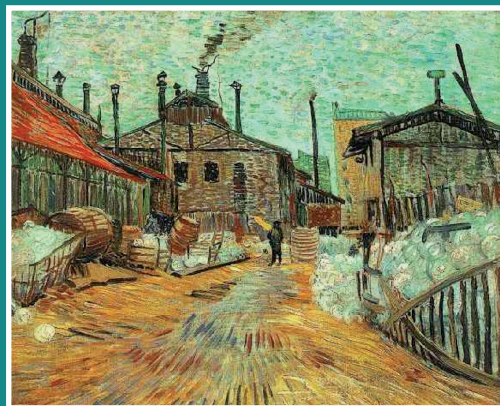


Sistema Nazionale  
per la Protezione  
dell'Ambiente

# IED inspections shared in a knowledge single homogeneous network

Executive  
summary



*Arpae Editions*

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*Arpae Editions*

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# IED inspections

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homogeneous network

Executive summary

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We are not God. The earth was here before us and it has been given to us (67).

Whether believers or not, we are agreed today that the earth is essentially a shared inheritance, whose fruits are meant to benefit everyone (93). Here I want to recognize, encourage and thank all those striving in countless ways to guarantee the protection of the home which we share (13).

- Encyclical Letter "Laudato si'" of the Holy Father Francis on care for our common home



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# Introduction

## 1.1 The IED Directive and the role of Environmental Agencies in Italy

Directive 2010/75/EU on Industrial Emissions (integrated pollution prevention and control, or IPPC) has been transposed into Italian law within Law Decree 152/2006, constituting part two, title III-*bis* of the Environmental Protection Consolidation Act.

The well-known purpose of the directive, as set forth in Art. 1, is the integrated prevention and reduction of pollution from various industrial activities. The Directive also lays down rules designed to prevent or, where this is not possible, to reduce emissions into the air, water and soil resulting from said activities, and to prevent the production of waste, in order to achieve a high level of protection of the environment as a whole.

In the Italian transposition of the Directive (Law Decree 152/2006, as amended and supplemented), the role and activities of the Environmental Agencies and of ISPRA (the Italian National Institute for Environmental Protection and Research) are defined in the following articles:

- Art. 29 *quater*, paragraph 6: opinion, expressed as part of the procedure for issuing the IPPC permit, on the procedures for monitoring and controlling plants and emissions into the environment;
- Art.29 *quinquies*, paragraph 1: involvement of the representatives of ISPRA and the Environmental Agencies to coordinate uniform application of the regulation throughout the country;
- Art. 29 *sexies*, paragraph 9 *sexies*, and related implementing decrees, on the basis of any regional provisions and of the circular of the Ministry of the Environment, Land and Sea (MATTM) no. 27569 of 14/11/2016: reference report;
- Art. 29 *decies*, paragraph 3: execution of ordinary and extraordinary audits by ISPRA on state-run plants or, in other cases, by the Regional and Provincial Environmental Agencies (ARPA and APPA respectively) employed by the competent authorities.

The main purpose of the project, the results of which are presented below, is to investigate the procedures that ISPRA and the regional and provincial Environmental Agencies adopt – from an organisational and technical standpoint – to perform the tasks assigned to them for the execution of ordinary and extraordinary audits.

It must be noted that, with regard to the IPPC permit and with a view to implementing the provisions of art. 29 *decies*, paragraphs 11 *bis* and 11 *ter*, the SNPA (Italy's National System for Environmental Protection) is conducting a separate, specific project on the procedures adopted to draw up the environmental audit plan, based on a product created by ARPA Lombardia known as SSPC (Support System for Planning Controls). The aspects of this issue that apply to this project are discussed herein.

## 1.2 The Project

Within the context of the SNPA projects for the years 2015-2016, a project has been approved and launched, entitled “Current situation and best practices in the field of environmental controls” (RR 7.2). Initially, the project focused on the environmental control activities performed by the Environmental Agencies on plants with Integrated/Single Pollution Prevention and Control permits, whereas, during the implementation phase, the project focused solely on Integrated Pollution Prevention and Control (IPPC) audits.

The project basically compares different ways of executing control activities, also for the purposes of verifying, on a voluntary basis, the uniform implementation of substantive and technical regulations.

The project is run by a core team, coordinated by ARPA Lombardia, made up of specialists from the following Environmental Agencies: Emilia-Romagna, Friuli Venezia Giulia, Lazio, Lombardy, Piedmont, Sardinia, Sicily and ISPRA.

The project is split into a preparation and an execution phase:

- First phase (Section A): collection of programmatic-organisational and technical-procedural data and information on the IPPC controls conducted by all regional/provincial Environmental Agencies and by ISPRA.
- Second phase (Section B): peer reviews of Environmental Agencies selected on a voluntary basis. The peer reviews were carried out based on the IMPEL REVIEW INITIATIVE (IRI) set by the “European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL)”.

## 1.3 The Survey

The first project phase involved a comparative evaluation of the methods of implementing IPPC audits, conducted by analysing the data and information acquired from the regional/provincial Environmental Agencies and ISPRA.

To this end, a survey was prepared and distributed to all the national Environmental Agencies for the comparative evaluation of the programmatic-organisational and technical-procedural aspects of implementing IPPC audits.

The survey consists of 16 sections with a variety of questions covering the following topics:

0. Personal details
1. Identification of the audit team
2. Scheduling and drafting of a detailed control plan
3. Audit execution times
4. Any provisions/procedures/instructions issued by the Management of the participating Environmental Agencies
5. Transmission and evaluation of the plant operator’s monitoring and self-control data
6. Assessment by ARPA of the plant operator’s disclosure obligations

7. Sampling and subsequent laboratory analyses carried out by ARPA as part of an audit
8. Verification by ARPA of requirements and obligations related to the following environmental parameters: wastewater, emissions into the atmosphere, waste products, noise, odour, protection of soil and groundwater, etc.
9. Assessment of the application of general and industry-specific BATs
10. Promotion of compliance and continuous improvement
11. Directions to the Competent Authority
12. Reference report
13. Emission trading (CO<sub>2</sub> and climate change)
14. Companies with a major accident risk (MAR)
15. Livestock enterprises – IPPC activities referred to in point 6.6 of Annex 8
16. Economic impact of the IPPC audits on ARPA

The survey was distributed to all the regional/provincial Environmental Agencies and to ISPRA from September 2015, to be filled in by their specialists.

To make the survey easier to fill in and process, most of the questions consist of the following types of answers:

- First type: Yes / No / sometimes;
- Second type: Never, <10% (actions rarely carried out), 3 50% (actions carried out in about half of all cases), > 80% (actions carried out very frequently);
- Third type: other more extended or numerical answers.

## 1.4 Information acquired and analysis of the answers provided

In the table 1 below are the Environmental Agencies that, at the end of the first fact-finding stage, completed and transmitted the survey to the working group. The data is up-to-date to the time of filling in the individual surveys.

The Environmental Agencies were given 5 months, from October 2015 to February 2016, to complete and return the surveys.

The results give a fairly accurate overall picture of Italy's Environmental Agencies (regional/provincial and ISPRA), since over 98.6 % of the national population of Environmental Agencies completed their survey, for a total of almost 6,100 regional IPPC companies. To these may be added the survey produced by ISPRA.

The answers provided by the Environmental Agencies were analysed per section, producing charts for each question and providing comments to the most significant results and the consequent conclusions drawn. The charts produced for every question were inserted in the annexes to the final report.

The results give a fairly accurate overall picture of the work carried out by Italy's Environmental Agencies with reference to IPPC companies, identifying strengths and areas for improvement with regard to the Environmental Agency's purposes and objectives under the IPPC regulations.

The information contained in the report – in addition to enabling comparisons between and providing food for thought on the organisation of the activities of each Environmental Agency, provide a useful two-way means of exchanging experiences and

Environmental Agency	Number of resident people	% Italia	Number of Municipality	IED Installation
Lombardia	9.973.397	16,41%	1.530	1.900
Lazio	5.870.451	9,66%	378	132
Campania	5.869.965	9,66%	550	199
Sicilia	5.094.937	8,38%	390	62
Veneto	4.926.818	8,11%	579	826
Emilia-Romagna	4.446.354	7,32%	340	855
Piemonte	4.436.798	7,30%	1.206	572
Puglia	4.090.266	6,73%	258	203
Toscana	3.750.511	6,17%	279	313
Calabria	1.980.533	3,26%	409	41
Sardegna	1.663.859	2,74%	377	83
Liguria	1.591.939	2,62%	235	54
Marche	1.553.138	2,56%	236	215
Abruzzo	1.333.939	2,19%	305	96
Friuli-Venezia Giulia	1.229.363	2,02%	216	266
Umbria	896.742	1,48%	92	124
Basilicata	578.391	0,95%	131	46
Trento	536.237	0,88%	210	70
Valle d'Aosta	128.591	0,21%	74	6
<b>TOTALE</b>	<b>59.952.229</b>	<b>98,65%</b>	<b>7.795</b>	<b>6.063</b>

**Table 1: Survey Transmitting**

good practices among Environmental Agencies. It may also be used within the context of the coordination activities envisaged by art. 29 *quinquies* of Law Decree 152/2006 – “*Coordination of uniform application throughout the country*”.

It is worth noting that the aim of said coordination is to draw up, also by means of working groups, guidelines on issues of common interest, and to *allow for the joint examination of issues relating to the application of the regulations*, also in order to ensure the coordinated and consistent implementation of the new regulations and to prevent situations of non compliance and related consequences.

## 1.6 Peer reviews

Peer reviews – the second instrument employed in the project – involve exchanges between specialists of the various Environmental Agencies, with a view to analysing and commenting the procedures for planning, organising and managing IPPC audit activities as adopted by those Environmental Agencies that voluntarily offer to engage in said exchanges.

In stating that peer reviews can be an effective tool for the purposes of coordination as referred to in the aforementioned art. 29 *quinquies* of Law Decree 152/2006, it is worth noting that:

- Peer reviews are to be considered informal activities conducted by a “project team” made up of specialists of the regional/provincial Environmental Agencies, and do not constitute an audit;

- Peer reviews are a useful means, for the hosting Environmental Agency and for the “project team” as a whole, of exploring the different ways in which IPPC audits are carried out, especially from a technical-organisational standpoint;
- Peer reviews set out, in particular, to highlight good practices and opportunities to improve current practices, also with the aim of disseminating same throughout the SNPA;
- Peer reviews are conducted on the basis of a manual, so that both the hosting Environmental Agency and the “project team” know in advance the contents of the review and the method of conducting same;
- The hosting Environmental Agency can ask for the review to focus on some particular aspect of the IPPC audit, based on its goals and needs.

A “*Manual for the development and execution of peer reviews*” was drafted for the purposes of the project, with the specific aim of defining and regulating the method of preparing and conducting peer reviews. The Manual also allows for comparisons between the peer reviews carried out at different hosting Environmental Agencies.

With Resolution DOC No.67/CF of 15/03/2016, the Federal Council of the National System for Environmental Protection formally approved the manual drawn up by the working group devoted to the project.

The project’s first peer review was conducted at Arpa Campania in October 2016, and the results are summarised in a dedicated section of this report.

## 1.6 Structure of the document

This document constitutes an extensive extract of the Italian language version. It is split into an introduction and a summary of results, with two paragraphs describing the results of processing the survey.

The paragraph on “programmatic and organisational aspects” describes the results of sections 1-2-3-4-5-16, while the one on “technical and procedural aspects” relates to sections 6-7-8-9-10-11-12-13-14-15-17.

The concluding paragraph, then, outlines the main aspects of the work performed and some developmental proposals for the establishment of a permanent observatory on IPPC audits and the system’s overall improvement.

The charts reflecting the answers to every question in the 16 sections of the survey are available at <http://bit.ly/controlliAIA>

The publication ends with a report on the peer review carried out at Arpa Campania.



<http://bit.ly/controlliAIA>



SECTION A  
Project Report

**Current situation and best practices  
in the field of environmental controls**





## Summary of results

Below is a summary of the conclusions relating to the most important aspects examined in each individual section, providing an overview of the situation observed and clarifying the strengths and weaknesses detected.

For a more effective representation of the overall results, the survey sections were grouped into themes of a mainly programmatic-organisational nature (sections 1, 2, 3, 4, 5 and 16) and those of a mainly technical-procedural nature (sections 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15).

### 2.1 Programmatic and organisational aspects

#### Identification of the audit team

Over 60% of Environmental Agencies do not have a permanent facility dedicated to IPPC, and therefore the audit teams are set up as needed.

The analysis reveals a certain amount of difficulty in applying anti-corruption rules with regard to the application of the staff rotation principle.

Moreover, we detected a difference in the presence of staff qualified to work as judicial police officers in the ISPRA/ARPA/APPA systems. It is worth noting that, with the entry into force of art. 14 of Law 132/2016, the legal representatives of Environmental Agencies may in fact identify and appoint staff qualified to work as judicial police officers.

It appears necessary therefore for the Environmental Agencies as a whole to launch common training initiatives and uniform lines of conduct.

#### Scheduling and drafting of a detailed control plan

With regard to the scheduling of ordinary and extraordinary audits, the analysis reveals ongoing critical situations that could be overcome by adopting plant classification systems based on risk analysis, such as the SSPC (Support System for Planning Controls).

As regards the parameters controlled, it is worth noting that ordinary audits do not necessarily involve the systematic control of all environmental parameters, despite being conducted more frequently than extraordinary audits.

The analysis reveals that operator self-controls would be useful, both for the company, which could monitor the progress of its facilities, and for the auditing body, which could use this information to improve its audits. We believe that assessments of such self-controls should become a core element of the system.

The scheduling of analytical activities seems to be carried out in parallel with the scheduling of audits, and the weight of the demands of the judicial authorities is in most cases limited.

One critical aspect concerns the audit results lack of influence on the objectives achieved in relation to the resources employed. Indeed, only in a few cases is a review of resources carried out based on analyses conducted post audit.

### Audit execution times

The contents of the permit are normally taken into consideration when estimating the audit execution times; the annual scheduling, instead, takes into account the time required to conduct the controls.

### Any provisions/procedures/instructions issued by the Management of the participating Environmental Agencies

The analysis of companies with procedures in place for executing the various audit phases has yielded positive results. It is interesting to note that, while less than half of the Environmental Agencies (47%) have a procedure in place for drafting a final report, this percentage rises to 75% for companies.

As regards procedures relating to violations subject to civil penalties, their dissemination is limited, perhaps due to the fact that some Environmental Agencies have long addressed such fines with established practices.

As regards procedures relating to violations subject to criminal penalties, the findings are worse than those relating to procedures for civil penalties. This situation may be due to several factors: first of all, the presence in various Environmental Agencies of judicial police officers who refer directly to the Code of Criminal Procedure; in other cases, despite not having judicial police officers among their staff, criminal penalties have probably long been addressed with established practices and, frequently, with the use of dedicated forms, but without defining a specific procedure.

As regards entering audit activities in a formalised quality management system, most Environmental Agencies do not adopt quality certification systems applied to audits. This situation may be ascribed to the non-homogeneous dissemination of quality management procedures among the Environmental Agencies as a whole; the Environmental Agencies with the greatest number of controlled companies appear to be more inclined to adopt this approach.

The analysis highlights the importance within Environmental Agencies of updating procedures based on new regulations.

As regards training, the figures reveal a prevalence of training focused on regulatory aspects rather than ongoing training that also encompasses other respects.

### Transmission and evaluation of the operator's monitoring and self-control data

With reference to communications relating to operator self-control data, only the regular transmission of data is managed in a uniform manner by the competent authorities, which almost always make this a mandatory requirement right from the permit stage; the transmission of other data, instead, is very non-homogeneous given the lack of specific and detailed requirements in the permit itself.

In most cases, Environmental Agencies tend to assess the operator's data during ordinary and/or extraordinary audits (where required), and do not tend to assess such data on a yearly basis in the absence of an audit; moreover, when the assessment is car-

ried out outside the scope of an ordinary and/or extraordinary audit, a summary report is not always produced, sometimes even when the data highlights critical situations.

The Environmental Agencies pay particular attention to evaluating the tools, methods and procedures used by operators to collect data and, during an audit, the general tendency is to employ staff specialised in the environmental parameters being controlled.

The behaviour of the Environmental Agencies is not very homogeneous with regard to the measures undertaken as a result of analysing self-control data, as well as to the scheduling of further ordinary and extraordinary audits.

### Economic impact of the IPPC audits on ARPA

The recording of staff resources employed and of incoming economic resources of individual Environmental Agencies is generally poor.

With regard to both staff resources employed and incoming economic resources, the extreme variability of the type of data received did not make it possible to make reliable, standardised comparisons and evaluations.

With regard to the payment of fees in the years in which audits are not carried out, it may be noted that the ARPAs/APPAs with the greatest number of IPPC permits interpret the national regulations as associating fees solely with the execution of audits, and therefore do not apply fees in the years when supervisory activities are carried out without an on-site audit.

From the point of view of the human and instrumental resources needed in connection with state IPPC permits, for some ARPAs/APPAs a high number of regional IPPC permits – characterised by a greater number of production sectors – necessarily entails a greater differentiation of types of audit, and the need to schedule accordingly. On the other hand, in cases with a higher number of state plants, there is a strong need for co-ordination between those responsible for control activities (ISPRA and ARPA/APPAs), in terms of both scheduling actions and defining audit methods and operational practices.

## 2.2 Technical and procedural aspects

### Assessment by ARPA of the operator's disclosure obligations

There is substantial uniformity of behaviour in relation to general communications, such as those relating to accidental events and plant malfunctions, the exceeding of authorised limits, and technical/process changes to plants, especially among Environmental Agencies that assess such aspects; There is a lack of uniformity with regard to the evaluation of E-PRTR declarations, solvent management plans and single environmental statements (MUD), probably due to the different ways in which individual regions are organised.

### Sampling and subsequent laboratory analyses carried out by ARPA as part of an audit

In many regions, the competent authorities promptly enter the parameters to be verified – also analytically – by ARPA/APPAs during ordinary audits. Only a few regions form the exception to this rule; however, their weighting in terms of authorised companies (about 40%) is significant.

The analytical evaluations carried out more assiduously (by all the ARPA/APPA) are those involving industrial wastewater. Emissions into the atmosphere, odour, noise, groundwater and waste characterisation are subject to less articulated and less frequent sampling and analysis.

The analytical water controls carried out by the ARPA/APPA are aimed predominantly (71 % of companies) at assessing compliance of production discharges into surface water; in the presence of water treatment plants, treatment results are not generally assessed. Less standardised and less frequent are the controls carried out on discharges into sewage and/or relating to runoff or cooling waters.

Emissions into the atmosphere are controlled regularly only by 16% of ARPA/APPA, equal to 18% of controlled companies. Sampling, when carried out, concerns only one smokestack (or a limited number thereof), and typically only some of the pollutants covered by the Monitoring and Control Plan are investigated. The Environmental Agencies struggle to analyse micropollutants, also on selected plants (incinerators, co-incinerators, steelworks, etc.). Furthermore, in some cases, the choice of pollutants analysed is further limited by the analytical skills of the Environmental Agency's laboratory. Finally, it should be noted that the continuous emissions monitoring systems (SME) of companies are very rarely evaluated.

Few regions – accounting for as many as 49% of IPPC companies – have issued specific regulations governing odour emissions. For their part, even those Environmental Agencies that have received odour-related complaints struggle to perform olfactometry measurements. Only two Environmental Agencies can rely on their own specialised laboratory.

Phonometric checks are generally only carried out by ARPA/APPA upon receiving reports of noise pollution.

Only 11% of IPPC companies are equipped with piezometric networks that, we assume, are justified by technical/regulatory concerns (landfills, waste treatment plants, plants subject to reclamation, etc.). In such plants, Environmental Agencies carry out regular analytical controls on water quality.

Rarely carried out are analytical controls both on incoming waste in authorised waste recovery/disposal plants and on the products obtained (secondary raw material, end of waste). Similarly, the characterisation of waste generated by IPPC plants is also carried out intermittently by the Environmental Agencies.

Verification by ARPA of requirements and obligations related to the following environmental parameters: wastewater, emissions into the atmosphere, waste products, noise, odour, protection of soil and groundwater, etc.

There is substantial uniformity of behaviour in relation to checking the instructions included in the permit and, in general, a high level of attention with regard to monitoring, during audits, any provisions concerning the plant's critical issues.

### Assessment of the application of general and industry-specific BATs

Many Environmental Agencies do not adequately check for the application of Best Available Techniques (BAT), perhaps partly because the relevant regulations do not expressly envisage such checks during the audit phase. These would require a signifi-

cant effort, for example organising specific training courses, preferably at the national level, in order to ensure the exchange of knowledge and uniform behaviour.

### Promotion of compliance and continuous improvement

The investigation reveals that the Environmental Agencies adopt a fairly uniform conduct, aimed at encouraging operators to implement measures designed to improve the environmental performance of companies and consequently reduce the impact generated.

### Recommendations to the Competent Authority

In general, the Environmental Agencies – on the basis of self-control data and/or data collected during audits – promote any necessary changes to the permits and Monitoring and Control Plans, highlighting such needs to the Competent Authorities and, if necessary, stating the need to review the permits themselves.

### Reference report

At the moment, the introduction of the obligation for operators that use, produce or discharge certain dangerous substances, to evaluate the applicability of the obligation to submit a first reference report (pre-report) and possibly a subsequent reference report, makes the control and ratification procedures very non-homogeneous on a national scale, also due to non-homogeneous regulations at a regional level, with only some regions having set the deadline for submitting the documentation.

The ARPAs/APPAs generally do not express an opinion on the contents of the pre-report; in fact, only 26 % of the Environmental Agencies, which control 53% of the IPPC plants, check the contents thereof during scheduled audits; instead, the behaviour of the Environmental Agencies is significantly inhomogeneous with regard to the ratification of the reference reports, as required by the competent authorities, with the prevailing tendency being that of not expressing an opinion in this regard.

It is also worth noting that, at the moment, the indications stated in the guidelines of the Ministry of the Environment, Land and Sea (MATTM) of 17/06/2015 – concerning the possibility of the operator changing the frequency of monitoring activities involving groundwater and soil as a result of the ratification of the evaluation of the applicability of the obligation to submit a first reference report (pre-report) – have not yet been applied.

### Emission trading (CO<sub>2</sub> and climate change)

Within the scope of the IPPC audits, no controls are carried out with a view to analysing compliance with the Emission Trading legislation.

### Companies with a major accident risk (MAR)

It is to be noted that the distribution across Italy of MAR plants which are also subject to the application of an IPPC permit is strongly non-homogeneous, and that most Environmental Agencies have the resources and professional skills to perform a MAR audit as required by Law Decree No. 105/2015.

The purpose of the IPPC and MAR audits are not the same, and usually the team of Environmental Agencies performing the IPPC audit does not participate in the MAR audit. This is due to the fact that the MAR audit team, which is purposely appointed, can comprise staff from other public bodies, and the two audit teams do not cooperate in any way.

### Livestock enterprises – IPPC activities referred to in point 6.6 of Annex 8

The distribution across Italy, in absolute terms, of livestock enterprises subject to the application of an IPPC permit is strongly non-homogeneous, with most enterprises situated in the country's northern regions. The Environmental Agencies that control the greatest number of livestock enterprises are specialised in such audits.

However, there is a lack of assessments on Agronomic Utilization Plans (PUA), an aspect that could be improved, also with a view to improving the effectiveness of controls on soil and groundwater.

## 2.3 SWOT analysis

The results produced by analysing the various survey sections can be interpreted in a synthetic and operational manner by means of a SWOT Analysis, an instrument generally used to evaluate the strengths (S), weakness (W), opportunities (O) and threats (T) connected with achieving a project goal, with a view to promoting informed decision-making.

In the case in point, the analysis was carried out with reference to the programmatic-organisational and technical-procedural aspects identified, considering both the strengths and weaknesses within the Environmental Agencies as a whole, and dependant on same, and the opportunities and threats connected with external factors.

In order to better understand the contents of the analysis, it should be pointed out that some aspects were considered both as strengths (because, for example, they constituted good practices already adopted by certain Environmental Agencies) and as weaknesses (because, for example, they constituted good practices that are not yet universally adopted). Similarly, the non-achievement of significant opportunities may become a threat to the effective functioning of the system.

## Programmatic and organisational aspects

	S: strengths	W: weakness
	O: opportunities	T: threats
Internal factors	<ul style="list-style-type: none"> <li>• Establishment of audit teams at the national level (better understanding of the context).</li> <li>• Presence of specialised staff for the various parameters being audited.</li> <li>• Audits scheduled based on environmental risk assessment tools (e.g. SSPC).</li> <li>• Scheduling of analytical activities.</li> <li>• Use of permits to schedule the duration of audits.</li> <li>• Presence of internal procedures for executing audits.</li> <li>• Integral management of audit results by staff qualified to work as judicial police officers when present in the Environmental Agencies.</li> <li>• Widespread training activities as a result of the enactment of new legislation.</li> </ul>	<ul style="list-style-type: none"> <li>• Incomplete and inhomogeneous adoption of audit schedules through the use of risk assessment tools (e.g. SSPC).</li> <li>• Difficulties applying anti-corruption legislation with regard to staff rotation.</li> <li>• Inhomogeneous presence of audit procedures in a certified quality management system.</li> <li>• Frequent absence of computing platforms for the recording and management of self-control data.</li> <li>• Inhomogeneous presence of staff qualified to work as judicial police officers in the ARPA/APP/ISPRA system.</li> <li>• Frequent prevalence of training focused on regulatory aspects rather than ongoing training that also encompasses other respects.</li> <li>• Inhomogeneous reporting methods.</li> <li>• Difficulty quantifying the economic resources needed for the fees paid.</li> <li>• Substantial generalised lack of instruments for recording audit costs.</li> </ul>
External factors	<ul style="list-style-type: none"> <li>• Activation by the SNPA of common training initiatives and uniform lines of conduct.</li> <li>• Uniform audit scheduling tools proposed by SNPA.</li> <li>• Establishment of a single computing platform for SNPA, for the recording and management of self-control data.</li> <li>• Activation of exchanges between SNPA and reference stakeholders on the organisation and role of the Environmental Agencies judicial police officers.</li> </ul>	<ul style="list-style-type: none"> <li>• Absence of uniform procedures across all Environmental Agencies for executing audits, drawing up final reports and handling penalties.</li> <li>• Staff generally insufficient to cope with the frequency of audits prescribed by the regulations.</li> </ul>



## Technical and procedural aspects

	S: strengths	W: weakness
Internal factors	<ul style="list-style-type: none"> <li>• Uniform evaluation of operator communications.</li> <li>• Significant sampling and analyses of industrial wastewater.</li> <li>• Updates on new legislation.</li> <li>• Assiduous controls on instructions.</li> <li>• Directions to operators on measures aimed at improving environmental performance.</li> <li>• Systematic evaluation of operators' self-controls.</li> </ul>	<ul style="list-style-type: none"> <li>• Inhomogeneous evaluation of E-PRTR declarations, solvent management plans and single environmental statements (MUD).</li> <li>• Insufficient analytical verifications on emissions into the atmosphere, odour, noise, groundwater and waste characterisation.</li> <li>• Insufficient ongoing training with regard to Best Available Techniques (BAT).</li> <li>• Insufficient knowledge about issues concerned with the reference report.</li> <li>• Assessment of self-controls often only carried out during audits.</li> <li>• Inhomogeneous actions resulting from self-controls.</li> <li>• Separate IPPC and MAR audit groups.</li> <li>• Lack of assessments on Agronomic Utilisation Plans (PUA) when auditing livestock enterprises</li> </ul>
	O: opportunities	T: threats
External factors	<ul style="list-style-type: none"> <li>• Evaluation of soil and groundwater and production of the reference report.</li> <li>• Coordination of IPPC and MAR audits.</li> <li>• Definition of technical and regulatory guidelines by the SNPA to address deficiencies in current regulations.</li> <li>• Activation by the SNPA of common training initiatives and uniform lines of conduct.</li> </ul>	<ul style="list-style-type: none"> <li>• Objective difficulties of interpretation regarding checks on the application of Best Available Techniques (BAT).</li> <li>• Deficiencies in current regulations for homogeneous evaluation of E-PRTR data.</li> <li>• Absence of national legislation on odour emissions and diffuse emissions.</li> <li>• Absence of technical-regulatory indications regarding criteria for ratifying the reference report.</li> <li>• The Emission Trading legislation does not envisage controls by Environmental Agencies.</li> <li>• Absence of national guidelines for coordinating IPPC-MAR audits.</li> </ul>

## 2.4 Proposals going forward

On the basis of the above, we would like to make a few brief operational suggestions to the SNPA, in order to implement the results of the project.

The survey provided interesting information, but represents the current picture of a situation that keeps changing and evolving over time. For this reason, said information should be kept up-to-date, also with a view to fulfilling the information and transparency obligations required both by the legislation and by the various stakeholders that interact with the Environmental Agencies.

From this point of view, it would be extremely useful for the SNPA to set up a permanent observatory designed to update the data collected and assess changes relating to the Environmental Agencies. The main aim is to create a computerised system for the annual recording of data (see in this respect the conclusions of the working groups 12 Transparency and 32 Reporting, which should interact) in order to keep information up-to-date. This should be a core activity, also on the basis of the recent establishment of the SNPA, and should involve preparing a proposal for a specific three-year plan.

The second aim of the project should be the systematic adoption of peer reviews, which our experience has demonstrated to be very useful. These reviews provide on-the-field exchange, often translating into concrete actions those reflections resulting from the survey analysis. Moreover, they provide opportunities for training and/or exchange between the various Environmental Agencies on the various themes highlighted in this document.

The third and equally important application of the project's results involves providing technical-operational support for the coordination envisaged by art. 29-*quinquies* of Law Decree 152/2006 "Coordination of uniform application throughout the country".

It is worth noting that the aim of said coordination is to draw up, also by means of working groups, guidelines on issues of common interest, and to allow for the joint examination of issues relating to the application of the regulations, also in order to ensure the coordinated and consistent implementation of the new regulations and to prevent situations of default and related consequences.

In this respect, the results of the project – all the more so if kept up-to-date over time, identifying both the strengths and weakness within the Environmental Agencies as a whole with regard to the execution of IPPC audits, and the opportunities and threats connected with external factors – could be an operational instrument of Coordination, to be used to lay down guidelines both for the Environmental Agencies and for the competent authorities.



SECTION B

Peer review at Arpa Campania



# Introduction

## 3.1 Scope and method of carrying out the peer review

Within the scope of the project, by the term *peer review* we mean an exchange between specialists from various Environmental Agencies, aimed at assessing and commenting the methods of planning, organising and managing the activities carried out by a specific Environmental Agency (the hosting Environmental Agency) within the scope of the provisions of part two, title III-*bis* of Law Decree 152/2006 and subsequent amendments and integrations, in particular as regards compliance with the conditions of the Integrated Pollution Prevention and Control permit (Art. 29-*decies*, paragraph 3).

The peer reviews are informal activities and are conducted by specialists from the hosting Environmental Agency and other regional/provincial Environmental Agencies, with the aim of investigating the ways in which IPPC audits are carried out, especially from a technical and organisational standpoint.

Peer reviews set out in particular to highlight good practices and opportunities to improve current practices with the aim of disseminating it throughout the SNPA.

A “*Manual for the development and execution of peer reviews*” was drafted for the purposes of the project, with the specific aim of defining and regulating the method of preparing and conducting peer reviews. The Manual also allows for comparisons between the peer reviews carried out at different Environmental Agencies.

With Resolution DOC No.67/CF of 15/03/2016, the Federal Council of the National System for Environmental Protection formally approved the manual drawn up by the working group devoted to the project.



## Peer review at Arpa Campania

### 4.1 Organisation

Arpa Campania expressed its willingness to host a peer review in February 2016. It took several – albeit not continuous – months to organise the event as it was considered important to prepare it meticulously and in advance, in order to maximise its effectiveness.

In particular, the hosting Environmental Agency was asked to prepare the documentation and information on the technical content of the peer review in advance of the dates set for the event, so as to make them available in good time to the “project team”.

The review took place from 4 to 6 October 2016 at the Naples Department of Arpa Campania, and was coordinated by Luigi Cossentino, who introduced the event and brought the greetings of the Agency’s General Directorate.

### 4.2 Participants

Throughout the peer review, the “project team” was made up of seven specialists from the regional Environmental Agencies that formed the core team of the project “Current situation and best practices in the field of environmental controls”: Arpa Sicilia, Arpa Piemonte, Arpa Lombardia, Arpa Emilia Romagna, Arpa Friuli Venezia Giulia.

The Arpa Campania specialists, from all the provincial departments and from the General Directorate, participated in a more extensive and articulated manner.

### 4.3 Contents of the peer review

Paragraph 5 of the “Manual for the development and execution of peer reviews” specifies that such reviews be executed through specific frameworks, by means of which the topics under discussion are fully addressed in all their parts, presenting, commenting, comparing and providing a summary of the contents of said frameworks.

The frameworks identified in the manual and used for the Arpa Campania peer review were as follows:

#### Statutory, regulatory and procedural framework

The hosting Environmental Agency was asked to submit any regional rules and regulations issued in application of Part II, TITLE III *bis* of Law Decree 152/2006 and subsequent amendments and integrations, as well as any procedures adopted internally for the execution of the tasks taken on as part of the procedures laid down by Part II, TITLE III *bis* of Law Decree 152/2006 and subsequent amendments and integrations, whether or not included in a formalised QMS.



### The role of the Environmental Agency in the authorisation process

The hosting Environmental Agency was asked to describe its role in the process of authorising plants subjected to the procedures referred to in Part II, TITLE III *bis* of Law Decree 152/2006 and subsequent amendments and integrations, focusing in particular on the institutional tasks provided for by art.29 *quater*, para. 6 of Law Decree 152/2006 and subsequent amendments and integrations.

### Organisational framework

The hosting Environmental Agency presented the current situation relating to the plants, located in its region, authorised in accordance with the procedures referred to in Part II, TITLE III *bis* of Law Decree 152/2006 and subsequent amendments and integrations. Moreover, it described its internal organisation, focusing in particular on the activities referred to in Part II, TITLE III *bis* of Law Decree 152/2006 and subsequent amendments and integrations.

### Technical framework

The hosting Environmental Agency was asked to describe all the technical and procedural aspects of executing audits on plants authorised in accordance with the procedures referred to in Part II, TITLE III *bis* of Law Decree 152/2006 and subsequent amendments and integrations.

### Case study

The hosting Environmental Agency was asked to submit a case study relating to a significant plant located in its territory, describing the contents of the plant's permit, as of Part II, TITLE III *bis* of Law Decree 152/2006 and subsequent amendments and integrations. It was also asked to describe the outcome of the last audit carried out on the plant, in order to highlight the main technical aspects and the most significant environmental impact of the plant in question.

## 4.4 Agenda

The peer review's agenda was agreed upon by the "project team" and Arpa Campania based on the points set out in the manual.

Arpa Campania decided to entrust the presentation of each point to a different rapporteur – a choice that proved effective in practice. The rapporteurs were chosen among the technicians of all the provincial departments and of the General Directorate, thus ensuring the involvement of the entire organisational structure of Arpa Campania involved in IPPC.

## 4.5 Presentations and documentation

Following the procedure set forth in the "Manual for the development and execution of peer reviews", the framework issues were addressed starting from specific presenta-

tions, prepared with a view to introducing the issue, describing the hosting Environmental Agency's approach, and opening a debate on the matter.

The Arpa Campania peer review comprised 11 presentations: one consisting of a general introduction to the project, one on the legal framework and the role of the Environmental Agency (see points 5.1 and 5.2 of the manual), one on the organisational framework (see point 5.3 of the manual), six on the technical framework (see point 5.4 of the manual) and two on the case study (see point 5.5 of the manual).

Furthermore, the hosting Environmental Agency also made available the legal and technical documentation adopted in the region of Campania concerning IPPC permits, including the deliberations and decrees issued by the Regional Committee and the December 2006 *"Guide to preparing and presenting an application for an Integrated Pollution Prevention and Control permit"* issued by the Environmental Protection Department of the region of Campania.

## 4.6 Key elements of the peer review

Each presentation was followed by a discussion between the specialists, which helped to highlight the qualifying aspects of the experience of the hosting Environmental Agency in the field of IPPC permits, and allowed the "project team" to provide advice on how to improve the organisational and operational methods adopted. For their part, the members of the "project team" also benefited, for the same reasons, from this exchange with their colleagues from the hosting Environmental Agency.

It is useful to summarise the main issues discussed and the main points that emerged for each framework defined by the "Manual for the development and execution of peer reviews".

### 4.6.1 Statutory, regulatory and procedural framework

In the region of Campania, the process to obtain an IPPC permit is regulated by regional provisions, such as the aforementioned December 2006 *"Guide to preparing and presenting an application for an Integrated Pollution Prevention and Control permit"* issued by the Environmental Protection Department of the region of Campania, Executive Decree no. 16/2007 *"Approval and forms for presenting IPPC applications"*, and Executive Decree no. 369/2014 *"Criteria and procedures to be adopted in the event of renewing, amending or changing ownership of plants already in possession of an Integrated Pollution Prevention And Control (IPPC) Permit, pursuant to Law Decree 152/06"*. This latter document is particularly appreciated for its ease of compilation and reading.

The process to obtain an IPPC permit is conducted by a single entity, the Campania Regional Authorities, which performs administrative functions through provincial Executive Operating Units (U.O.D.). The competent authority entrusts the technical investigation to the universities of Campania, and in particular to their engineering faculties. These university departments support the competent authority, checking the technical documents provided by the plant operators, and issuing a technical report.

Each faculty performs its activities independently, there being no (existing or planned) system of coordination between the various faculties. This makes it difficult to ensure homogeneity in the technical reports issued in different provinces, even for

similar plants. The technical reports produced by the universities are transmitted directly to the Campania Regional Authorities. Arpa Campania is not informed of their content – except in the event of an interdepartmental conference or of informal relations between the two institutions – and consequently is required to provide its opinions without being able to take into account the contents of said technical reports.

In order to improve the overall regional process to obtain an IPPC permit, the peer review participants agreed that it would be advisable to suggest to the Campania Regional Authorities the establishment of technical round tables to coordinate the work of the institutions and universities before any interdepartmental conference.

Moreover, it was also agreed that it would be equally advisable to suggest to the Campania Regional Authorities the emission of a provision formally permitting interaction between institutions and universities, and between institutions and plant operators while putting together the documentation and technical opinions – something that already happens in other regions. This interaction would allow universities to learn about any issues already known to Arpa Campania and its staff, and to improve their knowledge of plants and processes. Moreover, it would make it possible to suggest the inclusion in the permits of elements such as to ensure completeness and uniformity, thus also facilitating subsequent control activities.

Finally, the peer review participants noted a common and widespread issue connected with an increasingly substantial and informal use of BATs during investigations and when issuing IPPC permits.

#### 4.6.2 The role of the Environmental Agency in the authorisation process

With regard to the process to obtain an IPPC permit, Arpa Campania performs the activities assigned by the legislation (art.29 *quater* para. 6 of Law Decree 152/2006 and subsequent amendments and integrations). In the event of permit review requests, Arpa Campania usually provides the Campania Regional Authorities with a report on the self-control data produced by the plant operator while the permit under review was in force.

It is worth noting that, in Arpa Campania, there is no formalised method – systematically applied by the various departments – for the emission of the Environmental Agency's opinions. The organisation of the staff that performs the task is entrusted to each department. However, some organisational arrangements seem quite functional, such as the establishment of internal technical round tables involving technical experts in various fields and an executive coordinator. This method provides an overall and integrated view of the plant subject to authorisation or review. The peer review participants agreed on the fact that it would be advisable to define uniform procedures throughout the Environmental Agency, drawing on the most effective and functional models.

With regard to the emission of an opinion within the scope of the IPPC permit review or authorisation for existing plants, the peer review participants have a positive view on the possibility of making official the practice of conducting preliminary inspections.

With regard to self-controls, it is worth noting that; contrary to some regions, there is currently no IT platform enabling plant operators to transmit the data collected to Arpa Campania. The participants agree that it would be advisable to ask the Campania Regional Authorities to set up a formalised computerised procedure for the transmission of self-control data, drawing if possible on the systems already in use in some regions.

#### 4.6.3 Organisational framework

Arpa Campania appears to have a complete and exhaustive overview of the many, dislocated IPPC companies in the region, and of their distribution by business category. Having this knowledge is an important element in order to facilitate the execution of audits.

Audit teams are not currently set up following the same criteria in all departments. Also in this case, there are organisational arrangements that seem quite functional, such as the establishment of multidisciplinary audit teams, usually headed by a manager specialised in the most important parameter for the specific plant in question. Once again, the peer review participants agreed on the fact that it would be advisable to define uniform procedures throughout the Environmental Agency, drawing on the most effective and functional models. To this end, it would be advisable to give more impetus to interdepartmental cooperation, promoting mutual professional and instrumental support between departments.

As happens in many other regions, the staff entrusted with carrying out IPPC audits is normally also engaged in other activities during the course of the year. There are also some difficulties applying anti-corruption legislation with regard to the rotation of staff entrusted with carrying out IPPC audits. This is due to an objective shortage in staff – a problem found in several other Environmental Agencies.

The peer review participants have a positive view on the possibility of analysing the goals, objectives and conditions required to promote inter-agency cooperation through the joint execution of some audits.

The Arpa Campania laboratory appears to be organised in a rational manner. Moreover, according to the technicians from Campania who took part in the peer review, the organisation involving the transportation of samples, entrusted to the in-house company Arpac Multiservizi, does not raise any particular issues, except for some constraints on the sampling days and, in some case, on the time required to return the relevant reports.

Arpa Campania is working hard to schedule controls on IPPC plants. Currently, in the region of Campania there are no structured and formalised criteria for scheduling annual audits. Indeed, scheduling is still at the provincial level and not at the regional level, as required by the legislation. However, Arpa Campania is studying the application of a method of risk assessment correspondent with the one identified by the SNPA. Early tests on the use of the SSPC are demonstrating good correspondence between the results generated by the system and the level of risk experimentally perceived by the technicians of the Environmental Agency. At the end of the current experimentation, Arpa Campania intends to suggest to the Campania Regional Authorities the adoption of SSPC as the official system for scheduling IPPC audits.

#### 4.6.4 Technical framework

The audit preparation phase is particularly thorough in all the departments of Arpa Campania, and includes preliminary analyses of all the environmental parameters investigated. Positively impressive, as also mentioned in other parts of this report, is the attention dedicated to analysing the self-control data submitted by plant operators, by means of a preliminary investigation and the drafting of an annual report. In some departments, the technicians of the Environmental Agency are present during the op-

erators' self-controls, subject to the operator notifying the date of commencement of said activity.

As in other regions, Arpa Campania notifies the plant operator of any impending audit about 15 days before the event. The work plan is then submitted at the start of the inspection. The results of the audit are also presented and discussed with the operator at a special audit closing meeting. If any particular issue arises, Arpa Campania puts forward proposals for improvements, both to the operator and to the competent authority.

We were pleased to note that one particular department is attempting to tackle the issue of odour in connection with certain industrial productions in a consistent and structured manner, also through the introduction of reference values in the relevant permits. Considering the importance of odour-related issues in many local contexts, the peer review participants consider it useful to share the results of this experiment not only with the other departments of Arpa Campania, but with every other Environmental Agency.

With regard to the procedure for carrying out controls, the peer review participants have noted an non-homogeneous approach across different local departments. The situation is not dissimilar to that found in most Environmental Agencies, especially those that cover a particularly vast and complex territory. There is a shared feeling, however, that the existence of a central operational and coordination unit for practical issues would contribute positively to strengthening the degree of homogeneity between different provincial departments. From this point of view, having ascertained that some provincial departments of Arpa Campania use check lists to execute audits, the peer review participants consider it advisable to formally extend the use of these tools to all departments, after an appropriate assessment and standardisation of the instruments already in use.

The peer review participants also highlight the need for Arpa Campania to pursue its dialogue with other Environmental Agencies on the application of Ministerial Decree 272/2014 (Reference Report). This is because there are still some issues under discussion at national level, and the approach of the various Environmental Agencies to the issue of controls is not uniform.

In the unanimous opinion of the peer review participants, the SNPA should be asked to promote both national and inter-agency training on the theme of applying and monitoring BATs, facilitating the exchanging of experience between technicians from the various Environmental Agencies on a very delicate and complex issue of Italian and European law in the field of IPPC plants.

#### 4.6.5 Case study

The case study presented involves the waste-to-energy plant of Acerra (Naples), where Arpa Campania performs ongoing and in-depth controls, also at the direct request of the competent Public Prosecutor's Office, acting on the basis of a predefined memorandum of understanding. The controls reveal a profound understanding of the plant and ongoing relations with all stakeholders.

While executing the audit, particular focus was placed on monitoring emissions into the atmosphere. To this end, a special facility was set up within the Naples Department of Arpa Campania devoted to auditing the waste-to-energy plant's continuous

emissions monitoring system (SME). It is the intention of Arpa Campania to ask the Campania Regional Authorities to have the SME manual, revised in line with the Arpa Campania directives, transposed into the permit.

The peer review participants agreed that the controls in this area could be further improved by Arpa Campania technicians taking part in instrumental checks, to ensure the quality of the data produced by the SME.

The managers of the Naples Department of Arpa Campania welcome the possibility of exchanging technical experiences on this subject with specialists from other Environmental Agencies, in particular ARPA Lombardia. In this respect, it has been agreed to look into the possibility of a future collaboration in a relatively short time span.

The peer review participants also agreed that the experience of the Naples Department should be shared within Arpa Campania.

## 4.7 Conclusions

The opportunity to exchange views between technicians of the various Environmental Agencies involved on a daily basis on specific issues enables the achievement of the final purpose of the peer review, which – as mentioned – is to highlight good practices and opportunities to improve current practices, for the benefit of the hosting Environmental Agency, the “project team” and the entire SNPA.

The Arpa Campania peer review was characterised by a particularly thorough debate, thanks above all to the passion and competence shown by all participants.

Many of the topics addressed revealed issues common to the various participating Environmental Agencies, albeit tackled with different – and sometimes complementary – tools and methods.

We believe that the method experimented with the Arpa Campania peer review may be repeated on other occasions, and may potentially constitute a regular means of exchange within the SNPA, both with regard to specific IPPC issues – to provide concrete suggestions to improve Coordination and the uniform application of this legislation throughout the country, as foreseen by art. 29 *quinquies* of Law Decree 152/2006 – and to address other issues of similar importance and complexity.

Arpae Editions “IED inspections – shared knowledge in a single homogeneous network” originates from the work carried out in the context of the SNPA projects in 2015-2016 “Present situation and best practices in the field of environmental inspections”.

Organisational and executive procedures of the IED inspections conducted by the Italian agencies, were compared through a questionnaire made up of 16 sections and the following analysis covers a sample of some 6.100 regional AIA installations also providing information on national AIA installations.

The project also involved a voluntary *peer review* carried out in October 2016 in Arpa Campania on the basis of the Impel Review Initiative pattern (IRI) developed by the European network for the Implementation and Enforcement of Environmental Law (IMPEL).

The overall framework emerging from the conclusive SWOT analysis, highlights the strong points but also indicates where there is room for improvement in the field of IED inspections carried out by the Italian agencies. The project conclusions also envisage the setting up of a SNPA monitoring unit regarding IED inspections and the development of a national peer review programme.