

MORE EFFECTIVE, EFFICIENT AND ACCOUNTABLE ENVIRONMENTAL PERMITS
AND INSPECTIONS

Output 5: Recommendations for conceptualisation of the next generation of the Single Environmental Licensing Scheme (i.e. LUA 2.0).

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Introduction

The OECD has been entrusted by the EU under funding from the Technical Support Instrument (TSI) with the task of supporting the Government of Portugal, specifically the Portuguese Environmental Agency (APA) to develop and reinforce Portugal's environmental licensing and inspections regime. Objectives of the co-operation were to focus on the enhancement of Portugal's Single Environmental Licensing Regime (LUA), to strengthen Portugal's environmental inspections regime, and to improve the integration between environmental and economic licenses for a better and a more viable business landscape in Portugal.

Since 2006, the Government of Portugal has taken steps to improve their administrative landscape. Portugal's *Simplex* program has driven large support towards improving administrative simplification and advancing modernization within the country. Between the program's launch in 2006 and 2011, more than 1000 measures of administrative and legislative simplification were implemented, and the country also supported procedures for e-Government across the administration. In 2016, the program was relaunched under the brand of the *Simplex+* and continued with the objective of advancing the lives of citizens and businesses through their interactions with the public administration.

As part of *Simplex+* efforts, APA renovated their licensing procedures to advance simplification of the environmental licensing regime. In 2015, APA created the SILiAmb – an integrated environmental licensing system – which established the LUA module. The LUA is an integrated licensing system which supports the principles of “one request, one certificate, one fee.” The Single Environmental Permit (TUA) that the LUA issues applies to any industrial, commercial, or service activities that relates to the use of water resources, waste management, and/or hazardous substances and emissions.

The LUA, however, is only one aspect of Portugal's environmental protection regime. Environmental inspections also play a vital role in supporting and enforcing environmental laws. In Portugal, though APA is the main co-ordinating authority for environmental permitting, the inspection competences for the environment are split between three actors: APA, CCDRs (Commissions for Coordination and Regional Development) and IGAMAOT (the General Inspectorate of Agriculture, Sea, Environment and Spatial Planning).

The objective of this report is therefore to review these functions of the system and to provide recommendations to support a more holistic and coherent regime. The recommendations outlined in this report could advance Portugal's institutional set-up of their environmental protection system as well as provide guidance into competences of the regime. The recommendations outlined in this report also consider the changes that will impact the regime via introduction of Portugal's new Environmental Simplex. This report is the fifth deliverable of this co-operation and builds on the consideration that were outlined in previous work taken under this co-operation (see next section for more detail).

Overview of the co-operation

The primary focus of this co-operation was to strengthen channels for the simplification and harmonisation of Portugal's environmental protection framework. This co-operation encompassed various aspects, such as reviewing the enhancement of Portugal's environmental licensing system as well as an examination of its inspection and enforcement regime.

To support its analysis of Portugal's environmental protection landscape, the OECD undertook several missions to prepare its diagnosis and assessments. In April 2022, the OECD started by a preliminary review of Portugal's environmental protection regime as a whole and published an inception report. The inception report was formally submitted to the Portuguese authorities and DG REFORM on the 16th January 2023.

For the delivery of Output 2 and 3, the OECD conducted an additional three fact-finding missions in October 2022, November 2022, and March 2023 to establish deeper insights into the institutional framework of the regulatory system and its technological advancements. Output 2 refers to the diagnostic and assessment of Portugal's LUA system and its institutional set-up, while Output 3 focusses on diagnosing and assessing Portugal's inspection and enforcement regime. Output 3 was formally submitted to the Portuguese authorities and DG REFORM on 2 February 2024 and Output 2 was submitted on 29 March 2024. Additionally, a fourth report was developed looking at the possibility of integrating other permitting schemes into the LUA. This latter report was submitted to DG REFORM alongside Output 2 on the 29th of March.

A complete overview of the authorities met throughout this co-operation and the documents used to establish the OECD's assessment can be observed in Annex A.

Structure of the report

The present report suggests recommendations based on issues identified in the four previous reports. The recommendations are based on OECD best practices on regulatory enforcement and inspections (OECD, 2014^[1]) and the OECD toolkit on the same subject (OECD, 2018^[2]) (OECD, 2020^[3]). The recommendations are also streamlined with lessons from ongoing OECD work¹. This report is completed with five sections. Each section contains a number of recommendations that could be applicable for Portugal moving with its development of its environmental protection regime. The report begins with recommendations on setting environmental objectives and reforming the institutional landscape. Through these recommendations, the environmental regime can be more outcome focussed and transparent with reduced overlap of functions. This chapter also lays down the necessary foundation for any further reform such as greater digitalisation and the application of risk-based approaches to regulatory delivery (chapter 2). The second chapter provides recommendations on how to strengthen and apply existing financial and human resources optimally. Given the extent of data being collected, recommendations have also been provided on how to use and share this data more efficiently. The third chapter contains four recommendations for the improvement of LUA including using data from LUA for risk-based approaches, and making the processes within LUA clearer. Any upgrade to LUA should consist of assessments of its current system and also integration with other systems on licensing to avoid overlaps. The final chapter deals with improvement of enforcement and inspections through digital penetration and improving the institutional landscape.

The recommendations reflected in Output 5 herein were presented at a multi-stakeholder workshop in Lisbon on 13th March 2023. The workshop was attended by various industry associations including pharmaceutical, steel producers, metallics, oil and gas and business confederations, The input gathered during the workshop has also been added to this Output.

¹ The Regulatory Policy Outlook 2024 is under the process of development and consists of useful practices for regulatory simplification, accelerated permitting processes and human-centred administrative burden reduction.

1 Setting environmental objectives, and reforming institutional processes

This first chapter concentrates on recommendations to set objectives and simplify Portugal's institutional landscape. This section takes a top-down approach to streamline EU, national and regional policies, and priorities. Such an approach acknowledges that a simplified regime² can only be achieved when the legal landscape is simple to navigate and when authorities and personnel at all levels of government are aligned towards the same objectives. General topics covered within this section are to set clear objectives for Portugal's environmental protection sector, possibly consider simplifying Portugal's legislative regime, improve communication between internal stakeholders, and finally consider the human and financial resources of the regime. This initial section starts with **five** recommendations that could be applicable to Portugal.

Recommendation 1: Setting clear environmental objectives for the Portuguese environmental protection regime.

Clear environmental objectives are important for establishing safety parameters and should be the focus of an environmental protection regime. When concrete objectives are set at the highest levels of government, they can **advance transparency** of the regime's purpose, help **assess outcomes** as well as **facilitate important communication** between the responsible bodies and their relevant external counterparts. Clear environmental objectives also underpin government regulations, which help to establish legal standards for environmental protection.

Portugal's environmental objectives are outlined in the Government's four-year plan and the annual state budget. However, conversations with stakeholders indicated that there was general vagueness of what these objectives were and with unclear guidance on how authorities could incorporate these plans within their daily activities. Without a clear acknowledgement of what entities in Portugal's environmental protection regime should be striving for, the regulatory outcomes cannot be assessed effectively.

A first step for Portugal's environmental protection regime should be to **clarify its long as well as short term objectives** and prepare a roadmap on how they can be achieved. Setting mandates that align with these objectives can improve the understanding of institutions and their contributions to the overall system. A **performance management system** can help determine the range of objectives of the regime. For instance, using a LogFrame matrix can be one way to evaluate performance Box 1.1.

² A regime consists of all the regulations, processes and actors working towards environmental protection goals.

Box 1.1. Performance evaluation and management

Performance evaluation and management is a crucial aspect for reducing administrative barriers faced by businesses and entrepreneurs, addressing concerns about effectively managing the risks posed by firms' operations, and managing limited resources available to public authorities to fulfill their legal duties.

Evaluation of performance requires a systematic and top-down approach to ensure national priorities and the accompanying policies are effective in their outcomes. One such tool for performance evaluation is the Logical Framework Model (LogFrame Matrix). The model offers a suitable methodology for evaluation exercises due to its simplicity and hierarchical logical structure. The LogFrame Matrix is a valuable tool for policy planning, monitoring, and evaluation and can be adapted during policy implementation. However, like any evaluation/ performance management system, its effectiveness depends on the quality of input data, buy-in from decision-makers, and the practical utilization of generated data.

The LogFrame Matrix relies on indicators. The establishment of indicators is critical in policy design to monitor and evaluate interventions effectively. Indicators provide quantitative measures that offer evidence of goal achievement and play a crucial role in understanding the progress toward long-term objectives.

Indicators classified under categories such as efficiency, effectiveness, quality, economy, compliance, and performance. Each category serves a unique purpose in assessing different dimensions of public policy. While the aim is not to create an exhaustive list of indicators, including a few indicators from each category is desirable for a comprehensive evaluation of policy objectives.

For a given policy, key performance indicators (KPIs) should be identified and connected to strategic objectives and engage stakeholders in discussions about achieving success. Indicators should adhere to the SMART criteria—specific, measurable, achievable, relevant, and time-bound—to ensure they are practical and informative.

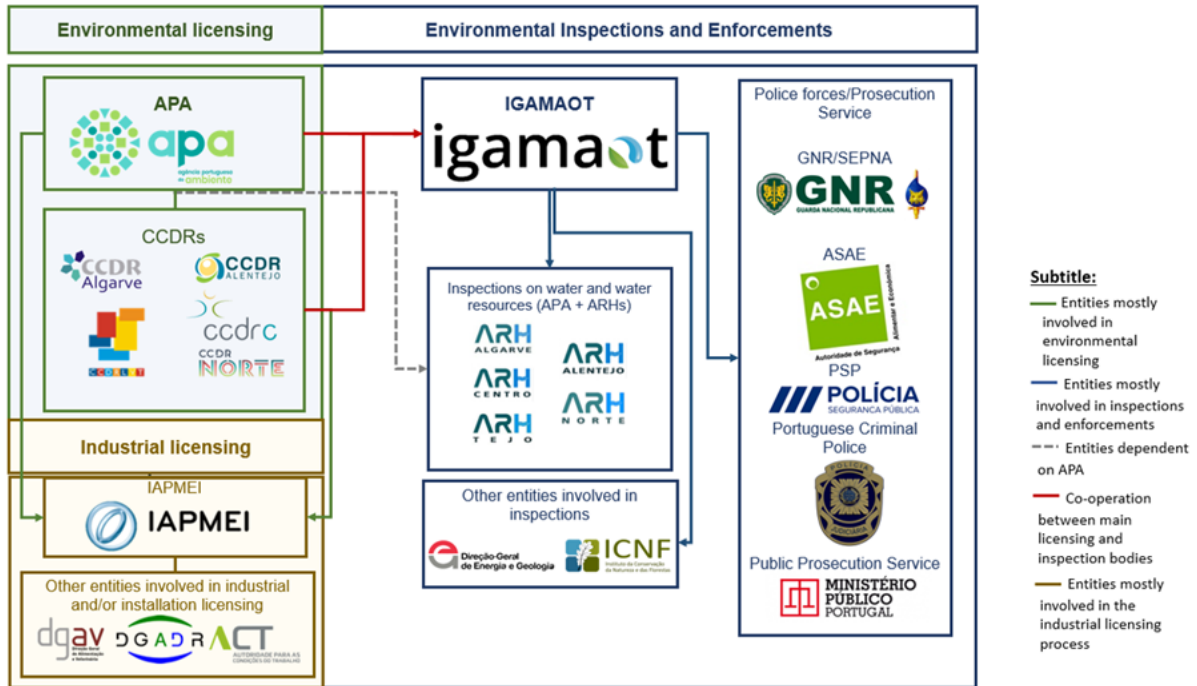
Recognising that environmental objectives are set in Portugal's legislative system; it is key that these are **brought to light** and **used as guidance** to shepherd the system through tangible action plans where achievement of these outcomes can be measured. Advancing clarity of what the system is aiming towards can also **motivate efficiency and better coherence** between functions. Most importantly a clear set of objectives can help with **shaping Portugal's performance framework** and providing feedback on where the system is well-performing as well as identifying the pain points which might need additional resources, methods, or techniques to alter the system. The impetus that can be driven from clear environmental objectives can then improve clarity on how the rest of the system is organised, co-ordinated and managed. At a more granular level, it can also motivate personnel in their day-to-day activities recognising that their positions are supporting a broader objective.

Recommendation 2: Simplifying Portugal's institutional landscape.

In line with defining or clarifying Portugal's environmental objectives, there is also a need to improve clarity of how Portugal's environmental system is organised. From an institutional standpoint, Portugal's environmental regime has many players and it is often not clear how these roles are co-ordinated to support a more effective and accountable environmental regime.

Early in the co-operation, the OECD developed a **basic mapping diagram** to understand a) how many actors were involved in Portugal's environmental regime and b) to see how these actors cooperated with one another during the performance of their functions. The mapping exercise of the OECD led to a basic diagram which can be viewed in (Figure 1.1).

Figure 1.1. OECD's mapping of Portugal's environmental regime



Source: OECD's illustration

Generally, the OECD observed that there was an abundance of actors, all having very specific functions for the regime. The organisation and differences of these functions were prescribed in law, and in most cases, only altered slightly based on who owned procedures versus who managed procedures or enforced different sectors of the regulated regime. When asked on how the organisation and co-ordination of functions were managed, it was indicated that it was prescribed in law, and thereby respected the legal definitions of their institutional functions. It was not clear, however, how these functions linked to the environmental objectives of the regime.

Given the number of actors, and the fixed nature of their functions, it is not clear whether there are redundancies or possible gaps in the system. As an initial approach to improve clarity of Portugal's environmental protection regime, a process map should be curated.

A process map refers to a visual flowchart or a diagram that outlines the **series of activities, processes, or functions** that might be at play (Figure 1.1), and in many ways, can serve as a reference point as a first-level process map. The developments of a process map can improve clarity on whether a more streamlined institutional framework could be considered, and at the minimum improve transparency between authorities (and stakeholders) on the differences between roles and competences of the system.

Recommendation 3: Simplifying Portugal's environmental legislation.

Portugal's legislation for environmental protection is equally complex as its institutional set-up. Portugal's environmental landscape is comprised of 15 different regimes, with most descending from EU regulations. Stakeholders from the workshop on March 13th also described how gold-plating of EU regulations at the local level is creating additional burdens on businesses. EU regulations when transposed in Portuguese law tend to impose additional requirements. In addition to this, low levels of co-ordination between these various regimes results in several burdens for both the administration and operators.

It was also highlighted during the workshop that more needs to be done to **clarify** regulations coming from the EU level. Businesses and industries working across several EU Member States find the application of EU environmental legislation to be applied differently with Portugal having a stricter and complex interpretation of the Directives. Industry associations find it easier to conduct business in countries such as Spain because of reduced administrative burdens.

The stakeholders highlighted the importance of more communication and cooperation between the various authorities at the EU level to harmonise definitions and processes so that industries do not have to spend additional resources in complying with local/ domestic administrative requirements. Regulatory cooperation and learning are particularly important. This is especially so because safety risks within Europe are similar and best practices from Member States with simplified approaches to permitting and inspections should be considered.

Authorities within Portugal's environmental protection regime such as APA have attempted to simplify the legal landscape by undertaking digitalisation exercises. However, each of these efforts are siloed and therefore not contributing to the desired extent to overall simplification. True simplification can only be achieved when it is facilitated and managed by the governing Ministry. A proper assessment of the burdens must be performed and those administrative activities which are excessive and not proportionate to regulatory outcomes should ideally be removed.

Portugal has made significant efforts in digitalisation. These digitalisation efforts must be accompanied with periodic evaluations of the overall processes that are part of the 15 different regimes. Moreover, while commissioning digitalisation exercises, attempts need to be made to ensure that such efforts don't end up being siloed. More communication and coordination are important for this.

In order to further the efforts aimed at simplifying Portugal's environmental legal framework, the application of a process map, as suggested in Figure 1.1 could serve as a useful first step. Conducting a **comprehensive mapping** to delineate the interconnections among various schemes and procedures would help with advancing clarity of Portugal's legal landscape for environmental protection and posing possible options for simplification. It would additionally support the identification of potential bottlenecks, redundancies, or synergies to be supported within the system. An example, where process mapping was used as an effective tool to support efforts of simplification within an environmental system was in the region of Friuli Venezia Giulia in Italy (see Box 1.3).

A process map can also prompt efforts towards **regular ex post evaluations**. *Ex post* evaluations can help to measure the performance of regulations and provide indication on whether the prescribed regulation is achieving its intended objectives. *Ex post* evaluations can also support exercises for administrative simplification, by proposing options for **optimisation, consolidation, or even removal**. A practice that has been tested across several OECD and EU countries to support with the management of administrative burdens arising from new regulations and to systemise *ex post reviews* has been the 'one-in, one-out' principle (Box 1.2).

Box 1.22. 'One-in, one-out' principle of the European Union's Better Regulation Agenda

The European Commission has committed to the 'one in, one out' (OIOO) approach. The OIOO approach is defined as Tool #59 in the Commission's Better Regulation Toolbox.

The one-in, one-out rule, in its simplest form, proposes that individual regulatory agencies should not be able to adopt a new regulation without simultaneously abolishing an existing regulation. The result would clearly be that there would be no net increase in the overall number of regulations on the statute book. The key rationale of one-in one-out, as with the regulatory budget concept, is that regulation would no longer be a "free good" and regulators would, instead, be forced to optimise regulatory choices, trading off between different possibilities.

Some countries which have adopted such principles are the following:

In **Canada**, the "One for One" rule requires departments and agencies to:

- Offset new administrative burden costs imposed on business as a result of a regulatory change by removing an equal amount of administrative burden costs from their existing stock of regulations; and
- Remove an existing regulation every time a new one imposing new administrative burden costs on business is enacted.

A similar rule has been introduced on the sub-national level by the Ontario government with the "Reducing Regulatory Costs for Business" Act in 2017.

France also introduced a moratorium on new regulations with the "gel de la réglementation" in 2013. Similar to the "One for One" rule, departments are required to both offset the increase in costs to businesses and to remove (or, if not possible, simplify) an existing regulation when a new one is enacted, with the difference that also costs to local governments and citizens are considered. The rule was then extended into the two-for-one policy "maîtrise du flux des textes réglementaires" put in place under the Macron government in 2017. The offsetting obligation was doubled with the intent to impose greater control of the flow of regulatory texts on the different ministerial departments, because the original approach had not achieved the desired results.

In the **UK**, this was also the original approach when the rule was introduced through a Coalition Agreement of the Cameron Government in autumn 2010. The programme was deemed so successful and in recognition of increased political ambition the Government decided to go further and double the offsetting by introducing the "One-In, Two-Out" approach (Holl, A, 2015^[41]). In 2015, the approach was even strengthened and every pound of newly created regulatory costs had to be offset by a reduction of 3 pounds ("One-In, Three-Out"). It was set not as a goal itself but as a tool to achieve the Business Impact Target of reducing regulatory costs for businesses by 10 billion GBP during the five-year term of that Parliament, which had been expected to end in 2020. Regulatory offsetting in the UK has been discontinued in the 2017 Parliament with the focus now on promoting more efficient regulation, backed by high-quality evidence, and supporting transparency and accountability for the costs and benefits of regulation to business and wider society.

Source: (European Commission, n.d.^[5]; Trnka and Thuerer, 2019^[6]; Deighton-Smith, R., 2011^[7]; Holl, A, 2015^[41])

Presently, however, Portugal does not have a systematic framework in place for *ex post* evaluations (OECD, 2021^[8]). In the future, this is a criterion that Portugal should consider for its environmental legal framework to ensure its system effectiveness.

Finally, any efforts taken towards simplification should be complemented with **effective stakeholder engagement**. Feedback from stakeholders such as internal and external users can provide useful insights

on where burdens could be reduced as well as advance possible opportunities for innovations within the system. **Regular communication and consultation** with stakeholders should also serve as a secondary source of oversight on the regime and help with its simplification. At present, stakeholders were engaged in only some evaluations of existing regulations in Portugal's regulatory landscape (OECD, 2021^[8]).

Box 1.3. Process mapping tools to get over “bottlenecks” in licencing: the Friuli Venezia Giulia Experience

In Italy, the *Autorizzazione Unica Ambientale* (AUA) authorization process presents a classical procedural bottleneck. The AUA represents a unified environmental authorization framework that consolidates seven separate environmental communications and authorizations into a single, streamlined title. Initially, operators initiate the AUA request through the SUAP (One Stop Shop for Facilities) portal. Subsequently, the various services within the Regional Environmental Authorities swiftly process individual aspects of the application.

However, challenges arise in a specific phase of this process: when SUAP receives feedback from the authorities, it does not exhibit the same level of promptness in completing the licensing process and communicating the results to the operator. It is worth noting that efforts are underway to address and rectify this issue.

To address these procedural inefficiencies and enhance the overall workflow, the implementation of a Process Mapping tool, such as BPMN (Business Process Model and Notation), is imperative. This tool serves to delineate the existing process flows (as-is) and articulate a strategic vision for improvements (to-be). The Regione Friuli Venezia Giulia has adopted BPMN as a valuable instrument for optimizing numerous intricate licensing processes.

Recommendation 4: Involve stakeholders in environmental policymaking.

In addition to simplifying Portugal's environmental protection landscape, it is essential that stakeholders are also **engaged in the design and development** of new legislations. Engaging stakeholders not only offers pertinent feedback to legislators on the needs and feasibility of the legislation, but also provides critical viewpoints on what is the “pulse” of the sector they are regulating for.

The multistakeholder workshop revealed that while stakeholder involvement does take place during the policy drafting phase, the stakeholders do not receive feedback for their involvement. In other words, the stakeholder consultation process is a formalism. It was acknowledged at the workshop that resource constraints are the main reason for lack of feedback.

The elements of stakeholder engagement should focus on four key points: **1) consultation, 2) co-ordination, 3) communication, and 4) integrating feedback**. These processes should be adopted throughout the regulatory policy cycle and should improve how citizens engage with their country's law-making processes.

In Portugal, stakeholders are engaged in all draft regulations (OECD, 2021^[8]) and in the environmental context, this was observed with the development of the new *Environmental Simplex*, whereby more than 170 comments and suggestions were received from citizens. APA, through its LUA platform, has also

incorporated a feature whereby stakeholders can provide comments on the processes of new permit applications for up to 10 days. The consultation portal of Portugal is named *Portal Participa*³.

While stakeholders can comment on new draft regulations and permit applications, feedback from stakeholders indicated that more concerted efforts were required to improve their engagement within the policy development process. As mentioned briefly in the recommendation above, stakeholder engagement is a valuable component of regulatory policy as it can support innovative ideas and improve transparency within the system, thereby promoting compliance.

To improve stakeholder engagement in Portugal's regulatory environment, stakeholder engagement should also be **systemised, and awareness** of new consultation periods should be brought to the attention of relevant stakeholders. Therefore, advancing communication of consultation periods is necessary. Focus groups and regular working groups can also be facilitated to improve insight on particular policy issues and digital tools could also be used to make consultations more accessible (e.g., online consultation portals)

Stakeholders should also **support the co-design of new regulations** and should be involved in determining what the **right balance is between regulating and leaving the situation as-is**. For example, when new national legislation is adopted, including when EU legislation is transposed into national law, it's important to engage stakeholders to share how these changes will affect their real-life experiences. APA also indicated a few occasions whereby co-designing with stakeholders led to positive results in the renewable energy sector. These efforts should be maintained, and where possible systematised. In the future, and depending on context, APA could also facilitate engagements with marginal populations to advance the inclusivity of policymaking.

Stakeholders also noted that it would be relevant to see how their feedback was incorporated as part of the policymaking process. Environmental authorities should aim to provide timely responses to feedback provided by stakeholders and ensure that engagements are reciprocated. Ultimately, the objective of stakeholder engagement should ensure that policymaking advances policies that are supported by the people and informed by the people.

Recommendation 5: Advancing communication and cooperation between environmental functions.

While stakeholders to the environmental protection system indicated that ad-hoc interactions did take place between the various functions of the system (e.g., meeting, calls, and e-mail), considerations could be taken to advance the regular sharing of information and communication between the bodies. Mutual information sharing between these two domains is essential for not only, fostering accountability in the regulatory regime, but also for strengthening efficiency. IMPEL's Regulatory, Permitting, and Inspection cycle illustrates how communication between permitting and inspection processes can improve feedback to the overall regime (Figure 1.2).

³ <https://participa.pt/>

Figure 1.2. IMPEL's Regulatory, Permitting, and Inspection cycle



Note: The arrow between inspection and permitting was added to highlight how information sharing between the two functions must be reciprocal.
Source: Modification of the IMPEL 2014 IRAM/DTRT Diagram

Regional divergence in permitting and reporting have also been observed. For instance, in the north of Portugal, documents for emissions reporting can be submitted through SiLIAmb whereas in the south of Portugal, documents have to be submitted via email.

Laws are interpreted differently even amongst different inspection authorities. Lack of coordination means businesses could end up having two different inspections such as from SEVESO and IGAMAOT on the same day. Surprise inspections are the most common form of inspections and are oriented towards increased sanctioning than towards reducing safety risks and improving public-private trust.

The frequency of information exchanges between permitting and inspection bodies is unknown to the OECD. While it was understood that good personal relationships existed between APA and the remaining entities within the system, there was no direct evidence of planned engagements to support a regular exchange of information or collaboratively plan for the regime's future. For example, in March 2023, the OECD hosted a workshop with the CCDRs of Portugal and learned that this was one of the few times that these entities were brought together to share their experiences in operating within the regime.

As a result, in the future, there could be a consideration for the Portuguese environmental regime to **institutionalise and advance engagements** between its bodies. The relevance of this recommendation is to assure that the system is constantly evaluating its performance and contributing to a more efficient, accountable, and transparent environmental protection regime.

To advance the flow of information within the system, two approaches could be considered. The first and more radical approach would be **to consolidate all functions into one integrated agency**. Some examples of integrated environmental agencies can be observed in countries like the United States (United States Environmental Protection Agency), Ireland (Irish Environmental Protection Agency) and Scotland (Scottish Environmental Protection Agency). The consideration around an integrated framework is that would advance oversight of the regime and suggest more linear modes of communication. That being said, considering the complexities of Portugal's current environmental landscape, an integrated option would

require significant efforts from the administration to re-map the system and assure that effective competences were not liquidated. In turn, this consideration would necessitate long-term planning and precise execution.

A second consideration, to be considered more for the short-term, could involve **expanding the definition of integration** and **strengthening its implementation** through enhanced inter-agency cooperation. While integration may seem synonymous to consolidation, the basic principle of integration is to improve alignment and co-ordination within the regime.

To advance inter-agency co-operation between bodies of Portugal's environmental protection framework, **periodic meetings** between functions of the system should be advanced. In-person engagements transform the communication of information and break barriers in terms of how lessons are shared. These engagements can also improve knowledge of different methods (e.g., risk-based methods – further discussed in Recommendation 9) that are applicable to the regime and facilitate more coherent co-ordination across the regime. Establishing regular in-person working groups should not just be considered at the national level, but also through inter-agency mixtures such with different working levels or those working in different aspects of environmental protection (e.g., water, waste management, emissions). This would help to widen the viewpoints of what environmental conditions are within a country and what appropriate steps could be taken. Some ways to facilitate these approaches could be to regularise peer-2-peer engagements, engage in officer and manager trainings, and mixed working groups.

In this way, to ensure that financial constraints do not limit the recruitment of new talent, Portuguese authorities could also use the performance assessment of the system to support financial considerations of the regime and advance planning Recommendation 1.

2 Capacities, Data, IT tools and Risk-based approaches

This second chapter provides recommendations for reinforcing human and financial resources, improving the use of Data, IT tools and other regulatory methods within Portugal's environmental protection framework. Though Portugal has seen quite a sophistication in their digital developments, it is relevant to consider how these systems can be used to improve the operationalisation of Portugal's environmental protection regime. Recommendations within this section will cover concepts of improving data sharing across the regime, advancing the planning for digital infrastructures, and improving the system of risk assessment. This section will encompass a total of **four** recommendations considerable for Portugal.

Recommendation 6: Reinforce human and financial resources.

Developments to the regime depend on the availability of human and financial resources. At the time of this review, it appeared that challenges in maintaining human resources for Portugal's environmental regime were significant.

Of particular concern was the cumulative impact of impending resource losses that the system would face in the coming years. Loss of experienced staff, the growing number of vacancies across work programs, and issues with trying to attract, retain, and train new talent were some of the obvious factors. Budget and financial restrictions to the system were also seen as compounding issues.

To support the reinforcement of human and financial resources, a **clear performance review of the system** and an acknowledgement of how **resources are managed** and **allocated** across the system is required. This review can be incorporated to the performance management recommendation made in Recommendation 1. **Measuring the current effectiveness** of the regime will provide evidence for the necessity of additional staff and enhance clarity in areas where resources may be excessive. In the OECD's perspective, it was unclear to what extent the resource crisis was dire or whether a reorganisation of competences could improve the vitality of resources. A more efficient allocation of resources could also be supported by adopting more advanced risk-based systems within the regime Recommendation 9.

Nonetheless, in the long-term, there is a clear need to **recruit new talent**. The aging population of workforces is evident, and competitive opportunities have made it difficult to attract new talent. Possible strategies to improve the reinforcement of resources could be to strengthen opportunities for internships, vocational trainings, apprenticeships, or foster intergovernmental training so that skills within the regime could be transferable to other areas.

The **procurement of external consultants** could also be considered as an option to manage resource insufficiencies within the regime. However, the employment of these resources should be planned **adequately ahead of time**, given Portugal's lengthy procurement processes. These considerations must also be adequately planned financially and should not be considered as long-term solutions for Portugal's resource deficiency.

In this way, to ensure that financial constraints do not limit the recruitment of new talent, Portuguese authorities could also use the performance assessment of the system to support financial considerations of the regime and advance planning.

Recommendation 7: Improve data sharing across the Portuguese environmental regime.

Data is a valuable resource for all aspects of administration. In the context of environmental protection, data can offer significant insights into the system's operations, performance, and conditions. Armed with this information, data can heighten the system's efficiency and improve the effectiveness of the regulatory regime.

Data can also help manage existing resources better. With adequate data, decision-making processes related to permitting can be simplified and shortened in length. Regulatory principles such as “**only once**” can be **strengthened** through **more data sharing and integration** so that operators do not have to repeatedly share the same information. At present, during inspections businesses are required to *once again* submit all pertinent documents, generally via email, which they have already shared during the permitting phase. In this way, improving the data loading interface on the LUA from the operator standpoint, such as through: allowing the upload and download of data from excel files and/or other templates or preventing the reinsertion of data from the same operator on the same installation could help with strengthening the efficiency in Portugal's environmental permitting procedures.

In the case of APA's LUA, the system collects a substantial amount of quality data. Through the permitting process, it captures information on operator details, geolocation of activities, NACE codes, and the identification of hazardous materials, among other things.

This data collection system can be **extended to inspection data** as well. Data obtained from inspections can offer real-time input into the processes of the permitting system, the status of environmental conditions, and information pertaining to the performance of the regulated environment. It can also help improve the permitting process by identifying duplications, and risk-proportionate requirements.

At present, inspectors do not use data from LUA for inspection purposes to the desired extent. In the case, that they did, the extent and methodology of such data sharing remained unknown. Additionally, it was also unclear how permitting functions benefitted from the information collected by inspections. One reason for this is that in its current governance structure, accessing data from and supplying data to LUA remains complex. A simple interface and the use of templates can help inspectors upload as well as download data. A two-way exchange can help incentivise mutual data sharing between permitting and inspection agencies and also improve cooperation.

In conversation with some inspection authorities, they indicated limited capacities to retrieve and modify information within the LUA. This raised questions of how the system could be improved to strengthen the transfer of information between bodies and underscored the necessity to improve how data was used and shared across the regime.

Data sharing must be supported **by robust cultural, organisational, and legal frameworks**. Cultivating a culture of data sharing in the administration improves the relevance of the resources to strengthen administrative processes as well as safeguard how such resources are treated. Legal mechanisms, such as Memorandums of Understanding (MoUs) and reciprocal agreements between administrative bodies can improve the sharing of data and how it is managed. Especially in the environmental protection sector, data can be valuable for supporting a data-driven, risk-based approach, aiding resource management and ensuring the optimal use of public resources. Additional technical considerations for enhancing data sharing across the administration can be observed in Box 2.1.

Through a collective reading of Recommendation 6 and Recommendation 7, it is also crucial to emphasise that digitalisation cannot replace human competences. While they can improve the performance of the regime overall, personnel remain indispensable for managing complex decision-making, grasping contextual sector nuances, and devising solutions for emerging policy challenges. In this way, the development of new IT tools should be considered under the scope of how they can **support officials** to strengthen communications within the regime and stabilise efficient processes. In other words, digitalisation is a channel through which simplification can occur.

Ultimately, to advance the sharing of data across the administration, it depends on the availability and accessibility of this resource. Like exemplified in IMPEL's enforcement cycle (see Figure 1.2), the use of data should be to improve communication between bodies without needing to exert additional personnel resources. **Data frameworks, the establishment of a data-sharing culture, and legal frameworks** are some of the core principles to improve the transferability of this resource across the administration. The remaining recommendations in this Section will continue to explore how data can be adapted within Portugal's environmental regime through the harmonisation of IT tools and through the reinforcement of risk-based tools within the administration.

Box 2.1. Considerations for strengthening data management in Portugal's environmental regime

Data management within the Portuguese regime, could also benefit from other technical considerations. The following recommendations were outlined, which may also be relevant in the context of Portugal.

Data collection: Data should be collected in detailed and organised manner, and that is also stored in a structured format can offer greater flexibility in how the data is used for future purposes. Regulators should also harmonise their language when asking questions and should be as specific as possible, so that the data collected from this information can be easily categorised.

Inter-agency co-operation: Institutions, which can support in common data sharing should be identified for better policy intervention and benchmarking purposes.

Culture: Data sharing should be a norm. Codifying a duty to share data and including a comply-or-explain mechanism can minimise costly legal intervention for data sharing. A National Data strategy with data catalogues for sharing of core regulatory data should be considered.

These recommendations could also be complimented by the OECD's work on data governance, such as the *OECD's Going Digital Guide to Data Governance Policy Making* (OECD, 2022^[9]) and the OECD's working paper on *A data-driven public sector* (van Ooijen, Ubaldi and Welby, 2019^[10]). Source (OECD, 2022^[9]); (van Ooijen, Ubaldi and Welby, 2019^[10]).

Recommendation 8: Integrate, harmonise and strengthen planning of the IT tools in Portugal's environmental protection system.

As noted above, the creation of digital systems can help with data collection from permitting and inspections, and also organise and use such data for **evidence-based decision making**. It can also help create a **structured sharing mechanism** between the various authorities. However, one caution is to be exercised. Creating multiple digital systems without adequate oversight through a coordination agency and without harmonisation can create new problems.

In addition to LUA which is a tool for permitting, both IGAMAOT and APA are actively engaged in initiatives to streamline their inspection procedures. IGAMAOT has recently announced its efforts to establish the iFAMA platform, with the objective of improving interoperability between inspection and permitting agencies and advancing the complaints management of the regime, whilst APA's water inspection team is also creating a new inspection planning tool to strengthen communication and coordination between the country's five regional water basin authorities and IGAMAOT.

The growing developments of IT platforms across Portugal's environmental regime warrant **an authoritative overview and listing of systems**. A **coordination agency** can help ensure more harmonious data collection amongst the various digital tools. At present, an oversight/ coordination agency is missing which could lead to costly duplication of effort, more redundancies in functions and safety related gaps. **Harmonisation amongst the systems** can ensure that the data gathered from different sources are consistent, standardised and compatible. For instance, having common formats, terminology units, and other aspects of data uniformity which can help with easier analysis and comparison. An oversight agency can help guide the systems that are being created, the objectives these systems will serve, and what and more crucially how information will be collected in these systems. In other words, the coordination agency can help establish data collection standards and systematise large quantities of heterogeneous data. Portugal has already highlighted the challenges it faces in harmonising diverse legal terms within its environmental protection system. However, recognising the positive impact it can have on streamlining the regulatory framework and enhancing its efficiency, efforts for data standardisation should be considered across the regime.

Undertaking a stock of upcoming and current digital platforms could support a clearer line of what tools are being created within the system and improve how these tools are connecting with one another to avoid a siloed approach. **Improving co-ordination between IT resources** in the system could also support the better use of public resources and advance collaboration. For example, it was indicated to the OECD that there was weakness in how bodies co-operated with one another to develop IT solutions. In this way, an authoritative overview of systems being developed could advance how technological and knowledge spillovers were experienced within the administration to strengthen the effectiveness of these systems.

The enhanced coordination among IT systems should also **prioritise interoperability and where possible integration between systems**. To achieve this, a common understanding must be established between the various data points and how information is collected. **Standards and protocols for data exchange would have to be created**. Interoperability within the system should also be supported with the creation of a **central data warehouse, which the different IT platforms could connect too**. A central data warehouse is a repository that stores and manages data from different data sources within an organisation or a system (IBM, n.d.^[11]). The purpose of the central data warehouse is to consolidate information into a unified platform and make it easier for policymakers to access, analyse and use for decision making and reporting. The *OECD's publication on Data Portability, Interoperability and Digital Platform Competition* also provides guidance to governments on the ways data could be provided to strengthening interoperability within administrations, by considering the scope, format and mechanisms for data portability and interoperability (OECD, 2021^[12]).

At present, the only systems which seemed to have some levels of interoperability was the LUA and Portugal's Responsible Industrial Licensing platform: SIR. However, interoperability between these two platforms seemed to be limited, given that it was understood that not all information was always communicated between the two platforms. For example, IAPMEI was not aware when an operator was granted an environmental permit under the LUA to start their economic activities. Furthermore, discussions with stakeholders also underscored that while it was evident that an ample amount of data had been collected across the system, these data sources were dispersed among multiple tools. It became evident that there was a necessity within the system to enhance immediate and coherent access to this data.

Improving oversight of the different IT tools in the Portuguese sector is also required to ensure that resources are sufficient to ensure the health and maintenance of these IT platforms. The OECD recognised that given the limited resources of the Portuguese administration, some platforms, like the LUA, were being managed by external parties. In such instances, planning of IT system should also involve estimating the necessary resources required to sustain the platform over the long term. While external services can be valuable for augmenting initial IT skills within the administration, it is essential to exercise caution and strengthen deliberate planning regarding the internal resources necessary to sustain this resource over the long term. A situation should be prevented where a system becomes abandoned due to external developers retaining rights to it or the expertise. Currently, systems like LUA are raising concerns about the limited internal technical resources needed to maintain ongoing updates to the system.

Developing guidance and tools for the effective performance of IT systems

The creation of new IT platforms should also be **complimented with proper guidance materials**. Both for external and internal stakeholders of the system, guidance is necessary for ensuring that systems are kept relevant, user-friendly, secure and support the overall efficiency of the system.

While APA has developed guidance for their LUA platform, there is room for improvement in providing hands-on support. However, to make this possible, it would require a reinforcement in human resources (Recommendation 6). Conversations with internal stakeholders also highlighted that, although the user handbook for the LUA was valuable, in-person training sessions could improve the onboarding processes of new officials. Finally, ensuring regular updates on the guidance materials provided to external stakeholder could also support APA and reduce its time being spent on addressing or correcting erroneous processes.

In relation to the development of other programs, APA and relevant authorities could also consider **developing integrated training sessions** where officials could learn how to use information and navigate between different systems. These sessions could also be used to identify areas where digital tools could be further adopted to improve processes within Portugal's environmental regime.

Finally, in line with the digital developments of the Portuguese environmental protection regime, **portable digital tools could also be considered**. Presently, IGAMAOT inspectors indicated to have access to tools such as tablets, computers and databases from IGAMAOT and APA on the field. IGAMAOT also indicated that they widely used drones and GIS systems to strengthen their oversight for better enforcement. This is a positive development for strengthening the efficiency of the system and, where applicable should be extended to other actors of the system, such as CCDRs, APA, and water basin authorities.

Recommendation 9: Harmonise and strengthen risk-based methods within Portugal's environmental regime.

With the emergence of new IT platforms and a growing emphasis on data sharing and interoperability, it is imperative for the Portuguese environmental regime to explore avenues for the seamless integration of a comprehensive and data-driven risk assessment framework into its existing system. This **risk assessment methodology** should be regarded as a valuable instrument aimed at assisting environmental authorities in enhancing the enforcement of current laws and regulations. The primary objective of this methodology is to strengthen the effectiveness and efficiency of enforcement mechanisms by supporting the effective allocation of resources and presenting opportunities for the reduction of administrative burdens.

There is room to improve the use of risk assessment in Portugal's environmental regulatory framework. The most sophisticated integrated risk assessment methodology observed by the OECD was IGAMAOT's Risk Analysis System (RAS) as a management tool. According to IGAMAOT, The RAS led to a specific

risk classification for each target facility or entity. This classification determined the priority for inspections and audits, with inspection frequency varying based on this classification. Additionally, the RAS identified critical areas, focusing on systems and their associated data. This data was periodically updated and reevaluated.

The methodology employed in the RAS for planning environmental inspection actions is founded on the Integrated Risk Assessment Method (IRAM), as developed by IMPEL (the European Union Network for the Implementation and Enforcement of Environmental Law). This method utilises Impact Criteria, which are connected to the size and characteristics of each facility, and Operator Performance Criteria, which consider factors such as the compliance history with legislation. A full description of areas where RAS is applied in for environmental inspections can be viewed in Box 2.2. The information to support IGAMAOT's RAS system was also supported from co-operation, meetings, and inputs from authorities internally within IGAMAOT.

Box 2.2 Risk Analysis System in Portugal

In the area of environmental inspections, the following RAS have been designed and are implemented at IGAMAOT:

- Risk-PCIP (Industrial Emissions Regime / Integrated Pollution Prevention and Control);
- Risk-VOC (Industrial Emissions Scheme / Installations and activities using organic solvents);
- Risk-Seveso (Prevention of Major Accidents involving dangerous substances);
- Risk-ETAR (Urban Wastewater Treatment Plants with 2000 or more equivalent inhabitants);
- Risk-MTR (Transfrontier Shipments of Waste).

In the context of IPPC's Risk Assessment System (RAS), which is built upon the IMPEL IRAM tool and incorporates best practices, the inspection frequency is determined by assessing scores derived from Operator Performance Criteria (OPC) and Impact Criteria (IC).

Source: IGAMAOT's feedback to the Output 2 report

While Portugal's main enforcement body does have a sufficient risk system in place, the current framework of the RAS is simple. IGAMAOT's spectrum for assessing risk was based on a -1, 0, +1 (from best to worst) system and could possibly be extended to consider different variations of risk to support how enforcement was enacted upon (i.e., guidance instead of always punitive measures). Additionally, it was noted to the OECD that there was not a universal way presently in the system to monitor data. Therefore, **integrating a tool such as the curation of a central data warehouse** could improve how bodies accessed and monitored environmental conditions to support their enforcement activities.

There also needs to be a consideration, however, of whether RAS exists just in IGAMAOT or in other inspection bodies of the environmental protection regime. In conversations with CCDRs and APA, it seemed that presently, no such sophisticated systems existed for their operations. Within CCDRs, some ad-hoc efforts were being undertaken by personnels in the spare time, to develop this resource, and in conversations with APA's water inspection team, the development of a RAS was just beginning. Thereby, it is relevant that the regime improves how tools of RAS are integrated and used horizontally across the regime. The integration of this tool could also contribute towards a more cohesive and coherent regulatory framework.

To advance this effort, **IGAMAOT could support the integration of their IRAM model** across the regime. Given their level of sophistication and already established structure of using a RAS, this methodology could be shared and trickled down into the functions of other bodies such as CCDRs and APA. Alternatively,

bodies could also develop their own risk assessment system, however, the risk of developing multiple methodologies to assess risk could be that it leads to a more fragmented and confusing regime.

The use of risk assessment systems in Portugal's environmental regulations should be supported with effective tools and resources. This includes **checklists, scorecards, and encouraging operators to conduct self-assessments** to improve feedback into the regime.

At present, checklists and self-assessments seemed to be prominent tools in Portugal's environmental regulatory framework. For several environmental regimes, operators are required to comply with self-monitoring mechanism and in inspection visits, the OECD observed that inspectors did use technical checklist when undertaking their visits. However, adaptations could be made to strengthen these tools.

In particular, inspector checklists in Portugal seemed to be highly legalistic and bureaucratic. During inspections, it was observed that inspectors focussed mostly on non-conformances and non-compliances of operators based on permitting conditions, rather than applying a critical judgement or offering guidance to advance correction. This resulted in an observation of serving as more of a box-ticking exercise for inspectors, rather than an effective evaluation of true harm or risk.

In this regard, several considerations could be taken to strengthen the application of checklists in Portugal and are outlined in Box 2.3. These recommendations are based on general good practices for checklists and should be adapted to the Portugal's context as needed and as required.

Box 2.3. Technical checklists for inspectors

To create an effective checklist, several items that could be considered:

- Every item on the checklist should relate to a single and verifiable aspect of a regulation.
- Items on the checklist should be written in plain language and should be easily comprehensible to all stakeholders including citizens.
- Items must respond to the existence of regulatory compliance and should be answered only by ticking the following boxes: “yes”, “no”, “does not apply”. An additional box with notes should be introduced in case clarifications or context is necessary. This context box should also be reference in the preparation of inspections and be used to pre-fill some lower-risk conditions.
- Items should include weights to reflect the relative risk within a checklist.

The structure of a checklist is also relevant. Ensuring there is a logical flow to the checklist can improve how inspections are carried out and support a more straightforward structure which is logical for both the inspector and the operators. In general, checklists should have a fixed structure which are supported by the following:

- Questions are grouped in clear-cut chapters.
- All items are responded by checkmarks, while additional comments/observations are optional.
- Items respond to the level of compliance, which includes the option of partial compliance to allow a nuanced assessment.

Annex A provides offers an example of what well-structured inspector's checklist could look like.

Source: (OECD, n.d.^[13])

An additional resource which could be considered, and which was not observed by the OECD was the **utility of score cards**. Score cards are other resources that can be used to inform the risk index. Score

cards are made of up all available information that describes the expected harm on the environment, and the probability that events could occur. Each item within a score card must include its own level of risk: low, medium, or high, and these should be used to weight the individual risk scores of each category. This allows the model to measure relative risks according to potential hazards. Score cards are particularly helpful for translating static information into elements that can be assessed within the risk index. Box 2.4 demonstrates what scorecards can look like.

Box 2.4. Scorecard template

Examples of score cards to measure the profile of the facility and their compliance background can be observed in Figure 2.4 and Figure 2.5. The number that emerges from these score cards can then be used to rank facilities, based on the percentiles of their risk scores.

Figure 2.1. Operational risks

| | Low (0) | Medium (0.5) | High (1) | Risk points | Category points |
|---|--------------------|-------------------------|---------------------|------------------------|----------------------------|
| Type of activity | | | | | |
| Production capacity | | | | | |
| Number of employees | | | | | |
| Characteristics of the surrounding area | | | | | |
| Type of technology | | | | | |
| Management processes | | | | | |
| Total points | | | | | |

Note: The profile operator is made up of all the available information that describes the expected harm on the environment, and the probability that events could occur. Each item must include its own level of risk: low, medium, or high. These have to be weighed with the individual risk scores of each category. This allows the model to give relative risks according to potential hazards.

Source: (OECD, n.d.^[13])

Figure 2.2. Compliance background

| | Low (0) | Medium (0.5) | High (1) | Risk points | Category points |
|--------------------------------------|--------------------|-------------------------|---------------------|------------------------|----------------------------|
| Prior infractions | | | | | |
| Notifications from other authorities | | | | | |
| Social or legal conflicts | | | | | |
| Total points | | | | | |

Note: Similar to the profile of the operator, the compliance context relies on a classification of low/medium/high risk and should be measured against risk points for each individual item of the list.

Source: (OECD, n.d.^[13])

3 Recommendations for improving LUA's capabilities

This third chapter provides recommendations for improving Portugal's permitting system. The establishment of the LUA is considered a technological revolution in how both operators and administrators engage with Portugal's environmental protection regime. While the LUA has successfully dematerialised the regime and simplified navigation, discussions with stakeholders have highlighted that there is room for further optimization of this system and Portugal's general permitting landscape.

The recommendations presented in this section build upon the considerations discussed in Sections 2 and 3 of this report. It also notes considerations towards how data from the LUA can be applied throughout the system, how stakeholders understand the system, as well as how the system self-reports to advance potential new developments. Additionally, the OECD conducted a complementary study to explore the possibility of further adapting the LUA to integrate other regimes, and the findings offer valuable considerations for Portugal. As a result, this section comprises of **six** recommendations that could be relevant for Portugal.

Recommendation 10: Use data collected by LUA to heighten effectiveness and efficiency

As noted in Recommendation 7 and Recommendation 8, the value of data is multifaceted. The LUA collects a significant amount of information which should be used more effectively to advance the performance of the regime.

The previous chapter highlighted the importance of having a robust risk-based approach. A risk-based approach can benefit immensely when it has data to support it. Data from the LUA and relevant data gathered during inspections should be used to support the system to work "smarter". Integrating a risk-based system could help with using data more efficiently. For example, data from the LUA (which could potentially be reinforced by information collected from inspections) could be used to undertake a preliminary analysis on the risk profile of the operators and support with streamlining of the system. Should an analysis reveal that an operator's profile was low risk (or perceived to be low risk), licenses could be granted under a more expedient manner. Documentary requirements for low-risk activities could also be reduced to limit burdens on the public sector.

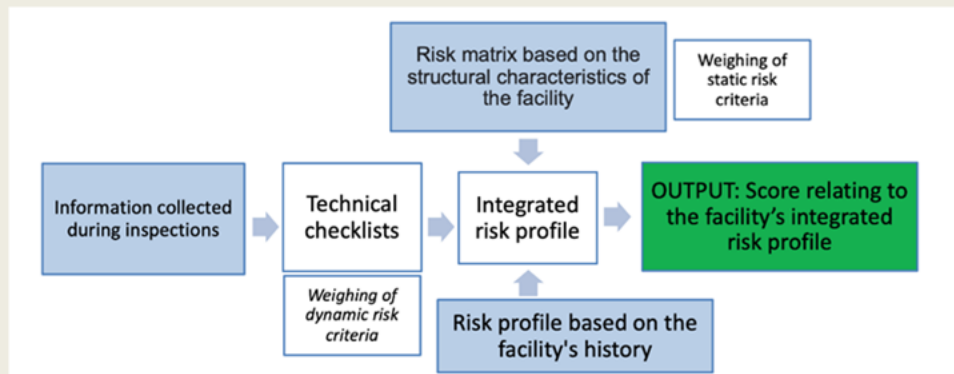
Presently, most of Portugal's culture focusses on "ex post" facilities assessment. However, with the information collected through LUA and during inspections, there is also the possibility of **enhancing** Portugal's culture of "**ex ante**" **facility assessment** Box 3.1. The model appeared to be perfectly suitable and complementary for a risk-based approach to classifying companies "ex ante" and implement a system of preventive inspections. Data should also be used to improve the co-ordination between functions of the Portuguese environmental regime. APA and IGAMAOT staff noted that they could see and access

elements of the permitting and inspection systems, but it was not clear how comprehensive and consistent this was in preparatory use or for post-inspection updates.

Box 3.1. Shifting from ex post to ex ante using data support

A data-based risk-centric approach allows for both static and dynamic classification of companies based on risk categorization criteria, enabling proactive measures that can lead to a rationalization of resources used in inspections and greater transparency, while reducing the burden of controls on companies. Figure 4.1 provides a visual representation of how information from these two functions can be used to advance a more risk-based and efficient system. Elements of using data to support a stronger permitting and inspection landscape were provided in the previous chapters.

Figure 4.1. Overview in the ways static and dynamic information can improve risk-assessment methodology.



Recommendation 11: Leverage existing IT systems for improving risk calculations.

Building on Recommendation 8 on harmonised and interoperable systems, Portugal could also explore the **potential of leveraging IT tools** to enhance the **assessment of risk calculations**. Integrated and interoperable risk assessment systems can streamline the exchange of information among authorities and improve the seamless integration of risk-based methods into the administration.

Though Portugal has made significant developments in building IT infrastructures and strengthening digitisation, there should also be a reinforced commitment towards using **digital tools to improve the calculation of risks**. Advancements in evaluating data and determining algorithms should be used with other risk tools such as checklists and score cards to heighten the performance of the regime. IT tools can also advance policymakers' recognition of risks, without needing to employ new or additional resources. In fact, by **harnessing both IT tools and risk-based methodologies**, Portugal's environmental framework can improve how it manages resources more effectively without compromising its effectiveness.

Another way to leverage risk assessments is during the permitting process, once a request has been made via LUA. Stakeholders highlighted delays that come from clarifications/ additional documents which are asked once a permit request has been made. Efforts should be made to grant permits without delaying the process through requests for clarification. If clarifications are indeed required, these can be processed even after a permit is issued. A risk-based approach can help identify additional burdens on businesses such as documents and process clarifications which do not have a bearing on environmental or public

safety to expedite the permitting process. Meetings and site visits can also be used as alternatives to remedy issues and manage due diligence of the environmental protection system⁴.

Recommendation 12: Advance clarity in the processes of the LUA.

There is a need to **simplify processes for the LUA**. Though originally, the LUA was meant to simplify Portugal's environmental permitting landscape, the simulator has progressively grown. Conversations with stakeholders indicated that the original LUA consisted of only 50 questions and now it has developed into a simulation with more than 200 question.

One of the main issues affecting the growing complexity of the LUA is the highly legalistic and complex nature of the Portuguese environmental regime. This issue was addressed in Recommendation 3.

However, on a more granular level, **definitions between the different regimes need harmonisation** so that terms from various regimes are understandable. This can help with identifying duplications amongst the regimes as well. A consistent and standardised nomenclature system can help operators understand the process amongst the various regimes better. Some stakeholders indicated that the LUA sometimes simulated unexpected results based on the described activities and a reason for this could be how questions were proposed within the simulator. Public bodies should **collaborate more closely** to enhance harmonisation among different regulatory regimes, fostering the adoption of a **common language** in their processes. Improved coordination between these regimes can also enhance clarity regarding potential synergies in processes, such as the submission of an environmental impact assessment, and thereby support with the reduction of administrative burdens for operators. To improve familiarity towards how different regimes corresponded with each other, a process map as mentioned in Recommendation 2 could serve as an effective tool. International regulatory cooperation and observation from other countries undergoing similar regulatory reforms for environmental protection could also help serve as a source of inspiration for considering areas of clarity and harmonisation among legal texts.

The LUA could also consider adopting **standardised forms and processes**. The standardisation of procedures would assist in **reducing redundancies** within the system as well as enhancing efforts towards interoperability between systems. Standardising procedures would improve not only how operators navigate the system but could also strengthen the system's predictability in terms of what information was required at different steps of the process. Currently, the lack of co-ordination between regimes added burdens to operators in terms of how they engaged with the system.

From a technical perspective, a business is only allowed to carry out one process in LUA. In its subsequent version, more than one process from a business/ installation should be allowed given that complex industries might require permits in several phases or that some permits may take longer than others. The option to allow multiple processes in parallel can help industries plan their activities better and also save time instead of applying for permits sequentially.

A process map would also be relevant for aligning procedures introduced pre and post the LUA. Another issue mentioned by stakeholders regarding the current LUA was that there were also some misunderstandings regarding the timing and condition of different procedures. For example, regimes that came before the LUA had different time requirements and conditions than those that came after the LUA. For operators, these situations sometimes created illogical obstacles in the pursuit of their activities and added burdens when attempting to navigate them (e.g., a post-LUA procedure could only be issued if the pre-LUA procedure was issued first). In these cases, a process map could help with building an anticipatory

⁴ Feedback from external stakeholders indicated that some of the technical questions asked within the LUA would be benefit more substantially from *ex ante* site visits to facilities.

approach for both operators and the administration as well as and improve the identification of bottlenecks in the system to advance the simplification of the LUA.

Clarity should also be prescribed between different permitting actors and their involvement in supporting the regime. Though Portugal made a clear distinction between which regimes were managed by APA versus CCDRs, confusion sometimes arose between what was ultimately overseen by which authority and who was responsible for undertaking the decision. For example, in some regimes, CCDRs would be responsible for the oversight, but the decision and ownership of the procedure was prescribed to APA. These situations highlighted a need for better co-ordination in the system and to reduce duplication in efforts. Therefore, a process map could also be used to offer clarity in competences and diminish overlaps where applicable.

Recommendation 13: Improving guidance to support external and internal users.

In addition to the overall lack of clarity concerning the process, equal attention should be directed towards the system's need for **clarity in requirements**. **Guidance and tools for the LUA** should be prepared to support this development.

At present, there is no easy way to clarify questions related to the simulation. This is particularly problematic when the applicant is a small business or is applying for the first time. Due to lack of clear instructions, businesses might end up spending more time or even financial resources (such as external consultant) to complete the form and ensure their compliance. This reflects burdens on the operators as well as the authorities who do not have resources to spend in clarifying questions from operators.

From a technical perspective, APA and LUA developers could consider introducing more clarity in the simulations. Stakeholders find that the simulator is not always clear in the questions being asked and thereby leading to results that are not compatible with the specificities of the installation and/ or even legislation. The involvement of experienced technicians from the very beginning could be an added value.

To enhance clarity for external stakeholders, the implementation of both a **process map and supplementary guidance** can be instrumental in achieving this objective. One possible source of inspiration is the approach employed by IAPMEI and the comprehensive guidance they offer regarding the SIR, which has proven to be quite effective. It may also be worthy to explore other technical considerations, such as the development of a dynamic **FAQ section or the incorporation of a chat box function**, both of which can be invaluable in assisting stakeholders with system navigation. Currently, APA does have a technical help desk⁵ as part of the support it provides operators. However, effective guidance could alleviate the number of human resources that are currently provided to this service.

Even once the process is complete and once a permit is issued via LUA, it is accompanied with several requirements that an operator has to comply with. This is a complex document to understand. A consideration under this theme could also be to incorporate a **summary of technical details** from permitting processes. A **synthesised** and **user-friendly** version of this information could be developed so that it reduced burdens on operators to understand and would also make it easier for them to comply.

In addition to improving guidance for external stakeholders, there is also a need to **improve guidance for internal counterparts**. Conversations with stakeholders revealed that the only form of guidance available for onboarding new officials was a manual and ad-hoc support provided by APA when needed. APA should consider developing more hands-on trainings and materials to improve how officials engage with the system.

⁵ If the issue requires an in-depth consultation, the operator can also make an appointment with APA.

There is also a need to ensure that guidance materials are **routinely maintained** and **updated**. There were instances mentioned by stakeholders where modifications to the system were not duly reflected in the existing guidance, necessitating direct communication and clarification from APA. A similar observation was also made by external stakeholders on outward facing materials. In such situations, it adds to the burdens of trying to manage the system as well as advances the probability of unsolicited errors. In parallel with the planning of IT developments, a **systematic and regular update** of the guidance materials could also be instituted.

Recommendation 14: Routinely monitor and assess the LUA for effectiveness and efficiency.

To facilitate the development of LUA 2.0, it is essential for the LUA to consistently **gather performance data**. The implementation of a monitoring framework for the LUA could enhance APA's capacity to pinpoint technological weaknesses in the system and overlaps, ultimately enabling more efficient and precise solutions.

In the development of a monitoring framework for the LUA, several key considerations should be taken into account. Firstly, it is crucial to **establish** appropriate **parameters** for the monitoring framework. Given that the primary goal of the LUA is to streamline Portugal's environmental regulations, these parameters should gauge how effectively the LUA is **enhancing the efficiency** of the country's environmental protection system. In general, the framework's parameters should encompass both long-term assessment of impacts (3-5 years) as well as the achievement of short-term objectives (1-2 years).

Secondly, the indicators used to inform the performance framework should be **SMART**⁶ and **verifiable**. The indicators applied should connect to reliable data sources and have means for verification. Without access to the necessary information for verification, an indicator serves no practical means. Some practical examples of indicators that APA could consider could be the number of permitting applications processed, the duration required for processing applications, permit approval rate, types of permits requested, and permitting process costs.

Indicators selected for the performance framework should also **incorporate** the **perception of stakeholders**. Indicators such as “**user satisfaction**” or “**user perception**” of the system can offer insightful insights on the platform and improve its user-friendliness. In 2023, the OECD undertook a preliminary survey to measure user's perception of the tool thus far and observations from that study reported the following (a full list of the findings from the survey can be found in Output 2):

- 51% of respondents indicated that the LUA was significant in terms of cost reductions for environmental licensing processes.
- 50% of respondents indicated that the LUA responded to the needs of companies.
- Overall user satisfaction of the LUA platform by operators was 68%.

The realities of these figures highlighted that while LUA was a positive development to the regime, there was still considerable room for improvement. In this way, creating a framework for consultation complimentary to the monitoring component could also support user feedback back into the system. In conversations with stakeholders, the OECD already noted some technical considerations that could be made to the platform to improve its performance, and those are outlined in Box 3.2

Finally, **systematic reviews** and **reporting** of the **performance framework** should take place. These evaluations can happen either on a **bi-annual or annual basis** but should coincide with system updates to ensure that revisions are considered. The findings from the performance framework should also be

⁶ Specific, Measurable, Achievable, Relevant, Time-bound

reported publicly. Inspection authorities for example could benefit from the information on the environmental conditions of Portugal as well as offer more data and valuable information for the pursuit of their activities. It could also provide follow-up in terms of compliance concerning the licensing authorities' duties. In this way, annual reports could be developed to strengthen communication of the effectiveness of the platform and provide insights towards the conditions of the overall regime, more generally.

Box 3.2. Technical consideration to the LUAs as mentioned by stakeholders.

Based on conversation with stakeholders, the following observations were made in areas that the LUA could be adapted to better fit the needs of stakeholders:

- **Add a “save a draft” option of permitting applications:** a permitting application is only valid for the time that the web application window is open. In cases of inactivity, or if an operator must consult with another person within its entity, they risk losing their application and having to restart the process. Given that the LUA now consist of more than 200 questions, this can increase burden and stress of operators.
- **Allow for the correction of information:** In the LUA system, if an operator fails to complete a process correctly, they are neither alerted to the issue nor provided with an opportunity to rectify it. If APA decides to invalidate a procedure due to incorrect information, operators are subsequently required to restart the entire process. It is crucial to emphasise that operators are obligated to repay the associated fees each time their processes are cancelled. The lack of this feature adds additional burdens to both operators and public sectors.
- **Allow to have two ongoing processes within the LUA:** Operators have conveyed their inability to concurrently manage two ongoing processes within the system. The LUA system, by design, accommodates only one active process per entity. This has given rise to concerns among business stakeholders regarding the system's capacity to effectively handle “dynamic changes”.
- **The timing of industrial permitting and environmental licensing:** SIR processes permit applications significantly faster, leading to a misalignment of the required permits for the operation. This frequently results in businesses having to contend with operational delays. There should be considerations towards either alerting operators when all their permitting procedures have been approved and accepted or improving the communication between the two platforms so better oversight is given on the status of different regimes.

Recommendation 15: Adding new regimes to the LUA.

While reviewing potential areas for development within the existing LUA, the OECD also explored whether additional permitting regimes could be adapted to the LUA to improve efficiency of the system. In this respect, two possible options are proposed.

The **first option** is to incorporate regimes that have already **undergone dematerialization** in Portugal. In Portugal, this consideration applies to two regimes: the Electronic Sea Counter (BMar), which is related to maritime affairs, and the Registration of Livestock Activities (SI-REAP).

Adapting these regimes into the LUA could advance significant savings for operators. Box 3.3 provides a visual overview of what these savings would be. The adoption of these regimes within the LUA would be premised on the fact that these two regimes had, to a degree, contextual connections with environmental permitting for some of its schemes. Thereby, considering the integration of these regimes within the LUA

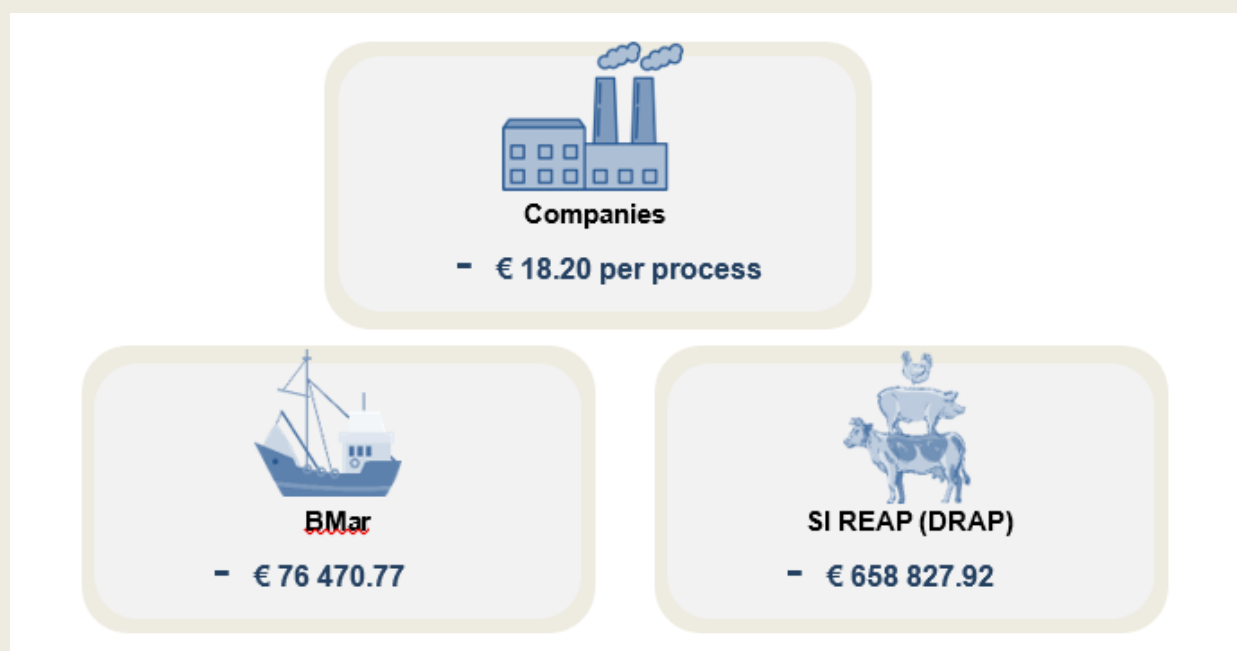
could improve a seamless transition between how permits co-ordinated with one another, and how this contributes to a more integrated system for operators. The relationship to be formed with the integration of these regimes would form a relation like that of LUA and Portugal's licensing platform, the SIR.

Box 3.3. OECD assessment on potential savings with additional regimes within the LUA

The OECD's analysis emphasised that the integration of BMar and SI-REAP into the LUA would yield substantial cost reductions for operators.

Based on the OECD's assessment, the integration of these regimes could lead to a cost saving of at least €18.20 per process. At the maximum, if this integration severed all companies currently under the regime, saving could be incurred of up to €76 470.77 for those currently under BMar and €658 827.92 for those under the SI REAP (DRAP).

Figure 3.2. Potential administrative burden reduction through harmonisation



Source: (OECD, Forthcoming^[14])

A **second consideration** could think about the **integration of schemes** that required environmental permits, when certain thresholds were approached. In Portugal, the following schemes had these related criteria:

- Exploration of mineral masses (linked environmental permit: AIA, IPPC, REAR, RH, ApR)
- Installation of gas pipelines (linked environmental permit: AIA, RH)
- Large commercial areas (linked environmental permit: REAR, RH, Waste)
- Construction of motorways and roads (linked environmental permit: AIA, RH)
- Tourist enterprises (linked environmental permit: AIA, REAR, RH, ApR, COV, Waste)

The **integration of these regimes**, however, would be technical and would need to be carefully managed so that no gaps or overlaps would be created within the permitting system of Portugal. As a result, the integration of these regimes should be carefully evaluated by APA and done in collaboration with other agencies recognising that it may result in changes of competencies. Inter-agency co-operation would be equally relevant for the preliminary option as well.

A final option, and outside of the scope of augmenting the LUA could be to consider a **single licensing portal**. Portugal currently has developed the *Balcão do Empreendedor*, which is one-stop-shop for economic activities certain licensing processes. Therefore, as Portugal prepares to make further changes to the permitting structure, it would be relevant to think about introducing a single platform, which could be harmonised and be branched out by all types of permits necessary for companies to operate, including those under the purview of municipalities.

4 Recommendations for improving performance: enforcement and inspections

This fourth chapter offers recommendations for enhancing the performance of Portugal's inspection regime. Much like Chapter 3, the suggestions in this chapter also stem from the considerations outlined in Sections 2 and 3 of this report. This section addresses how Portugal's inspection regime can be streamlined to improve efficiency, how communication between inspection functions and with customers can be enhanced, and how the inspection regime can establish a robust performance management system. In total, this section includes **five** recommendations that could be of relevance to Portugal.

Recommendation 16: Simplify Portugal's inspection landscape.

A distinct feature of Portugal's environmental protection regime is the number of inspections it conducts. Portugal has a four or five-fold typology of inspections that includes checking visits, fiscalisation visits, formal inspections and audits. These visits are supported by all different authorities of the regime and their competences can be defined in Box 4.1.

Box 4.1. Typology of inspections in Portugal

Below outlines the entities that are involved in Portugal's environmental inspections protocol:

- Fiscalisation checks are undertaken by APA and CCDRs.
- Formal and legal inspections are undertaken IGAMAOT and APA.
- Environmental audits are undertaken by IGAMAOT.
- Ex-ante visits can be participated by any relevant regional authority who is relevant to the permitting process (from the OECD's observation it was unclear whether IGAMAOT also participated in ex-ante facilities checks).

In 2017, the Portuguese administration tried to proactively address this challenge of a complex inspections regime by creating the National Plan for Environmental Inspection and Enforcement (PNFIA⁷). The plan's goal was to strengthen co-ordination in inspection planning within the administration and to optimize the use of resources. In certain aspects, the PNFIA has been viewed as a successful approach, as it has prompted initiatives such as the iFAMA platform.

⁷ The entities that are integrated as part of the plan are IGAMAOT, the five CCDRs, APA, its five Hydrographic Region Administrators (ARHs), the Institution for the Conservation Nature and Forests (INCF) and the Directorate-General for Energy and Geology (DGEG).

The iFAMA is a significant addition to the digitalization of the environmental regime. However, the system could be further benefitted if iFAMA has **interoperability with other systems** such as LUA. One step to facilitate is to allocate **a clear owner** to the PNFIA. This would help to stabilize the developments of the Plan but also improve how it is integrated across the regime. A clear owner of the PNFIA could also help with the **frequent monitoring of the Plan** and ensure that it was adding to a more effective and cohesive inspections landscape.

Opportunities to **streamline** Portugal's current inspection's structure should also be considered. While the iFAMA platform will improve internal oversight on the planning of the inspections, steps should be taken to improve efficiency of the regime and reduce the levels of enforcement that are imposed on operators. One potential approach to consider involves **merging inspections** with **the use of technical checklists** that cover various enforcement aspects. Alternatively, the regime could explore **self-assessment methods** to determine operators' **risk profiles** and the extent of necessary enforcement. The application of the latter could also foster trust within the system and improve efforts toward achieving greater compliance.

Recommendation 17: Routinely monitor and assess the inspection regime for effectiveness and efficiency.

As with the LUA, Portugal's inspection systems should also strengthen its performance framework. A performance framework for Portugal's enforcement regime can set and improve the authorities' objectives and address any technical gaps or weaknesses in the system that could be improved through additional resources or the application of more effective methods, such as **risk assessment**. Performance frameworks can also provide greater clarity regarding the collaboration among different actors in the regime, offering insights for potential streamlining that could boost the overall regime's efficiency (as highlighted in Recommendation 1)

For evaluation of inspectorates, performance metrics should begin with a **coherent performance goal**, that is based on various legal drivers and powers for environmental protection and improvement. The framework should then determine **the results** it aims to achieve, both over a **short- and longer-term period**, and what tools, operational activities, and powers it employs to support these outcomes. It is then possible to set outputs into that framework and the indicators that will be used to measure performance and progress. Indicators and the sharing of data, information, and knowledge should **align** with a **value chain** that **facilitates the evaluation of outcomes** and the contribution of individual officers and activities toward these objectives. Following this, the revised system should support these requirements. Well-trained and supported staff, appropriately motivated and rewarded, and instilled with trust, are then integrated into the state and organisational mission.

As a result, the performance framework of institutions should follow a model that supports communication between an Outcome, Output, Process, and Input model. Ultimately, the outcome of government objectives should lead authorities to determine whether their activities are performing effectively, and if not, determine what process or inputs are required to revise the system to improve efficiency.

Recommendation 18: Data and providing feedback to permits

The **data** collected from the performance framework for inspections should also be utilised to **offer feedback** on the environmental conditions governed by the regulatory regime. Insights gathered from these inspections can enhance oversight of the environmental conditions within Portugal and assess whether the legislative framework is genuinely contributing to environmental improvements. In cases where this is not the case, it is imperative for the government to **reconsider the legislative framework**,

and where required revise permits to ensure that their conditions encourage more environmentally responsible behaviour from operators.

As mentioned throughout this report, there is significant potential within Portugal's environmental regime to use **data more effectively** (see: Recommendation 9 and Recommendation 10). Recognising the amount of data that is collected within the system, it should be used more productively to improve the performance of the system. Inspectors should **aggregate data** from permits to understand the profiles of operator, while previous inspection records can provide insights into their compliance history. Environmental incidents and compliance records should be **utilised to inform the risk analysis of operators** and **determine the resources** and effort necessary for an effective enforcement exercise. As a result, there should be a focus on enhancing inspectors' performance through improved data utilisation.

Recommendation 19: Advance the feedback loop within inspections to strengthen efficiency of the function.

This report has already underscored the significance of effective communication in enhancing the coordination of Portugal's environmental system. Recommendation 3, from an institutional perspective, highlighted why engagement among all facets of the system was pivotal and how it could contribute to a more robust regulatory framework.

Feedback within the system, however, holds relevance not only for **planning** and **ex ante purposes** but also for the system's progression through **learning from past experiences**. Currently, in the Portuguese regulatory framework, it appears that once a project or inspection visit is concluded, there is a lack of follow-up to identify potential overlaps or establish precedents between other actors within the system. Some actors even indicated that on occasions when they were involved in initial stages, such as for emergency response, no subsequent feedback was provided, making it challenging to learn on a case-by-case basis. This could also signal a possible fragmentation within the regime where inter-agency co-operation is required to improve how functions and bodies are operating in the same domain.

Feedback within the system should not only adhere to a circular flow between functions of the system but should also **contribute to development** within functions. For inspections, the **sharing of inspection results** and how **complaints are addressed** can improve the systems understanding of potential risks as well as offer insights on how resources should be allocated. It can also **strengthen clarity** on levels of enforcement, by facilitating a comparison between cases. At present, the Portuguese inspection regime indicates that it does use information sourced from complaints as part of its planning of upcoming inspections, and this practice should be upheld. However, Portugal also noted that it responded to each complaint out of due diligence, and this exercised a significant use of resources. Over time, and as the risk system in Portugal matured, the analysis of complaints could be compared against a threshold of risk, and this could improve how operations of the systems were allocated and deployed Box 4.2. The threshold of risk could be informed based on **the analysis of the cases received** to the Portuguese enforcement regime and set of criteria that established between low-risk and high-risk criteria of urgency.

Box 4.2. A risk-based complaint management system

Citizens can play a crucial role in activities aimed at enforcing current legislation. Their complaints constitute an important source of information for improving risk identification and inspection planning. Therefore, hazard warnings should be considered as "free feedback" for regulatory authorities rather than additional workloads.

From this perspective, a risk-informed reporting management system (RMS) allows determining whether the contested issues are sufficiently serious to prejudice public interests. Furthermore, it enables assessing whether it is appropriate to immediately initiate investigations or, conversely, postpone inspections to subsequent oversight activities. A risk-informed system enables effectively organizing inspection activities. That is, it prioritizes checks related to cases that, after adequate evaluation, are deemed more serious and urgent. Consequently, inspection results are maximized to protect environmental and public interest.

The iFAMA platform will also play a critical role in the future for advancing communication within inspection bodies in Portugal. Alongside the planning of inspections, the iFAMA platform will improve the management of complaints by systematically assigning the correct authorities to oversee a compliant profile and will also improve how information is communicated. Results of all inspections will be submitted into the system and will allow for the 23 entities part of the system to review any documentation. This level of document sharing will be more advanced than what the OECD has observed among other IT platforms developed within the system. Inspectors will also have the leniency to upload new information as available to ensure that profiles will remain current. Thereby, in terms of IT infrastructure, there will be advancements for improving how feedback is received at the level of inspections.

Ultimately, however, the **delivery of feedback is essential**. As consistently emphasised in this report, promoting inter-agency cooperation, both between and within functions, is crucial for enhancing a unified system. Consequently, enhancing feedback exchange among inspection functions should be prioritized to prevent authorities from perceiving themselves as working in isolation. Instead, they should perceive their contributions as integral to an overall and more efficient regulatory framework.

Recommendation 20: Support a culture of compliance promotion and advance customer feedback

Effective communication is vital, not only for enhancing the internal functions of the system but also for upholding a transparent and efficient regulatory environment for external operators. Proficient communication with operators can enhance the system's performance, furthering safety in the regulated environment, fortifying quality control, and encouraging better adherence to regulations.

Operators complying with Portugal's environmental protection system should receive a higher level of service. The relationship between regulators and operators should be characterized by **guidance, collaboration, openness, and coordination**. However, presently, most efforts appear to adopt a rather inflexible approach to these inspections. The inspections observed by the OECD displayed a somewhat bureaucratic focus, concentrating solely on non-conformities and non-compliance, without considering the severity of the issues. A risk-based system can help direct resources towards promoting compliance rather than sanctioning violations.

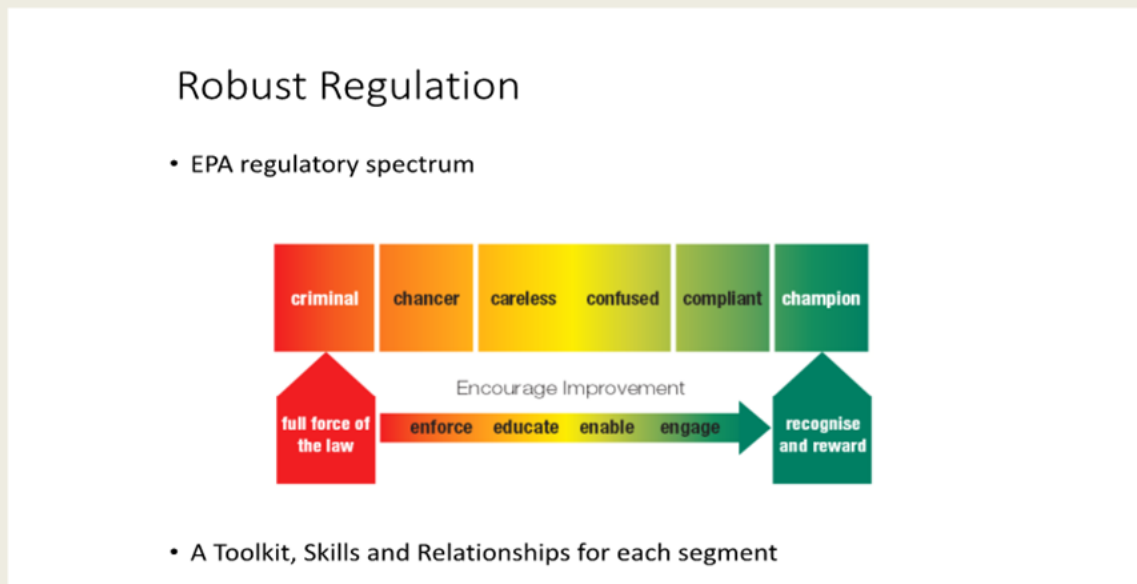
Stakeholder discussions reveal that businesses have to pay fines because of delays in reporting even when they substantially comply with legislative requirements (for instance on emissions). They also have to pay fines when there is a legislative gap (so called grey zones) and no clear guidance exists on how to address the gaps. In other words, the first action is to fine a business rather than support compliance.

As mentioned above, the more coordination and cooperation between the authorities, the more is the scope for developing a robust risk-system through mutual data exchange. Box 4.3 illustrates ways in which inspection and enforcement agencies can be more supportive than coercive in their actions.

Box 4.3. Improving compliance and strengthening regulatory communication

As Figure 4.1 demonstrates, strengthening compliance within the regime depends on the extent and how operators are engaged with. This engagement must be established from the very beginning of their interactions with the regime, and throughout the cycle of regulatory delivery. At the beginning of their engagement, guidance materials for example can help with how operators attain the right permits and abide by legal regime and following the delivery of permits, conditional reporting can also be used to strengthen the monitoring of environment conditions and inform areas of non-compliance. When inspections are granted, these should also be done in a co-ordinated manner, to minimise burdens on operators and to ensure that proper preparations are taken to streamline efforts of both the regulator and the operators. Finally, when inspections have been completed, operators should be briefed on the regulators' observations and all decisions depending on the outcome of inspections, should be informed to the operator in a timely manner⁸.

Figure 4.1. Red to green regulatory spectrum



Source: (Campbell Gemmell and Marian Scott, 2013^[15])

Ensuring there is effective communication throughout the regulatory delivery process is critical for promising that operators feel well-supported by the regime, and that they are not deliberately being driven to non-compliance. Risk-assessment is also a key element for operators to base their judgements of what is grave issue, versus what may have been an “honest” mistake. A prominent example of approaches that countries have employed to improve communications between what is acceptable and non-acceptable is the “name and shame” strategy which disclose the names of individuals, companies, or entities that have violated environmental laws or regulations.

Thus, as crucial as customer feedback is for operators, it also underscores the broader significance of enhancing communication within the regulatory framework. Effective communication among operators, between agencies, and throughout different segments of the system bolsters the regime's effectiveness, accountability, and efficiency, while also directing efforts toward achieving compliance. The aim of any

regulated framework should be to promote compliance, ensuring the co-existence of government priorities and economic activities in harmony.

Sector engagement between authorities who enforce different elements of the environment regime should also be established. As mentioned in different aspects of this report, the collaboration between entities within the regime can improve the socialisation of approaches and garner, respond to and shape industry views. Improving **inter-agency co-operation** can also advance insights on where there may be permit revisions required or where they may need to be greater clarity in the permitting system, for example in the LUA system and how it connects with the SIR or the general rule-making environment. This is a common practice and very successfully used in several jurisdictions from Scotland to Sweden, Ireland and Germany. The two functions between inspections and permits must also be closely linked to offer clarity when a change in one part of the system has implications on their own activity.

⁸ Ideally a breakdown of observations and issues of non-compliances should be communicated immediately post-inspections, however, in cases of uncertainty, these should be communicated ideally in a 24–48-hour window with proper documentation and evidence of non-conformance.

5 Conclusion

The recommendations outlined in this report address the imperative need to simplify Portugal's environment regime for ensuring achievement of environment protection outcomes. The report looks at recommendations in 4 distinct chapters relating to simplifying the environment protection regime, simplification of the permitting process, considerations for improving LUA and finally strengthening the interrelations between permitting (via LUA) and inspections processes.

In addressing the need for simplifying Portugal's institutional landscape concerning environmental protection, several key recommendations emerge in Chapter 1. Setting environmental objectives, and reforming institutional processes. Firstly, **setting clear environmental objectives** is important as it allows for monitoring and achieving short- and long-term environment goals. It can also ensure more consistency between the various policy levels. Simultaneously, efforts to **simplify Portugal's institutional structure** are crucial for streamlining operations and enhancing transparency. This can be done through for instance process mapping and enhanced coordination. Additionally, **simplifying Portugal's environmental legal regime** requires systematic evaluation and stakeholder engagement to identify ways to improve regulatory efficiency and effectiveness. Meaningful stakeholder involvement in environmental policymaking is essential for promoting transparency, inclusivity, and compliance within the regulatory framework. Furthermore, **advancing communication** and **cooperation** between environmental functions can foster accountability, efficiency, and knowledge sharing, ultimately strengthening Portugal's environmental protection regime.

The development of Portugal's environmental regime is contingent upon the availability of human and financial resources, yet challenges in maintaining these resources exist especially with growing shortage of experienced staff, and difficulties in attracting and retaining new talent. To reinforce financial resources, a **clear performance review** alongside resource management is essential. Recommendations in Chapter 2. Capacities, Data, IT tools and Risk-based approaches can improve the way resources are allocated and reduce burdens on public authorities such as through more **digitalisation, risk-based approaches** etc. Data can help manage existing resources better. Data-based tools can help streamline decision making processes. However, in the long run, **more integrating, harmonizing, and strengthening of IT tools** within the regime is needed which can improve data collection, interoperability, and overall efficiency. Risk-based approaches should be developed, and efforts should be made to integrate and learn from the various risk assessment methodologies across environment protection bodies within the regime to ensure coherence and effectiveness.

Recommendations in Chapter 3. Recommendations for improving LUA's capabilities focus on **leveraging data** from APA's permitting platform LUA. At present, LUA collects significant amount of data to run simulations for the permitting process. However, the data being collected can be put to more use including even **simplification of permitting** and making **inspections** more **risk-based**. LUA can contribute towards enhancing coordination between permitting and inspection functions. Integrating risk-based systems with existing IT tools can improve resource management without added costs. **Simplifying the LUA's processes, harmonizing definitions**, and providing **clearer guidance** can reduce complexities and burdens on operators. Monitoring the LUA's effectiveness through SMART indicators and stakeholder feedback allows for continuous improvement and ensures efficiency. These measures aim to optimize

Portugal's environmental protection regime, making it more responsive, user-friendly, and effective in addressing environmental challenges.

Chapter 4. Recommendations for improving performance: enforcement and inspections acknowledges steps that can be taken to improve inspections and permitting processes. Portugal's environmental protection regime features a complex inspection structure involving various entities and types of inspections. Efforts like the National Plan for Environmental Inspection and Enforcement (PNFIA) and the iFAMA platform aim to optimize inspection planning and resources. However, **further integration with systems** like LUA is needed. **Streamlining inspections** through technical checklists or self-assessment methods can enhance efficiency and trust within the system. The recommendations propose **monitoring and assessing inspection regimes**, utilizing **data** for **feedback** and **improvement**, promoting **inter-agency cooperation**, and fostering a **culture of compliance** through effective communication and risk-based approaches.

Overall, the recommendations set herein seek to deploy measures which can enhance Portugal's environmental regulatory framework, ensuring effectiveness, transparency, and cooperation between authorities and operators.

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Annex A. Stakeholders interviewed and documents referenced as part of this co-operation.

Box 0.1. Stakeholder we met with as part of the OECD's review of Portugal's environmental inspection activities.

In three separate fact-finding missions, the OECD interviewed with several stakeholders to assess and understand the environmental protection inspection regime of Portugal. Below is a list of the stakeholders that the OECD engaged with to develop this report:

Date of missions:

- 24 October – 28 October 2022 (Virtual)
- 21 November – 25 November 2022 (In-person, Lisbon, Portugal)
- 28 February – 3 March 2023 (In-person, Porto, Portugal)

Lisbon-based authorities

- Portuguese Environmental Agency (*Agência Portuguesa do Ambiente - APA*)
 - Operational team working on the Single Environmental Licensing Regime (LUA)
 - Operational team working on the co-ordination and reporting of the Integrated Pollution Prevention and Control (IPPC) permit.
 - IT team support the Single Environmental Licensing Regime (LUA)
 - Inspections and enforcement team overseeing water resources and water management of APA.
- The Agency for Competitiveness and Innovation (*Agência para a Competitividade e Inovação - IAPMEI*)
- The General Inspectorate of Agriculture, Sea, Environment and Spatial Planning (*Inspeção-Geral da Agricultura, do Mar, do Ambiente e do Ordenamento do Território - IGAMAOT*)
- Ministry of Environment and Climate Action (*Ministério do Ambiente e Ação Climática - MAAC*)
- National Republican Guard (*Guarda Nacional Republicana - GNR*)

Regional authorities

- APA-ARH North (*APA - ARH Norte-Porto*)
- Northern Regional Directorate for Agriculture and Fisheries (*Direção Regional de Agricultura e Pescas do Norte - DRAPN*)
- The Commission for Regional Development and Coordination (*Comissão de Coordenação e Desenvolvimento Regional*) of:
 - North (CCDR N)
 - Lisbon and Tagus Valley (CCDR LVT)
 - Alentejo (CCDR Alentejo)

Private stakeholders

- Private Sector, business associations, regional businesses
 - Confederation of Portuguese Business (*Confederação Empresarial de Portugal (CIP)*)
 - Lipor
 - An independent consultant in the area of environmental licensing
- ZERO - Associação Sistema Terrestre Sustentável (NGO)

In addition to fact-finding missions, the OECD also received the following information and documents from stakeholders in Portugal:

The following documents were also provided by authorities to strengthen insights:

From the Portuguese Environmental Agency (*Agência Portuguesa do Ambiente - APA*):

- Landfill monitoring committee regulation (*Regulamento De Funcionamento Da Comissão De Acompanhamento Do Aterro*)
- [Background information on IPPC verifiers](#)
- Presentation on the Single Environmental Permit and organisation set-up of APA
- FAQs on the Single Environmental Licensing Regime (LUA) (*Licenciamento Único Ambiental – FAQs*)
- Manual on the Single Environmental Licensing Regime (LUA) (*Licenciamento Único Ambiental - Manual de Apoio ao Simulador*)
- List of improvements implemented on the LUA platform (*Enquadramento relativo ao módulo LUA*)
- Data points on current environmental permitting cases in Portugal received by email.
- Presentation on APA's water enforcement

From the Agency for Competitiveness and Innovation (*Agência para a Competitividade e Inovação - IAPMEI*):

- [Responsible Industry Guide](#) (*Guia da Indústria Responsável*)
- Presentation on Industrial licensing - A case study in Better Regulation and E-Governance Electronic Administration / Dematerialization
- Information on the typology of Industrial facilities (Type 1, 2, 3)
- Sample of an ex-ante inspection report (*Auto Vistoria Sanitana*)
- Sample of a digital title of exploration (*Título Digital de Exploração*)
- [Video](#) on the new Environmental SIMPLEX model

From the the General Inspectorate of Agriculture, Sea, Environment and Spatial Planning (*Inspeção-Geral da Agricultura, do Mar, do Ambiente e do Ordenamento do Território - IGAMAOT*):

- IGAMAOT general description
- Decision tree for the IFAMA platform (*Árvore Decisão – Ambiente*)
- Presentation on environmental inspections
- Presentation on the assessment and accountability framework of IGAMAOT

From the Regional Directorate for Agriculture and Fisheries in Porto:

- Presentation on the operations of the organisation

From the The Commission for Regional Development and Coordination (*La Comissão de Coordenação e Desenvolvimento Regional - CCDR*):

- Document supporting the annual fiscalisation plan (*Plano fiscalização*)
- Notice (*Auto de Notícia*)
- Implementation of the monitoring plan (*Implementação Do Plano De Fiscalização*)
- Plan of fiscalisation of CCDR Centro (*Plano de fiscalização da CCDRC – PNFIA*)
- List of fiscalisation measures
- Proposed Order - Preliminary hearing stage (*Proposta de Ordem – Fase de audiência previa*)

- Infraction notice
- Surveillance report (*Relatório de fiscalização*)
- Letter requesting information on the designation and location of a company
- Service note
- Sample monitoring report
- Flowchart on the elaboration of an annual fiscalisation plan (*elaboração do plano anual de fiscalização*)

Documents gathered by the OECD:

- Presentation on the Environmental Simplex (*Ambiente + Simples Simplex*)

Decree-law n. 11/2023 of 10 of February - Reforming and simplifying environmental licensing (*Decreto-Lei n.º 11/2023 de 10 de fevereiro - Procede à reforma e simplificação dos licenciamentos ambientais*).

Annex B. Sample structure of the checklist

| | Non-conformity (1) | Partial conformity (0.5) | Full Conformity (0) | N/A (0) | Risk weight | Risk points (Risk weight*result) |
|-----------------------------|-----------------------|-----------------------------|------------------------|------------|-------------|-------------------------------------|
| Administrative aspects | | | | | | |
| 1.1 Subcategory | | | | | | |
| Item 1.1.1 | X | | | | 10 | 10 |
| Item 1.1.2 | | | X | | 10 | 0 |
| 2.1 Subcategory | | | | | | |
| Item 1.2.1 | | X | | | 7 | 3,5 |
| Item 1.2.2 | | | | | 0 | 0 |
| Water quality and treatment | | | | | | |
| 2.1 Subcategory | | | | | | |
| Item 2.1.1 | | | X | | 10 | 0 |
| Item 2.1.2 | | | X | | 5 | 0 |
| Water quality and treatment | | | | | | |
| 3.1 Subcategory | | | | | | |
| Item 3.1.1 | X | | | | 10 | 10 |
| 3.2 Subcategory | | | | | | |
| Item 3.2.1 | | | | X | 4 | 0 |
| Total risk points | | | | | | |

Note: Checklists can also be developed to address individual and specific environmental hazards. Environmental enforcement agencies must develop the amount of checklists necessary to cover all environmental sectors related to potential hazards from industrial activities under APA regulations.