



**Mining, Minerals and
Sustainable Development**



International
Institute for
Environment and
Development

AN MMSD BRIEFING PAPER

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1 INTRODUCTION

This paper is intended to be a readable explanation of the Mining, Minerals and Sustainable Development Project – what it is and what it hopes to produce -- as of 1 October 2000. Intended to complement *A Guide to MMSD*, it explains the:

- Organisation of the Project Centre and its activities
- Roles and management of the regional centres and
- Principal products and outcomes of MMSD

2 BACKGROUND

MMSD is an independent process of multi-stakeholder engagement and analysis with the objective of *“identifying how mining and minerals can best contribute to the global transition to sustainable development”*. Beginning in April 2000, it is a two-year project designed both to produce concrete results during this period, and to create structures capable of being carried forward thereafter. A key product of MMSD will be a project report to be presented during the proposed Earth Summit in 2002.

MMSD was initiated by the World Business Council for Sustainable Development (WBCSD) as one of a number of projects being supported by the Global Mining Initiative (GMI). GMI was formed by the Chief Executive Officers of several of the world’s principal mining companies. The project is managed by the International Institute for Environment and Development (IIED) in London, UK, under contract to the WBCSD.

The objectives of MMSD are explained in a Scoping Report prepared by IIED for the WBCSD in 1999, which suggests why a new initiative is needed, and how it will work. The Scoping Report, and other information about MMSD, is available on the IIED web site at www/iied.org/mmsd/.

3 WHAT IS MMSD?

MMSD views itself as an agent of change.

In our current era, people, countries, institutions and companies are increasingly seeing a need to reorient our societies consistent with a concept referred to as “sustainable development.”

The transition to a more sustainable society will require all social actors to change the way they produce, use, recycle, and dispose of resources.

Mineral resources have throughout history been a critical part of the human economy, and the way they are produced and used has had a profound effect on human society and culture, as is obvious by our very characterization of much of the human past as the Stone Age, the Copper Age, the Bronze Age, or the Iron Age.

It is therefore reasonable to believe that a major shift in the way human societies operate is likely to produce -- or be produced by -- changes in the conditions under which minerals are produced and consumed.

The MMSD Project aims to identify the changes which are needed and catalyse them.

It needs to be emphasized that change cannot and should not be imposed or directed, but must be the result of careful involvement of affected interest groups. They, not MMSD, will ultimately set the agenda.

4 HOW CAN CHANGE BE CATALYSED IN THE MINING AND MINERALS INDUSTRIES?

An agent of change requires at least four capabilities. The absence of any one of them may mean the goals are not achieved. These are:

- **Research and Analysis.** Positive change is more likely if based on the most informed possible understanding of the problem. Moreover, many actors will not be convinced of the need for changes without a sound analysis of why change is needed, and what direction it should take.
- **Stakeholder Engagement.** Even the most rigorous work of the best experts may not catalyse change if it is not accepted or understood by all of the social actors whose cooperation is necessary for change to occur. Experience shows that ideas are accepted when all of these actors have a role in defining the questions, deciding how to answer them, and absorbing the results.
- **Planning for Outcomes.** It is often much easier to agree on what the problem is than on the mechanism to solve it. If there is agreement on a general goal, (more stable tailings dams) but no agreement on how to get there (licensure for engineers, a new international inspection body, laws, tax incentives, best practice guides, requirements imposed by lenders, ombudsmen, certification systems) then the process of change may be stopped in its tracks. Because this has happened so often, sophisticated stakeholders may not be willing to engage in a process if they do not see this element taken seriously from the outset.
- **Information, Communication, Dissemination.** Change processes in a small community may take place face to face. But change on a global level, especially in industries which affect almost everyone, requires the ability to communicate project objectives, activities, and outcomes very clearly to very large audiences. And the need for stakeholder engagement means this communication has to be two-way.

The MMSD Project intends to develop capabilities in all four areas and blend them to create an effective process of change. Its goal is to develop:

- **A clear agenda for change**
- **Based on rigorous research and analysis**
- **Involving key stakeholders**
- **Generating mechanisms for action**

5 HOW IS THE PROJECT CENTRE ORGANISED?

The Project Work Group is centred at the International Institute for Environment and Development (IIED) in London, England. The Work Group is guided by Project Director Luke Danielson, Assistant Project Manager Elisabeth Wood, and Project Administrator Sarah Henson.

Its activities are overseen by an independent Assurance Group consisting of recognised experts in a variety of subjects chosen for their knowledge, diversity, and judgment.

The resources to operate the Project are provided by a Sponsors Group. Convened by the World Business Council for Sustainable Development, consisting of companies from the mining industry, government agencies, international organisations, foundations, NGOs and others.

The MMSD management team, in addition to the Project Director, consists of:

- **Research and Analysis.** Caroline Digby, Research Manager, *Caroline.Digby@iied.org*
- **Stakeholder Engagement.** Frank McShane, Coordinator of Stakeholder Engagement, *Frank.McShane@iied.org*
- **Planning for Outcomes.** Elisabeth Wood, Assistant Project Manager, *Elisabeth.Wood@iied.org*
- **Information, Communication, Dissemination.** Ray Doucet, Communications Coordinator, *Ray.Doucet@iied.org*
- **Administration.** Sarah Henson, Project Administrator, *Sarah.Henson@iied.org*

6 HOW WILL MMSD DO RESEARCH AND ANALYSIS?

MMSD has the capability to call on a wide set of resources for research and analysis.

- **Research Fellows.** MMSD has a number of able Research Fellows who are undertaking important research tasks in house. The MMSD Fellowships have been highly competitive, and we have attracted a number of excellent candidates with advanced degrees in a variety of disciplines. Currently we have visiting fellows from Chile, Canada, South Africa, Australia and Peru - all important mineral producing regions – with considerable collective practical experience. Each one is currently undertaking a specific aspect of the baseline assessment and literature review for the Project.
- **The International Institute for Environment and Development.** IIED has for many years been one of the world's leading research institutions in the field of sustainable development, and MMSD is able to call on other programmes within the institute for support.
- **Partner organisations.** MMSD sees one of its key roles as consolidating existing knowledge. To achieve this, it is working in partnership with organisations which have ongoing programmes of work in this field.
- **Contracted research.** MMSD is contracting specific research tasks to a variety of distinguished individuals and institutions in different countries.
- **Regional partners.** One of MMSD's most exciting capabilities is to do research through its developing network of partner organisations in the world's principal mineral producing and consuming regions. These regional partners have both in house research capabilities and the ability to contract studies through their regional networks.

7 HOW ARE MMSD REGIONAL PARTNERSHIPS ESTABLISHED?

MMSD is seeking to establish partnerships with existing organisations in a number of the principal mineral producing and consuming regions of the world to carry forward the work of the Project at the regional level.

The reasons for this approach are several. Among them are:

1. A great deal of very useful research and analysis has been done on a regional basis. The MMSD Final Report will be much enriched by tapping into these very rich sources of information and ideas more deeply than can be accomplished from the project centre in London.

2. While some priority issues will be common throughout the world, others differ between regions. Similarly, some of the outcomes of MMSD will be most appropriately implemented at a regional level.
3. The broad stakeholder engagement process which this project envisions cannot credibly be accomplished without regional bases.
4. When MMSD is over in 2002, the Project aims to leave new or reinforced networks of strong, regionally-based centres, broadly acceptable to the many stakeholders around the industry, capable of quality research on issues of sustainable development affecting the minerals industries. The Project must have some conception of where its work will be carried forward after the final report in order to be perceived as more than a short term public relations exercise.

This network of regional centres is the best identifiable alternative for meeting all these needs.

The principal characteristics of the institutions with which MMSD is seeking to partner in these regions are:

- Acceptability to principal stakeholders. Regional partner organisations should be broadly acceptable to the principal stakeholders in the region in which they are to work.
- Competence in and commitment to research in sustainable development . The regional partners needs to understand sustainability issues and have solid capacity in this area.
- Competence in and commitment to mining and minerals research. The institutions needs to have knowledge of the minerals sector.
- Willingness to take a regional role. The institutions must be ready willing and able to work and engage not only in its home country but in the region as a whole.

Each regional partner organisation will need to have adequate administrative capabilities and also have or be able to acquire the capacity to work in the four areas defined as critical to MMSD's success as an agent of change, namely: research and analysis; stakeholder engagement; planning for outcomes; and information, communication and dissemination.

Once a regional partner institution is selected, MMSD will enter into a contract with it spelling out the terms of the partnership agreement. In some regions, where organisations with complementary skills and experience are identified, more than one organisation may form the partnership.

8 HOW WILL THE REGIONAL CENTRES BE MANAGED?

It is important to achieving MMSD's objectives that the regional centres have a high degree of autonomy. But in general, MMSD will seek to ensure that each centre has the following elements:

- **A multistakeholder regional steering committee or advisory group** designed to insure that the centre remains open and responsive to divergent interests and views
- **A regional sponsors group** which will provide resources to expand and deepen the centre's work.
- **A partner institution** which will execute and administer the project under the direction of a Project Coordinator.
- **A regional coordinator** who will be responsible for managing all project activities at a regional level as well as raising sponsorship.

Research and stakeholder engagement activities done through regional centres will be of three types:

1. A report, in an agreed format, on a series of defined issues within the region. The template for these reports will be developed at the Project Centre in close consultation with regional partners.
2. In depth research and stakeholder engagement around priority issues as determined by regional partners through consultation with stakeholders in the region.
3. Research and stakeholder engagement on special projects. Special projects will be developed with funding made available by specific donors for identified purposes.

We anticipate that the regional centres will do some work in house and other work by contracting it out to qualified researchers on individual subjects.

9 IN WHAT REGIONS WILL PARTNERSHIPS BE ESTABLISHED?

MMSD is currently exploring the development of partnerships in the following regions:

- **Australasia**
- **Europe**
- **Latin America**
- **North America**

- **Southeast Asia**
- **Southern Africa**

While MMSD hopes to form partnerships in each of these regions, the ability to do so depends on factors within the region, including a sense that the process offers benefits to regional researchers and stakeholders, the willingness and capacity of regional institutions to serve as partners, and working through very complex political issues of international cooperation.

To date, the results of the Project's exploration of these partnerships are among the most gratifying and encouraging aspects of MMSD.

Forming strong and effective partnerships in all of these regions is a great challenge. While MMSD is working hard and to date successfully in all of these regions, it may well be that problems will arise which prevent all six of these efforts from being successful. A network composed of even three or four truly effective regional partnerships would be a major accomplishment which immeasurably enriches the Final Report and other MMSD activities.

We are also quite aware that there are very important activities underway in other parts of the world outside these six regions. Yet limitations on management resources, money, and time make it infeasible to try to build full regional partnerships in these areas at this point. Proposals have been submitted to the European Union and the UK Department for International Development for the funding of a regional partnership in West Africa.

MMSD also intends, to the extent that resources permit, to develop research workshops and individual research projects in a number of other parts of the world. Plans are advancing for such activities in the former Soviet Union/Commonwealth of Independent States. Other possible places in which this approach may be fruitful are China, Japan, or India. The key to success in these efforts will be to find strong regional organisations which share MMSD's basic goals and which will be willing to take the initiative in partnership with MMSD to move these activities forward.

In the process, MMSD will undoubtedly be able to assess the feasibility of formation of regional centres in these areas in the future, and identify actors who could be helpful in such efforts should they be undertaken after the end of this Project.

10 WHAT WILL BE MMSD'S CONCRETE OUTPUTS?

The core of MMSD's work is directed to the preparation of a Report, due in draft at the end of 2001. The Report will attempt to present a broad panorama of the issues which confront the mining and minerals sector in the transition to a society consistent with the model of sustainable development.

The Report will not be simply the opinions or ideas of MMSD staff, but will in many areas be the product of outstanding researchers outside MMSD, and of one of a number of innovative techniques of participatory research. Among these will be research workshops designed to incorporate divergent views, large multistakeholder processes designed to develop consensus on key issues – or at least to clarify the areas of disagreement -- or techniques employed by our regional partners, who in turn will employ broad processes of engagement in the course of their work.

While it represents the core of MMSD's work, *the Report is not the objective of this Project.*

The Project *objective* is to serve as an agent of positive change toward a more sustainable future based on excellent analysis of the challenges we face.

The function of the *Report* is to document the process of change in progress, as of the date of its submission, synthesize what has been learned to date, and chart an agenda for the future.

The Report will be subject to an intensive process of review by the Project's distinguished Assurance Group, who are the body responsible for insuring its fairness, integrity, objectivity and quality, and insuring that it gives due regard to minority or dissenting views.

11 HOW WILL THE REPORT BE STRUCTURED?

The report structure is being developed under the leadership of Research Manager Caroline Digby and Project Rapporteur Nick Robins (*Nick.Robins@iied.org*).

The issues it will deal with have been identified in consultation with hundreds – or at this point thousands—of experts, stakeholders and institutions dating back to the 1999 Scoping Report prepared by IIED. In addition, the Report will contain sections detailing the conclusions reached by our regional partners in their reports.

We are still at a relatively early stage in the Project but a Proposed Outline for MMSD Draft Report, which contains a suggested structure for the analytical themes, is now available to any interested party. As is the case with all MMSD documents, it is available for comment and suggestions, and will shortly appear on our website.

12 WILL THE REPORT BE THE PROJECT'S ONLY OUTPUT?

The Project has been designed to produce a wide range of useful interim outputs, the first of which will be available as soon as November of 2000. We conceive of these as falling into groups, corresponding to the four elements of the Project:

- Research and Analysis

- Stakeholder Engagement
- Planning for Outcomes
- Information, Communication, Dissemination

In a sense however categorising outputs in this way is artificial, since every activity developed by MMSD will involve each of the four project elements.

We also envisage outputs in the area of institution and network building from existing initiatives and the regional partnerships.

13 WHAT WILL BE THE PRINCIPAL RESEARCH AND ANALYSIS OUTPUTS OTHER THAN THE FINAL REPORT?

MMSD will develop a variety of interim research reports on issues deemed of strategic importance. These interim reports will examine individual issues in considerable depth and will be stand alone volumes on topics with a specific focus. The main findings and conclusions of these interim reports will feed into the overall project report.

There will be three groups of interim research reports:

- Topical research reports
- Regional research reports
- Reports of national workshops

MMSD is still a fairly new project and all of the details of the research agenda have not been finalised. Thus, selection of topics for in depth treatment resulting in a stand alone interim report is not complete. Below we outline some of the topics which are firm to date. More detailed concept notes, outlining the objectives, the planned approach and the hoped-for results, are available in each case.

- **Topical research reports**

1. Long Run Minerals Availability. *In cooperation with Professor John Tilton of the Colorado School of Mines.* This study will focus on examining the extent to which progressive internalisation of environmental and social costs in the industry may lead to constraints on mineral availability in the long run.
2. Managing Mineral Wealth. *In cooperation with the United Nations Conference on Trade and Development.* This effort will be aimed at deepening the understanding of the obstacles which have prevented some developing countries from using mineral revenues as an effective catalyst to economic and social development, the so-called “resource trap.” It will examine whether more effective management of mineral

wealth can overcome these obstacles and build understanding of these concepts in developing country finance ministries.

3. **Baseline Assessment of Current Corporate Practice.** *In cooperation with PricewaterhouseCoopers.* A survey of the top 50-60 largest mining companies will be undertaken to assess current company understanding of sustainability issues and the current status of arrangements to manage those issues. The analysis of the survey will attempt to identify what companies need to do in the future to move toward more sustainable practices.
4. **Management of Large Volume Wastes.** *In cooperation with Professor Dirk van Zyl of the Mackay School of Mines.* The level of toxicity or hazards presented by mineral wastes is highly controversial. But there is widespread agreement that they are produced in high volume. The focus of this effort will be on development, through case study methods, of clearer understanding of the problems associated with the disposal of these wastes in key areas: land (stability, acid generation), rivers and submarine disposal.
5. These case studies will then be exposed to a critical review by a variety of experts and stakeholders who will be asked whether they are able to propose mechanisms for addressing identified problems.
6. **Life Cycle Analysis.** *In cooperation with the United Nations Environment Program, Dr. Robert Ayres of INSEAD and others.* This study will focus first on bringing together a group of recognized experts in life cycle analysis of metals to identify the chief methodological issues and difficulties in life cycle analysis of several metals (zinc, lead, copper and nickel). Informed by that process, one or more life cycle analyses of each of these metals will be completed. Results will be evaluated in a final research workshop which will be asked to develop recommendations.

- **Regional research reports**

As described earlier, each of MMSD's regional partners will be requested to prepare a Report as described consisting of two sections: firstly that region's perspective on a standard list of issues developed by MMSD and secondly, in depth studies of issues importance at a regional level.

- **Reports of national or regional workshops**

As indicated above, MMSD intends to hold research workshops in some countries. Among the outcomes of these workshops may be an understanding of the feasibility of forming regional partnerships in the area at some future time. Plans are advancing for such a workshop in the Former Soviet Union/Commonwealth of Independent States. We are also investigating the resource requirements and other factors affecting the feasibility of such efforts in China, Japan, and India.

WHAT ARE THE PRINCIPAL POTENTIAL PRODUCTS OF THE STAKEHOLDER PROCESS?

There are two important observations here. First, the stakeholder process is intimately linked to research and analysis, and its most important function may be to add value to those outputs by increasing their legitimacy and credibility. Second, it is rash, and potentially quite counterproductive, to announce ahead of time what the results of a stakeholder process are going to be. Indeed, it may be quite hard to attract participation if it appears the results are foreordained, or if the stakeholders are told they “must” come to a conclusion by some artificial deadline.

That said, MMSD undertakes both a serious internal review and external consultation on any stakeholder process before it is launched, in which one of the key questions is whether the conditions exist for some concrete and usable outcome.

Even where a stakeholder process is not capable of “resolving” problems by a consensus, it can still be extremely useful if it can:

1. Narrow or at least *identify the principal issues* where there is serious disagreement. This is anticipated to produce very useful results for the Final Report.
2. Assist in enabling stakeholders to develop a better understanding of each others’ perspectives as well as their willingness and ability to move forward on specific issues.
3. Set the stage for future research, or future processes which may lead closer to long term solutions.

Beyond the very important functions of the stakeholder engagement process in shaping our Final Report, we expect two distinct types of concrete products from the Stakeholder Engagement. The first is a groundbreaking publication on Rules of Engagement. The second will be reports from a limited number of Global Dialogues on strategic issues.

13.1 Guidelines for Engagement

This exercise addresses several needs simultaneously. The first of these is a management need of MMSD as a decentralised Project with many partners. If we are going to engage stakeholder in dialogue in many places on many issues with many partners it is vital that there be some set of core understandings of the guidelines under which this is done. This is necessary to insure that all those who engage in any of our processes have some assurance that their participation will not be abused, to maximize the effectiveness of the effort, and to manage the reputational risk to the Project.

Such a set of rules cannot be developed at the MMSD centre and “imposed” on partners. They would be ineffective if they were. And they would be less valuable if they lack the vital experience which many regional institutions have developed in this area, and the regional variations which reflect diversity of culture, resources, and experience.

Therefore they will be developed at a set of two workshops, one late in 2000, and the other in early 2001, at which regional and other partner organisations and a variety of outside stakeholders will be invited to participate in their development.

These principles will then guide all of MMSD's stakeholder processes through the life of the Project.

And out of this process, we anticipate that in the first quarter of 2001 we will be able to publish these guidelines as a separate interim report. We anticipate that it will be of considerable use to many outside organisations throughout the world who see the importance of broad engagement but want to ensure that their processes are effective, equitable, and do not endanger the interests of participants.

13.2 Global Dialogues

MMSD plans to develop major stakeholder processes, or "Global Dialogues" on three strategic sets of topics of broad global interest.

At this stage, a number of strong candidates for these issue sets have surfaced. We are consulting with a variety of stakeholders about their feasibility, the resources needed to accomplish them, and their structure.

Only one issue has at this point been selected.

Others are likely to be selected reasonably soon, but these are important decisions which require very broad consultation, identification of funding sources, and evaluation of other considerations, such as the willingness of key stakeholder groups to engage.

The Role of Financial Institutions in the Transition to Sustainable Development

The one topic which has been selected and in which MMSD now intends to develop a Global Dialogue is the question of the role of financial institutions in the transition to sustainable development in the minerals sector. This effort would be in partnership with the World Bank Group, the United Nations Environment Program, and potentially others.

The project concept is at this point stated generally in order to insure that it includes a number of related ideas important to one or more stakeholder groups.

These include concerns that:

1. Current World Bank/IFC guidelines in the mining sector could need to be examined in light, *inter alia*, of the number of complaints received by the IFC ombudsman in this sector, an expressed concern that the guidelines may unduly restrict mineral development, a realisation that there are limitations, not fully appreciated, on the ability of banks to "enforce" standards on borrowers, etc.
2. Other public sector lending institutions such as regional banks, export credit agencies, or otherwise, may likewise need to review the question of whether their procedures are appropriate, for many of the same reasons.

3. Those providing finance to the mining sector (whether they are public or private institutions, and whether they are supplying debt or equity) sometimes lack clear, understood, or effective methodologies for evaluating risk based on social, environmental and related factors.
4. Best practice guidelines for mineral finance could improve overall performance and thereby reduce the frequency with which projects go forward with important unaddressed issues.

As the concept evolves, it is likely that other issues will emerge, or that the focus of the ultimate structure will not include all the concerns outlined.

The timeliness and importance of addressing these issues is underscored by the views recently expressed by James Wolfensohn in Prague. We anticipate that this process may evolve to be more directly responsive to these expressed needs of the Bank Group.

Global dialogues will spark complementary research efforts, enrich the Final Report, and will have these additional outputs:

Process output

- The very success in convening this kind of a process would be in itself a major and very useful accomplishment. It would at a minimum get the principal actors into more effective communication, and much more clearly define the expressed concerns and issues.
- If there is a broad consensus on a particular course of action coming out of this process, this would of course be an added benefit, though hardly one which can be anticipated in advance.
- Should this process be making progress, but not conclude within the life of the MMSD Project, the actors might well find a basis to continue it, making it a more long term product of MMSD.

Interim Report

We anticipate that this process will yield a detailed interim report focussing on the issues as they have been developed, areas of agreement, and problems to which there is no consensus.

14 WHAT ARE THE EXPECTED RESULTS FROM MMSD'S PLANNING FOR PROJECT OUTCOMES?

Change processes have often stalled even when all principal actors have agreed on the definition of a problem, and on a desired objective. In our view, this has often occurred because research and dialogue have focussed too exclusively on defining problems

(“artisanal mining is releasing too much mercury into rivers”) and desired objectives (“we should reduce the amount of mercury released by artisanal miners into the environment”). There is another extremely important track which is too often neglected, the study and discussion of mechanisms by which the desired objective can be reached.

If the result of the process is a carefully documented conclusion with broad support, it develops a sense of momentum, and represents a time when action can be taken with a real chance of obtaining results.

But the momentum can easily be lost, and the time for action pass, if the participants then have to start a second lengthy dialogue about what mechanisms are to achieve the desired result. Often, there is surprisingly easy agreement on the desired objective. But the choice of mechanisms to achieve the objective can still be highly and bitterly divisive.

While nothing more should be read into this example than use as an illustration, MMSD has already received from a wide variety of stakeholders the view that tailings dam failures are too frequent in the industry, and that they lead to environmental damage, financial loss, danger to people and property, and have an enormous reputational cost to the industry. Perhaps therefore a consensus could be reached that the number of these failures should be reduced dramatically.

But *how*?

MMSD has, unsolicited, received suggestions that (1) there should be international licensure of the engineers who design tailings structures; (2) some form of international body should be set up to do periodic inspections, particularly in areas where government may lack capacity to do so; (3) this should be considered as part of an overall system of certification of mine sites; and (4) a best practice guide should be developed in this area as a refinement of earlier efforts.

This may help to illustrate the point that mechanisms to drive change processes deserve attention at the same rate as identification of problems and desired objectives, so that all three of these strands can coalesce in a process of change.

MMSD held a workshop on the subject of implementation of project outcomes, in Geneva, Switzerland in July of 2000. (Notes from this workshop are available on the Project website)

14.1 Interim report on mechanisms

Based on the results of that workshop, MMSD is preparing a preliminary study - to be published in November of 2000 – which focuses on possible mechanisms to drive various potential changes after the conclusion of this project. It is anticipated, for example, that this exercise will discuss, among other things, the strengths and limitations of best practice guides, codes of conduct, ombudsman processes, certification processes, international conventions, and the like.

This publication is intended to be useful to MMSD staff, stakeholders in the process, partner institutions, and others in beginning the discussion of the kinds of mechanisms which might be appropriate to implement possible outcomes of the MMSD Project.

14.2 Second interim report

MMSD may also, in the third quarter, issue a second report on this subject, as the completion of the Final Report nears, and it is possible to see more clearly what kinds of desired objectives are emerging. This report could more closely link these objectives to potential mechanisms for achieving them, and the institutions necessary for those mechanisms to be effective.

We do note that MMSD will not be implementing the outcomes. These are much more effective and likely to lead to change if they emerge from the stakeholders rather than MMSD itself.

15 WHAT PRODUCTS WILL THE COMMUNICATIONS PROGRAM PRODUCE?

The principal functions of communications element of MMSD are to ensure:

- The transparency of the project
- That people and institutions potentially interested in its work are aware of MMSD and what it is doing
- That interested stakeholders, researchers, and others have the means to communicate their ideas freely and effectively in ways that impact the project and its outcomes.

In addition, it is expected to produce three concrete products:

- Database of contacts. With the help of our regional partners and other cooperating institutions, MMSD should be in a position to assemble in useable form the most comprehensive directory yet available of the people and institutions concerned with sustainable development and the minerals cycle. Since most of the work to produce this product must be done in any case to achieve the project's objectives, MMSD intends to invest the small additional resources needed to produce this in a usable form (perhaps compact disc) suitable for distribution at low cost to any institutions or individuals who would find it useful.
- Research database. MMSD anticipates that together with its partner institutions it will be in a position to produce an extensive and highly usable bibliographic data base related to mining, mineral products and sustainable development. MMSD's regional capabilities should greatly enrich this product. Again, most of the effort to produce it needs to be invested in any case in the process of developing MMSD's Final Report. MMSD will therefore invest the additional resources required to put it in a usable and easily distributed form.

- Regional information centres. At a regional level, the literature, information and contacts generated through MMSD will be used to form the basis of information centres which will be sustained beyond the life of the project.

16 WHAT ARE OTHER EXPECTED PROJECT RESULTS?

Enhanced capacity for change. In all groups of stakeholders through the shared experience and learning of MMSD.

Complementing existing initiatives. There are many outstanding individuals and institutions working on themes highly relevant to the issues of mining, minerals and sustainable development. Many of them have spent years in this field, and a number of important networks exist. Such networks and institutions as the Mining and Energy Research Network (MERN) and the International Council on Metals and the Environment (ICME) have made and continue to make ground breaking contributions.

It is the objective of MMSD to add to, rather than interfere with, these institutions, which will continue after MMSD has ended its project life.

Regional partner network. MMSD does intend to leave behind stronger and more effective networks, principally in the form of a network of the regional partner institutions it is in the process of forming. We view this network as a principal vehicle for carrying forward the kinds of work MMSD was created to do. They may well have a significant role as well in the implementation phase of the results of the MMSD Project.

Research fellows. While benefiting the Project enormously with their experience and ability, the Research Fellows are learning on the fast track in this exciting Project. In the long run, the experience, knowledge, and networks they take with them will be an important output from MMSD.