

# Integrating Biodiversity into Environmental Management Systems



## The Energy & Biodiversity Initiative

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## EXECUTIVE SUMMARY

This document takes as its starting point the assumption that biodiversity conservation is an integral part of sustainable development, and that oil and gas companies should integrate biodiversity considerations into their Environmental Management Systems (EMS) or integrated Health, Safety and Environmental Management Systems (HSEMS) at a corporate and/or project level. Although consideration of biodiversity should be an integral part of any EMS, actions and activities to manage and conserve biodiversity should be based on a valid and transparent risk assessment process. Therefore, only in those cases where there are significant biodiversity issues will many of the responses proposed in this document be necessary.

There are two principal templates for environmental management within the oil and gas sector, the *Guidelines for the Development and Application of Health, Safety and Environmental Management Systems* published by the E&P Forum (now named the International Oil and Gas Producers Association, or OGP) in 1994 and the International Organization for Standardization's *Environmental Management Systems – Specification with Guidance for Use* (ISO 14001), published in 1996. The OGP Guidelines have been developed to integrate relevant health, safety and environment concerns into a single approach and guideline, while remaining sufficiently generic to be readily adapted to different companies and their organizational cultures. The OGP Guidelines' principal difference with respect to the ISO 14001 EMS standard is the joint consideration and integration of health and safety and environmental matters.

The ISO and OGP approaches are presented separately here to maximize the value of this document to the broadest possible range of end-users. More generally, this document should also be applicable to other EMS templates, which are increasingly based upon, or linked to, the ISO standards. It is important to note, however, that irrespective of whether an ISO, OGP or other environmental management system template is used, systems actually used by companies are likely to be modified in some way. Therefore, any company using this document will need to carefully check the transposition of its content into their system.

It is the purpose of this document to provide examples of how biodiversity considerations can be integrated into EMS. Consequently, it avoids prescriptive activities and actions, offering suggestions instead. Within the overall structure of an organization's particular EMS, there may be a number of ways to achieve the desired outcomes using formal or informal procedures. The measure of success should be based on performance rather than strict adherence to a narrowly defined process. In both the ISO and OGP templates, the management of biodiversity issues can, in the majority of cases, be readily integrated with responses to more general environmental issues, as long as the environmental management tools used within the EMS or HSEMS (e.g. Environmental and Social Impact Assessments) also properly address biodiversity issues.

# 1. INTRODUCTION - USING THIS DOCUMENT

This document takes as its starting point the assumption that biodiversity conservation is an integral part of sustainable development, and that oil and gas companies should integrate biodiversity considerations into their Environmental Management Systems (EMS) or integrated Health, Safety and Environmental Management Systems (HSEMS) at a corporate and/or project level. Although consideration of biodiversity should be an integral part of any EMS, actions and activities to manage and conserve biodiversity should be based on a valid and transparent risk assessment process. Therefore, only in those cases where there are significant biodiversity issues will many of the responses proposed in this document be necessary. It is important to note at this point that significance is a value judgment, and its definition may vary from one project to another. Within the Energy and Biodiversity Initiative (EBI) the focus is the process of defining significance appropriately rather than attempting to define it in any absolute terms.

**i** See **Integrating Biodiversity into Environmental and Social Impact Assessment Processes.**

Where significant issues do exist, companies may face pressure from governments, communities, shareholders and non-governmental organizations to go beyond preventing or mitigating negative impacts and take advantage of opportunities to benefit biodiversity conservation in and around project sites and in the countries and regions where they operate. Consideration of such opportunities may also be integrated with a corporate or project-level EMS at the discretion of each company or site, as fits their specific context. Examples are noted where appropriate throughout this document.

There are two principal templates for environmental management within the oil and gas sector. The first is based upon the *Guidelines for the Development and Application of Health, Safety and Environmental Management Systems* published by the E&P Forum (now named the International Oil and Gas Producers

Association, or OGP) in 1994 (Report No. 6 36/210). The second is based upon the International Organization for Standardization's *Environmental Management Systems – Specification with Guidance for Use* (ISO 14001), published in 1996. While there is a large degree of convergence between the OGP and ISO approaches, they are presented here separately to maximize the value of this document to the broadest possible range of end-users. More generally, this document should also be applicable to other EMS templates, which are increasingly based upon, or linked to, the ISO standards.

It is important to note, however, that, irrespective of whether an OGP, ISO or other environmental management system template is used, systems actually used by companies are likely to be modified in some way. Therefore, any company using this document will need to carefully check the transposition of its content into their system. Equally, it is the purpose of this document to offer examples of how biodiversity considerations can be integrated into EMS. Consequently, it avoids prescriptive activities and actions, offering *suggestions* instead. Within the overall structure of an organization's particular EMS there may be a number of ways to achieve the desired outcomes using formal or informal procedures. The measure of success should be based on performance rather than strict adherence to a narrowly defined process.

This document is primarily aimed at corporate officers, site managers and other relevant personnel responsible for the management, monitoring and conservation of biodiversity within the wider context of environmental protection throughout the lifecycle of upstream oil and gas operations (see Figure 1). However, ultimately, environmental and biodiversity protection and management is the responsibility of all oil and gas staff, irrespective of their job description or location. Therefore, this document may also be useful when considering biodiversity in the context of environmental training programs and briefings.

Although this document is designed for use as a standalone document, other EBI products offer detailed guidance on key elements of the integration.

See **Integrating Biodiversity Conservation into Oil and Gas Development**, which contains a summary of the analysis and recommendations of the EBI, and forms the overall context for this document.

This document is presented in four principal sections:

1. Introduction – using this document.
2. Integrating biodiversity with an ISO 14001-based EMS.
3. Integrating biodiversity with an OGP-based Health, Safety and Environmental Management System.
4. Appendices.

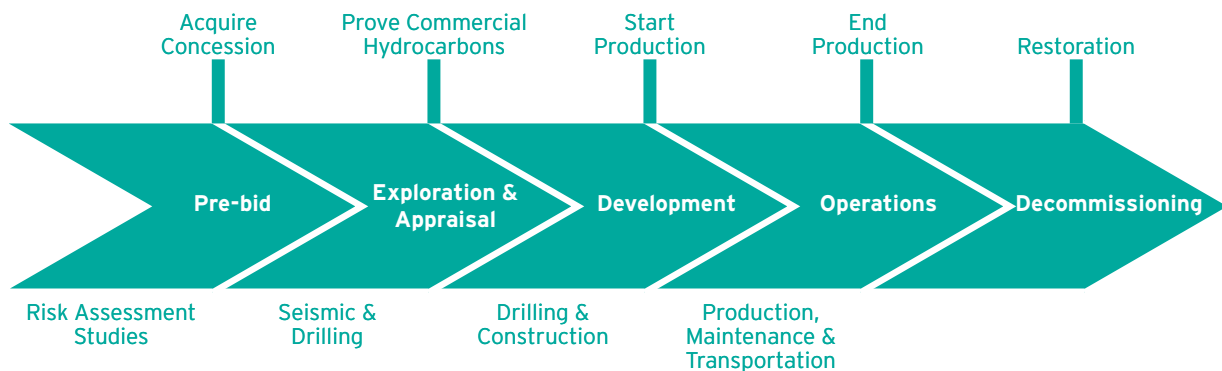
Sections 2 and 3 present information in the form of flowcharts and tables, with one table for each key stage of the EMS or HSEMS process (broken down by clause for the former, and reference for the latter). Each table gives an overview of the structure and requirements with respect to either the ISO or OGP EMS template as appropriate, supported by quotes (italicized), and additional comments and suggestions on how to approach the consideration of biodiversity issues at a project and/or corporate level.

## PLEASE SEND COMMENTS, SUGGESTIONS AND QUESTIONS TO:

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The continued improvement of this document is dependent on the active participation of end-users. Therefore we welcome any comments and suggestions relating to revisions and additions that will improve the usability, content and breadth and depth of application in the oil and gas sector. We are also actively seeking case studies examining the successful integration of biodiversity issues into project-level or corporate EMS and HSEMS for inclusion in future updates.

**FIGURE 1. THE LIFECYCLE OF UPSTREAM OIL AND GAS OPERATIONS<sup>1</sup>**



<sup>1</sup> At the pre-bid stage, a company may choose not to proceed with investment and exit the project lifecycle, because of biodiversity or other concerns. For technical, economic or other reasons, a company may not continue activity after completion of exploration and appraisal. In addition, at any point in the project lifecycle after the pre-bid stage, a company may choose (or be required by the host government) to “exit” a project by divesting and transferring its legal interest to another operator. This possibility may raise a number of issues about the continuity of biodiversity-related philosophy, commitment and practice from one company to another, potentially jeopardizing sustainable biodiversity conservation and a company’s ability to maintain the reputational value of its activities related to biodiversity conservation (see *Integrating Biodiversity into Environmental and Social Impact Assessment Processes*, Section 3.11, and *Framework for Integrating Biodiversity into the Site Selection Process* for further discussion of this issue).

## 2. INTEGRATING BIODIVERSITY WITH AN ISO 14001-BASED EMS

### 2.1 INTRODUCTION

ISO 14001 specifies requirements for an EMS to enable an organization to formulate a policy and objectives, taking into account legislative requirements and information about significant environmental impacts. It applies to those environmental aspects that the organization can control and over which it can be expected to have an influence. It does not itself state specific environmental performance criteria.

ISO 14001 is applicable to any organization that wishes to implement, maintain and improve an EMS, assure itself of its conformance with its stated environmental policy, demonstrate such conformance to others, seek certification/registration of its EMS by an external organization and make a self-determination and self-declaration of conformance with this standard (see Figure 2).

**FIGURE 2.**  
**THE ISO 14001 MANAGEMENT CYCLE**

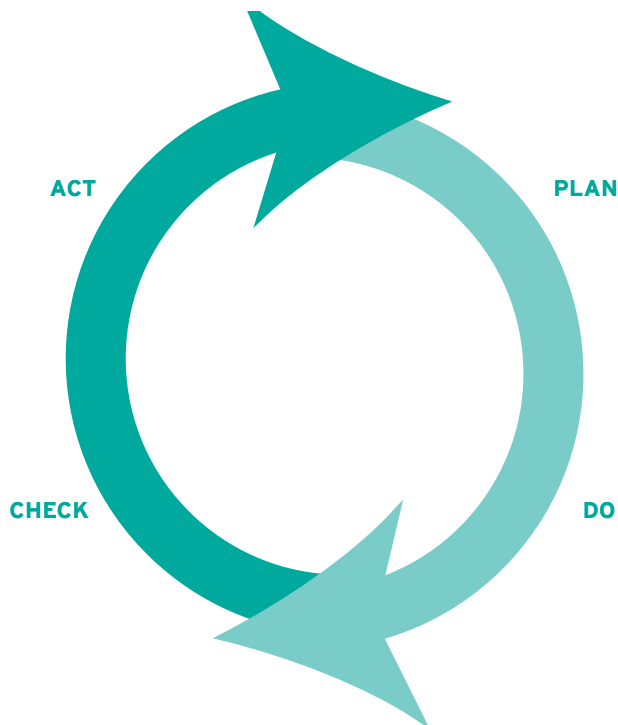


Figure 3 summarizes the relationship between EBI products (shown as the left-hand column) and the EMS process as defined within ISO 14001 (shown as the central column and explored in detail in Tables 1-5). Other inputs to the EMS process – including the Appendices to this document – are shown in the right-hand column. It is important to recognize that many of the steps in the EMS process will be conducted at the same time, rather than in the linear sequence shown in Figure 3.

### KEY TO EBI PRODUCTS NOTED IN FIGURE 3:

*IBCOGD – Integrating Biodiversity Conservation into Oil and Gas Development*

*Biodiversity & site selection – Framework for Integrating Biodiversity into the Site Selection Process*

*Biodiversity & ESIA – Integrating Biodiversity into Environmental and Social Impact Assessment Processes*

*Good practice in avoiding negative impacts – Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity Impacts*

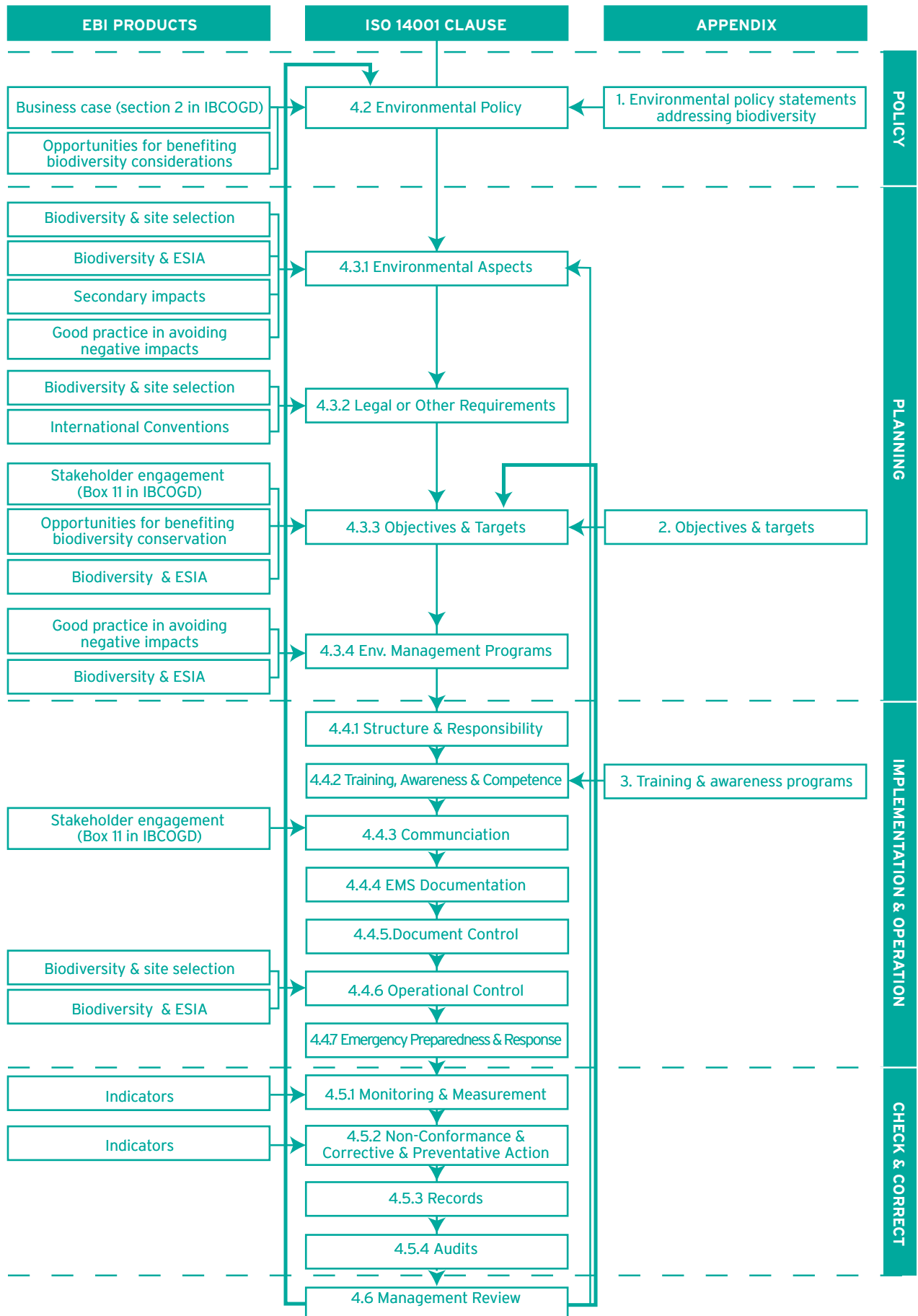
*Indicators – Biodiversity Indicators for Monitoring Impacts and Conservation Actions*

*International Conventions – International Conventions*


*Opportunities for benefiting biodiversity conservation – Opportunities for Benefiting Biodiversity Conservation*

*Secondary impacts – Negative Secondary Impacts from Oil and Gas Development*



**FIGURE 3. RELATIONSHIP BETWEEN EBI PRODUCTS AND THE ISO 14001 EMS PROCESS**



**TABLE 1. ENVIRONMENTAL POLICY**



ISO 14001 CLAUSE	SUGGESTED APPROACH
<p>CLAUSE 4.2</p>	<p>The ISO standard has six requirements for a policy: it should be appropriate to the environmental impacts of the company’s activities; it should commit to continual improvement and pollution prevention; commit to comply with legislation etc; provide a framework for setting and reviewing objectives and targets; be documented and communicated to employees; and be available to the public.</p> <p>Company environmental policies are typically related to pollution, energy conservation and sustainable development. Few policies mention biodiversity as a subject, although it might well be included in a common formulation such as “without causing any harm to the environment.”</p>
<p><b>Suggested approach – project</b></p>	<p>Building on the overall company policy, individual sites may produce a biodiversity policy relevant to the specific activities undertaken on-site, which also fully acknowledges the potential for secondary impacts. A statement on taking opportunities to benefit biodiversity might also be included, although such activities will often be strongly driven by the results of a project Environmental and Social Impact Assessment (ESIA) and any determined need or value for actions that go beyond mitigation to benefit valuable and threatened ecological resources.</p>
<p><b>Suggested approach – corporate</b></p>	<p>Appendix 1 shows four examples of how biodiversity might be addressed in environmental policy statements. At the corporate level, opportunities to benefit biodiversity conservation may also be a key part of an overall corporate social responsibility strategy that recognizes the strong role of biodiversity conservation in sustainable development and the business value of a positive public reputation on biodiversity issues.</p> <p>See <b>Integrating Biodiversity Conservation into Oil and Gas Development</b> and <b>Opportunities for Benefiting Biodiversity Conservation</b>.</p> 

**TABLE 2. PLANNING**

ISO 14001 CLAUSE	SUGGESTED APPROACH
<p>CLAUSE 4.3.1</p>	<p><b>ENVIRONMENTAL ASPECTS</b></p> <p><i>“The organization shall establish and maintain procedures to identify environmental aspects of its activities, products or services ... in order to determine those which have or can have <u>significant</u> [emphasis added] impacts on the environment.”</i></p>
<p><b>Suggested approach – project</b></p>	<p>A procedure for defining activities, products or services (environmental aspects) that might have an impact on biodiversity may be combined with a procedure for identifying biodiversity in the affected or influenced area. For larger projects these issues could be integrated into the ESIA for the project.</p>
<p><b>Suggested approach – corporate</b></p>	<p>The organization might consider extending the procedure to include other activities and commitments such as joint ventures.</p> <p>See <b>Framework for Integrating Biodiversity into the Site Selection Process, Integrating Biodiversity into Environmental and Social Impact Assessment Processes, Negative Secondary Impacts from Oil and Gas Development, and Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity Impacts.</b> </p>
<p>CLAUSE 4.3.2</p>	<p><b>LEGAL OR OTHER REQUIREMENTS</b></p> <p><i>“The organization shall establish and maintain a procedure to identify and have access to legal or other requirements to which the organization subscribes.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>The procedure described in <i>Framework for Integrating Biodiversity into the Site Selection Process</i> may be used, for example, to obtain references or links to:</p> <ul style="list-style-type: none"> <li>• Finding information on protected areas and their legal status.</li> <li>• National red-lists on vulnerable species.</li> <li>• Biodiversity action plans for areas in question.</li> <li>• Conservation organizations with which the organization cooperates.</li> <li>• Environmental management guidelines and procedures published by professional and industrial bodies to which the organization subscribes.</li> </ul> <p>See <b>Framework for Integrating Biodiversity into the Site Selection Process</b> and <b>International Conventions.</b> </p>



**TABLE 2. PLANNING (cont'd)**


ISO 14001 CLAUSE	SUGGESTED APPROACH
<p align="center"><b>CLAUSE 4.3.3</b></p>	<p><b>OBJECTIVES AND TARGETS</b></p> <p><i>“The organization shall establish and maintain documented environmental objectives and targets, at each relevant function and level within the organization.”</i></p>
<p><b>Suggested approach – project</b></p>	<p>Specific project-level objectives and targets are only required in cases where there are significant biodiversity impacts. Where significant impacts do exist, stakeholder engagement is an important basis for setting realistic and transparent objectives and targets. More general corporate targets may be set at the discretion of the company, with the targets relating to policies and strategies rather than specific operational activities. Appendix 2 shows some examples of project-level biodiversity targets along with examples of actions that could be included in a Biodiversity Management Program as part of a wider Environmental Management Program (see ISO 14001 clause 4.3.4).</p>
<p><b>Suggested approach – corporate</b></p>	<p>Corporate objectives and targets may also take into account opportunities to benefit biodiversity conservation beyond simple prevention and mitigation of negative impacts.</p> <p>See <b>Integrating Biodiversity Conservation into Oil and Gas Development, Opportunities for Benefiting Biodiversity Conservation</b> and <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes.</b> </p>
<p align="center"><b>CLAUSE 4.3.4</b></p>	<p><b>ENVIRONMENTAL MANAGEMENT PROGRAMS</b></p> <p><i>“The organization shall establish and maintain programs for achieving its objectives and targets. It shall include designation of responsibility and the means and time-frame by which they are to be achieved.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>A Biodiversity Management Program (BMP) may be developed as part of the wider Environmental Management Program if objectives and targets are required to address significant biodiversity impacts.</p> <p>See <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes</b> and <b>Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity Impacts.</b> </p>

**TABLE 3. IMPLEMENTATION AND OPERATION**



ISO 14001 CLAUSE	SUGGESTED APPROACH
<p style="text-align: center;"><b>CLAUSE 4.4.1</b></p>	<p style="text-align: center;"><b>STRUCTURE AND RESPONSIBILITY</b></p> <p><i>“Roles, responsibility and authorities shall be defined.”</i></p>
<p><b>Suggested approach – project</b></p>	<p>The company may acquire and/or retain biodiversity expertise within its project staff, alongside or instead of the use of consultants, as appropriate to its specific needs and as determined by its risk assessment process. Internal staff capacity could be developed alongside links to external biodiversity and conservation NGOs and other relevant stakeholders. Where appropriate, biodiversity criteria may be incorporated in existing performance contracts to emphasize the focus within line management, making accountability for decisions and responsibility for actions clear.</p>
<p><b>Suggested approach – corporate</b></p>	<p>Companies may wish to consider the appointment of a biodiversity “champion” who has a clearly defined role and responsibility relating to corporate biodiversity policy and strategy. The company should ideally assess with whom responsibility for environmental issues (including biodiversity) lies.</p>
<p style="text-align: center;"><b>CLAUSE 4.4.2</b></p>	<p style="text-align: center;"><b>TRAINING, AWARENESS AND COMPETENCE</b></p> <p><i>“The organization shall identify training needs. It shall require that all personnel whose work may create a significant impact upon the environment, have received appropriate training.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>Appendix 3 outlines a range of biodiversity issues that might be included in training and awareness programs. The breadth and depth of the issues to be covered from site to site will be decided by the significance of biodiversity impacts. However, in keeping with a “best practice” approach it is suggested that all staff should have at least a general introduction to biodiversity in the context of oil and gas operations.</p>
<p style="text-align: center;"><b>CLAUSE 4.4.3</b></p>	<p style="text-align: center;"><b>COMMUNICATION</b></p> <p><i>“The organization shall establish and maintain procedures for internal and external communication...[and] shall consider processes for external communication on its significant environmental aspects.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p><i>Internal communication:</i> A description of the communication lines between the company’s biodiversity expertise and the other functions might be drawn up and distributed to relevant staff.</p> <p><i>External communication:</i> Identifying and involving stakeholders on biodiversity early in the project is advantageous, and may contribute to gaining valuable information. The company may also consider establishing a formal cooperation agreement with a conservation organization to act as a pathway to identifying biodiversity issues, acquiring critical information and disseminating information relating to performance at both project and corporate levels.</p> <p style="text-align: center;">See <b>Integrating Biodiversity Conservation into Oil and Gas Development.</b></p>



**TABLE 3. IMPLEMENTATION AND OPERATION (cont'd)**

ISO 14001 CLAUSE	SUGGESTED APPROACH
CLAUSE 4.4.4	<b>ENVIRONMENTAL MANAGEMENT SYSTEM DOCUMENTATION</b> <i>“The environmental management system shall be documented in paper or electronic form.”</i>
<b>Suggested approach – project &amp; corporate</b>	No specific suggestions required, as this issue will normally be covered through general procedures established for the existing EMS and overall management system.
CLAUSE 4.4.5	<b>DOCUMENT CONTROL</b> <i>“The organization shall establish and maintain procedures for controlling all documents required by the ISO standard.”</i>
<b>Suggested approach – project &amp; corporate</b>	No specific suggestions required, as this issue will normally be covered through general procedures established for the existing EMS and overall management system.
CLAUSE 4.4.6	<b>OPERATIONAL CONTROL</b> <i>“ The organization shall establish and maintain procedures related to the identifiable significant environmental aspects of goods and services used by the organization and communicating relevant procedures and requirements to suppliers and contractors. The procedures shall cover situations where their absence could lead to deviations from the policy and targets and stipulate operating criteria.”</i>
<b>Suggested approach – project</b>	Projects and sites could implement and monitor policy established at the corporate level relating to supply chain management and any requirements established for contractors and suppliers, or establish, implement and monitor requirements established at the project level for supply chain management and performance of contractors and suppliers.
<b>Suggested approach – corporate</b>	The company may wish to include in its biodiversity policy (see Table 1) a statement referring to voluntary or mandatory requirements relating to biodiversity that suppliers and contractors may be subject to, or to how biodiversity is considered in the criteria used in choosing suppliers and contractors.
CLAUSE 4.4.7	<b>EMERGENCY PREPAREDNESS AND RESPONSE</b> <i>“The organization shall establish and maintain procedures to identify potential for and respond to accidental and emergency situations.”</i>
<b>Suggested approach – project</b>	If there are significant potential impacts on biodiversity that could arise during or following significant accidents or emergencies (e.g. oil spills, uncontrolled fires), then the project may undertake a more detailed risk analysis, identifying vulnerable resources and sites and drawing up plans for emergency preparedness and contingency measures for each potential impact. This is particularly relevant if the project is in, or near to, a sensitive biodiversity area. The Environmental Management Program will normally handle biodiversity issues on a smaller scale (see ISO 14001 clause 4.3.4). It is important to note that health and safety concerns may outweigh environmental and biodiversity protection during and after some emergency situations and that the correct balance should be judged on a case-by-case basis.
<b>Suggested approach – corporate</b>	The company may ensure that biodiversity issues are fully integrated with any planned response to emergency situations and that where project-level plans are required, they are regularly reviewed.
	See <b>Framework for Integrating Biodiversity into the Site Selection Process and Integrating Biodiversity into Environmental and Social Impact Assessment Processes.</b> 

**TABLE 4. CHECKING AND CORRECTIVE ACTION**

ISO 14001 CLAUSE	SUGGESTED APPROACH
<p><b>CLAUSE 4.5.1</b></p>	<p><b>MONITORING AND MEASUREMENT</b></p> <p><i>“The organization shall establish and maintain documented procedures to monitor and measure, on a regular basis, the key characteristics of its operations and activities that can have a significant impact in the environment. This shall include the recording of information to track performance, relevant operational controls and conformance with the organization’s environmental objectives and targets.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>See <b>Biodiversity Indicators for Monitoring Impacts and Conservation Actions.</b></p> 
<p><b>CLAUSE 4.5.2</b></p>	<p><b>NON-CONFORMANCE AND CORRECTIVE AND PREVENTIVE ACTION</b></p> <p><i>“The organization shall establish and maintain procedures for defining responsibility and authority for handling and investigating non-conformance, taking action to mitigate any impacts caused and for initiating and completing corrective and preventive action.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once any biodiversity issues have been integrated.</p> <p>See <b>Biodiversity Indicators for Monitoring Impacts and Conservation Actions.</b></p> 
<p><b>CLAUSE 4.5.3</b></p>	<p><b>RECORDS</b></p> <p><i>“The organization shall establish and maintain procedures for the identification, maintenance and disposition of environmental records. These records shall include training records and the results of audits and reviews.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once biodiversity issues have been integrated.</p>
<p><b>CLAUSE 4.5.4</b></p>	<p><b>AUDITS</b></p> <p><i>“The organization shall establish and maintain programs and procedures for periodic environmental management audits.”</i></p>
<p><b>Suggested approach – project</b></p>	<p>The company may acquire and/or retain biodiversity expertise within its audit team as appropriate to its specific needs and as determined by its risk assessment process. Where appropriate, audit procedures might emphasize the inclusion of biodiversity issues identified in the ESIA process. External audit expertise should be sought and incorporated into the audit team when independent external assessment is required.</p>

**TABLE 5. MANAGEMENT REVIEW**

<b>ISO 14001 CLAUSE</b>	<b>SUGGESTED APPROACH</b>
CLAUSE 4.6	<i>“The organization’s top management shall review the environmental management system to ensure its continuing suitability, adequacy and effectiveness.”</i>
<b>Suggested approach – project &amp; corporate</b>	In cases where biodiversity is a significant aspect of one or more projects, biodiversity criteria may also be incorporated in existing performance contracts to emphasize that focus within line management.

### 3. INTEGRATING BIODIVERSITY ISSUES WITH AN OGP-BASED EMS

OGP Guidelines for the Development and Application of Health, Safety and Environmental Management Systems (HSEMS) have been developed to integrate relevant health, safety and environment concerns into a single approach and guideline, while remaining sufficiently generic to be readily adapted to different companies and their organizational cultures. The Guidelines also recognize, and are applicable to, the role of contractors and sub-contractors.

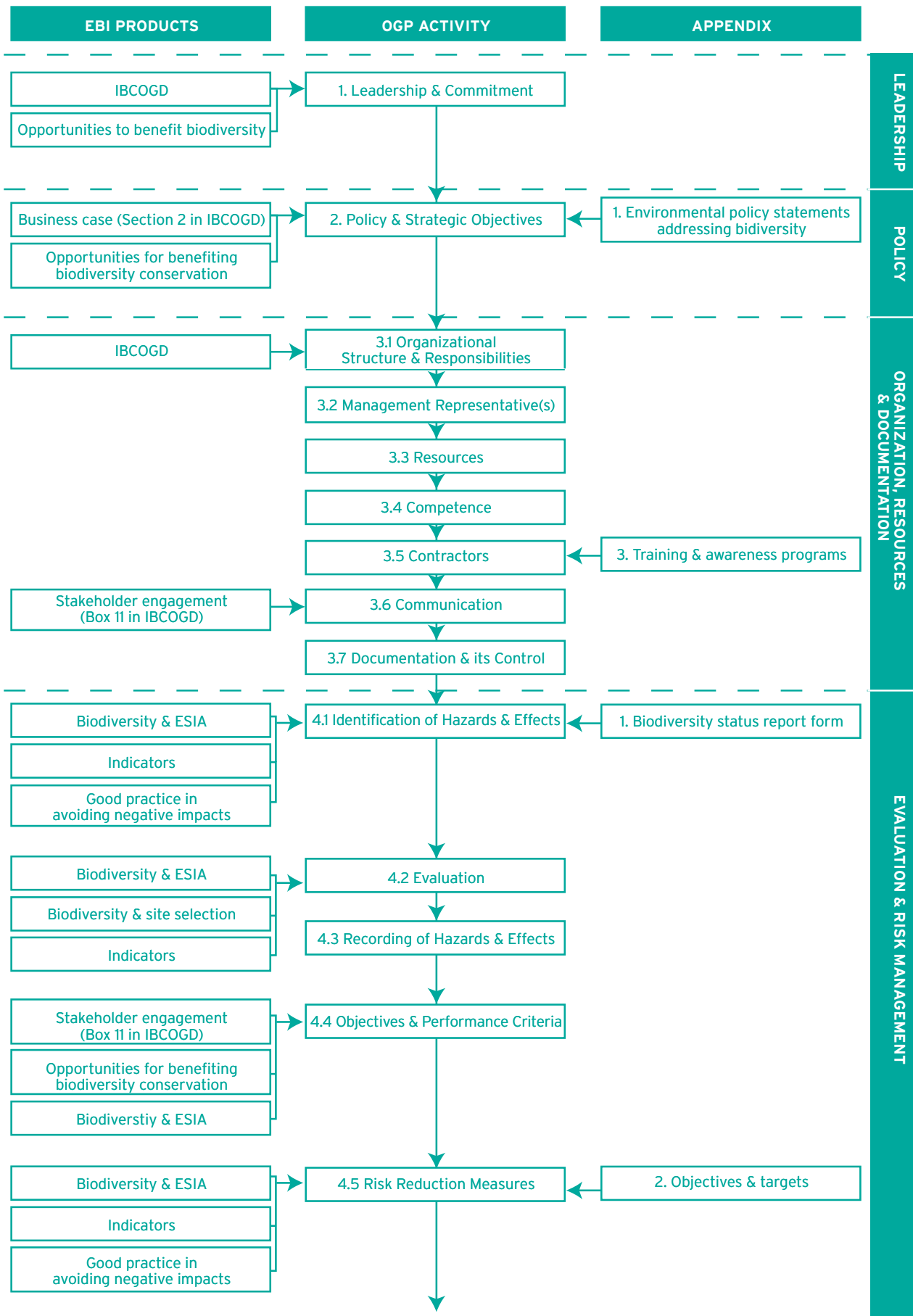
The OGP Guidelines' principal difference relative to the ISO 14001 EMS standard is the joint consideration and integration of health and safety and environmental matters. The Guidelines describe the main elements necessary to develop, implement and maintain an HSEMS (see Figure 4), but do not prescribe specific performance requirements, instead recommending that companies set policies and objectives that take into account the significant hazards and environmental effects of their operations. Figure 5 summarizes the relationship between EBI products (shown as the left-hand column) and the EMS process as defined by OGP (shown as the central column and explored in detail in Tables 6-12). Other inputs to the EMS process – including the Appendices to this document – are shown in the right-hand column. It is important to recognize – as noted in the OGP Guidelines – “many of the stages will in practice be addressed at the same time or revisited at different times,” rather than conducted in a linear sequence.

FIGURE 4. THE OGP MODEL HSEMS

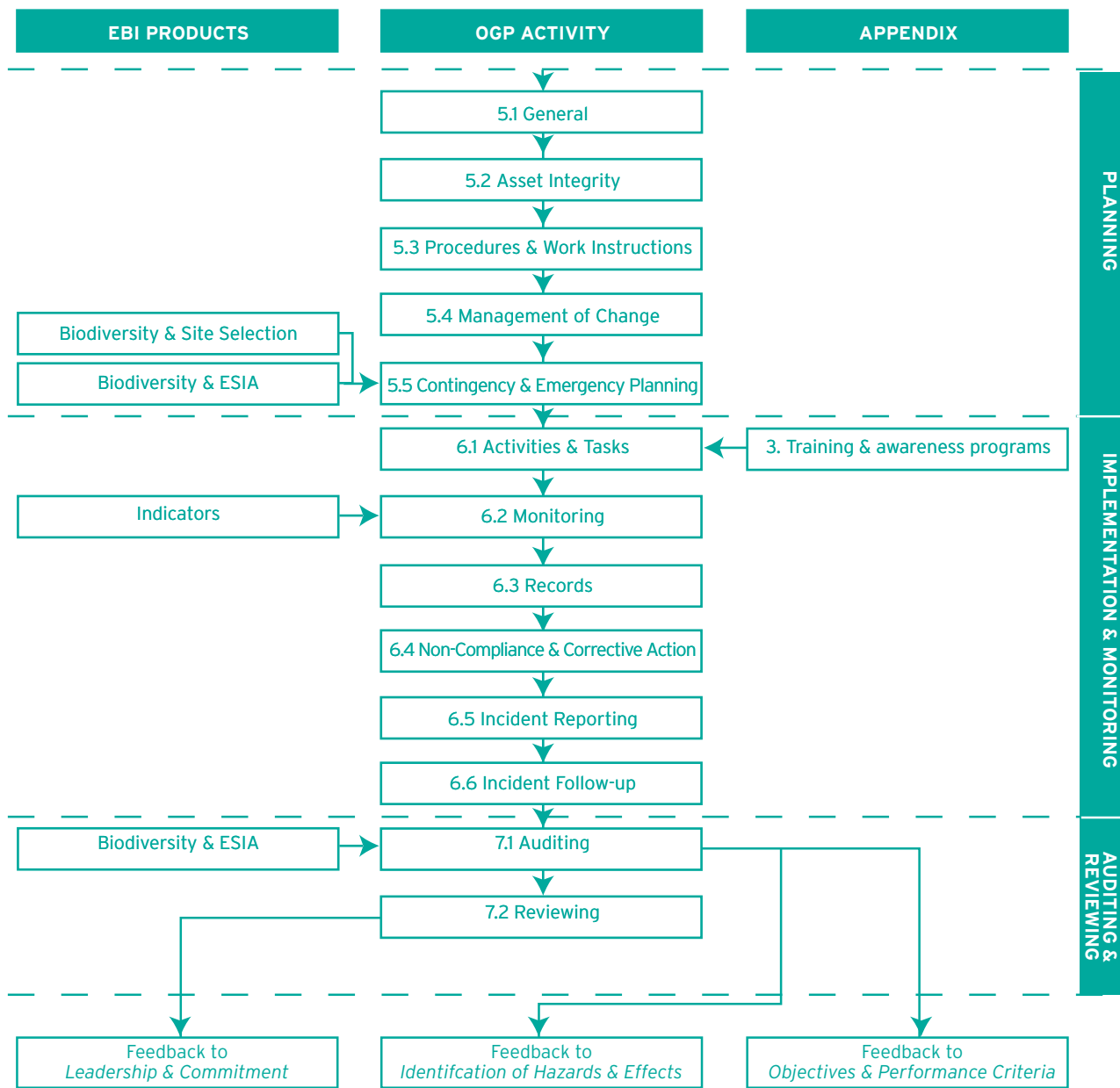


Source: E&P Forum (now named the International Association of Oil and Gas Producers Association, or OGP). Guidelines for the Development and Application of Health, Safety and Environmental Management Systems. 1994. Reproduced with kind permission of OGP.

**FIGURE 5. RELATIONSHIP BETWEEN EBI PRODUCTS AND THE OGP HSEMS PROCESS (cont'd next page)**



**FIGURE 5. RELATIONSHIP BETWEEN EBI PRODUCTS AND THE OGP HSEMS PROCESS (CONT'D)**



**KEY TO EBI PRODUCTS NOTED IN FIGURE 5:**

**IBCOGD** – Integrating Biodiversity Conservation into Oil and Gas Development

**Biodiversity & site selection** – Framework for Integrating Biodiversity into the Site Selection Process

**Biodiversity & ESIA** – Integrating Biodiversity into Environmental and Social Impact Assessment Processes

**Good practice in avoiding negative impacts** – Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity Impacts

**Indicators** – Biodiversity Indicators for Monitoring Impacts and Conservation Actions

**International Conventions** – International Conventions

**Opportunities for benefiting biodiversity conservation** – Opportunities for Benefiting Biodiversity Conservation

**Secondary impacts** – Negative Secondary Impacts from Oil and Gas Development



**TABLE 6. LEADERSHIP AND COMMITMENT**

OGP REFERENCE	SUGGESTED APPROACH
<p><b>1. LEADERSHIP AND COMMITMENT</b></p>	<p><i>“Top-down commitment and company culture, essential to the success of the system...Senior management of the company should provide strong, visible leadership and commitment, and ensure that this commitment is translated into the necessary resources, to develop, operate and maintain the HSEMS and to attain the policy and strategic objectives.”</i></p>
<p><b>Suggested approach – project</b></p>	<p>Where there are significant biodiversity issues, each project may consider selecting a biodiversity “champion” who can be consulted prior to and during environmental management activities, and who can guide the use of resources to address those issues within the wider EMS.</p>
<p><b>Suggested approach – corporate</b></p>	<p>One or more senior managers may be assigned the role of biodiversity “champion” at internal and external meetings ensuring that the topic is accorded an appropriate degree of significance.</p> <p>See <b>Integrating Biodiversity Conservation into Oil and Gas Development</b> and <b>Opportunities for Benefiting Biodiversity Conservation.</b></p>




**TABLE 7. POLICY AND STRATEGIC OBJECTIVES**

OGP REFERENCE	SUGGESTED APPROACH
<p><b>2. POLICY AND STRATEGIC OBJECTIVES</b></p>	<p><i>“The company’s management should define and document its HSE policies and strategic objectives and ensure that they are consistent with those of any parent company; are relevant to its activities, products and services, and their effects on HSE; are consistent with the company’s other policies; have equal importance with the company’s other policies and objectives; are implemented and maintained at all organizational levels; are publicly available; commit the company to meet or exceed all relevant regulatory and legislative requirements; apply responsible standards of its own where laws and regulations do not exist; commit the company to reduce the risks and hazards to health, safety and the environment of its activities, products and services to levels which are as low as reasonably practical; and provide for the setting of HSE objectives that commit the company to continuous efforts to improve HSE performance.”</i></p>
<p><b>Suggested approach – project</b></p>	<p>Where there are significant biodiversity issues, individual sites may produce a biodiversity policy and strategy derived from the corporate policy and objectives that is relevant to the specific activities undertaken on-site, and which also fully acknowledges the potential for secondary impacts on- and off-site. It might demonstrate that the importance of any policy and objectives set for biodiversity are appropriate to the significance of the impacts. A statement on taking opportunities to benefit biodiversity can also be included, although such activities will often be strongly driven by the results of a project Environmental and Social Impact Assessment (ESIA) and any determined need or value for actions that go beyond mitigation to benefit valuable and threatened ecological resources.</p>
<p><b>Suggested approach – corporate</b></p>	<p>Appendix 1 shows four examples of how biodiversity might be addressed in environmental policy statements. At the corporate level, opportunities to benefit biodiversity conservation may also be a key part of an overall corporate social responsibility strategy that recognizes the strong role of biodiversity conservation in sustainable development and the business value of a positive public reputation on biodiversity issues. The corporate policy and objectives might also include references to how biodiversity will be considered in the absence of local laws and regulations and the provisions for continuous improvement of biodiversity conservation at specific sites and across the overall company.</p> <p>See <b>Integrating Biodiversity Conservation into Oil and Gas Development</b> and <b>Opportunities for Benefiting Biodiversity Conservation</b>.</p>





**TABLE 8. ORGANIZATION, RESOURCES AND DOCUMENTATION**

OGP REFERENCE		SUGGESTED APPROACH
3. ORGANIZATION, RESOURCES AND DOCUMENTATION	3.1	<p><b>ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES</b></p> <p><i>“Successful handling of HSE matters is a line responsibility, requiring the active participation of all levels of management and supervision; this should be reflected in the organizational structure and allocation of resources.”</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>The company may define, document and communicate the roles, responsibilities, authorities, accountabilities and interrelations necessary to integrate biodiversity within the HSEMS, relating specifically to (a) ensuring compliance with any biodiversity policy (see Table 7), (b) the appropriate acquisition, interpretation and provision of information relating to biodiversity based on a transparent and rigorous risk assessment process, (c) identification, control and verification of any required corrective actions to prevent or minimize biodiversity impacts and (d) control of emergency situations.</p> <p>See <b>Integrating Biodiversity Conservation into Oil and Gas Development.</b> </p>
	3.2	<p><b>MANAGEMENT REPRESENTATIVE(S)</b></p> <p><i>“A management representative should be assigned responsibility, authority and accountability for coordinating implementation and maintenance of the HSEMS. ”</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>Where significant biodiversity issues exist, a management representative may be assigned whose responsibility includes relevant aspects of biodiversity conservation. This person may be the same member of staff responsible for the HSEMS or a separate staff member working alongside the HSEMS representative.</p>
	3.3	<p><b>RESOURCES</b></p> <p><i>“Senior management should allocate sufficient resources to ensure the effective operation of the HSEMS, taking account of advice from the management representative(s), line management and HSE specialists.”</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>Resource allocation to biodiversity conservation measures can be reviewed on a regular basis and modified in accordance with any ongoing risk assessment relating to significant biodiversity impacts arising at specific projects.</p>
	3.4	<p><b>COMPETENCE</b></p> <p><i>“The company should maintain procedures for ensuring that personnel performing specific assigned HSE-critical activities and tasks are competent on the basis of appropriate personal abilities, skills developed through experience, and acquired knowledge.”</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>As for any activities, the company should ideally first identify how tasks relating to biodiversity are to be performed and competencies required. Appropriate staff can then be selected and trained as required, with periodic performance reviews. The effectiveness of training materials related to biodiversity issues may also be evaluated and the materials updated/modified as appropriate. Appendix 3 outlines a range of biodiversity issues that can be included in training and awareness programs. The breadth and depth of the issues to be covered will be decided by the significance of biodiversity impacts at specific sites. However, as “best practice” it is recommended that all staff should have at least a general introduction to biodiversity in the context of oil and gas operations.</p>




**TABLE 8. ORGANIZATION, RESOURCES AND DOCUMENTATION (cont'd)**

OGP REFERENCE	SUGGESTED APPROACH
3.5	<p><b>CONTRACTORS</b></p> <p><i>“The company should maintain procedures to ensure that its contractors operate a management system that is consistent with the requirements and provisions of [the OGP] Guidelines and that is compatible with the HSEMS of the company.”</i></p>
<b>Suggested approach – project</b>	<p>Projects and sites can implement and monitor policy established at the corporate level relating to supply chain management and any requirements established for contractors and suppliers. It is unlikely that biodiversity impacts will be specifically targeted, being considered instead as part of a wider policy on the environmental and social impacts of suppliers and contractors.</p>
<b>Suggested approach – corporate</b>	<p>The company may wish to include in its biodiversity policy (see Table 7) a statement referring to voluntary or mandatory requirements relating to biodiversity that suppliers and contractors may be subject to, or to how biodiversity is considered in the criteria used in choosing suppliers and contractors.</p>
3.6	<p><b>COMMUNICATION</b></p> <p><i>“The company should maintain procedures to ensure that its employees, and those of its contractors and partners, at all levels, are aware of:</i></p> <ul style="list-style-type: none"> <li><i>• The importance of compliance with the HSE policy and objectives, and their individual roles and responsibilities in achieving it.</i></li> <li><i>• HSE risks and hazards of their work activities and the preventative and mitigation measures and emergency response measures that have been established.</i></li> <li><i>• Potential consequences of departure from agreed operating procedures.</i></li> <li><i>• Mechanisms for suggesting, to management, improvements in the procedures which they and others operate.”</i> </li></ul>
<b>Suggested approach – project &amp; corporate</b>	<p><i>Internal communication:</i> No specific suggestions regarding this subject, except that a description of the communication lines between the company’s biodiversity expertise and the other functions may be drawn up and distributed to relevant staff.</p> <p><i>External communication:</i> Involving stakeholders regarding biodiversity early in the project is advantageous, and may contribute to gaining valuable information. The procedure might include guidelines on how to identify stakeholders. The company may also consider establishing a formal cooperation agreement with a conservation organization as this may act as a pathway to identifying biodiversity issues, acquiring critical information and disseminating information relating to performance at both project and corporate levels.</p> <p style="background-color: #e0f2f1; padding: 5px;"><b>See <a href="#">Integrating Biodiversity Conservation into Oil and Gas Development</a>.</b></p>
3.7	<p><b>DOCUMENTATION AND ITS CONTROL</b></p> <p><i>“The company should maintain controlled documentation.”</i></p>
<b>Suggested approach – project &amp; corporate</b>	<p>No specific suggestions required, as this issue will normally be covered through general procedures established for the HSEMS and overall management system.</p>

**TABLE 9. EVALUATION AND RISK MANAGEMENT**

OGP REFERENCE		SUGGESTED APPROACH
4. EVALUATION AND RISK MANAGEMENT	4.1	<p><b>IDENTIFICATION OF HAZARDS AND EFFECTS</b></p> <p><i>“The company should maintain procedures to identify systematically the hazards and effects which may affect or arise from its activities, and from the materials which are used or encountered in them. The scope of identification should cover activities from inception...through to abandonment and disposal” (see Figure 1).</i></p>
Suggested approach – project & corporate		<p>The method for identifying biodiversity risks, hazards and effects is detailed in <i>Integrating Biodiversity into Environmental and Social Impact Assessment Processes</i>.</p> <p>See <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes, Biodiversity Indicators for Monitoring Impacts and Conservation Actions</b> and <b>Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity Impacts</b>. </p>
	4.2	<p><b>EVALUATION</b></p> <p><i>“Procedures should be maintained to evaluate (assess) risks and effects from identified hazards against screening criteria, taking account of probabilities of occurrence and severity of consequences...”</i></p>
Suggested approach – project & corporate		<p>See <i>Biodiversity Indicators for Monitoring Impacts and Conservation Actions</i> and <i>Framework for Integrating Biodiversity into the Site Selection Process</i>.</p> <p>See <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes, Framework for Integrating Biodiversity into the Site Selection Process</b> and <b>Biodiversity Indicators for Monitoring Impacts and Conservation Actions</b>. </p>
	4.3	<p><b>RECORDING OF HAZARDS AND EFFECTS</b></p> <p><i>“The company should maintain procedures to document those hazards and effects...identified as significant...outlining the measures in place to reduce them and identifying the relevant HSE-critical systems and procedures.”</i></p>
Suggested approach – project & corporate		<p>No specific suggestions required, as this issue will normally be covered through general procedures established for the HSEMS and overall management system.</p>

**TABLE 9. EVALUATION AND RISK MANAGEMENT (cont'd)**

OGP REFERENCE	SUGGESTED APPROACH
4.4	<p><b>OBJECTIVES AND PERFORMANCE CRITERIA</b></p> <p><i>“The company should maintain procedures to establish detailed HSE objectives and performance criteria at relevant levels.”</i></p>
<b>Suggested approach – project</b>	<p>Specific project-level objectives and targets are only required in cases where there are significant biodiversity impacts. Where significant impacts do exist, stakeholder engagement is an important basis for setting realistic and transparent objectives and targets. Appendix 2 shows some examples of project-level biodiversity targets along with examples of actions that could be included in a Biodiversity Management Program as part of a wider Management Program (see Table 10, Section 5.4).</p>
<b>Suggested approach – corporate</b>	<p>More general corporate targets may be set at the discretion of the company, with the targets relating to policies and strategies rather than specific operational activities. Corporate objectives and targets may also take into account opportunities to benefit biodiversity conservation beyond simple prevention and mitigation of negative impacts.</p> <p>See <b>Integrating Biodiversity Conservation into Oil and Gas Development, Opportunities for Benefiting Biodiversity Conservation</b> and <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes.</b> </p>
4.5	<p><b>RISK REDUCTION MEASURES</b></p> <p><i>“The company should maintain procedures to select, evaluate and maintain measures to reduce risks and effects. Risk reduction measures should include both those to prevent incidents (i.e. reducing the probability of occurrence) and to mitigate chronic and acute effects (i.e. reducing the consequences).”</i></p>
<b>Suggested approach – project</b>	<p>See <b>Biodiversity Indicators for Monitoring Impacts and Conservation Actions</b> and <b>Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity Impacts.</b> </p>
<b>Suggested approach – corporate</b>	<p>The company may establish guidelines, expectations or requirements to assure that operations/projects implement appropriate biodiversity risk reduction measures.</p> <p>See <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes, Biodiversity Indicators for Monitoring Impacts and Conservation Actions</b> and <b>Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity Impacts.</b> </p>

**TABLE 10. PLANNING**

OGP REFERENCE		SUGGESTED APPROACH
5. PLANNING	5.1	<p><b>GENERAL</b></p> <p><i>"The company should maintain, within its overall work programme, plans for achieving HSE objectives and performance criteria."</i></p>
<b>Suggested approach – project &amp; corporate</b>		<p>The company may set out a clear description of any biodiversity-related objectives and designate responsibility for setting and achieving these objectives and performance criteria for each relevant function and at each level of the organization. It may also state the means by which any objectives will be met, the resources required to do so and the time scale for implementation. Programs might be considered that motivate and encourage staff to approach significant biodiversity issues in a professional manner, while offering them feedback on performance in dealing with these issues. The company may also wish to consider implementing an award scheme that recognizes best practice on the part of individuals and teams in dealing with biodiversity impacts</p>
	5.2	<p><b>ASSET INTEGRITY</b></p> <p><i>"The company should maintain procedures to ensure that HSE-critical facilities and equipment which it designs, constructs, procures, operates, maintains and/or inspects are suitable for the required purpose and comply with defined criteria."</i></p>
<b>Suggested approach – project</b>		<p>Biodiversity issues will normally be addressed by the procedures and systems for ensuring asset integrity (e.g. structural integrity, process containment, ignition control, and systems for protection, detection, shutdown, emergency response and lifesaving). If one or more impacts on biodiversity is not covered by these measures at a site where significant biodiversity issues exist, then additional parameters that address the biodiversity issue of concern can be considered.</p>
<b>Suggested approach – corporate</b>		<p>Not applicable.</p>
	5.3	<p><b>PROCEDURES AND WORK INSTRUCTIONS</b></p> <p><i>"Activities for which the absence of written procedures could result in infringement of the HSE policy or breaches of legislative requirements or performance criteria should be identified."</i></p>
<b>Suggested approach – project &amp; corporate</b>		<p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once biodiversity issues have been integrated.</p>
	5.4	<p><b>MANAGEMENT OF CHANGE</b></p> <p><i>"The company should maintain procedures for planning and controlling changes, both permanent and temporary, in people, plant, processes and procedures, to avoid adverse HSE consequences."</i></p>
<b>Suggested approach – project &amp; corporate</b>		<p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once any biodiversity issues have been integrated.</p>


**TABLE 10. PLANNING (cont'd)**

OGP REFERENCE	SUGGESTED APPROACH
5.5	<p><b>CONTINGENCY AND EMERGENCY PLANNING</b></p> <p><i>“The company should maintain procedures to identify foreseeable emergencies by systematic review and analysis. A record of such identified potential emergencies should be made, and updated at appropriate intervals in order to ensure effective response to them.”</i></p>
<b>Suggested approach – project</b>	<p>If there are significant potential impacts on biodiversity that could arise during or following significant accidents or emergencies (e.g. oil spills, uncontrolled fires), then the project should ideally undertake a more detailed risk analysis, identifying vulnerable resources and sites and drawing up plans for emergency preparedness and contingency measures for each potential impact. This is particularly relevant if the project is in, or near to, an area with high biodiversity values. It is important to note that health and safety concerns may outweigh environmental and biodiversity protection during and after some emergency situations and that the correct balance should be judged on a case-by-case basis.</p>
<b>Suggested approach – corporate</b>	<p>The company should ideally ensure that biodiversity issues are fully integrated with any planned response to emergency situations and that where project-level plans are required, they are regularly reviewed.</p> <p>See <b>Framework for Integrating Biodiversity into the Site Selection Process</b> and <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes.</b></p>






**TABLE 11. IMPLEMENTATION AND MONITORING**

OGP REFERENCE		SUGGESTED APPROACH
6. IMPLEMENTATION AND MONITORING	6.1	<p><b>ACTIVITIES AND TASKS</b></p> <p><i>“Activities and tasks should be conducted according to procedures and work instructions developed at the planning stage – or earlier, in accordance with HSE policy:</i></p> <ul style="list-style-type: none"> <li>• <i>At senior management level, the development of strategic objectives and high-level planning activities should be conducted with due regard for the HSE policy.</i></li> <li>• <i>At supervisory and management level, written directions regarding activities (which typically involve many tasks) will normally take the form of plans and procedures.</i></li> <li>• <i>At the work-site level, written directions regarding tasks will normally be in the form of work instructions, issued in accordance with defined safe systems of work...”</i></li> </ul>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once any biodiversity issues have been integrated.</p>
	6.2	<p><b>MONITORING</b></p> <p><i>“The company should maintain procedures for monitoring relevant aspects of HSE performance and for establishing and maintaining records of the results” (see Section 6.3 of this table).</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>See <b>Biodiversity Indicators for Monitoring Impacts and Conservation Actions.</b> </p>
	6.3	<p><b>RECORDS</b></p> <p><i>“The company should maintain a system of records in order to demonstrate the extent of compliance with its HSE policy and its requirements, and to record the extent to which planned objectives and performance criteria have been met.”</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once any biodiversity issues have been integrated.</p>
	6.4	<p><b>NON-COMPLIANCE AND CORRECTIVE ACTION</b></p> <p><i>“The company should define the responsibility and authority for initiating investigation and corrective action in the event of non-compliance with specified requirements relating to the HSEMS, its operation or its results.”</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once any biodiversity issues have been integrated.</p>
	6.5	<p><b>INCIDENT REPORTING</b></p> <p><i>“The company should maintain procedures for the internal recording and reporting of incidents which affected, or could have affected, HSE performance, so that relevant lessons can be learned and appropriate actions taken” (see Section 6.6 of this table).</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once any biodiversity issues have been integrated.</p>
	6.6	<p><b>INCIDENT FOLLOW-UP</b></p> <p><i>“Both the immediate circumstances of the incident, and the underlying HSEMS weakness which caused it, should be identified to enable judgments to be made by those responsible for authorizing the necessary follow-up action.”</i></p>
		<p><b>Suggested approach – project &amp; corporate</b></p> <p>No specific suggestions required, as this issue will normally be covered through a general updating of the management system once any biodiversity issues have been integrated.</p>

**TABLE 12. AUDITING AND REVIEWING**

OGP REFERENCE	SUGGESTED APPROACH
<p>7. AUDITING AND REVIEWING</p> <p>7.1</p>	<p><b>AUDITING</b></p> <p><i>“The company should maintain procedures for audits to be carried out, as a normal part of business control, in order to determine:</i></p> <ul style="list-style-type: none"> <li>• <i>Whether or not HSE management system elements and activities conform to planned arrangements, and are implemented effectively.</i></li> <li>• <i>The effective functioning of the HSEMS in fulfilling the company’s HSE policy, objectives and performance criteria.</i></li> <li>• <i>Compliance with relevant legislative requirements.</i></li> <li>• <i>Identification of areas for improvement, leading to progressively better HSE management.”</i></li> </ul>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>The company may acquire and/or retain biodiversity expertise within its audit team(s) at the local or corporate level, as appropriate to its specific needs and as determined by its risk assessment process. Where appropriate, audit procedures may emphasize that biodiversity issues identified in the ESIA process can also be included in audit/review programs.</p> <p>See <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes.</b> </p>
<p>7.2</p>	<p><b>REVIEWING</b></p> <p><i>“The company’s senior management should, at appropriate intervals, review the HSEMS and its performance, to ensure its continuing suitability and effectiveness.”</i></p>
<p><b>Suggested approach – project &amp; corporate</b></p>	<p>In cases where biodiversity is a significant aspect of one or more projects, biodiversity criteria may also be incorporated in existing performance contracts to emphasize that focus within line management.</p>

# APPENDIX 1. ENVIRONMENTAL POLICY STATEMENTS ADDRESSING BIODIVERSITY

## EXAMPLES

### The Shell Group Biodiversity Standard

In the Group, we recognise the importance of biodiversity. We are committed to:

- Work with others to maintain ecosystems
- Respect the basic concept of protected areas
- Seek partnerships to enable the Group to make a positive contribution towards the conservation of global biodiversity

Shell companies will:

- Conduct environmental assessments, which include the potential impacts on biodiversity, prior to all new activities and significant modifications of existing ones, and
- Bring focused attention to the management of activities in internationally-recognised 'hot spots', including the identification of, and early consultation with, key stakeholders.

### The BP Biodiversity Strategy

The key themes of our biodiversity strategy are:

- *Responsible Operations* - to understand our direct and indirect impacts on biodiversity and demonstrate continual improvement in our performance;
- *Public Policy* - to contribute constructively to the public policy debate on biodiversity;
- *Conservation Projects* - to create collaborative partnerships, fund and contribute to conservation activities aligned with local, national, regional and global priorities;

- *Research, Education and Awareness* - to make a positive contribution to biodiversity research and education; to raise awareness and understanding of our employees, people we work with and our customers; and
- *External Relations* - to understand what is important to people; forming partnerships to develop solutions to biodiversity issues.

### Statoil's Environmental Policy (with specific reference to biodiversity)

Statoil has an HSE Poster where it is stated that the company's goal is zero harm to people and the environment. In the new environmental policy adopted on 6 May 2003, this general goal is specified through a definition of zero harm to the environment, where biodiversity and biodiversity related issues are specifically referred to.

Statoil's definition of zero harm to the environment is:

- Conserving biodiversity
  - No habitat destruction
  - No introduction of foreign species
  - No effects on population level
- Limiting emissions and discharges
  - Emissions and discharges to be below the critical level of relevant ecosystems
- Limiting land use
  - Restore and clean used areas when activity is completed
  - Conserve landscape and cultural heritage

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This definition is followed by a number of policy statements, of which several may apply to biodiversity:

- We will act according to the precautionary principle.
- We will comply with applicable legislation and regulations.
- We will set specific targets and implement measures based on relevant knowledge of the area affected, and by applying risk analysis to assess environmental and health effects.
- We will consult and cooperate with relevant stakeholders and strive for solutions acceptable to all affected parties.

**From the Environmental Policy of the ONDEO Services UK Group (formerly the Northumbrian Water group):**

The group recognises its duty to conserve and enhance the natural and built environment and wildlife. The Group will strengthen its partnership with local communities

and conservation groups. The group will promote the sensitive development and management of its sites and buildings, taking positive measures to enhance wildlife habitats and landscapes, and to protect archaeological sites. Conservation issues will be formally considered during the planning and construction of projects, and the group will consult and involve the relevant voluntary conservation bodies.

**Other elements that could be included in the policy:**

- Biodiversity is considered as one component of sustainable development.
- The company will aim to reduce its impact on biodiversity.
- The company will aim to make a positive contribution to biodiversity where it operates.
- The company is committed to work in partnership with others on biodiversity issues.

## APPENDIX 2. EXAMPLES OF OBJECTIVES AND TARGETS FOR BIODIVERSITY PROTECTION AND CONSERVATION

*NOTE: Specific project-level objectives and targets are only required in cases where there are significant biodiversity impacts.*

### For fields or areas in operation

<b>Target</b> Restore damaged key habitats (wetlands) at Site X. or Compensate for destroyed wetland area at Site X by establishing new wetland along creek north of industrial facility.  The main target is to restore former breeding sites for common grasshopper warbler and other reed species.	
<b>Actions</b> Consult with conservation specialist for design, localization, establishment, management, monitoring surveys etc. Prepare plan with time and cost estimates Reconstruction work completed Monitoring surveys	<b>Deadline</b> e.g. 2003 2003 2004 2005-08
<b>Responsibility</b> [one or more specific named individuals]	

<b>Target</b> Contribute to increased biodiversity at Site X through active engagement in the work with the local biodiversity plan/local conservation organizations.	
<b>Actions</b> Carry out biodiversity baseline survey at Site X Develop an internal biodiversity action plan	<b>Deadline</b>
<b>Responsibility</b> [one or more specific named individuals]	

<b>Target</b> Contribute to enhancing local biodiversity through active engagement in the work with the local biodiversity plan/local conservation organizations.	
<b>Actions</b> Financial support of local conservation work	<b>Deadline</b>
<b>Responsibility</b> [one or more specific named individuals]	

### For new developments

<b>Target</b> Minimize negative interference with biodiversity.	
<b>Actions</b>  <b>Integrating Biodiversity into Environmental and Social Impact Assessment Processes</b>	<b>Deadline</b>
<b>Responsibility</b> [one or more specific named individuals]	

## APPENDIX 3. BIODIVERSITY ISSUES TO BE INCLUDED IN TRAINING AND AWARENESS PROGRAMS WHERE RELEVANT

- General introduction to ecology and the term biodiversity.
- Provision of information on international and national protected areas and related regulation.
- Presentation of company policy, objectives and targets.
- Presentation of expected benefits gained by high-profile biodiversity awareness (strong aesthetic and ethical drivers, economic arguments, credibility etc).

**i** See **Integrating Biodiversity Conservation into Oil and Gas Development.**

- Specific biodiversity procedures in the EMS.

- Responsibility structure within the company.
- Biodiversity issues in areas where the company operates.
- Examples of good and bad practice.

**See Good Practice in the Prevention and Mitigation of Primary and Secondary Biodiversity impacts.**

**i**

- Examples of projects where use of the management system has resulted in obtained objectives and targets for biodiversity issues, including specific analysis of “success factors.”
- Review of conservation organizations with which the company cooperates.