

***AISM***Association of Internationale de Signalisation Maritime ***IALA***

International Association of Marine Aids to Navigation and Lighthouse Authorities

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On

**Environmental Management in Aids to Navigation**

**(IALA Green Guidelines)**

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**TABLE OF CONTENTS**

[1. Introduction 3](#_Toc322596497)

[2. Scope 3](#_Toc322596498)

[3. References and Legislative Compliance 3](#_Toc322596499)

[4. Environmental Management 4](#_Toc322596500)

[4.1 The Commercial Aspects of Environmental Management 4](#_Toc322596501)

[4.2 Best practice vs. leading practice principles 4](#_Toc322596502)

[4.3 Environmental Management Policies 5](#_Toc322596503)

[4.4 The Risk Assessment Process 5](#_Toc322596504)

[4.5 Environmental Management Systems and Plans 5](#_Toc322596505)

[4.6 Environmental considerations in ATON design and production. 7](#_Toc322596506)

[4.7 Carbon Ommissions / Carbon Control 7](#_Toc322596507)

[4.8 Restoration of Impacted Habitats. 7](#_Toc322596508)

# Introduction

Aids to Navigation (ATON) play a critical role in protecting the environment by preventing maritime disasters that could have potentially catastrophic ecological impact on sensitive marine and terrestrial ecosystems.

However, AtoN equipment and activities themselves can create significant environmental impact through waste generation, unsustainable energy use, pollution and the disturbance of ecosystems. It is essential to minimize these negative impacts so that the benefits of AtoN are not outweighed by unintended negative impacts on the environment. Minimizing the impacts can be achieved by responsible environmental management and the factoring in of environmental concerns to all levels of AtoN design, management and maintenance.

In order to manage the impact of AtoN activities on the environment, an ethos of environmental protection and natural resources stewardship should be promulgated throughout the organization. Environmental considerations should be made a part of all engineering, planning, and decision-making processes. These considerations should also be based on a global approach, with an understanding that impacts are not localized and can have complex effects on the broader environment.

# Scope

Detail the scope of document as this was absent in the original document. Scope needs to clearly outline what the document is about.

# References and Legislative Compliance

Protection of the environment is of paramount importance to aids to navigation (AtoN) authorities and service providers and all organizations should show a strong commitment to comply with all local, national and international laws, regulations, standards and codes of practice in their area of operation. AtoN authorities and service providers should refer to their local legislation for specific compliance requirements to guide their environmental management.

Governments, intergovernmental and nongovernmental organizations, major groups, the private sector and civil society, individually or collectively, have a role in environmental governance. At the international level, multilateral environmental agreements have been increasingly playing an important role and providing leadership in this field. Regional organizations and bodies provide forums for policy development and implementation in regions. AtoN authorities and service providers should look to these as a source of information, assistance and additional funding for environmental programs that could possibly be run parallel to their own activities.

# Environmental Management

Environmental Management could be classified as an attempt to control human impact on, and interaction with the environment in order to preserve natural resources.

IN the broader sense, environmental management consists of a series of different, but inter-related systems that when combined, allow effective management of these environmental interactions.

Needs additional input regarding the importance of environmental management.

## The Commercial Aspects of Environmental Management

This needs additional review, it is important to outline the commercial benefits of good environmental management.

There is a false impression that increase the environmental "friendliness" will always increase the cost of doing AtoN work or proving AtoN services. In fact, the result can be just the opposite. Methodologies, engineering solutions and procedures that reduce the impact on the environment can actually reduce AtoN costs.

Even being more expensive at first , providing nature friendly AtoN is a significant investemnt in a long run. …

The monetary and non-monetary costs of not pursuing an environmentally responsible approach can be much higher for an organization. These can range from bad publicity, financial liability and increasingly, to actual criminal prosecution.

General understanding and awareness of these issues has increased dramatically in the recent past, and as a result there is now a strong emphasis on responsible environmental stewardship, especially in marine areas. Local and global communities now have the relevant information at hand to be able to monitor the actions and impacts of authorities or service providers, putting the pressure on those entities to ensure they take their responsibilities seriously.

Development of better waste management strategies can also increase in better use of resources, less wasteful practices, a focus on more renewable energy sources; all of which will eventually result in reduced costs. The upfront cost of implementing these systems is of course a consideration however the long term benefits must always be investigated.

The response to environmental degradation or contaminated site is a lengthy and expensive process. Environmental incidents now attract a much wider audience and as a result attract more attention from authorities or bodies tasked to deal with the response. The cost of responding to incidents and remediating the impacts are often far more than the cost of implementing systems to mitigate the risks of those accidents happening in the first place.

## Best practice vs. leading practice principles

Reference should be made to this concept.

## Environmental Management Policies

Environmental management policies are top level documents that outline the general direction, focus and goals of an organization’s approach to their interaction with the environment. Due to increasing complexity and understanding of environmental issues, policies may be related to specific issues, such as sustainability, waste management, habitat protection etc. The type and direction of the policies should be dictated by the organization.

Policies should create the basis for further development of environmental management plans, systems and any other documentation that is required to guide this aspect of an organizations activitities, whether it would be related to maintenance, a project, specific circumstances, or operations as a whole.

Relevant legislation, laws, standards or codes practice must be considered by the organization when developing or reviewing policies, to ensure compliance.

Environmental policies should be communicated to all employees, managers, and stakeholders. All personnel should understand their role in supporting these policies, and should receive proper training in this regard.

## The Risk Assessment Process

Needs substantial content as this is important concept.

## Environmental Management Systems and Plans

Needs additional review.

An effective way of creating and controlling the environmental ethos within an organization is through development of an Environmental Management Plan (EMP) or Environmental Management System (EMS). Generally, an EMP/EMS would provide a specific outline on management and the processes involved, and in some cases, an outline of the monitoring of the impact and effect of an organization’s interactions with the environment.

This type of documentation and control must be compliant to the relevant legislation and must be relevant to an organization’s level of environmental maturity, however in general an EMP/EMS should include components such as;

* Components to be added.

Detailed information on how to implement an organization-wide environmental management system is available through the International Organization for Standardization (ISO), in their ISO 14000 family of standards. ISO 14001:2004 gives the **generic requirements** for an environmental management system.

**Commitment to compliance** with applicable environmental legislation and regulations is required, along with a commitment to **continual improvement** – for which the EMP/EMS provides the framework.

### Waste Management

In reference to the bullet points in 4.5.

Should also make some reference to ATON specific waste management issues

### Hazardous Substances

In reference to the bullet points in 4.5.

Should also make some reference to ATON specific issues

### Incident Reporting & Response

In reference to the bullet points in 4.5.

Should also make some reference to ATON specific issues

### Sustainable Energy Use

In reference to the bullet points in 4.5.

Should also make some reference to ATON specific issues

### Protection of Flora and Fauna

In reference to the bullet points in 4.5.

Should also make some reference to ATON specific issues

### Traditional and Cultural Heritage

Needs to be filled out. Not relevant for some regions, but will be important to include it here for benefit of some regions where there are interactions with traditional / cultural communities.

## Environmental considerations in ATON design and production.

## Carbon Omissions / Carbon Control

## Restoration of Impacted Habitats.