



Australian Government

Department of the Environment, Water, Heritage and the Arts

Environmental Management System Tool

Manual

Acknowledgement

The EMS Tool was developed for the Department of the Environment, Water, Heritage and the Arts by NCSI.

How to use this manual

This manual works through each of the requirements of AS/NZS ISO 14001:2004 in the same order as the international standard. Sections of both the guidance notes and the manual are referenced to relevant clauses of the standard. Examples are provided in some cases—these refer to a fictitious Department of XYZ, which is largely an office based organisation. If downloaded as one complete document, the EMS Tool includes hyperlinks at each section within the manual and guidance notes to enable the reader to jump between the corresponding sections. Hyperlinks have also been included where reference is made to a template register.

This system manual provides a template for the agencies to create their own EMS manual. The manual broadly covers:

- *a description of the scope of the organisation's EMS,*
- *a description of the interaction of the processes or elements of the EMS,*
- *a reference to the organisation's environmental policy,*
- *detailed procedures for other elements of the EMS, and*
- *a reference to other documents required by the EMS and the international standard for environmental management systems, AS/NZS ISO 14001:2004.*

In this manual, the text is provided in three forms:

- *Most text is shown in black regular font and is the foundation of the documentation. It is expected that this text will mostly be left intact, although it can be changed to suit special circumstances.*
- *Text in **red italicised font** indicates template text which should be edited to reflect details particular to the agency and then reformatted to black regular font once the manual is completed and ready to be adopted by the organisation.*
- *Hints, suggestions and instructions are shown in **green italicised text**. These should be deleted once the EMS documentation has been tailored for use by the agency.*

Where agencies have already implemented elements of an environmental management system, the EMS Tool can be applied and used to enhance rather than replace existing management processes. For example, where an agency already has a training program and register, this can be incorporated into the EMS by referring to the program in the Competence, training and awareness section of the EMS manual, and the suggested formats in the model can be ignored. In general, integration of management systems contributes to their efficiency and effectiveness, and the EMS Tool has been designed with integration in mind.

The documentation provided within the EMS Tool is only the foundation documentation for an environmental management system. In the development of an EMS, an organisation must, at the very least adapt the documentation to suit its particular circumstances, then augment the documentation with further documented operational controls considered necessary, and faithfully implement the processes and controls described by the documentation.

THIS PAGE SHOULD BE REMOVED ONCE THE MANUAL HAS BEEN ADAPTED

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect those of the Australian Government or the Minister for the Environment, Heritage and the Arts or the Minister for Climate Change and Water.

While reasonable efforts have been made to ensure that the contents of this publication are factually correct, the Commonwealth does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this publication.

Table of Contents

1	Scope of EMS	1
2	Environmental policy	3
3	Planning	3
3.1	Environmental aspects.....	3
3.2	Legal and other requirements	5
3.4	Objectives, targets and program(s).....	5
4	Implementation and operation	5
4.1	Resources, roles, responsibility and authority.....	5
4.2	Competence, training and awareness.....	6
4.3	Communication	6
4.4	Documentation.....	7
4.5	Control of documents.....	7
4.6	Operational control	8
4.7	Emergency preparedness and response	8
5	Checking	9
5.1	Monitoring and measurement	9
5.2	Evaluation of compliance	9
5.3	Nonconformity, corrective action and preventive action.....	10
5.4	Control of records	11
5.5	Internal audit	12
6	Management review	13

1 Scope of EMS

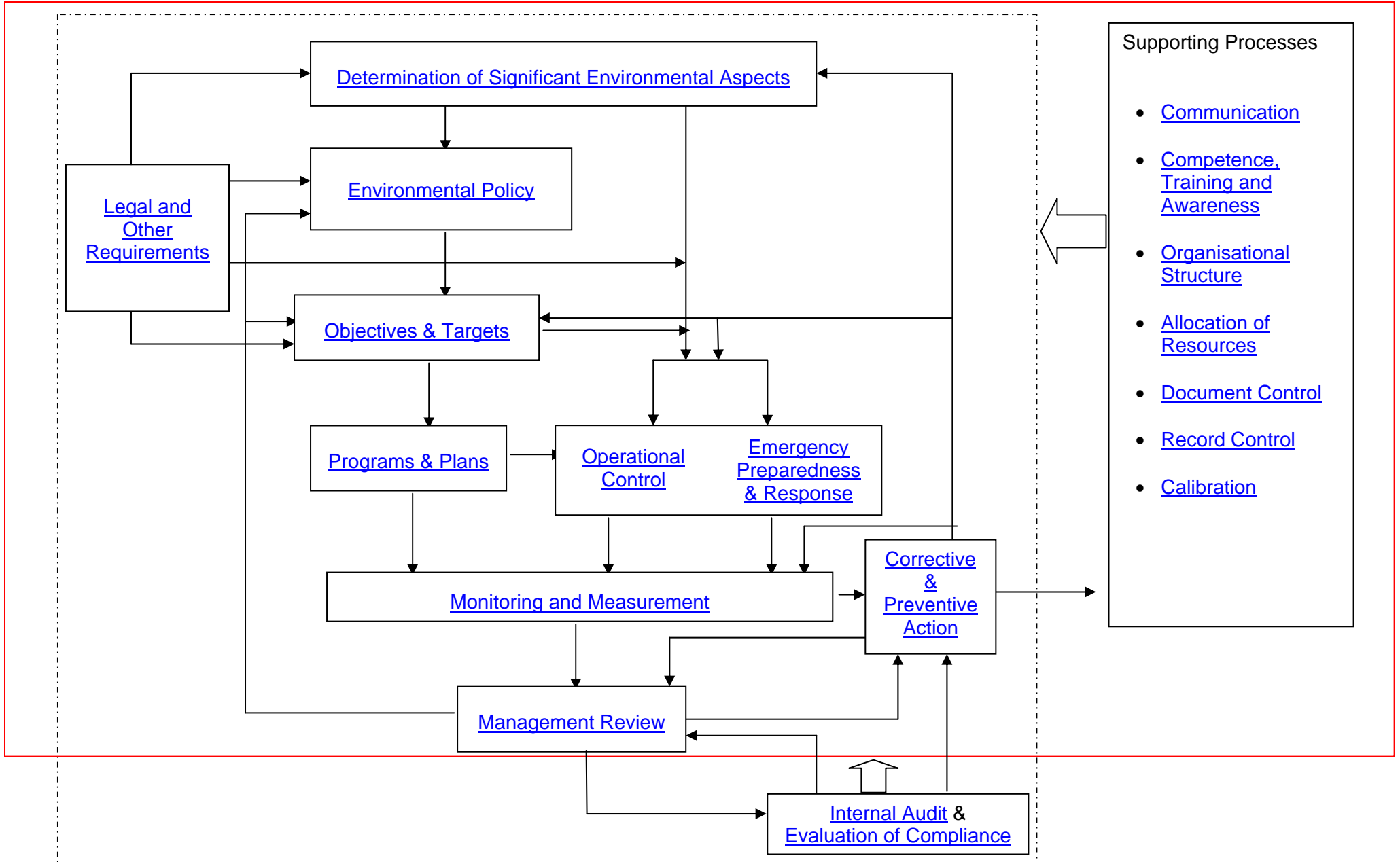
Instruction: Insert the scope of the EMS for which certification is sought here. It may be useful to adapt the following example from the EMS Guide:

The Department of XYZ provides information to the public on the Australian Government's XYZ activities and policies. Its head office is in Parkes, ACT, and there are branch offices in Sydney, Melbourne, Brisbane and Perth. The Department also has staff embedded in other government agencies in Adelaide, Darwin, Hobart and Townsville, as well as in Australian consulates in the UK, USA, Hong Kong and Japan.

The Department's environmental management system applies to all operations and services of the Department at its head office and branch offices. Staff in other offices in Australia and overseas are expected to comply with the spirit of the environmental policy in the context of the organisation in which they work.

The environmental management system is a set of interacting processes or elements. Each process or element of the environmental management system takes one or more inputs and creates one or more outputs to be passed onto one or more other processes or elements. This is depicted in the following diagram, which can be viewed as a roadmap to the agency's environmental management system:

INTERACTIONS BETWEEN THE EMS ELEMENTS



2 Environmental policy

Our environmental policy is developed as a statement of commitment from top management and reflects the values and ethos of the organisation. The policy is reviewed every year by the management for its appropriateness and legitimacy. It is signed and dated after every review.

The policy is communicated to people working for or on behalf of the organisation through staff and contractor inductions, and is displayed on all floors of the buildings that we operate from. It is also available on the organisation's intranet.

The policy is made available to the public on the organisation's website *instruction: insert URL*.

3 Planning

3.1 Environmental aspects

Organisations title has reviewed all of its activities, products and services that it can control and influence, including planned and new developments and new and modified activities, products and services and has identified all of its environmental aspects. These are listed in a Register of Environmental Aspects.

Each identified environmental aspect is subject to a qualitative risk analysis based on likelihood and consequences of environmental impact or impact on the organisation from environment-related issues, in the context of *existing* measures to control the risk. Both positive and negative impacts can be considered. The risk analysis matrix is as follows:

LIKELIHOOD	CONSEQUENCES				
	Catastrophic 1	Major 2	Moderate 3	Minor 4	Insignificant 5
A (almost certain/daily)	Extreme	Extreme	Extreme	High	High
B (likely/weekly)	Extreme	Extreme	High	High	Medium
C (possible/monthly)	Extreme	Extreme	High	Medium	Low
D (unlikely/annually)	Extreme	High	Medium	Low	Low
E (rare)	High	High	Medium	Low	Low

Likelihood refers to the possibility or frequency of an environmental impact. The organisation undertakes many routine activities that have an environmental impact on a daily or relatively frequent basis. Other activities are done less routinely, and environmental incidents can also occur. The following criteria explain the five categories of likelihood:

Almost certain/daily: An environmental impact or impact on the organisation from an environmental-related issue is expected to occur in most circumstances, or will occur on a daily basis.

Likely/weekly: An environmental impact or impact on the organisation from an environmental-related issue will probably occur in most circumstances, or will occur on a weekly basis.

Possible/monthly: An environmental impact or impact on the organisation from an environmental-related issue could occur, or will occur on a monthly basis.

Unlikely/annually: An environmental impact or impact on the organisation from an environmental-related issue could occur but is not expected, or will occur annually.

Rare: An environmental impact or impact on the organisation from an environmental-related issue would occur only in exceptional circumstances.

The following provides criteria for determining consequence to the environment or the agency from an environment-related issue:

Catastrophic: Widespread, irreparable environmental damage; loss of human life or long term human health effects; national attention; serious litigation; over \$1 million to manage consequences.

Major: Widespread, medium to long term impact; serious human health impacts; state-wide or national attention; major breach of legal requirements; major disruption to operations; agency's reputation badly tarnished; \$100,000 to \$1 million to manage consequences.

Moderate: Localised medium to long term impact; moderate contribution to climate change; moderate human health impacts requiring medical treatment; regional media attention; moderate breach of legal requirements with fine; \$10,000 to \$100,000 to manage consequences.

Minor: Localised short to medium term impact; minor contribution to climate change; minor and reversible human health impacts treatable with first aid; negative publicity from local media; minor breach of legal requirements; \$1000 to \$10,000 to manage consequences.

Insignificant: Limited impact to a local area but no long term effects; concern or complaints from neighbours; no injury to people; minor technical nonconformity but no legal nonconformity; less than \$1000 cost to the agency to manage consequences.

Conducting a risk analysis results in the allocating of a risk level of *extreme, high, moderate* or *low* for each environmental aspect. Environmental aspects with an *extreme* or *high* risk are considered to be *significant*, that is, they have or can have a significant environmental impact.

Environmental aspects associated with a legal requirement, or another requirement to which the organisation subscribes, such as an Australian Government policy, are also considered to be significant, regardless of the outcome of the risk analysis.

Significant environmental aspects of the agency are flagged in the Register of Environmental Aspects. These are given priority for management, and are taken into account in establishing, implementing and maintaining the agency's environmental management system.

The Register of Environmental Aspects is reviewed each year to ensure that it is kept up to date. It is also reviewed if there is any change to activities, products or services of the agency.

3.2 Legal and other requirements

The organisation is subject to several legal requirements regarding its environmental aspects. *It subscribes to EnviroLaw which keeps us up to date with our environmental legal obligations OR The organisation's legal officer monitors our legal obligations and keeps them up to date.* The organisation is also subject to several other non-legal requirements regarding its environmental aspects.

The Register of Legal and Other Requirements details the specific requirements applicable to the agency, and shows how the requirements apply to the organisation's environmental aspects. It is maintained by the environmental co-ordinator. The environmental co-ordinator is also responsible for reporting on changing legal and other requirements related to the organisation's environmental aspects in management reviews.

Our legal and other requirements are taken into account in establishing, implementing and maintaining the environmental management system.

3.3 Objectives, targets and program(s)

Consistent with our environmental policy, measurable objectives and targets are set each year for our significant environmental aspects and recorded in a Register of Environmental Objectives and Targets. The register also lists action plans, improvement programs and controls for achieving those objectives and targets, as well as key performance indicators (KPIs) to monitor progress in achieving the objectives and targets. The register is revised each year in the management review in the item on the extent to which objectives and targets have been met.

4 Implementation and operation

4.1 Resources, roles, responsibility and authority

Various positions in the organisation have roles, responsibilities and authorities for managing environmental aspects, action plans, programs and controls. All of these roles, responsibilities and authorities are documented in a Responsibility Matrix.

A special management role of *environmental co-ordinator* has responsibility for overall co-ordination of the environmental management system in accordance with the requirements of AS/NZS ISO 14001:2004 and reporting its performance, including recommendations for improvement, to top management for review. The specific tasks associated with this role include:

- Maintenance of the Register of Environmental Aspects
- Maintenance of the Register of Legal and Other Requirements
- Maintenance of the Register of Environmental Objectives and Targets
- Maintenance of the Responsibility Matrix, including records of incumbents in positions and roles, competence requirements, competence possessed, training needs, training plans and training undertaken
- Assessment of general environmental awareness of staff and contractors

- Control of documents, forms and records required by the EMS
- Co-ordination of environmental monitoring and measurement
- Evaluation of compliance with legal and other requirements relevant to the EMS
- Management of the internal audit program
- Co-ordination of corrective and preventive action
- Maintenance of the emergency preparedness and response procedure and management of testing the procedure
- Co-ordination of management review of the EMS

4.2 Competence, training and awareness

Positions and roles which have responsibility for an activity, product or service that has the potential to cause a significant environmental impact are also included in the Responsibility Matrix, along with competence requirements of each position and role. Competence refers to the knowledge, understanding, skills or abilities required for a person to effectively and efficiently carry out the position or role. Competence can be determined through appropriate education, training, experience and assessment.

For each person in each position and role, competence possessed, training needs, and training or other personal development undertaken to acquire the required competence are also recorded in the Responsibility Matrix. Copies of education and training qualifications are maintained in personnel files in the *Human Resources Branch*.

The Responsibility Matrix is updated each *month* with changes to positions, roles and staff, and training or other personal development undertaken.

General awareness of the organisation's environmental management system is propagated through an EMS training package provided during induction of staff and contractors, as well as in refresher sessions. General EMS awareness is assessed following the induction and refresher sessions, and records of assessment are maintained in the *Human Resources Branch*.

More specific training on the agency's environmental management system is provided on documented operational procedures and emergency preparedness and response as required. Records of such training are made in the Responsibility Matrix.

4.3 Communication

Information about the organisation's environmental aspects and environmental management system is communicated among the levels and functions of the organisation through:

- *EMS awareness package provided during induction and at refresher sessions*
- *Provision of this manual and supporting documentation on the agency's intranet.*
- *Provision of the results of monthly monitoring of the agency's environmental performance on the agency's intranet and on noticeboards throughout the agency's offices.*
- *Monthly staff meetings.*
- *Environmental theme of the month.*

Communication received from external parties regarding the organisation's environmental management is managed in the same way as formal communication received by the organisation on all issues. However, it is also tracked in the

organisation's environmental corrective and preventive action process by the environmental co-ordinator. The environmental co-ordinator is also responsible for reporting on communication from external interested parties, including complaints, in management reviews.

External communication required during response to emergency situations and accidents is documented in its emergency response plan *instruction: insert hyperlink to document.*

The organisation publishes its current list of significant environmental aspects at insert URL or reference the annual report or other document.

OR

The organisation does not publish information on its significant environmental aspects.

OR

The organisation will decide on a case by case basis whether to communicate externally about its significant aspects. Top management and the environmental co-ordinator will be involved in making this decision. Records of all communication will be kept, including the organisation's responses, and the communication will be tracked in the agency's environmental corrective and preventive action process.

4.4 Documentation

A Register of Documents and Records lists policies, manuals, procedures, plans, external documents, registers, forms, templates and records relevant to the environmental management system.

4.5 Control of documents

All environmental management system documents are filed within the organisation's record management system. Each internal document is identified by a unique name and a *last updated* date and listed in the Register of Documents and Records. Each external document required for the environmental management system is also recorded in this register.

This EMS manual specifies the frequency for which certain documented information is revised. For example, the environmental policy, environmental aspects, legal and other requirements, and objectives and targets must be revised at least annually, while the Responsibility Matrix requires monthly revision.

The agency's environmental management system documents are dynamic pieces of information used to guide what people do—they need to be kept up to date and relevant to the organisation's needs. Changes to the environmental policy, this EMS manual, a documented procedure, an environmental management plan, a form, or any register or matrix referenced in this manual require approval from the environmental co-ordinator. Corrective and preventive action resulting from identification of actual and potential nonconformities often results in recommendations for changes to documents. Suggestions for improvement to documents can also be made directly on corrective and preventive action records.

Instruction: The following is one simple, effective and common way of managing changes to EMS documents:

Once changes are approved, the latest additions to a document are made in *blue font in italics*, while deletions are in blue strike through text. The environmental co-ordinator posts notices of significant changes to documents on the Intranet, and emails relevant managers. Managers are expected to promote relevant and significant changes to documents to their staff.

The immediate earlier version of a revised document is stored as a record in an *Archived Documents and Records* folder on the server, to which only the environmental co-ordinator and the system administrator have access.

4.6 Operational control

The following documented procedures and work instructions have been devised on the basis of risk to control operations associated with significant environmental aspects, including the significant environmental aspects of goods and services used by the agency:

Instruction: Insert list of documented procedures and work instructions required for operational control.

These procedures and work instructions are also listed in the Register of Documents and Records.

4.7 Emergency preparedness and response

The agency identifies potential emergencies and accidents that can have an environmental impact during the identification of environmental aspects. Environmental emergencies and accidents are therefore subject to risk analysis and determination of environmental significance and handled accordingly in the environmental management system. Objectives and targets are set for environmental emergencies and accidents that are regarded as significant environmental aspects and an emergency response plan (*instruction: insert hyperlink to document*) is established to achieve the objectives and targets.

Environmental emergencies and accidents are regarded as environmental nonconformities. Accordingly, in the event of an occurrence, immediate action is taken to mitigate the environmental impact, followed by corrective action to avoid a recurrence.

The emergency response plan is tested in each building each *month/quarter*. Planned tests are recorded in a Register of Emergency Response Tests. The organisation's emergency preparedness and response is reviewed after every test and after the occurrence of each environmental emergency and accident using the Emergency Test and Incident Review Form. The aspect identification and significant impact determination of an environmental emergency or accident, and the organisation's emergency response plan are revised where appropriate after a review.

5 Checking

5.1 Monitoring and measurement

An annual Schedule of Monitoring and Measurement is used to record data on the organisation's environmental performance on a monthly basis.

Instruction: If the organisation operates any monitoring and measuring equipment that requires calibration or verification, list it here:

The following monitoring and measuring equipment requires calibration or validation:

- *List*
- *List*
- *List*

All records of calibration and verification are kept in the Calibration Records folder.

OR

The organisation does not operate any monitoring or measuring equipment that requires calibration or validation.

The environmental co-ordinator is responsible for analysing the results of monitoring and measurement and reporting on the environmental performance of the organisation, in particular the extent to which environmental objectives and targets have been met, in management reviews.

5.2 Evaluation of compliance

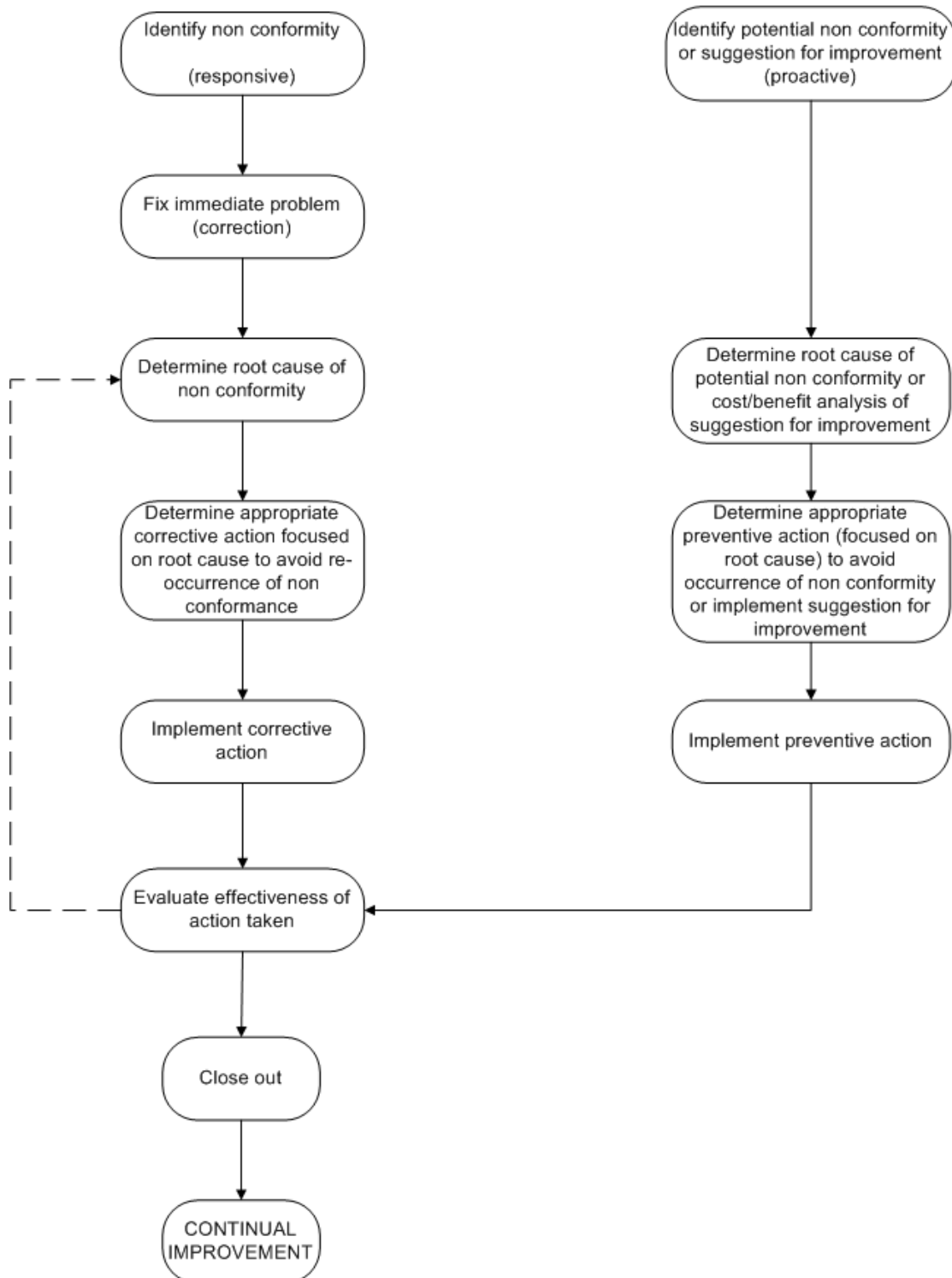
Once a year, a review or compliance audit is conducted to evaluate compliance with legal requirements applicable to the agency and other requirements to which the organisation subscribes. This is undertaken by completing the following two columns in the Register of Legal and Other Requirements:

- Evidence required for compliance
- Evaluation of compliance (yes/no)

The register that is completed in this review or compliance audit becomes a record of the evaluation of compliance. Where non-compliance is detected, this is followed up with corrective action (see below).

5.3 Nonconformity, corrective action and preventive action

Corrective & Preventive Action



The above flowchart illustrates the organisation's process for identifying actual and potential environmental nonconformity, recording suggestions for improvement to environmental management, taking appropriate action to correct nonconformity and mitigate environmental impact, taking corrective action to avoid recurrence of

nonconformity and taking preventive action to avoid occurrence of nonconformity or implement a suggestion.

This process has the ultimate goal of driving continual improvement of the environmental management system.

Actual and potential nonconformity is identified and suggestions for improvement are made by the following means:

- Internal audit
- External audit
- Site inspections
- Feedback from external parties
- Complaints from customers or other stakeholders
- Suggestions for improvement from staff and contractors
- Occurrence of environmental emergencies and accidents
- Testing of emergency preparedness and response
- Management review

The environmental co-ordinator is responsible for maintaining a Register of Environmental Nonconformity and Suggestions for Improvement to Environmental Management. Each record in this register is given a Corrective and Preventive Action Number (CPA No.) and is associated with a Corrective and Preventive Action Form used to analyse nonconformity and suggestions for improvement and manage action taken. The Corrective and Preventive Action Form provides for the following:

- The taking of immediate action to correct the nonconformity (i.e. correction) and mitigate environmental impact
- Root cause analysis of actual nonconformity
- The taking of corrective action addressing the root cause to avoid recurrence of nonconformity, or the taking of preventive action to avoid occurrence of nonconformity or implement a suggestion for improvement
- Evaluation of the effectiveness of the action taken
- Close out.

Corrective and preventive action often requires changes to environmental system documentation. In such cases, this process feeds into the process for control of documents.

The environmental co-ordinator is responsible for reporting on the status of corrective and preventive action in management reviews.

5.4 Control of records

Records required by the agency's environmental management system are listed in the Register of Documents and Records. In this register, records are given an identifier and a description, and their location and retention period are recorded.

Instruction: The following Archives Register is optional. The organisation may already have an archives register as part of its records management system, in which case it should be used in place of the register provided by the EMS Tool.

An Archives Register lists all paper records relevant to the environmental management system held in archival storage, and their disposal date and means.

Instruction: The following folder structure is suggested for storing electronic records required by the EMS. The structure can be a simple set of folders on a server, or part of a structure within a more sophisticated document/records management system.

Of course, records could be also stored entirely in paper form, in which case the following folder structure could be used in a filing cabinet.

Records required by the environmental management system are primarily stored electronically. Records originating in paper form are scanned, after which the electronic version is the controlled version. Records are stored using the following folder structure:

- *Archived Documents and Records*
- *Assessment of General EMS Awareness*
- *Calibration Records*
- *Corrective and Preventive Action Records*
- *Emergency Test and Incident Reviews*
- *Evaluation of Compliance*
- *Internal Audits*
 - *Completed Checklists*
 - *Reports*
 - *Schedules*
- *Management Reviews*
- *Monitoring and Measurement Records*
- *Training*
 - *Packages*
 - *Training Records*

5.5 Internal audit

The organisation has established and implemented an annual internal audit program with the objective of determining whether the environmental management system conforms to planned arrangements, including the requirements of AS/NZS ISO 14001:2004 and this EMS manual, and has been properly implemented and maintained.

The environmental co-ordinator manages the internal audit program and reports the results of internal audits and the effectiveness of the program to top management.

The internal audit program covers all of the organisation's operations units and functions, environmental management system elements, and the full geographical scope of the agency's environmental management system over the year. Some units, functions, elements and sites may be audited more than once annually if justified on the basis of environmental risk. The program also provides for additional audits that may be required to follow up scheduled audits.

Instruction: The following is one way of scheduling internal audits: Internal audits are scheduled each month except December and January, when many staff are on leave, and June, which is the financial year end. Instruction: Insert hyperlink to the current internal audit schedule—an Internal Audit Schedule is provided as a guide for use by organisations with a single site. Months could be replaced by quarters if simplification is an advantage. Further assistance on audit scheduling may be required for a complex agency with multiple sites.

Audit criteria in the program include the requirements of AS/NZS ISO 14001:2004 for environmental management systems, the requirements of this EMS manual, the requirements of work instructions listed in this manual to control operational activities associated with significant environmental aspects, and legal and other requirements.

One audit each year is devoted to evaluating compliance with legal and other requirements. The Register of Legal and Other Requirements is used to record the evidence and findings of this audit.

An Internal Audit Checklist is used to record evidence for audits of the requirements of AS/NZS ISO 14001:2004 and this EMS manual. Findings of such audits are reported using an Internal Audit Report Template.

Instruction: The following paragraph is a suggested approach to training of internal auditors:

Internal auditors of the environmental management system must attend a course on environmental management systems and a course on internal auditing as a minimum requirement before being allowed to conduct an audit on their own. Auditors are encouraged and supported by the agency to achieve certificates of attainment in environmental management systems and auditing/lead auditing.

Further to the above requirements, an organisation may also wish to include the following requirements of internal auditors:

All auditors must participate in an audit team for at least three audits before being allowed to conduct an audit alone.

Auditors are selected for audits with a view to ensuring objectivity and impartiality of the audit process. That is, an auditor cannot audit the section in which he or she normally works.

Nonconformities raised in internal audits are entered into the Register of Environmental Nonconformity and Suggestions for Improvement to Environmental Management, and subject to appropriate corrective and preventive action.

6 Management review

Top management of the agency reviews the environmental management system for its continuing suitability, adequacy and effectiveness *annually/six-monthly/quarterly*. Each management review makes decisions on changes to environmental policy, the risk assessment procedure and environmental aspects, objectives and targets, environmental programs/plans, and other elements of the environmental management system.

The environmental co-ordinator compiles information for management review using the Management Review Template. The template also provides for recording the decisions of the management review, and the resulting document becomes the record of management review.