SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

Sustainable Water Integrated Management and Horizon 2020 Support Mechanism

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Environmental Inspection Principles

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Presentation Outline

- **Basic principles**
- **Targets of inspection**
- **Inspection cycle**

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Basic principles

- **Transparency** off all procedures followed during inspection (justification on decisions taken)
- **Effectiveness** of the periodical inspections (cover all routine inspections according to National Plan)
- **Efficiency** of the technical staff (competence)
- **Validity** of the inspection procedure (approved methodology by the Authorities)
- **Applicability** of the inspection plan (cooperation between different Authorities)
- **Team organization** (coordination)

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Target of the inspection procedure

- Regular monitoring of application of environmental conditions
- Application of the national or international legislation
- Avoidance of major environmental incidents
- Rational treatment of waste/ Hazardous waste (solid, liquid)
- Air emission monitoring

Target of the inspection procedure

- Compliance with the recycling and abatement techniques
- Abatement efficiency control
- Periodical update on legislation requirements
- Raw material, fuel and natural resources control according to permits

Inspection process

– ***Planning**:* Establishing plans for environmental inspections

– ***Execution**:* Performing inspections and investigating accidents, incidents and occurrences of non-compliance

– ***Reporting**:* Reporting on inspections, accidents and incidents and storing inspection data

– ***Evaluation**:* Evaluating the implementation of inspection plans for internal purposes and reporting to other 3rd parties

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Inspection process

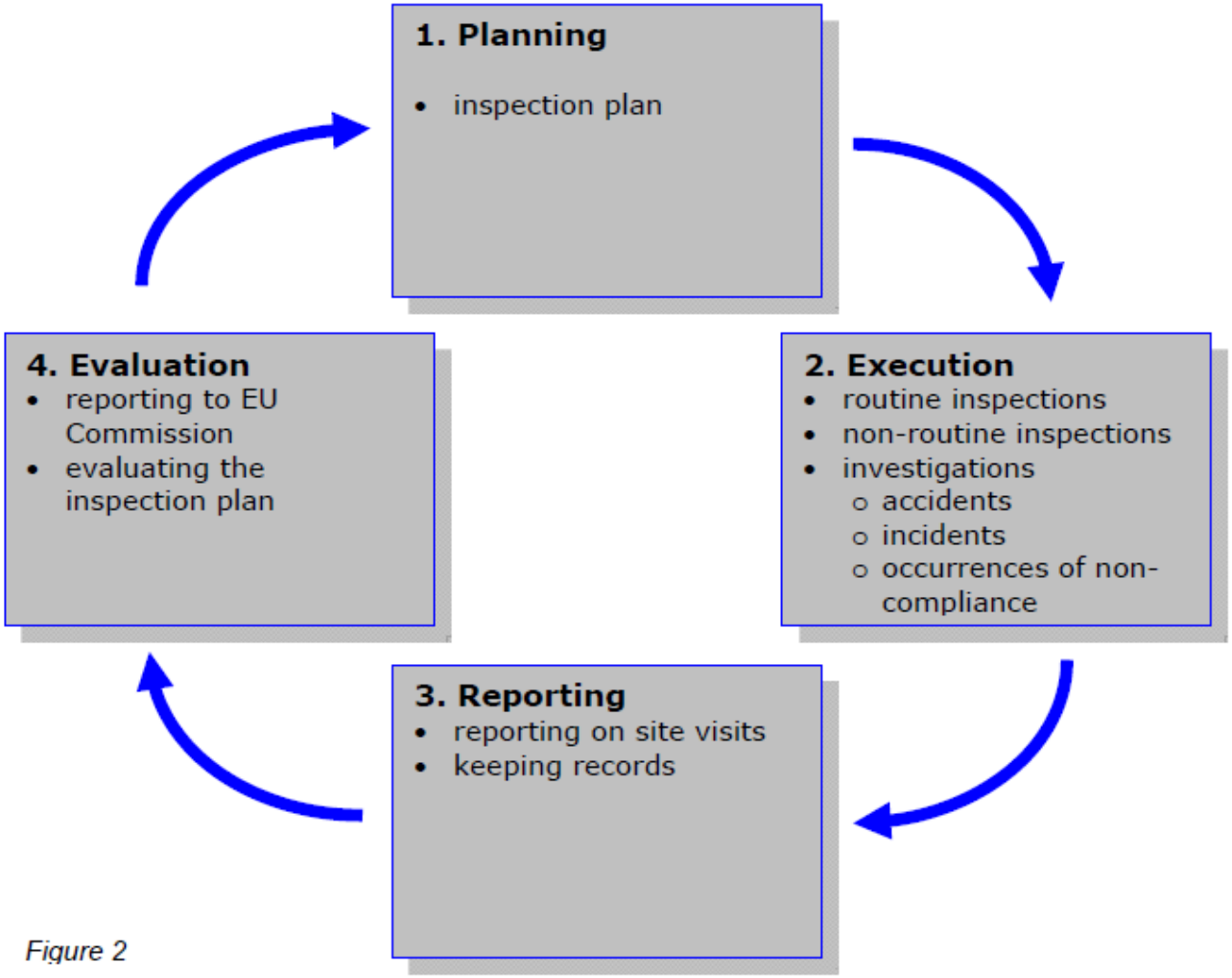

Figure 2

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Environmental Inspection Cycle

1. Describing the context of the Inspection Plan
2. Setting Priorities
3. Defining objectives and strategies
4. Planning and review

and

5. Execution framework
6. Execution and reporting
7. Performance monitoring (evaluation of the Inspection Plan)

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Planning

1a. Describing the context

- identifying the scope
- information gathering

1b. Setting priorities

- risk assessment
- ranking and classification
- resources

1c. Defining objectives and strategies

- objectives and measurable targets
- inspection strategies to ensure compliance
- communication strategy

1d. Planning and review

- organizational, human and financial conditions
- inspection plan (including inspection schedule)
- review and revision

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2. Execution Framework

- work protocols and – instructions
- protocols for communication
- information management and information exchange
- equipment and other resources

3. Execution and Reporting

- routine inspections
- non-routine
- investigation

- accidents
- incidents
- occurrence of non compliance

- reporting
- information exchange with partner organizations

4. Performance monitoring

- monitoring
- accounting for effort, performance results
- comparing and auditing
- external reporting

The planning cycle- Identifying the scope

Relevant factors in identifying the scope are (in random order):

- Geographical area for which the inspecting authority is competent
- Mission and goals (in general) of the inspecting authority
- The environmental outcome the inspecting authority is trying to achieve
- Statutory tasks and competences of the inspecting authority
- Applicable legislation, either originated from a national- or regional level, according to which the inspecting authority is competent to inspect
- Obligations to inspect, laid down in specific legislation
- Established environmental (national) policy and priorities

Identifying the scope

- Interests of stakeholders (e.g. NGO's, branches of industries)
- Public opinions
- Register of activities and installations for which the inspecting authority is competent to inspect:

o Sectors of industries

o Types and sizes

o Numbers and geographical distribution of installations

- Relevant environmental issues (water, air, safety, etc) for which the inspecting authority is competent to inspect
- The inspection resources (financial and human) that are available for the inspecting authority
- Types of inspection activities (control, compliance promotion, education, information transfer etc) to be covered

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Information gathering

Information on the following issues may be relevant in this respect:

Environment

- Environmental issues (environment, safety, public health, nature) particularly relevant for the area concerned
- Information on the state of and trends in the (ambient) environment (e.g. data from monitoring networks)

Installations

- Sector-specific issues/needs, e.g. expertise, attitude, culture, compliance behavior and economics of (industrial) target groups
- Information on the numbers, location and the branches of small and medium sized enterprises in the area that are regulated and falling under the scope of the inspection plan

Information gathering

- (Minimum) frequency of inspections based upon (national) legislation or national or local goals.
- Information on individual controlled activities/installations, such as information on:

o Legal requirements and permit situation

o Emissions/discharges (results from emission monitoring), environmental impact, risk, accidents/incidents

o Complexity of installation

o Location of installation

o Compliance record / behavior (inspection history)

o Performance record (e.g. Environmental management systems, self monitoring and reporting, safety management systems, audits, experiences of inspection authorities)

o Relevant complaints

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Information gathering

General

- Changes in legislation that need to be implemented
- Quality and enforceability of the requirements in legislation or permits
- Research on types of industry, objects and spatial planning done by third parties (e.g. Universities, Statistical boards or other Inspectorates)
- Coordination and cooperation with other (inspection) authorities

o Feedback and evaluation of past inspections

o Likelihood of offences (e.g. is there a big financial profit for not complying to legislation)

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Risk Assessment

On an abstract level (prioritizing between different tasks) the following risk criteria can be used:

- Environmental impact
- Impact to public health
- Safety risks
- Impact to nature
- Social impact
- Financial, economic and legal impact
- Sustainability
- Compliance behavior

Risk Assessment

On a more detailed level (prioritizing within a task, e.g. between installations (or sector of industry) the following risk criteria can be used:

- Previous experience of the inspector with the facility in question
- Compliance rating or compliance history of the facility
- Comparison of compliance with other facilities in the same category
- Scale and complexity of facility
- Location and sensitivity of receiving environment
- Emissions
- Potential impact (e.g. emissions in case of accidents and incidents)
- An implemented (certified) Environmental Management System
- Public perception of the facility/complaints by 3rd parties
- Incidents and accidents

Ranking, classification and priorities

Ranking

The risk assessment **produces amounts of risk or scores** of the installations or activities assessed. Generally the higher the risk, the higher the score. The range between low score and a high score depends on the system used

Classification

To set priorities an appropriate classification is important. With the classification it's possible to **classify a certain risk within in a risk category**. In other words we **have to determine under what score we still believe the risk is low and above what score we believe the risk is high**. The number of risk categories depends on the system that is used (if this is pre-defined) and can be adjusted.

Priorities

The priorities can be linked to the amount of risk. In other words, a **high risk gives a high priority**. The inspecting authority must then decide what a high priority means in terms of type and frequency of required inspections. A simple example is given in the box below.

Objectives and measurable targets

Objectives and targets

Objectives are set to achieve the overall goals. The targets are the actions and deliverables we have to accomplish to reach these objectives.

For example: an objective can be to reduce the odour nuisance of intensive farming in a certain area, and the corresponding target to reduce the amount of complaints within that area by 40%. Objectives and targets do not necessarily cover the same time period (e.g. long term, medium term, short term).

Performance monitoring, is only possible when the targets that we define are measurable. The targets should be precise and preferably specified by **indicators**, quantifying the desired situation that should be achieved.

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Performance indicators

The work of an inspecting authority has a long-term purpose. Very often the **relation between environmental outcome and inspection work** is difficult to observe or cannot be observed immediately. **Performance indicators on outputs or outcomes** can be used to monitor and **demonstrate progress** in achieving targets

Examples: Traditional indicators of performance **quantify activities** (or outputs) such as the number of inspections conducted and enforcement actions taken through the year

Performance indicators on outcomes can be the number of complaints received, the number of non- compliances, but also the volume of hazardous waste that is managed correctly etc

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Strategies

In order to actually achieve a certain target we need to determine what inspection activities in that particular case have the greatest positive effect on compliance. By doing so we can **further determine the resources needed** and use our resources in the most **effective and efficient way**. In many cases a mix of activities is the most appropriate strategy. In some cases however an inspecting authority may be limited in its choices because it is obliged to perform specific inspection activities, based on national legislation.

An inspection strategy to help ensure compliance may include:

- specific ways of compliance checking (e.g. certain routine and non-routine inspections, in-depth investigations, verification of self monitoring data),
- specific approaches and ways to remedy and sanction (repeated) non compliances.

Strategy

To determine the best inspection strategy it can be useful to assess the following elements:

Element 1

Clearly define the target and the rules they have to comply with.

Element 2

Gather information about the compliance behavior of the target.

The aim is to get an insight into the target, compliance behavior and the motives for that behavior.

Strategies

Element 2: factors that influence compliance behavior

- The familiarity with and clarity of legislation among the target group.
- The tangible/intangible advantages and disadvantages arising from compliance or non-compliance with the rule(s), expressed in time, money and effort.
- The extent to which the policy and legislation is considered acceptable by the target.
- The extent to which the target respects the government's authority.
- The risk, as estimated by the target, of positive or negative reactions on their behavior from others than the authorities.
- The risk, as estimated by the target, of a violation detected by persons or bodies other than the authorities, being reported to a government body.

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Strategies

- The risk, as estimated by the target, of an inspection by the authorities.
- The risk, as estimated by the target, of a violation being detected in an inspection carried out by the authorities.
- The perceived risk of inspection and detection of a violation resulting from being selected for inspection out of a larger population.
- The risk, as estimated by the target group, of a sanction being imposed if an inspection reveals that a rule has been broken.
- The severity and nature of the sanction associated with the violation and additional disadvantages of being sanctioned.

Element 3

Determining the inspection strategy

Based on insights on the compliance behavior the proper inspection strategy can be determined.

Generally speaking the strategy will depend on the specific tendency of the target to comply or not to comply and the factors that lead to this tendency.

Communication strategy

The inspecting authority can only perform in **an effective, transparent and accountable way** when it has a communication strategy: a set of adequate provisions and arrangements for internal information exchange and for communication with other authorities, stakeholders and the general public.

The **general public** should have access to information on the inspecting authorities' activities and environmental performance of the regulated community. Beyond passively responding to requests for information, the inspecting authority should pro-actively issue news releases and otherwise **disseminate information**. The general public should have the right to provide information to the inspectorate (for example complaints) and to have its concerns addressed.

Inspection plan

Defined time period and area

The inspecting authority needs to develop an **inspection plan** that covers a defined time period and a defined geographic area. A common time period is **1 year** but multi-annual inspection plans are used.

As the competence of an inspecting authority is also **bound to a geographic area** (municipality, region or MS) it is common to use this geographic area also in the inspection plan. Depending on the size and tasks of the inspecting authority **sub-inspection plans can be developed** covering all a different part of the area.

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Inspection Plan

Scope

Besides time period and area the inspecting authority should give a clear picture of the scope of the inspection plan. It should describe:

- the tasks, competences and obligations it has
- its mission and goals
- the (national) policies and priorities
- the applicable legislation (EU or national)
- the controlled activities and installations
- the range of different inspection activities that can take place

Priorities

The inspection plan should describe the method used for the risk assessment, the classification and ranking of activities and installations and the priorities arising from these.

This means that besides the outcome, also the process needs to be described. In other words **the inspection plan should not only give the priorities itself but also the justification how the inspecting authority came to these priorities**.

Inspection plan

Objectives and targets

Based on the priorities the inspection plan **should describe** the objectives and the measurable targets for the activities. It is important the targets are formulated in a way so they can be monitored and evaluated.

Inspection activities

The inspection plan should provide information on the numbers and types of routine environmental inspections to be carried out, including:

- frequency of site visits for different types of specified controlled installations
- key figures/indicators on necessary inspection capacity

Inspection Plan

Strategies and procedures

The inspection plan should describe or refer to the strategies and the procedures that will be taken into account. The inspection plan should at least **include reference** to:

- procedures for routine inspections, which can include site visits as well as other kind of inspection activities
- procedures for non-routine inspections in case of

o Complaints

o Accidents and incidents

o Occurrences of non-compliance

o Inspections or activities as part of the permit procedure

- procedures for coordination between the different inspecting authorities;
- provisions for review of the inspection plan

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Inspection plan

Inspection schedule

The inspection schedule can be **part of the inspection plan**. The inspection plan however is publicly available. Therefore the inspecting authority might want to decide to include the schedule as an annex or separate document. This way **the schedule can stay confidential**.

The inspection schedule at least covers:

- a defined time period of maximum 1 year
- a list of all activities and installations to be inspected, including:

o Inspectors or inspection unit

o Type of routine inspections

o Date (days/weeks/months), time and frequency

o Amount of time and staff needed

o Co-operation with other authorities

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Sample Inspection Plan; Table of contents

1. Scope of this inspection plan

1.1. Time period and area

1.2. Tasks, competences and (Statutory) Inspection Obligations

1.3. (National) policies and priorities that have to be taken into account

1.4. Applicable legislation

1.5. Organisational structure

1.5.1. Range of inspection activities

1.5.2. Resources

1.5.3. Budget

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Sample Inspection Plan; Table of contents

2. The environment, activities and installations
2.1. State of the environment
2.1.1. Specific, topical environmental issues in the area
2.2. Controlled Activities
2.2.1. Environmental impact and performance
2.2.2. Compliance behavior
2.3. Controlled Installations
2.3.1. Environmental impact and performance
2.3.2. Compliance behavior

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Sample Inspection Plan; Table of contents

3. Last years performance
3.1. Objectives and targets we had to reach
3.2. Input, Output and Outcome
3.3. Evaluation
4. This years planned performance
4.1. Risk assessment method
4.2. Outcome of risk assessment
4.3. Priorities
4.4. Resources
4.5. Objectives and targets
4.6. Inspection and Communication strategies
4.7. Procedures for routine and non-routine inspections
4.8. Procedures for coordination with partner organisations
4.9. Procedures for review of this plan

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Sample Inspection Plan; Table of contents

5. Overview of inspection activities for the coming year
5.1. Routine inspections
5.1.1. Installations
5.1.2. Activities
5.2. Non routine inspections
5.2.1. Complains
5.2.2. Accidents and incidents
5.2.3. permits
5.3. Compliance assistance and other inspection activities
Annex: Inspection schedule
o Routine inspections
- Installations
- Activities

o Non routine inspections
- Complaints
- Accidents and incidents
- Permits
- Compliance assistance and other inspection activities

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Review and revision

The inspection plan should be reviewed and if necessary revised periodically. In **evaluating the success** of the inspection plan the inspecting authority should determine the extent to which it **achieved the objectives and targets** set out in the plan. Where they have not been met, the inspecting authority should determine the factors that have impacted on the completion of the tasks.

As the inspection plan is a more **strategic document**, it is envisaged that **revision may only be required** in response to significant changes to policies, significant changing activity in given industrial/work sectors, or other changing situations.

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Review and revision

Changes to the plan may also be made as a **result of performance monitoring**. Where performance targets set are met (or not met), or where efforts expended through the inspection plan have not resulted in the expected improvements to the state of the environment, the authority may also wish to change the inspection plan (e.g. to change the strategy to be employed, the resources to be assigned, or the objectives/targets set).

When only the inspection schedule has to be revised, revision of the entire plan may not be necessary (e.g. where the only change is to the number of planned inspections to be carried out – i.e. changes in desired output). The inspection schedule however will normally **change on an annual basis**.

Review and revision

The requirement to revise and evaluate the implementation of previous plans in order to develop the plan for the coming period is the **application of a management systems approach**.

In defining the priorities and targets within the inspection plan, the inspecting authority should put in place the means to **track and evaluate their performance** with respect to the plan.

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Review and revision

The inspection plan should contain the targets to be achieved during the year, to allow for **ongoing evaluation** of activities during the execution of the plan.

In addition to the **numerical targets**, inspecting authorities should also consider how they are going to **evaluate performance**, in relation to the priorities that they set in their plans. That way, the **environmental outcome** of their activities is checked in addition to the activities themselves.

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Thank you for your attention.

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