

Mining and biodiversity: towards best practice



Summary and discussion of the results of an IUCN-ICMM workshop
on Mining, Protected Areas and Biodiversity Conservation:
Searching and Pursuing Best Practice and Reporting
in the Mining Industry
7-9 July, 2003

IUCN – The World Conservation Union

IUCN – The World Conservation Union was founded in 1948 and brings together 79 states, 112 government agencies, 760 NGOs, 37 affiliates, and some 10,000 scientists and experts from 181 countries in a unique worldwide partnership. Its mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. Within the framework of global conventions IUCN has helped over 75 countries to prepare and implement national conservation and biodiversity strategies. IUCN has approximately 1000 staff, most of whom are located in its 42 regional and country offices while 100 work at its Headquarters in Gland, Switzerland.

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International Council on Mining & Metals (ICMM)

ICMM is an industry-based organisation that has been established to provide leadership to the mining and metals industry in meeting the challenges of sustainable development. Its membership is currently comprised of 15 of the world's largest mining and metal producing companies as well as 27 industry associations worldwide.

ICMM members believe that the mining, minerals and metals industry acting collectively can best ensure its continued access to land, capital and markets as well as build trust and respect by demonstrating its ability to contribute successfully to sustainable development.

ICMM members offer strategic industry leadership towards achieving continuous improvements in sustainable development performance in the mining, minerals and metals industry. ICMM provides a common platform for the industry to share challenges and responsibilities as well as to engage with key constituencies on issues of common concern at the international level, based on science and principles of sustainable development.

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MINING AND BIODIVERSITY: TOWARDS BEST PRACTICE

This report is a report of the workshop on Mining, Protected Areas and Biodiversity Conservation: Searching and Pursuing Best Practice and Reporting in the Mining Industry (7-9 July, 2003).

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1 Introduction

Economic development, social equity and environmental protection are the essential elements of sustainable development. The nexus between economic development and the conservation of natural resources has been, in particular, a subject of recurrent debate.

One of the most visible and controversial issues has been the impact of the mining industry, whose products are essential for society's development needs, but whose activities also have impacts on the environment and thus biodiversity.

In response to increasing concerns by society and the mining industry itself, an independent analysis of the challenges that the industry must meet to contribute constructively to sustainable development was initiated in 1999. This programme of work, called the Mining, Minerals and Sustainable Development Project or MMSD, was undertaken by the International Institute for Environment and Development (IIED) and the World Business Council for Sustainable Development (WBCSD). It was sponsored by a large number of organizations – including, *inter alia*, several members of the mining industry and IUCN. Based on an extensive programme of stakeholder consultations, the MMSD report came forward with a number of recommendations for all constituents aimed at improving performance and enhancing the sector's contribution to sustainable development. The report was produced in time for the 2002 World Summit on Sustainable Development (WSSD) held in Johannesburg.

Responding to the recommendations of the MMSD Project, IUCN and the International Council on Mining and Metals (ICMM) launched a Dialogue on mining and biodiversity at WSSD. The purpose of this initiative is to provide a platform for communities, corporations, NGOs and governments to engage in a dialogue to seek the best balance between the protection of important ecosystems and the

social and economic importance of mining. IUCN and ICMM are committed to discussing a full range of issues with the objective of enhancing the contribution of the mining industry to biodiversity conservation.

The Dialogue envisages several outputs in the lead-up to the World Parks Congress (Durban, 7-17 September 2003) and beyond. Among the most important of these is the development of best practice guidance and reporting criteria in the area of biodiversity assessment and management. This guidance will assist ICMM members, and the industry at large, in implementing the Biodiversity Conservation Principle of the new ICMM Sustainable Development Framework, within the overall context of host communities and their environments.

Terms of Reference for the IUCN-ICMM dialogue are available at http://www.iucn.org/info_and_news/press/miniucnicmmtorfin.pdf. Information on ICMM's Sustainable Development Principles can be found at www.icmm.com.

In addition to the Dialogue with IUCN, ICMM is also working with other organizations, notably with the World Bank Group to develop community management tools, and with the Global Reporting Initiative to develop a Mining and Metals Sector Supplement of the GRI Sustainability Reporting Guidelines. The IUCN-ICMM Dialogue will contribute to these complementary processes of defining best practice in mining.



LEAD-ZINC TAILINGS DERIVED FROM A MINE IN THE SNOWDONIA NATIONAL PARK IN WALES, LAST ACTIVE IN 1954. NOTE THE SERIOUS SHEET EROSION OF THE WALLS AND THE TOP LEFT. (PHOTO: M. JOHNSON)

2 Workshop objectives

The workshop focused on seeking participants' views and inputs on various activities of the IUCN ICMM Dialogue as well as other parallel projects now underway by other organisations. It also advanced the development of best practice guidance and reporting criteria in the area of biodiversity assessment and management. Accordingly, the workshop was divided into two parts: Strategic Overview and Best Practice Guidance and Recommendations.

The first day of the workshop was devoted to the Strategic Overview. Its objectives were to:

- engage participants with the latest developments in the IUCN ICMM Dialogue initiative and other parallel activities
- obtain stakeholder inputs on the various issues/projects that will be considered in the Dialogue in the lead up to the World Parks Congress and beyond; and,
- set the context for the ensuing discussions on best practice guidance and recommendations to guide future work.

The remaining two days of the workshop focused on Best Practice Guidance and Recommendations. Its objectives were to:

- develop best practice guidelines for mining in relation to biodiversity conservation, based on a review of the current practices and past learning taking into account environmental and social considerations, including those related to communities and indigenous peoples; and
- develop recommendations to help guide future work in a number of areas related to mining and sustainable development.



STAKEHOLDER INPUT IS CONSIDERED ESSENTIAL FOR THE SUCCESS OF THE DIALOGUE. PICTURED: ENVIRONMENTALIST AND LOCAL COMMUNITY MEMBERS DISCUSS ENVIRONMENTAL MANAGEMENT.

3 The process

The Strategic Overview Session featured presentations from IUCN and ICMM to bring participants up-to-speed with progress in the Dialogue. It also featured presentations and discussions on related projects and perspectives of IUCN, ICMM, indigenous communities, and other international organizations related to the Dialogue, as well as on the road-map up to the World Parks Congress. An interesting part of this session was a debate on what 'best practice' means. Together the different presentations and discussions provided a rich perspective on the current Dialogue and its future.

On the second day, in the Best Practice Guidance and Recommendations Session, case studies and examples were presented from Peru, Madagascar, Namibia, Australia, Indonesia, South Africa and Bolivia. These provided rich and useful material for the discussion of operating principles and key performance criteria in the working groups.

Most of the third day was spent in breakout sessions. The participants worked in four working groups:

- (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.
- (4) Perspectives of communities and indigenous peoples on mining and biodiversity.



THE DIALOGUE IS ADDRESSING HOW TO INTEGRATE BIODIVERSITY ASSESSMENT INTO THE EIA PROCESS. PICTURED: WILDLIFE AND BIRDS LIVING ON TOP OF A SUCCESSFULLY REHABILITATED DUMP.

Thought starters and discussion papers, jointly authored by delegates from the conservation community and industry, provided a balanced overview of the state of the debate to enable the workshop discussions to be forward-looking and constructive. They provided the basis for the discussion of operating principles and key performance criteria in the first three areas. The fourth group focused on the critical community and indigenous peoples components of assessment, management and closure to provide feedback to each of the technical groups. The discussion in this group was informed by the background papers on social and gender equity and indigenous peoples' perspectives presented earlier in the workshop. A further over-arching theme of the best practice development process – that of industry's contribution to biodiversity conservation – was also covered by a discussion paper.

Each group made considerable progress on developing draft operating principles for good practice guidelines. These were presented in the final plenary session in which it was agreed for IUCN and ICMM to set up one or more group(s) to facilitate the finalization of these and to develop related performance criteria/indicators as well as implementation guidance.

4 Highlights of the workshop

Dr. Richard Sandbrook, former director of IIED and project coordinator for the MMSD Project, also attended the workshop to lead the substantive reporting. What follows is his reflections of the over all discussions in the workshop:

This was really two workshops in one, and a remarkable amount of material was gone through. Not only was there a general orientation to the issues and perspectives of both “sides” but also productive sessions on developing operating principles for biodiversity and community concerns. The rich diet of presentations is available on the meeting CD ROM.

ICMM and IUCN’s Dialogue on Biodiversity and Mining is taking place in the context of a changing world. The sustainable development agenda that emerged from the Rio Summit and was reinvigorated in Johannesburg is gaining momentum in all sectors of society. The orientation component of the workshop highlighted key developments relevant to the IUCN-ICMM dialogue.

The government view indicated that although there is buy-in to the sustainable development agenda, there remain inconsistencies in implementation. Specific to biodiversity, legal frameworks around biodiversity conservation and protected areas tend to be segregated from and at times inconsistent with other legal frameworks. This creates a difficult operating environment for companies in the mining sector – in particular where mining legislation allows activities in areas which are formally protected, or where areas become protected after mining concessions have been approved. Furthermore, there is recognition that there are few mechanisms for resolving conflicts arising out of this situation.



INVESTORS ARE ASKING COMPANIES TO ADDRESS BIODIVERSITY ISSUES SUBSTANTIVELY IN ORDER TO LIMIT THEIR EXPOSURE TO LIABILITIES. PICTURED: WASTE ROCK DUMP CLOSE TO THE OLD RIO TINTO CU-AU WORKING IN SOUTHERN SPAIN. (PHOTO: M. JOHNSON)

The financial community signaled the increasing importance investors are placing on sustainable development in general and biodiversity in particular. Investors are asking companies to address biodiversity issues substantively in order to limit their exposure to liabilities, ensure their license to operate, and minimise risks to investments – all of which serve to secure and increase shareholder value. Specifically, investors need to know that companies are aware of biodiversity risks, that they are addressing them systematically, and that they have a clear vision of where they are going on biodiversity. This must be demonstrated through reporting and verification. The need for global standards for reporting and verification, such as those being developed by GRI, is itself rising on the agenda of industry, the conservation community, and the public, brought on by the waning trust in corporations and the collapse of industry giants such as Enron.

The conservation community has moved to increase its interaction with other sectors of society – in particular the business community – in recognition of the need to engage with business to achieve conservation objectives. IUCN itself has a series of mandates from its Members for engaging with the private sector. These mandates have received concerted attention in recent years in the form of activities such as a Private Sector Task Force, the Business and Biodiversity Initiative, and engagement with extractive industries (e.g. the World Heritage and Mining Workshop, September 2000).



THE WORKSHOP CONSIDERED ALL STAGES OF THE MINING CYCLE. PICTURED: GEOLOGICAL AND GEOPHYSICAL SURVEYS AT AN EXPLORATION SITE IN NAMIBIA.

The business community has responded to this changing world by initiating processes of collective action to address the sustainable development agenda. The mining and metals industry launched the Global Mining Initiative (GMI) in 1999 which eventually led to the establishment of ICMM as the industry body with the mandate to take forward the industry recommendations emerging from the MMSD report (following a two year independent process of stakeholder consultation and analysis). Most recently, in May 2003, ICMM's Council approved the adoption of its Sustainable Development Framework, a set of ten guiding principles by which member companies will report their sustainable development performance.

Issues were covered all through the mining cycle – from cradle to grave – emphasizing that from the very earliest days of prospecting to the last acts of closure the impacts and their amelioration have to be to the fore. Some of the cases demonstrated that mining need not result in net negative biodiversity impacts and social cost. Indeed, the potential and real biodiversity benefits were shown in the case material. This could be a feature of mining if the best (and yet better) becomes the norm. But no one denies that there are bound to be some negative aspects simply because of the nature of the business itself. A similar positive conclusion seemed to be drawn on the developmental aspects, but the time spent on this was limited.

Nevertheless, there were deep concerns expressed about those operations that were not represented in the room. Mining companies are bound to show off their best – what of the worst? All agreed that the spread of best practice and the sustainable development message is key.

There was concern expressed over safeguarding our cultural heritage as well as our biological and landscape heritage. A major conclusion of the few representatives of indigenous peoples present and the IUCN members was that ICMM should not consider communities and indigenous peoples as synonymous – they have different perspectives. It was also felt that in future sessions the community based breakout group should be dispersed and integrated with the other working groups.

A strong observation was that rights need to be remembered throughout – and that the abuse of rights was unacceptable in any mining operation. Indigenous peoples face problems of rights – that have to be addressed – somewhere. As this was not a workshop on this topic there was a conclusion (see below) that asks for it to be specifically addressed elsewhere. It was accepted that there are other processes that are not under ICMM/IUCN leadership that could be more suitable than the dialogue process. But no hard conclusions were drawn.

Many speakers stated that it was time to address the legacy issue in mining. Many accepted that the scale of the problem and the complex issue of liabilities were problematic. But we should move beyond a blame culture to one where positive solutions can be mobilized. As a start it was felt that an organization such as UNEP should survey the scope of the issue – in terms of potential human harm and biological impact of doing nothing. They should then move – country by country – to a more considered programme of action based on established priorities. The costs of such a scheme are unknown and would need to be researched, but no one should be under any illusion that we are talking about billions and not millions worldwide. Governments have to be central to any scheme that evolves.

Some privately expressed the desire to get on with specific guidelines and best practice manuals – even to a system of certification and independent monitoring. In all of this the work already done to identify the issues (such as via the MMSD) should not be forgotten.

But all this depends on raising trust in the intentions of all parties that can only come from engagement. It was also agreed by all that seeing progress is the route to believing. The more the best can be demonstrated the sooner more will be given an incentive to do a better job. (The vexed issues of law versus voluntary practice was not entered into).

It is fair to suggest that while progress was made at the workshop more will be needed from here on out and on key issues such as protected areas and directly affected stakeholders. Companies need to work with and strengthen community institutions and mechanisms as they exist more than to undermine them..... Similarly the communities need to engage with companies in good faith and on terms agreed with mutual consent.



DIALOGUE PARTICIPANTS EXPRESSED CONCERN OVER SAFEGUARDING OUR CULTURAL HERITAGE AS WELL AS OUR BIOLOGICAL AND LANDSCAPE HERITAGE. (PHOTO: CI)



5 Conclusions and recommendations

5.1 THE OVERALL IUCN-ICMM DIALOGUE

- 5.1.1. The Dialogue needs to continue after the WPC because the process to date has been productive and there are a series of priority tasks to complete. These include completing the process, begun at the workshop, of developing best practice guidance in the areas of biodiversity assessment, biodiversity management and closure. There may also be additional areas where best practice guidance is desirable, and the same process should be followed for these. Issues related to decision-making approaches that integrate biodiversity conservation and mining into land-use planning strategies, including 'no-go' areas, remain to be tackled. The options for using offsets to counterbalance unavoidable biodiversity losses at operating and project sites, and the issues surrounding their application, require further work. How to minimize the cumulative and secondary impacts of mining on biodiversity is an area for more collaboration.
- 5.1.2. There is a need for a small joint working group to extract the principles from the breakout groups and to develop performance criteria and indicators against a variety of needs. The timelines and ideas of for these items will follow from the two secretariats of IUCN and ICMM.
- 5.1.3. The IUCN Working Group on Extractive Industry and Biodiversity and the ICMM Biodiversity Task Force should meet no later than October to review progress and determine next steps for the consideration by the Councils of the two organizations.
- 5.1.4. There is a continuing need for the industry to deliver performance in line with the ICMM principles to build trust.



THE DIALOGUE RECOGNIZED THE NEED TO SPREAD 'BEST PRACTICE' WIDELY. PICTURED: INDUSTRY MANAGER IN DISCUSSION WITH A REPRESENTATIVE OF THE COMMUNITY WHICH IS GROWING TREES FOR USE IN THE MINE'S REFORESTATION PROGRAMME.

5.1.5. There is a need to spread the "best practice" in community and biodiversity as widely as possible – within (and beyond) the ICMM membership and IUCN

5.1.6. Consideration should be given as to how to better address the issues surrounding indigenous peoples and the extractive industries. IUCN and ICMM should assist in this process (and the suggestions of group "four" is important in this respect- it suggests an Ethical code be developed by a new working group. (see Code of Ethics, p.15).



THE WORKSHOP NOTED THE IMPORTANCE OF CONSIDERING BIODIVERSITY EARLY IN A PROJECT, FOR INSTANCE WHEN EARLY DECISIONS ABOUT LOCATION ARE BEING MADE. PICTURED: A BOTANICAL SURVEY DONE PRIOR TO NEW OPEN PIT NEAR MOKOPANE, SOUTH AFRICA.

5.2. IUCN GUIDING PRINCIPLES

During discussion of the ICMM principles, particularly relating to biodiversity conservation and community development, some participants proposed that IUCN also consider a set of principles that it could bring to bear on the dialogue. IUCN may or may not develop parallel principles in view of the vision and mission it already has, however, a number of overarching principles emerged from each of the working group discussions, which could be refined and adopted as guiding principles. Some examples of these include:

- (a) biodiversity (as defined by the CBD – three levels and three objectives) mainstreamed into decision-making;
- (b) due recognition of community rights and effective community participation in decision-making at all stages of the mine life cycle;
- (c) transparency and accountability in relationships of companies and communities;
- (d) capacity-building among community leaders, government regulators and company employees; and
- (e) partnerships between companies and NGOs as a way of managing risk.

5.3 TOWARDS BEST PRACTICE IN BIODIVERSITY CONSERVATION

The overall aim of ICMM Sustainable Development Principles is to ensure that performance improvements are delivered in all areas covered. However, most of the potential for securing improvement is at the site level, where detailed decisions are made. There is a need for a more detailed set of operating principles to guide such decisions.

Operating principles in the area of biodiversity must be consistent and supportive of the high level principles and form the reference framework for the development of detailed guidance. Working groups were tasked with preparing recommended operating principles in each of the areas, and these were reviewed and endorsed by the workshop meeting in plenary. Some recommendations, especially those from Group (IV) below, also address the community development, monitoring and other aspects of the Framework/Principles.

5.3.1. General recommendations

The work of the working groups produced some recommendations that apply equally to all the areas covered.

- (a) Operations should minimize adverse impacts on biodiversity and maximize conservation opportunities by careful design and planning and by diligent management.
- (b) Biodiversity and its conservation should be integrated into all evaluation and decision-making processes of operating companies.
- (c) Rehabilitation and restoration efforts should be guided by specific management plans which include before/after photos, spot checks, ongoing engagement with stakeholders, biannual audits and full reporting, restoration activities should be reviewed and approved.
- (d) Rehabilitation and restoration should be an ongoing effort, which is planned from the outset of a project and is undertaken as the project proceeds.
- (e) Companies should seek to achieve net positive effects on biodiversity and this principle should inform the impact assessments, management systems, and rehabilitation and restoration plans and activities.



REHABILITATION AND RESTORATION EFFORTS SHOULD BE GUIDED BY SPECIFIC MANAGEMENT PLANS. PICTURED: LEAD-ZINC-FLUORSPAR TAILINGS IN THE PEAK DISTRICT NATIONAL PARK (UK) TWO YEARS AFTER SEEDING IN A TREE/SHRUB LANDSCAPING SCHEME. [PHOTO: M. JOHNSON]



REHABILITATION EFFORTS SHOULD FOCUS ON LOCAL SPECIES.
 PICTURED: TWO YEARS OF GROWTH IN A TRIAL PLOT IN CORTA BAMA
 MAKING USE OF LOCAL, INDIGENOUS AND NATIVE SPECIES ONLY FOR
 RECLAMATION TRIAL WORK. (PHOTO: M. JOHNSON)

- (f) Companies should seek input to biodiversity assessment and management activities from stakeholders including NGOs, communities and governments and should ensure there is a forum for such contributions.
- (g) Human and ecological systems are intrinsically interlinked and should be dealt with holistically.
- (h) Offsets may present an option for addressing impacts which cannot be avoided, minimized or mitigated, but the process for deciding what constitutes appropriate offsets needs clarification. Systematic mapping of conservation objectives (looking regionally and considering human uses) is one approach that was explored during this workshop.

5.3.2. Specific recommendations

(I) Impact assessment

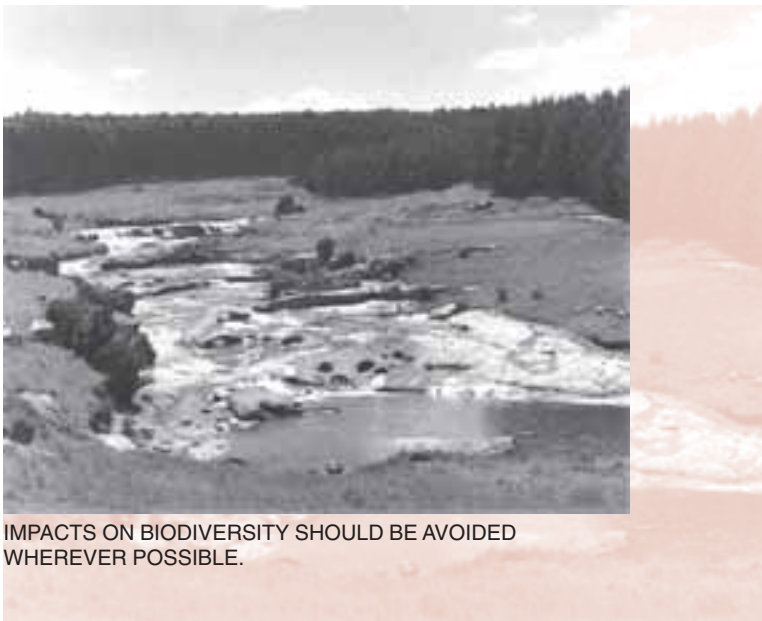
(a) **Demonstrate corporate commitment to biodiversity:** Companies should demonstrate high-level commitment to the integration of biodiversity aspects into decision-making processes and to the maintenance and enhancement of important and protected habitats and species. Companies should commit to addressing biodiversity at ecosystem, species and genetic levels as appropriate, and to integrating associated social aspects.

(b) **Adopt an ecosystem approach:** The interrelationships between biological/ecological systems and human systems should be identified and impacts on these relationships addressed in a local, regional, national and international context. In adopting an ecosystem approach, ecosystem functions and structure should be maintained.

(c) **Understand the nature of project sites:** The diversity of species or richness of ecosystems present at the future project site should be considered, alongside related cultural and social aspects. Impact assessments should identify if a site is important and why (e.g. does it contain or lie within a protected area, is it a sensitive/

vulnerable site with high biodiversity values, is it a site of cultural importance). There should also be recognition of and respect for specific local biodiversity values and uses and local, traditional & indigenous knowledge relating to biodiversity.

(d) Assess biodiversity impacts: Impact assessment should be viewed as a process, and not a product. Direct, secondary and cumulative impacts on biodiversity should be assessed in a phased approach, early in the project and throughout the lifecycle of the mine. Impact assessment should also take into account social, economic and health impacts. The open and iterative process should actively seek and allow time for stakeholder input. Biodiversity data gathered via baseline studies, impact assessment and subsequent monitoring, should be shared with and validated by stakeholders, including local communities, academics, conservation organisations, and other companies.



IMPACTS ON BIODIVERSITY SHOULD BE AVOIDED WHEREVER POSSIBLE.

(e) Mitigate biodiversity impacts: Impacts on biodiversity should be avoided wherever possible, minimized where they cannot be avoided, and mitigated where there are residual impacts. During the development phase of a project, there should be a rigorous assessment of all options including 'do nothing'. Offsets may be useful in mitigating residual impacts, and preference should be given to *in situ* offsets that are aligned with local, regional, national and international conservation strategies and goals and that bring a net positive benefit for biodiversity conservation.

(f) Facilitate and support a partnership approach: Manage risk around biodiversity and maximise positive contributions by working in partnership with government, communities and others.

Community involvement in biodiversity assessment should be implemented at an early stage and sufficient time should be allowed for government, industry, and other stakeholders to understand, evaluate and communicate biodiversity aspects throughout the process.

(II) Environmental Management Systems (EMS) and Community Development Programmes (CDP)

The environmental management working group developed recommendations for integrated EMS and CDP operating principles in six areas:

(a) Document and assess local biodiversity in consultation with appropriate partners: Build on impact assessment baseline studies. Prioritise anticipated biodiversity impacts in consultation with holders of local scientific, lay and traditional biodiversity knowledge, using a transparent and inclusive process. Establish and maintain information sharing mechanisms with relevant institutions and local communities. Work with local and national institutions to detail and understand land ownership, condition, use and management, and their implications for biodiversity, including regional assessments where appropriate. Ensure that the assessment and subsequent updates cover the areas where potential biodiversity impacts are anticipated; including potential mine extensions. Where possible, build, develop or support local biodiversity assessment capacity via training and workshops. Facilitate and contribute to local economic development and community initiatives based on sustainable biodiversity use and conservation activities.



THE DIALOGUE GIVE PRIORITY TO EXPLORING THE ISSUES SURROUNDING INDIGENOUS PEOPLES AND THE EXTRACTIVE INDUSTRIES. (PHOTO: CI)

(b) Undertake comprehensive identification of actual biodiversity impacts: Regularly reassess and review potential and actual biodiversity impacts, including those that are direct, indirect, transient, permanent, localised, dispersed, positive and negative. Plan and design the identification process to enable significant secondary or cumulative effects to be monitored and addressed.

(c) Plan and design preventive and mitigative responses to identified biodiversity impacts: Understand and comply with or exceed regulatory requirements, international conventions, and best practice guidance. Develop local site biodiversity policies covering all relevant issues including secondary and cumulative impacts. For potentially significant biodiversity impacts develop comprehensive management plans, objectives and targets. Biodiversity objectives and targets should be based on expert advice and consultation with stakeholders and local communities and reviewed and revised according to monitoring and performance data and subsequent consultation. Prioritise preventative over mitigative measures wherever possible. Identify and maintain resources for implementation of plans, and assign formal responsibilities to appropriately trained staff. In consultation with local communities and other relevant bodies, consider biodiversity offsets as a means of biodiversity conservation and maintaining local community access to biodiversity resources.

(d) Implement preventive and mitigative responses to identified biodiversity impacts: Companies should integrate biodiversity considerations into their existing decision-making processes, management systems and operations and ensure that all biodiversity-related targets and objectives are met. Broad guidelines for the integration process at site-level should include: definition of policy and means of achieving objectives and targets; training to raise awareness and competence

amongst company staff with respect to understanding and preventing the potential biodiversity impacts arising from their job; use of detailed and auditable written procedures to managing significant biodiversity impacts; development of emergency preparedness and response plans, including risk assessment of and responses to potential biodiversity impacts during or following significant accidents or emergencies where appropriate and audits using suitably qualified staff or external experts as appropriate to its specific needs and as determined by its risk assessment process. Companies should seek to involve NGOs, local community, associations and institutions in biodiversity management, monitoring and conservation programmes, and support community education programmes on environment, biodiversity conservation and sustainable use of natural resources.

(e) Monitor, measure and report performance on biodiversity management: Seek partnerships with appropriate institutions (e.g. research centres and universities) for biodiversity monitoring purposes. Ensure transparency and disclosure of independently audited monitoring and performance data and research information, especially to local communities, in an understandable form. Reporting should include the area disturbed and rehabilitated, site-specific biodiversity conservation indicators, secondary impacts on biodiversity and communities, performance of biodiversity offsets and substantiated complaints related to biodiversity. Companies should develop, support and maintain community involvement in monitoring and quality assurance where appropriate, and build capacity in local companies that could provide support for biodiversity management, monitoring and conservation activities.

(f) Implement and support initiatives that promote and enhance biodiversity: Sustainable biodiversity conservation activities need to involve staff and be linked with other local and regional conservation programmes to maximize the contribution to local development. Opportunities to make available biodiversity research information and provide training (e.g. monitoring) should be identified and pursued.

(III) Closure and rehabilitation

The working group considering mine closure and rehabilitation issues recommended the following in terms of the operating principles.

(a) Develop appropriate and realistic objectives and targets: Maximise opportunities to benefit biodiversity where possible while ensuring that biodiversity objectives fit the regional context and take into consideration any constraints arising from site conditions (e.g. long-term acid conditions at pyrite-rich metal sulphide mines may significantly limit biodiversity gains and opportunities). Ensure that the time expected to achieve biodiversity targets is linked to the speed of relevant biological and ecological restoration processes.

(b) Develop comprehensive closure strategies and plans: Strategies and plans should be developed at the permitting stage and include direct and secondary impacts. They should be reviewed at least once every five years and be informed by baseline and ongoing surveys developed from an understanding of ecological



THE DIALOGUE CALLS FOR SUPPORT TO INITIATIVES THAT PROMOTE AND ENHANCE BIODIVERSITY. (PHOTO: CI)



THE DIALOGUE URGES THE DEVELOPMENT OF COMPREHENSIVE CLOSURE PLANS AT THE PLANNING STAGE OF A MINE. PICTURED: REHABILITATION FOR CLOSURE.

structure and functioning. Engineering and environmental considerations may be priorities but plans should include biodiversity options and imperatives. The duration of post-closure monitoring should be based on the sustainable achievement of biodiversity targets.

(c) **Promote progressive closure:** Rehabilitation should be undertaken during the life of the mine where possible.

(d) **Plan for and promote rehabilitation with local species:** Natural assets should be conserved through existing or newly established seed banks, bio-repositories and island reservoirs to facilitate rehabilitation with species of local provenance. The use of alien species should be avoided where possible.

(e) **Maintain restoration standards and conditions following ownership changes:** Asset disposal/subleasing should be held to the original restoration conditions.

(f) **Develop dedicated financial provision:** Closure funds must be adequate and dedicated, controlled by trustees including independent third parties, and have actuarial and technical oversight. There must be transparency of financial provisions to interested parties. Suitable means of dealing with the financial and technical consequences of unexpected premature closure and the closure of selected features during the life of the mine should be addressed in the structuring of financial provision.

(g) **Promote public participation:** Planning, implementing, monitoring and post-closure land use objectives should use a full participatory and consultative approach, since the community will often need to assume a much greater degree of responsibility following closure.

(IV) Community and indigenous peoples

The community and indigenous peoples working group made the following recommendations. Some of these are targeted to biodiversity aspects addressed by the other groups, while others reflect the communities and indigenous peoples concerns with mining as such and should therefore inform development of the operating principles in the respective areas such as community development, and monitoring and reporting.

(a) **Effective engagement and participation:** Community and indigenous peoples need to be involved in the decision-making to ensure integration of social issues from the outset, through all stages of operation and post-closure, including monitoring and assurance (of compliance with agreed principles and standards) Transparency and accountability should underpin all company-community relationships. The concept of consensus-orientation should be employed, while also recognizing existing community decision-making processes. Capacity-building to ensure effective engagement is required among all groups – communities, regulators and company employees. NGOs have a key role to play in building capacity among communities. Mechanisms need to be established to support and provide expertise for smaller companies with few in-house resources. Companies need to work with and strengthen community institutions and mechanisms as they exist more than to undermine them by imposing new organizations or supporting divisions and rivalries among existing ones. Similarly, the communities need to engage in good faith with companies.



THE DIALOGUE FORESEES DEVELOPMENT OF AN ETHICAL CODE OF BEST PRACTICE FOR INTERACTIONS BETWEEN INDIGENOUS PEOPLES AND THE MINING INDUSTRY.



ENGAGEMENT WITH LOCAL COMMUNITIES IS A KEY TO SUCCESS. PICTURED: PRIMARY HEALTH CARE IN SETTLEMENTS NEIGHBOURING A MINE. A NURSE TREATS PATIENTS IN A MOBILE CLINIC.

(b) **Legacy issues:** Processes involving governments need to be established to address the legacy issues of mining, and these should address social impacts as well as environmental rehabilitation needs.

(c) **Assessment:** Assessment must be an integrated process (including social and community issues) rather than a product. It should consider the implications of not doing a project in terms of both opportunity costs to the community and biodiversity conservation. Baseline information and assessment results should be made publicly available. The group agreed that local, traditional and indigenous knowledge and specific local biodiversity values and uses should be recognized, respected and integrated into the assessment. Mitigation measures must consider social and gender equity issues. The assessment and mitigation should take into account the potential conflict of interest arising from a company's own staff such as geologists doing the community development work with guidelines from the company's anthropologists.

(d) **Operations and Management:** The community should be involved in the EMS, the community development plan (CDP) and emergency preparedness procedures (such as APELL), and appropriate coordination is required among these activities. Improving company and community skill sets for integrated approaches may be needed to ensure community biodiversity values are included. Both EMS and CDP should recognize and involve those with indigenous knowledge, concerns and perceptions related to resource management and monitoring. A multi-stakeholder group and process should be established to support EMS and CDP implementation and periodic review.

(e) **Closure:** The group agreed that the company should plan and implement restoration from the beginning of the project, with the active involvement of communities. The extent of financial provisions such as reclamation bonds should be disclosed. Restoration should be progressive as appropriate. Subletting or sale during the currency or towards the end-of-life of the mine should not allow for any change in the rehabilitation and restoration plans that would negatively affect environment and community benefits. The new owner or lessee must inherit, be able, and provide for all liabilities on this account.

(f) **Code of Ethics:** A specific recommendation was to establish a process to negotiate an ethical code of best practice for interactions between indigenous peoples and the mining industry. It was suggested that this process might be broadened to include the oil and gas and possibly other extractive industries and that IUCN and ICMM should support the establishment of this process.

6 The way forward

This workshop was the first major event under the IUCN-ICMM Dialogue. It was ambitious in its objectives but, barring the reporting criteria which could not be discussed in detail for want of time, achieved much of what it had set out to do. The most important achievement of the workshop was the constructive engagement among the stakeholders on this sensitive issue – which has tended to be so divisive in the past – and that all participants were pleased with the progress and resulting recommendations.

These recommendations will now be taken forward in several ways. The overall recommendations for the Dialogue and the draft best practice operating principles on biodiversity assessment and management will be taken, in the form of this report, to the World Parks Congress in September 2003. They will be discussed in the relevant workshop(s) and side meetings for further input.

Following the Congress, an IUCN-ICMM task team will be established to refine the draft operating principles, identify performance criteria/reporting indicators and develop implementation guidance in the areas of biodiversity assessment and management. Demonstration of results in the field will determine the eventual success.

Moreover, the IUCN Working Group on Extractive Industry and Biodiversity and ICMM Taskforce on Biodiversity are envisaged to meet in October to assess progress and prepare recommendations for the considerations of their respective Councils later in the year.

The workshop has also generated several useful recommendations which may not be specifically related to the mandate of the Dialogue but address other aspects of mining of paramount interest to society and the mining industry. These include recommendations related, for example, to community development, indigenous peoples' issues, monitoring and reporting, which will inform the respective parallel initiatives that ICMM is pursuing with the World Bank and GRI.

If the journey of a thousand miles begins with the first step, this has now been taken. However, the world will not judge our efforts on where we come from, but on where and how far we go from here.



THE DIALOGUE REPRESENTED CONSTRUCTIVE ENGAGEMENT AMONG STAKEHOLDERS ON A SENSITIVE ISSUE, AND TOOK A GIANT STEP TOWARD DEVELOPMENT OF BEST PRACTICE GUIDANCE FOR THE MINING INDUSTRY. PICTURED: 'BEST PRACTICE' ON THE GROUND: A REVEGETATION TRIAL ON WASTE ROCK TESTS TREE AND SHRUB COMBINATIONS MOST SUITED TO LOCAL CONDITIONS AND 'SUSTAINABLE' IN THE LONG TERM.



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