ICMM'S GOOD PRACTICE GUIDANCE ON MINING AND BIODIVERSITY[1]

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Abstract. Mining has the potential to impact biodiversity throughout the life cycle of a project, both directly and indirectly. The potential for significant impacts is greater when mining in remote, environmentally or socially sensitive areas.

ICMM will publish in May 2006 provisional good practice guidance (GPG) on mining and biodiversity as one of the products of its three-year dialogue with the World Conservation Union (IUCN). The document is intended for use by technical and environmental managers at mines and during exploration, in greenfields and brownfields projects. It provides guidance on how to improve performance in biodiversity conservation and management by identifying critical biodiversity risks and opportunities and outlining what is currently understood to constitute good practice. The GPG provides an outline of the steps required to improve biodiversity management throughout the mining cycle, from pre-feasibility to closure. By implementing this guidance, mining companies should be better placed to: understand the interfaces between their activities and biodiversity; assess the likelihood of their activities having negative impacts on biodiversity; avoid and mitigate impacts on biodiversity; and explore the potential to contribute to biodiversity conservation.

An overview of the GPG is presented, with a discussion of the key issues that were faced in arriving at a common view. Based on feedback received from this and other forums as well as field testing by ICMM members, the GPG will be revised, if necessary, probably during 2007 or 2008.

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Introduction

Mining and biodiversity conservation have traditionally been viewed as mutually exclusive activities. To those working within the mining industry, it is clear that this need not be the case. There is considerable scope for the industry to help alleviate pressure on protected areas as well as to contribute directly to biodiversity conservation, while minimising environmental impacts. There is also a very sound business case for the industry to address biodiversity issues. However, the challenges in realising this potential are formidable as a deep lack of trust has historically characterised the relationship between the conservation community and the mining industry.

The world's biodiversity is under threat. This is as much due to root causes such as poverty, social change and lack of government capacity, as to the more obvious proximate causes, including habitat loss, invasive species and pollution (Wood *et al.*, 2000). Many of the most acute conservation problems occur in biodiversity-rich developing countries that are also facing pressing human development needs. The challenge of sustainable development is to alleviate poverty in these countries while sustaining the environmental foundations of their economies. It is clear that without economic development there can be no poverty reduction. Experience also shows that without economic development there can be little improvement in environmental protection.

The World Summit on Sustainable Development, the World Parks and Conservation Congresses and the Parties to the Convention on Biological Diversity have called for fresh, innovative and integrated approaches to reduce the unacceptably high rate of biodiversity loss. These forums have also highlighted the need for a people-centred approach. The important role of business in advancing this agenda has been increasingly recognised by governments and the conservation community. At the 3rd World Conservation Congress in 2004, two resolutions were passed calling on the World Conservation Union (IUCN) to develop ways to work more closely with, and to influence, the private sector (IISD, 2004). The 8th Conference of the Parties to the Convention on Biological Diversity (CBD) in March 2006 will similarly consider a draft decision urging governments to engage with companies on biodiversity and encouraging business to attend CBD meetings (CBD, 2006).

Responsible mining operations can be part of the solution to biodiversity loss and poverty by being an engine of economic and social development and by contributing directly to biodiversity conservation activities, while minimising social and environmental impacts (Stewart Carter, 2004). ICMM acknowledges that mistakes have been made in the past and that the industry's commitment to sustainable development and society's expectations demand that performance needs to be improving continually. These points and others confirming ICMM's interest in, and engagement with, the issues surrounding protected areas and mining were made to the plenary session of the Vth World Parks Congress in 2003 by Sir Robert Wilson, then Chairman of the ICMM (ICMM, 2003a).

The Business Case for Biodiversity

The business case for biodiversity management has been cogently set out in a joint publication of Earthwatch Europe, IUCN and the WBCSD (2002). They show that biodiversity issues are important to companies for both positive and negative reasons.

From a negative perspective, not addressing biodiversity adequately potentially exposes a company to the following risks:

1. Challenges to its legal license to operate,
2. Disruption of its supply chain,
3. Damage to the brand image,
4. Consumer boycotts and campaigns by environmental NGOs,
5. Fines, third party claims for environmental damages and future environmental liabilities,
6. Lower ratings in the financial markets, and
7. Poor staff morale and reduced productivity.

Each of these risks corresponds, however, to an opportunity that a company can capitalize on:

1. Secure the license to operate,
2. Strengthen the supply chain,
3. Bolster stakeholder relationships,
4. Appeal to ethical consumers,
5. Ensure sustainable growth,
6. Attract socially responsible investors, and
7. Improve employee productivity.

Not all of these are applicable to mining companies. Items 1, 3, 5, 6 and 7 are certainly relevant to the sector, and item 4 is increasingly an issue, through campaigns such as "No Dirty Gold" (Earthworks and Oxfam America, 2004). Indeed major gold and diamond mining companies, all but one of them ICMM members, have responded by joining jewellery companies in establishing the Council for Responsible Jewellery Practices.

Rio Tinto, one of the world's largest mining companies, recently published its biodiversity strategy (2004), stating that "biodiversity and its management [were] of strategic importance" to the company. It identified the same opportunities as Earthwatch *et al.* (2002), but took point 1 further, listing "preferred developer status" as a "potential business benefit flowing from sound biodiversity management". Thus, good biodiversity management is expected not only to reduce the time taken to obtain permits, but also to lead to the company being chosen above others because of its track record and commitments.

The Energy and Biodiversity Initiative (EBI), a collaborative effort of nine oil and gas companies and NGOs, considered the business case for integrating biodiversity conservation into oil and gas development (2003). Many of the issues faced by the oil and gas industry are common to the mining industry, so that study is very relevant. The EBI argued that one of the most important drivers for leading companies was the moral and ethical argument, i.e. that conserving biodiversity was "simply 'the right thing to do.'" They identified the same reasons as Earthwatch *et al.* and Rio Tinto. Interestingly, they specifically mentioned access to capital as a key driver.

Drawing on each of the above sources, we suggest that the reasons for mining companies to manage biodiversity well are as follows:

1. Access to land
   1.1 Shorter and less contentious permitting
   1.2 Better relations with regulators
   1.3 Preferred developer status
2. Improved community relations
3. Access to capital
4. Attracting and retaining the best employees
5. Reduced risks and liabilities
6. The moral imperative
7. In future: appeal to ethical consumers

Mining and Biodiversity: The Issues

The issues facing the mining industry in regard to biodiversity have been very clearly elaborated in the Mining, Minerals and Sustainable Development (MMSD) report (IIED and WBCSD, 2002) and its follow up paper focusing on biodiversity, "Room to Manoeuvre" (Koziell and Omosa, 2003). Though largely sponsored by the industry, the MMSD project was carefully designed to be independent of industry control. Its analysis was often critical of industry players and its recommendations were often very demanding. In the latter report, the following recommendations were made to stakeholders in mining and biodiversity issues:

- Engage in equitable and diverse partnerships to build trust;
- Improve coherence of and accessibility to information on biodiversity;
- Continue reviewing and improving protected area categorization and classification systems;
- Work towards developing more effective land-use planning systems;
- Pull together and disseminate best practice experience;
- Institute more rigour and independence in environmental impact assessment processes; and
- Ensure that finance agencies apply better practice criteria consistently.

ICMM and its members are actively working in each of these areas, though more progress has been made on some than others. In doing so, the organisation is very proud of the leadership it has been able to show to other industry sectors. That leadership role has been recognised by outsiders too (ten Kate *et al.*, 2004 and F&C Asset Management, 2005).

Stewart Carter (2005) has recently listed the contributions that mining companies can – and do – make to biodiversity conservation. He provides examples of companies that:

- fund protected areas;

- have improved their environmental management and planning;
- manage part of their concessions as protected areas;
- forgo their rights to develop a resource;
- contribute to conservation science by baseline studies, SEIAs and ongoing monitoring programmes; and
- publicly support conservation initiatives.

ICMM members are involved in each of the above activities. The fact that a conservationist (Stewart Carter works for Conservation International) has pointed this out is testimony to the industry's achievements.

Today, both onsite and offsite opportunities are being pursued by leading companies to enhance their contributions to biodiversity conservation. These include assessments and conservation of unique flora and fauna, research and development, support for protected area site management programmes and proactive community development programmes to provide sustainable economic and social benefits even after mine closure. A number of companies have also established partnerships with conservation groups, and these are beginning to deliver real on-the-ground conservation outcomes.

ICMM's Biodiversity Work Programme

Central to ICMM's work in the field of biodiversity conservation is a dialogue with IUCN[3]. Contact between IUCN and the International Council on Metals and the Environment, ICMM's predecessor, started in 2000. The relationship was formalised by agreeing terms of reference in 2003 and 2004. However, before then, workshops on world heritage and good practice were held in 2000 and 2003, and two workshops were held to explore the issues around mining and biodiversity as part of the MMSD project in 2001. The dialogue, though difficult at times because of the strong opposition to it from parts of IUCN's membership, has enabled ICMM and its members to better understand the scientific issues around mining and biodiversity, as well as the views and concerns of the conservation community.

To give formal effect to its recognition of the importance of protected areas and in the context of the dialogue with IUCN, ICMM announced its landmark 'no-go' pledge in August 2003 (ICMM, 2003b) wherein ICMM's corporate members undertook 'not to explore or mine in World Heritage properties' and to take all possible steps to ensure that operations are not incompatible with the outstanding universal values of World Heritage properties. ICMM members also undertook to respect all legally designated protected areas. As part of this commitment, ICMM is now working with IUCN to strengthen its protected areas category management system.

The first output of the dialogue was a book of biodiversity case studies (IUCN and ICMM, 2004). It was intended to "inspire communities, companies, governments, NGOs and scientists to co-operate in developing more avenues for integrating mining and biodiversity conservation in ways that reduce conflict and costs".

[3] See www.iucn.org/themes/business/mining/ for detailed information about the dialogue.

ICMM recently published two discussion papers on biodiversity offsets (ICMM, 2005a and 2005b). They were intended to inform the debate and generate discussion. Several companies (see Rio Tinto, 2004 for example) have committed themselves to "zero harm" to the environment, or even to achieving a net positive effect, and they see offsets as a key means to achieving these challenging goals.

Good practice guidance in biodiversity conservation for mining companies is currently being developed. It is the primary topic of this paper and is described in the next section.

Finally, we are working with UNESCO, IUCN and others on improved land use planning processes.

Good Practice Guidance

Scope of the Good Practice Guidance

The good practice guidance (GPG) encompasses the steps required to improve biodiversity management throughout the mining cycle. It assumes the existence of a corporate commitment to the ICMM sustainable development principles and sub-elements, which may be reflected in individual members' biodiversity strategies, policies, or standards. It does not address the development of policies with respect to biodiversity in any detail, other than in the context of environmental management systems. Instead, it offers a series of practical modules that should enable companies to:

- *Understand the interfaces between their activities and biodiversity*: Help companies recognise the interfaces between their various operational activities and biodiversity, and effectively engage with stakeholders;
- *Assess the likelihood of their activities having negative impacts on biodiversity:* Undertake practical steps to assess the potential for operational activities to negatively impact biodiversity and related stakeholders;
- *Mitigate potential impacts on biodiversity:* To identify and implement a hierarchy of measures to protect biodiversity and affected stakeholders ; and
- *Explore the potential to contribute to biodiversity conservation:* Beyond the mitigation of impacts, explore the potential to contribute to biodiversity conservation or protection.

The GPG has been developed to be applicable to a variety of operational contexts, encompassing a range of ecosystem types (e.g. from desert situations to lowland tropical environments) and importance (e.g. where biodiversity may be of international importance or of very limited importance). As a consequence, the application and interpretation of the guidance will sometimes be dependent on specialised local knowledge or biodiversity expertise.

Structure of the Good Practice Guidance

The GPG is divided into three parts. The introductory section outlines the background for ICMM developing the GPG for mining and biodiversity, highlights the importance of biodiversity and relevance to the mining sector, and emphasises the need for stakeholder engagement in the identification, assessment, mitigation and management of biodiversity.

The second part of the GPG provides guidance on managing biodiversity at various operational stages. The focus is on identifying the intersection between mining activities and biodiversity, and on highlighting the systems, tools and processes that can be applied to help

companies manage potential impacts on biodiversity or enhance biodiversity protection and conservation. Its three chapters correspond to the three broad phases of mining projects which encompass:

- Project development, including exploration, pre-feasibility and feasibility studies, and construction;
- Operations, including core mining facilities and activities and ancillary infrastructure; and
- Closure planning and implementation.

The third section describes the systems, tools and processes in greater detail, and provides guidance on their practical application in the context of mining operations. It includes three clusters as follows:

- Management system and assessment tools, including environmental management systems and environmental & social impact assessment;
- Stakeholder engagement tools and processes; and
- Mitigation, rehabilitation and enhancement tools.

This structure has been so designed in recognition that different operations will be at different stages of development, and that many of the systems, tools and processes for biodiversity management may be applicable to all three of the operational phases, albeit at varying degrees of detail. The document as been designed to guide users to determine the level of detail (e.g. of assessment) which is appropriate, depending on the operational context. The conceptual approach adopted for the GPG is illustrated in the Fig. 1 below.

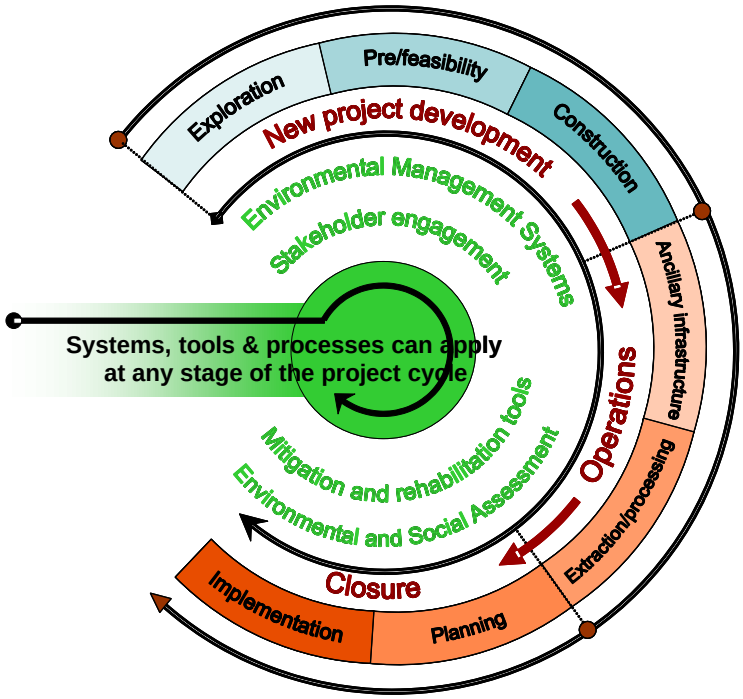

Figure 1. Integrating Biodiversity into the Mining Project Cycle.

Throughout, the guidance includes illustrative case studies that demonstrate practical efforts by mining companies to address biodiversity challenges. In addition, the case studies provide examples of the mutual benefits that can arise for mining companies and their stakeholders through constructive engagement.

Process for Development and Finalisation of the Good Practice Guidance

A plan to prepare, in collaboration with IUCN, guidance for members on biodiversity conservation good practice has been under consideration within ICMM for some years. The most important practical step was a joint ICMM-IUCN workshop in Gland, Switzerland in July 2003 (IUCN and ICMM, 2004). It brought together a diverse group of industry experts and stakeholders who debated issues relating to industry practice and contributions to biodiversity conservation. The workshop report made recommendations under three headings and agreed that GPG should be prepared on each of these topics:

1. Integrating biodiversity surveys and assessment into EIA process.
2. Integrating biodiversity into environmental management systems and community development plans.
3. Mine site reclamation and ecosystem reconstruction.

A joint IUCN-ICMM Advisory Group (AG) was appointed during 2004 to oversee the preparation of the GPG. Although it was formed in the context of an established dialogue, there was some mutual suspicion. However, as time passed and AG members demonstrated that they genuinely wanted to see improved performance and that the industry members were not engaging in "greenwashing" and that the NGO members were not interested in criticising the industry for the sake of it, mutual trust developed instead. Of course, the real test for the NGOs will be improved performance on the ground.

A call for proposals was distributed to various environmental consultants and three proposals were received. A consultant was appointed in September 2004 by ICMM on the recommendation of the AG. After three rounds of revision, a draft document was approved by ICMM's Biodiversity Working Group (BWG) and the AG for distribution to stakeholders for comment over a 2-month period during June – August 2005.

The principal concerns expressed by stakeholders from within and without the industry concerned:

- The level of detail desired: some wanted an accessible, high-level document that would not put off readers by its length or technical language, while others sought a detailed document that would provide specific guidance to people in the field. A compromise was chosen that leant more to the former position in view of the fact that the document must address the needs of exploration and mine sites all over the world.
- Coverage of tailings disposal and its impacts: some NGOs wanted a prohibition of riverine disposal, while companies preferred a risk-based approach, acknowledging the impacts of riverine and other forms of disposal. The latter approach was taken.
- Acknowledgement of social and community issues: people from various stakeholder groups commented on the need to address both the requirements of communities that depend on biodiversity and the importance of community consultation. There was much concern that the previous draft saw addressing biodiversity as simply a matter of dealing

with flora and fauna without acknowledging human aspects. A concerted attempt has been made to address these concerns.

- Organisation of the material in the document: as the various systems and tools are used to some degree at each stage of the mining life cycle, they could be referenced at each appropriate point or only at the end and cross-referenced at the discussion of the mining stages. The initial draft took the former approach but it was considered to be very repetitive so the final document has taken the latter approach.
- Use of case studies: some felt that case studies were self-serving advertisements with little use to anyone else while others felt that they had a pedagogical use. A limited number of instructive case studies has been retained, and glossy language has been removed.

The collated comments were reviewed by the AG and given the nature of the comments it was considered that the document required extensive revision by a different consultant. An independent consultant with extensive experience of working with industry was appointed in October 2005.

Following approval by the AG and ICMM, the document will be published, most likely in May 2006, as "provisional GPG". It is hoped that it will receive some form of endorsement from IUCN, but that cannot be guaranteed.

ICMM members will be encouraged to use the provisional GPG and to comment on its strengths and weaknesses. Where appropriate, stakeholder workshops will be held to promote uptake and testing of the document and seek views regarding its usefulness. Participants at this symposium are invited to send their views on the document (available from www.icmm.com/ project.php?rcd=22) to the authors. At an appropriate point, as judged by the BWG and with advice from the AG, the GPG will be reviewed in the light of experience and revised as necessary.

Conclusion

ICMM members are committed to providing leadership aimed at improving the industry's performance and enhancing the contribution of mineral development to poverty alleviation and biodiversity conservation objectives. ICMM commitments set industry standards that can be used to influence better performance in other parts of the mining industry.

Advancing conservation and development objectives will require close cooperation between governments, multi-lateral organisations, industry, communities, including indigenous peoples, and NGOs. The recognition of this imperative in the IUCN and its members was made clear at the 3rd World Conservation Congress, in which closer co-operation with the private sector was a prominent element of the speeches by both departing and incoming Presidents of IUCN and in two congress resolutions, 46 and 47 (IISD, 2004). Partnership opportunities with companies offer environmental NGOs considerable potential to achieve on-the-ground conservation outcomes. Governments can also foster real progress by establishing clear criteria for project outcomes, including biodiversity conservation and community development results, when seeking commercial partners in mineral development projects or when inviting bids on new mining licences.

Collaboration is required to assist in the development of decision-making models and assessment tools that integrate conservation and mining into land-use planning strategies. A

concerted programme of international cooperation will also be required to build government capacity to implement these tools and ensure the application and enforcement of equitable rules regarding land access.

The challenge is to ensure that mining is part of the solution that enables better outcomes for biodiversity conservation and sustainable development. We have attempted to show that ICMM members are well on their way to achieving this ambitious goal.

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