



# GUIDELINES EMS\_DB

*EMS\_DB is based on the third edition of the ISO (14001:2015).*

## Get started

As mentioned in the description, inside the EMS\_DB you will find mostly empty tables that need to be filled by the users of this product.

We suggest you follow these steps:

1. Insert data to the tables of the '1\_PLAN' schema
2. Insert data to the tables of the '2\_DO' schema
3. Insert data to the tables of the '3\_CHECK' schema
4. Insert data to the tables of the '4\_ACT' schema
5. Insert data to the tables of the 'CROSS\_DOMAIN' schema
6. Create relationships between records, do this for the tables of the 'JOIN\_TABLES' schema.

## How to insert the data?

### 1. Manual

Insert your data manually by copying and pasting the values into a worksheet. Check our example queries in the next paragraph for some insert statements.

### 2. File import

Insert your data in batches via file import. Create your own file format based on the type of file and the structure of your data in the file.

### 3. Interface

Insert your data automatically via an interface to one of your external systems that hold your company's Environmental Management data.

## Good to know

There are a few tables that require a minimum number of records:

- LEADERSHIP\_ELEMENT
  - Minimum of 10 rows
  - For each row in the 'LEADERSHIP\_ELEMENT\_TYPE' table at least 1 row where the column 'TYPE\_ID' refers to the ID of that row.
- ENVIRONMENTAL\_POLICY\_CRITERION
  - Minimum of 7 rows
  - For each row in the 'ENVIRONMENTAL\_POLICY\_CRITERION\_TYPE' table at least 1 row where the column 'TYPE\_ID' refers to the ID of that row.
- PROCESS
  - Minimum of 7 rows
  - For each row in the 'PROCESS\_NAME' table at least 1 row where the column 'NAME\_ID' refers to the ID of that row.



To help you gain overview of the number of rows your tables currently hold we included the view 'EMS\_ROW\_OVERVIEW'. Based on this result you know what tables still require some attention.

## Insert statement examples

To get started with inserting data into the tables we have listed a few examples of manual insert statements.

### Important notes

1. Always wrap the schema names in double quotes, otherwise your query will fail. Due to pre-reserved words and the use of leading numbers we had to wrap the schemas in quotes, so this is also required when querying them.
2. Never insert a value for the 'ID' column, this ID will be generated automatically. If you insert your own ID, it will cause duplicate ID's!

### Example 1: Insert data into INTERESTED\_PARTY

Insert your company's data related to Interested parties.

Replace the values with your data and run the query.

```
INSERT INTO "1_PLAN".INTERESTED_PARTY (NAME, EXTERNAL)
VALUES
('Dutch government', FALSE),
('Greenpeace', FALSE),
('R&D department', TRUE),
('The CEO', TRUE);
```

### Example 2: Insert data into NEED\_OR\_EXPECTATION

Insert your company's data related to Needs and Expectations.

Replace the values with your data and run the query.

Make sure you enter the correct related 'ID' of an INTERESTED\_PARTY.

```
INSERT INTO "1_PLAN".NEED_OR_EXPECTATION (INTERESTED_PARTY_ID, DESCRIPTION)
VALUES
(2, 'Greenpeace expects us to reduce our emissions by switching to sustainable transport.');
```

### Example 3: Insert data into a JOIN table

Insert your company's data related to Risks and Opportunities and Compliance

Obligations and link the inserted rows to each other with the use of the JOIN table.

Replace the values with your data and run the different steps one by one.

```
-- STEP 1 : insert data to a table
insert into "1_PLAN".COMPLIANCE_OBLIGATION (NAME, TYPE_ID, DESCRIPTION, IMPACT_TO_ORGANISATION)
values ('obligation 1', 1, 'my description', 'It financially affect our organisation');

-- STEP 2 : get latest ID (perform directly after step 1!)
set var1 = (select max(ID) from "1_PLAN".COMPLIANCE_OBLIGATION AT(statement=>last_query_id()) );
```



```
-- STEP 3: insert data to another table
insert into "1_PLAN".RISK_OR_OPPORTUNITY (NAME, DESCRIPTION, TYPE_ID, RELATION_TO_EMS)
values ('risk 1', 'my description', 1, 'related by the [...]');

--STEP 4 : get latest ID (perform directly after step 3!)
set var2 = (select max(ID) from "1_PLAN".RISK_OR_OPPORTUNITY AT(statement=>last_query_id()) );

-- STEP 4 : add relation between the 2 records in the JOIN table
insert into "JOIN_TABLES".COMPLIANCE_OBLIGATION_RISK_OR_OPPORTUNITY (COMPLIANCE_OBLIGATION_ID,
RISK_OR_OPPORTUNITY_ID)
values ($var1, $var2);

-- STEP 5: check the values in the join table
select * from "JOIN_TABLES".COMPLIANCE_OBLIGATION_RISK_OR_OPPORTUNITY;
```

#### Example 4: Insert default data into parameter tables

Add default values to the parameter tables.

These values have already been added but might be helpful when you accidentally removed some of the values.

Run the insert statement(s) you need individually.

```
INSERT INTO "CROSS_DOMAIN".RATING (NAME) VALUES ('Low'), ('Medium'), ('High') ;

INSERT INTO "3_CHECK".INTERNAL_AUDIT_RESULT_TYPE (NAME) VALUES ('Conform'), ('Improvement
opportunity'), ('Improvement opportunity & Nonconformity'), ('Nonconformity') ;

INSERT INTO "1_PLAN".PROCESS_NAME (NAME) VALUES ('Establish controls, as appropriate, to ensure
the company's environmental requirements are addressed in the design and development process
for the product or service, considering each life cycle stage'), ('Determine the company's
environmental requirements for the procurement of products and services, as appropriate'),
('Communicate the company's relevant environmental requirements to external providers,
including contractors'), ('Consider the need to provide information about potential significant
environmental impacts associated with the transportation or delivery, use, end-of-life treatment
and final disposal of its products and services'), ('Prepare for and respond to potential
emergency situations defined in 6.1.1'), ('Provide relevant information and training related to
emergency preparedness and response, as appropriate, to relevant parties, including persons
working under the company's control'), ('Evaluate fulfillment of the company's compliance
obligations (frequency of compliance evaluation, how actions are taken, maintenance of
knowledge)') ;

INSERT INTO "2_DO".COMPETENCE_NAME (NAME) VALUES ('Ability to determine and evaluate
environmental impacts or compliance obligations'), ('Ability to contribute to the achievement
of an environmental objective'), ('Ability to respond to emergency situations'), ('Ability to
perform internal audits'), ('Ability to perform evaluations of compliance') ;

INSERT INTO "1_PLAN".SCOPE_ELEMENT_TYPE (NAME) VALUES ('Internal and external issues'),
('Obligations'), ('Organisation units'), ('Functions'), ('Physical boundaries'), ('Activities,
products and services'), ('Facilities'), ('Processes'), ('Legal requirements'), ('Organisational
elements') ;

INSERT INTO "1_PLAN".RISK_OR_OPPORTUNITY_TYPE (NAME) VALUES ('Risk'), ('Opportunity') ;

INSERT INTO "1_PLAN".RESPONSIBILITY_TYPE (NAME) VALUES ('Ensuring the environmental management
system conforms to the requirements of ISO14001'), ('Reporting on performance of the
environmental management system, including environmental performance, to top management') ;

INSERT INTO "2_DO".RESOURCE_TYPE (NAME) VALUES ('Financial'), ('People'), ('Infrastructure'),
('Products'), ('Skills'), ('Training') ;

INSERT INTO "1_PLAN".PROCESS_TYPE (NAME) VALUES ('Operational'), ('Communication') ;
```



```
INSERT INTO "1_PLAN".ENVIRONMENTAL_POLICY_CRITERION_TYPE (NAME) VALUES ('Framework for setting environmental objectives'), ('Commitment to the protection of the environment, including prevention of pollution'), ('Commitment(s) relevant to sustainable resource use'), ('Commitment to climate change mitigation and adaptation'), ('Commitment to protection of biodiversity and ecosystems'), ('Commitment to fulfil compliance obligations'), ('Commitment to continual improvement of the environmental management system') ;
```

```
INSERT INTO "3_CHECK".OUTPUT_TYPE (NAME) VALUES ('Conclusion'), ('Decision'), ('Action'), ('Implication') ;
```

```
INSERT INTO "CROSS_DOMAIN".OBSERVATION_TYPE (NAME) VALUES ('Action status'), ('Changes in external and internal issues that are relevant to the environmental management system'), ('Changes in the needs and expectations of interested parties, including compliance obligations'), ('Changes in significant environmental aspects'), ('Changes in risks and opportunities'), ('Performance evaluation/level of achievement'), ('Trends in nonconformities and corrective actions'), ('Trends in monitoring and measurement results'), ('Trends in fulfilment of compliance obligations'), ('Trends in audit results'), ('Adequacy of resources'), ('Communication & complaints'), ('Opportunities for improvement'), ('Nonconformities') ;
```

```
INSERT INTO "3_CHECK".MONITORING_ELEMENT_TYPE (NAME) VALUES ('Process'), ('People'), ('Targets'), ('Environmental performance'), ('Effectiveness of EMS') ;
```

```
INSERT INTO "1_PLAN".LEADERSHIP_ELEMENT_TYPE (NAME) VALUES ('Effectiveness of the environmental management system'), ('Environmental policy and environmental objectives'), ('Integration of the environmental management system requirements into the organisations business processes'), ('Resources needed for the environmental management system'), ('Importance of effective environmental management'), ('Conforming to the environmental management system requirements'), ('Environmental management system achieves its intended outcomes'), ('Directing and supporting people to contribute to the effectiveness of the environmental management system'), ('Promoting continual improvement'), ('Support of other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility') ;
```

```
INSERT INTO "1_PLAN".ENVIRONMENTAL_OBJECTIVE_TYPE (NAME) VALUES ('Business area'), ('Aspect'), ('Function'), ('Process') ;
```

```
INSERT INTO "1_PLAN".ENVIRONMENTAL_ASPECT_TYPE (NAME) VALUES ('Emissions to air'), ('Pollution of land'), ('Discharge of water'), ('Use of materials / natural resources'), ('Solid waste management'), ('Hazardous waste') ;
```

```
INSERT INTO "1_PLAN".COMPLIANCE_OBLIGATION_TYPE (NAME) VALUES ('International, national and local laws and regulations'), ('Requirements specified in permits, licenses or other forms of authorization'), ('Orders, rules or guidance from regulatory agencies'), ('Judgements of courts or administrative tribunals'), ('Agreements with community groups or non-governmental organizations'), ('Agreements with public authorities or customers'), ('Organizational requirements'), ('Voluntary principles or codes of practice'), ('Voluntary labelling or environmental commitments'), ('Obligations arising under contractual arrangements with the organization'), ('Relevant organizational or industry standards') ;
```

```
INSERT INTO "2_DO".COMPETENCE_TYPE (NAME) VALUES ('Analytical thinking'), ('Organisational understanding'), ('Goal-oriented'), ('Crisis management'), ('Observing and critical thinking'), ('Due diligence'), ('Problem solving') ;
```

```
INSERT INTO "2_DO".AWARENESS_TYPE (NAME) VALUES ('Policy'), ('Environmental aspects'), ('Environmental impact'), ('Contribution to the effectiveness'), ('Implications of nonconformities') ;
```

```
INSERT INTO "3_CHECK".INPUT_TYPE (NAME) VALUES ('Extent to which any objectives have been met'), ('Changes and trends in environmental performance based on monitoring and measurement'), ('Status of improvement opportunities'), ('Changes and trends in results'), ('Status of actions and actions plans'), ('Changes in compliance obligations including regulations') ;
```

```
INSERT INTO "3_CHECK".INTERNAL_AUDIT_TYPE (NAME) VALUES ('Audit'), ('Audit Program') ;
```