

# Environmental Management Systems in Telecom Companies

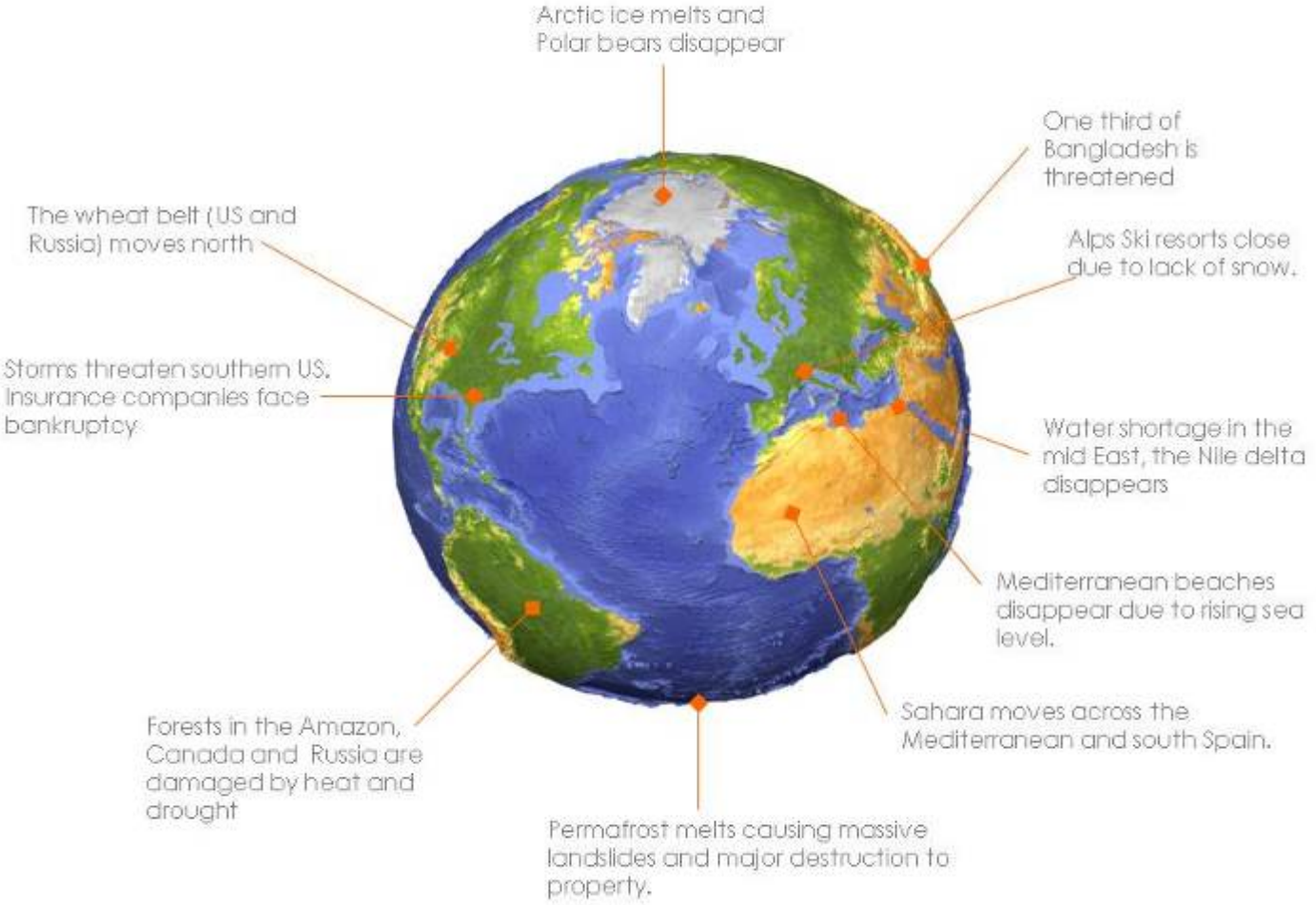
Mobinil: A case study

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**This is how the world will look like in 2050. Unless we do something...**



**Remember:** "We did not inherit this earth from our forefathers, but instead we have borrowed it from our grandchildren".

# 1 About Environmental Management Systems

An Environmental Management System [EMS] is a set of programs and processes aiming to reduce environmental impact and increase operational efficiency.

These programs and processes identify, measure and control the environmental impacts of an organization; they are also an integral part of existing business processes.

EMS initiatives can be prompted by several reasons like compliance or a desire for recognition, but the most important driver is when acting on best management practices.

Ultimately, an EMS is bound to have lasting and effective powers only when there is strong management and staff commitment, clear communication of objectives and a mechanism for continual improvement.

## 1.1 Characteristics of an effective EMS

- **Flexible...**

Inability to change leads to failure; a good EMS should be adaptable to all situations in order to succeed.

- **Transparent...**

All programs and processes should be clearly identified beforehand.

- **Useful to the practitioner...**

It is not only a matter of filling gaps and completing documentation; users have to realize tangible gains from an EMS to continue using it.

- **In harmony to the mission focus...**

This is necessary in order to have higher management buy-in

- **Focused on continual improvement...**

The essence of EMS; the learning curve never ends and so is the improvement.

## 1.2 Why do we need an EMS?

Modern businesses operate in markets characterized by growing awareness of sustainability issues like the environment and its protection. Accordingly, environmental credentials play a key part in customer loyalty.

- Environmental regulations are getting stricter and so is the enforcement.
- Cutting waste and using natural resources more efficiently have proved to reduce costs and boost profits.
- Banks, stock exchanges and insurers are taking a closer look at the environmental risk of companies seeking credit or insurance.
- There is growing interest in environmentally responsible companies.
- The public is using its buying power to encourage businesses towards fulfilling environmental and social responsibilities.

Environmental credibility is becoming a factor in national and international competitiveness. Implementation of an EMS can facilitate progress towards increased profit, efficiency, reduced liability and improved image.

### 1.3 EMS certification:

The two most globally recognized Environmental management systems are the ISO 14001 and the EPA NEPT [National Environmental Performance Track].

Formal recognition of the company's Environmental Management System is done by an independent third party. Typically there is a:

- Certification body and an,
- Accreditation body.

Having a third party auditing and assessing the company's EMS gives greater assurance to the public that the EMS complies with the requirements of the standard.

### 1.4 Key EMS definitions:

#### Aspects...

Elements of a company's activities, products or services that can interact with the environment like emissions to air, releases to water or contamination of land; aspects are influenced by a company's waste treatment and use of natural resources.

#### Impacts...

Any change to the environment whether adverse or beneficial resulting from the company's activities [aspects]

#### Performance...

Measurable results related to a company's control of its environmental aspects, and based on its environmental policy, objectives and targets.

#### Objectives...

Objectives are overall long term goals that arise from the environmental policy.

### 1.5 Benefits of the EMS:

As an internal driver of change, implementing an Environmental Management System affects any company's bottom line through:

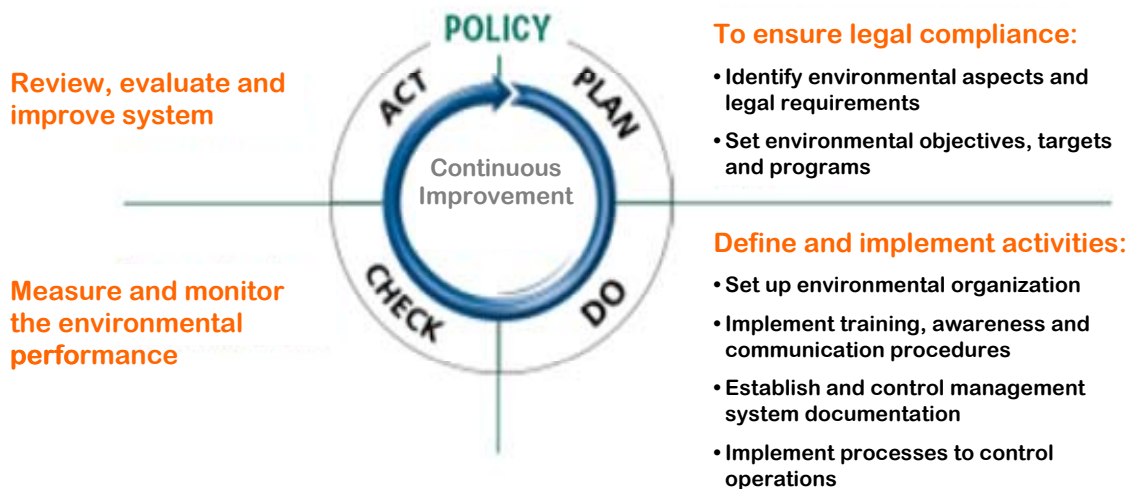
1. Reducing costs [of waste, energy and raw materials consumption]
2. Ensuring compliance with regulatory and legal requirements.
3. Building public image with clients, regulatory bodies and stakeholders
4. Motivating employees and enhancing loyalty.

## 2 The Environmental Management System model

### 2.1 Plan. Do. Check. Act...

The success of an EMS depends on commitment from all levels and functions of a company, especially top management.

The following model is typical for any viable EMS; it is a perpetual loop of planning, doing, checking and acting that ultimately leads to continual improvement.



### 2.2 EMS Model and components implementation

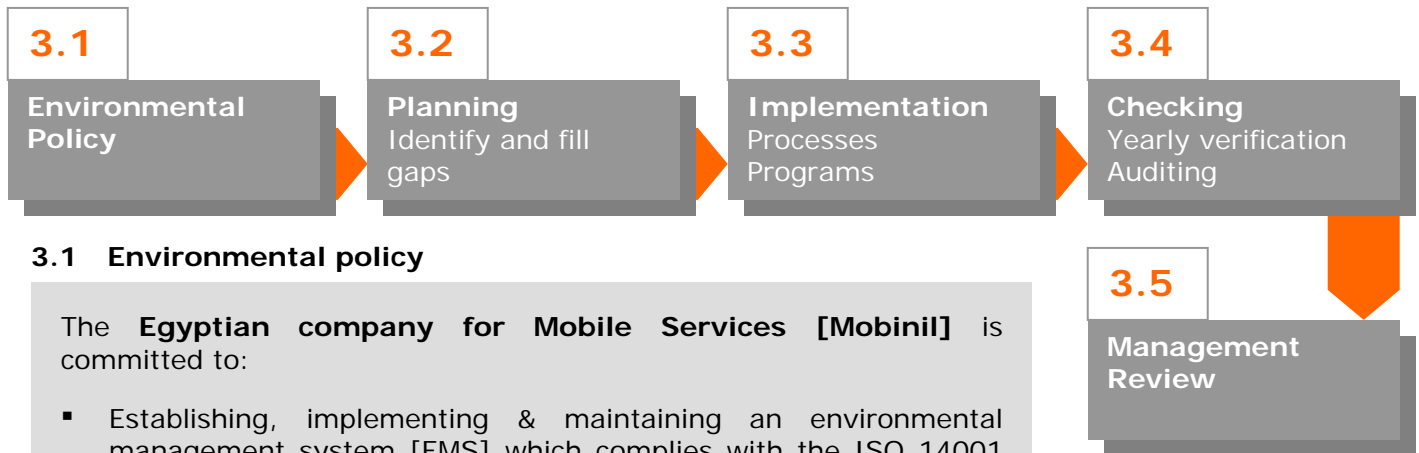
In the next chapter we shall demonstrate how the EMS model maps perfectly with current Mobinil's operations and activities.

We shall also list the essential [18] EMS components and refer each to an existing and documented process.

### 3 Mobinil's Environmental Management System

ISO 14001 was developed to support environmental protection in a manner that is balanced with socio-economic needs and to ensure that products and services have the least environmental impact.

In this chapter, we shall discuss in the five phases of the Plan-Do-Act-Check model and how they are reflected in Mobinil's daily operations



#### 3.1 Environmental policy

The **Egyptian company for Mobile Services [Mobinil]** is committed to:

- Establishing, implementing & maintaining an environmental management system [EMS] which complies with the ISO 14001 requirements.
- Complying with national environmental legislation, regulations and other requirements.
- Controlling & preventing all forms of environment pollutants such as wave emissions, waste & noise.
- Giving particular emphasis to efficient use of the assigned frequency band, electricity, water, fuel and other resources to minimize consumption and waste.
- Continually improving the Environmental Management System to always make it consistent with ISO 14001 updates.
- Setting measurable objectives & targets and drawing up environmental programs and regularly monitoring and reviewing their progress through performance indicators.
- Conducting awareness programs & active training for all the company employees.
- Communicating policy to all employees as well as the community, and establishing the strategic business tools to support our corporate philosophy of providing the best quality service & the highest environmental protection for our customers in addition to the best working environment for our employees.

### 3.2 Planning EMS – The components

EMS components summarize the performance improvements and cost reductions that can be achieved. These components mainly address:

- Aspects, requirements, objectives and targets
- Responsibilities, training, awareness and communications.
- Document control, operation control and records.
- Monitoring, measurement, corrective action and non-conformance
- Auditing and management review.

These components were identified in Mobinil during the planning phase; the next step was to see if they are already represented as an existing company process or whether a new process should be established.

A group of processes were introduced; documented and implemented to ensure that all EMS components are covered. These processes are detailed in the next section.

### 3.3 Implementing the EMS

#### 3.3.1 The processes

The following is a list of EMS related processes and the corresponding component:

EMS Component	Description	Corresponding Mobinil Procedure	Procedure Number
Environmental Policy	Develop statement of company commitment	Declaration of environmental policy	<b>EP 010000</b>
Environmental Aspects	Identify attributes that impact the environment	Environmental aspects procedure	<b>EP 020000</b>
Legal Requirements	Ensure access and understanding of relevant rules and regulations	Legal and other requirements procedure	<b>EP 030000</b>
Objectives and Targets	Establish goals for company and EMS	Objectives and targets procedure	<b>EP 040000</b>
Structure and Responsibility	Establish roles and responsibilities for EMS	Declaration of company structure procedure	<b>EP 060000</b>
Training and awareness	Ensure employees are capable of environmental responsibilities	Training procedure	<b>EP 070000</b>
Communications	Establish system for communicating environmental issues	Communication procedure	<b>EP 080000</b>
Document Control	Effective management of procedures and other key documents	Document control procedure	<b>EP 100000</b>
Operations Control	Identify, plan and manage operations and activities	Operation control procedure	<b>EP 110000</b>
Emergency Preparedness and Response	Identify potential emergencies and prevention measures	Emergency preparedness and response procedure	<b>EP 140000</b>
Monitoring and Measurement	Track performance on achieving targets	Monitoring and measurement procedure	<b>EP 150000</b>
Non-Conformance and Corrective Action	Identify and correct problems	Control of non-conformance and corrective actions	<b>EP 170000</b>
Records	Maintain and manage EMS performance records	Record control procedure	<b>EP 190000</b>
Auditing	Verify EMS is operating as intended	Internal audits procedure	<b>EP 200000</b>
Management Review	Review EMS for continual improvement	Management review procedure	<b>EP 210000</b>

### 3.3.2 The programs

There are four environmentally supportive programs in Mobinil that operate within the framework of the EMS. Each program consists of a group of projects with a clear goal and definite time frames.

The four environmental programs in Mobinil are:

#### 1. Awareness

- Holding environmental awareness sessions in governorates, local councils and NGOs working in the field.
- Establishing forums and debates in universities.
- Supporting research in 9 national universities and academic institutions.
- Sponsoring conferences and events that contribute to environmental protection
- Conducting periodic training sessions to Mobinil employees.
- Recognizing distinguished university students.
- Publishing awareness material on company website and Intranet

#### 2. Radiation Control

- Conducting periodic measurement and inspection for Mobinil cell sites.  
[Initiative is made under supervision of National Telecom Regulatory Authority].
- Establishing active data base [Site Info System] with updated information about status of each site and radiation levels.
- Launching measurement projects – in collaboration with Cairo University – to assess EMR levels in overall areas.

#### 3. Environmental Projects

- Office waste collection program [shredded paper, toners and cartridges]
- Charging over the air [E-Charging]
- Using solar powered cells – instead of traditional fossil fuel in remote areas
- Micro and indoor cell deployment
- Putting monthly bills on CD - instead of sending paper bills.
- Recycling mobile phone batteries in accordance with UN Basel Convention
- Use of stub towers instead of masts
- Using artificial tree pylons instead of towers in environmentally sensitive areas
- Using bio-degradable scratch cards instead of plastic based.
- Recycling BTS batteries.

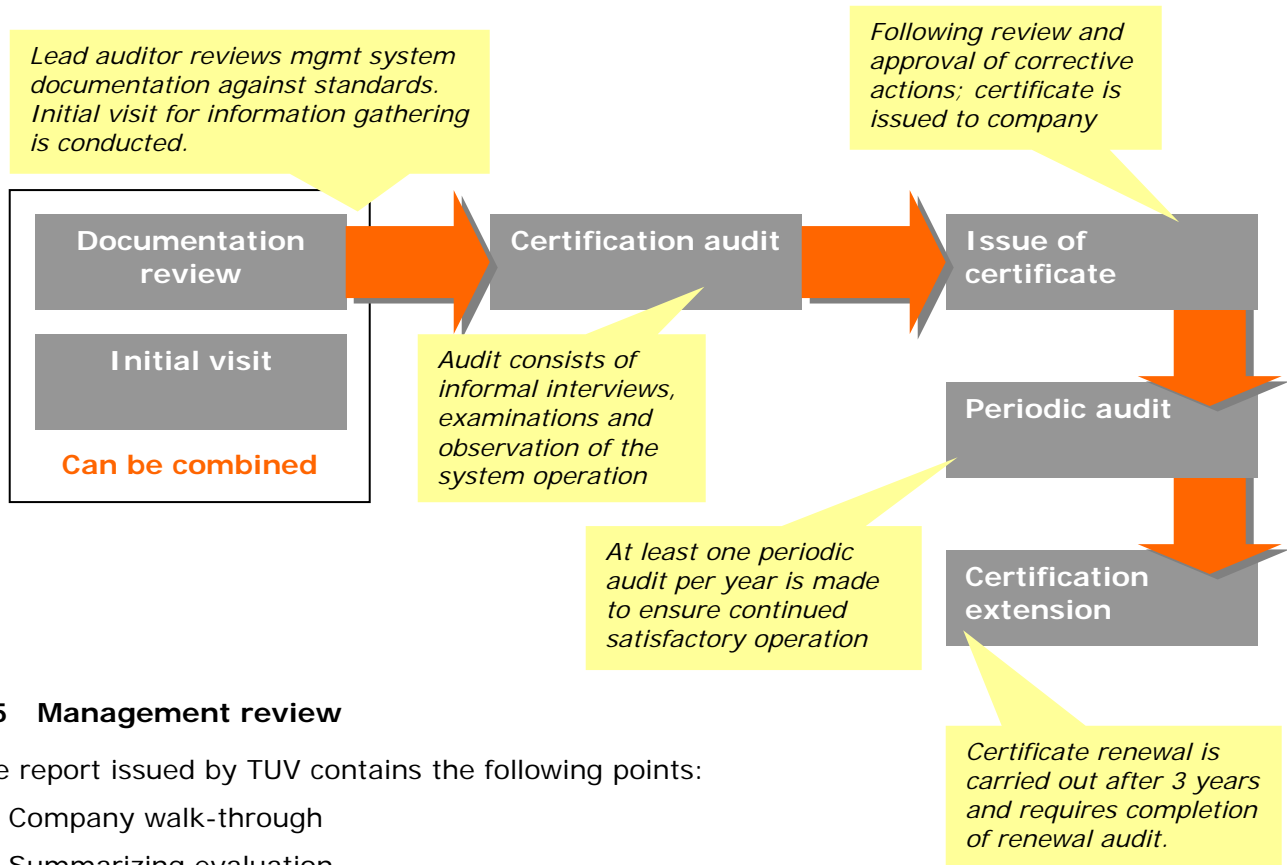
#### 4. Public Complaints

- Handling public concerns or questions regarding any cell site.  
A special fax and e-mail was set up for that purpose: [environment@mobinil.com](mailto:environment@mobinil.com)
- Resolving environmentally related issues with concerned officials during cell construction.

### 3.4 Checking

Verifying that the EMS is effective is a yearly audit task; a more comprehensive audit to renew the ISO 14001 certification occurs every three years.

The following diagram explains the checking process:



### 3.5 Management review

The report issued by TUV contains the following points:

- Company walk-through
- Summarizing evaluation
- Changes from last audit
- Audited elements and approach
- Status of key EMS components such as the policy, aspects, objectives, environmental program, structure and responsibility, training, communication...etc.
- Handling of complaints filed by clients.

Based on outcome report, the management is presented by recommendations for continual improvement and corrective actions.

## 4 References

As a leader in the telecommunication market in Egypt and the first company to be ISO 14001 certified in the Middle East; Mobinil recognized the importance of environmental responsibilities through best practices and proper management of its products and services impacts.

### 4.1 ISO 14001 certification

Obtaining the ISO certification is not a goal by itself; it is the start of a long journey towards full commitment to environmental protection.

Spreading environmental public awareness as well as guiding the society is one of our main responsibilities for "better and safe Environment"

The following is a copy of the latest ISO 14001 certificate obtained in 2004:



### The next step: OHSAS 18001

OHSAS 18001 is an international occupational health and safety management system specification.

The OHSAS 180001 was created via efforts from a number of leading national standards bodies, certification bodies and specialized consultancies.

The importance of managing Occupational Health and Safety is recognized by all interested parties: employers, employees, customers, suppliers, insurers, shareholders, the community, contractors and regulatory agencies.

OHSAS 18001 can be used by organizations of all sizes regardless of the nature of their activities or location. Organizations can now achieve third party certification for their Occupational Health and Safety management system.

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### 4.2 Site certificates

The following is a typical site conformity certificate as issued by the National Telecom Regulatory authority.

All Mobinil sites must have a certificate as shown, and must be renewed at least once every two years.



### 4.3 Project news flashes

<p><b>Shredded paper and toner collection program</b></p>	<p><b>Using solar powered cells</b></p>	<p><b>The E-Charging program</b></p>
<p><b>Recycling mobile phone batteries</b></p>	<p><b>Using environmentally friendly – tree towers</b></p>	<p><b>Joining the yearly clean up the world campaign</b></p>

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