



European Union Network for the Implementation
and Enforcement of Environmental Law

Nature protection in permitting and inspection of
industrial installations – Implementation of Art. 6(3) of
the Habitats Directive (phase 4)

*Guidance for environmental, nature protection and land use inspections in
or near Natura 2000 sites – quarries and open cast mining (part 1)*

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Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the EU Member States, acceding and candidate countries of the European Union and EEA countries. The association is registered in Belgium and its legal seat is in Brussels, Belgium.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building and exchange of information and experiences on implementation, enforcement and international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation.

During the previous years IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the 7th Environment Action Programme and the Recommendation on Minimum Criteria for Environmental Inspections.

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation.

Information on the IMPEL Network is also available through its website at: www.impel.eu



<p>Title of the report:</p> <p>Nature protection in permitting and inspection of industrial installations – Implementation of Art. 6(3) of the Habitats Directive (phase 4)</p> <p>Guidance for environmental and nature protection inspections of quarries and open cast mining in Natura 2000</p> <p>(IMPEL Guidance Document)</p>	<p>Number report:</p> <p>2017/19 (part 1)</p>
<p>Project Manager/Authors:</p> <p>Gisela Holzgraefe (DE), Project manager</p> <p>Antonio Vasquez Quintela (ES)</p> <p>Kate Bayley (UK)</p> <p>Andreja Slapnik (SI)</p> <p>Katica Bezuh and Brigitte Brigitte Čečatka (Cr)</p> <p>Constantin Hutupas and Dan Laurentiu (RO)</p> <p>Lia Mergulhão, Alexandra Magalhães, Ana Garcia, Ana Monteiro, Susana Pires (PT)</p>	<p>Report adopted at IMPEL General Assembly Meeting:</p> <p>Written procedure, May 2018</p> <p>Total number of pages: 84</p> <p>Report: 43</p> <p>Annexes: 41</p>
<p>Executive Summary</p> <p>The main purpose of this guidance is to provide support and guidance information on how best to ensure the consideration of environmental and nature impacts in inspection of quarries and open cast mining located in or near to Natura 2000 sites.</p> <p>The document is intended to be used by competent authorities, primarily inspectors, but can also be of interest to permit writers, nature protection agencies, sites managers, consultants, enforcement, experts and other practitioners involved in the planning, design, implementation or approval of quarries and open cast mining plans or projects, as well as other interested parties such as local communities, non-governmental organisations and international bodies.</p>	
<p>Disclaimer</p> <p>This report is the result of a project within the IMPEL network. The content does not necessarily represent the view of the national administrations or the Commission.</p>	



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1. Introduction

1.1. Objectives and scope

This report refers to IMPEL Project 2017/18, Part 1 - Guidance for environmental and nature protection inspections of quarries and open cast mining in Natura 2000, providing a general framework on inspections on Natura 2000 sites.

IMPEL Project 2017/18 covers also a Part 2, the development of a roadmap for the development of a planning tool concerning the risk assessment of inspection of Natura 2000 sites (including the option of using an adaptation of the existing IMPEL IRAM-Tool) Roadmap for a planning tool concerning inspection of Natura 2000 sites, considered in a separate IMPEL Report.

This report focuses on inspections on Natura 2000 sites, designated and regulated by European Union (EU) legislation, the Birds Directive¹ and the Habitats Directive² which are in, or close to non-energy extractive industries (NEEI). Natura 2000 network aims to establish a coherent European ecological network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II of the Habitats Directive, that shall enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. The Natura 2000 network shall also include the special protection areas classified by the Member States pursuant to Birds Directive. In most countries the designated Natura 2000 sites partially overlap with protected areas under national specific legislation.

The following terms outline different inspection-types, and are visualised in Figure 1 (EC, 2013)³:

(1) "surveillance" means a careful observation of circumstances that may disclose non-compliance with enforceable duties by duty-holders. This can be pictured as the outermost of three concentric circles and would cover circumstantial evidence (for example evidence of significant land-cover changes in a Natura 2000 site)

¹ Directive 79/409/EEC on the conservation of wild birds, amended by Directive 91/244/EEC.

² Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, amended by Council Directive 97/62/EC, Regulation (EC) No 1882/2003, Council Directive 2006/105/EC and Council Directive 2013/17/EU.

³ Towards an Upgraded EU Legal Framework on Environmental Inspections and Surveillance, 2013, DG ENV Discussion Paper.



(2) "inspection" means the examination of any aspect of an activity to ensure that such aspect(s) comply with enforceable duties. This is pictured as the middle circle (Figure 1), covering the examination of a specific activity

(3) "investigation" means an examination to determine the cause(s) of non-compliance with enforceable duties and correctly attribute legal responsibility for the non-compliance to one or more natural or legal persons. This is the innermost circle (Figure 1) and is particularly relevant to situations where a major challenge consists in identifying the person or persons responsible for non-compliance (for example clandestine land use in Natura 2000 location).



Figure 1: Different inspection-type activities (EC, 2013)

This report aims to better understand how inspections, in the sense of the 'middle concentric circle' in Figure 1, are undertaken in practice and to provide examples of best practices and inspection procedures from member countries.

Furthermore 'Inspection' under the scope of the present IMPEL project refers to both:

- Inspection of Natura 2000 sites or nearby areas, (as explored in Chapter 2)
- Inspections directed to specific installations of quarries and open cast mining, located in Natura 2000 sites or nearby areas (as explored in Chapter 3)



The focus of the report covers quarries and open cast mining (for production of stones, sand (pits), chalk, gravel, and other products for civil construction, industry, etc.), with the exception of marine areas and underground mining, activities integrated on the sector of Non-Energy Extractive Industry (NEEI). The phases of the NEEI sector that are analysed include prospecting, extraction, first processing of mineral rocks and closure activities. Further processing, such as refining, it is not included.



1.2. Background IMPEL Projects

This IMPEL (part 1) report, is a continuation of work undertaken during the IMPEL 2016 project on nature protection in permitting and inspection of extractive industry where aspects of inspection were already integrated.

The 2016 IMPEL Project Report 'Permitting and Inspection under Art. 6 (3) Habitats Directive - Quarries and Open Cast Mining (Experience in IMPEL Member Countries, Best Practice Examples)' covers the main steps on the implementation of Article 6 (3) of the Habitats Directive to quarries and open cast mining. It explains the potential impacts of those activities on nature and wildlife, the criteria for assessment of significance used on screening and appropriate assessment of plans and projects for their installation or change, the processes of permitting, monitoring, inspection and their restoration/rehabilitation after exploration. It also addresses the importance of strategic planning and management plans on Natura 2000 in relation to requirements of Article 6 (3) of Habitats Directive.

Other guidance which is also pertinent to this report includes:

- IMPEL guidance book 'Doing the right things (DRT)' developed in 2009, that provides direction on how inspection activities should be planned and performed
- 'Building up IMPEL nature conservation capacities', BINC 2013 IMPEL Project
- 2015 IMPEL Report on 'Permitting and Inspection under Art. 6 (3) Habitats Directive', namely the IMPEL guidance document concerning "Pig and Poultry Farms and Natura 2000", which includes a background guidance on the general application of Article 6 (3) of the Habitats Directive. 2014 IMPEL Report on "Permitting and Inspection under Art. 6 (3) Habitats Directive", the first one exploring the legislation requirements and its implementation, aiming to identify some main challenges.



1.3. Inspections under the framework of the Habitats and the Birds Directive

Neither the Birds nor Habitats Directive contain detailed inspection provisions. However, some articles relate to the inspection-type activities directed to Natura 2000 sites, namely (IEEP, Bio Intelligence Service and Ecologic Institute (2013))⁴:

- Checking compliance of projects with assessment provisions set out in Article 6(3) - (4)⁵ of Habitats Directive, ensuring the obligation of non-deterioration of sites under Article 6(2) (screening decisions, quality of assessments, alternatives) and related permits delivered (conditions attached there to concerning implementation of mitigation/compensation measures or monitoring requirements)
- Checking compliance with management requirements for Natura 2000 sites in accordance with respective management plans and designation acts set out in Article 6(1) of Habitats Directive
- Surveillance provided for in Article 11 of the Habitats Directive, of the conservation status of the natural habitats and species referred to in Article 2 with particular regard to priority natural habitat types and priority species.

The 'Recommendation of the European Parliament and of the Council of 4th of April 2001 providing for minimum criteria for environmental inspections in the Member States' (RIMCEI) does not include criteria

⁴ IEEP, Bio Intelligence Service and Ecologic Institute (2013). Information collection and impact assessment of possible requirements for environmental inspections in the area of EU legislation on water, nature protection and trade in certain environmentally sensitive goods.

Final report for the European Commission, DG Environment. Institute for European Environmental Policy, Brussels and London, July 2013. <http://ec.europa.eu/environment/legal/law/pdf/Final%20report%20inspections.pdf>.

⁵ Article 6 3. Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

4. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.



for the inspection of Natura 2000 sites. Nevertheless an environmental inspection⁶ can integrate aspects related specifically to nature conservation, as explored in chapter 3 of the present report.

Furthermore, in any type of inspection, it is important to consider the 'Expanded Environmental Inspection Cycle' designed under the IMPEL Project Doing the Right Things II⁷. The guidance book for planning of environmental inspections describes the different steps of the environmental inspection cycle pursuant to the RMCEI, summarised in Figure 2.

This report explores in more detail, the execution framework and execution and reporting (points 2 and 3 of Figure 2) on facilitating inspection, compliance checking through site visits, with guidance/good practices on inspections to Natura 2000 sites and specific guidance and checklist developed to support the inspection of quarries and open cast mining located in or near a Natura 2000 site. It also addresses some elements of planning, namely describing the context, setting priorities and defining objectives and strategies (points 1a, 1b and 1c of Figure 2).

⁶ RIMCEI states that an environmental inspection entails: (a) checking and promoting the compliance of controlled installations with relevant environmental requirements set out in Community legislation as transposed into national legislation or applied in the national legal order (referred to hereinafter as 'EC legal requirements'); (b) monitoring the impact of controlled installations on the environment to determine whether further inspection or enforcement action (including issuing, modification or revocation of any authorisation, permit or licence) is required to secure compliance with EC legal requirements.

⁷ <http://www.impel.eu/projects/doing-the-right-things-methodology/>

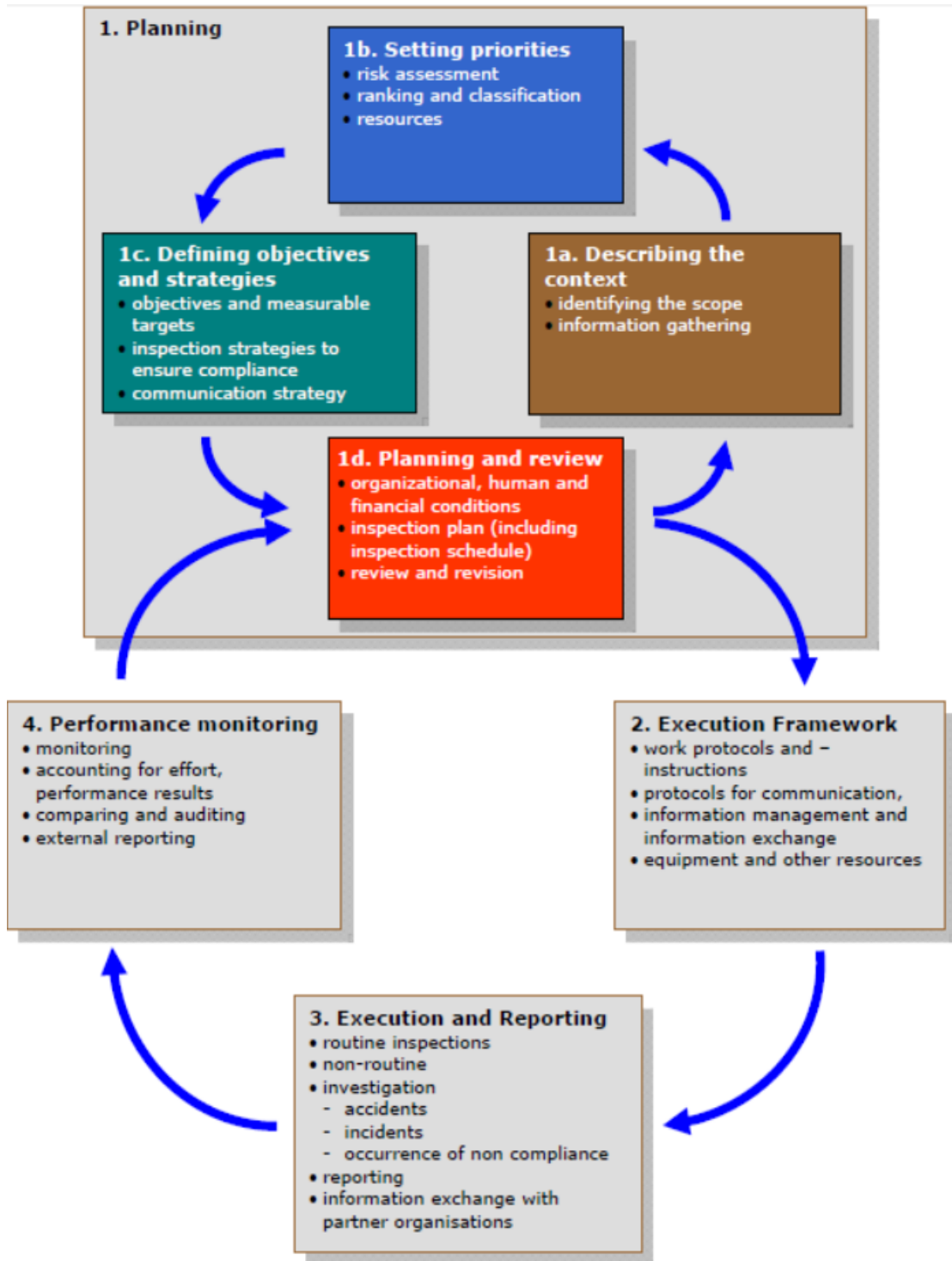


Figure 2: Expanded environmental inspection cycle designed under the IMPEL Project Doing the Right Things II



2. Inspection of Natura 2000 sites

2.1 Methodology for compliance inspections of land use with the National Spatial Planning for Nature Protected Areas – Portuguese Example

2.1.1 Definition of the goal: Compliance evaluation of spatial plans and regulations – framework and stages

The Portuguese General Inspectorate for Agriculture, Sea, Environment and Spatial Planning, IGAMAOT, has competences on performing environmental inspections of installations, but also on spatial planning and nature conservation, namely through:

- i) Evaluation of the support actions carried out by the public entities corresponding to the regulation, planning, monitoring, evaluation, inspection, supervision and surveillance of classified natural values.
- ii) Evaluation of the intervention and actions of public entities associated to the socio-economic activities developed in the protected areas (including Natura 2000 sites), such as forestry, mining, agriculture, livestock, hunting or fishing, among others.
- iii) Evaluation of active conservation actions triggered by public entities directed to the management of species, habitats, ecosystems and protected geosites.

This chapter describes the general framework and stages of IGAMAOT spatial planning and nature conservation inspections with the goal to evaluate compliance of land use with the National Spatial Planning for Nature Protected Areas, Public Reservoir, Coastal Zone and Estuaries and related regulations concerning Natura 2000, National Ecological Reserve, Ramsar Sites and National Forests. In this context, the aim of the inspection is not necessarily to check the compliance of the operators with the operating/environmental conditions set in the permit, but through the evaluation of the actions and procedures of competent authorities.

National Spatial Planning for Nature Protected Areas integrates spatial plans and regulatory instruments that:

- establish the land-use regime to protect natural resources indispensable for human life, species and



habitats and also the ecosystems that support them,

- consider areas that must have special protection due to natural and anthropological risks and/or for ecological and biophysical support, and that prevent harm to and safeguard natural assets and values.

The range of regulatory instruments established to guarantee national interest goals with spatial impact are considerable, and thus, it is necessary to have a risk assessment tool which will select targeted inspections to specific geographical areas, that can be under the jurisdiction of several authorities at national, regional and local level. Relevant criteria to consider within such a tool would be:

- Localization of most sensitive habitats and species
- State of environment (water, air, soil, ...), as well as of species and habitats
- Complaints and news clippings
- Results from previous inspections
- Pressure resulting from soil impermeabilization (construction rate) and human pressure (tourism, agriculture, construction for industry or residences) for soil land use change
- Spatial land plan aerial photography availability
- Existing Management Plans for that site
- Rate of enforcement actions and dedicated inspection plans
- Existing operators (installations under Industrial Emissions or Seveso Directives) and their environmental risk, also stated by IRAM tool⁸ (IMPEL Integrated Risk Assessment Method).

Annual inspection activities plans are prepared in the year prior to their implementation, and are previously approved by the Minister for the Environment.

After approval, inspections are performed according to the Portuguese Law that states all the stages to be performed, namely:

⁸ More information available at <https://www.impel.eu/projects/supporting-the-implementation-of-the-integrated-risk-assessment-method-iram/>.

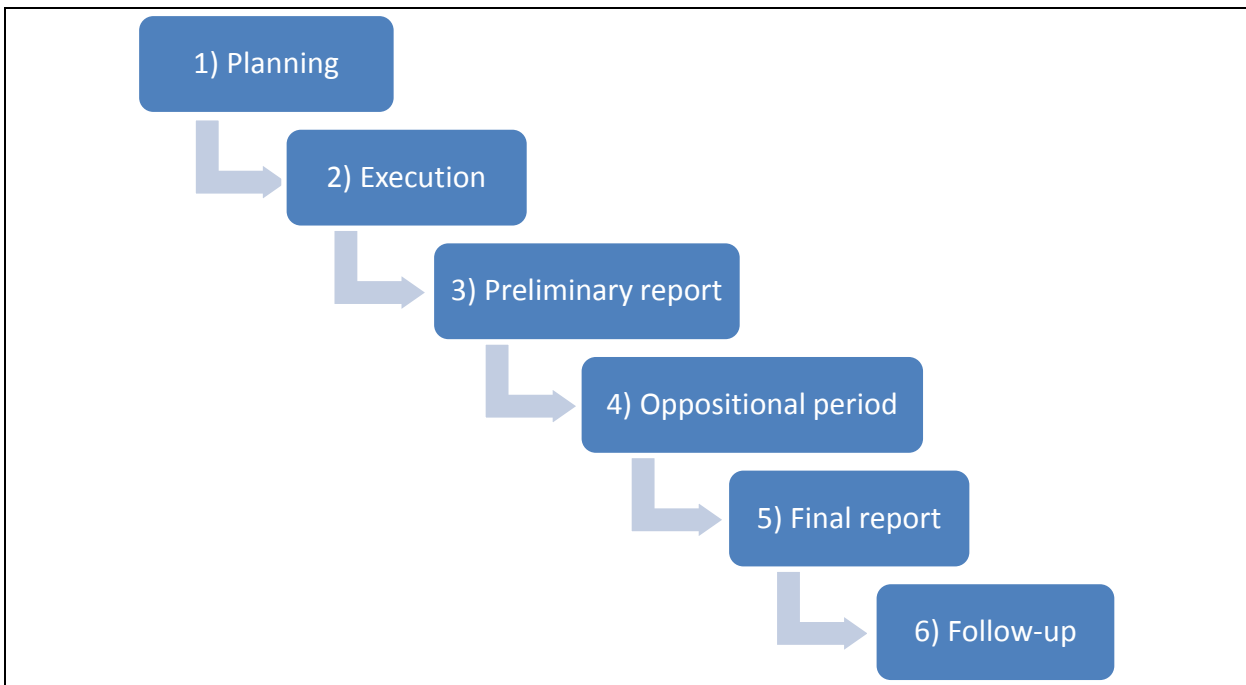


Figure 3: Stages of Inspection

2.1.2 Planning

2.1.2.1 *Define a framework methodology*

For each geographical area to be inspected it is necessary to obtain the official spatial planning plans that are applicable, preferably in a vector digital version. The first step on the preparation of the inspection implies the analysis of those spatial land plans, including regulations and drawing pieces, such as maps and plans, as well as management plans or other nature conservation measures such as the ones stated in Article 6(1) of the Habitats.

Inspectors must then develop a methodology to conduct the inspection, which has to consider, at a minimum, the territorial dimensions and timeframe of evaluation, authorities that need to be involved, and sampling criteria to select specific locations for activities or land uses to be inspected in detail.

At this stage the authorities with jurisdiction in the targeted area at national, regional and local level are informed that the inspection will occur, and its scope and objectives. The aim will be to request their cooperation, asking each authority to designate an interlocutor who will be the contact person through



the inspection period.

2.1.2.2 Sampling criteria in practice

i) Sampling criteria by spatial and temporal analysis on the specific area of study

Sampling criteria must be chosen in order to have a spatial and temporal analysis on the specific area of study that allows for an appropriate detection of all potential conflicts in land use.

Spatial planning plans, regulations and drawings must be analyzed in detail, selecting the most sensitive areas, those usually subject to more restrictions, according to degrees of protection, ecological and/or risk associated, as main targets for the initial scan. Examples could be locations with priority habitats and species in Natura 2000, areas at risk of erosion or flooding, areas for protection or recharge of groundwater.

When the sampling criteria and methodology has been decided, inspectors should produce a geographical information system (GIS) file, with the drawings of the spatial land plan and the aerial photographs of available years, usually using a time frame of at least five previous years. This period can be longer and it is dependent on the year of publication of spatial plans to evaluate from where specific restrictions entry into force. These two elements are overlapped in the GIS software in order to evaluate the evolution of land use in time, but also administrative boundaries – regional and local, roads, land use cover, etc.

The scale of the analysis in the GIS is usually 1:4000. Nevertheless, many times plans are produced in 1:10000 or even 1:25000, hence the digital and analogical information must be validated.

When possible, spatial plans and aerial photographs are obtained through national data repositories that integrate external geographical information, national and international, directly from the producer in real time, in web map services (WMP). National authorities that have competences under the Infrastructure for spatial information in the European Community (INSPIRE)⁹ and Copernicus¹⁰ systems are crucial producers of official information.

⁹ Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) (OJ L 108, 25.4.2007, p. 1).



The GIS software also allows a connection with Bing Maps, an open access tool available at the internet, which has an aerial photography coverage from recent years. Bing Maps also has some advantages, in that it is able to integrate GIS files, although for Portugal it has one coverage, from June/July of 2011. In some cases, it has proven useful as a complement to the official aerial photographs and the Google Earth coverage.

Inspectors can use ArcGIS for Server as its GIS software, but there are open sources and other free options that can be used, as QGIS¹¹, an open source GIS software. Another free software option is Google Earth¹² and more recently, Google Earth Pro¹³, as it has become free of charge. The possibility of using Google Earth comprises aerial photographs that go back at least 10 years in time. Ideally this methodology complements the use of a GIS software and official aerial photographs, impossible to manage for inspections with a broader area, for example a region, both in terms of the necessary software and hardware.

Google Earth allows many important features that support inspectors, such as the use of digital “pins” to locate a certain place in a map, but also drawing polygons and marking areas where a land use change potentially occurred.

Spatial planning has its own rules defined in the associated regulations. Inspection methodology consists of the spatial-temporal analysis of aerial photography, especially in sensitive areas searching where changes in land use shows differences that potentially conflict with rules set in the territorial planning legislation or other regulatory instruments. Thus, the aim is to identify “potential situations” that need to be further investigated to verify the compliance of these activities/land uses/constructions with the rules set in the spatial plan’s regulation.

If these ‘situations’ are great in number, for example over 50, and/or quite complex, inspectors can decide on further criteria for sampling in order to reduce their number. In cases where the number of potential situations is lower, for example less than 20, inspectors can decide to expand the spatial

¹⁰ Regulation (EU) No 911/2010 of the European Parliament and of the Council of 22 September 2010 on the European Earth monitoring programme (GMES) and its initial operations (2011 to 2013) (OJ L 276, 20.10.2010, p. 1) and COM (2013) 312 on a proposal for a Regulation of the European Parliament and of the Council establishing the Copernicus Programme and repealing Regulation (EU) No 911/2010.

¹¹ www.qgis.org/

¹² <https://www.google.com>

¹³ Accessible through <https://www.google.com>



analysis to other less, but still sensitive, areas of the plan. Thus, the previously described scanning procedure is then replicated to such areas of the territory.

The images below illustrates an area of activity that existed in 2003, the year defined as the first of the time interval. Between 2006 and 2009 there is an expansion of the sandpit towards the west, as well as the construction of a building on the south-east limit. Between March and October of 2009, the sandpit extends north-west, and continues to expand until the last image, from 2013.



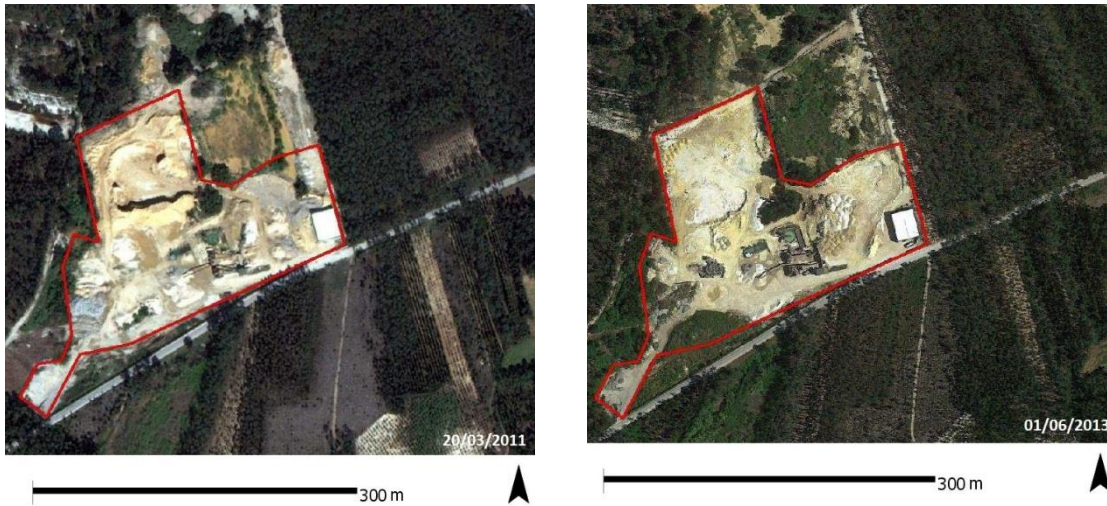


Figure 4: Images from Google Earth (date on the image)

Once all of the most sensitive areas have been scanned, the inspectors must decide on the relevancy of situations and which will or will not be pursued. To support such selection, it is important at this stage to check the aerial data to the field, taking photographs and confirming the exact location of existing activities/land uses/constructions.

Experience has shown that a team of two inspectors can validate usually between 50 to 100 'potential situations' with fieldwork, depending on accessibility, in a week.

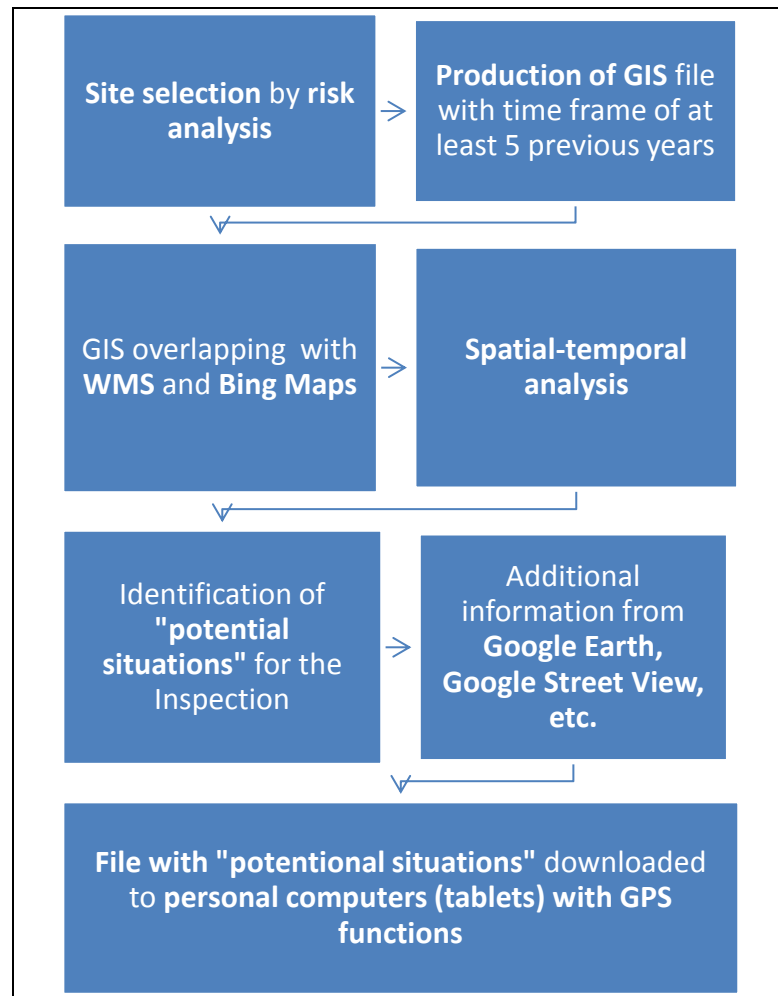


Figure 5: Sampling criteria and using of available maps and tools in practice

The use of Google Street View¹⁴, an open access tool available on the internet, might also be important to validate some of the 'potential situations', as shown in Figure 10. In the past few years this tool has also acquired value as now more the one street view coverage is available, and in some cases with approximately four years' coverage.

¹⁴ Accessible through <https://mapstreetview.com/>.



Figure 6: Image from Google Street View (dated from February 2010)

Recent developments allow the use of new systems with tablets that can be loaded with GIS information prior to field work. These tablets have a GIS software into which, the 'potential situations' are added. The tablet has a global positioning system (GPS) which allows the inspection team to identify the exact coordinates of potential situations, as well as viewing the GIS file that was produced in the office. It is also an important tool to take, save and organize photos.

In the field work each potential situation is validated and a second check includes a quick assessment of its conformity to the land-use plan regulations. If the team considers it might not be in line with the rules of the plan, the situation is photographed.

In the field, the inspection team checks for new situations, usually those that were produced after the last aerial photograph, but also that might not have been visible through this spatial analysis. These new situations have to be not only photographed, but also identified in terms of spatial positioning, either by marking it on a map or by determining its geographical coordinates with GPS.

When in the course of any inspection, a situation is thought to lead to the chance of serious injury to the public interest or serious danger for the health, safety of people and property or environment are detected, the inspection team must immediately inform the Inspector-General, and propose the adoption of preventive measures that deem appropriate to prevent or eliminate the situation.



The provisions of the previous paragraph shall also apply:

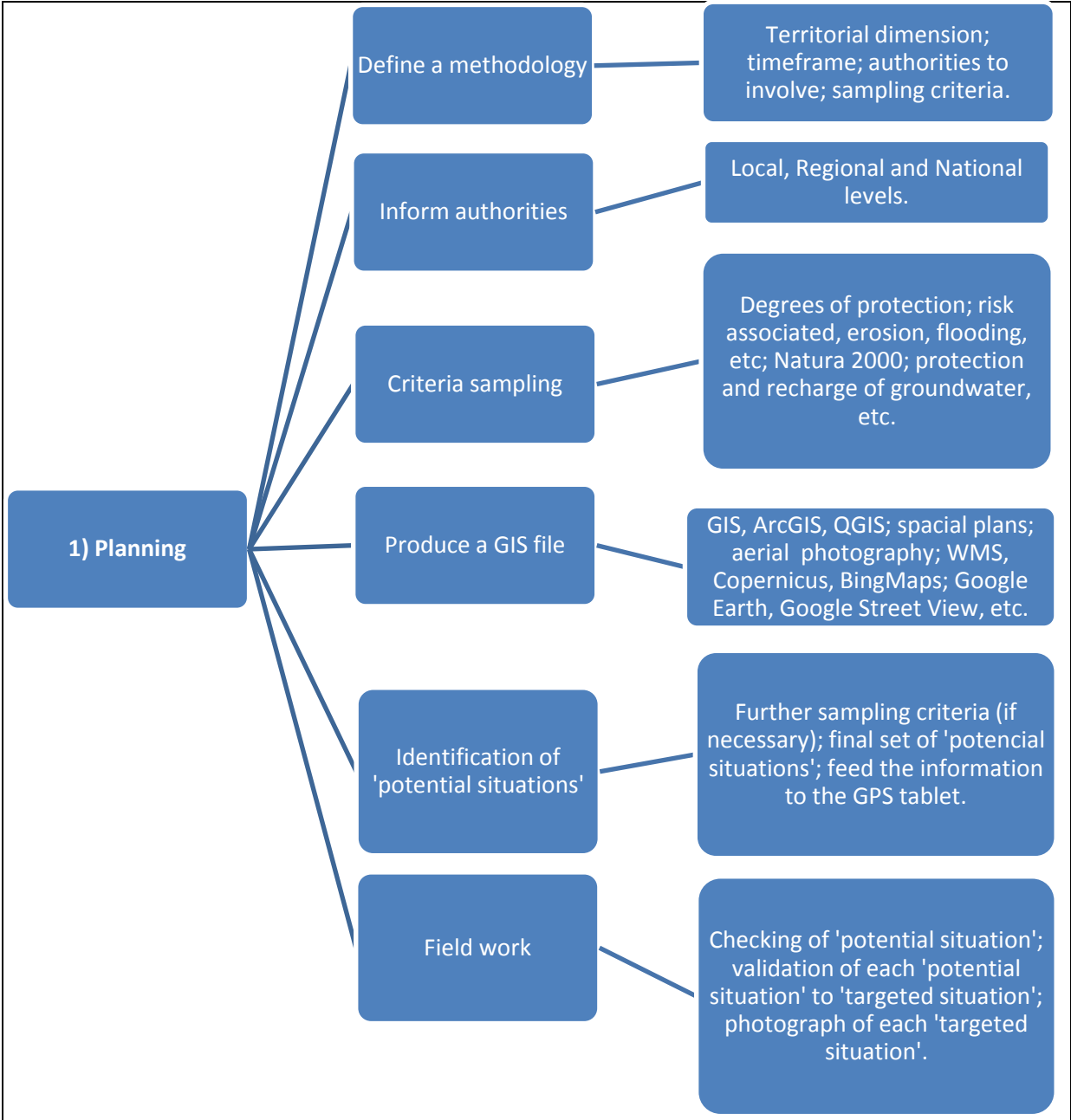
- If it is necessary to adopt precautionary measures, in the development of any inspection action related to the area of intervention of the environmental control system
- If the situation violates legal provisions that allow the determination of embargo, demolition or cessation of uses or actions.

Protocols and cooperation with other authorities that have boats or special road vehicles to access locations with difficult accessibility, are of major importance. This field work can be done jointly with the inspectors but if this is not possible there must be a procedure in place to ensure these authorities are informed of the scope and aims of this visits and necessary items to be reported, including photographs and measurements.

Recently, there is complementary related information that can be acquired through Unmanned Aerial Vehicles (UAV - Drone) for more detailed and specific information on site. This information supports the aerial images, especially in areas with difficult accessibility.



INPUT: information about territories, species and habitats; spatial plans, management plans, land use plans, available maps; software; on-site information etc.



OUTPUT: 'targeted situations' for the execution

Figure 7: Planning stages of the inspection in practise



ii) Sampling criteria by analysis of proposals on the specific area of study in a specific time frame

If the purpose of the inspection is to study in depth the administrative procedures and final decisions concerning the regulatory instruments, another sampling method might be the analysis of the databases from competent authorities to extract information on administrative processes.

Thus the aim, will be always to identify 'potential situations' that need to be further investigated to verify the compliance of the acts of the public administration concerning proposals for activities/land uses/constructions, with the rules set in the spatial plan's regulation.

In this case the sample will be selected amongst administrative processes on:

- Screening and appropriate assessment of new and changes to existing situations
- Permitting
- Monitoring compliance with the permit
- Inspection
- Prosecution

As main targets for the initial sampling, it is relevant to consider situations located on the most sensitive areas, usually subject to more restrictions, according to degrees of protection, ecological and/or risk associated, by analysis in detail of spatial land plan regulation and drawings. Examples can be locations with priority habitats and species in Natura 2000, areas at risk of erosion or flooding, areas for protection and recharge of groundwater.

Further criteria applied can take into account criteria such as:

- Area occupied and dimension/extracting capacity of the 'situation'
- Representativeness of processes with screening and appropriate assessment, permitting of new and changes to existing situations, with favorable/unfavorable/exemption decisions
- Analysis of representativeness of compliance monitoring with the permit processes, taking into account just permitted and executed plans and projects
- Analysis of representativeness of inspection and prosecution processes, taking into account permitted, not permitted and exempted situations and results from previous inspections and prosecutions.



2.1.3 Execution

2.1.3.1 Determination of “targeted situations” and individual file templates

After the field work the team returns to the office to validate the information collected. The information stored on tablets and other equipment must be downloaded to computers. Ideally inspectors have the potential to work on shared folders and files where information is available for the team to facilitate joint work.

Once the team has all the information, a final assessment of all ‘potential situations’ is made, deciding on a final set of ‘targeted situations’ by the inspection. At this stage senior managers should be informed of the methodology, time line, resources required and the set of ‘targeted situations’, in order to gain approval.

Following approval, individual file templates are developed for each ‘targeted situation’, an example of such is provided in Annex 1. These individual file templates consist of all the images and data that characterize the situation in terms of activity/land use/construction and geospatial location, also under the jurisdiction of spatial plans, and integrate a written questionnaire considering all the information necessary for the evaluation of compliance, namely:

- legal property of the land and legal responsibility of activity/land use/construction
- validation of applicable restrictions under spatial land plans and regulations
- permits or administrative decisions issued by authorities, and associated administrative procedures
- inspections and prosecutions

These individual file templates are sent to the designated contact person for completion by the authorities which manage the territory on national, regional and local levels, namely authorities with competences on land use, water resources and nature conservation management, planning and permitting. The procedure should ideally be digital, being the individual file templates sent by e-mail or a web platform in a format that can be edited by authorities. Authorities will then fill the files and return them through the same route, making this process simple, quick and avoiding printing and use of CD’s to store information.



The answers provided by authorities in digital files, are compiled into an inspection record, one for each situation, with all the information from all the entities involved in this inspection. This data then requires verification for its coherence across all authorities.

After this, and during the next inspection stages, the inspector will fill IGAMAOT's validated and final version of each individual file template, including other items such as:

- characteristics of the activity
- material facts and evidences
- legal analysis, conclusions and recommendations

2.1.3.2 Consultation of authorities administrative processes and procedures

The next stage includes a visit to each authority to consult on all the administrative processes associated with each 'targeted situation'. For some authorities, a physical visit might not be necessary, for instance if their relation to the analyzed situations is collateral, for example because their intervention is related to a non-crucial part of the activity, providing funding for tourism or agriculture activities. In these cases, information concerning individual processes and general questions/topics can be requested and provided by writing. Processes (or parts of it) can be sent to IGAMAOT for consultation in a digital form.

A visit is normally pre-scheduled with the authorities' contact person, with a set agenda, list of processes to be consulted on, and questions/topics to further explore, either general or individual administrative process related.

This visit is also an opportunity for the inspectors to establish a dialogue with the authorities, explaining the aim, scope, methodology and authorities involved in the inspection

During the visit the inspectors question the responsible persons from authorities, in order to fully understand, during the time frame period for analysis, the evolution of the main strategic and operational administrative procedures in use for permitting and their own inspection, also including information technology (IT) tools and support instruments in place to store and treat (geospatial) data, and cooperation with other authorities and also understanding how monitoring of conservation status of habitats and species is done in practice, both for the Natura 2000 site and for a specific location where a



plan or project applies. Questions must be posed to the responsible persons for the authority, to ensure feedback which will further analyze any inconsistency found in the answers provided by those authorities when filling the individual file templates.

The respective administrative processes are swiftly analyzed according to a check-list that should ensure that main documents that must integrate each process are detected. Ideally the administrative process is totally or partially (more relevant parts) digitalized in an organized IT database and the inspectors will bring those copies, ensuring they are faithful to the original signed documents. Another possibility is for inspectors to request the physical processes for consultation for a previously agreed period of time.

The check-list with documents to be consulted includes all the relevant documents that must integrate an administrative process, with important content such as:

- Screening and appropriate assessment (that can be integrated on Impact Assessment) procedure: requirements and projects and plans sent to authorities for approval, according to requirements from national legislation; administrative decisions for screening procedure or its exemption and main fundamentals and criteria applied, including significance of and cumulative impacts and alternatives administrative decisions for appropriate assessment procedure or its exemption and main fundamentals and criteria applied, including significance of and cumulative impacts and alternatives
- Permit: requirements and projects and plans sent to authorities for approval; administrative decisions for (des)approval and main fundamentals; approved projects and plans, including drawings and specific location; permits; legal documents that certify the legal ownership of property and activity
- Monitoring compliance with the permit: all documentation related to follow-up performed by legal owners or responsible for activities and authorities that intend to ensure compliance with dispositions set by the relevant permits, during its construction, operation and closure, including mitigation and compensation measures in every season of the year (for instance with special requirements during breeding season for birds)
- Inspection: inspection reports and administrative, civil or criminal legal measures and sanctions taken for enforcement, such as infringements and penalties/fines; revocation or change of the permit; prohibition of the activity or setting new additional conditions within a permit; order for rehabilitation measures; risk assessment criteria for selection of inspections targets



- Prosecution: decisions taken by Public Prosecutors and Courts following infringement notices and administrative, civil or criminal legal measures proposed by authorities to prevent, correct, sanction and remediate infringements and environmental harm
- Treatment of complaints, accidents and incidents.

The inspection might include site visits, and when necessary, accompanied by authorities when their expertise is of most relevance, for example monitoring compliance with permit conditions that require specific knowledge of mitigation, compensation and monitoring requirements, plans and projects approved, and nature conservation related dispositions to named habitats and species.

2.1.3.3 Completing individual file templates

Back at the office, with all the available elements, the inspectors must now analyze all the available information, namely extracting the material facts and their compliance with legislation, spatial plans and associated regulations. At this stage it is still possible to request for more information from authorities, if necessary, to ensure all relevant facts, documents and information are in possession of inspectors. The analysis consists of a series of steps, in which:

- i) Firstly, the situation is analyzed to check if the activity/land use/construction needed a permit procedure. If it does and no permit procedure took place, then it is potentially illegal and it will be further investigated.
- ii) If it has been subject to a permit procedure, the analysis reviews it, in order to determine if legally binding requirements and specific conditions stated in the permit are fulfilled. In this case the situation might be legal or (partially) illegal, according to compliance with rules of the spatial plans and permits.
- iii) When the situation is considered illegal, although it has a permit, this means that either:
 - the permit procedure did not fulfill relevant legally binding requirements that were in place to ensure environmental protection. In this case the authority(ies) have failed on complying legal requirements, hence the permit is illegal and it must be declared null, either by the authority who emit it or, if these authorities disagree with such conclusion, by a Court of Law (usually Administrative)



- the legal entity responsible for the activity/land use/construction, is not complying with permit conditions, totally or partially, and therefore is infracting the law and must be sanctioned. Many times the authorities already detected it and are taking enforcement actions.

If the situation is considered illegal and there is no possibility that it will come into compliance with spatial land plans and regulations (for instance through an administrative procedure that could make this evaluation, a prediction of Portuguese Law), it might be necessary to return the affected area to the previous state, before the illegal activity/land use/construction occurred. If it is still under construction, there are several inspection procedures that must take place in order to stop it, in close cooperation with the competent authorities and whenever necessary the Court of Law.

On each file template, the inspector will describe the facts, analyze them according to the regulation of the plan and concludes about the compliance of each situation, stating in general the follow up necessary measures.

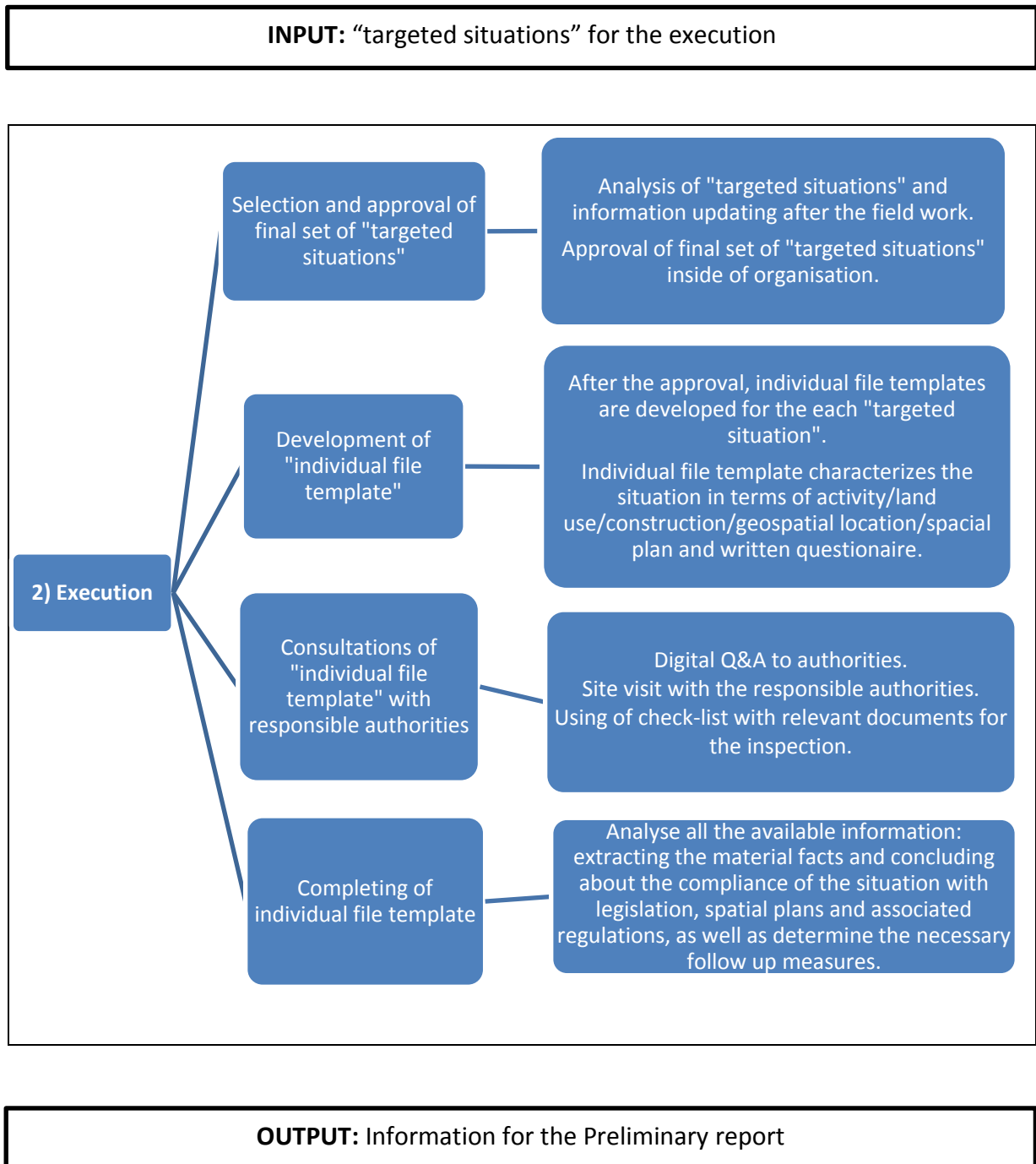


Figure 8: Execution stages of the inspection in practise



2.1.4 Preliminary report

At this stage a preliminary report is produced. Usually the report integrates two volumes (Volume I and II) and respective annexes:

- the first Volume (I) is the main body of the report, including the aim, scope, methodology, sampling criteria and process, a synthesis of main findings and conclusions and recommendations and follow up measures with respective addresses and a timeline for their fulfillment
- the second Volume (II) is a compilation of all the individual file templates filled by inspectors for each 'targeted situation'
- Annexes from Volume I and Volume II, comprising documents that are important to demonstrate main findings and reported facts.

<p>The first Volume (I) has the following chapters:</p>	<ul style="list-style-type: none"> • introduction • framework (scope/purpose of investigation and territorial/legal framework) • report structure explanation, methodology (including sampling) and constraints • compliance assessment (legal compliance of the situations and violation of land use regulation, with or without permit) • conclusions • recommendations and follow-up measures directed to authorities to ensure full compliance and restoration of affected areas, when necessary. <p>- Such recommendations can also be directed to the improvements of administrative processes, procedures or activities or to legislation and regulation, through a fundamental analysis that thoroughly explains the need for it.</p> <p>- These recommendations should arise from the identification of obstacles and root causes that hinder a good application of the legislation and provide proposals on possible solutions to address them. They can be directed to specific authorities or even Ministries. Recommendations can address subjects such as the availability of relevant information between authorities, criteria for screening and appropriate assessment, quality of information provided by operators, streamlining and integration of permits, licenses or approval procedures, and the availability of analysis of monitoring of compliance by operators and inspection procedures, performed by different authorities, according to legislation and cooperation in practice.</p> <p>- The recommendations and follow up measures will take place and be accompanied by inspectors after the report is collated, usually by the Minister(s) of Environment, Nature Conservation and other areas on the scope of the report.</p>
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The second Volume (II) includes:	<ul style="list-style-type: none"> • an introduction explaining its content; • one chapter for each 'targeted situation'.
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In Volumes I and II, 'targeted situations' are only identified by numbers. The identification of legal property owner of the land and legal responsibility of activity/land use/construction are identified in relation to period and time frames and dates. These data are also compiled in a separate file for each numbered situation together with associated nominal data. This separate file is available only to involved authorities and Court of Law.

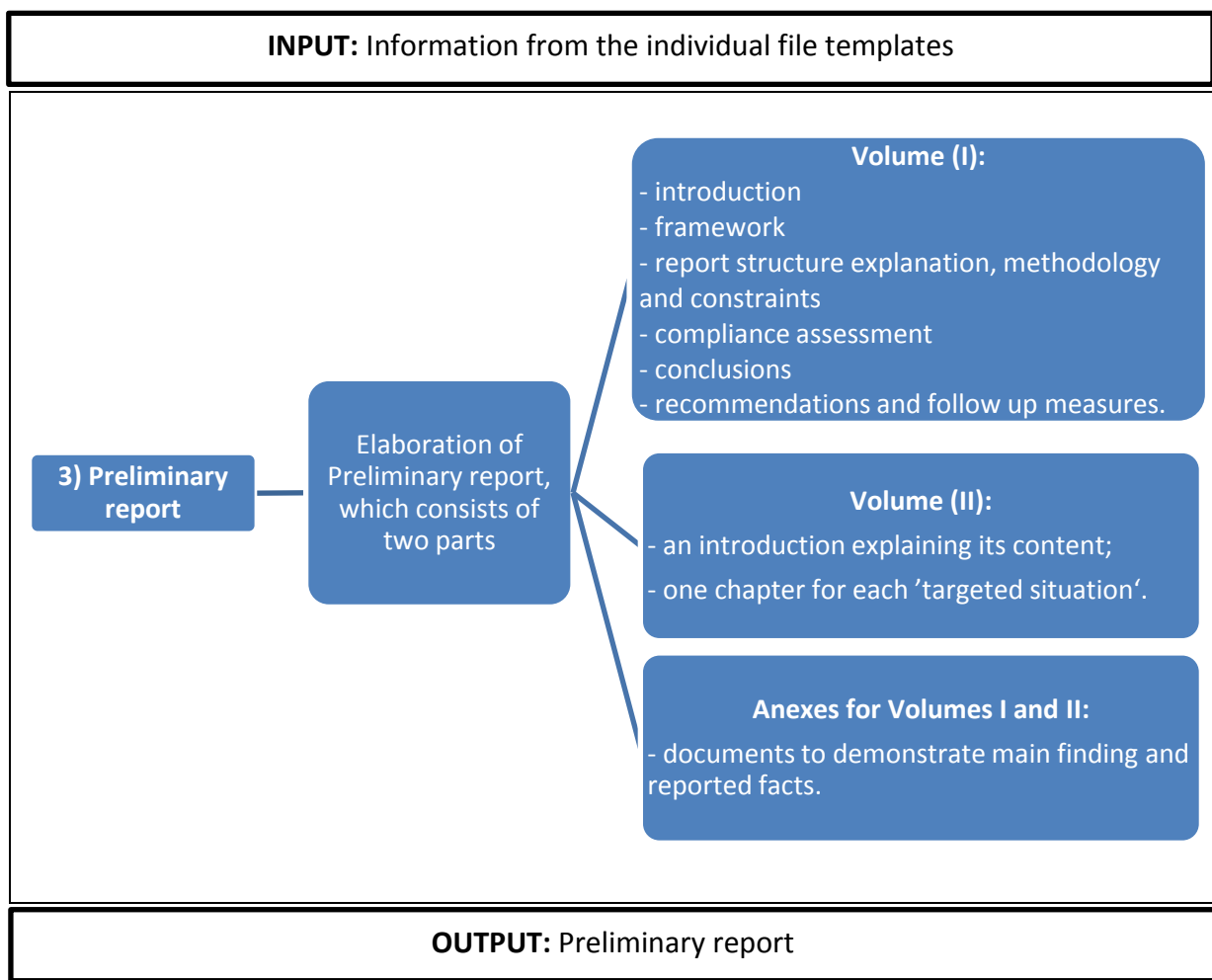


Figure 9: Preliminary report



2.1.5 Opposition period

When the preliminary report is completed, it is submitted to senior managers and afterwards to the General Inspector for approval. Once approved, the preliminary report is sent, ideally in digital format, to all the authorities that were involved in the inspection.

These authorities will have 30 working days to exercise their right of opposing to any part(s) of the preliminary report, presenting detailed arguments, data and documentation that must be considered by the inspectors before the emission of the final report.

After this opposition period, the inspectors gather all responses, and produce an internal document in which all the information provided by authorities is analyzed in detail. The inspectors must fundamentally decide if each proposed change is acceptable or not. This document is submitted to senior managers and the General Inspector for approval. Once approved, the preliminary report must be altered according to approved changes, and the final report is produced.

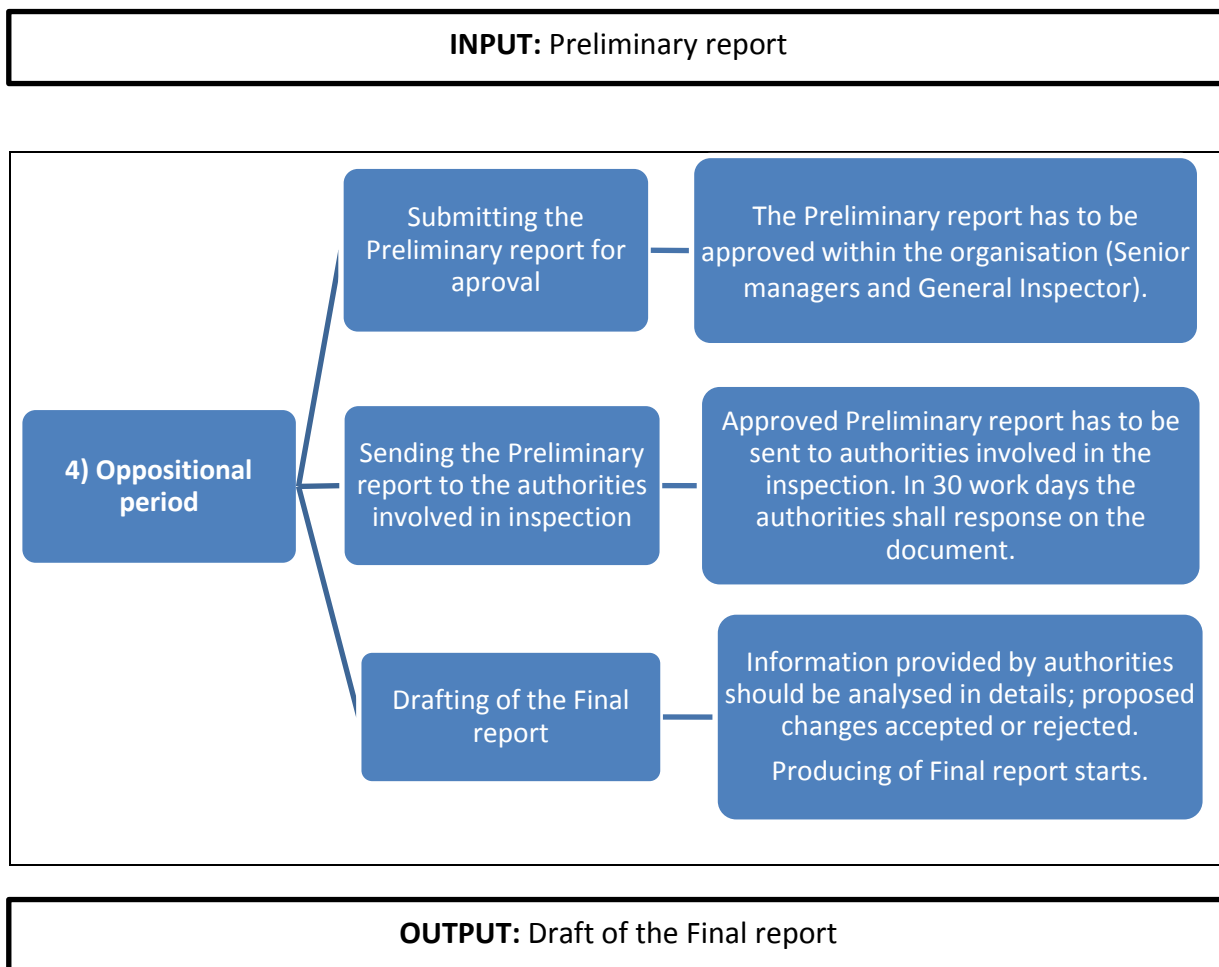


Figure 10: Oppositional period in practise

2.1.6 Final report

The final report is submitted to senior managers and must be approved by the General Inspector. After approval it is sent, in digital format, to the relevant Ministry (-ies) for ratification, according to authorities identified by the recommendations. After Ministry ratification, it is sent to all the authorities that were involved in the inspection, providing 60 working days to inform them of measures that must be taken to fulfil the recommendations that were addressed to them.

This may also be sent, in part (a dedicated report with relevant content), to a Court of Law if the report contains information about illegal situations where the permit requirements are not fulfilled to ensure environment protection. In these cases, the authority (-ies) will have failed to comply with legal requirements and decided not to declare its nullity, so will be referred to the courts to make a



final decision. For all other illegal situations, the enforcement¹⁵ procedure must be promoted and followed by competent authorities.

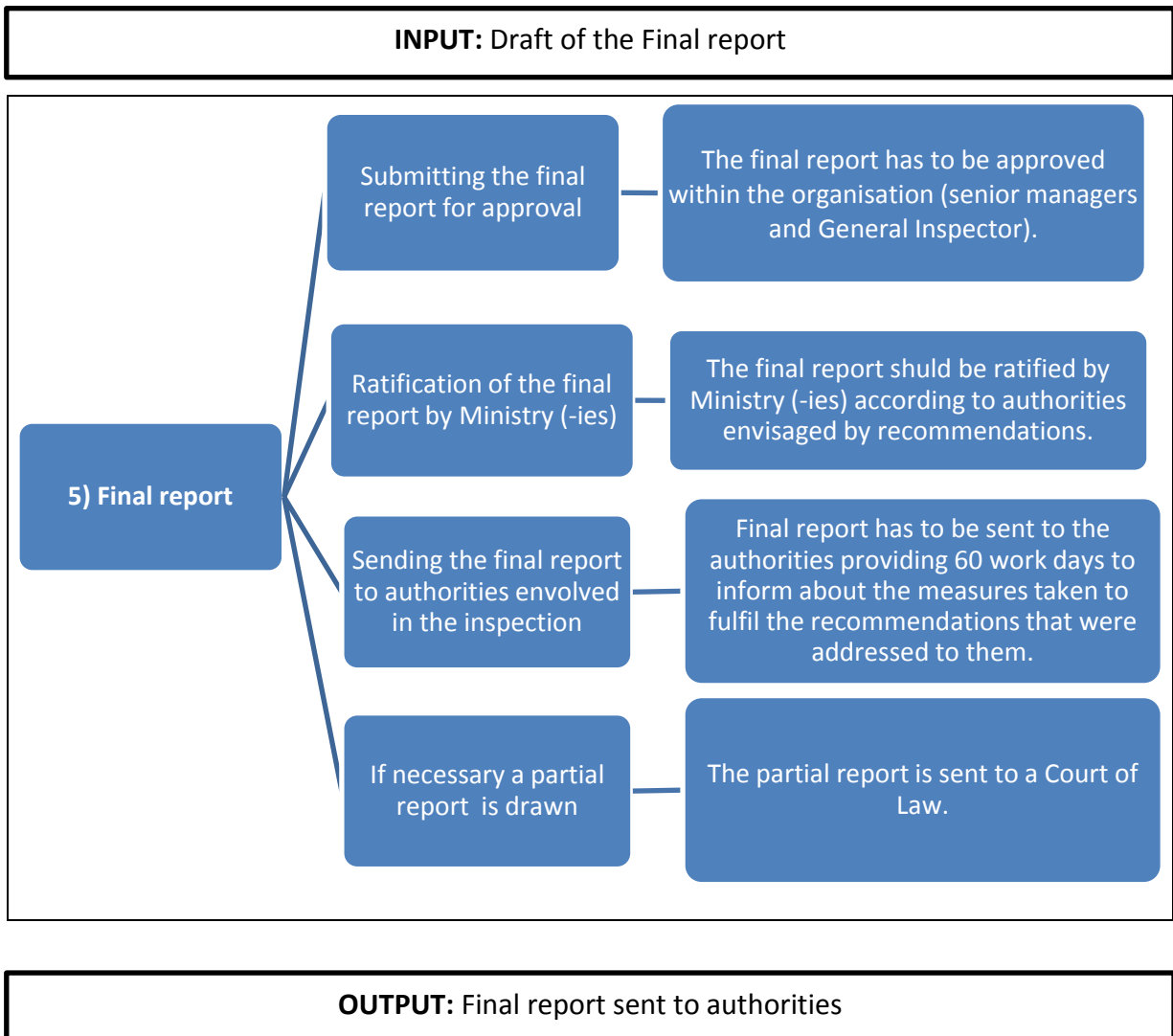


Figure 11: Final report

¹⁵ Enforcement covers actions by a competent authority under civil, administrative or criminal law in response to detected or notified non-compliances with obligations under law.



2.1.7 Follow-up

The final ratified Volume I of the report is made available to the public on IGAMAOT's website. After 60 work days, authorities are informed about the measures required to fulfil the recommendations that were addressed to them.

One inspector is designated to lead on the recommendations and follow-up measures, being responsible for monitoring this process at regular periods, and at each stage, producing a document which analyses in detail, whether or not the recommendations have been fulfilled in due time and making further proposals to ensure they will be accomplished.

These documents must be submitted to senior managers and then approved by the General Inspector. Each entity targeted by recommendations under the analysis must be informed of the results, namely the ones that are considered compliant and are closed and the ones that are still open stating further action to be taken and deadlines.

The follow up phase should take the minimum amount of time possible and not more than two years, even when questions are complex and difficult to solve.

Once all the recommendations have been accomplished the process is closed, even if there are Court cases that are still to be resolved. In rare cases where authorities do not comply with recommendations a report must be sent to the competent Ministry, explaining the situation.

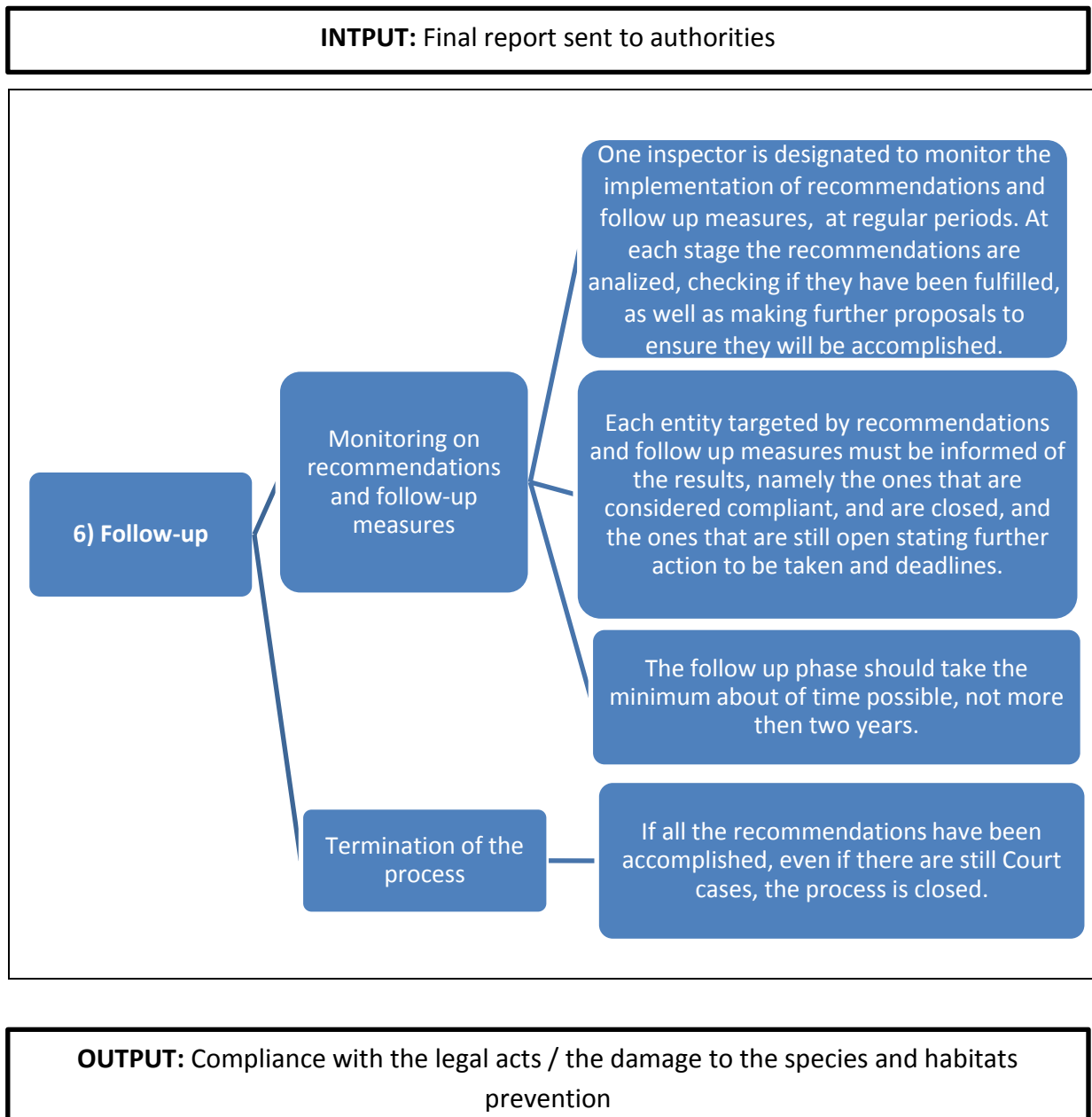


Figure 12: Follow-up in practise



2.2 Methodologies for ensuring compliance with management plans and designation acts

2.2.1 Introduction

The Habitats Directive aims to "contribute towards ensuring biodiversity through the conservation of natural habitats and wild fauna and flora in the European territory of the Member States to which the Treaty applies". Article 6 of the 'Habitats' Directive (92/43/EEC) determines the relationship between the conservation of the habitats and species and other types of land use within these designated areas, playing a crucial role in the management of Natura 2000 sites.

Article 6(1) makes provision for the establishment of the necessary conservation measures:

"For special areas of conservation, Member States shall establish the necessary conservation measures involving, if need be, appropriate Natura 2000 management plans specifically designed for the sites or integrated into other development plans, and appropriate statutory, administrative or contractual measures which correspond to the ecological requirements of the natural habitat types in Annex I and the species in Annex II present on the sites".

The European Court of Justice (ECJ) case C-508/0416 provides jurisprudence on the failure of a member state to fulfil obligations on transposing Article 6 (1) from the Habitats Directive. The decision stated that the implementation of Article 6(1) is not optional, and that the necessary conservation measures must be established for all Special Areas of Conservation (SACs), in addition to eventual obligations and prohibitions laid down pursuant to law. In this context member states must designate Sites of Community Importance (SCIs) as Special Areas of Conservation and apply the necessary conservation measures required under Article 6(1) within six years of the Site of Community Importance being adopted by the Commission (in accordance with Article 4(4)) (CE, 2014)²⁹.

The objectives of the management plan for the site have to correspond to the ecological requirements of the natural habitats and species significantly present on it, in order to ensure their favorable conservation status. They must be as clear as possible, realistic, quantified and manageable.

¹⁶ <http://curia.europa.eu/juris/liste.jsf?language=en&num=c-508/0439/96>



According to the 'Summary compilation of information included in the countries - fact sheets of 2011'¹⁷ regarding the 'Factsheets on Natura 2000 Management Planning in the Member States'', in most countries the requirement to produce management plans for Natura 2000 sites is not obligatory. These management plans are considered very important, especially in sites where conflicts between land use practices and conservation objectives are identified and need to be resolved. In most of those cases, the sites are selected by the experts of the nature protection departments.

In some countries, management plans are required for sites outside protected areas, for which there is already a management plan. If these are not considered appropriate, integrations and/or changes will be made in those plans. For example, in Italy, management plans are not obligatory but are considered relevant for sites that need an effective conservation of natural resources that is not guaranteed just by conservation measures. This mainly involves sites where conservation measures are complex and need to be defined with particular detail, and which require specific monitoring activities that cannot be included in instruments other than a management plan. In Sicily, 218 Natura 2000 Sites (Sites of Community Importance, SCIs, and Special Protection Areas, SPAs) were combined in 58 management plans, according to territorial proximity and ecological similarity.

In most Member States countries, the organizations responsible for Natura 2000 management plans are the environment, nature conservation and protection departments, in a regional or national scale. Depending on the countries and regions, the management plan is legally binding for the authorities, for the administration, for site managers and/or private and public bodies. It usually represents a formal obligation for responsible national authorities to implement the measures foreseen.

Although management plans can be a non- legally binding instrument, in most member states the management actions have to be consistent with other national protection documents, such as the legal acts concerning protection of nature reserves.

¹⁷ Available at <http://ec.europa.eu/environment/nature/natura2000/management/docs/conservation%20measures-Annex%202.pdf>



2.2.2 An example from Portugal

2.2.2.1 Sectoral Plan of Natura 2000 Network

In Portugal, management of Natura 2000 sites is ensured by the Sectoral Plan of Natura 2000 Network and an integrated mix of administrative, and/or contractual acts (spatial land use plans, agri and forest-environment contracts). There are also some Natura 2000 sites with management plans already in implementation.

The Portuguese Institute of Nature Conservation and Forest (ICNF, I.P.) is the national authority responsible for the development and approval of Natura 2000 management plans. Nevertheless, any public or private entity can produce a management plan for a Natura 2000 site with the mandatory period for public consultation according to law. The plans need to be formally approved by Environment and Land Planning Minister and other Ministers in charge of relevant sectors for those Natura 2000 sites.

In most of the cases, the management of Natura 2000 areas is integrated into other land use planning instruments, for example in those whose conservation objectives are dependent on forestry and agricultural management, the creation of Integrated Territorial Intervention programs was the solution adopted (Portugal under Rural Development Program). The Natura 2000 Sectoral Plan developed in Portugal identifies the need to promote conservation actions in those areas by partnerships in the forestry and agriculture sectors, especially with owners and managers, aiming at maintaining a favorable conservation status of target species and habitats. As an example, for the Habitat 8240* (Limestone pavements), in Portugal this habitat occurs in five locations, one of the most important is “Serras de Aire e Candeeiros” Natural Park, which is also a Natura 2000 Site [PTCON0015 Serras de Aire e Candeeiros (Mediterranean Biogeographic Region)]. For this habitat, the Sectoral Plan of Natura 2000 considers that NEEI activities should not be allowed in areas where this habitat occurs. According to the “Report of the main results of the surveillance under article 17 for Annex I habitat types (Annex D)¹⁸”, European Commission, NEEI activities are considered as pressures and threats of medium importance to the habitat. In the conservation measures’, regulating/management exploitation of natural resources on land (9.1)’ is considered a measure of high importance.

According to the percentage of biogeographical assessments reported as being affected by one or more pressures or threats categorized as of ‘high importance’, in Portugal, mining extraction of materials and

¹⁸ Available at http://ec.europa.eu/environment/nature/knowledge/rep_habitats/index_en.htm.



energy is the item with the lowest percentage of pressures/threats to the habitats [2007-2012 report, EC¹⁹]. In most of the cases, the plans are not integrated in other instruments, but they function as a fundamental source of information about actions which can harm or damage sites, as well as about suggested actions to improve their conservation objectives.

The integration of Natura 2000 management in other planning processes, under some member's states' transposing legislation (for example in the UK and Portugal), all public/statutory bodies, are required to exercise their functions with regard to the requirements of the Habitats Directive. Thus, other sectoral plans which are in direct responsibility of other authorities must respect the conservation requirements of Natura 2000 sites in their area. In many cases this is achieved through application of Article 6.3 (assessment of plans and projects) to land use and sectoral planning processes.

2.2.2.2 Quarries

The Portuguese national legislation requires adequate land planning measures, environmental impact assessment, surveillance and enforcement, together with complementary conservation measures through management plans, on a case by case analysis, as well as legal, administrative or contractual measures that contribute to the pursuit of conservation objectives identified for the Natura 2000 areas. This is the case for the NEEI activity.

According to the Portuguese legislation concerning Natura 2000 Sites, the permit for mineral exploration may only be granted with prior favorable approval of its location. The competent authority is the Institute for Conservation of Nature and Forests (ICNF), the same as that for the approval of the Environmental and Landscape Recovery Plan. Exceptions are the permit applications for projects subject to the Environmental Impact Assessment (EIA) legal regime, which, in case of a favorable environmental or environmental impact statement (EIS), do not require the presentation of a certificate of the location of the permit application.

In to the Portuguese legislation, quarries are organized in classes 1-4 according to their impact (1-more; 4 – less):

¹⁹ REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT The State of Nature in the European Union Report on the status of and trends for habitat types and species covered by the Birds and Habitats Directives for the 2007-2012 period as required under Article 17 of the Habitats Directive and Article 12 of the Birds Directive.



- CLASS 1: class 1 area ≥ 25 ha
- CLASS 2: $5\text{ ha} < \text{class 2} < 25$ ha, and more than $> 10\text{m}$ deep or excavation or production $> 150\,000$ t/year, or > 15 workers, or use more than 2000 kg of explosives in the exploitation work
- CLASS 3: less than < 2000 kg of explosives in the exploitation work and area ≤ 5 ha; $\leq 10\text{m}$ deep or production $\leq 150\,000$ t/year or ≤ 15 workers
- CLASS 4: quarries of “calçada portuguesa” and “laje” (usually quarries with small dimension).

The environmental impact assessment depends on dimension of the NEEI activity. For Quarries of Class 1, the environmental impact assessment is mandatory. For the other NEEI is a case by case decision by the competent authorities. The environmental impact study (EIA) is submitted to the licensing entity together with the exploration license application.

When the quarry has Environmental Impacts Assessment (EIA), in Natura 2000 sites, the Natura 2000 Sectoral Plan /Management Plan of the NATURA2000 Site was considered, and if the “Declaration of the Impact Assessment” (DIA) is favorable or favorable with conditions, the Quarry Plan, Mitigation measures, Compensatory measures and Monitoring Plan are already established and approved.

2.2.3 An example from Croatia

The ecological network of the Republic of Croatia was established in 2013 and covers 36.73% of land territory and 15.42% of the coastal sea. It consists of 743 sites of Conservation Significant for Species and Habitats and 38 Bird Conservation sites. Because of the large spatial Natura 2000 area extent and recent time of proclamation, there is not enough experience within this member state to performing appropriate inspections related to Natura 2000 at this time.

The management of Natura 2000 sites in Croatia is under the authority of public institutions that manage the protected areas. In Croatia, 46 such public institutions were founded. Public institutions have about 160 rangers authorized to perform inspection on first level. Their authorization for supervision of Natura 2000 sites is based on the provisions of the Nature Protection Act (Off. Gazette No 80/2013).

So, beside nature protection inspectors, who are employees of the Ministry, also rangers perform control in Natura 2000 sites.



Basic documents for planning and performing inspection in Croatia are:

1. Management plans for protected areas. Croatia has 19 protected areas (8 national parks and 11 parks of nature). All of them have management plans, but only 5 of them include requirements for Natura 2000 sites in accordance with respective management plans and designation acts set out in Art. 6(1) of Habitats Directive.
2. Other documents important for inspection in Natura 2000 sites are plans and programs for sustainable use of natural resources (water managements; forestry, hunting, mineral resources...) which contains mitigation measures or nature protection requirements. The water management yearly plan is a good example.
3. Ordinance on the conservation objectives and main measures for bird conservation in the area of the ecological network - Official Gazette 15/14 (implementation of the Directives) - which consist conservation objectives and conservation measures with responsible bodies.
4. Permits for projects with assessment provisions set out in Art. 6(3) - (4) of HD with mitigation measures or corrective measures of monitoring program or compensation measures.

Because all NEEI sites are on the list of projects for which environmental impact assessments are obligatory, there are no examples of a strict appropriate assessment.



3. Inspection of quarries and open cast mining located in or near Natura 2000 sites

3.1 Introduction

All mining activities have different phases of activity (exploration, site preparation, mineral extraction, processing and site closure) and each phase of these processes is associated with different sets of environmental impacts. Environmental impacts are inevitable in all mining activities. The main objective should be to avoid, reduce, minimize and/or eliminate this environmental impact. Mining activities are inherently destructive with respect to the environment and have a relatively high probability of significant effects when assessed. As a result of this, it is an activity that is subject to an environmental impact assessment or an appropriate assessment of its implications for the site in view of the site's conservation objectives.

The preparation of an inspection includes studying the environmental and nature protection legislation applicable as well as the administrative processes related to the specific installation, including permit procedures and results of previous inspections and self-monitoring reports, complaints, accidents and incidents and occurrences of non-compliance. The cooperation and information exchange with partner organizations is also part of this step.

It is very important to ensure the inspector knows the process of quarries and open cast mining well, that usually includes the following phases, described in Annex II:

- Prospecting and exploration
- Site preparation / Mineral extraction/Processing
- Site closure.

As well as the list above, the environmental impacts of this activity and the most appropriate mitigation measures that can be applied by operators to minimize them, described in Annex III, for air, noise and vibration, water, soil, landscape and social cultural impacts are also particularly important. To support the site inspection, a check-list was developed and is described in Annex IV. Furthermore, and in Annex V there is a list with most common waste that environmental inspection might find in a mining activity,



based on the European List of Waste (Commission Decision 2000/532/EC).

Traditional inspection activities are the (physical) routine (site) inspections, non-routine (site) inspections and investigations of incidents. As stated in the Guidance book for inspections (DRT II), in case of non-compliance an investigation is necessary to clarify the cause and its impact, but also:

- Responsibilities, liabilities and consequences;
- Forward conclusions to the inspecting authority and plan enforcement actions
- Follow up that has to be taken
- Actions to mitigate / remedy the impact
- Actions for prevention
- Actions taken by the operator
- Other compliance checking and compliance assistance activities like assessing operator monitoring data, organizing information campaigns etc.

Information on the inspection activities carried out, their results, and their follow up (imposed sanctions) should then be stored in an accessible database. It might also lead to the need for revising the permit. The results should be communicated to the operator and there must be exchange of information with partner organizations.

3.2 An example from Portugal

According to the Portuguese legislation for NEEI activities, one of the authorities for the regulation and compliance with the legal provisions on the exercise of exploration of mineral masses is ICNF, I.P. The technical supervision of compliance with the mining and rehabilitation plans are the responsibility of the competent authorities for their approval, which shall act in close coordination with the permitting entity and keep each other informed of the results of the inspection. In their regulation and compliance activities, the ICNF needs to:

- ensure compliance with the legal provisions applicable to the activities regulated by the legal diploma
- visit the quarries established in the area of their competence, requesting, as a matter of urgency, the



appearance of the competent authority for the permit in the quarry wherever they consider that it represents a danger for the personnel employed in it or for third parties or for the neighboring buildings or public services

- attend the quarry site, as a matter of urgency, when there has been an accident, complaints or compulsory participation of the operator.

The regulation and compliance activities program based on general legislation, has a frequency of inspections according to the law of: 180 days after license, 3 in 3 years, and in the end of exploitation. In practice the regulation and compliance activities are performed whenever they are required. The routine journeys of surveillance in the field (Technicians and Nature Rangers of ICNF, I.P.) identify anomalous situations, monitoring programs of the protected area and Natura 2000 habitats and species, in or near quarry areas that reveal unfavorable changes, as established by the legal timeframe. The inspections are made by technical experts with competence in the matter and the Nature Rangers of ICNF.

Compliance with the quarry plan is strongly focused on the location of the quarry (limits of the exploitation area, deposits area, defense zones, etc.), rehabilitation plan (Environmental and Landscape Recovery Plan) with emphasis in the accomplish of the timing and objectives, monitoring plan, mitigation measures and compliance with the Natura 2000 sectorial plan with identification of possible changes in natural factors as a consequence of the quarry (surroundings).

When the competent authorities for regulation and compliance establish the existence of infraction practices, they will write the corresponding report (of the deficiencies or faults found, the warnings and recommendations to the explorer or technical manager of the quarry plan), and if necessary raise both administrative and legal proceedings. Usually, these facts are communicated to the competent authority for the permit.

When necessary, a meeting is held with the technical director for the quarry, to analyze the facts that led to the identified infraction, and establish the best procedures to overcome its consequences, from the point of view of nature conservation.

To accomplish these objectives, it is important to ensure that there are no limitations regarding human resources, technological resources (hardware and software) and established legal processes such as collecting the right evidences in case of legal proceedings (e.g. satellite imagery as Google Earth has no



legal value, but nevertheless is a proof aid).

To sum up, a continuous process of monitoring the application of the Sectorial Plan of the Natura 2000 Network (PSRN2000) involves verification of compliance with the principles, the rules and procedures that it advocates, and is of paramount importance regarding the regulation and compliance process to ensure that Natura 2000 sites are well-preserved and properly kept. The competent authorities must make sure that the quarry's plan is being accomplished, the rehabilitation and monitoring plans are being adhered to, as well as the limits of the quarry and its areas, that unpredictable damage will not put Natura 2000 sites at risk, the monitoring process of the habitats must have a special focus on the Natura 2000 Sites where NEEI are established, and any anomalies are reported immediately and a visit to quarries area is made.

As noted previously, the periodic visit to NEEI sites is also of paramount importance. These visits can be prioritized according to the IRAM Tool, and this instrument must reflect the need for visiting in quarries included in the Natura 2000 sites, on a regular basis and more frequently than others. It is of the utmost importance to keep a chronological record of the items/aspects observed and are relevant for the conservation of the site. It is also of the utmost importance to keep a permanent dialogue between permitting and inspection authorities.

3.3 An example from Croatia

More than 50% of Croatian geology is carbonate rock - limestone and dolomit mainly mesozoic adriatic carbonate platform, 40% is quaternary sedimentary deposits (Panonian Basin) and less than 5% eruptive and metamorphic rocks. Most of the non-energy mineral resources represents aggregate, ornamental stone, sand and gravel. To some extend clay, bauxite, cement, sea salt, gypsum and barite appears. According to Mineral Strategy there is 518 mineral sites form which 161 are situated in or near Natura 2000 sites which was proclaimed at 2013.

As a part of annual environmental inspection plan for 2011/2012 (Ministry of Environment Protection, Physical Planning and Construction) it was planned to inspect extraction sites. In the planning phase, the information was gathered for the risk assessment approach. The extraction activities are permitted by an authorized body at regional level and the Ministry of Economy depending on the type of minerals being



extracted. For the purpose of the environmental inspection plan, a list of all sites was obtained from Ministry of Economy which holds the register of exploration and extraction sites.

The information on Environmental Impact Assessments (EIA) was added to the list of exploration sites, as well as the decision on the EIA procedure with prescribed measures and monitoring conditions. For the risk assessment the following criteria were set:

1. That the site was subjected to Environmental Impact Assessment procedure
2. Reported production capacity higher than a selected threshold.
3. Other criteria were considered such as number of complaints and the findings of mining inspection. Unfortunately, data from mining inspection were not possible to obtain in short period of time and for such a list of sites.
4. Data bases of the inspection cases could not be searched by the criteria of complaints. Even the data on EIA had to be obtain from searching through archives rather than from data bases in the Ministry.

The objective of these inspections was to establish a relationship between complaints and the implementation of EIA measures. For that purpose, the Croatian guidance was developed with a check list of instructions. This guidance had a short introduction on inspection of extractive sites, aims of the inspections, a list of used data and registers, activities and technology description of extraction, legal framework, list of necessary documents, instruction on how to use the check list, a protocol on involving line inspectors, reporting and follow-up and photography to be taken during the inspection. The Inspection Plan derived on an Inspection schedule directed to environmental inspection regional branch units. After inspections, the respective reports were sent to the Ministry and they were stored in excel data base. The main findings were presented as percentage of compliance, illustrated in graphs as shown in Figure 11, below. Findings and conclusions were published in the Annual Environmental Inspection Report²⁰.

²⁰ Accessible at http://www.mzoe.hr/doc/godisnje_izvjesce_o_radu_inspekcije_zastite_okolisa_za_2011_godinu.pdf

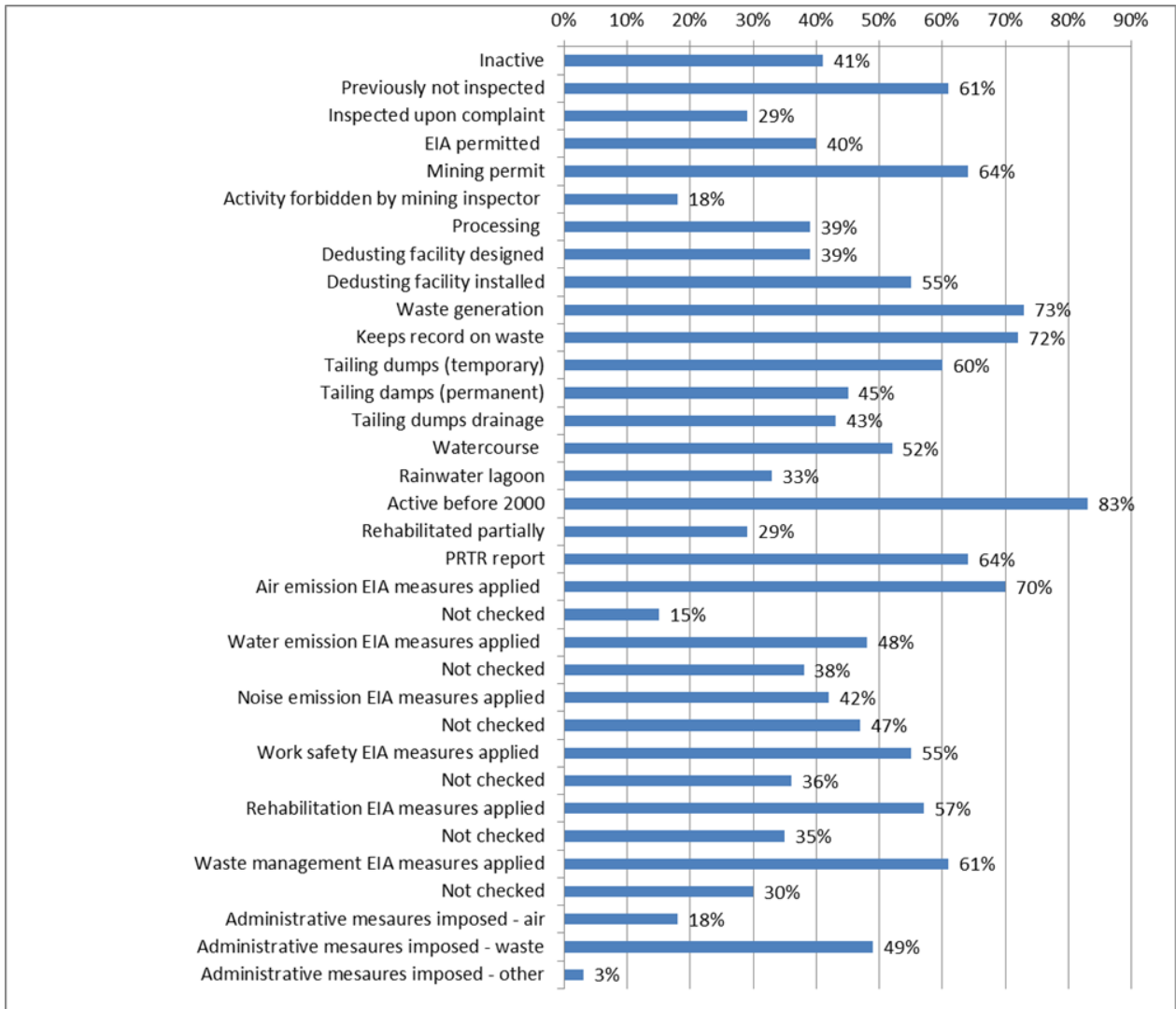


Figure 13: Main findings of Croatian Annual environmental inspections for extraction sites (2011/2012)

The main objective, was to establish a relationship between complaints and the implementation of EIA measures. Nevertheless, reports revealed that findings on EIA conditions were not stated in more than 30% of the inspection reports. There are a few reasons for such results, such as unclear competencies, unclear conditions and difficulty to enforce, also due to lack of expertise. In some cases, the non-compliances were detected but not reported to responsible authorities.

In the context of Appropriate Assessment, integrated as a part of EIA procedure, conditions concerning



nature protection and biodiversity were not inspected. Although the main objective of the inspection plan was not totally met, it allowed to reach conclusions that can be used as criteria in future inspection planning of extraction sites. Concerning in particular, the inspection of extraction activities in Natura 2000 sites it would be appropriate to gather expertise to enforce nature protection specific conditions and to preview investigation of accidents/ incidents/occurrences of noncompliance to clarify the cause and its impact, to determine responsibilities and liabilities, and forward conclusions to competent authorities and for follow-up measures that have to be taken.

Other recommendations also arose from this work:

- The planning phase is a very important part of Inspection cycle and an appropriate timeframe should be assigned while describing the context, enhanced cooperation among authorities which share responsibilities for environment and nature conservation and permitting, monitoring and inspection, would be appreciated as well as ensuring availability of relevant data, to avoid duplication of work and overlap of competences
- A Coordinator should be appointed and when several authorities are involved a protocol should be previously developed for efficiency of inspection
- All necessary conditions for inspection should be met before starting the execution phase; reports should be formatted and standardized and stored in accessible database
- Outputs and outcomes of the inspection should be used for the review of the following inspection plans.



4. Conclusions and Recommendations

4.1 Conclusions on inspections of quarries and open cast mining in or near Natura 2000 sites

The Recommendation 2001/331/EC providing for minimum criteria for environmental inspections in the Member States (RMCEI) [SEC (2007)1493] does not include criteria for inspection of Natura 2000 sites.

The present work contains “Guidance for environmental and nature protection inspections of quarries and open cast mining in or near Natura 2000 sites” that shows that the integration of aspects related to nature conservation into an environmental inspection is useful and leads to good results.

“Inspection” under the scope of the present IMPEL Project refers to both:

- Inspection of Natura 2000 sites or nearby areas (Chapter 2, 2.1), through an administrative inspection that evaluates the acts and procedures of nature conservation competent authorities, having as main steps of inspection:
 - Planning
 - Execution
 - Preliminary report
 - Opposition period
 - Final report
 - Follow-up
- Checking compliance with management requirements for Natura 2000 sites in accordance with respective management plans and designation acts set out in Article 6(1) of Habitats Directive (Chapter 2, 2.2)
- Inspections directed to specific installations of quarries and open cast mining, located in Natura 2000 sites or nearby areas, exploring the prospecting, extraction, first processing of mineral rocks and closure activities (Chapter 3), integrating:
 - Environmental impacts and mitigation measures for Air, Noise and Vibration, Water, Soil, Landscape and Social Cultural Impacts (Annex III)



- Check-list for inspection (Annex IV)
- List of most common waste (Annex V)

The Expanded Environmental Inspection Cycle designed under the IMPEL Project Doing the Right Things II, was explored, namely on:

- Execution framework and execution and reporting on facilitating inspection, compliance checking (also through site visits), with guidance/good practices and specific guidance and checklist developed to support the inspection (Chapter 2 and 3)
- Planning, namely describing the context, setting priorities and defining objectives and strategies (Chapter 2).

4.2 Challenges / Recommendations / Good practice at national level

The discussions during the current project indicated that inspection authorities face a number of challenges in their daily work. They occur on different levels from authority level to the background and legal system and also on the operator level. Here the challenges are addressed in the form of recommendations / good practice.

The following items were identified:

a) Authority level:

Good practice includes:

- Clear structure of the work:
 - risk assessment to select targets for inspection plan and annual program
 - inspection plan and annual program should be reviewed after analysis of outputs and outcomes of the inspections
 - planning and preparatory phase need an appropriate timeframe, describing the context, enhanced cooperation among authorities as well as ensuring availability of relevant data and necessary conditions for inspection
 - inspection phase includes site visit, reports should be formatted and standardized and stored



in accessible database, and conclusions forward to competent authorities

- follow-up phase with measures after the inspection to ensure sanctioning of infringements, and correction, prevention and remediation of negative impacts, determine responsibilities and liabilities.
- Adequate number of staff for general nature protection tasks and for inspections (see IMPEL report “Building up IMPEL nature conservation capacities” (2013/17))
- Involvement of inspectors during the permitting phase for the development of enforceable permit conditions
- Constant training of the involved staff
- Adequate work safety equipment for inspectors
- Adequate technical assistance through IT tools and hardware (tablets, drones and use of satellite photos, Google earth photos).

The legal basis for working with drones has to be explored and clear rules for inspectors should be provided.

b) Background and legal system:

A robust legal system provides self-confidence to the inspector and is a corner stone of the effectiveness. Important items are:

- Strong legal system with clear, effective and well defined system of sanctions
- High sanctions for offences/infringements and defined rules for disgorgement (skimming of illegal profits)
- Inspection authority should have the competency to fix fines of a level that has impact
- Clear rules and conditions for proving evidence, namely through drones (possibility of reversal of evidence)
- Lists for fixing the prices of damages (species and habitats)
- Clear and effective system of competencies of authorities, prosecutors and judges (Court procedures often take too long time (inspection authority should be able to fix fines)
- Training of prosecutors and judges



- Cooperation of the inspection authority with competent nature protection agency / institute
- Production of brochures / leaflets for operator information
- The legal basis for working with drones has to be explored and clear rules for inspectors should be provided.

Cooperation of the inspection authority with the permitting of the activity and nature protection authority as well as competent water, land, agriculture and IED authorities is highly recommended. This can be carried out for example through regular meetings, access to databases and joint inspections. Enforcement of measures from the EIA can be very weak because of numerous, incoherent/overlap and unclear and non-enforceable administrative decisions/permit conditions, or lack of clear and enough, competences and procedures involving inspections.

Cooperation between all responsible inspection parties is necessary using coordinated joint inspection. A memorandum of understanding between relevant inspection services or agencies can be very useful. Risk assessment is also a critical need, to ensure information on state of environment/nature protection and activities is collected, analysed and used to determine priority and focus actions of limited resources from authorities, preventing and correcting (potential) harmful activities.

The use of guidance to ensure a quality, legally robust and harmonized approach of inspections is also a best practice. Environmental authorities at national level might consider to use the guidance incorporated in this report for this purpose.

c) Operator level:

- operator awareness of his responsibility for nature / environmental protection

Apart from these measures the establishment of an incentive system for voluntary activities of the operator may be a challenge and make the operator comply with or even produce results beyond the requirements of the authorities. An award system could be such a system. Company comparison programs might have a similar effect. Affiliated companies of a concern can be subject of such programs too.



4.3 Proposals for future IMPEL work

The following proposals for future work of IMPEL identified are:

- Project to provide such criteria and an IT tool as part of the planning (risk assessment) of inspections of nature protected sites in the member states. One option might be to adjust the already existing IRAM-Tool.
- Projects to address the elaboration, implementation and checking compliance with management requirements for Natura 2000 sites in accordance with respective management plans and designation acts set out in Art. 6(1) of Habitats Directive;
- Projects to further improve the impact and use of guidance produced under IMPEL Projects on the Habitats Directive, analyzing the possibility of adapting them to training materials and provide tailored assistance to countries who wish to implement best practices described.



Annex I. Example of an Individual file templates for “targeted situations”- Spatial Planning Plans and Nature Conservation Regulation

Situation n.º 01

Municipality/ Parish Council / Location: **Previously filled by IGAMAOT Inspectors**

legal property of the land and legal responsibility of activity/land use/construction: **Information that later will be inserted in a separate file with nominal data**

Figure 1 – Aerial photograph (coordinates, place, year, source)
(Figures previously inserted by IGAMAOT Inspectors)




 Activity (defined perimeter set by IGAMAOT)

Figure 2 - Aerial photograph (coordinates, place, year, source)



Figure 3 - Aerial photograph (coordinates, place, year, source)





1. Administrative processes and main administrative decisions

- Authority, Number, Type of process (Permitting, Inspection, Prosecution)
- Permit number, inspection report number, prosecution case number

2. Characteristics of the activity (To be filled by IGAMAOT Inspectors after consultation of administrative processes)

- Land use:
- Occupied area: (source, years, square meters)
- Permitted Occupied Area: (source, years, square meters)
- Number of floors, height: (source, years, meters)

3. Background in IGAMAOT (previous inspections)

4. Applicable Spatial Plans and Regulations (Source, year)

- Sites of Community Interest: for example, SIC PTCON0050.
- REN,

5. Material facts and evidences and related documents (To be filled by IGAMAOT Inspectors after consultation of administrative processes)

6. Legal analysis, conclusions and recommendations (To be filled by IGAMAOT Inspectors after consultation of administrative processes)



Annex II. Stages/ activities of quarries and open cast mining

1. Prospection	2. Site preparation / Mineral extraction/Processing	3. Site closure and rehabilitation
<p>1.1. Field studies, surveys.</p> <p>1.2. Clearing of wide areas of soil and natural vegetation. Land clearance and removal surface.</p> <p>1.3. Opening roads and building staging areas.</p> <p>1.4. Movement of people, vehicles, trucks, machines</p> <p>1.5. Drilling test boreholes.</p> <p>Ending the Prospection phase can appear two options:</p> <p>1. The prospection phase proves that the mineral ore deposit is large and economic viable.</p> <p>In this case activity pass to the next phases: exploration:</p> <p>2. If the mining conditions are economic unviable the next phase is: -Site closure and rehabilitation site.</p>	<p>2.1. Site preparation Land clearance Stripping/storing of “overburden” of soil and vegetation Drilling and trenching Road/trail construction Infrastructure development (power lines, roads, buildings, crushers, conveyor belts) Sewerage and drainage Blasting to release ores/rock Ore/rock Extraction & stockpiling Mine and surface water treatment Surface & ground-water discharge Drawdown of water table Creation of waste rock piles Transport of materials</p> <p>2.2. Mineral extraction Perforation – boreholes Ore/rock extraction - stockpiling Transport of materials Movement of vehicles Maintenance operations</p> <p>2.3. Processing Crushing / grinding Mineral treatment Use and storage of process chemicals</p> <p>2.4. Tailings disposal Dumps and tailings ponds</p> <p>Environment impacts in this phase are more significant because of maximum production of quarries/mining operations simultaneously (ore extraction, drilling, blasting, crushing, grinding, transport of mineral, creation of waste rock piles, tailings ponds...).</p>	<p>3.1. Re-contouring of pit walls, quarry faces and waste dumps. Safe release dumps and tailing ponds</p> <p>3.2. Decommissioning of roads/dismantling buildings and other infrastructures.</p> <p>3.3. Covering of reactive tailing dumps.</p> <p>3.4. Possible treatment for water quality. Monitoring and possible water quality treatments</p> <p>3.5. Reseeding and/or revegetation of disturbed areas.</p> <p>3.6. Fencing dangerous areas.</p> <p>3.7. Ongoing monitoring.</p> <p>3.8. Other mine reclamation activities.</p> <p>3.9. Abandoning the mining site.</p>



Annex III. Environmental impacts and mitigation measures for quarries and open cast mining activities

Annex III – 1: Environmental impacts - Air

Environment impacts - Air	Mitigation measures
<p>1. Dust pollution over non cleared, exploitation and surrounded areas can produce airborne dust with consequent air quality reduction affecting deterioration or elimination habitats and species hosting and disturbance, displacement and migration of sensitive species of fauna</p> <p>It affects natural process such as photosynthesis causing:</p> <ul style="list-style-type: none"> - Growing plants reduction - Changes in species composition fragile/resistant plants) -Proliferation resistant species and site colonization by invasive pioneer species (alien species) -Deterioration and habitat loss <p>3. Dust emissions can contaminate soils and water affecting flora and fauna and degradation of aquatic ecosystems (wetlands,...)</p> <p>3. Greenhouse gas emissions (CO₂) from vehicles, trucks...</p> <p>4. Ill-smelling from machines fuel combustion, wastes,...</p>	<ul style="list-style-type: none"> -Avoiding exploration activities in sensitive stages for wildlife (reproduction, nesting, and breeding, feeding...). - Isolate sensible habitats from dust emissions using vegetation to intercept dust (plantation of natural windbreaks) and/or artificial barriers or screening (meshes, nets, buildings, conveyor belts,...). -Dust emission control during drilling operation using dust collectors and reducing the number of blasting holes. -Using filters and dust collection systems in crushing chutes, conveyor belts and drilling systems. If it is possible, reuse this dust collected in the process cycle or sold as raw material. - Periodic clearing and removal of dust accumulations on roads and other installations. - Reduction traffic speed of machinery, trucks and vehicles. - Covering dump trucks during the mineral mining transportation. -Substitution of minerals transport in trucks for covered conveyor belts. - Periodic watering of roads and accesses. - Periodic clearing and removal of dust accumulations on roads and other installations. - Adequate maintenance of trucks, vehicles, machinery and heavy equipment. -Reduce the time between the mining phase and restoration phases. - Immediate revegetation/reseeding of exploited areas. -Reduction traffic speed of vehicles and trucks during windy days. -Periodic watering by sprinklers over aggregate and mineral piles (sand, gravel,...). - Permanent paving of mine ways (concrete or asphalt surface). - Reseeding and/or revegetation of exploited and disturbed areas with native species. Using vegetation to stabilise worked grounds, embankments, covered tailings ponds. - Restoration disturbed areas according with traditional or new compatible uses.



Annex III – 2: Environmental impacts – Noise and vibration

Environment impacts – Noise and vibration	Mitigation measures
<p>1. Noise emissions can produce disturbance, displacement and/ or migration of sensitive species of fauna, coming from heavy machinery, crushers, trucks... Cumulative impacts because of simultaneously operations (drilling, crushing, ripping, stock-pilling...) affect wildlife. Impacts depends on proximity sensitive areas.</p> <p>2. Blasting, drilling and blasting and other mining operations can cause vibrations and this produce the disturbance and/or displacement of sensitive species, especially in critical stages of species (for example, during breeding and nesting of birds, mammals).</p>	<ul style="list-style-type: none"> -Adequate maintenance of trucks, vehicles and machinery. -Location the noisy operations (pressure equipment, machinery maintenance...) as far as possible from sensitive areas for fauna. -The blasting operations should be the minimum for an adequate exploration process, avoiding drilling and blasting in surrounding areas. - Optimization of blasting operations (quantity and quality of detonators, explosives...) -Avoiding exploration activities in sensitive stages for wildlife (reproduction, nesting, breeding, feeding, migration areas...) -Noise emission control and monitoring. - Building sonic barriers surrounding areas hosting sensitive species and isolating sensible areas from noise emissions using natural and/or artificial acoustic screens (trees, meshes, buildings...). - Exclusively noisy and disturbing operations in daytime. -Use machines and equipment electrically operated. -Substitution of materials transport in trucks for covered conveyor belts. -Design alternative routes to transport far from inhabited areas and sensitive areas for fauna. - Using rubbers and dulling systems in mechanical equipment. - Silencers installation in mobile equipment.



Annex III – 3: Environmental impacts – Water

Environment impacts – water	Mitigation measures
<p>The potential sources of water pollution include drainage installations, wastewater from mining operations, surface run-off</p> <p>The action of rainwater on mineral and waste rocks piles transfer pollution to freshwater bodies.</p> <p>Mine wastewater contains large amounts of suspended solids (turbidity). These solids can affect aquatic flora and fauna.</p> <p>Pollution of water bodies (rivers, wetlands...) for sedimentation of rainwater with suspended solids and waste compounds from mineral piles and tailing dumps.</p> <p>Also, mining activities can produce permanent adverse impacts because of modifications of natural water courses and over the surface drainage.</p> <p>High environmental impact because of dumping mining wastes into rivers or other bodies of water as a method of disposal producing habitat loss, changes in species composition, mortality of fauna and flora (macrophytes) and degradation of aquatic ecosystems.</p> <p>Changes in the area water balance.</p> <p>Surface and groundwater can be contaminated affecting springs.</p> <p>The impacts are:</p> <ol style="list-style-type: none"> 1.Impact on water resources affecting water quality and availability of water resources. 2.Mine wastewater usually contains large amounts of suspended solids (turbidity) that can affect aquatic flora (loss of river macrophytes) fauna and natural water courses. 3.Dumping mining wastes directly water courses produce water pollution and high impact over habitat and fauna hosting fishes, amphibians...) and indirectly over their predators. 4.Modification of natural water courses, alteration of river bodies and banks produce habitat loss, changes and degradation of aquatic ecosystems. 5.Also the decline in vegetation and the competition of wildlife for water resources make these ecosystems especially fragile. 	<ul style="list-style-type: none"> - In areas with Recuperation or Reintroduction Plans for rare or endangered species, the distance between mining activity and life area of the specie must be respected. -In this phase the design of future infrastructures (roads, drainages, canalizations, water filters systems, dumps, household sewage system, waste management...) and exploitation activity (material storage...) is very important for future environment impacts caused by waste water. -Avoiding modifications of natural water surface courses and over surface drainage. -Official authorization of surface and groundwater abstractions, predicting and controlling sustainable water management, avoiding unnecessary water consumptions and wastewater production. - Periodic monitoring of water quality. -Waste management, storage and machinery maintenance plan avoiding oil spillages to soil and water bodies and production of (hazardous waste) that must be managed by authorized companies. -Sedimentation particles systems (ditches, natural vegetation to intercept suspended solids, meshes, straw blocks...). -Rainwater cannot be mixed with wastewater, avoiding it using channels, drainpipes and other type of canalizations. -Reducing slope gradient in excavations, dumps and access ways with the aim to reduce water speed that produce erosion and water turbidity. -Protection of mineral piles and accumulations of aggregates which easily disaggregate with other natural materials or artificial systems (canvases, meshes, nets,...). -Immediate reseeding and/or revegetation of exploited and disturbed areas. In reseeding and/or revegetation areas using autochthonous species, better from environment area, avoiding the introduction of invasive non-native species. - Construction of infrastructures for waste water treatment (filter systems, decantation tanks settling lagoons,... -Household sewage treatment, designed, constructed, operated and maintained in such a way as to ensure their filter capacity, stability, as well as the safety and health of workers and the flora and wild fauna of the site. -Building and maintaining a general drainage network for the withdrawal of the external waters of surrounded mining site and a specific drainage network for every dump, landfill, pit wall.



Annex III – 4: Environmental impacts – Soil

Environment impacts – Soil	Mitigation measures
<p>1.Habitat loss because of deterioration and fragmentation caused for land clearance.</p> <p>2.Soil and habitats disappearance because of roads construction, movement of machinery...</p> <p>3. Mortality of fauna from operations (clearance, excavation)</p> <p>4. Loss of wild fauna as a result of habitat fragmentation and loss of predators resulting of reduced prey resources.</p> <p>5. Erosion process may cause significant amounts of sediments (turbidity) to nearby waterbodies with the consequent alteration of aquatic habitats and fauna hosting.</p> <p>6.Excavations can create potential risks such as landslides, collapses, slope failures, erosion and subsidence.</p>	<ul style="list-style-type: none"> -Storage fertile land extracted from land clearance for future reseeded and/or revegetation of disturbed areas. -Sedimentation particles systems (ditches, natural vegetation to intercept suspended solids, meshes, straw blocks...) in ditch roads. -Protection systems against erosion processes over embankments, terraces... - In areas with Recuperation or Reintroduction Plans for rare or endangered species, the distance between mining activity and life area of the specie must be respected. -Sedimentation particles systems (ditches, natural vegetation to intercept suspended solids, meshes, straw blocks...) -Reducing slope gradient in excavations, dumps and access ways with the aim to reduce water speed that produce erosion and water turbidity. -Protection of mineral piles and accumulations of aggregates which easily disaggregate with other natural materials or artificial systems (canvases, meshes, nets,). -Immediate reseeded and/or revegetation of exploited and disturbed areas. In reseeded and/or revegetation areas using autochthonous/native species, better from environment area, avoiding the introduction of invasive non-native species. - Restoration disturbed areas according with traditional or new compatible uses. - Re-contouring of pit walls, quarry faces and waste dumps according previous topography before site closure of mining activity. - Using natural fertile lands from the site land clearance. - Using vegetation to stabilise worked grounds, embankments, covered tailings ponds. - Refuse land with waste presence.



Annex III– 5: Environmental impacts – Landscape

Environment impacts – Landscape	Mitigation measures
<p>Environment impacts on landscape in this phase are very important because of the important soil modification, land clearance, infrastructures, buildings, landfills....</p> <p>Permanent impacts because of creation of excavation holes, pits, tailing dumps, overburden piles...</p>	<p>Reduce as much as possible, the size of the excavation and landfills areas.</p> <ul style="list-style-type: none"> - Adapt the infrastructures development (power lines, buildings, conveyor belts...) with natural elements of surrounding area (morphology, height, colours...) - Re-contouring of pit walls, quarry faces and waste dumps according previous topography before site closure of mining activity. -Using natural fertile lands from the site land clearance. -Refuse land with waste presence. - Immediate reseeding and/or revegetation of exploited and disturbed areas. -Plantation of native species of trees and shrubs as a vegetable screens. - Protective measures for the existing vegetation avoiding its affection during all the mining activity phases (fencing areas, watering, fertilization,). - Compensation measures with the construction of green areas, natural corridors, landscape gardens,) with the aim to improve the aesthetic appearance of installations inside landscape.



Annex III – 6: Environmental impacts – Social cultural impacts

Environment impacts – Social cultural impacts	Mitigation measures
<p>With respect to social and cultural impacts produced for mining activities, it is necessary to consider: positive and negative impacts.</p> <p>Positive impacts: -Mining and other industrial activities increases the economy in the area -Reducing unemployment -The value of the land area increases.</p> <p>Negative impacts: -Permanent impacts because of affecting sites and elements with high singular heritage (historical, monumental, cultural, artistic, scientist,). -High or moderated impact because of personal risks from mining activities. -High or moderated impact as a result of the increase in movements of vehicles, trucks, workers, with consequent danger of traffic accidents and ways deterioration. -Increasing the cost living in area which adversely affects to inhabitants who are not associated with mining activity</p>	<ul style="list-style-type: none"> - Previous removal of singular and genuine elements (historical monuments,) avoiding their deterioration and/or destruction. - Movement of trucks, vehicles and heavy machinery inside exploitation routes. - Correct signalling in all routes, ways and accesses. - Improvements in existing routes. - Protection of all heritage elements against other impacts (vibrations, dust, water pollution). - Washing trucks and vehicles (wheels minimum) previously going out the exploitation. - Restoration disturbed areas according with traditional or new compatible uses. - Employment of workers from surrounding areas, increasing economic and social aspects. - Training courses for workers and inhabitants of the area about environment risks, waste managements, health and safety risks, ... - Public information (risks, incidences, accidents about mining activities in the area. - Mining website, mining publications...



Annex III. CHECK-LIST ENVIRONMENTAL INSPECTION - quarries and open cast mining

1. INSPECTION DATA

INSPECTION CODE :	INSPECTION DATE :
PREVIOUS INSPECTION DATE	
INSPECTOR :	
NOTES :	

2. COMPANY DATA

NAME OF THE COMPANY:		COMPANY IDENTIFICATION:	
COMPANY REPRESENTATIVE:		REPRESENTATIVE IDENTIFICATION:	
COMPANY ADDRESS:			
VILLAGE/TOWN:	POSTCODE:	PROVINCE/REGION:	
TELEPHONE:	FAX:	E-MAIL:	
ACTIVITY OF THE COMPANY:		NUMBER OF WORKERS:	
ORGANISATION MINING CHART (BRIEF DESCRIPTION):			

3. LOCATION

SITE :	AREA :
COUNCIL :	PROVINCE/REGION :
COORDINATE SYSTEM: UTM (Zone), DATE: X = , Y=	
CLOSEST HOUSE (APPROXIMATE DISTANCE km):	
CLOSEST POPULATED PLACE (APPROXIMATE DISTANCE km):	
CLOSEST MINING ACTIVITY (APPROXIMATE DISTANCE km):	
CLOSEST INDUSTRIAL ACTIVITIES AT THE POINT OF INSPECTION:	



INDICATE POSSIBLE CUMMULATIVE EFFECTS:

ACCESS: MAIN ROAD SECONDARY ROAD TRACK²¹
ROAD NUMBER/ROAD CATEGORY:

IS THIS MINING ACTIVITY CARRIED OUT INSIDE A NATURA 2000 ? : YES NO

IS IT CARRIED OUT INSIDE A SPECIAL CONSERVATION AREA (SCA)? : YES NO
NAME:..... CODE: MANAGEMENT PLAN: YES NO
ZONIFICATION : PROTECTION ZONE CONSERVATION ZONE PUBLIC USES ZONE*

IS IT CARRIED OUT INSIDE A SPECIAL PROTECTION AREA (SPA)? : YES NO
NAME: CODE: MANAGEMENT PLAN: YES NO
ZONIFICATION : PROTECTION ZONE CONSERVATION ZONE PUBLIC USES ZONE

IS IT CARRIED OUT INSIDE ANOTHER TYPE OF PROTECTED AREA ? : YES NO

TYPE OF PROTECTED AREA (National Park, Natural Monument,...) :

NOTES:

IS THIS MINING ACTIVITY CARRIED OUT IN THE VICINITY OF A PROTECTED AREA?: YES NO

²¹

* to be adapted to national legislation



IS THIS MINING ACTIVITY CARRIED OUT UPSTREAM OF A PROTECTED AREA? YES NO

NOTES:

ARE THERE SURFACE OR UNDERGROUND WATERCOURSES IN THE SURROUNDINGS AREA OF THE MINING ACTIVITY?: YES NO

NOTES:

IS THE QUARRY IN THE GROUNDWATER SOURCE PROTECTION ZONES? YES NO

NOTE:

IS THERE ANY CAVES OR OTHER KARST FEATURES IN THE SURROUNDINGS AREA OF THE MINING ACTIVITY? YES NO

NOTE:

IS THERE A LANDSCAPE BARRIER WHEN ACCESSING TO QUARRY? YES NO

4. ACTIVITY AUTHORIZATIONS

4.1. ACTIVITY LICENCE (Ex.Council, ...):

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

4.2. MINING AUTHORIZATION:

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

TYPE OF AUTHORIZATION (Ex.EXPLORATION PHASE...):

4.3. ENVIRONMENTAL AUTHORIZATION:

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

TYPE OF AUTHORIZATION (Ex.EIA,...):

4.4. NATURE CONSERVATION AUTHORIZATION:



YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

TYPE OF AUTHORIZATION (Ex.EIA,...):

4.5. OTHER AUTHORIZATIONS:

- WATER ABSTRACTION:

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

COMPETENT AUTHORITY (Ex.Water Department,Council...):.....

- WASTEWATER DIRCHARGES:

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

COMPETENT AUTHORITY (Ex.Water Department,Council...):.....

- OTHERS (Ex. Electric power lines,...).....

5. MINING ACTIVITY

5.1. CURRENT PHASE OF THE ACTIVITY:

- EXPLORATION PHASE: YES NO

- PREPARATION PHASE: YES NO

- MINING PHASE: YES NO

- RESTORATION PHASE: YES NO

- COMBINED PHASES (Ex. Mining phase + restoration phase): YES NO

- ABANDONED HISTORIC MINE SITES: YES..... NO

- NOTES:

5.2. DEVELOPMENT OF THE ACTIVITY:

FULL PRODUCTION REDUCED PRODUCTION INACTIVE

ONE SHIFT TWO SHIFTS NIGHT SHIFT



IS THE EXPLORED AREA INSIDE THE PERMITTED ZONES? YES NO

(control by Global Positioning System, GPS system that can be supported by Earth-observation)

5.3. MANAGEMENT PLANS*:

- IS THERE AN EXPLORATION PLAN? :

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

- IS THERE A MINING (EXPLOITATION) PLAN? :

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

- IS THERE A RESTORATION PLAN? :

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

- IS THERE AN ENVIRONMENTAL MONITORING AND CONTROL PLAN? :

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

- IS THERE AN ENVIRONMENTAL MANAGEMENT SYSTEM (EMAS,...) IMPLEMENTED? :

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

- ARE THERE OTHER MANAGEMENT PLANS? : YES NO

WHICH? :

HAVE THE PLANS BEEN FOLLOWED? YES NO

_ IS THERE A MAP THAT SHOWS THE CURRENT STATUS OF MINING ACTIVITIES IN REGARD TO THE PERMIT

-NOTES:

*



5.4. RAW MATERIALS PRODUCTION (m³):

- MAIN RAW MATERIALS (Ex. Blocks of ornamental stone) :.....
- SECONDARY RAW MATERIALS (Ex. Aggregates for concrete gravel,sand...) :
- OTHER MATERIALS (Ex. Remnants of the process,...):.....
- TOTAL AUTHORIZED VOLUME (m3):.....
- VOLUME EXTRACTED (m3):
- USEFUL LIFE OF THE MINING ACTIVITY (APPROXIMATE YEARS):.....
- NOTES:

5.5. PRODUCTION PROCESS (Brief description of : extraction methods, mineral treatment, blasting conditions, mineral transport inside and outside the mining site, storage,...):

- FLOW CHART PROCESS (BRIEF DESCRIPTION) :

5.6. INFRASTRUCTURES, BUILDINGS AND INSTALLATIONS.

(Brief description about drainage network, waste water and sewage treatment systems, electric power lines, crushers, conveyor belts, hoppers, buildings,):

AGE OF THE INSTALLATIONS (YEARS) :.....

CONDITION OF THE EXISTING INSTALLATIONS:

OPTIMAL GOOD BAD

IS THERE A DECOMMISSIONING PLAN OF THE INSTALLATION? YES NO

5.7. MECHANICAL EQUIPMENT:

(Brief description about drilling and blasting equipment, shovel loaders, trucks...)

AGE OF THE EQUIPMENT (YEARS)²² :.....

²² safety certificate if applicable



CONDITION OF THE MECHANICAL EQUIPMENT:

OPTIMAL

GOOD

BAD COND

ARE THE MAINTENANCE AND REPAIR SERVICES OF MECHANICAL EQUIPMENT CARRIED OUT INSIDE MINING INSTALLATIONS:

YES

NO

OCCASIONALLY

IN SITUATIONS OF :.....

EXTERNAL MECHANICAL SERVICES FOR THE MAINTENANCE AND REPAIR OF MECHANICAL EQUIPMENT:

NOTES:



6. HAZARDOUS WASTE (HW) MANAGEMENT

6.1. ADMINISTRATIVE MANAGEMENT.

<input type="checkbox"/> PRODUCER OF HW < 10*TONNES/YEAR	<input type="checkbox"/> PRODUCER OF HW > 10* TONNES/YEAR
PRODUCER COMMUNICATION/AUTHORIZATION :	
YES <input type="checkbox"/> IDENTIFICATION NUMBER:..... NO <input type="checkbox"/> IN PROGRESS <input type="checkbox"/>/...../.....	
IS THERE A REGISTER OF HW PRODUCED? : YES <input type="checkbox"/> NO <input type="checkbox"/>	
IS THE RECORD UPDATED? : YES <input type="checkbox"/> NO <input type="checkbox"/>	
NOTES:	
IN THE CASE OF PRODUCER OF HW > 10* TONNES/YEAR:	
IS THERE THE ANNUAL STATEMENT ON THE HW PRODUCED? : YES <input type="checkbox"/> DATE:...../...../.....NO <input type="checkbox"/>	
IS THERE A MINIMISATION STUDY OF HW? : YES <input type="checkbox"/> DATE:...../...../..... NO <input type="checkbox"/>	
IS THERE A LIABILITY INSURANCE INCLUDING ENVIRONMENTAL DAMAGES? :	
YES <input type="checkbox"/> LIABILITY INSURANCE NUMBER:..... NO <input type="checkbox"/>	
NOTES:	

6.2. PRACTICAL MANAGEMENT.

IS THERE A REGULATED AND IDENTIFIED PLACE FOR THE STORAGE OF HW? : YES <input type="checkbox"/> NO <input type="checkbox"/>	
IS THE PLACE PROTECTED FROM THE SEVERE WEATHER? : YES <input type="checkbox"/> NO <input type="checkbox"/>	
IS THE FLOOR WATERPROOFED? : YES <input type="checkbox"/> NO <input type="checkbox"/>	

*
*
*



ARE THERE SPILLAGES AND/OR WASTESTAINS ON THE FLOOR? : YES NO

ARE THE HAZARDOUS WASTE STORED INSIDE CONTAINERS? : YES NO

ARE THERE CONTAINERS OFFICIALLY APPROVED? : YES NO

DO THE CONTAINERS SHOW ANY STRUCTURAL DAMAGES? : YES NO

ARE THERE CONTAINERS IDENTIFIED WITH OFFICIALLY APPROVED LABELS? : YES NO

ARE THERE HAZARDOUS WASTE PROPERLY SEGREGATED INSIDE CONTAINERS? : YES NO

DO THE CONTAINERS WITH FLUID AND LIQUID HW HAVE RESTRAINT SYSTEMS UNDER THEM?

YES NO SOME OF THEM WHICH? :

TYPE OF RESTRAINT SYSTEMS (Brief description) :

DO THE RESTRAINT SYSTEMS HAVE A SUFFICIENT CAPACITY FOR CONTAINING POSSIBLE SPILLAGES? :

YES NO

NOTES ABOUT RESTRAINT SYSTEMS CAPACITY:

IS THERE ANY WASTEWATER TREATMENT SYSTEM INSIDE THIS AREA? : YES NO

TYPE OF WASTEWATER TREATMENT SYSTEM :
(Brief description about the system and treatment capacity) :

IS THERE ANY FIRE EXTINGUISHING SYSTEM INSIDE THIS AREA? : YES NO

TYPE OF FIRE EXTINGUISHING SYSTEM (Brief description):

6.3. TYPE OF HAZARDOUS WASTE PRODUCED.

WASTE	WASTE CODE	STORAGING	LAST SHIPMENTS	NOTES
LEAD BATTERIES	160601*	PLASTIC CONTAINER (1 M3) WITH OFFICIALLY APPROVED LABEL	27 August 2016	Storage time exceed 6 months.



7. NON HAZARDOUS WASTE (NHW) MANAGEMENT

7.1. ADMINISTRATIVE MANAGEMENT.

PRODUCER OF NHW > 1000 TONNES/YEAR : YES NO

PRODUCER COMMUNICATION/AUTHORIZATION :

YES IDENTIFICATION NUMBER:..... NO IN PROGRESS /...../.....

IS THERE A REGISTER OF NHW PRODUCED? : YES NO

IS THE RECORD UPDATED? : YES NO

NOTES:

7.2. PRACTICAL MANAGEMENT.

IS THERE A REGULATED AND IDENTIFIED PLACE FOR THE STORAGE OF NHW? : YES NO

IS THE PLACE PROTECTED FROM THE SEVERE WEATHER? : YES NO

IS THE FLOOR WATERPROOFED? : YES NO

TYPE OF FLOOR (Ex. Natural soil,...) :

ARE THERE SPILLAGES AND/OR WASTESTAINS ON THE FLOOR? : YES NO

IS THERE ANY WASTEWATER TREATMENT SYSTEM INSIDE THIS AREA? : YES NO

TYPE OF WASTEWATER TREATMENT SYSTEM:
(Brief description about the system and treatment capacity) :

IS THERE ANY FIRE EXTINGUISHING SYSTEM INSIDE THIS AREA? : YES NO

TYPE OF FIRE EXTINGUISHING SYSTEM (BRIEF DESCRIPTION):

NOTES :



7.3. TYPE OF NON HAZARDOUS WASTE PRODUCED.

WASTE	WASTE CODE	STORAGING	LAST SHIPMENTS	NOTES
END-OF-LIFE TYRES	160113	STORAGE IN COMPLIANCE WITH LEGAL REGULATION.	10 January 2016	Storage time exceed 15 months.

8. WASTE FACILITIES (Management of waste from extractive industries)

IS THERE A EXTRACTIVE INDUSTRY WASTE FACILITY SUBJECTED TO PERMITTING? YES NO

IS THERE A CATEGORY "A" WASTE FACILITIES? YES NO

IS THERE A TAILING POND? YES NO

IF YES:

IS THERE A WASTE MANAGEMENT PLAN (MP) THAT PREVENTS OR REDUCES WASTE GENERATION, AND ENCOURAGES WASTE RECOVERY AND SAFE WASTE DISPOSAL? YES NO

IS THE MP REVIEWED EVERY 5 YEARS BY THE AUTHORITIES? _____ YES NO

9. ENVIRONMENTAL EFFECTS

9.1. AIR EMISSIONS.

IS THERE ANY EVIDENCE OF DUST AND PARTICLE EMISSIONS? : YES NO

SOURCE OF POTENTIAL EMISSIONS (Brief description. Ex. Transport, reception hopper,...) :

MITIGATION MEASURES IMPLEMENTED (Brief description.Ex.Dedusting system, Periodic watering of accesses,...) :



THE MITIGATION MEASURES IMPLEMENTED ARE ACCORDING WITH THE CONDITIONS APPROVED IN THE ENVIRONMENTAL AUTHORIZATION: YES NO

BRIEF DESCRIPTION OF THESE DEVIATIONS :

REASONS OF THESE DEVIATIONS :

ARE THERE ALLEGATIONS OR COMPLAINS BECAUSE OF AIR POLLUTION? : YES NO

NOTES ABOUT ALLEGATIONS OR COMPLAINS :

9.2. NOISE EMISSIONS.

IS THERE ANY EVIDENCE OF NOISE EMISSIONS? : YES NO

SOURCE OF POTENTIAL EMISSIONS (Brief description. Ex. Blasting operations,...) :

MITIGATION MEASURES IMPLEMENTED (Brief description.Ex.Blasting with minimized effects in sensitive stages for wildlife, ...) :

THE MITIGATION MEASURES IMPLEMENTED ARE ACCORDING WITH THE CONDITIONS APPROVED IN THE ENVIRONMENTAL AUTHORIZATION: YES NO

BRIEF DESCRIPTION OF THESE DEVIATIONS:

REASONS FOR THESE DEVIATIONS :.....



ARE THERE ALLEGATIONS OR COMPLAINS BECAUSE OF NOISE POLLUTION ? : YES NO

NOTES ABOUT ALLEGATIONS OR COMPLAINS :

9.3. VIBRATIONS.

IS THERE ANY EVIDENCE OF VIBRATION EFFECTS? : YES NO

SOURCE OF POTENTIAL VIBRATIONS (Brief description. Ex. Blasting operations,...) :

MITIGATION MEASURES IMPLEMENTED (Brief description. Ex.Control about quantity of explosives , ...) :

THE MITIGATION MEASURES IMPLEMENTED ARE ACCORDING WITH THE CONDITIONS APPROVED IN THE ENVIRONMENTAL AUTHORIZATION: YES NO

BRIEF DESCRIPTION ABOUT THESE DEVIATIONS:

REASONS FOR THESE DEVIATIONS:

ARE THERE ALLEGATIONS OR COMPLAINS BECAUSE OF VIBRATION EFFECTS ? : YES NO

NOTES ABOUT ALLEGATIONS OR COMPLAINS:



9.4. ADVERSE EFFECTS ON WATER (WATER POLLUTION).

9.3.1. CLEAN WATER MANAGEMENT.

DOES THE MINING SITE HAVE GROUNDWATER WATERHOLES?:

YES NO HOW MANY WATERHOLES?:.....

DOES THE OPERATOR HOLD AN AUTHORIZATION FOR THESE GROUNDWATER ABSTRACTION?

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

DOES THE MINING SITE ABSTRACT WATER FROM WATERCOURSES? YES NO

DOES THE OPERATOR HOLD AN AUTHORIZATION FOR THESE WATERCOURSE ABSTRACTION?

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

IS WATER QUALITY BEING ANALYSED ACCORDING WITH LEGAL PROVISIONS?

YES DATE OF LAST ANALYSIS:/...../..... NO

MUNICIPALY WATER SUPPLY:

YES DATE:...../...../..... NO IN PROGRESS DATE:...../...../.....

NOTES:



9.3.2. DOMESTIC WASTE WATER (DWW) MANAGEMENT.

RECEIVING NETWORK OF DWW : WATERCOURSE BODY MUNICIPAL SEWAGE

IS THERE A DISCHARGE AUTHORIZATION? : YES NO

ARE WASTE WATERS ANALYSED ACCORDING WITH LEGAL PROVISIONS, PREVIOUSLY TO THEIR DISCHARGE INTO THE WATER COURSES? :

YES NO

ARE THE EMISSION MEETING LIMITE VALUES SET IN PERMITT/REGULATION?

YES NO

ARE THERE WASTE WATER TREATMENT SYSTEMS? YES NO

TYPE OF WASTE WATER TREATMENT SYSTEMS (Ex. Sewage plant, Septic tanks,...) :

ARE THERE ALLEGATIONS OR COMPLAINS ABOUT SPILLAGES, ODOURS OR OTHER ADVERSE EFFECTS? :

YES NO

NOTES:

9.3.3. WATER MANAGEMENT OF PRODUCTION PROCESS.

IS THERE ANY EVIDENCE OF POLLUTED WATERS INSIDE THE INSTALLATION? : YES NO

ARE THERE EVIDENCES OF POLLUTED WATERS IN SURROUNDINGS OF THE INSTALLATION? :

YES NO

SOURCE OF POTENTIAL POLLUTED WATERS? (Ex. Machinery washing, decantation tanks,...) :

THE MITIGATION MEASURES IMPLEMENTED ARE ACCORDING WITH THE CONDITIONS APPROVED IN THE ENVIRONMENTAL AUTHORIZATION: YES NO



BRIEF DESCRIPTION OF THESE DEVIATIONS:

REASONS OF THESE DEVIATIONS:

ARE THERE WATER ANALYSIS ACCORDING WITH THE ENVIRONMENTAL MONITORING AND CONTROL PLAN? : YES NO

ARE THERE ALLEGATIONS OR COMPLAINS ABOUT POLLUTED WATERS FROM PRODUCTION PROCESS? :

YES NO

NOTES:

IS THERE A SEPARATE RAINWATER DRAINAGE NETWORK : YES NO

BRIEF DESCRIPTION ABOUT THE NETWORK:

ARE THERE DECANTATION TANKS OR SIMILAR FOR PROCESS WATER TREATMENT? : YES NO

BRIEF DESCRIPTION OF THAT SYSTEM (Number, type of tanks, capacity...):

ARE REGULAR CONTROLS ON THESE TANKS CARRIED OUT? : YES NO

TYPE OF CONTROL (Risk assessment, stability control ...):

EXISTING CAPACITY OF THESE TANKS (INSPECTION TIME) :

< 25% 25-50% 50-75% > 75%

NOTES:



9.5. ADVERSE EFFECTS ON THE SOIL (SOIL POLLUTION).

IS THERE ANY EVIDENCE OF EROSION PROCESSES OVER BANKS AND STORAGING PILES?:

YES NO

BRIEF DESCRIPTION OF THESE EFFECTS:

SOURCES OF THESE EFFECTS (Ex. Absence of sedimentation particles systems,...)

IS THERE ANY EVIDENCE OF SEDIMENTATION PROCESSES?: YES NO

BRIEF DESCRIPTION OF THESE EFFECTS (Pay special attention on zones nearby watercourses):

IS THERE ANY EVIDENCES OF LANDSLIDE AND/OR COLLAPSES?: YES NO

BRIEF DESCRIPTION OF THESE EFFECTS (Ex.Presence of cracks, subsidences,...):

POSSIBLE CAUSES OF THESE EFFECTS:

THE MITIGATION MEASURES IMPLEMENTED ARE ACCORDING WITH THE CONDITIONS APPROVED IN THE ENVIRONMENTAL AUTHORIZATION:

YES NO

BRIEF DESCRIPTION ABOUT THESE DEVIATIONS:

REASONS FOR THESE DEVIATIONS:

ARE THERE ALLEGATIONS OR COMPLAINS ABOUT EFFECTS ON THE SOIL?:

NOTES:



9.6. ADVERSE EFFECTS ON LANDSCAPE.

IS THERE A LANDSCAPE IMPACT AROUND THE MINING ACTIVITY?: YES NO

THE COLORS OF THE INSTALLATIONS ARE ACCORDING TO THE NATURAL ENVIRONMENT:
YES NO

SOURCES OF ADVERSE EFFECTS OVER THE LANDSCAPE (Ex. Shocking colors,excavation holes,...):

THE MITIGATION MEASURES IMPLEMENTED ARE ACCORDING WITH THE CONDITIONS APPROVED IN THE ENVIRONMENTAL AUTHORIZATION:
YES NO

BRIEF DESCRIPTION OF THESE DEVIATIONS:

REASONS OF THESE DEVIATIONS:

ARE THERE ALLEGATIONS OR COMPLAINS ABOUT LANDSCAPE IMPACT?:

NOTES:

9.7. SOCIAL AND CULTURAL EFFECTS.

HOW MANY LOCAL WORKERS ARE WORKING IN THE MINING ACTIVITY (Number)?:

ARE THERE ANY ENVIRONMENTAL TRAINING COURSES PROVIDED TO THE MINING COMPANY EMPLOYEES?:
YES NO

BRIEF INFORMATION ABOUT THESE COURSES (Ex.Course of Work Risk,...):

IS THERE ANY HISTORICAL OR CULTURAL HERITAGE SITE AROUND THE MINING ACTIVITY?:



YES NO

BRIEF DESCRIPTION ABOUT THESE HERITAGE (Ex. Type of monument, distance,degree of protection,):

IS THERE ANY PIECE OF INFORMATION PROVIDED PUBLICLY ABOUT THE RISKS OF THE MINING ACTIVITY ON THE HUMAN HEALTH AND THE ENVIRONMENT IN THE SURROUNDING AREA.
(Ex.Blasting operations on population and protected species):

YES NO

BRIEF DESCRIPTION OF THE PUBLIC INFORMATION PROVIDED PUBLICLY (Ex.Local meetings,...):

IS THERE ANY COOPERATION BETWEEN THE OPERATOR AND STAKEHOLDERS (NGOs, Community,neighbourhood associations,...)? :

YES NO

BRIEF DESCRIPTION OF THIS COOPERATION (Ex.Cooperation with environmental associations in restoration process,...):

10. MONITORING - ENVIRONMENT

IS THERE ANY MONITORING FOR AIR EMISSIONS OR AIR QUALITY? YES NO

DOES IT EXCEEDS LIMITED VALUES? YES NO

IS THERE ANY NOISE MONITORING? YES NO

DOES IT EXCEEDS LIMITED VALUES? YES NO

IS THERE ANY SEISMIC MONITORING? YES NO

DOES IT EXCEEDS LIMITED VALUES? YES NO

IS THERE ANY SOIL MONITORING? YES NO

DOES IT EXCEEDS LIMITED VALUES? YES NO

IS THERE ANY WATER MONITORING? YES NO



DOES IT EXCEEDS LIMITED VALUES? YES <input type="checkbox"/> NO <input type="checkbox"/>

11. NATURA 2000 -GENERAL DATA (<http://natura2000.eea.europa.eu/#>) Natura 2000 Network Wiever)

SITE NAME	
SITE CODE	
SITE LOCATION (GPS)	
AREA	
ECOLOGICAL INFORMATION	
Habitat type present on the site	
Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site	
Other important species of flora and fauna	
Other Site Characteristics	
IS THERE A HABITAT AND SPECIES MONITORING IN THE QUARRY IMPACT ZONE? YES <input type="checkbox"/> NO <input type="checkbox"/>	
IS THERE A HABITAT TYPES MONITORING IN THE QUARRY IMPACT ZONE? YES <input type="checkbox"/> NO <input type="checkbox"/>	
DOES AN ACTUAL SITE MANAGEMENT PLAN EXIST? YES <input type="checkbox"/> NO <input type="checkbox"/>	
ARE THERE ANY REQUIRED MONITORING REPORTS IN THE QUARRY IMPACT ZONE?	



YES NO

NOTE:

CAN THE CAUSAL RELATION BE ESTABLISHED IN INDICATORS TREND AND QUARRY ACTIVITY?

YES NO

NOTE:

CAN ANY OF THREATS, PRESSURES AND ACTIVITIES WITH IMPACTS ON THE SITE BE RELATED WITH INSPECTED QUARRY?

YES NO

NOTE:

WAS THE PERMITTE ISSUED BEFORE NATURA WAS PROCLAIMED

YES NO

IF YES, DOES IT HAVE TO BE ADAPTED TO NEW CONDITIONS OF NATURA 2000

YES NO

12. OPERATOR PERFORMANCE (IRAM).

NO RELEVANT NON COMPLIANCES BY THE OPERATOR WITH THE PERMIT CONDITIONS OR VIOLATION OF THE OPERATOR DUTIES:

YES NO

ONE RELEVANT NON COMPLIANCE BY THE OPERATOR WITH THE PERMIT CONDITIONS OR VIOLATION OF THE OPERATOR DUTIES:

YES NO

BRIEF DESCRIPTION ABOUT THIS RELEVANT NON COMPLIANCE:

MORE THAN ONE RELEVANT NON COMPLIANCE OR MORE IMPORTANT NON COMPLIANCE WITH THE PERMIT CONDITIONS OR VIOLATION OF THE OPERATOR DUTIES:

YES NO

BRIEF DESCRIPTION ABOUT THESE RELEVANTE NON COMPLIANCES:



NUMBER OF COMPLAINTS FROM THE PREVIOUS INSPECTION

13. FOLLOW-UP MEASURES



Annex V. MOST COMMON WASTE – quarries and open cast mining

(LIST OF WASTE: COMMISSION DECISION of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council.)



01. WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS.

01 01 wastes from mineral excavation

010102. Wastes from mineral non-metalliferous excavation.

01 04 wastes from physical and chemical processing of non-metalliferous minerals

01 04 07* wastes containing hazardous substances from physical and chemical processing of non-metalliferous minerals.

01 04 08 waste gravel and crushed rocks other than those mentioned in 01 04 07.

01 04 09 waste sand and clays.

01 04 10 dusty and powdery wastes other than those mentioned in 01 04 07.

01 04 11 wastes from potash and rock salt processing other than those mentioned in 01 04 07.

01 04 12 tailings and other wastes from washing and cleaning of minerals other than those mentioned in 010407 and 01 04 11.

01 04 13 wastes from stone cutting and sawing other than those mentioned in 01 04 07.

01 04 99 wastes not otherwise specified.



13. OIL WASTES AND WASTES OF LIQUID FUELS (from the maintenance and repair services of machinery operations).

13 02 waste engine, gear and lubricating oils.

13 02 04* mineral-based chlorinated engine, gear and lubricating oils.

13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils.

13 02 06* synthetic engine, gear and lubricating oils.

13 02 07* readily biodegradable engine, gear and lubricating oils.

13 02 08* other engine, gear and lubricating oils.

13 03 waste insulating and heat transmission oils.

Check in cases of power electric transformers

13 05 oil/water separator contents.

13 05 01* solids from grit chambers and oil/water separators.

13 05 02* sludges from oil/water separators.



13 05 03* interceptor sludges.

13 05 06* oil from oil/water separators.

13 05 07* oily water from oil/water separators.

13 05 08* mixtures of wastes from grit chambers and oil/water separators.

13 07 wastes of liquid fuels.

13 07 01* fuel oil and diesel.

13 07 02* Petrol.

13 07 03* other fuels (including mixtures).

14. WASTE ORGANIC SOLVENTS, REFRIGERATES AND PROPELLANTS (except 07 and 08).

14 06 waste organic solvents, refrigerants and propellants.

14 06 02* other halogenated solvents and solvent mixtures.

14 06 03* other solvents and solvent mixtures.

14 06 04* sludges or solid wastes containing halogenated solvents.

14 06 05* sludges or solid wastes containing other solvents.

15. WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED.



15 01 packaging (including separately collected municipal packaging waste).

15 01 01 paper and cardboard packaging.

15 01 02 plastic packaging.

15 01 03 wooden packaging.

15 01 04 metallic packaging.

15 01 05 composite packaging.



15 01 06 mixed packaging.

15 01 07 glass packaging.

15 01 09 textile packaging.

15 01 10* packaging containing residues of or contaminated by hazardous substances.

15 01 11* metallic packaging containing a hazardous solid porous matrix (for example asbestos), including empty pressure containers.

15 02 absorbents, filter materials, wiping cloths and protective clothing.

15 02 02* absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances.

15 02 03 absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 150202.

16. WASTES NOT OTHERWISE SPECIFIED IN THE LIST.

16 01 wastes from vehicle maintenance.

16 01 03 end-of-life tyres.

16 01 04* end-of-life vehicles.

16 01 07* oil filters.

16 01 08* components containing mercury.

16 01 11* brake pads containing asbestos.

16 01 12 brake pads other than those mentioned in 160111.

16 01 13* brake fluids.

16 01 14* antifreeze fluids containing hazardous substances.

16 01 15 antifreeze fluids other than those mentioned in 160114.

16 01 16 tanks for liquefied gas.

16 01 17 ferrous metal.

16 01 18 non-ferrous metal.

16 01 22 components not otherwise specified.

16 01 99 wastes not otherwise specified.





16 02 wastes from electrical and electronic equipment.

16 02 09* transformers and capacitors containing PCBs

16 04 waste explosives.

16 04 03* other waste explosives.



16 05 gases in pressure containers and discarded chemicals.

16 05 04* gases in pressure containers (including halons) containing hazardous substances.

16 05 05 gases in pressure containers other than those mentioned in 160504.

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals.

16 06 batteries and accumulators.

16 06 01* lead batteries.

16 06 05 other batteries and accumulators.

17. CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES).





17 01 concrete, bricks, tiles and ceramics.

17 01 01 Concrete.

17 01 02 Bricks

17 01 03 tiles and ceramics.

17 01 06* mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances.

17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06.

17 02 wood, glass and plastic.

17 02 01 Wood.

17 02 02 Glass.

17 02 03 Plastic.

17 02 04* glass, plastic and wood containing or contaminated with hazardous substances.

17 03 bituminous mixtures, coal tar and tarred products.

17 03 01* bituminous mixtures containing coal tar.

17 03 02 bituminous mixtures other than those mentioned in 17 03 01.

17 04 metals (including their alloys).

17 04 01 copper, bronze, brass.

17 04 02 Aluminium.

17 04 03 Lead

17 04 04 Zinc

17 04 05 iron and steel.

17 04 06 Tin

17 04 07 mixed metals.

17 04 09* metal waste contaminated with hazardous substances.

17 04 10* cables containing oil, coal tar and other hazardous substances.

17 04 11 cables other than those mentioned in 17 04 10.

17 05 soil (including excavated soil from contaminated sites), stones and dredging soil.

17 05 03* soil and stones containing hazardous substances.

17 05 04 soil and stones other than those mentioned in 17 05 03.

17 05 05* dredging spoil containing hazardous substances.



17 05 06 dredging spoil other than those mentioned in 17 05 05.

17 06 insulation materials and asbestos-containing construction materials.

17 06 01 * insulation materials containing asbestos.

17 06 03* other insulation materials consisting of or containing hazardous substances.

17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03.

17 06 05* construction materials containing asbestos.



17 08 gypsum based construction material.

17 08 01* gypsum-based construction materials contaminated with hazardous substances.

17 08 02 gypsum-based construction materials other than those mentioned in 17 08 01

17 09 other construction and demolition wastes

17 09 03* other construction and demolition wastes (including mixed wastes) containing hazardous substances.

17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03.

20. MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS.

20 01 separately collected fractions (except 15 01).

20 01 01 paper and cardboard.

20 01 02 Glass.

20 01 21* fluorescent tubes and other mercury-containing waste.



20 01 27* paint, inks, adhesives and resins containing hazardous substances.

20 01 28 paint, inks, adhesives and resins other than those mentioned in 20 01 27.

20 01 29* detergents containing hazardous substances.

20 01 30 detergents other than those mentioned in 20 01 29.

20 01 35* discarded electrical and electronic equipment other than those mentioned
in 20 01 21 and 20 01 23 containing hazardous components (1).

20 01 36 discarded electrical and electronic equipment other than those mentioned in
20 01 21, 20 01 23 and 20 01 35.

20 01 37* wood containing hazardous substances.

20 01 38 wood other than that mentioned in 20 01 37.

20 01 39 Plastics.

20 01 40 Metals.

20 01 99 other fractions not otherwise specified.

20 03 other municipal wastes.

20 03 01 mixed municipal waste.

20 03 04 septic tank sludge.

20 03 07 bulky waste.

20 03 99 municipal wastes not otherwise specified.

(1) Hazardous components from electrical and electronic equipment may include accumulators and batteries mentioned in 16 06 and marked as hazardous; mercury switches, glass from cathode ray tubes and other activated glass, etc.