

Chapter 3

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Chapter 3

Report Framework and Contents

Controlling Officers can follow the general report framework suggested below as to what content to include in the report, and how it could be organized. Each element of the framework is discussed in the following sections and illustrated with selected examples.

Environmental Reporting Framework

Controlling Officer's Profile of Key Responsibilities

Describes the programmes, associated policy areas, and the facilities being operated or managed by the Controlling Officer, the expenditure for which is under his or her direct control and responsibility.

Environmental Goal, Policy, Objectives and Targets/Milestones

Identifies the extents to which environmental issues are being considered and addressed in the operations and programmes that are managed by the bureau or department.

Discusses how the bureau or department is to manage its operations and programmes to achieve its environmental objectives and targets.

Environmental Management Analysis

Environmental Performance Analysis

Shows where the bureau or department stands now on its environmental performance in relation to its operations and programmes by analysing and presenting the key environmental indicators and measurements against the corresponding policy, objectives, targets/milestones as benchmarks.

Environmental Actions Requiring Special Attention

Highlights the views of the Controlling Officer on how his or her bureau or department has performed during the reporting year and which areas he or she will focus on in the coming year.

1. Controlling Officer's Profile of Key Responsibilities

The Controlling Officer's profile of key responsibilities is to help readers understand the activities of the bureau or department and have a clear idea as to which of these are being covered in the report, including:

- programmes and the associated policy areas of the bureau or department;
- expenditure;
- facilities operated or managed;
- number of offices occupied; and
- staff establishment ceiling.

This section should be concise and focused but with sufficient details to relate to the other content elements such as environmental policy, objectives and targets, and environmental management analysis that follow. The Controlling Officer could also report on any major operational changes that may affect environmental performance, for example, the commissioning of new plants and facilities.

2. Environmental Goal

An environmental goal is a statement about the organization's overall commitment on responsible care for the environment.

The Controlling Officer could set the environmental goal of his or her bureau or department by taking into account the following:

- the activities and programmes undertaken;
- the key environmental impacts of the activities and programmes; and
- the capability of the bureau or department in tackling these environmental impacts.

Figures 2.1 – 2.4 give some local and overseas examples of environmental goals.

Figure 2.1 — Architectural Services Department, HKSAR Government

“ Architectural Services Department when offering our clients a comprehensive range of multi-disciplinary professional and technical services for buildings and facilities is committed through our quality management system to improve the environment. ”



Figure 2.2 — Environmental Protection Department, HKSAR Government

“ The Environmental Protection Department is committed to ensure that all services offered by the Department as well as our own internal operations are conducted in an environmentally responsible manner. ”



Figure 2.3 — Thames Water Plc., United Kingdom

“ ‘Care for the Environment’ is one of the fundamental guiding principles of Thames Water, and adherence to it is the responsibility of us all. ”



Figure 2.4 — Environment Agency for England and Wales

“ The Agency is responsible for regulating the most complex and polluting industrial processes, managing the water environment, regulating waste disposal, including radioactive waste, and dealing with some aspects of waste regulation, contaminated land and air quality. In carrying out these activities, our principal aim is to contribute to the Government’s overall commitment to sustainable development. ”



3. Environmental Policy

Through the formulation of an environmental policy, a bureau or department can establish the overall strategic direction for the organization to achieve its environmental goal and set out the key areas for action. All environmental responsibilities and performance of the bureau or department could then be evaluated against statements set forth in the environmental policy.

To demonstrate top management commitment, the Controlling Officer and his senior management should be responsible for developing the environmental policy and to make sure it is properly implemented and regularly reviewed. When formulating the environmental policy, the Controlling Officers could consider the following issues:

- is it in line with some of the environmental guiding principles developed by international bodies ? (see examples in [Annex 1](#))
- is it in line with the bureau or department's vision, mission, core values and beliefs ?
- does it address the key environmental impacts of the activities and programmes of the bureau or department ?
- does it provide a framework for setting and reviewing environmental targets ?
- has it been documented and communicated to all staff ? and
- has it been made known to the public ?

Possible elements that could be included in the environmental policy:

- top management commitment;
- environmental management;
- energy and resource use;
- pollution prevention initiatives (emissions, effluents and wastes);
- compliance with environmental legislation, regulation and standards;
- purchase and contract management practices;
- staff training and education;
- communication and reporting;
- continual improvement (audit and management review); and
- contribution to sustainable development.

Examples of local environmental policies are provided in Figures 3.1 and 3.2 below and more overseas examples of environmental policies are provided at the back in [Annex 2](#).

Figure 3.1 — Architectural Services Department, HKSAR Government



Environmental Policy

Architectural Services Department when offering our clients a comprehensive range of multi-disciplinary professional and technical services for buildings and facilities is committed through our quality management system to improve the environment by:

- a) undertaking the design, procurement and maintenance of community facilities in an environmentally responsible manner such as reducing energy consumption and the use of materials which are harmful to the environment.
- b) continuously developing and maintaining an environmental management system in accordance with ISO14001.
- c) complying with relevant environmental protection ordinances.
- d) providing training for staff to increase awareness for continual improvement in protecting the environment and preventing pollution.
- e) communicating and making available the environmental policy to the construction industry and the public at large.

Figure 3.2 — Environmental Protection Department, HKSAR Government



Our Green Management Policy

The Environmental Protection Department is committed to ensure that all services offered by the Department as well as our own internal operations are conducted in an environmentally responsible manner, and has adopted the following principles in pursuance of this commitment:

Compliance

We will seek to provide leadership by complying with, rather than just the letter, the spirit of all applicable environmental legislation, standards and regulations, as well as our internal guidelines and procedures in all our operations within the Department. We will endeavour to surpass them whenever possible.

Pollution Prevention

We will implement an environmental management system using ISO guidelines to maintain and improve the environmental quality of our activities and services. We will avoid, reduce or control environmental pollution arising from our day to day working practices. We will require our contractors to adopt and implement sound environmental management systems and pollution control measures, and actively encourage business and other organizations in Hong Kong to adopt similar systems and measures.

Minimization of Consumption

We will exercise the principles of Reduce, Reuse and Recycle in the consumption of materials. We will seek continual improvement in the efficient use of natural resources and energy.

Communication

We will ensure that all our staff are aware of our Green Management Policy as well as providing detailed information about our Policy and initiatives to organizations for which they have a particular interest. We will also seek to publicize to the community in general our Green Management Policy.

Training

We will ensure through appropriate training that all staff are in a position to assume their environmental responsibilities and to participate constructively in the environmental activities.

Management Review

The Management will regularly review and seek continual improvement in the department's environmental management system in order to ensure it is adjusted to reflect changing internal and external factors.

It is good practice to make clear to the reader what major impacts the bureau or department's activities or programmes may have on the environment. [Annex 3](#) sets out the steps on how to identify the relevant environmental aspects and impacts. [Annex 4](#) provides a simple checklist to facilitate those key environmental impacts that may be relevant to the bureau or department to be outlined with respect to four different areas:

- offices and facilities being managed;
- operational activities;
- formulation and execution of its policies or programmes; and
- Controlling Officer's other responsibilities.

4 Environmental Objectives, Targets and Milestones

Environmental objectives are the key areas of action identified through the formulation of the environmental policy whilst environmental targets and milestones represent the detailed performance requirements that the bureau or department sets out to achieve. All targets and milestones should be measurable actions and should, in the longer term, provide benchmarks against which the bureau or department's performance can be assessed.

When establishing its environmental targets and milestones, the bureau or department could consider:

- legal requirements under existing environmental legislation;
- significant environmental impacts;
- technological options;
- financial and operational requirements; and
- views of interested parties.

As a general rule, the targets and milestones should be:

- set with specific timescale, usually on a calendar year basis;
- as specific and measurable as possible;
- set for both short and long terms; and
- consistent with the environmental policy.

Figure 4.1 shows the interrelationship between environmental policy, objectives and targets.

Figure 4.1 - Environmental policy, objectives and targets set under operational activities

Policy	<ul style="list-style-type: none"> • We will promote reuse, recycle and recover. The disposal of remaining wastes will be done in an environmentally safe manner.
Objective	<ul style="list-style-type: none"> • Resources savings and wastes reduction
Long-term target	<ul style="list-style-type: none"> • By 1997, to reduce the amount of waste disposal to landfill sites by 60% of 1990 level.
Short-term target	<ul style="list-style-type: none"> • Reduce solid waste disposal by 25% of last year's level. • Compile data on photocopier paper use and volume of paper recycled and have these figures published every six months. • Move to exclusive use of recycled and environmentally preferable paper.

More examples of environmental targets/milestones are provided in [Annex 5](#) for reference.

5. Environmental Management Analysis

Environmental management within an organization involves having the systems for managing and monitoring environmental performance to ensure that environmental impacts arising from the day-to-day operations and programmes of the bureau or department are being addressed in an environmentally responsible manner. The Controlling Officer can report on their performance of environmental management system as measured against three important elements:

- Commitment (for example, formal responsibility and accountability), see figure 5.1
- Capability (for example, technology, programmes and procedures and training), see figure 5.2
- Mechanisms for continual improvement (for example, a system of measurements, reviews/audits, reporting), see figure 5.3

Figure 5.1 — Responsibility and accountability

We are directing our efforts on environmental issues at many levels. A committee of directors was established to oversee our policy and performance in the environmental area. The committee meets at least four times a year.

At each operation, local management is accountable for the implementation of the environmental policy. Facility managers are also accountable for compliance with all of the laws and regulations pertaining to the environment and occupational safety at the operation.

Figure 5.2 — Training and emergency response

Our policy and environmental regulations require that all our facilities have comprehensive emergency preparedness programmes. Included in these programmes are risk/hazard identification and assessment, emergency response planning and reporting, and staff training.

Emergency response plans are developed in cooperation with, and distributed to, local emergency response agencies, such as the police, fire and health departments. Staff are trained to serve as firefighters and emergency rescue personnel at facilities where that is appropriate. In addition, we maintain teams of specially selected and trained staff who are on call 24 hours a day to respond to spills or other emergencies.

Other staff training programmes address issues such as environmental regulations, handling, storage and transportation of materials, new or revised environmental programmes.

Figure 5.3 — Environmental audit programme

Our environmental audit programme is a systematic, internal review of operations to verify compliance with our environmental policy and programmes and environmental regulations. At the conclusion of each audit, a report listing audit findings is provided to division managers who then prepare action plans to address the findings. The action plans are reviewed and approved by senior management; significant findings are reported to the directors.

Some deficiencies were noted from the results of the 1996 environmental audit and they are being corrected. Action plans are now in place to improve our spill prevention and response, training, chemical storage assessments and waste recycling. Progress against plans is reviewed quarterly.

6. Environmental Performance Analysis

The parameters chosen to quantify and track environmental performance of organizations are called environmental performance indicators. The following factors might assist on how to define such indicators:

- figures that report the most significant impacts;
- figures that could be quantified;
- figures that could best be normalized to allow for changes in volume of work or production; and
- figures that are commonly adopted in the respective profession, trade and business.

These indicators could cover both internal green housekeeping measures as well as the activities and programmes of the bureau or department. Figure 6.1 provides some examples of typical environmental performance indicators under different key environmental aspects.

Figure 6.1 — Examples of performance indicators

Environmental Aspects	Typical Environmental Indicators
Energy and Resource Use <ul style="list-style-type: none"> Material, water, other renewable resources Energy 	<ul style="list-style-type: none"> Weight of raw materials per unit of production Volume of water conserved per head of staff compared to the previous year Reduction in materials per unit of production % substitution by sustainable or non-damaging materials Amount of energy consumption per year or per head
Pollution Prevention <ul style="list-style-type: none"> Water Pollution Air Pollution Waste (toxic, hazardous and solid wastes) 	<ul style="list-style-type: none"> Total weight of discharges per unit of production Weight of effluent of a specific substance per unit of production Percentage of days on which discharge consent was exceeded
	<ul style="list-style-type: none"> Total volume of emissions per unit of production Total weight of particulates
	<ul style="list-style-type: none"> Total volume of waste Weight or amount of a specific waste per unit of production % of waste recycled, treated and disposed Toxicity rating
Environmental Management <ul style="list-style-type: none"> Environmental audits Environmental management system 	<ul style="list-style-type: none"> Ranking of effectiveness of implementation of programmes Number of sites/divisions included under the environmental audit programme Frequency of carrying out audit (internal/external) Number of sites with environmental management system in place with reference to any international standard (e.g. ISO 14001)
Operations or Programmes <ul style="list-style-type: none"> Land and renewable resources disturbed, restored Population and wildlife affected 	<ul style="list-style-type: none"> Rate of losses Population protected
Purchasing and Contracting	<ul style="list-style-type: none"> % of organization's supplier base that has a written environmental policy % by value of organization's total dollars spent which is placed with suppliers with pre-contract environmental information
Education and Training <ul style="list-style-type: none"> People trained 	<ul style="list-style-type: none"> Number of staff attended environmental training courses
Compliance <ul style="list-style-type: none"> Compliance situations Non-compliance situations 	<ul style="list-style-type: none"> Percentage of compliance Number of non-compliance situations Volume of spills Average time to solve non-compliance issues
Environmental Expenditures	<ul style="list-style-type: none"> Total dollars spent
Technology <ul style="list-style-type: none"> Investment Waste reduction 	<ul style="list-style-type: none"> Dollars spent on improved technology (infrastructure/equipment) to address pollution problems Effectiveness of new systems (e.g. comparative emissions performance before and after investment) Level of investment to meet higher specification of products

With reference to each performance indicator, the environmental performance analysis compares environmental performance against the environmental policy, objectives and targets/ milestones through the use of financial, operational, scientific or other relevant statistics and data. When objectives or targets are not met, reasons for the failure and proposed corrective action plans might need to be discussed. The environmental performance analysis might include one or more of the following dimensions:

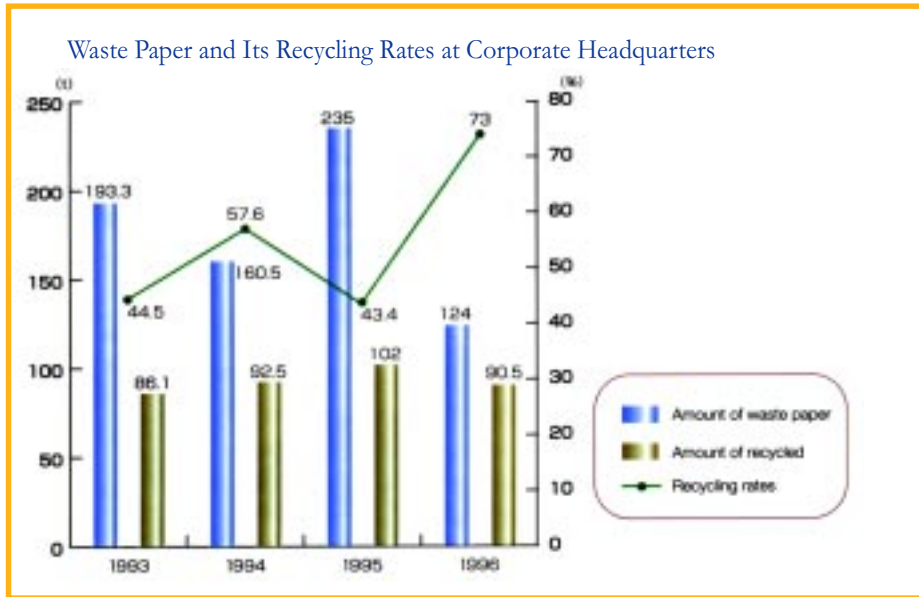
- an analysis of performance against certain benchmarks which could range from what have been set under the environmental policy, targets/ milestones to trend analysis or even compliance with laws and regulations. (See examples in figures 6.2 and 6.3);
- an analysis of performance by line of business and/or by location;
- the number and extent of environmental incidents and corrective actions;
- discussion of activities that offset environmental damage (including regeneration of renewable resources and restoration of sites); and
- environmental programmes with staff, suppliers, contractors and other stakeholders.

Figure 6.2 — Analysis of performance against environmental policy areas and targets

Environmental Policy Areas	1996/97 Target	1996/97 Performance
Energy and Utilities Management	<ul style="list-style-type: none"> • Reduce water consumption per passenger by 3% on 1994/95 base by 31 March 1997 	<p>ACHIEVED</p> <p>A saving of 7.6% was achieved. A comprehensive leak detection survey of Heathrow's water services infrastructure, which took place in the Spring of 1996 following an unsettled winter, revealed that ground movement had caused the fracture of a number of water mains. Work was undertaken to repair all leaks. A control system was also installed on all main water supply meters to the airport to alert both the water company and the airport water services department of future leakage and any unauthorised water use.</p>
	<ul style="list-style-type: none"> • Replace 100% of halon portable fire extinguishers by 31 March 1999 	<p>ON GOING</p> <p>To date 50% of portables have been replaced and 156 extinguishers remain.</p>
Waste Management	<ul style="list-style-type: none"> • Achieve an additional reduction in waste disposed to landfill of 15% per passenger (1994/95 base) by 31 March 1999 	<p>The amount of waste sent to landfill increased slightly this year on last year. This is mainly due to reduced markets for recyclable items.</p>
Procurement and Materials	<ul style="list-style-type: none"> • Establish a system for environmental assessment of BAA Heathrow suppliers at the tender stage of the procurement process by 31 March 1997 	<p>ACHIEVED</p>
Water Quality	<ul style="list-style-type: none"> • Ensure that all discharge consent are met 	<p>ACHIEVED FOR PERIOD (continuous target)</p>
	<ul style="list-style-type: none"> • Establish and maintain a database for the reporting and recording of all spills (landside and airside) by 31 March 1997 	<p>ACHIEVED</p> <p>A new operational safety instruction has been issued which establishes a system for reporting spills. This has only recently been implemented and so the formal database has not been set up. Paper copies of all spillage reports are currently held on file.</p>
Aircraft Noise	<ul style="list-style-type: none"> • Work with airlines and air traffic control to achieve 85% of departing aircraft on track by 31 March 1997 	<p>ACHIEVED 89%</p> <p>We commissioned a comprehensive and systematic analysis of all major airlines and aircraft type combinations to establish records of both good and bad noise and track keeping performance. Studies were undertaken with airlines with good track keeping records to determine whether they apply methods which can be shared with other carriers to improve their own track keeping performance. Improvements from 50% to 95% on track have been recorded by some airlines.</p>

(Extracted from British Airport Authority Heathrow: "Environmental Performance Report 1996/7")

Figure 6.3 — Analysis of performance against historical data to show general trend



(Extracted from Kirin Brewery Company Limited, Japan: “1997 Kirin Brewery Environmental Report”, p.24)

As reference, [Annex 6](#) provides more examples to illustrate how environmental information could be reported against various policy areas, objectives and targets.

When it is not possible to provide data to support performance claims, full narrative disclosure is encouraged. (See example in figure 6.4)

Figure 6.4 — Narrative disclosure of performance progress towards sustainable development

The department recognized the need to reduce solid waste going into landfill sites and, during the year, started a facility which burns wastes generated from operations. The burning process generates energy in the form of steam, which is based in operations and, when processed through a turbine, can generate up to 9.9 megawatts of electricity. The operation of the facility will significantly reduce the department’s reliance on landfill sites to store some of its waste and will not release any toxic air pollutants.

[Annex 7](#) shows a summary table that could be used to present the linkages among the various environmental impacts, their related targets and the performance reported against those targets.

7. Environmental Actions Requiring Special Attention

The Controlling Officer might wish to give his views on how well his bureau or department has performed in the current year and which specific areas they would focus their efforts on in the coming year. In this part of the report, it might be worthwhile for the Controlling Officer to consider the possible challenges likely to be faced by the bureau or department with regard to:

- changing environmental legislation;
- changing expectations and requirements of target audiences;
- changes in the activities and programmes of the bureau or department;
- recent advances in technology; and
- review of last year's achievements.