



## Council

Distr.: General  
31 January 2022

Original: English

---

### Twenty-seventh session

#### Council session, part I

Kingston, 21 March–1 April 2022

Item 11 of the provisional agenda\*

#### Draft regulations on exploitation of mineral resources in the Area

### Draft standard and guidelines on the development and application of environmental management systems

Prepared by the Legal and Technical Commission

---

\* ISBA/27/C/L.1.



## **Standard on the development and application of environmental management systems**

1. The Environmental Management System is that part of the overall mining operation management system applied by a Contractor that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing, maintaining and reporting on the environmental policy, goals and objectives and environmental performance.
2. The regulations on exploitation of mineral resources in the Area specify the requirements for an Environmental Management System.
3. The Contractor shall develop an Environmental Management System that:
  - (a) Delivers site-specific environmental outcomes consistent with the environmental management and monitoring plan;
  - (b) Ensures the prevention, reduction and control of pollution of the Marine Environment from mining operations consistent with the environmental objectives;
  - (c) Is developed in alignment with recognized standards and systems, including the approaches adopted by the standards and guidance of the International Organization for Standardization (ISO) as modified from time to time, in particular:
    - (i) ISO 31000: Risk management – Guidelines;
    - (ii) ISO 14001:2015 Environmental management systems – Requirements with guidance for use;
    - (iii) ISO 19011:2018 Guidelines for auditing management systems;
  - (d) Is consistent with the Rules, Regulations, Procedures and Standards of the International Seabed Authority.
4. The Contractor shall take key steps to develop and implement an environmental management system, including the following:
  - (a) Identifying and understanding all aspects of the seabed mining operation that may have an Environmental Effect;
  - (b) Ensuring that its operations are designed, planned and carried out in a systematic and controlled manner to prevent, minimize or eliminate harmful effects on the Marine Environment;
  - (c) Conducting monitoring activities to observe harmful effects on the Marine Environment and to control and evaluate whether the outcomes achieved are as planned;
  - (d) Assessing its operations in the light of the environmental objectives and identifying strategies to address areas for improvement;
  - (e) Implementing corrective actions to address the areas of nonconformity and where improvement is needed;
  - (f) Adapting the environmental management system when necessary.

## Guidelines on the development and application of environmental management systems

### Contents

	<i>Page</i>
I. Introduction . . . . .	4
II. Purpose and scope . . . . .	4
III. Leadership and policy . . . . .	5
A. Leadership . . . . .	5
B. Policy, objectives and strategy . . . . .	5
C. Roles, responsibilities and authorities . . . . .	6
IV. Identification of requirements . . . . .	7
A. Legal requirements . . . . .	7
B. Environmental baseline data . . . . .	7
C. Environmental impact assessment and environmental impact statement . . . . .	7
V. Operations . . . . .	7
A. Operational planning and control . . . . .	7
B. Non-conformity . . . . .	8
C. Procurement and subcontractor management . . . . .	9
D. Emergency response and contingency plan . . . . .	10
VI. Monitoring and performance evaluation . . . . .	10
A. Environmental Management and Monitoring Plan . . . . .	10
B. Evaluation of performance . . . . .	10
C. Reporting to and notifying the International Seabed Authority . . . . .	11
VII. Audits . . . . .	12
VIII. Environmental management system review . . . . .	12
IX. Support . . . . .	13
A. Resources . . . . .	13
B. Awareness and competence . . . . .	14
C. Communications . . . . .	14
D. Management system documentation . . . . .	15
X. Definitions and abbreviations . . . . .	16

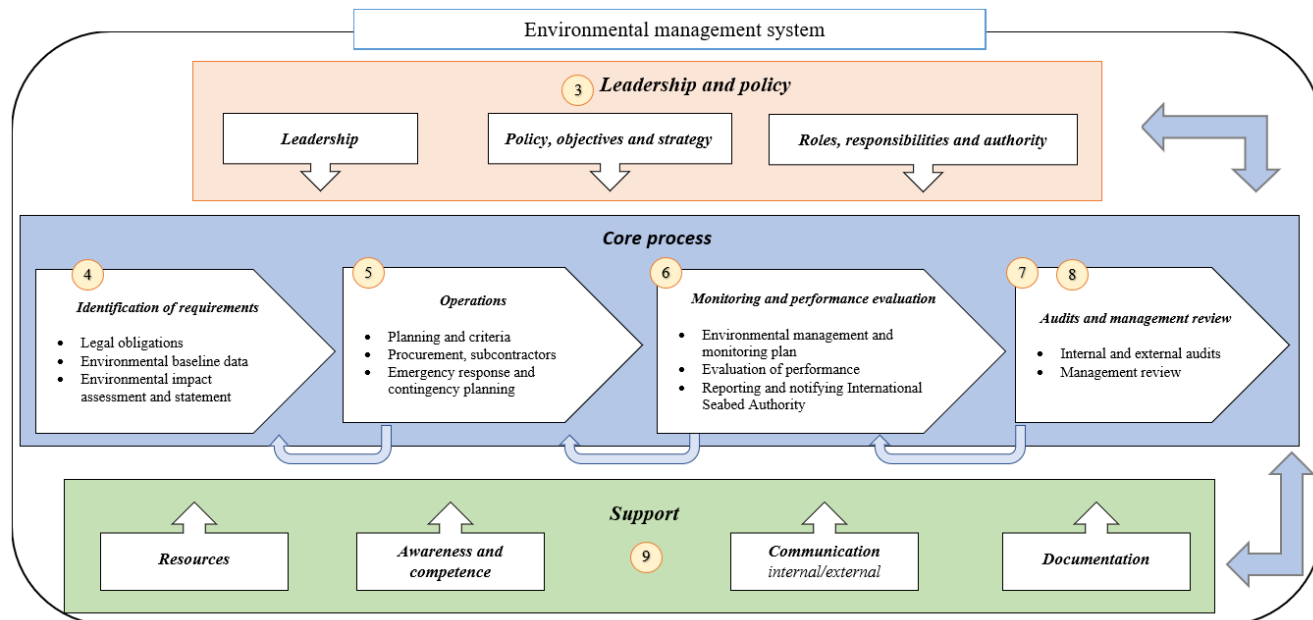
## **I. Introduction**

1. The present document describes the development and application of an environmental management system. It provides guidance on how to fulfil the requirements of the regulations on exploitation of mineral resources in the Area (regulations on exploitation).
2. The Guidelines should be read in conjunction with the regulations on exploitation, as well as other relevant International Seabed Authority Standards and Guidelines, including but not limited to those related to:
  - (a) Environmental Impact Assessment and Environmental Impact Statement;
  - (b) Environmental Management and Monitoring Plan;
  - (c) Establishment of baseline environmental data;
  - (d) Safe management and operation of mining vessels and Installations.

## **II. Purpose and scope**

3. The purpose of the Guidelines is to describe how an environmental management system for exploitation of mineral resources in the Area should be set up. These Guidelines focus on the development and content of the system.
4. The figure below illustrates the overall framework within which other environmental processes should be integrated as well as the main elements of an environmental management system.
5. In order to ensure that the environmental management system is effective and efficient, some framing elements should be in place. The Contractor's management should perform effective leadership, such as by setting out directions through the environmental policy, setting overall objectives of its operations and establishing the required organizational structure and chain of responsibility. Furthermore, to support the system, suitable resources need to be in place.
6. As a whole, all these elements should be in place to ensure an effective and efficient environmental management system.

## Main elements of the environmental management system



Note: The numbers refer to the sections in these Guidelines.

7. Except as otherwise specified herein, terms and phrases defined in the regulations on exploitation have the same meaning in these Guidelines.

### III. Leadership and policy

#### A. Leadership

8. The management of the Contractor should demonstrate leadership and commitment with regard to the environmental management system, including its implementation. This includes:

- (a) Ensuring that environmental policy, objectives, strategies, plans and relevant guidelines are established and implemented;
- (b) Ensuring that sufficient resources are available to support and implement the system;
- (c) Communicating to the Contractor's personnel and subcontractors the importance of effective environmental management and of compliance with the system;
- (d) Ensuring that the system achieves its intended outcomes;
- (e) Promoting continual improvements;
- (f) Conducting regular management reviews;
- (g) Supporting other relevant management roles in demonstrating their environmental management leadership as it applies to their areas of responsibility.

#### B. Policy, objectives and strategy

9. *Environmental policy*: The senior management of the Contractor should establish, implement, maintain and communicate an environmental policy.

10. *Environmental objectives*: The senior management of the Contractor should establish environmental objectives at relevant functions and levels in the organization. The objectives should take into account the specificities of the seabed mining operation and be aligned with the identified environmental issues and conform with the Contractor's obligations (see sect. IV below) and with the rules, regulations, procedures and Standards of the International Seabed Authority.

11. The Contractor should ensure that environmental objectives are:

- (a) Specific, measurable, achievable, realistic and time-bound;
- (b) Based on the Best Available Scientific Evidence;
- (c) Monitored in a standardized manner as documented in the Environmental Management and Monitoring Plan;
- (d) Communicated to the Contractor's personnel and subcontractors;
- (e) Referred to when reporting the outcomes of monitoring undertaken in accordance with the Environmental Management and Monitoring Plan;
- (f) Updated as appropriate (typically as a result of the outcome of the management review).

12. The environmental objectives may be long-term, medium-term or short-term in nature. Some guidelines distinguish between the terms "objectives" for the long term and "targets" or "objectives" for the short term. The present Guidelines make no distinction between these terms.

13. *Strategy*: The Contractor should establish a strategy describing how to achieve the environmental objectives. The strategy should be implemented by establishing a plan which describes:

- (a) What needs to be done (lines of action);
- (b) Where this needs to be done;
- (c) What resources will be required;
- (d) Who will be responsible;
- (e) When the actions will be completed (deadline);
- (f) How the results, including monitoring indicators, will be evaluated, including a time frame and external audits;
- (g) How and when the strategy will be adapted according to the monitoring data collected;
- (h) What individual and detailed contingency assessments and management measures will be taken to remedy or mitigate potential impacts of the activities;
- (i) How the results will be communicated.

### **C. Roles, responsibilities and authorities**

14. The Contractor should ensure that the responsibilities and authorities for relevant roles are assigned and communicated throughout the organization.

15. The senior management of the Contractor should assign responsibility and authority for:

- (a) Ensuring that the environmental management system is consistent with the Standard;

- (b) Reporting in a timely manner on the performance of the system, including environmental performance, to the senior management;
- (c) Reporting to the International Seabed Authority (see paras. 43–46 below).

## **IV. Identification of requirements**

### **A. Legal requirements**

16. The Contractor should identify the national and international legal requirements and other obligations, rules and standards applicable to the mining operation, and communicate internally the relevance of these obligations and of obligations arising from the regulations on exploitation to relevant parties within the Contractor's organization.

17. The regulations on exploitation require contractors to carry out Exploitation under an exploitation contract with reasonable regard for other activities in the Marine Environment. The Contractor should therefore identify activities and installations which may be affected by the Contractor's seabed mining activities, including as identified through the Environmental Impact Assessment and the Environmental Impact Statement.

18. Based on the issues identified above, the Contractor should assess and decide how to manage the effects of its mining operation, with reasonable regard for other activities, through operational controls (see sect. V below), including in cooperation with other operators.

### **B. Environmental baseline data**

19. The Guidelines for the establishment of baseline environmental data provide guidance on how the Contractor should identify the current status of the seabed.

### **C. Environmental impact assessment and environmental impact statement**

20. The regulations on exploitation provide that the Contractor shall prepare an Environmental Impact Statement in accordance with regulation 47 and in the format recommended in annex IV to the Regulations. A Standard on the Environmental Impact Assessment process and Guidelines on the Environmental Impact Assessment content and Environmental Impact Statement template provide guidance on how the Contractor is to conduct an Environmental Impact Assessment and report on its results.

## **V. Operations**

### **A. Operational planning and control**

21. The regulations on exploitation provide that the Contractor shall plan, implement and modify measures necessary for ensuring effective protection for the Marine Environment from harmful effects and take all necessary measures to prevent, reduce and control pollution and other hazards to the Marine Environment from its activities in the Area (see paras. 16–18 and 20 above).

22. This relates to both the Contractor's operations and operations performed by the Contractor's subcontractors.

23. The Contractor should establish suitable mitigating measures to reduce the environmental effects to a level that is as low as reasonably practicable (referred to as the “ALARP” level), taking into account the Environmental Impact Assessment and the Environmental Impact Statement, based on the Best Available Scientific Evidence, Best Environmental Practices, Best Available Technology and Best Available Techniques that should be used.

24. To achieve this, the Contractor should:

- (a) Establish operational criteria for the seabed mining activities;
- (b) Communicate the criteria to relevant personnel and subcontractors;
- (c) Ensure that the operational activities and processes are implemented in accordance with the criteria;
- (d) Monitor the operational activities and processes and report on the results;
- (e) Store all documented information to be able to demonstrate with confidence that the seabed mining activities have been carried out as planned.

25. The Contractor should ensure that the mitigating measures set out in the Environmental Impact Statement and the Environmental Management and Monitoring Plan take into account the following hierarchy of controls:

- (a) Designing technical and engineering controls that eliminate or reduce the harmful effects of the process or activity;
- (b) Establishing organizational and operational controls that eliminate or reduce the harmful effects of the process or activity;
- (c) Limiting impacts to the smallest area practicable;
- (d) Rehabilitating or restoring degraded ecosystems when impacts have already occurred.

26. The process or activity, and also the control hierarchy selected, may also involve the use of equipment or chemicals or both.

## **B. Non-conformity**

27. Nonconformity refers to a failure to meet one or more requirements outlined in a mandatory provision.

28. It may be identified during the seabed mining operations through an internal or external audit (see sect. VII below), or during post-closure management and monitoring of Environmental Effects.

29. When a nonconformity occurs, the Contractor should therefore:

- (a) React to the nonconformity by, as applicable:
  - (i) Taking action to control and correct it;
  - (ii) Addressing the consequences, including mitigating adverse environmental impacts and to the extent possible restoring and rehabilitating the affected area;
- (b) Evaluating the need for action to eliminate the causes of the nonconformity so that it does not reoccur (corrective action), by:
  - (i) Reviewing the nonconformity;
  - (ii) Determining the causes of the nonconformity;
  - (iii) Determining if similar nonconformities exist, or could potentially occur;



- (c) Implementing any action needed;
  - (d) Verifying the implementation and effectiveness of the corrective actions with follow-up internal and external audits (see sect. VII below);
  - (e) Report the nonconformity, the actions taken to remedy it and the results of the audits to the International Seabed Authority.
30. It is important that, if corrective actions are needed, they can be implemented swiftly and that the necessary equipment for this is in place.

### C. Procurement and subcontractor management

31. Procurement covers the procurement of both equipment and other physical assets, and also of services.

32. *Procurement*: The Contractor should establish a process to ensure that environmental considerations are taken into consideration when ordering and procuring equipment and other physical assets, and when engaging subcontractors, ensuring that equipment and other physical assets used are those that produce no or only minimal environmental effects.

33. *Subcontractor management*: The Contractor should establish a process to ensure that possible environmental impacts are taken into consideration when selecting and engaging subcontractors and evaluating their performance, noting that, under the standard clauses for exploitation contracts appended to the regulations on exploitation, a subcontract must include appropriate terms and conditions to ensure that the performance of the subcontract will reflect and uphold the same standards and requirements as those of the contract between the Contractor and the International Seabed Authority. The following could be covered in the subcontractor selection and management process (non-exhaustive list):

- (a) During subcontractor prequalification and selection phase the Contractor should:
  - (i) Define the expectations to the individual subcontractors, including alignment with the Contractor's environmental policy and objectives;
  - (ii) Develop an environmental self-assessment form, taking into account the rules, regulations, procedures and recommendations of the International Seabed Authority, which is to be filled out by the potential subcontractor;
  - (iii) Communicate to the subcontractor the Contractor's expectations related to environmental performance, during both the prequalification and the tendering phases;
  - (iv) Review and assess the subcontractor's ability to meet the Contractor's expectations related to environmental performance, including status of the subcontractor's environmental management system and historical performance (if relevant);
- (b) During the operations phase, the Contractor should:
  - (i) Provide regular training activities for the subcontractor, focused in particular on meeting and understanding the environmental objectives of the Contractor and arrange regular meetings at different levels (both management and operational levels);
  - (ii) Carry out inspections or audits of the subcontractor, at the office and on site (see also paras. 43–46 below);

- (iii) Require the notification of incidents in accordance with the regulations on exploitation (see also sect. VII below);
- (iv) Require regular reporting of environmental performance.

#### **D. Emergency response and contingency plan**

34. The regulations on exploitation provide that the Contractor shall prepare an Emergency Response and Contingency Plan in accordance with annex V to the Regulations. Such a plan aims to establish, implement, maintain and improve the processes needed to prepare for, and respond to potential emergency situations, including those that are likely to have harmful effects on the Marine Environment. A Standard and Guidelines on the preparation and implementation of emergency response and contingency plans provide guidance on how the Contractor may implement these obligations.

### **VI. Monitoring and performance evaluation**

#### **A. Environmental management and monitoring plan**

35. The purpose of the environmental management and monitoring plan is to manage environmental effects and confirm that the environmental quality objectives and standards for the mining operation are met. Some parameters may need to be monitored continuously, whereas others are measured and analysed at defined intervals. Some parameters may need to be monitored, whereas others are calculated.

36. The regulations on exploitation provide that the Contractor shall prepare an environmental management and monitoring plan in accordance with regulation 48 and annex VII to the Regulations. The Guidelines for the preparation of environmental management and monitoring plans provide further guidance on the development of environmental monitoring plans by contractors.

#### **B. Evaluation of performance**

37. The results of the monitoring activities should be evaluated in accordance with the criteria, method and frequency defined by the Contractor in the environmental management and monitoring plan (see paras. 21–26, 35 and 36 above). The evaluation may assess the results against the following:

- (a) Operational criteria defined by the Contractor (see paras. 21–26 above);
- (b) Environmental objectives (see paras. 9–13 above);
- (c) Legal requirements (see paras. 16–18 above);
- (d) Good industry practice;

(e) The Standards and Guidelines related to baseline data collection, environmental impact assessments, and environmental management and monitoring plans (see paras. 19, 20, 35 and 36 above).

38. Medium- and long-term trends in monitoring data should be evaluated against the environmental objectives annually. In addition, the trends may be evaluated, whether these are positive (improvement in environmental performance) or negative, regardless of whether serious harmful effects have occurred or are considered likely to occur, and reported.

39. The results should be summarized by the Contractor on an annual basis, and presented to the International Seabed Authority and the sponsoring State or States (see paras. 43–46 below). The Contractor should provide the full monitoring and evaluation reports.

40. The regulations on exploitation provide that the Contractor shall conduct performance assessments of the environmental management and monitoring plan. If the performance criteria are not met, the Contractor is required to take corrective action in accordance with the Regulations to improve the performance and meet the objectives. The Contractor should keep a record of the corrective action taken, including evidence showing how the corrective action has resulted in the desired outcome.

41. If the Contractor does not have the necessary resources for this purpose, the capacity needs to be improved to meet the performance criteria. This could mean increasing resources in one or several areas, such as:

- (a) Human resources;
- (b) Infrastructure resources;
- (c) Financial resources.

42. Human resources may mean personnel with specialized skills and knowledge. Infrastructure resources may consist of the Contractor's equipment, storage and processing vessels, waste management and transport vessels. Financial resources may be the necessary financial means to maintain the equipment, ensure the progress of the project and fund corrective action.

### **C. Reporting to and notifying the International Seabed Authority**

43. Reporting to the International Seabed Authority and notification of the International Seabed Authority in the event of Incidents and notifiable events are governed by the regulations on exploitation.

44. *Annual reporting*: The regulations on exploitation require that the annual report to the International Seabed Authority include the results obtained from environmental monitoring programmes in relation to its activities in the Contract Area (see paras. 35 and 36 above). The regulations on exploitation also require a Contractor to compile and submit a performance assessment report on the Environmental Management and Monitoring Plan to the Secretary-General.

45. Taking into account the requirements for annual reports and performance assessments set out in the regulations on exploitation, the Environmental Management System should describe the following:

- (a) Parameters to report;
- (b) Format of reporting;
- (c) Method of reporting;
- (d) When to report.

46. *Notifiable events*: In accordance with the regulations on exploitation, the Contractor shall immediately notify its sponsoring State or States and the Secretary-General of the happening of any event listed in appendix I to the Regulations. This includes such events as significant leaks of hazardous substances and unauthorized mining discharges.

## VII. Audits

47. An audit is a systematic, independent and documented process for obtaining evidence and determining the extent to which the audit criteria are fulfilled. The audit criteria should consist of the environmental objectives and criteria developed under the environmental management system and documented in the environmental management and monitoring plan. An audit aims to ascertain whether the organization does what it intends to do: in other words, that it compares the actual activities and results against the requirements and expectations.

48. Generally, audits can be carried out as first-party audits, second-party audits and third-party audits:

(a) First-party audits are internal audits carried out by, and within, the Contractor organization;

(b) Second-party audits are external audits carried out by the Contractor, auditing its subcontractors and suppliers;

(c) Third-party audits are external audits carried out by the International Seabed Authority or a certification body, auditing the Contractor.

49. The Contractor should prepare a programme for conducting audits of the environmental management system, in the form of first party audits and second party audits. The programme should cover annual audits. The programme should be based on a risk-based approach.

50. The programme should cover internal audits (first party) and external audits of subcontractors (second party).

51. The Contractor needs to ensure that the audit team is competent and independent of the audited unit or subcontractor.

52. The Contractor should establish a procedure for the planning and conduct of the different types of audits. The procedure should, among other requirements, cover the following tasks:

(a) Annual audit programme (when and who prepares and approves the programme), risk-based approach;

(b) Competence requirements of auditors;

(c) Notification, planning of each specific audit;

(d) Setting up an audit plan;

(e) Templates for notification, and audit report;

(f) Following up the audits;

(g) Reporting on the results of the audit to the International Seabed Authority.

## VIII. Environmental management system review

53. The management system review is a high-level process in which the senior management of the Contractor, informed by the audit results, reviews the organization's environmental management system.

54. The senior management of the Contractor should review the organization's environmental management system at regular intervals, including the adaptive management techniques (process, procedure and response).

55. The purpose of the management review is to ensure the environmental management system's continued suitability, adequacy and effectiveness for the seabed mining operation.
56. The input to the management review shall include:
- (a) Status of actions from previous management reviews;
  - (b) Changes in:
    - (i) External and internal issues relating to the seabed mining operation that are relevant for the Contractor or the environmental management system or both;
    - (ii) Contractor's obligations (see paras. 16–18 above);
    - (iii) Key environmental issues as defined in relation to the environmental impact assessment (see para. 20 above);
    - (iv) Extent to which environmental objectives have been achieved (see paras. 9–13 and 37–42 above);
  - (c) Information on the Contractor's environmental performance, including positive or negative trends in:
    - (i) Nonconformity and corrective actions (see paras. 27–30 above);
    - (ii) Monitoring and measurement results (see paras. 35–42 above);
    - (iii) Audit results (see sect. VII above);
    - (iv) Adequacy of resources;
    - (d) Relevant communications with the sponsoring State or States, the International Seabed Authority and stakeholders;
    - (e) Opportunities for continual improvement.
57. The output of the management review should include:
- (a) Conclusions on the continuing suitability, adequacy and effectiveness of the environmental management system for the seabed mining operation;
  - (b) Decisions related to continual improvement opportunities;
  - (c) Decisions related to any need for changes to the environmental management system, including resources, policy and strategy;
  - (d) Actions, if needed, when environmental objectives have not been achieved;
  - (e) Any implications for the strategic direction of the organization;
  - (f) Any further recommendations for improvements, including the necessary means to achieve them;
  - (g) Planning of the next management review.
58. The Contractor should retain documented information as evidence of the management review.

## **IX. Support**

### **A. Resources**

59. The Contractor should ensure that sufficient resources are available to carry out its seabed mining operations in a way that corresponds with the environmental management system. Resources in this context includes those referred to above. They also comprise people with relevant competence, equipment, funding and available time.

## **B. Awareness and competence**

60. The Contractor should ensure awareness among its personnel by ensuring knowledge and understanding of:

- (a) Policy and procedures followed by the Contractor;
- (b) Environmental aspects related to their functions;
- (c) Key elements of the environmental management system.

61. The Contractor should ensure that appropriate duties are assigned to the right personnel by:

- (a) Identifying the competence profile needed for individual positions and functions;
- (b) Identifying the current competence among relevant personnel;
- (c) Identifying gaps in competence for relevant personnel;
- (d) Preparing a competence plan for relevant personnel and providing the necessary regular and continuous training.

62. Training can take the form of on-the-job-training, classroom training, e-learning and others.

63. Personnel in this context are permanent employees, temporary employees, hired-in personnel and subcontractor personnel working under the instructions of the Contractor.

## **C. Communications**

64. Communications from the Contractor should cover both internal and external communication.

65. The Contractor should establish, implement and maintain processes needed for internal and external communications relevant to the environmental management system, including:

- (a) The issues to be communicated;
- (b) When to communicate;
- (c) With whom to communicate;
- (d) How to communicate.

66. The Contractor should respond to communications and requests for information concerning its environmental management system within a reasonable period of time.

67. The Contractor should retain documented information as evidence of its communications.

68. Where internal communication is concerned, the Contractor should internally communicate information relevant to the environmental management system among the various levels and functions within its organization, including relevant changes. It should also ensure that its communication processes enable persons performing work under the Contractor's control to contribute to continual improvement, including in particular staff members with responsibilities for achieving environmental objectives.

69. Where external communication is concerned, the Contractor should externally communicate information relevant to the environmental management system, as established by the organization's communication processes and as required by its obligations under the regulations on exploitation. External communications should be communicated in a timely manner.

70. Whether internal or external, communication from the Contractor should:

- (a) Include relevant information;
- (b) Be appropriate and understandable to the parties to whom it is communicated (personnel, stakeholders and other interested parties);
- (c) Be clear and transparent
- (d) Be truthful, trustworthy and not misleading.

#### **D. Management system documentation**

71. The regulations on exploitation set out the books, records and samples that a Contractor must keep and maintain.

72. The Contractor should have a system to ensure that the right documentation is available at all times to the right personnel.

73. When creating and updating documented information, the Contractor should ensure that the following aspects are appropriate:

- (a) Identification and description (e.g. a title, date, author or reference number);
- (b) Format (covering such aspects as language, software version, graphics and others) and media (whether in hard copy or electronic);
- (c) Review and approval for suitability and adequacy.

74. Documented information required by the environmental management system and by the International Seabed Authority should be subject to controls to ensure that it is available and suitable for use, where and when it is needed, and that it is adequately protected from such risks as loss of confidentiality, improper use or loss of integrity.

75. For the control of documented information, the Contractor should undertake the following activities as applicable:

- (a) Distribution, access, retrieval and use;
- (b) Storage and preservation, including preservation of legibility;
- (c) Control of changes (e.g. version control);
- (d) Retention and disposal.

76. Documented information of external origin which is necessary for the planning and operation of the environmental management system should be identified by the Contractor and verified.

77. When the Contractor receives documented information of external origin this may be verified by:

- (a) Ensuring that it is the version that is specified, and not a prior version;
- (b) Marking prior versions of documents as obsolete;

(c) Maintaining a database which keeps track of all internal and external documents, their titles, dates and revisions.

## **X. Definitions and abbreviations**

78. "ALARP" means as low as reasonably practicable.

79. "Subcontractor" means a party in a contractual relationship with the Contractor to support the execution of the mining operation in the Area.

---