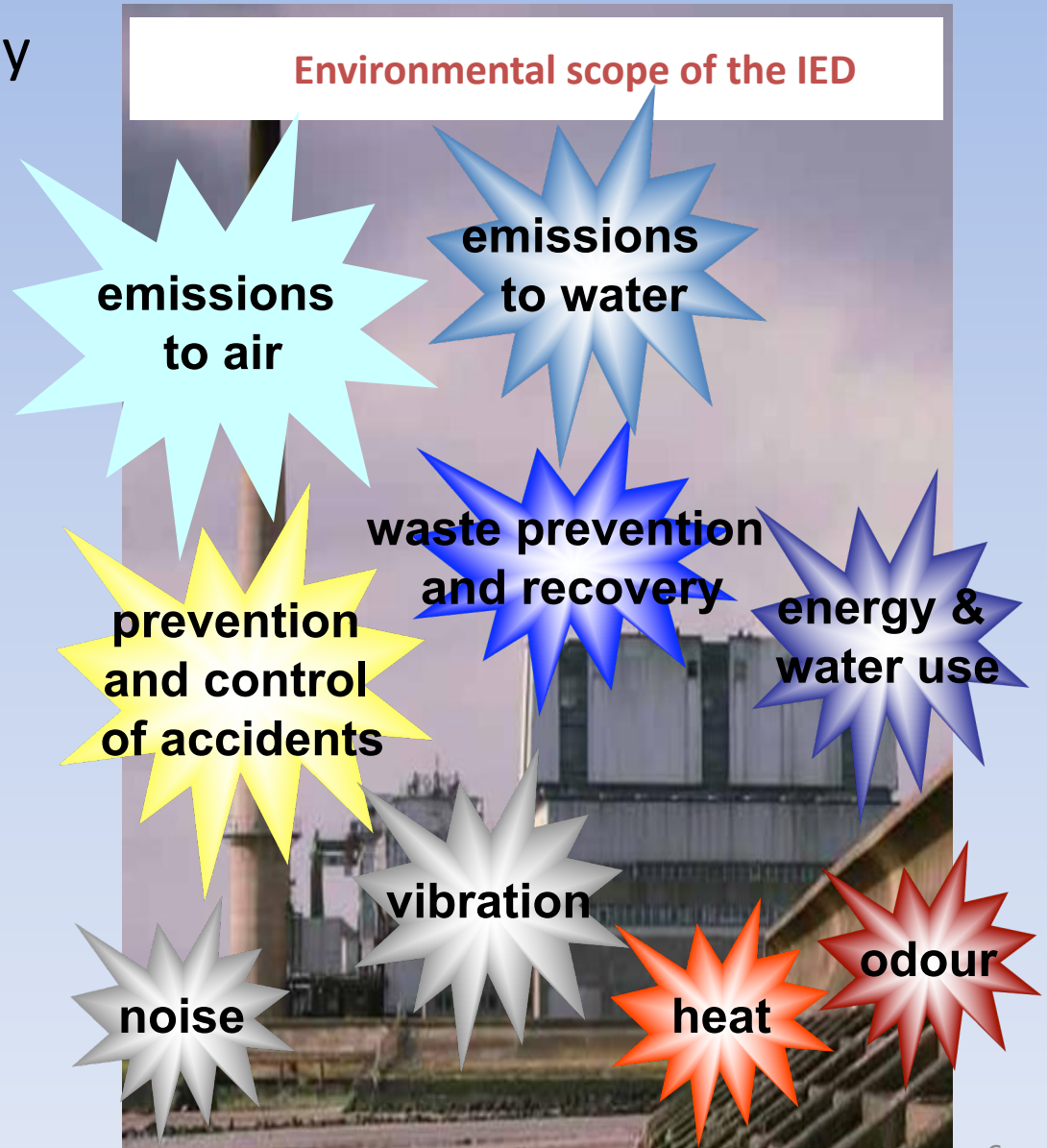
Applies to:

- ✓ Energy industries
- ✓ Production and processing of metals
- ✓ Mineral industries: cement, lime, glass, ceramics
- ✓ Production of chemicals
- ✓ Waste management industries
- ✓ 'Other' industries:
  - Pulp and paper, textile processing
  - Tanning of hides and skins
  - Intensive farming, food drink and milk processing, surface treatment using solvents



# IED Directive

- The IED Directive is mainly based on:
- an **integrated approach**: permit to operate must take into account the whole environmental performance of the plant, covering emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents...



# IED Directive

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- The **BAT conclusions** play a central role in the implementation of the IED.
- They are used as references when setting permit conditions.
- In particular:  
**Permit** contains emission limit values (ELVs) to ensure that, under normal operating conditions, **emissions do not exceed BAT-associated emission levels (BAT-AELs)**
- **BAT conclusions** are the **reference** for setting permit conditions

# Integrated Environmental Authorization (IEA)

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- In Italy the **Integrated Environmental Authorization (IEA)** is the measure that authorizes the operation of a plant or part of it under certain conditions, which must ensure compliance with legal requirements (IED).
- Ministry of Environment is the Competent Authority (CA) for installations permitted at **State Level** (170 installations)
- Regions and Provinces are the Competent Authorities (CA) for installations permitted at **Regional Level** (more than 5.000 installations)
- Permit procedures adopted at **State level** are based on evaluation schemes including coherence of permit conditions with **Best available techniques Reference document (BREF)** requirements;
- At State level IED permits and reports of control activities are made available on the web (<http://www.va.minambiente.it/it-IT>)
- ISPRA support MET for permit procedures and it is the control authority for environmental inspections.



## Environmental Inspection definition:

*“all actions, including site visits, monitoring of emissions and checks of internal reports and follow-up documents, verification of self-monitoring, checking of the techniques used and adequacy of the environment management of the installation, undertaken by or on behalf of the competent authority to check and promote compliance of installations with their permit conditions and, where necessary, to monitor their environmental impact”*

### Previous phase

- check of reports and documents
- Inspection plan and programme preparation

### On site Visit

- Site inspection
- Request for additional documents
- Sampling and monitoring

### Follow-up phase

- Laboratory analysis
- Evaluation
- Inspection report
- Follow-up procedures

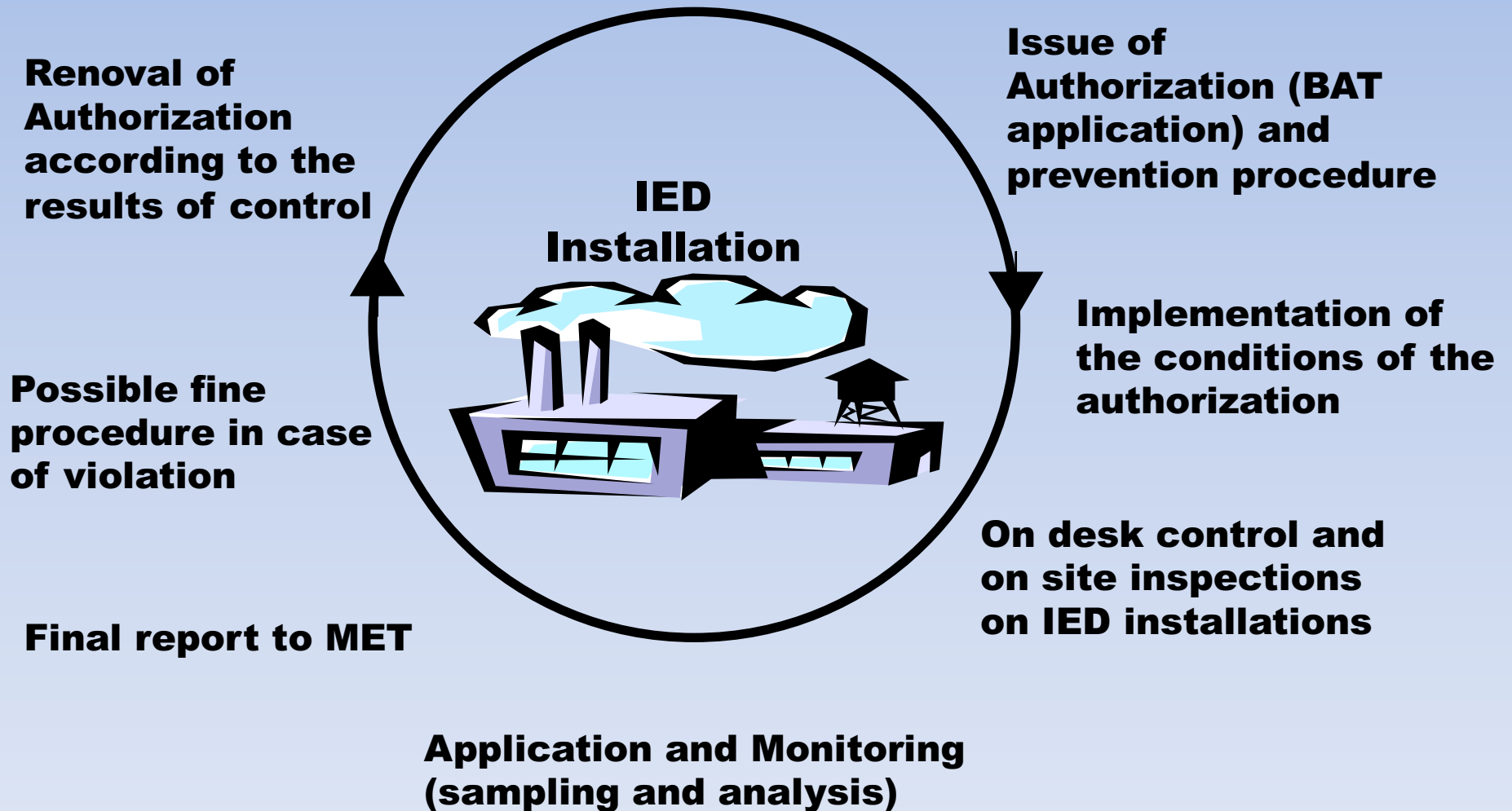
# Ordinary and Extraordinary Inspections



It is a periodic control, with frequency defined by the environmental inspection plan at regional level according to the Italian law (D.lgs. 152/06) every 1 to 3 years, using risk-based criteria. The annual program is published on the MET website.

It is an unscheduled control as a result of: accidents, notification of warnings, MET requests and/or judicial authority requests, check on specific requirements to verify that the plant configuration complies with the authorized one.

# ENVIRONMENTAL PREVENTION & CONTROL CYCLE



# Seveso Directive

## The principles

The Seveso-III-Directive (2012/18/EU) aims at:

- the prevention of major accidents involving dangerous substances.
- limiting the consequences of accidents not only for human health but also for the environment.



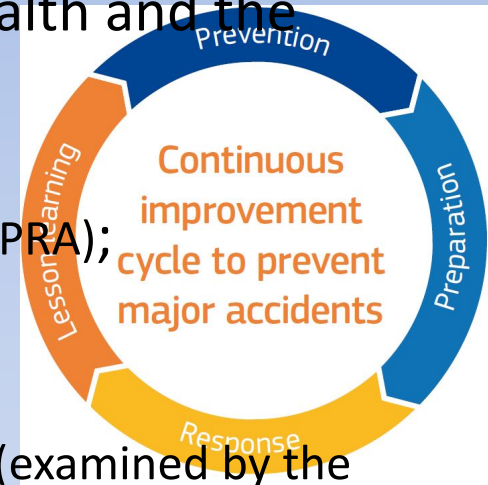
The Directive covers establishments where dangerous substances may be present (e.g. during processing or storage) in quantities exceeding certain thresholds.

# Seveso Directive

## Main obligations for operators

Operators are obliged to take all necessary measures to prevent major accidents and to limit their consequences for human health and the environment including:

- Notification of all concerned establishments (verified by ISPRA);
- Deploying a major accident prevention policy;
- Adoption of a Safety Management System (SMS)
- Producing a safety report for upper-tier establishments (examined by the Regional Technical Committee);
- Producing an Risk analysis for lower-tier establishments (examined as part of SMS Inspection);
- Producing internal emergency plans for lower and upper tier establishments (examined by the Regional Technical Committee);
- Providing information to Authorities in case of accidents.



# Seveso Directive

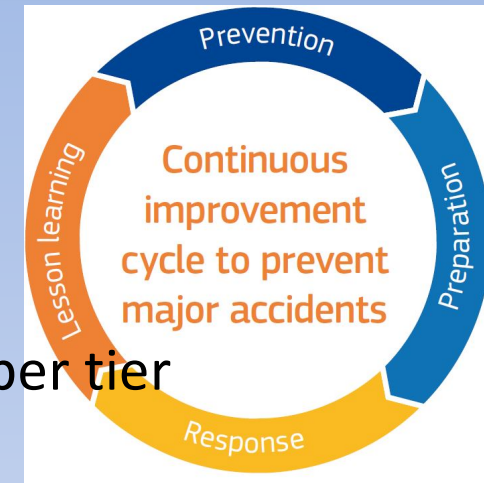
## Main obligations for Public authorities (1 of 2)

Producing external emergency plans for lower and upper tier establishments (National Civil Protection, Prefect);

Deploying land-use planning for the siting of establishments (Province, Region, Regional Technical Committee);

Making relevant information available to the public (MET, Ministry of Interiors, Ministry of Health, Region, Province, Mayor, Prefects, ...);

Ensuring that any necessary action is taken after an accident including emergency measures, actions to ensure that the operator takes any necessary remedial measures and informing the persons likely to be affected (National Civil Protection, Prefect, Regional Technical Committee, Region, ...); ...



# Seveso Directive

## Main obligations for Public authorities (2 of 2)

...

Reporting accidents to the Commission (MET);

Prohibiting the unlawful use or operation of establishments

(MET, Regional Technical Committee, Region) ;

Conducting inspections (Commissions formed by ISPRA and Regional Environmental Agency, National Fire Brigades, National Institute for Insurance against Accidents at Work).



# Seveso Directive

## Citizens' rights

The public concerned needs to be consulted and involved in the decision making for specific individual projects;

Public authorities need to make available any information held pursuant to the Seveso Directive;

Access to justice needs to be granted.





# Seveso Directive

In Italy about 1000 Seveso establishments (lower+upper tier establishments):

25 % chemical & petrochemical plants

25 % LPG storage depots

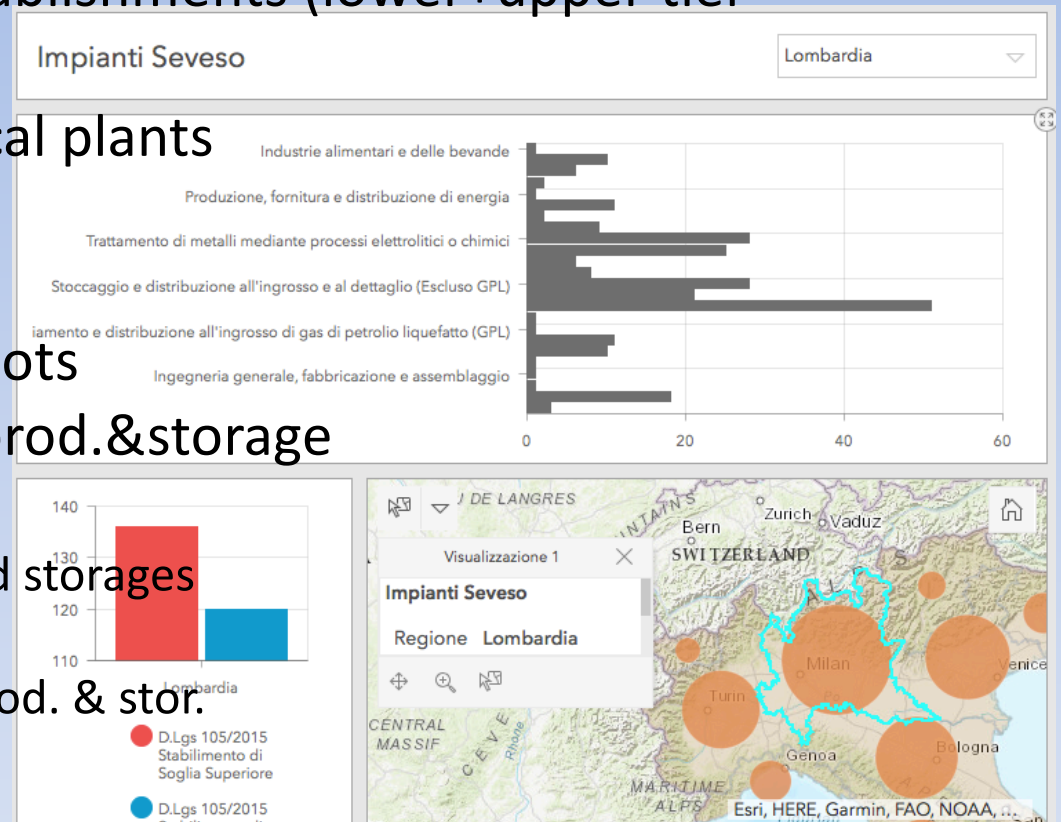
~10 % electroplating works

~10 % mineral oil storage depots

7 % explosive & fireworks prod.&storage

~20 % other typologies:

- natural gas underground storages
- termopower plants
- industrial gases (LOx) prod. & stor.
- steel and metal plants
- agrochemicals depots
- alcohol distillation plants
- toxic sub. ces depots



# Main technical tools

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## Data bases

- WEB National Inventory of MAH establishments (management and updating by ISPRA on behalf of MET), includes Notification information
- Data base on inspections results
- BIRD - an industrial accident database

## Guidelines and handbooks

- MESH – a tool for the fast evaluation of accidental consequences
- how to inspect a Safety Management System
- How to address aging of installations
- Criteria for post-accident analysis
- criteria for land use planning near MAH establishments
- criteria for defining External Emergency Plans
- criteria to improve public information and participation
- evaluation of environmental risks
- chemicals reactor safety
- criteria for the analysis of LPG storage plants Safety Reports
- Criteria for the analysis of Flammable and Toxic liquid storage plants SR

## Additional support

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- Coordination table for uniform application in Italy (chaired by MET)
- Exchange of information and sharing of experience promoted to identify needs of tools to improve controls (software, guidelines, check-lists, handbooks, etc.)
- National Inspection plan based on full coverage in 3 years and assignment of priority based on inspection results
- Minimum requirements for qualifying inspectors defined (about 6 months required to qualify an inspector)
- Training courses for new inspectors organized every year

### **Improvements: Tools and Qualified resources**

- Improvement of DB functionality
- Continuous training to maintain adequate resources for inspections (number of inspectors) and keep updated inspectors competence



**ISPRA**  
Istituto Superiore per la Protezione  
e la Ricerca Ambientale



**Sistema Nazionale  
per la Protezione  
dell'Ambiente**

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Thank you for the attention!