Reforming Regulatory Inspections in Italy at Regional and National Level 21IT12

Final Report
2024

The report is funded by the European Union via the Technical Support Instrument, requested by the Public Administration Department of the Italian Government and developed by the Regulatory Policy Division of the Governance Directorate - OECD

This Final report was produced with the financial support of the European Union. Its contents are the sole responsibility of the author(s). The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

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Funded by the European Union

Acronyms and abbreviations

AGEA	Agricultural Payment Agency (*Agenzia per le Erogazioni in Agricoltura*)
AIA	Integrated Environmental Permit (*Autorizzazione Integrata Ambientale*)
APPA	Provincial Agency for Environmental Protection *(Agenzia per la Protezione del Ambiente)*
APPAG	Agricultural Provincial Paying Agency (*Agenzia Provinciale per i Pagamenti*)
APSS	Provincial Health Service Company (*Azienda Provinciale per i Servizi Sanitari*)
ARPA	Regional Environmental Agency (*Agenzia Regionale di Protezione Ambientale*)
AUA	Environmental Single Permit (*Autorizzazione Unica Ambientale*)
AUT	Unified Territorial Permit (*Autorizzazione Unica Territoriale*)
CMS	Complaints Management System
FBO	Food business operator
FVG	Friuli-Venezia-Giulia, a region of Italy
HACCP	Hazard Analysis and Critical Control Points
IED	Industrial Emissions Directive
INAIL	National Institute for Insurance against Accidents at Work
INPS	National Information System for Prevention in the Workplace
IPPC	Integrated Prevention and Pollution Control
ISPRA	Institute for Environmental Research and Protection (*Istituto Superiore per la Ricerca e la Protezione dell'Ambiente*)
ISTAT	Italian National Institute of Statistics
MASE	Ministry for Environment and Energy Safety (*Ministero dell'Ambiente e della Sicurezza Energetica*)
MISE	Ministry for Economic Development (*Ministero dello Sviluppo Economico*)
MITE	Ministry for Ecological Transition (*Ministero della Transizione Ecologica*)
MSME	Micro, small and medium-sized enterprises
NRRP	National Recovery and Resilience Plan
PSR	Rural Development Plan (*Piano di Sviluppo Rurale*)
RAC	Rating Audit Control
SIAN	Agricultural Informative National System (*Sistema Informativo Agricola Nazionale*)
SME	Small and medium-sized enterprises
TSI	Technical Support Instrument
UOPSAL	Occupational Safety and Health Operative Unit from the Provincial Health Service Company *(Unità Operativa di Prevenzione e Sicurezza negli Ambienti di Lavoro dall'APSS)*

Chapter 1: Introduction

State of inspections in Italy before the Rating Audit Control project (2019-2021)[1]

The regulatory supervision of economic operators in Italy represents a significant cost for public finances, creates substantial burden and barriers to economic activity, and suffers from limited effectiveness in some areas. Institutional complexity and duplications create considerable costs for the state, inefficiencies, and complexity for those who are regulated[2].

Reform measures are particularly urgent to boost the competitiveness of micro, small and medium-sized enterprises (MSMEs), which comprise 67.1% of the total value-added and 78.5% of employment in the non-financial business sector (against a European average of 56.8% and 66.4%, respectively)[3]. MSMEs, which are essential to Italy's economy and employment, are the most burdened by the existing regulatory inspections regime and were hit hardest by the COVID-19 pandemic.

Lack of discretion in assessing the nature of individual non-compliance or specific discrepancies found by inspectors increase the complexity of the enforcement system. The widespread "criminalisation" of obligations placed on businesses and the consequent criminal liability for omission that the public official may incur[4] worsen the situation. This result on the phenomenon of so-called "defensive bureaucracy", which generates delays, inefficiencies, and above all a climate of general mistrust of citizens and businesses towards the administration. Moving towards a more effective regulatory inspections regime should build trust and assure businesses that they will receive support rather than be penalised for non-conformity.

Consensus on simplifying business inspections and controls

Simplification, transparency and inspections improvement has been pursued multiple times by the legislators, with mixed results. All public administrations were required to publish on their websites the list of their relevant controls to which businesses are subject[5]. This provision was then repealed by subsequent legislation[6]. Recent or ongoing legal changes include the entry into force of the recent Regulation (EU) 2017/325 (and development of associated secondary legislation), or the full implementation of the changes introduced to environmental supervision through the Law 132/2016 (such as the introduction of Essential Levels of Technical Output to ensure a level of

[1] RAC 1 project - Rating Audit Control. The construction of a model for the rationalisation and simplification of business controls.
[2] M. De Benedetto (2019), Controlli della pubblica amministrazione sui privati: disfunzioni e rimedi, in Rivista trimestrale di diritto pubblico, n. 3, pp. 855-881.
[3] European Commission, *Annual Report on European SMEs 2017/2018*, p. 16. https://op.europa.eu/en/publication-detail/-/publication/a435b6ed-e888-11e8-b690-01aa75ed71a1.
[4] F. Blanc; L. Megale, *Food Law*, in M. Scholten (eds.), Research Handbook on EU Law Enforcement, Edward Elgar Publishing Cheltenham, 2023. C. Bertone, F. Blanc, G. Cambell, P. Coletti, Environmental Law, in M. Scholten (eds.), Research Handbook on EU Law Enforcement, Edward Elgar Publishing, Cheltenham, 2023.
[5] Decree Law 5/2012 "Simplification of controls on businesses" converted into the Law 35/2012.
[6] Legislative Decree 33/2013 and Legislative Decree 97/2016.

harmonisation across regions). The latest simplification reforms[7] have also touched on inspection issues, aiming at improving coordination of feed and food sectors inspections.

At policy level, the commitment to simplifying controls on businesses was confirmed by the Italian Government in the National Operational Programme Governance and Institutional Capacity 2014-2020. Among the objectives aimed at strengthening the administrative capacity of the programme is the reduction of administrative and regulatory burdens (specific objective 1.2), to be achieved especially through the implementation of the actions of the Agenda for simplification 2015-2017 envisaged by art. 24 of the Decree Law 90/2014, and subsequently updated for the period 2018-2020. The Agenda was then renewed until 2026, continuing to include the simplification of the control and enforcement system for businesses. Furthermore, the COVID-19 pandemic highlighted the imminent need for more flexible regulatory frameworks with innovative and efficient control tools. Moreover, the National Recovery and Resilience Plan (NRRP) identifies coordination among administrations that perform control functions as a crucial element to simplify controls and inspection activities.

The ultimate consensus, linked to the present project "Reforming Regulatory Inspections in Italy at Regional and National Level", comes from the Legislative Decree on a reform of public controls on private entities, implementing art. 27 of the Law 118/2022 "Annual Law on the market and competition" ("*Legge annuale per il mercato e la concorrenza*"). It aims to simplify the inspections, but with a view to effectively protecting public interests and encouraging the recovery and relaunch of economic activities.

Building on the Rating Audit Control project

The RAC 1 project *"Rating Audit Control. The construction of a model for the rationalisation and simplification of business controls"*, implemented from 2019 to 2021 under the Structural Reform Support Programme (SRSP) upon a request from the Italian government, has achieved important results, which provided a robust model for further reform implementation in other services and local administrations. The project has allowed both to identify key problems and binding constraints, and to develop a range of approaches and tools for reform. These formed the basis of the current project "*Reforming Regulatory Inspections in Italy at Regional and National Level*"[8].

The European Commission agreed to support Italy, with technical assistance by the OECD, in its efforts to strengthen institutional and administrative capacity, to effectively address the challenges identified in the country-specific recommendations and to implement Union Law - under the conditions set in the Framework Delegation Agreement REFORM/IM2021/011. The Department of Public Administration of the Italian Government requested the current project. The project's overall goal was to enhance the regulatory and enforcement system in selected target regions and at national level.

[7] Decree Law 76/2020.
[8] M. Escobar, L. Megale, Rifromare i controlli pubblici sulle attività private: condizioni ottimali per una riforma essenziale, in Rassegna trimestrale dell'Osservatorio AIR, n. XIII-3, pp. 33-45.

The project ran from July 2021 to February 2024. Following the entry into force of the Law 118/2022 on the market and competition and the request to provide preliminary recommendations on the reform on inspections, the project included an amendment in mid-2023 for an extend in time (to allow for more activities as requested by the beneficiary) but also in budget (to allow for the actual implementation of such activities)[9].

Involved public authorities and covered regulatory sectors

The Autonomous Province of Trento has been a leader in adopting national guidelines and implementing inspection reforms within the RAC 1 project. The regulatory sectors and involved authorities included in the current project, at the regional and the local level, are:

Sectors:

- Food safety
- Environmental protection
- Occupational safety and health
- Documentary checks for construction permitting, economic permitting, incentives to companies

Authorities:

- Autonomous Province of Trento and Ala, Avio, Trento, Pergine Valsugana, Moena, Scurelle, Telve, Rovereto (municipalities)
- Campania region
- Friuli-Venezia Giulia region
- Lombardy region
- Emilia-Romagna region
- Lazio region and Viterbo (municipality)
- Tuscany region
- Piemonte region

At national level:

- Department of Public Administration (as authority requesting the project and the legislative reform, and with horizontal competencies)
- Ministry of Health
- Interregional table on Food Safety

[9] The project's operational implementation period was extended from 24 to 30 months, the budget from 600,000 to 850,00 EUR.

Chapter 2: Reforming Regulatory Inspections in Italy[10]

Outcomes and impact of the project

The project's expected outcome is to establish a risk-based thinking behind a regulatory reform of enforcement in several sectors, informed by the principles of effectiveness and efficiency, and supported by the use of IT tools. In the longer term, such scope might lead to improvement in competitiveness, facilitation of investment and growth, support to employment, improvement of the effectiveness of European and national recovery efforts, decrease of corruption risks, and increase of trust between business, citizens and public administration. In the short/medium term, the outcomes were to decrease administrative burden and increase efficiency through better coordination and targeting, improve compliance support, support better data coordination, sharing and management, and improve ability of the public bodies to focus and address key risks for the public interests they are called to protect.

These achievements result from designing and implementing innovative enforcement tools and methods, by introducing an "outcome-based approach" in the planning and performing of inspections. The latter also through an improvement in coordination between public authorities, and collaboration between the private and public sectors by promoting self-compliance.

As a crucial step, unforeseen but supported by the project, Italy has also drafted and presented in the Council of Ministers a legislative decree on a national reform of inspections. The Legislative Decree implements art. 27 of the Law 118/2022 on the market and competition to boost the competitiveness of the production sector and improve the effectiveness of public administration[11]. In any case, the achievement of outcomes and the long-term impact of this project depends, to a large extent, on the degree to which the pilot regions and the Government of Italy adopt and implement project recommendations and continue to use the developed tools. Broader policy conditions that remain outside the responsibility of the European Commission and the OECD may also influence the long-term outcomes.

Project outputs

The project was designed to support the development of methodological, information technology (IT) and organisational tools to make inspection planning more risk-based. To achieve the latter and enforcement's effectiveness, the approach included improving coordination among authorities and the collaboration and dialogue between public authorities and private economic activities.

The effectiveness of inspection controls is primary for regulatory delivery. This is defined as the set of actions taken by competent public entities to achieve the expected results from a regulatory

[10] 21IT12 project - Reforming Regulatory Inspections in Italy at Regional and National Level.
[11] On 28 March 2024, the Italian Council of State issued a negative opinion on the draft decree, which needs further updates.

source[12]. Regulatory delivery is a crucial element in achieving a functioning society and increasing trust in institutions through safeguarding of public interests as the ultimate purpose of regulations.

The risk-based approach

Within the regulatory cycle, the legislator should consider the dynamics present in society, follow the normative evolution, not only in the design phase but also in adoption, implementation, and subsequent evaluation of the impact obtained. The risk-informed approach becomes central throughout the regulatory cycle. Designing and implementing regulation with a risk-based vision allows for increasing effectiveness, strengthening actuality, and reducing administrative burdens[13].

The risk-based approach is a particular methodology that regulators use to direct their resources towards those activities that pose a threat to the ability to achieve the desired objectives[14]. When applying these concepts to businesses inspections, the implementation phase is particularly relevant since it is physically impossible for inspectors to inspect every activity or subject. Moreover, even the mere attempt to control every activity (while not necessarily effective) would entail a disproportionate administrative burden and inefficient allocation of public resources, as well as a deterioration of the trust relationship with businesses[15]. Regulatory delivery consists of the effective protection of public interests, and the risk-based approach represents the tool to pursue this objective. Additional elements of inefficiency and disorganisation stem from the overlap of inspections by different controlling authorities, if not coordinated among themselves[16].

Adopting a risk-based approach to businesses improves compliance by focusing on higher-risk areas and easing the burden on lower-risk businesses. This method optimises the allocation of resources, ensuring that regulatory efforts are targeted at significant threats to public interests, such as safety and environmental protection. It promotes efficiency by enabling adaptive responses to changing risks and encouraging companies to develop internal risk management practices. It also supports economic growth by reducing unnecessary compliance costs for businesses, which especially benefits SMEs. This approach not only helps regulators to be more effective, but also fosters a competitive business environment by prioritising actions based on the actual level of risk.

Within the project in order to achieve outcomes and facilitate achievement of impacts, the activities were performed by the OECD with the view to produce the following outputs:

- **Output 1: Risk-based tools** (planning criteria, checklists, including training) **developed and rolled-out further in phase 1 pilot regions** (covering additional services/sectors) and **Output 2: Methods, tools, guidelines, training for risk-based inspections in other**

[12] G. Russell; C. Hodges (2019), Regulatory Delivery, *Bloomsbury Publishing*.
[13] OECD (2021), *Data-Driven, Information-Enabled Regulatory Delivery*, OECD Publishing, Paris.
[14] J. Black; R. Baldwin (2010), *Really responsive risk-based regulation. Law and Policy*, 32 (2). pp. 181-213.
[15] *Ex. multis*, F. Blanc (2018), *From Chasing Violations to Managing Risks: Origins, Challenges and Evolutions, in Regulatory Inspections*, Cheltenham, Edward Elgar Publishing, 2018.
[16] F. Blanc, M. Benedetti, C. Bertone (2021). L'informatica e il machine learning al servizio della semplificazione dei controlli sulle imprese: un equilibrio ancora da definire, in corso di pubblicazione, in Studi Parlamentari e di Politica Costituzionale, n. 1/2021.

selected regional and municipal administrations (provided in a series of specific notes) **and at national level for food safety/environmental inspections.**

Every country should adopt a series of tools to ensure optimal control processes such as: planning of controls based on risk parameters and profiles, the use of checklists by inspectors, and the management of reports, also informed by risk.

An undoubtedly efficient and proven tool is technological support, which was specifically developed to:

- support official controls so that they are proportionate to potential risks;
- enable fruitful communication and coordination among competent authorities;
- plan controls based on evidence collected by the administrations themselves.

Assessing the risk of an adverse event, i.e., its relative probability and severity, enables the correct pursuit of a given regulation's objective (risk reduction or management). Risk management is important to ensure the optimal functioning of the public authority, the protection of its integrity goals, and the prevention of harm[17]. Understanding the risk, its causes, and characteristics helps to better design a regulation and to direct efforts more efficiently for its implementation (in areas, sectors, and businesses that present the highest level of risk)[18].

The risk-informed model provides supervisory bodies with a tool to plan and coordinate inspections and analyse their results. This also facilitates an increase in the sharing and management of information, to ensure that risks are assessed effectively and that inspections are carried out appropriately, based on evidence and proportionately. Moreover, in virtue of the goal of public-private cooperation and the use of shared criteria, every private entity should be put in a position to assess the level of risk of its own activity. At the same time, the available resources of the administrations should be commensurate and allocated in relation to the level of priority dictated by the potential risks of a specific control area. Thus, all control activities should be based on risk analysis (see Text Box 1).

The enhancement of risk-informed controls depends on: i) the implementation of new targeting/planning tools, ii) the improvement of field inspection methods, iii) the increase of consistency in inspections, and iv) efforts to make regulatory requirements more transparent and understandable for industry operators.

Text Box 1. Risk-informed tools for control planning and delivering

Italian and international experiences recognise scorecards and checklists as good practices for implementing more efficient, less burdensome, and more effective inspections in protecting public interests. These tools are based on:

[17] OECD (2020), Regulatory Enforcement and Inspection in Environmental Sector of Peru, OECD Publishing, Paris.
[18] OECD (2021), Data-Driven, Information-Enabled Regulatory Delivery, OECD Publishing, Paris; OECD (2021), *OECD Regulatory Policy Outlook 2021*, OECD Publishing, Paris.

- Risk criteria: these involve risk parameters and a scoring system necessary for assessing businesses, used by inspectors to plan inspections by prioritising higher-risk subjects.
- Risk-based inspection methods: these can be guidelines or checklists with a risk-based scoring system, used to guide inspectors "in the field". This allows them to focus their attention on potential high-risk non-compliance situations and make decisions, including sanctions, that are proportionate.
- Complaint Management System: these are risk-based screening methods that allow for better management of complaints, enabling prioritisation based on the level of risk and incorporating data from collected reports into categorisation systems.

In a risk-based system, the definition and processing of risk profiles depend on the formulation of criteria that identify the conditions and represent the likelihood of a certain harm occurring, with a given impact. Risk criteria are typically used within scorecards (or evaluation sheets), which allow calculating the risk profile of a particular company (see Text Box 2).

Text Box 2. Scorecards in defining risk profiles

Scorecards have proven to be a crucial tool for associating risks with a score in a simple way, based on the context and specific factors, facilitating the rationalisation, programming, and prioritisation of inspections. Relevant international experiences show that the most used tool to define a risk profile is the scorecard, i.e., a list of parameters - legal and technical - formulated to assess the compliance of businesses, weighted on risk. In this way, the scorecard allows associating potential risks for a company with a given score. Risk assessments do not allow a rigid approach and must be carried out in relation to the risk factors encountered, the activities carried out in the territory, and the policies implemented. Such evaluation sheets are straightforward, define companies by their risk profile, and are preparatory to the possible use of machine learning. Indeed, they facilitate[19].

The transparency of the control system is achieved when the individual subjectivity of the inspectors is limited while maintaining their actual framed discretionarily (see Text Box 3).

Text Box 3. Development of risk-based scoring checklists

Checklists have proven useful for organising inspection activities. Using these risk-based tools allows for easy coordination of the inspection and concentration of control on the most dangerous elements, interfering as little as possible with what does not represent a potential harm and thus avoiding damaging the economic fabric.

All sectors targeted for regulation (e.g., food safety, occupational safety, environmental protection) involve a significant number of requirements that private entities must comply with. Generally, these rules aim to protect public interests that the regulator must safeguard. However, not all regulations have the same impact on the protected public good. Some have a direct

[19] Ibid.

relationship, and their non-compliance results in significant harm. Others stipulate requirements that only indirectly or formally relate to the public good, without having a real impact on it. Thus, inspectors should diversify their efforts relative to what laws and regulations stipulate. Monitoring everything with the same effort is not feasible due to limited resources, and it does not guarantee greater protection of the public interest, and even risks harming the economy.

To ensure that a control system does not inefficiently interfere with economic activities, limiting growth and competitiveness, inspections should focus on aspects that pose an actual risk to public interests. Hence the need to prepare checklists, whose items are "weighted" according to the risk they represent. This control list allows guiding the on-field inspector by showing the score of each aspect of the field control. This methodology looks beyond mere compliance with regulatory requirements, aiming at the core of the control administrations' objectives and the actual compliance of private entities with regulatory goals.

Moreover, this focus on the legislative rationale facilitates understanding and communication for companies striving to be more aware and compliant. The pursuit of a common risk assessment methodology encourages the harmonisation of the actions of administrations and companies and consequently further enhances the levels of compliance. Companies are thus incentivised to adopt internal self-assessment systems to improve their performance.

Risk-informed Complaint Management System (CMS) allows determining if the issues reported are severe enough to jeopardise public interests (see Text Box 4). It also assesses whether immediate investigations should be initiated or if verifications can be postponed to subsequent monitoring activities. Such a system ensures greater operational consistency between scheduled inspection activities and those reactive to the most significant reports.

Text Box 4. Implementation of a risk-informed Complain Management System

Citizens can play a crucial role in enforcing compliance with existing regulations. Their reports are an essential source of information for improving risk identification and inspection planning. Thus, hazard warnings should be seen as "free feedback" for regulatory authorities.

The CMS effectively organises inspection activities and prioritises controls related to cases that, after proper evaluation, are deemed more severe and urgent. As a result, inspection outcomes are maximised to protect the concerned good. If properly implemented, the CMS ensures secure communication mechanisms that protect individuals from potential retaliation. It contributes to the development and support of a risk-based, results-oriented control system. It allows for the better organisation of administrative resources, introduces a transparent decision-making mechanism and reduces administrative barriers and costs for businesses.

Moreover, it is also advisable to publish an annual report that includes activities conducted by an inspectorate. This practice offers several benefits in relations with private entities and other institutions. It communicates to citizens and businesses how an agency contributes to the

protection of public interests when receiving such reports. This demonstrates that public feedback is not ignored and that there is a methodology to respond to it efficiently. Publication leads to increased mutual understanding with stakeholders and, naturally, voluntary compliance. Furthermore, publication of information about activities positively impacts cooperation with other administrations, which can replicate practices and knowledge in their relevant sectors.

From a regulatory standpoint, data analysis is increasingly becoming multifunctional. It has both vertical and horizontal applications, with the same data being used to pursue various regulatory objectives. The process of data analysis planning for effectively assessing risk objectives, including identifying needs and data sources, selecting and understanding data, and designing and analysing the data itself, has become much more streamlined (see Text Box 5).

Text Box 5. Development of risk profiles and business rating using machine learning

The analysis of historical data, the integration of algorithms, and the interconnection between databases have been central to effectively assess the characteristics of companies and classify them based on risk. Machine learning represents an important tool for prediction, hence for targeting potentially risky situations, and helps to increase coordination, reduce the number of inspections and ensure their better planning.

Advancements in IT (especially in the computational power, reduced processing costs, and the growth of machine learning methods), are altering the regulatory landscape and creating new opportunities to enhance regulation enforcement[20].

A key challenge in implementing risk-based approaches is appropriately determining the factors that increase risk and assessing their relative importance. Until recently, it was difficult to replicate such a tool for non-tax inspections due to insufficient, non-digitised, or complex data. Historical documents were also lacking, and existing data systems had a limited scope for identifying risk indicators. A growing understanding of risk-informed regulation and the importance of accurate risk has paved the way for a more systematic and data-driven approach.

Machine learning applications are very promising in terms of improving understanding of businesses and facilities. They are tools for risk prediction and for generating knowledge from past experience. Algorithms identify patterns and generate solutions. The process starts from data collection, goes through model training and scoring, and then to technical implementation. In addition, machine learning enables the implementation of business ratings, allowing for evidence-based inspection planning. The computer system, using two algorithms, allows both the retrieval of business characteristics and the assessment of their risk. Consequently, it formulates a risk-based prediction. Historical behaviour and previous inspections inform risk assessment. The risk class of a business can vary by sector, leading to different classifications for environmental and workplace safety concerns within the same company. However, even though IT supports the achievement of regulatory objectives, it cannot replace the work of inspectors and the decisions at the heart of control activities remain with the inspectors.

[20] S. Mangalam (2020), Use of New Technologies in Regulatory Delivery, in Summary Note and Case Studies, the Donor Committee for Enterprise Development, https://www.enterprisedevelopment.org/

In general, the reform of risk-based regulatory supervision has proven to be crucial for planning and coordinating inspections, ensuring effective, proportionate, and evidence-based assessment and, consequently, more efficient and less burdensome implementation of controls. This has not only had a positive impact on public finances but also on business activities. Indeed, it directly and positively affected the element of certainty. Businesses are correctly informed and aware of the risks, and are involved in the inspection process. Furthermore, targeted interventions allow for savings in terms of time and money. Greater security for companies translates into greater freedom of investment and has a positive impact on competitiveness in the market.

Shifting the approach towards greater attention to the behaviour of the company (particularly increasing compliance), rather than identifying and penalising errors, represents a key element of reform. This paradigm shift not only encourages businesses to actively engage in risk management and compliance but also fosters a cooperative relationship between the regulatory bodies and the regulated entities. By guiding businesses towards compliance, the overall system becomes more efficient, effective, and fair. This approach aligns with contemporary regulatory principles that emphasise the importance of collaboration, trust, and respect between regulators and the regulated community, ultimately leading to improved outcomes for the protection of public interests.

In addition, the possibility of planning controls based on scientific evidence has allowed for the effective and proportional allocation of resources. Indeed, the work is distributed optimally with respect to the personnel available, thanks to more effective identification of companies at risk.

The evidence-based approach

International principles and practices that make inspections more efficient and effective are summarised in the OECD recommendations in the Regulatory Enforcement and Inspection Toolkit (OECD 2018)[21].

Among the various approaches, the **evidence-based**, or fact-based **approach**, is of paramount importance. According to this approach, the intervention decisions of inspection authorities must take into account concrete facts, especially regarding the subjects to be inspected and the frequency of inspections. An approach based on empirical evidence has not only undoubtedly increased the transparency of administrative activity but has also favoured more uniform decisions and interpretations by inspectors. Discretion in choices is thus limited, but still ensured.

The same applies to the **principle of proportionality**, according to which controls must respond proportionally to any non-compliance with regulations. A severe sanctioning procedure should only be initiated where the "non-compliance" is of decisive importance.

Furthermore, the attitude of regulators should generally be less punitive and more oriented towards promoting compliance. This leads to another principle that inspires good inspection practices, known as **responsive regulation**. According to it, the decisions of inspectors must correspond to

[21] OECD (2018), OECD Regulatory Enforcement and Inspections Toolkit, Paris, OECD Publishing, OECD Regulatory Enforcement and Inspections Toolkit | en | OECD

the private sector's response to the law. In this way, inspectors rely on a wide range of tools towards the controlled subjects that allow both the adoption of severe punitive measures against subjects at the highest levels of law violation (e.g., criminal activities) and the guidance of subjects who need to understand the regulations. This is done to increase respect for the regulations or reward (via reduced inspections) those who voluntarily and spontaneously observe the legal provisions.

The set of OECD principles makes it possible to realise another principle that must guide public administrations in promoting compliance: the **principle of transparency**. This can be guaranteed when the decisions of inspectors are objective, substantiated, and proportional. It strengthens the trust relationship between the parties involved in the system, promotes compliant behaviour, and increases the legitimacy of inspectors' decisions in the eyes of the private sector. The relevance of such stimulation lies in its temporal effects. Indeed, while compliance promoted with sanctioning tools has a short-term effect, spontaneous compliance—based on respect for the administration—has a longer duration over time and requires fewer inspection resources.

Completing the picture are the **principles of coordination and collaboration** between public administrations. These ensure the efficient implementation of controls, in the sense of preventing the multiplicity of public interventions. As is known, the duplication of public interventions in economic activities significantly slows down the latter. Moreover, this needs the use of economic resources (e.g., money, time, workforce) that could otherwise be invested in improving business activity. Generally, such collaboration requires the creation and strengthening of communication channels that allow the sharing of data related to inspections, the exchange of best practices and the capitalisation of experiences accumulated in the implementation of controls.

The ultimate result of a reform aimed at strengthening the effectiveness and efficiency of risk-informed controls lies in increasing predictability and trust in institutions. In the longer run, the latter will hopefully lead to an overall improvement of the business landscape, an incentive for investments, an increase in competitiveness, and more efficient use of public funds.

- **Output 3: Report presenting recommendations for IT solutions to enable data-sharing and data analysis so to allow data driven regulatory enforcement.**

Digital tools are not discussed here in depth as there is a dedicated document: “Report presenting recommendations for IT solutions to enable data-sharing and data analysis so to allow data driven regulatory enforcement” which constitutes Output 3.

Chapter 3: Food Safety

Enhancing the risk-based approach on food safety enforcement in Campania, Friuli Venezia Giulia, Lazio, Lombardy and Piemonte regions

The concept of food safety is undergoing a transformation, marked by the introduction of novel food items, innovative production and delivery methods, and a transition towards more digitalised processes. This new era of food safety underscores the dynamic nature of the sector, necessitating continuous adaptation and integration of safety cultures and practices[22].

Authorities involved in the project increased coordination and did efforts on the integration of new methods and technology to improve food safety. A strategic approach was implemented to advancing food safety, focusing on proactive measures and technological support to protect public health more effectively.

Strategies and activities for enhancing food safety regulatory frameworks

- Design and roll-out of risk-based methods and tools for inspection enhancement:
  - Design and testing of risk-based methods and tools (including risk criteria, scorecards and checklists) to plan and perform inspections.
- Enhanced training and collaboration for food safety inspectors:
  - Inspectors require extensive training and substantial technical knowledge. Promoting collaboration between inspection can augment the capabilities and tools available to inspectors.
- Promotion of food safety culture:
  - Design and testing of self-assessment checklists to incentivise risk awareness culture and spontaneous compliance promotion. Activities within the project aimed at supporting regions on encouraging companies to engage in self-assessment practices to meet safety standards, promoting trust, cooperation and a culture of compliance within the industry.
  - Focus inspections not just on compliance, but also on the attitudes and approaches towards food safety at the management level, recognising these as integral to effective food safety practices.
- Enhanced information sharing and digitalisation for evidence-based enforcement:
  - Utilise resources, evidence, and data available, to ensure that surveillance and enforcement activities are grounded in evidence and measurable outcomes.
  - Leveraging on advanced IT solutions to facilitate the inspection process, improve data sharing and support a more proactive approach.
- Improved coordination and collaboration: strengthen collaboration between various competent authorities in the food safety ecosystem to ensure a cohesive and effective approach to inspections and safety management.

[22] F. Blanc, L. Megale, Food Law, in M. Scholten (eds.), Research Handbook on EU Law Enforcement, Edward Elgar Publishing, Cheltenham, 2023.

- Standardisation of inspection processes: streamlining inspection procedures to ensure that they are clear and understandable to companies, while allowing the discretion needed to effectively manage food safety risks.

Activity 1: Situation assessment

The assessment was built on work already implemented in the RAC 1 project and the assessments of the Government of Italy, the European Commission[23] and the OECD team. The project took stock of legislation, institutions, resources and staffing, IT and data, tools and practices, focusing on identifying key constraints in terms of structures, competencies, institutions, used tools, strategies for coordination, potential overlapping and duplications, and data.

Key findings of the assessment are as follows:

- Food safety inspections were hampered by duplication, insufficient coordination, and partially overlapping responsibilities. Although the Ministry of Health has recommended a procedure for implementing the risk concept, this was applied differently in (or within) every region and with differences between competent authorities in the same region. There are also differences both within and between regions and at national level in how risk indicators are understood.
- Most of the regions didn't have checklists; if checklists were used, all questions had the same importance or did not respect a true risk-based approach. The IT system (if present) did not encourage compliance or provide incentives to improve self-control.
- Not all inspectors have been sufficiently trained to use risk-based methods. Furthermore, they were not trained in a way that would allow an assessment of their risk management understanding.
- Food safety culture in private businesses needed to be measured, controlled and improved.
- Lack of effective business complaint management.

Activity 2: Formulating risk criteria and parameters

One of the primary objectives was to standardise the understanding of the methodology and tools developed in cooperation with the OECD team, and to disseminate this knowledge to all inspection personnel. This approach led to achieve high levels of inspection standardisation, resulting in increasing trust in the authorities, efficiency, effectiveness, and the emergence of a new culture among all involved stakeholders: institutions, inspectors, businesses, and the population.

The model of risk-based categorisation for food safety involved the identification and assessment of risks associated with foods based on various criteria. These principles helped to establish priorities and adopt adequate measures to ensure food safety. Implementing an effective risk-based categorisation facilitated the systematic identification and management of risks, concentrating resources on areas of greatest concern, and adopting appropriate measures to ensure that the foods were safe for human consumption.

[23] The European Commission provided audit on Food Safety domain with regard to primary production.

Risk categorization helped to establish priorities in monitoring, controlling and managing risks, focusing resources where they were most needed.

The OECD team in cooperation with the public authorities analysed the current risk criteria of all target regions involved in the domain of food safety and organised meetings to understand key priorities, such as those based on territorial peculiarities.

Afterwards, the OECD team, in close cooperation with the authorities, revised these risk criteria and the risk assessment model, sharing and adapting best practices in the regions concerned. This revision aimed to refine the wording of the criteria and to determine the appropriate weight of risks to promote compliance and improve self-inspections of food businesses. The revised criteria were subjected to analysis and testing to assess their effectiveness in prioritising and targeting controls, with a specific focus on their applicability in IT systems. After thorough data analysis and benchmarking, the risk criteria were updated, tested and refined, incorporating new technologies to ensure an effective approach to food safety management.

Activity 3: Developing risk-based checklists or scorecards

Checklists and scorecards were compared to benchmarks based on international best practices on control methods and the knowledge of food safety experts (the dialogue between OECD staff, consultants and civil servants from the targeted authorities). Each question was weighted according to the level of importance to food safety and hygiene. The draft checklists were tested and adjusted using historical data and machine learning. The OECD team provided support in the Campania, the Friuli-Venezia Giulia (FVG) and the Lombardy Regions (see Text Box 6).

Text Box 6. Checklists in Campania and FVG; Scorecards in Lombardy and "noise" experiment

The OECD team collaborated with regional authorities of Campania and Friuli-Venezia Giulia Regions to support the use of compliance promotion tools, as opposed to the application of punitive measures. A set of risk-based methods was supported, including risk-based businesses rating and checklists, and relevant guidelines and manuals of good practices were developed. The regions aim to "educate" all stakeholders as much as possible to the culture of risk, so that they understand its purposes and benefits.

The OECD team also worked with authorities of Lombardy to support the implementation of a new scorecard for risk assessment. The "noise-experiment" was also conducted that focused on measuring the level of "noise" present in food safety inspections. The notion of "noise" refers to the cause for inconsistency in judgements when evaluating one the same situation. The aim was to reduce the variability between inspectors' assessments to obtain a coherent and consistent evidence-based judgment, and thus enhance the quality of inspections, promote trust from the controlled entities, and improve regulatory delivery.

Activity 4: Enabling self-assessments

"Enforcement should be based on 'responsive regulation' principles; that is, inspection enforcement actions should be modulated depending on the profile and behaviour of specific businesses"[24]. Adopting a solely deterrent and repressive approach to ensure compliance with current regulations is neither effective nor efficient for several reasons, including:

- It is not possible to continuously monitor everything and everyone because available resources are limited.
- Compliance is achieved out of "fear of sanction".
- Only "formal" adherence to the rules is observed.
- Uniformity of sanctions without paying attention to virtuous behaviours.

On the contrary, following the theory of responsive regulation[25], the company enhances risk-based thinking and adheres to the "spirit of the law," spontaneously aligning its behaviours with it. This is illustrated by the example of using self-assessment tools in Campania, building a relationship between inspection authorities and regulated entities based on the principles of trust, transparency, fairness, and proportionality (see Text Box 7).

Text Box 7. Self-assessment tool within the GISA system in the Campania Region

The GISA Self-Assessment of Food Sector Operators (OSA) tool is useful for improving the conduct and education of businesses. It allows, through the completion of the checklist related to the commercial activity profile, to identify and assess the level of health risk, achieving a score within the 5 risk classes (from 1 low risk to 5 high risk) established by the Campania Regional Multi-Year Control Plan. This initial compilation will be followed by verification carried out by the Competent Authority, which can confirm and/or modify the business's risk classification.

Another innovative element in the application is the free access to the compilation of checklists for any user who wants to start a commercial activity related to food safety and/or veterinary issues. This access allows selecting the specific business line, acquiring awareness of the requirements needed for conducting the activity and the specific points that will be checked. Information from the compiled self-checklists would help inspectors get an idea of the OSA's compliance with regulatory requirements. The checklist is the same one used by the Competent Authority during inspections in domain of food safety and/or veterinary health and is part of the risk-based classification system of establishments, used by the Local Health Units of Campania.

The number of businesses that can self-assess is certainly higher than those receiving official controls. The tool is also considered strategic for collecting data from businesses belonging to

[24] OECD (2018), OECD Regulatory Enforcement and Inspections Toolkit, Paris, OECD Publishing.
[25] I. Ayres & J. Braithwaite, (1992), Responsive Regulation: Transcending the Deregulation Debate. Oxford Journal of Legal Studies, 12(1), 103-140.

low and medium risk classes that are rarely inspected. Moreover, inspectors can verify the level of awareness during the preparation phase and define a support strategy, and also have clarity on the points to check with greater criticality, dedicating resources specifically where it is most needed, with a particular focus on the prevention of risks that are already apparent at this stage.

FBOs can understand and verify their level of effectiveness and efficiency in managing their businesses in compliance with regulations. This increases self-confidence and trust in the authorities. With the possibility of obtaining information and training, FBOs can be able to avoid hiring external resources over time, thereby achieving economic benefits. In addition, businesses using self-assessment benefit from their risk class and the frequency of inspections. Another advantage is closely connected with the level of subjectivity of the inspectors: FBOs familiar with the same checklist and the requirements in the web application can adequately respond to the inspector's requests and make it known where an excessive level of subjectivity emerges.

GISA Self-Assessment is included in the national register for free reuse and has already been requested by FVG, and is of interest to many other national authorities. As other country's example, Greece also showed interest in the software.
Making GISA Self-Assessment a mandatory practice could help save significant economic resources, invest human resources more precisely, and intervene where the risk is concrete.

Activity 5: Improving complaint management systems

As explained above, in a risk-based supervision system, inspections should primarily be planned based on risk assessment. Complaints should be used as a source of information to improve risk identification and inspection planning and should, only in a few cases, lead to impromptu inspections. A risk-based complaint management system is therefore essential to ensure consistency between proactive inspections, which occur after careful risk-based planning, and reactive inspections, which are unplanned and occur ad hoc in response to reports deemed serious. The OECD team support an initiative in Lazio region to test complains available in social medial as a source of the CMS (see Text Box 8).

Text Box 8. Using TripAdvisor as part of a complaints management system

The OECD team analysed two million restaurant reviews on TripAdvisor, limited to the area of Rome, focusing then on a sample of five thousand for the training of the machine learning system. These reviews were manually categorised based on the presence of hygiene issues or food poisoning. The developed system, tested on the entire dataset, demonstrated reliability in identifying risk situations. Furthermore, the integration of OpenAI's GPT technology into the training process further enhanced the performance of the machine learning system.

Activity 6: Developing IT systems

This activity is covered by a dedicated document: "Report presenting recommendations for IT solutions to enable data-sharing and data analysis so to allow data driven regulatory enforcement".

Activity 7: Training in new systems and tools

Food safety training activities included the following (according to the project dashboard, see Annex 1):

- Campania, *Interregional training event on risk-based enforcement*, annex 19
- Campania, *Guidelines for operators and training to businesses associations on risk-based tools (GISA self-assessment)*, annex 21
- Campania, *Training on risk-based tools*, annex 22
- Campania, *Training on risk-based methods and tools*, annex 23
- Friuli Venezia Giulia, *Training for inspectors on risk criteria*, annex 46
- Lazio, *Training on risk-based methods*, annex 65
- Campania, *Training on IT systems for food safety (GISA experience)*, annex 72

Activity 8: Recommendations on the way forward

To further enhance the risk-based approach and the enforcement system, further developments must be done on data/interoperability, skills and administrative capacity, collaborations between regulatory/enforcement systems to decrease administrative burdens. In particular, it is recommended to:

- Facilitate knowledge sharing: Encourage the exchange of best practices on risk-based tools among regions, and extend their application to new sectors, ensuring a consistent, standardised and harmonised approach to risk management.
- Align with legislative changes: the risk-based approach should be implemented in a way that can be used under any regulatory framework. This includes amending current procedures and introducing new approaches/tools.
- Bridge knowledge gaps: Address the imminent retirement of officials without adequate knowledge transfer. Implement systematic training programs to equip new colleagues with necessary skills, ensuring continuity and efficiency in operations.
- Further development of digital tools: Develop and implement specific IT systems to conserve resources while bolstering regulatory delivery. This is critical for safeguarding public health, especially in the face of the Italian regions' compromised situation marked by a general lack of knowledge/skills necessary for advancing data-driven solutions under human supervision/monitoring.
- Enhance data harmonisation: Address the lack of harmonisation between regional and national authorities which currently impedes the quality of data used for evidence-based decision-making. This disharmony imposes a serious burden on firms and undermines the efficiency of regulatory processes.
- Strengthen training and system updates: Recognise the impact of past support but also acknowledge the evolving context. Invest in continuous training and updating of systems (especially in GDPR interpretation), ensuring they are robust, current, and effective.

Chapter 4: Environmental Protection

Enhancing the risk-based approach on environmental inspections in Campania, Friuli Venezia Giulia, Emilia-Romagna, Lombardy regions and the Autonomous Province of Trento

In the context of Italian environmental law[26], obtaining an environmental authorisation is a mandatory step, following a detailed administrative process. This process is governed by sector-specific environmental laws, often integrated into the Administrative Procedure Act (Law 241/1990) (APA). This streamlined "single authorisation model" is quite prevalent. Some authorisations, such as IPPC, have European origins, while others, like AUA (Single Environmental Authorisation, *Autorizzazione Unica Ambientale*), do not attend risk considerations and are based on national legislation.

Strategies and activities for enhancing environmental protection regulatory frameworks

The project aims to strengthen environmental protection using both data analysis and technology integration. This concise strategy aims to effectively address environmental challenges and promote a responsible regulatory ecosystem. Recommendations mainly focus on a more balanced, effective, and just environmental regulatory culture, which includes a risk-based approach inspired by the protection of the public interest. They aim at:

- Simplifying the management of the AUAs and AIAs (Integrated Environmental Authorisation, *Autorizzazione Integrata Ambientale*) by adopting flexible management practices and increasing transparency and accountability.
- Simplifying inspection processes to ensure clarity and discretion, improve collaboration with stakeholders and utilise advanced IT solutions for regulatory efficiency.
- Encouraging companies to actively participate in compliance and self-assessment to cultivate a proactive culture of environmental management.

[26] In 2022, the Italian Constitution was updated, notably revising art. 9 to incorporate the safeguarding of the environment, biodiversity, and ecosystems as core values. The framework for environmental governance in Italy is multifaceted, involving numerous bodies and authorities. The Ministry for Environment and Energy Safety (MASE), previously known as the Ministry for Ecological Transition (MITE) before 2022, plays a pivotal role at national level. Since its inception in 1986 as the Ministry for the Environment, MASE has gradually expanded its scope and delegated responsibilities to other ministries. Under the previous administration, MITE was also charged with energy-related matters, a responsibility formerly held by the Ministry for Economic Development (MISE). Nonetheless, other central authorities, including the Ministries for Health, Agricultural Policies, and Culture, also retain significant roles in environmental governance, occasionally leading to complex administrative challenges. The Institute for Environmental Research and Protection (ISPRA) provides MASE with technical assessments for administrative processes and produces environmental monitoring reports. Moreover, ISPRA coordinates with Regional Environmental Agencies (ARPAs) to ensure a cohesive approach. Key administrative responsibilities related to environmental matters are also bestowed upon regional and local authorities. These entities are involved in various aspects of environmental management, such as planning, issuing environmental permits, setting standards, providing financial incentives, and overseeing regulatory compliance and enforcement. Regional authorities are particularly focused on sector-specific planning, while municipalities take charge of urban planning. In addition, extended producer responsibility laws assign certain waste management responsibilities to private entities, like producer consortia.

Activity 1: Situation assessment

The project conducted a situation assessment to understand the state of environmental protection in each targeted authority.

Key findings include:

- The importance of mapping AUAs:
  - Highlight the need to map AUAs, noting that currently, they are neither inventoried nor subjected to annual risk-based planning like IPPC and AIAs.
- Introduction of risk-informed approach:
  - Discuss the introduction of a risk-informed approach to monitor AUAs.
- Lack of criteria for planning AUA inspections:
  - Note the absence, in most cases, of criteria for planning inspections, which are currently largely based on reports or indications, highlighting the need for a more systematic approach.
- Reliance on paper in inspections and the need for a database:
  - Point out the ongoing reliance on paper during inspections and emphasise the importance of introducing a database to extract data related to companies.
- Defining indicators and risk classes for AUA:
  - Stress the necessity of defining indicators and risk classes to identify high-risk companies that should be prioritised for inspections.

Activity 2: Risk-based environmental enforcement

The risk assessment methodology is conceived as an instrument for environmental authorities to enhance the implementation of existing legal and regulatory frameworks. The primary goal is to bolster evidence-based enforcement, thereby aiding agencies in enhancing both the effectiveness and efficiency of enforcing environmental laws and strategically allocating resources towards monitoring the activities associated with higher risks.

For constructing the risk model, agencies are tasked with gathering data from diverse sources to further produce a risk score for each operator. This score positions an establishment along a risk continuum in comparison to other establishments within the same regulatory domain. The score should be interpreted as indicative of a risk category; however, the numerical value in isolation doesn't convey standalone information. Agencies are required to allocate risk weights to the foundational elements of the risk index, thereby calibrating the significance of specific information in relation to the potential impact (scope or magnitude). Each company is then characterised by its own risk index; the ranking of companies according to this risk index is proposed as a basis for planning controls (see Text Box 9 and Text Box 10).

Text Box 9. Risk-based approach for companies subject to AUA in the Emilia-Romagna Region

To develop a risk-based control solution for AUAs present in entire Emilia-Romagna region, the starting point was the registry of AUA Authorisations. With the support of OECD, the database was investigated to verify the presence of repeated business names and addresses that could be attributed to subsequent changes (for example, a new size development) presented to regional authorities by the same facility. The unique Local Units were extrapolated through this analysis, and the final processing was performed on this data set. In the absence of a specific list for AUA activity and a specific code for Potential Risk (PR), it was necessary to establish a criterion for assigning the PR code based on the intrinsic risk of the type of activity. To do this, a list was created starting from the list of activities with reduced environmental pollution established at national level by art. 272 of Legislative Decree 152/06. From here, an attempt was made to associate this list with a similar type of activity from the list of AIA activities for which a specific potential risk index is available. To then associate this data set with the PR, it was necessary to identify a characteristic parameter of the activity that is easy to interpret. Therefore, it was decided to use the ATECO code (classification type adopted by the Italian National Institute of Statistics (ISTAT), associating the list of activities drawn up with the ATECO codes that could represent that activity.

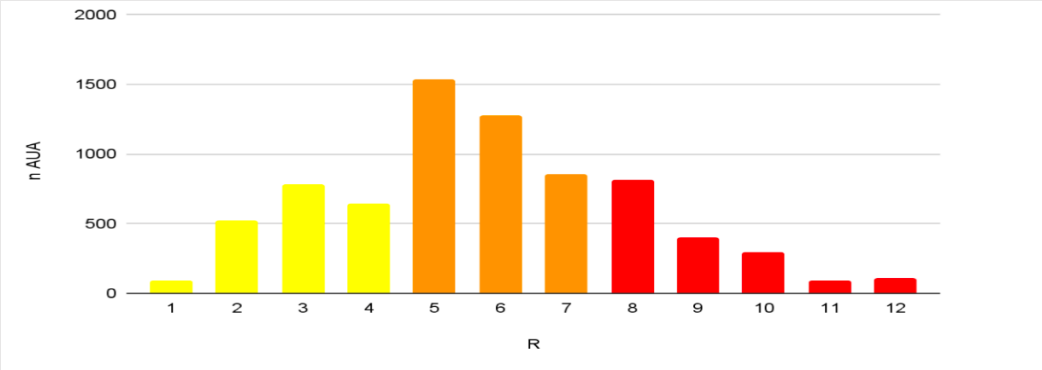
The OECD team distinguished different methods of environmental inspection in relation to risk categorisation, balancing the criticalities with the number of activities compatible for documental verification alone or verification with on-site visit. Documentary inspection can replace, in less critical cases, inspection with an on-site visit and can provide elements of evaluation useful for deciding to subsequently schedule any on-site visit. This allows for better surveillance, giving priority to planning inspections with on-site visits for activities that potentially are more critical.

The sample was divided into three risk classes: low, medium, and high, analogous to the IRI methodology of IMPEL adopted in Italy with the SSPC model for AIA. Furthermore, for the choice of the sample to be attributed to the high-risk range, using Pareto's Law, the team identified the 20% of the analysed AUA companies that corresponds to the RT (Total Risk Index, *Rischio Totale*) greater than or equal to 8.

Types of Inspections based on risk:
- RT from 1 to 4: documentary inspection
- RT from 5 to 7: documentary inspection and on-site inspections following reports or substantial/non-substantial changes presented during the validity of the AUA (15 years)
- RT from 8 to 12: at least one inspection during the validity of the AUA.

In summary, the key steps of the risk categorisation system are:
1. "Static" assessment of potential risk based on data on the type and location of the facility;
2. "Static" evaluation based on the company's history;
3. "Dynamic" assessment based on inspections, most relevant within the total risk algorithm.

AUA divided in risk categories:



Text Box 10. Risk-based approach for companies subject to AUA in Campania region

Campania, like nearly all other Italian regions, faced numerous challenges in inspecting companies subject to AUA due to a series of regulatory and administrative barriers and the lack of tools and specific regulations to support risk-based enforcement for AUAs. The cooperation between OECD and ARPAC (Regional Agency for Environmental Protection in Campania) aimed to outline an initial framework of the barriers and possible solutions. It was proposed to ARPAC to carry out a pilot project in Marcianise, a municipality in the province of Caserta, with the following phases:

- Census of AUA companies present in Marcianise.
- Risk analysis according to the SSPC model to understand if it brings same good results for AUA risk models observed for AIA companies.
- Verification of the model through a checklist.

The final result shows that the SSPC method does not offer useful insights for the construction of indicators and/or effective tools for the AUAs. This is because the elements and weights of the indicators for AIA companies are not always present in the AUAs. For example, the size, types/quantities, and emission thresholds, as well as the considerable breadth of companies with AUA, make it complex to extract useful indicators from the SSPC model.

Thanks to ARPAC, it was possible to start a first phase of study and application of two risk analysis models to verify their effectiveness in inspections towards companies with AUA. Although the final outcome does not allow the concrete use of the models, it is an important first step for research and the identification of further solutions which will enable the construction of a risk categorisation model for the AUAs. Since the AUA is applicable to most activities, namely large companies (Interpretative Circular of MATTM of November 7, 2013) and all SMEs, and the number of these companies per region is from 5,000 to 20,000, the estimated number nationally is largely over 100,000. Currently it is not possible to calculate

their impact on the environment, precisely due to the lack of a detailed census and their risk-based categorisation.
To create a first risk-based model and in an attempt to investigate possible solutions, ARPAC's work will continue in collaboration with the Emilia-Romagna region on the construction of a new model for the analysis and categorisation of companies, and with the Friuli-Venezia Giulia region on the development and testing of the first risk-based checklists built in Italy for AUA controls.

Inspection planning should, therefore, involve:

- Risk criteria for facility profile and compliance background: these criteria facilitate the assessment of an operator's risk by incorporating the operational characteristics and historical compliance record (categorised as low, medium, high risks). Consequently, each category will be assigned a specific risk rating.
- Inspection planning and frequency: this involves mapping the array of establishments and their compliance status, establishing a clear basis for identifying establishments with higher risk levels and non-compliance. This foundation is crucial for the future planning and monitoring of inspection activities.
- Risk criteria for checklists: This method prioritises and targets the extent of on-site inspections. Risk-based sector-specific checklists comprise various elements and categories, including administrative details, test results, equipment condition, signage, etc. The compliance of these individual items should be proportionately weighted against the anticipated impacts (categorised as compliance, partial compliance, non-compliance).
- Inspection feedback for risk categorisation: the insights derived from inspections can serve as constructive feedback for the initial risk categorisation, potentially altering the establishment's profile and, consequently, its risk rating.

Activity 3: Developing risk-based checklists or scorecards

Checklists were simplified and made more “risk-based”, following the risk-based approach, changing from a very normative perspective, to the actual goal of building efficient tools as a support for inspectors to implement proportional enforcement measures while supporting business to perform better. The lists were constructed with a 'make it easy approach' in mind and in such a way as to consistently reflect the impact of the risk expressed.

Activity 4: Enabling effective self-control

Businesses subject to AIA regulations are required to submit data pertaining to emission monitoring to the relevant Competent Authority and local Municipalities. This data submission should align with the stipulations and timing outlined in the established Self-Monitoring Plan. The plan outlines detailed procedures, including pollutant sampling and analysis techniques, measurement strategies for key process and mitigation system parameters, and evaluation methods. These components are meticulously designed to address potential environmental risks associated with water, soil, waste, noise and air pollution.

Routine self-monitoring is conducted under normal plant operating conditions, explicitly excluding periods of startup, shutdown, or malfunction. It is also performed at peak operational capacity to reflect standard plant operation conditions. Emission sampling, encompassing both air and water emissions, may be executed intermittently or continuously. In continuous monitoring scenarios, contaminant levels are documented under all operational states of the plant.

The primary objectives of monitoring include:

- ensuring adherence to and preservation of AIA-dictated conditions, such as stipulated requirements, preventive actions, and potential emission limits.
- Gathering information to assess the proper implementation of management protocols or other data mandated by IPPC regulations or sector-specific environmental laws. This also aids in compiling valuable information for routine reporting to overseeing bodies.

Instead, businesses with AUA, at least every 4 years should communicate to the competent authorities their data relating to the obligations and self-control operations of environmental emissions into the atmosphere and water discharges. For those companies, the intricate regulatory landscape, coupled with the necessity for constant sample collection, poses operational challenges for both the companies themselves and the competent authority, which also faces difficulties due to a limited number of inspectors and systemic challenges. Regional authorities should support such companies in moving towards greater independence in risk culture and implementing effective self-monitoring under normal operating conditions. This represents an advanced concept of cooperation between public governance and private operators for better risk awareness and management (see Text Box 11).

Text Box 11. GISA also used in the environmental protection domain in Campania

Drawing inspiration from the implementation of the GISA Self-Assessment for food safety (see Text Box 7), and following recommendations from the OECD team, ARPAC has adopted the software, provided free of charge by the Public Health and Veterinary Prevention Unit.

GISA Self-Assessment is a web application designed by ARPAC to streamline the inspection process for companies with AUA. It aims to monitor their mandatory self-checks and assess their compliance levels in real-time. These companies are subject to regular sampling over time, and due to human and financial resource constraints, maintaining a consistent and continuous level of sampling inspection is challenging.

GISA Self-Assessment will be integrated into GISA Ambiente, the IT tool used for official controls. It will feature simplified checklists to monitor and assess. The checklists allow companies to self-evaluate and understand their risk category in real-time. This application is the region's initiative to heighten awareness of risk factors associated with different emission domains, thereby strengthening prevention and fostering a risk culture within companies.

Activity 5: Improving complaint management systems

Each regional environmental agency crafts its own set of technical Guidelines for the Management of Environmental Incident Reports, and this practice leads to variations in handling and prioritizing

these complaints among agencies. However, many agencies tend to prioritise the processing of complaints based on the chronological order of their receipt. This approach often overlooks the risk criteria that could otherwise prioritise complaints posing greater potential harm. The OECD work, as described in the food safety chapter above, aimed to introduce risk-based analysis also in the complaint management system – to make it effective and efficient for the protection of the public interest. Reporting of environmental incidents and relevant levels of intervention in Emilia-Romagna is illustrated in Annex 2.

Activity 6: Developing IT systems

The growing use of IT systems by regulatory authorities highlights a transformative shift towards smarter compliance monitoring and data management. Examples of innovations like Trentino-Alto Adige's web scraper and Lombardy's AIDA are illustrated in Text Boxes 12 and 13. By improving data submission and enhancing the analysis of self-reported data, these technologies demonstrate the significant impact on identifying non-compliances. IT solutions streamline reporting for operators and empower agencies with better oversight capabilities, giving origin to a new era in regulatory and environmental management.

Text Box 12. "Find it" in the Autonomous Province of Trento

The identification of non-compliance situations represents one of the biggest challenges for inspectors, especially when not supported by adequate information. However, using data available on the internet, it is possible to overcome this obstacle. The web scraper developed in Trentino-Alto Adige for the Provincial Agency for Environmental Protection allows the identification of companies operating in the market without the public authority's knowledge.

Text Box 13. AIDA in the Lombardy Region

Lombardy has benefited from OECD technical assistance to valorise self-monitoring data in order to improve its inspections in the environmental protection domain. For example, by analysing historical emissions data, it is possible to identify patterns of compliant companies in relation to reported emissions levels. If the information provided by operators through a dedicated software (AIDA) results in "statistical anomalies", the regional environmental authority may decide to investigate these situations further.

Such anomalies do not necessarily indicate non-compliance or misrepresentation, but may provide an additional element of knowledge to guide certain inspection activities. The system detects fraudulent insertion of data (e.g. forced to remain under the admitted thresholds), so non-compliance might be identified.

Activity 7: Training in new systems and tools

Environmental protection training activities included the following (according to the project dashboard, see Annex 1):

- Campania, *Interregional training event for risk-based enforcement*, annex 19

- Friuli Venezia Giulia, *Training on risk-based tools and methods, data driven regulation*, annex 33
- Friuli Venezia Giulia, *Training on risk-based methods and tools*, annex 34
- Friuli Venezia Giulia, *Training for Inspectors on risk-based methods*, annex 45
- Emilia Romagna, *Training on risk-based methods and tools*, annex 61

Activity 8: Recommendations on the way forward

It is evident how environmental protection agencies are mandated to conduct risk-based inspections. Specifically, the criteria to be considered during inspection planning are dictated. However, this regulation explicitly refers to facilities with AIA, which the legislator considers to be of higher environmental risk. Nevertheless, the implementation of this control planning methodology is not as widespread for small operators nor for so-called "extraordinary" controls (those activated based on reports or emergencies). This could be due to the absence of explicit normative reference on such controls, which are not uniformly implemented.

- It seems appropriate to integrate the legislation with this explicit reference and to give greater impetus to the dissemination of risk-based practices. This is especially crucial so that extraordinary controls are proportionate as well as reactive.

Facilities formally considered less risky are instead subject to AUA[27]. This regulation, aiming to simplify the authorisation process for certain activities, has allowed the activation of application procedures at various public entities (such as municipalities) in a territory. However:

- Sometimes the municipality that authorises is not the entity that controls, creating an uneven distribution of data across territories.
- Municipalities might face significant obstacles in transferring data on granted AUAs to environmental authorities, which control and need this information for inspection purposes.
- As a result, due to missed cooperation on data sharing between municipalities and regional agencies, environmental authorities have limited access to information on these facilities, essential for risk-based controls.

It should also be noted that environmental protection authorities do receive some information from actively operating AUAs (e.g., via self-assessment). However, in general there is the lack of comprehensive knowledge of activities subject to/eligible for AUA.

Considering the above, it is recommended to:

- Ensure full information sharing/alignment between authorising and controlling entities (e.g., Environmental Authority of Trento).
- Introduce explicit normative references on extraordinary controls and controls for facilities subject to AUA.
- Strengthen data sharing and consolidation, not only to standardise extraordinary controls with ordinary ones but also to increase awareness of the actual environmental impact of AIAs (generally considered riskier) and AUAs (generally considered less risky).
- Strengthen skills and administrative capacity of Public Administration personnel.

[27] Regulated by the Presidential Decree 59/201.

- Enhance further collaboration between different regulatory/enforcement systems to further decrease administrative burdens.

Chapter 5: Occupational Safety and Health

Enhancing the risk-based approach on Occupational Safety and Health inspections in Lombardy region and the Autonomous Province of Trento[28]

Occupational Safety and Health (OSH) domain equally requires competent regulatory framework, fostering an environment where occupational hazards are systematically addressed, and workers are protected.

Activities developed during the project

Activity 1: Recommendations on data sharing for better targeting of risk on construction sites

Adopting a risk-informed approach, which supports the principle of proportionality, allows for a focus on the likelihood of a negative event occurring, combined with the potential impact of such an event. This combination yields the risk level of the action to be undertaken, thereby guiding the urgency and necessity of intervention. Moreover, it enables the analysis of patterns related to situations of compliance (or non-compliance). This methodology is not only applicable to random checks but also to preventive controls (in cases where the administration must issue a license, clearance, authorisation, etc.). By prioritising actions based on risk and impact, authorities can better allocate resources, ensuring that the most significant risks are addressed promptly while lesser risks are managed appropriately.

Activity 2: Recommendations on Air quality regulation

Indoor air quality is crucial for the comfort, health, and productivity of workers. In the context of the COVID-19 pandemic, it is also essential in the short, medium, and long term to limit and contain the spread of the coronavirus where it has the greatest efficiency, that is, indoors.

This is illustrated by Guidelines for the prevention and monitoring of air contamination in buildings in Lombardy (see Text Box 14). Similarly to how the current system of water treatment and monitoring ensures the quality and the prevention of diseases of which the carrier is water,

[28] In Italy, the institutional framework for occupational safety and health falls under the purview of the Ministry of Labor and Health, which operates in coordination with Regional Coordination Committees and Social Parties. The roles encompassed within this framework involve legislative consulting, supervision, health promotion, and providing assistance to businesses. The National Information System for Prevention in the Workplace (INPS) plays a crucial role in this structure. It is a collaborative network that includes the Ministry of Labor and Social Policies, the Ministry of Health, the Ministry of the Interior, the Regions and Autonomous Provinces of Trento and Bolzano, INAIL (National Institute for Insurance against Accidents at Work), with contributions from National Council for Economics and Labour (CNEL), parity bodies, and sector-specific institutes. The primary goal of INPS is to guide, plan, and evaluate the effectiveness of activities aimed at preventing workplace accidents and occupational diseases. It also aims to direct supervision activities by integrating specific archives and creating unified databases. INAIL serves as the Focal Point for Italy and coordinates the national network of the European Agency for Safety and Health at Work. This coordination ensures that Italy aligns with broader European standards and practices regarding workplace safety and health.

monitoring and improving the air quality in public and private buildings is a crucial factor in prevention of airborne health hazards, such as the coronavirus, or different types of microbiological and chemical contamination.

Text Box 14. Guidelines for prevention and monitoring of air contamination in buildings in Lombardy region

The OECD has facilitated a technical discussion panel titled "*Prevention at the Centre: The Targeted Prevention Plans for the Occupational Health and Safety Area as per the Regional Plan 2021-2025*", in accordance with the regional resolution 6869 of August 2, 2022.

To incorporate scientific evidence into the discussion, several brainstorming sessions with international experts were conducted. The initiative aimed to address various settings, leading to the formation of the working groups, each comprised of ATS/UOOML (Local Health Units) and representatives of social parties. These groups were tasked with identifying issues from associated members or within their respective sectors:

- Healthcare environments
- Schools and educational settings
- Offices
- High-traffic hospitality facilities
- Transport

The mandate of the working groups was multifaceted:

- To present evidence, problems, and critical issues.
- To collect insights from stakeholders affected and from local territories.
- To identify the most efficient solutions relative to potential risk scenarios.

The collaborative and evidence-based approach highlighted the proactive steps being taken to address OSH concerns, emphasising the importance of multi-stakeholder engagement and data-driven decision-making in crafting effective preventive measures.

On the same line, the guidelines aimed to inform and advise employers on the actions to undertake and techniques to adopt in order to contain the spread of infectious agents indoors. The mitigation of coronavirus circulation was at the heart of this document, but the long-term goal also includes the prevention of other infectious and chronic diseases caused or catalysed by insufficient indoor air quality. The language of these guidelines is intended to be simple to make it accessible to non-experts and to have a greater impact in improving the indoor air quality.

The work undertaken within the framework of the technical discussion panel by the OECD concentrated on two pivotal components:

- Outcomes of brainstorming sessions with experts: These sessions were instrumental in gathering insights from experts in various fields. The received outcomes are crucial as they provide a foundation for understanding the complexities of OSH in different settings, ranging from healthcare environments and educational institutions to offices, high-traffic hospitality facilities, and transport systems.

- Document "*Proposals for the prevention and monitoring of microbial air contamination in private and public buildings*": This document was a significant output of the collaborative efforts of the working groups. It encapsulates the recommendations and strategies for addressing the critical issue of microbial contamination in the air within both private and public buildings. The document covered various aspects of prevention and monitoring, providing a comprehensive approach to ensuring safe and healthy indoor air quality. It serves as a reference point for implementing effective measures to mitigate the risk of microbial contamination.

These components reflect the thorough and multi-dimensional approach of the OECD-led initiative, aiming to enhance OSH standards through a combination of expert knowledge, evidence-based recommendations, and targeted preventive and monitoring strategies.

Activity 3: Improving safety through digitalisation

The use of software tools can assist in identifying construction sites at higher risk of fatal or disabling incidents and focus inspections on these based on an algorithm (see Text Box 15). This would allow the achievement of the objective to rationalise and simplify the inspection activity in the Construction sector, which has a high frequency of accidents.

Text Box 15. Risk Calculation for Construction Sites (Ca.Ri.Ca) in the Lombardy Region

The OECD support has been institutionalised in the Regional Prevention Plan 2021-2025. The OECD collaborated in achieving the Health Equity Audit objectives in the Regional Prevention Plans, and a memorandum of understanding has been signed with INAIL-ANCE.

In Lombardy, the Ca.Ri.Ca system utilises data derived from notifications, surveillance, and accidents (collected through Impres@BI) and estimates the risk level of a particular construction site. The criteria and risk weights, previously defined empirically, are now being verified through Machine Learning. The system's strength lies in integrating data from various sources, including notifications from the healthcare system, significantly enhancing risk management in an efficient manner.

Activity 4: Training in new systems and tools

OSH training activities included the following (according to the project dashboard, see Annex 1):

- Lombardy, *OSH Training on air quality regulation*, annex 48

Activity 5: Recommendations

General recommendations

- Quantifying the impact of inspectors' judgements: develop methods to measure and reduce bias in inspectors' decisions and companies' self-assessments.
- Using machine learning: use machine learning to predict risks and improve inspection planning in different regions.

- Data sharing for inspection planning: promote real-time data exchange between agencies for accurate inspection planning.
- Identify inconsistencies in documents: set up alerts for inconsistencies in risk analysis documentation.
- Share information on contractors: share comprehensive information on contractors and subcontractors for risk assessment.
- Use accident data for training: distribute aggregated accident data for risk awareness and training of workers.
- Apply predictive analysis: implement predictive analysis for early intervention and risk management.
- Collaborate on data analysis: encourage joint data analysis between companies and inspectorates to improve compliance and worker safety.

Specific recommendations: Ca.Ri.Ca.

- It is recommended that the algorithm in operation be calibrated on advanced parameters.
- It is suggested to conduct training sessions to deepen the risk-based approach to be developed in the new program.

Specific recommendations: air quality

- It is suggested to continue the activities of the technical working group on a topic of such relevance, to connect it with the national project of the NRRP.
- It is recommended to finalise the self-assessment questionnaire to be submitted to a sample of companies to detect actions taken regarding air quality.

Chapter 6: Documentary checks on permits and licenses

Introducing risk-based approach on documentary checks for construction and economic permitting, labour and innovation incentives for companies in the Municipalities of the Autonomous Province of Trento, in Tuscany and the city of Viterbo

Officials who face work overload and an excessive number of documents to check reflect inefficiencies in a rigid regulatory system, pointing at the need for an improvement in procedures. Risk criteria need to be considered to take into account the probability of the occurrence of significant non-conformities for the documentation received, the magnitude of the damage that would occur if the non-conformity materialised for a specific document, and the historical level of compliance to documentary requirements of the subject submitting the file.

Activities developed during the project

Activity 1: Implementation of risk criteria

Adopting a risk-informed approach allows for a focus on the likelihood of a negative event occurring, combined with the potential impact of such an event. This combination yields the risk level of the intervention to be carried out in relation to the public interest, thus indicating the urgency and necessity of the intervention. This approach also addresses the issue of efficient use of resources and results in a categorisation of the practices to be controlled in terms of priority. Additionally, it enables the analysis of patterns related to situations of compliance (or non-compliance). This is applicable to random checks as well as to preventive controls (in cases where the administration must issue a license, clearance, authorisation, etc.).

In light of the above, even when regulations require checking all elements of a case and all requests, this methodology allows the work to be carried out with a priority informed by risk, with a view to protecting the public good and more efficient use of resources (see Text Box 16).

Text Box 16. Risk criteria for Tuscany Region, Viterbo municipality in Lazio Region and the Autonomous Province of Trento

In Tuscany, the risk-based methodology and classification of the grant application was introduced to documentary checks made by the region on funding requests for economic activities operating in the region, particularly for European grants to incentivise innovation.

The risk based methodology was also applied to documentary checks made by the municipality of Viterbo on economic activities permits. The recommendations included risk-based tools that the Municipality could adopt and implement, in the ways and times it deems appropriate.

In the field of construction, the establishment of risk-based documentary checks is paramount for improving regulatory efficiency and safeguarding public interests. For the Autonomous Province of Trento (Ala, Avio, Trento, Pergine Valsugana, Moena, Scurelle, Telve, Rovereto) OECD team suggested a systematic approach to classify building practices according to risk and complexity, ensuring that regulatory efforts are targeted and effective.

Also for the Autonomous Province of Trento, the risk criteria for incentives on labour (public funding for businesses and training contributions) were developed to identify and prevent situations where damage involving public interests is more likely to occur.

Activity 2: Impact measurement

The evaluation of the efficiency of incentives was identified as a key tool for measuring the effectiveness of public funds in achieving their objectives and for identifying potential areas for improvement. Moreover, useful parameters for evaluating efficiency can guide the future planning of incentives to ensure that public bodies manage funds aiming for the utmost protection of public interests and to improve the performance of economic activities (see Text Box 17).

Text Box 17. Analysis on efficiency of incentives for Tuscany Region

The project was focused on inspections at national and regional level but in Tuscany it covered a new area: assessing the methodology in place to evaluate the effectiveness of public funds (European grants to incentivise innovation). In particular, the analysis focused on assessing the impact of research and development incentives assigned to SMEs by the Tuscany government, with a special focus on the 2020 campaign, and proposing new methodologies to facilitate future evaluations.

Although the methodology used in Tuscany is valid, it does not isolate the effectiveness of the region's R&D parameters from other factors that might affect the number of researchers engaged or economic performance. This significant and common shortcoming led to the search for methods to overcome it. Most efforts in this direction involved the selection of control groups to compare indicators across SMEs (e.g. beneficiaries and non-beneficiaries). The work allowed for a microeconomic analysis that could guide the implementation of future policies. Adopting the strategy and recommendations below will allow for more accurate evaluation, aligning with the broader criteria set by the European Commission and facilitating understanding of the actual effectiveness of the programme.
The recommendations were divided into two categories. The first set, based on a survey conducted by the OECD with 73 applicants for R&D grants for the 2020 call, suggests ways to improve the effectiveness of the programme. These include improving communication about the programme to attract more applicants and increasing transparency in the selection process, thus preventing the reinforcement of regional disparities.

The second set of recommendations focuses on measuring and evaluating the efficiency of the programme in the future. Suggestions include streamlining the application and reporting processes through automation and simplification, considering programme measurement and monitoring. Clear objectives should be defined, such as supporting innovation and improving skills. Criteria for evaluating effectiveness, such as the number of patents or innovative products developed, should be established, inspired by the models of Germany and the UK. Data collection and analysis should be quantifiable and, where possible, automated.

Activity 3: Training in new systems and tools

Documentary checks training activities included the following (according to the project dashboard, see Annex 1):

- Trento, *Training for privates on risk-based controls on construction*, annex 52
- Trento, *Training for officials on risk-based controls on construction*, annex 53
- Tuscany, *Training on risk-based tools*, annex 70

Activity 4: Recommendations on the way forward

It is essential to support the expansion of reforms in all regions and municipalities in order to achieve the following objectives:

- Enhance communication and transparency: improve economic growth by providing businesses with a clear and reliable framework for obtaining permits for economic activities and incentives. This includes ensuring clarity on the length of the application processes, objectives, and transparency.
- Increase SMEs – research interactions: encourage more collaboration between businesses and academic or research institutions.
- Apply objective criteria for risk assessment, concentring efforts on practices posing the greatest risk and securing public interest.
- Promote the adoption of IT tools and data-based regulations in authorisation processes to speed up procedures, improve transparency and facilitate more effective communication with businesses.
- Cultivate a results-based regulatory culture both within the public administration and the business community, and improve compliance and enforcement by emphasising the importance of achieving outcomes rather than merely meet formalities requirements.

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Annexes

Annex 1. Project dashboard

Output 1: Risk-based tools (targeting indicators, check-lists, including training) developed and rolled out further in phase 1 pilot regions (covering additional services/sectors)																				
level/names		Activitity 1.1											Activity 1.2			Activity 1.3			
		Further roll-out of tools for risk-based inspections (planning criteria, check-lists, data management, etc.) in first-phase pilot regions, and enlargement to other regulatory domains (including municipal pilots)											*Support to improvement of the regional/provincial legal framework for risk-based instruments.*			*Development and roll-out of training on risk management, compliance promotion and behavioural approaches in inspection services of the pilot regions.*			
National	Interregional table on food safety	**ANNEX 1 (A-D).** - Checklist on primary production	**ANNEX 2.** - Guidelines on controls (EU Reg 625/2017) DECEMBER	**ANNEX3.** - Report on support (TBC DECEMEBER)																
Regional	Autonomous Province of Trento	**ANNEX 4 - E** Report on Web searcher - "Find it" for AUA stablishments **IT Component**	**ANNEX 5 (a,b,c) - DC** Risk criteria for documentary controls on incentives to companies - Labour agency	**ANNEX 6 - DC** Recommendations on building a risk asessment algorithm to implement risk classification in labour agency **IT Component** (Final report)	**ANNEX 7 - AG** Data analysis to formulate risk criteria for sampling and frequency definition on agricultural payments inspections **IT Component** (Final report)	**ANNEX 8 - OSH** Recommendations on sharing data for better targetting risk on construction														
	Campania	**ANNEX 9 - F** Self assesment tool in GISA (+ Report with findings) (JULY)	**ANNEX 10 - F** Recommendations on algorithm to stablish correlations on compliance (+ summary notes on main findings) **IT Component** (JULY)	**ANNEX 11 - F** Guidelines for inspectors (National plan adapted to regional level) (JULY)	**ANNEX 12 (A-Q) - F** (16) Checklists on food sectors to standardize controls	ANNEX 13 - F Material on AUDIT **IT component** for the GISA update	**ANNEX 14 - E** Adapted checklist from FVG	**ANNEX 15 - E** SPPC adpated to AUA (+ report with main findings) (JULY)	**ANNEX 16 - E** Risk-based methodology on environmental inspections (report and guideline Alberto)		**ANNEX 17 - E** Self-assesment tool (DECEMBER)	**ANNEX 18 - E** Report on AUA Census	**ANNEX 19 - F+E** Interregional training event for F+E risk-based enforcement (MAY)	**ANNEX 20 - (A-B) F** Definitive Checklist on Ungulate Slaughterhouses and Public Catering + Definitive (15)Checklists with risk-based scorecards +Report on Risk-based indicators (JUNE/JULY)	**ANNEX 21 (a,b,c,d) - F** Guidelines for operators and training to businesses associations on risk-based tools (Gisa self assesment), including training material and email	**ANNEX 22 (A-B) - F** Training on risk-based tools (Checklist)	**ANNEX 23 - E** Training on risk-based methods and tools (including the report)	**ANNEX 24 - F (see annex 58E)** Report on risk criteria and risk-based planning
	Friuli	**ANNEX 25 (a-c) - F** Guidelines for operators on best practices on food safety (dissemination to steakholders)	**ANNEX 26 - F** Scorecards for food safety inspections (slide 6 on ppt)	**ANNEX 27 - F** GISA adopted for food safety (slide 8 on ppt)	**ANNEX 28 - F** Non compliance simulator (Video)	**ANNEX 29 - E (see annex 58E)** Risk categorization: local use of ARPAE version (Report)	**ANNEX 30 - E** 3 checklists: water emission, energetic establishments, air emissions	**ANNEX 31 (same as 32) - E** Risk-based methodology on environmental inspections (report and guideline)							**ANNEX 32 - F (see 16-F)** Report on risk criteria and risk-based planning for AUA (Manual)	**ANNEX 33 (A-C) - E** Training on risk-based tools and methods, data driven regulation	**ANNEX 34 - E** Training on risk-based methods and tools (including the report)	
	Lombardy	**ANNEX 35 - E** Report on data analysis (water component) **IT Component** (JUNE)	**ANNEX 36 - E** (see 16 - F) Report on risk criteria and risk-based planning for AUA (Manual)	**ANNEX 37 (A-B) - F** Risk-criteria (scorecard)	**ANNEX 38 - F** Noise experiment proposal + guidelines on scorecard validation **IT Component**	**ANNEX 39 - F** Noise experiment regulation (Regional law approval)	**ANNEX 40 - F** Final report on the Noise experiment + recommendations on score card validation **(+IT Component)** (OCTOBER)	**ANNEX 41 (see Annex 10)- F** Final report on heat map of co-variation **IT Component** (SIMILAR AS CAMPANIA ALGORITHM SELF-ASSESMENT) (JULY)	**ANNEX 42 - F** Assessment of data set/propose on the evolution of the algorithm (DECEMBER)	**ANNEX 43 (A-C) - OSH** Guidelines on air quality regulation	**ANNEX 44 (A-B) - OSH** Report on MoRiCa algorithm "OECD recommendations on artificial intelligence applied to OSH inspections on construction in Lombardy region – MoRiCa System **IT Component**			**ANNEX 45 - E** Training for Inspectors on risk-based methods (MARCH)	**ANNEX 46 (A-C) - F** Training for inspectors on risk criteria (attendee sheet + slides)	**ANNEX 47 (A-C) - E** Webinar on Risk assessment (ARIA, Labour inspections, Ance) (JUNE)	**ANNEX 48 - OSH** Training on air quality regulation
Municipalities	Trentino municipalities	**ANNEX 49 - DC** Risk criteria on construction (JULY)	**ANNEX 50 - DC** Guidelines on risk-based approach and methods for documentary checks on construction (OCTOBER)	**ANNEX 51 (see annex 6)- DC** Recommendations on IT implementation for risk-assessment for documentary checks on construction **IT Component**												**ANNEX 52 - DC** Training for privates on risk-based controls on construction	**ANNEX 53 - DC** Training for officials on risk-based controls on construction 15 december		

Output 2: Methods, tools, guidelines, training for risk-based inspections in other selected regional and municipal administrations (provided in a series of specific notes) and at National level for food safety/environmental inspections												
level/names		**Activitity 2.1** ***Adapt / further develop and roll out tools for risk-based inspections (planning criteria, check-lists data management, etc.) in new regions and municipalities, and documentary checks on development incentives programs***				**Activity 2.2** ***Development and roll-out of training on risk-based approaches, compliance promotion (other regions, selected services, and municipalities)***			**Activity 2.3** ***Support national Ministries and rule-making bodies on the discussion of the regulatory delivery reform and provide advice on the drafting of the enforcement regulation in the context of the annual competition law***		
National Level	Public Administration Department								**ANNEX 54** (A-B) - Concept note on regulatory reform in the context of the annual competition law	**ANNEX 55** - Support on drafting regulatory delivery reform decree (cross-sectorial) (JUNE)	**ANNEX 56 -** Support drafting regulatory delivery reform decree (public health) (AUGUST)
	Ministry of Health		**ANNEX 57 (A and see 56) - F** Material on controls - Risk-based organization and HR distribution (DECEMBER)								
Regional	Emilia Romagna	**ANNEX 58 - E** Risk criteria for AUA (JULY)	**ANNEX 59 - E** Adapted checklist from FVG (OCTOBER)	**ANNEX 60 - E** (see 16-F) Report on risk criteria and risk-based planning for AUA (Manual)		**ANNEX 61 - E** Training on risk-based methods and tools (including the report) (DECEMBER)					
	Lazio	**ANNEX 62 - F** (9) Checklists on food safety (DECEMBER)	**ANNEX 63 - F** Riks criteria (categorization) (DECEMBER)	**ANNEX 64 - F** Citizens' complains on risk situations through data extracted from digital platforms' API - TripAdvisor **IT Component**		**ANNEX 65 - F** Training on risk-based methods (TBC) (DECEMBER)					
	Tuscany	**ANNEX 66 - DC** Risk criteria - incentives to businesses (DECEMBER)	**ANNEX 67- DC** Guidelines on risk-based method (DECEMBER)	**ANNEX 68 - DC** Recommendations on IT implementation - algorithm for risk assessment (TBC, not sure if possible to build an algorithm) **IT Component** (DECEMBER)	**ANNEX 69 - DC** Incentives impact meassurment: main findings and reccomendations (OCTOBER)	**ANNEX 70 - F** Training on risk-based tools (DECEMBER)					
	Piemonte	**ANNEX 71 - F** Guidelines on risk methods for HR management (DECEMBER)				**ANNEX 72 - F** Training on IT systems for food safety (GISA experience)					
Municipalities	Trieste	**ANNEX 73 - DC** Recommendations on risk-based approach for economic activities and construction (shared experience from Trentino region) (NOV)									
	Parma	**ANNEX 74 - DC** Recommendations on risk-based approach for economic activities and construction (shared experience form Trentino region) (NOV)									
	Viterbo	**ANNEX 75 - DC** Risk criteria for economic activities (+report) (OCTOBER)									

Annex 2. Emilia-Romagna's complaint management system

An environmental inconvenience can be reported directly to ARPA (Regional Agency for Environmental Protection) or to any supervisory and control body/organisation such as regional, provincial, or municipal authorities, the Ombudsman, police forces, or Carabinieri. Once received, the report is then forwarded to ARPA. Each report of an environmental incident is classified into one of the following categories, based on the urgency and the nature of the required intervention:

- Programmable intervention: this category includes reports that allow for the planned scheduling of inspection or sampling activities. The nature of these reports is such that they do not require immediate action, thereby providing flexibility in arranging the timing and methodology of the necessary inspections or samplings.
- Immediate intervention: this involves reports received within office hours and for which it is considered crucial to conduct inspections or samplings right away, without any delay, due to the potentially urgent or harmful nature of the reported incident.
- Report of environmental inconvenience or discomfort in readiness: This pertains to reports received by the Provincial Section Foreman outside of office hours. These reports demand a state of readiness to address potential issues that are reported during times when the office is closed, ensuring that urgent incidents are not overlooked and are addressed timely.

The categories for environmental incident reports and the corresponding level of intervention by ARPA are structured to prioritise and manage the response based on the urgency and significance of the incident. They function as follows:

- Red: This category signifies that the incident requires urgent intervention within ARPA's jurisdiction. The incident is unique and critical, demanding immediate attention over routine or scheduled tasks. The urgency is underscored by a potential hazard that needs to be mitigated as swiftly as possible to prevent or minimise environmental damage.
- Yellow: This category denotes that the intervention falls under ARPA's purview and is deemed particularly significant, often due to the profile of the reporting entity (e.g., reports originating from General Advocates or other law enforcement bodies such as NOE, NAS, Carabinieri). While these reports are important, the interventions they necessitate can be scheduled and coordinated based on the service's operational requirements and capacities.
- Green: These interventions are the responsibility of ARPA but are not classified as urgent. The interventions can be planned and scheduled without the need for immediate action.
- White: This category is for reports that do not fall within the scope of ARPA's responsibilities. The incidents reported are not considered to be of public interest as they pertain to disputes between private parties. Such matters are typically addressed through civil law procedures rather than environmental regulatory interventions.