



**The Inspection Technology and
Quality Assurance National Institute**

**ENVIRONMENTAL ASPECT / IMPACT
IDENTIFICATION
AND EVALUATION
ITQAN-MP-03**

According to ISO 14001:2015 requirement

ITQAN Institute



ENVIRONMENTAL ASPECT / IMPACT IDENTIFICATION AND EVALUATION

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ENVIRONMENTAL ASPECT / IMPACT IDENTIFICATION AND EVALUATION

1. PURPOSE

- 1.1. This document outlines the systematic process for identifying environmental aspects related to the activities, products, and services within the defined scope of our Environmental Management System.
- 1.2. The purpose also includes establishing criteria to determine the significance of identified environmental aspects. This evaluation aims to identify those aspects with substantial impact, allowing the development of pertinent objectives and procedures.

2. SCOPE

This procedure applies to all facilities and locations engaged in the operations of the Inspection Technology and Quality Assurance National Institute (ITQAN) within the Kingdom of Saudi Arabia. The procedure encompasses the identification of environmental impacts, the assessment of their significance, and the regular updating of the environmental impact register.

3. RESPONSIBILITY

Effective implementation of this procedure falls under the responsibility of the Quality, Health, Safety, and Environment Management Representative (QHSE MR), along with team members and subcontractors. Their collective efforts ensure the proper execution of this process.

4. DEFINITION

- **Environmental Aspect:** Refers to an identifiable element within an institute's activities, or services that holds the potential to interact with the environment.
- **Environmental Impact:** Denotes any alteration to the environment, irrespective of being detrimental or advantageous, that arises wholly or partially because of an institute's activities, or services.
- **Significant Aspect:** Pertains to an environmental aspect that presently possesses or has the potential to create a notable environmental impact.

5. PROCEDURE

5.1. Identification of Environmental Aspects

Environmental aspects, which can potentially impact on the environment either directly or indirectly, are initially identified by respective department/unit heads, in collaboration with the Management Representative. Various methods, such as process analysis, activity investigation, environmental audits, questionnaires, and interviews, are employed for this purpose. Initial identification of aspects may be documented using the "Initial Aspect Identification Form" as an initial feedback mechanism from the relevant function. Environmental aspects are recognized in the following domains:

- **Emissions to Air:** This includes the release of toxic or harmful gases from both the plant and vehicles.
- **Releases to Water:** Encompasses the disposal of wastewater or solid particles with wastewater into drainage systems.
- **Releases to Land:** Involves the disposal of waste chemicals, other solid waste, or wastewater onto land surfaces.
- **Use of Raw Materials and Natural Resources:** Covers aspects such as water consumption, utilization of paper products, and wood products.
- **Use of Energy:** Encompasses fuel and electricity consumption.
- **Energy Emissions:** Refers to energy-related emissions like heat, radiation, and vibration.
- **Waste and By-products:** Encompasses waste generated during processes and resulting by-products.
- **Physical Attributes:** Involves characteristics such as size, shape, color, and appearance.
- **Environmental Factors:** Includes factors like noise, odor, dust, vibration, heat, and visual impact.

5.2. Evaluation of Significance

ITQAN institute establishes probability and severity criteria to discern whether the identified aspect is associated with a significant environmental impact.

5.3. Components of Environmental Impact

The impact related to environmental impairment in any given scenario is comprised of two key parameters.

5.3.1. Probability of Occurrence: (Likelihood)

- L (1) – Extremely infrequent event: Frequency will be more than 30 days.
- M (2) – Moderately frequent event: Frequency is between 8 days to 30 days.
- H (3) – Frequent event: Frequency in between 1 to 7 days

5.3.2. Severity Assessment:

- **L – (1) Low Impact:** No external complaints lodged. No violations of laws observed. The impact is short-lived but does have some minor effect on the environment.
- **M – (2) Medium Impact:** Regulatory standards remain uncompromised, and clients have not raised concerns. Enhancement of environmental performance could be achieved through additional measures.
- **H – (3) High Impact:** Signifies long-term environmental damage with severe regulatory breaches. Client requirements are violated, potentially leading to far-reaching implications. Public concern escalates, and notable health risks emerge. Legal actions may ensue due to the gravity of the situation.

5.3.3. Assessment Matrix for Environmental Aspect Evaluation is given below in figure 5.3.3.1 and 5.3.3.2.

ASSESSMENT MATRIX (Figure 5.3.3.1.)

(SIGNIFICANCE = SEVIRITY X PROBABILITY)

SEVERITY OF THE CONSEQUENCES	PROBABILTYY (LIKELIHOOD)			
		L (1)	M (2)	H (3)
	H (3)	INSIGNIFICANT (3)	MODERATE (6)	SIGNIFICANT (9)
	M (2)	INSIGNIFICANT (2)	MODERATE (4)	MODERATE (6)
L (1)	INSIGNIFICANT (1)	INSIGNIFICANT (2)	INSIGNIFICANT (3)	

(Figure 5.3.3.2.)

<u>SIGNIFICANCE (S X P)</u>	<u>DESCRIPTION</u>	<u>ACTION</u>
1-3	INSIGNIFICANT	Acceptable: No major further controls required.
4-6	MODERATE	Extensive Action required with planned approach. Action taken must be documented in Environmental Aspect / Impact Register (ITQAN-MR-09-00)
7-9	SIGNIFICANT	Immediate Extensive Action required with planned approach. Action taken must be documented in Environmental Aspect / Impact Register (ITQAN-MR-09-00)

5.4. Environmental Aspect Evaluation in Different Conditions:

The evaluation of environmental aspects should be conducted for activities under the following circumstances:

- **Normal Conditions:** This pertains to routine activities within the institute, representing steady-state operations.
- **Abnormal Conditions:** These situations involve deviations from the norm, such as instances of heavy wind causing dust generation or office relocation leading to elevated paper waste.

- **Emergency Conditions:** These are critical situations involving incidents like water or fuel tank leaks, flooding, fires, and accidental toxic releases.

5.5. Environmental Aspect Response Time Objectives (EARTOs)

ITQAN established Environmental Aspect Response Time Objectives (EARTOs) to determine how to respond promptly and mitigate environmental aspects. These EARTOs range from a few minutes for significant environmental aspects to one business day or more for insignificant environmental aspects:

1. Significant:

- Objective: Respond to and mitigate significant environmental aspects that could potentially cause notable harm to the environment.
- EARTO: Within 1 minute to 4 hours of detection.

2. Moderate:

- Objective: Address moderate environmental aspects that possess a moderate potential for environmental impact. These aspects are more impactful than insignificant ones but not as severe as significant ones.
- EARTO: Within 8 hours to 1 business day of detection.

3. Insignificant:

- Objective: Manage insignificant environmental aspects with minor impact on the environment.
- EARTO: Within a week of detection, if needed.

5.6. Recognition and Mitigation of Environmental Impacts:

It is essential to acknowledge the environmental impacts associated with these situations. This recognition enables the implementation of actions aimed at minimizing or eradicating the adverse effects on the environment.

5.7. Maintenance of Environmental Aspect / Impact Register:

A listing of all environmental impacts, along with their corresponding assessments and control measures, is documented in the Environmental Aspect / Impact Register (Document ITQAN/MR/09). This record should be distributed and explained to employees across various institutional levels, contractors, and relevant visitors as needed.

5.8. Workforce Involvement:

Engagement of the workforce is imperative for the identification of environmental aspects, assessment of impacts, and formulation and execution of control measures.

5.9. Assessment of New Process/Activity Environmental Aspects:

Whenever a new process or activity is introduced, a thorough assessment and evaluation of its environmental aspects and impacts must be undertaken to determine their significance. Subsequently, any necessary supplementary controls will be implemented, and both the Environmental Aspect / Impact Register Document (ITQAN/MR/09) and the Significant Aspect / Impact Register Document (ITQAN/MR/10) will be updated accordingly.

5.10. Implementation of QHSE-IMS Program:

The Quality, Health, Safety, and Environment Integrated Management System (QHSE-IMS) program (Document ITQAN/MR/11) shall be effectively implemented, covering all significant issues, and ensuring adherence to legal compliance standards.

5.11. Implementation of QHSE-IMS Program:

The QHSE-IMS program Document (ITQAN/MR/11) shall be accurately executed, including not only all significant issues but also ensuring strict adherence to legal compliance standards.

6. ASSOCIATED DOCUMENTS

- Environment Aspect / Impact Register [\(ITQAN/MR/09\)](#)
- Significant Aspect / Impact Register [\(ITQAN/MR/10\)](#)
- Integrated Management System Programme [\(ITQAN/MR/11\)](#)