

International Mining for Development Centre

AusAID Activity Proposal

Submitted by



THE UNIVERSITY OF
WESTERN AUSTRALIA
Achieve International Excellence

and



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

22 September 2011

International Mining for Development Centre (IM4DC) AusAID Activity Proposal

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Preface

The University of Queensland (UQ) and The University of Western Australia (UWA) are committed to delivering high quality education training and research in minerals and energy to developing nations.

Both universities believe that this initiative can contribute to lifting the quality of life in developing nations through more sustainable utilisation of minerals and energy resources.

Leveraging Australia's world class minerals and energy capability, led by our two universities, harnessing the intellectual capital that is resident in the Australian resources and higher education sectors is a strategy we see as in the national interest

Both universities currently collaborate in the minerals and energy space and the proposed International Mining for Development Centre (IM4DC) will further and deepen that broader cooperation

We understand that the Centre itself sits within the context of the Australian Government's proposed Sustainable Mining for Development Initiative.

The universities have been pleased to respond to the Australian Government's request within the ambitious time frame set by the planned launch of the 'working' Centre at the CHOGM meeting in October.

Clearly there are many opportunities for the Centre and for our two founding universities to participate more broadly in the Sustainable Mining Initiative, and we look forward to exploring areas where we can contribute to the other programs within the initiative.

We believe that this initiative, the Centre and the programs will evolve in their scope and nature in the future. Being able to adapt to those changes and to innovate to take advantage of the opportunities presented, while at the same time delivering the core components required will be an important flexibility.

This is an exciting opportunity for Australia to play to its strength in providing aid to developing nations and we are pleased to be able to contribute to its success.

Executive Summary

This Activity Proposal is a formal submission from The University of Western Australia (UWA) and The University of Queensland (UQ) to establish the International Mining for Development Centre (IM4DC). Both universities are committed to delivering high quality education, training and research in minerals and energy to developing nations and believe that the IM4DC can contribute to lifting the quality of life in developing nations through the more sustainable utilisation of minerals and energy resources. The IM4DC will be a \$31m component of the Australian Government's proposed Sustainable Mining for Development Initiative.

Many nations for which AusAID provides Official Development Assistance (ODA) possess considerable minerals and petroleum endowments and/or regions that are highly prospective for minerals or petroleum resources. These resources present those nations with an opportunity to accelerate economic development and transfer those resources into industries that provide employment and prosperity for the peoples of those nations well into the future. However, for this to occur, there are three inter-related essential elements:

- A competent and transparent system of industry governance and regulation;
- Mechanisms for community and environmental sustainability; and
- Expertise and technology that facilitates operational effectiveness.

The IM4DC will harness the intellectual capital existing in the Australian resources and higher education sectors to provide education, training and research outputs that demonstrate leading practices in support of each inter-related element. The IM4DC will create significant value through delivering short course format education and training in Australia and in key developing regions in Africa, Latin America and Asia. With initial targets exceeding 1000, carefully selected, international participants to receive IM4DC training in-country, along with over 600 participants coming to Australia, the IM4DC will have a broad reach. The Centre will also establish a Distinguished Fellows program to host at least 24 influential decision-makers to Australia for extended stays. The IM4DC will hold an annual conference to act as both a catalyst to generate demand for more IM4DC knowledge products, and showcase Australian expertise and our commitment to international development. The value unlocked through targeted education and training activity, leveraged through experienced university providers, will be extensive and reinforced through an action research program and formal monitoring and evaluation.

The IM4DC's outputs will

- support progress toward the United Nations Millennium Development Goals (MDGs) and broader whole-of-government objectives globally;
- work to establish and maintain sustainable mining sectors in developing nations;
- reinforce Australia's position at the forefront of innovative and best practice mining methods and technologies;
- improve governance and accountability through ethical and transparent regulation and operation in developing nations;
- strengthen economic and social outcomes globally through market reform, education and capacity building in developing nations;

- provide gravitas to Australia's reputation in the resources sector;
- positively promote the resources sector generally as a major contributor to economic development in developing nation.

1. Introduction and Background

The Australian Agency for International Development (AusAID) manages the majority of Australia's international aid program. In 2011-12, Australia will provide a total of approximately \$4.8 billion of Official Development Assistance (ODA) to developing nations and by 2015-16, Australia's ODA investment is expected to grow to \$8 to \$9 billion, or 0.5% of GDP.

Currently, the majority of Australia's ODA is directed at the Asia Pacific Region, where approximately two thirds of the world's impoverished people (equivalent to 800 million people) live. Australia also provides ODA to countries in the Caribbean, Latin America, the Middle East and Africa, with Australian ODA to African countries increasing dramatically in recent years to approximately 5% of Australia's total ODA. A table summarising AusAID's contemporary ODA investments is contained in **Appendix 1**.

The AusAID program revolves around the following four inter-related themes:

- **Generating Shared and Sustainable Economic Growth**

The AusAID program endeavours to address this theme through programs that:

- improve the policy environment in developing nations such that there is a framework that promotes and facilitates economic growth;
- promote trade between developing nations and between developing nations and the developed world;
- Support infrastructure development, rural development and the development of skilled indigenous workforces in developing nations; and
- address the environmental challenges associated with economic growth in developing nations.

- **Fostering Functioning States**

The AusAID program acknowledges that a functioning state with appropriate and effective mechanisms of government is an essential basis for prosperity and that sound public policies and institutions are essential for growth and development in developing nations.

- **Investing in People**

The AusAID program recognises that high standards of health and education for the peoples of developing nations are necessary to provide the opportunity for all citizens, particularly the poor, to participate in the economy and benefit from economic growth. This program also recognises that a healthy and educated society improves the productivity of the local workforce and leads to better informed citizens with the capability to demand better performance from their governments.

- **Regional Stability and Cooperation**

The AusAID program recognises that cooperation between nation states is essential to address trans-boundary threats such as pandemics, natural disasters and international crime

and also to ensure countries benefits from opportunities that require trans-national economic integration.

Overarching these four themes is a fifth theme of gender equality in developing nations.

Australia, particularly the States of Western Australia and Queensland, host substantial minerals and petroleum industries with exploration, extraction, processing and logistics operations in a range of commodities including gold, nickel, iron ore, minerals sands, copper, zinc, lead, thermal and metallurgical coal, rare earths, uranium and natural gas. Supporting this industry is a robust and diverse mining services sector and a solid and effective economic, regional and social development and environmental policy and regulatory framework at a local, state and federal government level. Australian governments and industry have extensive experience in bilateral trade agreements and foreign direct investment programs relating to the many minerals and petroleum projects that operate in their jurisdiction.

Australia's higher education and research sector plays an important role in addressing the future knowledge and technology needs of the nation's minerals and petroleum industries, training technical and management professionals for those industries and providing thought leadership on economic, social and environmental policy pertaining to those industries.

AusAID has long recognised the opportunity to better leverage from Australia's industry, government and higher education expertise in the minerals and petroleum industries to deliver economic development programs designed around its core aid themes. The main focus of this activity has been the Australian Mining Awards Program, under which scholarships are provided to students in developing nations to study mining related fields at Australian universities.¹ Historically, the Australian Mining Awards Program has focused primarily on South East Asia, Latin America and more recently, developing nations in Africa.

AusAID's proposed Sustainable Mining Initiative plans to expand AusAID initiatives in the minerals and petroleum industries in developing nations, particularly in Africa, where approximately two-thirds of African nations host operational mining activities², and many more African nations are prospective for a range of minerals.

The proposed Sustainable Mining Program is comprised of the following components:

- **International Mining for Development Centre (IM4DC)**
The main focus of the proposed IM4DC is the provision of practical advisory, education and training services to developing nations across a broad range of mining related issues and is the focus of this Activity Proposal.
- **Linkages Program**
The Linkages program will enable federal and state agencies and universities to work with developing nation counterparts to improve capacity in mining.

¹ There are currently students from developing nations enrolled in mining related programs at 10 Australian universities under the Australian Mining Awards Program.

² AusAID (2010), *Looking West: Australia's Strategic Approach to Aid in Africa (2011-15)*, Australian Government, Canberra

- **Australian Mining Awards**

The Australian Mining Awards is an existing program that provides scholarships for undergraduate and graduate students to study mining related fields such as engineering, geology and public administration at Australian universities.

- **Community and Social Development Program**

The Community and Social Development Program will support non-government organisations (NGOs), and/or multilateral institutions already supporting activities relevant to mining in fields such as community development, social responsibility, environmental sustainability, conflict preservation and occupational health and safety.

- **Economic Capacity Building Program**

The Economic Capacity Building Program will provide technical assistance in the development of extractive industry and macroeconomic policy frameworks as well as support for developing countries to negotiate contracts with industry. This will be delivered through contributions to the International Monetary Fund (IMF) and World Bank trust funds.

- **Revenue Transparency Program**

The Revenue Transparency Program will assist developing nations capture and mobilise their natural resource wealth via supporting developing nations to implement the Extractive Industries Transparency Initiative (EITI)³.

1.1. IM4DC Partner Universities' Engagement with AusAID's Programs

The IM4DC partner universities will continue to engage across the broad spectrum of education and research funding programs offered by the Australian Government including the elements of the Sustainable Mining Initiative (above). The IM4DC will maintain an awareness of international development research and education activities related to minerals and energy across the two universities and draw upon that knowledge and expertise as appropriate. The IM4DC seeks AusAID's cooperation in this, to ensure that IM4DC is aware of newly funded projects and activities.

1.2. Mining Industry Development Assistance Landscape

Whilst there has been a long history of development assistance for minerals, a great deal of the historical work has been less than optimal because it was seen as being too targeted towards the business growth goals of the donor country. The IM4DC represents a shift in paradigm. Care has been taken to investigate and understand the features of other programmes that have been less than optimally successful to ensure that the IM4DC distinguishes itself. The IM4DC management will have an ongoing scanning process in place to continue to avoid sub-optimal practices and equally to learn rapidly from other successful programmes. IM4DC is focused on delivering outcomes that will benefit Australia through the benefits that accrue to the receiving countries.

³ The Extractive Industries Transparency Initiative (EITI) is a coalition of governments, companies, civil society groups, investors and various international organisations that is endeavouring to improve governance in resource rich countries through the verification and full publication of company payments and government revenues from oil, gas and mining activities.

1.3. Harnessing the Minerals Wealth of Developing Nations

Many nations for which AusAID provides ODA possess considerable minerals and petroleum endowments and/or regions that are highly prospective for minerals or petroleum resources. These resources present those nations with an opportunity to accelerate economic development and transfer those resources into industries that provide employment and prosperity for the peoples of those nations well into the future.

However, for this to occur, there are three inter-related essential ingredients:

- A competent and transparent system of industry governance and regulation;
- Mechanisms for community and environmental sustainability; and
- Expertise and technology that facilitates operational effectiveness.

1.3.1. Minerals Industry Governance and Regulation

To ensure that a minerals and/or petroleum industry is able to provide prosperity to the peoples of a developing nation the goal of the governance and regulation system should be to develop and maintain a sustainable and well governed mining sector that effectively garners and deploys resource rents and that is safe, healthy, gender and ethnically inclusive, environmentally friendly, socially responsible and appreciated by surrounding communities.

The establishment and maintenance of such mechanisms of government is a significant, but necessary task for developing nations.

Key Issues

Attracting private sector investment in the development of minerals and petroleum resources requires an equitable and transparent system of ‘pegging’ and bidding for exploitation rights. Investors need to be comfortable that they can explore, claim, preserve and appropriate rights over prospective resources and that the system that supports this activity is stable and transparent.

The attraction of Foreign Direct Investment (FDI) for the purposes of developing minerals and petroleum resources and the necessary infrastructure to exploit those resources requires transparent and stable government and systems of taxation. Most developing nations own their minerals resources and provide the private sector with a license to extract, process and market those resources under a system of royalty payments. Royalty payments are usually an ad valorem tax and are an essential mechanism for ensuring that value from the State’s resources can be appropriated for the peoples of that State. Royalty and other taxation systems must be competitive, transparent and predictable to attract optimal FDI. They must also be adequate to ensure that the State appropriates fair value from its resource endowments.

The cyclical nature of commodity markets means that governments require plans and systems for the re-investment of royalty revenues in the long-term financial security of the nation. Large windfalls that are obtained by governments during commodity up-cycles need to be preserved or invested in other economic activity that will continue to provide prosperity to the nation during commodity down-cycles. Such policy may involve the establishment of a sovereign fund or the re-investment of royalties in other potential national industries. In practice, the implementation of such policy for developing nations can be problematic, simply from the perspective that there are many competing needs for the revenues acquired through the royalty systems, including basic civic

infrastructure. Royalty and taxation systems also need to facilitate fiscal flexibility so that the industry remains competitive in commodity down-cycles and other adverse economic conditions so that the industry continues to contribute to the national economy during weaker economic times

Effective marketing of mineral resources can often involve multi-lateral agreements between the nation hosting the resources, the company extracting the resources and the customer, which can be a nation or a corporation. These are complex arrangements that regard the medium to long term value of the resources and as such require careful planning for the national interest. These arrangements are particularly important for land-locked developing nations that are most prevalent in Africa.

Developing nations will often seek additional investment from minerals and petroleum Multi-national Companies (MNCs) when developing a project. This may include investment in assets that are directly related to the project such as energy or transport infrastructure, but may also involve negotiation to establish infrastructure that is not directly related to a project such as schools and hospitals. They may also include access to research, technology and expertise and the training of indigenous staff. Infrastructure is a particular challenge in Africa due to physical challenges such as altitude, few navigable rivers, large areas of high precipitation and a large number of land-locked states, as well as social challenges such as civil unrest.

Large minerals and petroleum projects may require specific regulation in order to be established. In the context of Australia, such agreements are referred to as 'State Agreements' and are designed to facilitate the special circumstances of a particular project and to accelerate the project's development, where the project is considered to be a significant contributor to the State's interests and would be unlikely to proceed within an acceptable timeframe without special conditions. These are complex arrangements that need to take into account medium-to-long term development, environment and community interests.

Minerals and petroleum MNCs are primarily attracted to world-class resources (large, low cost resources). However, most regions host a range of deposits in terms of size and grade. For developing nations to optimise resource rents from their minerals systems, government policy should facilitate participation by mid-tier mining companies, including those that are 'home-grown'. This involves a policy-framework that promotes entrepreneurship and provides access to appropriate capital markets.

An important component of established minerals and petroleum industries are instruments of collaboration. Such instruments include peak industry bodies and other organisations and associations that represent various stakeholders. These instruments serve to provide industry direction and leadership and to ensure that various stakeholder interests are represented in policy making.

While state-owned resources companies are becoming less prevalent they still operate in some developing nations. It is important that a level playing field exists with respect to competition between the state-owned enterprise and private sector industry participants and that the returns from the state-owned enterprises are invested in the national interest.

A key focus of resources industry regulation in developing nation should be improving occupational health and safety. Resources industry related fatalities are highest in developing nations, primarily as the result of relatively low Occupational Health and Safety (OH&S) standards and capacity. Optimal standards require methodologies and technologies that are often beyond the reach of local operations and are not mandated by local regulations.

Finally, ensuring the long-term competitiveness of the developing nation's resources industry is a competent macro-economic fiscal and monetary policy that underwrites and continues to attract FDI and grow the local industry in the interests of the nation. Effective fiscal and monetary management of economic cycles is key for developing nations where the resources industries are the dominant economic contributor as the potential impacts of 'Dutch Disease' can be devastating to the economies of developing nations.

1.3.2. Community and Environmental Sustainability

The development of a mining industry will inevitably involve both natural conflicts with local communities and environments as well as opportunities to enhance local communities and environments. Government policy and regulation needs to ensure that conflicts are minimised and opportunities are harnessed.

Key Issues

Minerals and petroleum projects present communities with considerable employment and quality of life opportunities. However, systems need to be in place to ensure a high level of local indigenous employment and engagement with the project and to ensure that investments are made in community infrastructure. This can range from simple investment in community infrastructure such as health and education capacity to integrated community employment and ownership opportunities with the project.

Small-scale informal mining (also called artisanal mining) has a long history in many developing nations and serves as an important source of income for many rural communities in developing nations. The preservation and enhancement (particularly from an environmental perspective) or meaningful replacement of this important source of community income is a key concern for development in developing nations.

The presence of mining activities in areas used for other agriculture and other community purposes can apply pressure upon shared resources such as water. The application of leading practice knowledge and processes around water management and accounting will assist developing nations in preserving the integrity and quality of groundwater supplies, including potable water supplies, and manage conflicting demands for limited water resources.

The conservation of biodiversity is a complex issue from both a political and scientific perspective that requires the application of scientific expertise that often doesn't reside in the developing nation, together with efficient and transparent conservation policy.

Minerals mining and processing operations produce a range of waste streams that are potentially damaging to the environment and toxic. The effective processing and management of these streams is critical from an environmental and human health perspective.

Most MNC's and many smaller resources companies have sophisticated corporate social responsibility and environmental policies. Governments of developing nations need to ensure that these policies are practiced by companies operating in their jurisdiction and that local companies adopt similar policies.

1.3.3. Operational Effectiveness

The generation of exploration information, the deployment of effective project development methodologies, extraction and processing systems and logistics processes are critical to economic development of a nation's minerals resources. Much of the technology and expertise to achieve this are not resident within developing nations and developing nations rarely have the in-country research and development capability to develop the necessary technology and expertise.

Key Issues

The main attraction of developing nations to the international mining industry is that their mineral systems are relatively under-explored when compared to more developed minerals provinces. This means that mining companies are more likely to discover new, large low cost resources that are less technically complex in developing nations than they are in developed minerals provinces. However, in most developing nations limited competent geological mapping information (pre-competitive geological data) exists. The establishment of a basic geological survey will significantly enhance opportunity for the development of a resources industry and will also provide the government of that country with a better understanding of the nation's potential mineral wealth.

Every minerals system offers unique exploration, mining and processing challenges. Variability in indicator minerals, depth of transported or in-situ cover, bedrock density and topography offer different challenges to exploration. Depth of deposit, hardness of bedrock, water table levels, geomechanics and other factors present different extraction contexts and different mineralogies present unique processing challenges. The expertise to address these technical challenges rarely exists in developing nations.

While in the short-term this expertise and technology will be imported, typically foreign companies operating in the jurisdiction, a goal of developing nations should be to develop in-country expertise and technology through knowledge transfer and eventually, local research and development capability.

2. Foundation Members

The IM4DC will be a joint venture between The University of Western Australia (UWA) and The University of Queensland (UQ), established under a grant agreement administered by AusAID. The two universities collaborate under a letter of agreement dated October 2009 (**Appendix 2**), which recognizes the mutual benefits to be derived from closer research collaborations between the two institutions⁴. The major areas of collaboration include physical sciences, minerals and energy, biomedical and health sciences, natural resource management and history and cultural studies.

2.1. The University of Western Australia

UWA is recognised internationally as a leading university. As Western Australia's leading university, UWA was rated second overall in Australia by the Good Universities Guide 2011 based on key performance measures such as graduate starting salaries, employment prospects, staff qualifications, research intensity and student demand.

UWA's strong research record is reflected in the Jiao Tong Shanghai ranking of 110th for 2011, and achieves excellent rankings on the Commonwealth government's Learning and Teaching Performance Fund. UWA consistently ranks in the top 10-18 universities in the Asia-Pacific region.

UWA is the only Western Australian university to belong to the Group of Eight – a coalition of the top research intensive universities in Australia – and it is one of only two Australian universities to belong to the Worldwide Universities Network, a partnership of 16 research-led universities from Europe, North America, North Asia and Australia and also a member of the Matariki, a new international network of high-quality universities across seven nations.

UWA's students benefit from the strong knowledge base and experience of teaching staff, many of whom have substantial international experience.

The University's strong foundation in research and teaching creates a scholarly environment, which promotes the pursuit and rigorous critical interpretation of new information as well as the acquisition of knowledge.

Apart from regular delivery of information (lectures, tutorials, supervised research, field trips and student placements), the University also provides students with opportunities to apply their knowledge on collaborative projects with business, industry, government and the wider community.

UWA students are involved in more than 75 student exchange or study abroad programs in North America, Asia and Europe

Comprehensive learning programs for undergraduates and postgraduates are offered across nine faculties and the School of Indigenous Studies. UWA's offshore teaching programs are attended by more than 700 students in Asia, including Singapore, China, Hong Kong, and the Philippines.

The University has a strong commitment to excellence and this underpins all its activities, particularly in the areas of teaching and research. UWA is responsible for almost 70 per cent of

⁴ A bilateral program offers project awards for collaborative projects between the institutions:
<http://www.research.uwa.edu.au/staff/funding/uwa-uq-award>

university-based research and development in Western Australia, attracting researchers of international standing, many of whom are working in the numerous research centres at the University. These academic leaders, including Nobel Laureate Professor Barry Marshall, pass on their knowledge and excite students to learn.

While research covers the full range of disciplines within the university, UWA's specialist areas include:

- exploration, production and exploitation of minerals, oil and gas
- management of agricultural and natural ecosystems
- the humanities and social sciences
- health and bio-medicine
- genetic epidemiology
- indigenous issues
- information technology, telecommunications and computer science
- international management and business studies.

UWA's International Linkages and Capability in Developing Nations

UWA's mission and objective are distilled and encapsulated in its overarching vision statement 'Achieve International Excellence', with the primary mission:

To advance, transmit and sustain knowledge and understanding through the conduct of teaching, research and scholarship at the highest international standards, for the benefit of the Western Australian, Australian and international communities.

The University thinks globally in preparing its students to be citizens of the world. Formal agreements with nearly 230 institutions around the world provide a spirit of internationalism and these partnerships promote a lively exchange of staff, students, knowledge and ideas. UWA teaches several programs offshore in Singapore, Hong Kong, Manila and Shanghai.

In 2011, UWA welcomed 23,292 students to its academic programs, 5,253 of whom are international students. The Crawley campus is a multi-cultural and multi-faith community which includes students from 90 different countries.

UWA has a long history of international engagement with developing countries on a wide range of issues. The University is a registered content provider with AusAID and has a long established relationship as a high performing institution that meets all the key performance measures (KPM) in relation to the AusAID training provider contract and scholarship management. The Australian Development Scholarships and Australian Leadership Awards Scholarship student numbers studying at UWA fluctuate between 75 to 90 per year with 70% of students studying Masters Degrees and 25% students studying PhDs. Major student cohorts represented include Indonesia, Iraq and Africa.

The University offers highly proactive planning processes focused on providing innovative courses with a clear focus on the outcomes of the course, and subsequent activities by the participants in their home workplace. With the support of ACIAR, AusAID, the World Bank, government organizations and NGOs (in public-private investment partnerships) with training and associated mentoring has been used to bridge the challenges of working in risky and challenging environments.

These activities all involve close collaboration with in-country partners for logistic, technical and demonstration activity support.

UWA builds indigenous capacity internationally in engineering (offshore and onshore, tailings, safety, infrastructure, curriculum design), resource economics, health (HIV), community infrastructure (such as sanitation and water, food (fish stocks) and sustainability projects including conflict resolution, economic and gender equity), agriculture (through plant and livestock breeding), environment such as forestry studies, land contamination, water and geosciences in countries such as Ghana, Burkina Faso, South Africa, Vietnam, Timor Leste, Mali, Senegal Tanzania, Zambia, Iraq, Iran, Nepal, Malaysia, Lao PDR, Niger, Syria, Eritrea, Jordan, Egypt, Chile, Cambodia, Indonesia, Spain, China, Kenya, PNG, Pakistan, India and Brazil.

The University is working toward further expanding its international development through education and research activities and is looking to deepen existing partnerships with relevant agencies, organisations and international communities in pursuing this objective. In addressing international developmental issues, universities play a critical role in delivering high quality education and research outcomes and in providing independent research and advice for policymakers and international development practitioners.

WA's minerals industry and UWA

Western Australia is one of the great mineral provinces of the world and hosts 540 commercial mineral projects with 968 operating mine sites that produce over 50 different minerals. It also supports large and diverse exploration and mining services sectors.

The value of Western Australia's mineral and petroleum industry reached a record \$91.6 billion in 2010. Iron ore remained the State's most valuable resource in 2010 accounting for \$48.5 billion or 53 per cent of all mineral and petroleum sales with strong results also recorded for the petroleum and gold sectors.

By combining the University's strengths in medicine, engineering, policy and other disciplines, UWA's researchers are working to ensure that energy and minerals endeavours take into account the well-being of both industry and society and better understand all perspectives of the complex business of resources.

The modern minerals industry is part of the knowledge economy, energy and minerals industries are users of highly developed technology, the industries are knowledge-rich and sophisticated. This University is committed to partnering with industry and government in developing countries to produce expertise to fill key roles in taking these industries forward into the 21st century.

Energy and Minerals Institute at UWA

The UWA progresses much of its comprehensive international agenda through the Energy and Minerals Institute (EMI). The EMI is a network institute which draws together the minerals industry related experience and expertise across the University's 10 Faculties and more than 30 Schools to provide a comprehensive response to complex problems, and a gateway for external engagement to leading researchers on innovative solutions. Through the EMI, UWA is a key stakeholder in Western Australia's growth as a globally significant minerals and energy destination.

The EMI is guided by a Board of Trustees with extensive minerals industry and international experience. The themes of oil and gas, minerals and mining, business leadership and international relations are reflected in the expertise brought by the Institute's board. The board ensures minerals industry related intellectual leadership and cutting-edge research conducted at the University are transferred to industry, government and the community.⁵

Knowledge transfer for UWA is delivered through multi-tiered capacity-building programs for government, community and industry through the AIMS-Alliance at UWA Business School (such as the Rio Tinto Asset Management Professional Development Program covering 12 programs for more than 200 Managers through the School of Mechanical and Chemical Engineering and the UWA Business School). With respect to language training UWA's Centre for English Language Teaching (UWACELT) has extensive experience designing courses for groups of sizes varying from four to more than 180 participants for durations from three days to several months⁶.

UWA partnerships with global corporations support the University's objective to take education and research to a new level and ensure that Western Australia and Australia are recognized as an international hub of excellence in all disciplines related to the resources sector. This is reaffirmed by the Australia Africa Mining Industry Group review showing that in addition to the size of the Australian mining industry involvement in Africa, Australian resources companies have influence and impact that far outweighs the effects and presence of other players in the region.

The EMI will continue to organise high-level conferences and colloquia on relevant topics such as the successful "In The Zone" Conference of 2009, to be repeated in 2012⁷.

The EMI will provide the IM4DC with access to the University's resources, enabling it to deliver practical advisory, education and training services to developing country governments across a range of mining issues and also ensure the following:

- Offer independent expert advice to the Australian government.
- The ability to achieve maximum outcomes to the developing countries through skilful management of national programs by drawing on a range of wider Australian expertise and facilitate partnerships with government, the private sector and other relevant organisations.
- Reinforce Australia's position as an international hub of excellence in education, training, research and leading practice in all disciplines related to the resources sector.

2.2. The University of Queensland

The University of Queensland (UQ) is one of Australia's premier learning and research institutions, ranked third in Australia and 86th in the world in the prestigious 2011 Academic Ranking of World Universities. Since its establishment in 1910, UQ's graduates have become leaders in all areas of society and industry. Today, UQ has almost 44,000 students across its four main campuses in southeast Queensland. With staff and students from more than 134 nations, UQ values and celebrates its multicultural community.

⁵ <http://www.emi.uwa.edu.au/institute>

⁶ <http://www.celt.uwa.edu.au/courses/groups>

⁷ <http://www.zone.uwa.edu.au>

UQ is ranked in the top 1% of the world's university rankings and aims to create an environment for staff and students to make deeper connections with global problem solving. To assist this aim, UQ's mission is:

'To connect with the global community and address issues that affect today's world, enabling students and staff to influence the societies in which they live.'

UQ is one of the three Australian Members of the global Universitas 21 alliance, a group established in 1997 that aims to enhance the quality of the university's outcomes through international benchmarking. Additionally, UQ is a founding member of the national Group of Eight (Go8), comprising of leading Australian universities, intensive in research and comprehensive in general and professional education.

UQ's *Global Strategy and Internationalisation 2011* embeds internationalisation through the University to continue to attract outstanding staff and students to deliver internationally to the state, national and global context. This strategy will build upon UQ's ability to broaden and deepen international linkages.

UQ's internationalisation agenda is embedded within the three key themes of the University's strategic plan: learning, discovery and engagement:

- Learning: The internationalisation of our curricula enables our students to develop the knowledge, skills, attitudes and habits of global-minded citizens.
- Discovery: Our research institutes and faculties bring together the best minds from around the world to tackle issues of global significance
- Engagement: Inclusion and impact are the key principles driving engagement strategies at UQ.

UQ has linkages with tertiary and government bodies throughout the world including South-East Asia, Asia Pacific and South America. The strong involvement within these communities assists UQ's students to make international breakthroughs and to influence policy and decision making.

UQ has obtained an international reputation for teaching quality and in 2010 was ranked 43rd in the QS world University Rankings and was named top international academic institution outside the United States in The Scientist magazine's Best Place to Work in Academia.

Consisting of Faculties in the area of Arts; Business, Economics and Law; Engineering, Architecture & Information Technology; Health Sciences; Science and Social & Behavioural Sciences, UQ delivers over 350 degree programs at undergraduate and postgraduate levels.

UQ's programs vary greatly in design, allowing students to gain a competitive edge in their chosen fields. UQ's range of postgraduate programs equips students with the skills and knowledge required to meet emerging workplace and career challenges across a range of disciplines.

Nationally, UQ has been rated world standard in more broad fields of research than any other Australian university by the Excellence in Research for Australia (ERA) Assessment 2010.

The eight research institutes within UQ are recognised on an international scale. These institutes attract scientists, researchers and commercialisation experts from across the globe and lead the way in world class research in their areas of expertise.

UQ's rich history of engagement with the minerals industry has been mutually beneficial for companies and the University. UQ attracts gifted students from Australia and abroad, provides world-class education at both undergraduate and postgraduate levels and delivers young professionals who are highly sought after by the industry.

Industry, government and the University have co-invested significantly in UQ's capacity to deliver high quality education, research and professional development programs.

UQ has worked in close partnership with resource companies for 60 years and has become one of the world's leading universities in disciplines of importance to the industry.

UQ estimates it has over 500 research academic staff working in areas related to minerals and energy. These staff spread across the University with primary foci in the Sustainable Minerals Institute (SMI), The Australian Institute for Bioengineering and Nanotechnology, in the School of Chemical Engineering, School of Mechanical and Mining Engineering and in the UQ Business School. SMI will lead UQ's activities in the IM4DC and will ensure that relevant expertise is drawn from across UQ to maximise the strength of the IM4DC's activities.

The Sustainable Minerals Institute

SMI is one of UQ's eight internationally significant research institutes. SMI is an initiative of industry, The University of Queensland and the Queensland Government to boost capacity in research and education in sustainable development in the minerals sector. SMI aims to participate in the transition of global mining and minerals recovery to a new level of performance and societal acceptance by being a world leader in providing knowledge-based solutions to the sustainability challenges of the global minerals industry.

SMI delivers research-based solutions to all facets of the life of mine. SMI's work covers geology, minerals extraction, water management issues, minerals processing, workplace health and safety, mine rehabilitation and community engagement. With disciplinary roots in production, environment and people, SMI has experience in minerals research, education, consulting and commercialisation. SMI today is unique internationally in its discipline breadth across engineering, science and social sciences, with over 300 staff and students working across six inter-related research centres. SMI has 104 currently enrolled research higher degree students, around half of whom are international students with a high proportion coming from developing regions. Two current students are supported through AusAID scholarships with another three AusAID-supported students soon to begin.

2.3. Core Capabilities of the Partners

2.3.1. The Energy and Minerals Institute at the University of Western Australia

EMI is the international gateway for industry and government to connect with UWA's research projects, leading international academics and thinkers and education in the fields of energy,

minerals and mining. The EMI creates opportunities for key UWA researchers from across the disciplines to collaborate on issues of significance and challenge to the resources industry resulting in creative solutions to complex issues and the formulation of sound policy to assist government in informed decision making. The EMI aims to build on UWA's position as a leading research and academic institution in the areas of energy and minerals nationally and internationally.

A selection of key centres outlined below (of more than 50 UWA Centres) illustrates the transfer of technology to community, government and industry:

1. Centre for Water Research

Established in 1981 and offers high-level research and consulting into natural aquatic systems comprising catchments, groundwater basins, wetlands, rivers, lakes, reservoirs, estuaries and regional seas. CWR's technology is used in the supply of 50% of Australia's water and internationally to service about 50 million people with water. CWR has undertaken projects in over twenty countries and has research partners in Australia, Korea, Singapore, USA, Canada, Germany, Israel, Chile, Argentina, Italy, Columbia and Kenya. CWR is currently working on projects including Lake Victoria (Kenya) Pilot Study on Hydraulic Conditions over Rusinga Channel and Winam Gulf and the Development of a Mathematical Model for the Upper/Middle Tiete River Basin (Sao Paulo, Brazil). The School of Environmental Systems Engineering through The University and Engineers Without Borders has led AusAID projects over the last 5 years working to build capacity in East Timor for local training in the water and sanitation sector. UWA through the Australian Water Research Facility (AWRF) and International Water Centre (IWC) have built relationships with the National University of Timor Leste (UNTL) and the Dili Institute of Technology (DIT).

2. Australian Centre for Geomechanics (ACG)

Established in 1992 is a joint venture between UWA, CSIRO and Curtin University. The ACG presents eight to ten events and courses per year for the worldwide mining industry. The symposiums, seminars, courses and workshops place particular emphasis on technology transfer, as well as on bridging the gaps between the disciplines of geotechnical engineering, mining engineering and structural geology. More than 6500 mining professionals have attended an ACG event or course.

3. WA Energy Research Alliance (WA:ERA)

Established 2004 is rapidly developing into one of the world's leading and easily accessible, oil, gas, and alternative and renewable energy research organisations. WA:ERA combines the multi-disciplinary expertise of three established research institutions: UWA, CSIRO and Curtin University. WA:ERA provides premium quality research and technology based solutions and education services to address challenges concerning the discovery, development, recovery, transportation and refinement of subsurface energy sources.

4. Centre for Mining Energy and Natural Resources Law (CMENRL)

Established in 1990 with more than 20 years experience has developed courses in Mining law, Environmental law, Water law, Australian Petroleum Law and International Petroleum law. Attendees are drawn from throughout Australia and from overseas, including Asia, Africa, Europe and the Middle East.

5. Centre for Offshore Foundation Systems (COFS)

Established 1997 COFS provides solutions to worldwide offshore foundation needs by providing highly sophisticated modelling, experimental facilities and the services of one of the largest teams of internationally recognized researchers and consulting engineers in offshore Geomechanics anywhere in the world.

6. Centre for Exploration Targeting (CET)

Established 2006, this Centre is focused on Gold mineral systems, Nickel-PGE mineral systems, Iron mineral systems, Geophysics and image analysis, Progressive risk and value, Strategic projects and other commodities. Since 2009 CET has had over 550 participants both nationally and internationally in the broad areas of resource economics (in conjunction with the World Bank), geology and geosciences. Course topics included: Risk analysis, Financial risk and Real option valuation of mining projects, Ore deposit system, Exploration Targeting, Vertically integrated approach to data handling with specific reference to the application of GIS to a range of minerals industry related analyses including spatial analysis of geochemical data, interpretation of regional geophysics, digital terrain analysis, field mapping, 3D modeling, capture of legacy data, advanced spatial analysis of multiple thematic datasets. The involvement of CET staff in the AMIRA led and AusAID sponsored WAXI and European Union-funded AEGOS projects provides connections with over 40 geoscience organisations in Africa, Australia and Europe.

2.3.2. The Sustainable Minerals Institute at the University of Queensland

SMI is unique internationally in its discipline breadth across engineering, science and social sciences, with over 300 staff and students working across six inter-related research centres. SMI's work covers geology, minerals extraction, water management issues, minerals processing, workplace health and safety, mine rehabilitation and community engagement. With disciplinary roots in production, environment and people, SMI has experience in minerals research, education, consulting and commercialisation.

SMI is truly international in scope, with existing activity across the IM4DC target regions and with strong focuses of research and education activity in Latin America, Asia and the Pacific.

SMI develops and delivers multi-tiered capacity-building programs for government and industry from a range of developing countries, including in-country and Australian short courses and study tours focussed on mineral industry development issues.

SMI has extensive experience in the production of educational materials including handbooks and guides for government and industry across the focus areas of the proposed IM4DC. For example, SMI

provided the chair and/or leading authors for 6 of the 14 Leading Practice in Sustainable Development handbooks co-ordinated by the then Department of Industry, Resources.

SMI also develops and delivers postgraduate coursework programs tailored to the resources sector in several relevant thematic areas including Community Relations, Environmental Management and Risk Management. These have attracted international interest, with students from countries as diverse as Mongolia, Kazakhstan, Trinidad and Tobago, Chile and Peru.

Of particular relevance to this proposal is SMI's expertise and experience in developing and delivering education programs in:

- Human rights, governance, community economic development and community relations (SMI – Centre for Social Responsibility in Mining)
- Cumulative impacts, environmental regulation, management and rehabilitation including water resource management (SMI – Centre for Mined Land Rehabilitation and SMI - Centre for Water in the Minerals Industry)
- Mining safety and health, emergency preparedness and disaster management (SMI- Minerals Industry Safety and Health Centre)
- Leading practice mining and mineral processing including energy and water use minimisation (SMI – WH Bryan Mining and Geology Research Centre, SMI - Julius Kruttschnitt Mineral Research Centre and JKTech Pty Ltd).

Following is an outline of each of SMI's centres, with more detailed information available at: <http://www.smi.uq.edu.au/>

1. Centre for Mined Land Rehabilitation – *environmental and mine waste management and mine closure*

The Centre for Mined Land Rehabilitation (CMLR) is leading the way we think about mining environmental management, focussing on the key issues facing modern mining and minerals processing industries. CMLR is comprised of a team of highly skilled professionals involved in broad research and training projects with mining companies, industry bodies and government departments in Australia and around the world. The Centre provides research outcomes for rehabilitation management decisions, addressing the key issues facing modern mining and minerals processing industries. Current research projects fall into three categories: mine waste and water management; ecosystem development and sustainability; and mine closure planning and post-mining land-uses.

CMLR has considerable experience in international education and training initiatives related to the proposed IM4DC activities. For example, CMLR and coordinated and/or contributed to the 2011 Australia Awards for Africa short courses on occupational health and safety in the resources sector and geospatial information systems. In the Philippines, CMLR has completed an AusAID Public Sector Linkages Program (PSLP) with the Mines and Geosciences Bureau that involved both in-country and in Australia training for government officials. CMLR is currently engaged in a PSLP with the University of the Philippines, University of Southeastern Philippines and Mindanao State University that involves training and engagement projects with academe both in-country and in Australia. Another PSLP proposal, involving Uruguay is currently being assessed. CMLR has in recent

years hosted six AusAID-funded postgraduate research students from Indonesia, East Timor and the Philippines.

2. Centre for Social Responsibility in Mining – *community social responsibility, governance and workforce*

The Centre for Social Responsibility in Mining (CSRM) is a leading research centre, committed to improving the social performance of the resources industry globally. CSRM's focus is on the social, economic and political challenges that occur when change is brought about by resources extraction and development. CSRM is a multi-disciplinary group of anthropologists, sociologists, political scientists, economists, engineers, development, technical and natural resource specialists. CSRM teams with industry organisations, governments and non-government organisations all over the world to undertake short and longer term projects addressing the challenges faced by those organisations. CSRM undertakes exploratory research in emerging areas including cumulative impacts, social risk and methodologies for assessing human rights. CSRM also delivers a range of short-courses to industry, governments and NGO's internationally and develops leading practice guides based on leading research outcomes.

CSRM's industry partners include some of the largest resources companies globally such as Rio Tinto, BHP Billiton, Newmont Mining, Anglo American, Xstrata, BG Group and Vale. CSRM also works with international organisations including; the International Council on Mining and Metals (ICMM), the United Nations Development Program (UNDP), the World Bank, Oxfam and the Responsible Mining Initiative (Mongolia).

The CPD activities in CSRM, further demonstrate the magnitude of relevant existing activity within SMI. In 2010 and 2011, CSRM has or will deliver a combined total of 25 courses to more than 480 participants in Laos, Cambodia, Mongolia, The Republic of South Africa, Chile, Papua New Guinea, Fiji and Solomon Islands. Subject areas include: an introduction to modern mining for government officers; mining industry governance; community relations; preventing and managing community conflict; societal and environmental impacts of mining; and the utilisation of mining revenue for community infrastructure.

3. Centre for Water in the Minerals Industry - *Water management and hydrogeology*

SMI research has led to significant benefits for the mining industry through improved industrial water management practices, a more certain regulatory environment and greater water security. CWiMI conducts systems science and engineering research; working with industry and government to facilitate adoption and technology transfer; and establishing, maintaining and providing access to a repository of knowledge.

WaterMiner is an online information system developed by CWiMI of water management practices coupled to a water and salt balance model. WaterMiner has allowed industry to investigate risks and opportunities associated with various strategic water management decisions on site under different climate conditions. As a result coal mines in Queensland have been able to adopt leading water management practices potentially leading to reductions in freshwater consumption by up to 75 per

cent, and total water use by up to 40 per cent. This can result in significant cost savings for operations with no compromise to production or product quality.

CWiMI has grown considerably in order to address water efficiency and discharge management issues facing the resources sector. CWiMI's ability to deliver outcomes has put it in a national and international leadership role in mine water accounting. CWiMI has previously developed and delivered water management short courses in Africa.

4. Minerals Industry Safety and Health Centre - *mining safety and risk research*

The Minerals Industry Safety and Health Centre (MISHC) was established in 1998 as an initiative of industry and government with a combined desire to improve safety and risk management in the minerals industry. Since its establishment, MISHC has become internationally recognised as a world-class centre of excellence and as the pre-eminent centre for minerals industry risk management education. MISHC integrates risk management knowledge into undergraduate, postgraduate and continuing professional education programs delivered around the world.

Through effective partnerships with industry, MISHC has developed resources that assist with the management of minerals industry safety and health risks. The Minerals Industry Risk Management Gateway portal and the National Minerals Industry Safety and Health Risk Assessment Guideline are key industry resources that are freely available online. MISHC's research group includes world-leading expertise in mine explosives, disaster survivability and worker fatigue management. MISHC has experience developing and delivering education programs in occupational health and safety and risk management for government regulators and inspectors that are highly relevant to this proposal.

5. WH Bryan Mining and Geology Centre – *mining and geology research*

The WH Bryan Mining and Geology Research Centre (BRC) is an applied engineering research centre with research strengths in; rock mechanics, blasting, caving mechanics, energy use in mining and computational modelling. The BRC has developed a number of leading software products that are used by industry to model mining processes.

A major initiative of the BRC is the Mass Mining Technology (MMT) project, which serves an international industry consortium in which member companies openly share and peer-review technical and operational experiences associated with large scale caving methods. As a direct consequence of the quality of the outcomes of the MMT Project, The University of Queensland is recognised as the hub of research excellence in mass mining.

The BRC's research strength in mineral resource analysis is relevant to the IM4DC in relation to building developing nation governments' resource knowledge for mine development and regional planning.

6. Julius Kruttschnitt Mineral Research Centre - *minerals processing research*

The Julius Kruttschnitt Mineral Research Centre (JKMRC) is a world-renowned leader in mineral processing science and technology. For over 45 years it has delivered innovative solutions to the Minerals Industry across a range of commodities. With an outstanding international reputation as an innovator in mining and mineral processing research, the JKMRC is noted for the widespread use of its research outcomes by industry. It is the largest Australian research centre in this field, and collaborates with major mining and mineral processing research groups worldwide. Research is sponsored by most of the major mining companies.

The JKMRC is known for the application of research outcomes to create modelling tools, analysis tools and instrumentation, and designs for new equipment. The principal focus is optimisation of mining and mineral processing operations. The current scope of research extends from exploration geometallurgy to comminution and flotation. JKMRC expertise could be brought into IM4DC courses aimed at developing nation government representatives to build their overall knowledge of minerals processing.

SMI Knowledge Transfer

The largest proportion of SMI's Continuing Professional Development (CPD) activity takes place within SMI Knowledge Transfer, an arm of SMI's commercialisation company JKTech Pty Ltd. For the year to date, SMI Knowledge Transfer has delivered 37 short courses to a total of 953 participants. These courses have been delivered in locations across Australia and in seven other countries, including in South Africa, Latin America and North America. The majority of courses are focused on skills development in leading practice mining and mineral processing with courses focused on environmental and water management issues also delivered. Additionally, SMI runs a range of short courses targeting industry and government agencies related to mine safety and health. In 2011, 16 courses have or will be delivered with approximately 300 participants in total. For the IM4DC, SMI-KT will be a key delivery vehicle for short course activities.

JKTech is establishing a permanent physical presence in Johannesburg, South Africa and Santiago, Chile which will be accessible for the IM4DC to assist with delivery of program activities.

3. International Mining for Development Centre

As a core component of AusAID's proposed Sustainable Mining for Development Initiative, the IM4DC will deliver a range of practical advisory, education and training services to developing nation governments across a range of mining issues relevant to the development context.

The programs formulated in partnership with communities and government and conducted through IM4DC will develop new knowledge and understanding in priority areas that will lead to innovative education and training, new-generation technologies, processes and techniques that build indigenous capacity in areas to ensure the sustainability of mining industries and position Australia at the forefront of providers towards a sustainable future for developing countries.

3.1. IM4DC Overview

3.1.1. Purpose of the IM4DC

Australia's policy objectives will contribute to the vision and mission of the Centre. Across the three core themes of Governance and Regulation, Community and Environmental Sustainability and Operational Effectiveness, the International Mining for Development Centre will:

- support progress toward the United Nations Millennium Development Goals (MDGs) and broader whole-of-government objectives globally ;
- work to establish and maintain sustainable mining sectors in developing nations;
- reinforce Australia's position at the forefront of innovative and best practice mining methods and technologies;
- improve governance and accountability through ethical and transparent regulation and operation in developing nations;
- strengthen economic and social outcomes globally through market reform, education and capacity building in developing nations;
- provide gravitas to Australia's reputation in the resources sector; and
- positively promote the resources sector generally as a major contributor to economic development in developing nations.

3.1.2. IM4DC Framework and Deliverables

The IM4DC deliverables will be determined through an annual planning process and are likely to include:

1. Design and conduct training programs in agreed core themes.
2. Prepare and disseminate reports, practical guides and tools related to contemporary issues in minerals and energy, both for general audiences and tailored for individual countries.
3. Conduct an annual conference on the development aspects of minerals and resources industries.
4. Provide technical advice to the Australian Government.
5. Undertake an action research program within IM4DC's themes and aligned with its education activities.

6. Establish a Visiting Fellowships program.
7. Build and maintain a network of IM4DC alumni.

An initial task of the IM4DC Director, in consultation with stakeholders will be to develop a high level objectives, activities and outcomes map that will finalise the list of deliverables above and provide the framework for annual activity planning.

Figure 1 provides a diagrammatic representation of the framework for IM4DC. Each of the major delivery elements and their relationship is indicated.

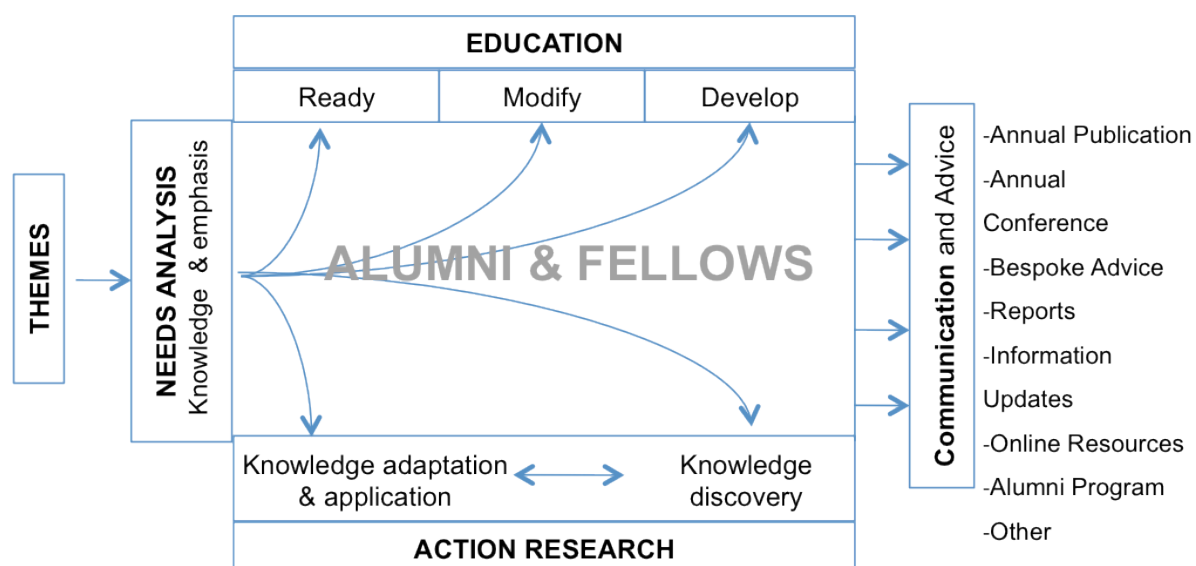


Figure 1. The IM4DC Framework showing the major elements of the Centre and their relationships.

As elaborated below, the IM4DC will focus on three themes, which have been described in terms of requirements to deliver sustainable wealth and quality of life to people in developing nations as a result of discovery, extraction, utilisation and sale of mineral resources. These themes provide a lens through which the needs of developing nations will be assessed against the Australian Government goals for aid. Needs analysis will be an ongoing feature of the IM4DC and will form one plank of the annual activity planning process. It is expected that, over time, the network of alumni and Fellows of the IM4DC will play an increasing role in assisting the Centre management ensure that the program is well focussed and can be delivered with the available skills and resources available. Further, needs forecasting will allow the Centre management to ensure the partner universities and other collaborators are given advanced warning of expertise and content needs to maximise the value of course development and early research definition and establishment.

In response to identified needs, the IM4DC will engage in activities for capacity building in target nations and regions in each of the elements represented in the framework, viz. education, action research, communication and advice.

The education offerings of the IM4DC will fall into three categories of 'readiness'. Given the substantial experience and existing expertise at both UWA and UQ in relation to the IM4DC themes, there are many education offerings that are ready for delivery with minimal adaptation or change

required. There are others where some adaptation or updating is required, for example to make an offering suitable for a specific language or cultural setting or to exploit synergies between UWA, UQ and collaborators. Finally, there will be some subject areas where existing course material is not available and where significant design and development work is required.

The Action Research Program of the IM4DC will focus on the themes. Action research will primarily be undertaken to assist developing countries with implementation and application of existing knowledge. However, it is certain that significant adaptation will be required in each case and this will form the basis of the necessary new contributions to knowledge. The Action Research agenda will also be designed to support education across the 'readiness' categories with emphasis on knowledge development where it is lacking for course design and development.

The final activity element of the IM4DC framework is the activities around communication and advice. These activities are critical success factors because they ensure that those gaining skills and capability through the Centre can capitalise on their new capital and the Centre can grow its influence and impact over time, eventually delivering on the stated outcomes (see below).

The key factor to the success of the IM4DC will be people. Therefore the Fellows and alumni are seen at the centre of the framework assisting with analysis of needs, conducting action research, undertaking and delivering education and, critically, participating in ongoing communication and advice activities.

3.1.3. IM4DC Outcomes

Australia has a strong focus on outcomes with respect to international aid. The ultimate development objective for the IM4DC is to improve incomes, employment, enterprise opportunities and life outcomes for people in rural and urban areas of developing countries including the long term establishment of world class mining industries to boost overall economic development.

The IM4DC has established an initial set of outcomes that are considered to be relevant to demonstrably meeting the overall outcome stated above:

- Transparency indicators showing improvement in partner countries.
- Alumni in positions of influence and see program having value.
- Functioning network of mining.
- Improved policies and practices in partner countries.
- Better legislation in partner countries.
- Partnerships generated that have life beyond/outside the program.
- Centre recognised as centre of subject matter expertise by Australian industry and NGOs, and globally – Centre would actively engage with other universities and institutions of relevant knowledge and use that expertise where it makes sense.
- Improved capability in select universities in partner countries.
- Improved knowledge of the resource base.
- Centre attracts other business.
- Australia is seen as a key influencer of sustainable mining practices in developing countries.

The IM4DC outcomes have been drafted in such a way as to make them amenable to inclusion in a monitoring and evaluation process that is expected to be driven across the mining for development initiative by AusAid. Progress in each should be able to be brought into evidence either through demonstration of examples, e.g., policy implementation in a particular country and/or in numerical terms, e.g., improved transparency indicators.

3.1.4. IM4DC Themes

All IM4DC education, research and communications activity will be centred around three themes.

Theme 1 - Governance and Regulation

In order to ensure that a minerals and/or petroleum industry is able to provide prosperity to the peoples of a developing nation, the goal of the governance and regulation system should be to develop and maintain a sustainable and well governed mining sector that effectively garners and deploys resource rents and that is safe, healthy, gender and ethnically inclusive, environmentally friendly, socially responsible and appreciated by surrounding communities. The establishment and maintenance of such mechanisms of government is a significant and necessary task for developing nations.

Theme 2 - Community and Environmental Sustainability

Many stakeholders, including governments and industry organisations, are seeking to align resource developments with broader societal objectives such as the Millennium Development Goals. Resource developments have the opportunity to make positive contributions to local and regional asset bases, whilst at the same time often bringing associated negative impacts in specific areas. Understanding, managing and monitoring the full range of impacts brought about by resource developments is a key focus for both governments, industry and communities.

Theme 3 – Operational Effectiveness

The deployment of effective project development methodologies, extraction and processing systems and logistics processes are critical to economic development of a nation's minerals resources. Much of the technology and expertise to achieve this are not resident within developing nations and developing nations. Regulators, educational institutions and other industry stakeholders need an understanding of leading practice in these areas across the mining lifecycle in order to implement effective governance systems for developments in their countries. A critical factor for the development of an effective minerals industry which is contributing to a country's development outcomes is the generation and management of public knowledge of mineral resources. This includes the generation of exploration information and management of exploration processes by relevant government agencies, using appropriate technology and tools.

4. Education and Training Program

The International Mining for Development Centre (IM4DC) will deliver a range of practical advisory, education and training services to developing nation governments across a range of mining issues relevant to the development context.

The IM4DC's Education and Training Program is structured around its three key themes:

- Theme 1 - Governance and Regulation.
- Theme 2 - Community and Environmental Sustainability.
- Theme 3 - Operational Effectiveness.

Education will draw upon existing expertise and materials developed within the IM4DC partner universities to enable delivery of some courses in the near future. The IM4DC will also draw upon the IM4DC Action Research Program, Visiting Fellow Program and course development activities to adapt and apply existing knowledge to new contexts, and to develop new knowledge for courses to be taught in later years of the IM4DC. The Education and Training Program will also be informed by an early needs assessment activity focused on IM4DC target nations and regions.

The proposed Education and Training Program will assist in addressing the need for an increased number of personnel skilled in resources related issues for the development of emerging resources industries in developing countries.

This proposal will create opportunities to unite Australian educators and researchers with developing nation partners in education and research. The IM4DC will build partnerships with local education providers so that parts of the program can be delivered in-country with involvement from local universities, thereby establishing a long term capacity to support local governments and resources industries.

4.1. Key Outcomes

Through its Education and Training Program, the IM4DC will transfer knowledge to current and future key decision-makers in industry and governments in developing nations. Key outcomes from the program include the following:

- Increased participant understanding of key issues across all themes of the IM4DC.
- Policy developments relating to resource development that reflect leading practice.
- Regulatory frameworks that enable countries to maximise the benefits of resource development for local and regional communities.
- Well-developed systems for managing resource knowledge .
- Increased capacity within in-country academic institutions to deliver educational programs in relevant areas.
- A network of participants able to engage and provide support across regions.
- Continued engagement by participants with the IM4DC program.

Both UWA and UQ draw on extensive existing experience in formal education and short course delivery across the three themes described above. In addition, both institutions have established partnerships with domestic and international academic institutions to supplement capacity in specific areas. The program proposed by IM4DC consists of courses delivered both in Australia for participants from all target regions, as well as in-country delivery.

- Australia-based courses – these will be flagship events, based mainly in Perth and Brisbane, but incorporating field elements and/or a study tour component in order to provide participants with exposure to Australian resource development contexts. The duration of courses would be from several days to several weeks. The potential to link courses with relevant Australian conference events (e.g. the annual IM4DC conference, Life of Mine 2012, and Mine Closure 2012 amongst others) as a method of reducing mobilisation costs and increasing learning and building participant networks would also be pursued where practical. These courses will normally be delivered in English as UQ and UWA experience has shown that increasing English language skills is an attractive feature of such courses for participants. Further, participants will be offered the opportunity to build upon their own English language skill level through attending a language course prior to the IM4DC event. Such courses are delivered at both UQ and UWA.
- In-country courses – these will be co-ordinated with a partner institution in the host country, and will typically be of a duration of one week or less. Participants will be targeted from host countries and regional neighbours, and relevant context built in to course content with assistance from the local partner. One long term aim of such activities would be the development of local capacity to deliver and update appropriate material on an ongoing basis. Course content will be delivered primarily in English with translation services present as appropriate. Involvement of local partner universities will also assist with running translation of technical information during courses.

Teaching and learning approaches will include a blend of activities, with a focus on participatory workshops to allow participants to share experiences and articulate the challenges they face in their own countries. Opportunities will be included for input from government and industry practitioners in addition to relevant experts. Both universities also have well-established e-Learning platforms which will be used to provide additional information and material pre- and post-workshop.

The courses of the IM4DC are non-accreditation courses that do not lead to a degree or formal qualification from the partner universities. The courses draw on material used in for-credit university programs but have been reformatted to suit short-course delivery.

The range of relevant courses currently delivered across both UQ and UWA is extensive which provides a significant advantage for the IM4DC by enabling a rapid start-up in Year one.

The following model helps to illustrate the level of ‘readiness’ of existing courses to be delivered through the IM4DC. Through this model, courses are classified as:

- **Ready** – could be deployed to most contexts with minimal adaptation required, mainly local case study material (could be run in year 1 of IM4DC).
- **Adapt** – significant resources already in place, could be adapted with some additional inputs (could be run from year 2 onward).

- **Develop** – Significant work required to develop new material to suit context (might be ready for year 2 or later years).

As described in more detail in the coming pages, the IM4DC's year one program will be comprised of highly relevant courses that sit within the 'ready' category. Year one will also involve further development of courses sitting in the 'adapt' category which will be delivered from year two. Activity to develop new courses based on the findings of the needs analysis work and outcomes of the Action Research Program will also commence from year one. This will ensure that IM4DC education course offerings present relevant, targeted and up to date information that is aligned with the topics most critical for target nations.

The Education and Training Program will also take into account other relevant education activities, including for example the current program of mining-related courses within the Australia Awards for Africa Program. Wherever possible, the IM4DC will seek to exploit synergies, build on existing activities and avoid duplication.

4.2. Course Information for Year One - 2012

The proposed program for Year 1 consists of six courses to be run within Australia, and a further four in-country courses to be run off-shore. The proposed courses are all drawn from the 'ready' category in the model described above. They have all been delivered previously and course materials are in place, requiring only minor updating before delivery as IM4DC courses.

These courses are targeted at government participants and cover a range of highly relevant topics. Course descriptions for each of the six in-Australia courses and four in-country courses are presented on the following pages. In summary however, the courses include:

- In-Australia
 - Sustainable development in the mineral industry context
 - International rural development
 - Introduction to mining law
 - Regulatory frameworks for managing sustainable resource developments
 - Understanding and managing cumulative impacts in resource regions
 - Introduction to mineral systems and exploration targeting
- In-country
 - Leading practice water management and accounting for the resources sector
 - Building productive community relationships for the resources sector
 - Introduction to management of mine site pollution
 - Introduction to mine closure

The 2012 course list will be reviewed by IM4DC management and the IM4DC Advisory Committee once operational. If that review and the findings of initial needs analysis indicate that the content and mix of courses proposed for 2012 does not best meet the needs of target nations, the program

will be adjusted before being finalised. The IM4DC partners have a suite of other courses that are also 'ready' to be delivered if any adjustment to the course list for 2012 is indicated.

Courses to be delivered in Australia in year 1

Working title of activity/program	Sustainable Development (SD) in the Minerals Industry Context
Name of coordinating organisation	SMI – All Centres
Target audience for activity/program	<ul style="list-style-type: none"> • Senior regulators with resource management accountability • Academics in Universities with mineral industry teaching and resource focus • Representatives of non-government stakeholder groups
Aim and objectives of the activity/program	The aim of this course is to provide an overall framework for the way in which sustainable development is being approached and implemented by stakeholders in the resources sector.
Intended outcomes of the activity/program	<ul style="list-style-type: none"> • Increased understanding of the emergence of SD as a framework for analysing resource developments • Knowledge of theoretical SD frameworks • Knowledge of key industry and government standards such as ICMM Framework, IFC Environmental and social standards. • Ability to relate resource development to SD principles.
Course Design	<ul style="list-style-type: none"> • The program is designed as an interactive workshop, with presentations from government, industry and academic experts in various aspects of the subject.
Proposed number of participants	20 participants
Planned duration of activity	Two weeks including <ul style="list-style-type: none"> • 5 days classroom-based activity including guest presentations from academics, government and industry representatives • 5 day field trip
Proposed timing of activity (month/year)	<ul style="list-style-type: none"> • Potentially aligned with planned activity around the International Geological Congress in Brisbane, August 2012
Suggested location of activity, including any site visits	<ul style="list-style-type: none"> • UQ • Field trip to coal and metalliferous sites in Central Queensland

Working title of activity/program	International Rural Development
Name of coordinating organisation	Centre for Regional Development, School of Earth and Environment, Faculty of Sciences, UWA
Target audience for activity/program	The attendees comprise representatives of government, academic agencies and non-government organisations.
Aim and objectives of the activity/program	Many of the world's problems require an understanding of the interdependence between human activities and the natural environment. Through the study of the earth's landscapes, peoples, places and environments, and their interactions participants will gain insights into the major challenges facing our planet including population explosion, the growth of megacities, natural hazards, environmental degradation and climate change.
Intended outcomes of the activity/program	This course will provide participants with understanding of the complex nature of the relationships and skills needed to pursue a sustainable future through an understanding of the interdependence between human activities and the natural environment. **Please note this course is delivered in modules and in its entirety is 6 weeks full time but concentration on mine related activities only can reduce the length of the course to two weeks.
Program Design	The Program will be designed around 3 components: <ul style="list-style-type: none"> • Advanced Land Use and Management • Planning and Governance • Analysis for Conservation Planning and Natural Resource Management
Proposed number of participants	20 participants
Planned duration of activity	Two weeks**(10 -days involving morning and afternoon sessions) of intensive learning, each 3 – 4 day period covering a single component.
Suggested location of activity, including any site visits	AIM-Alliance, Business School, UWA

Working title of activity/program	Introduction to Mining Law
Name of individual or organisation submitting this proposal	Centre for Mining Energy and Natural Resource Law (CMENRL) - Law Faculty, UWA
Target audience for activity/program	Representatives of government, academic agencies and non-government organisations, including both lawyers and non-lawyers.
Aim and objectives of the activity/program	This unit would provide an introduction to the fundamentals of mining law, regulation and financial aspects of mining and production.
Intended outcomes of the activity/program	<ul style="list-style-type: none"> • Develop an understanding of mining law • Acquire basic knowledge and skills in financial aspects of mining and project development • Improve skills related to mining governance and regulation such as taxation and state agreements
Program Design	<p>The Program is designed around 3 components:</p> <p>Introduction to Mining Law – where participants will learn the theoretical and operational fundamentals of The Framework of Mining Law, The Constitution, Ownership and Land Open for Mining such as different types of mining – concession/tenement/production sharing</p> <p>Allocation of Mining Rights</p> <ul style="list-style-type: none"> • Mining Tenements and Conditions • Tenement application procedures; including the roles of the Warden and Minister • Applications to commence mining <p>Transfer and Dealings: Registration and Tenement Management– where participants will learn the fundamentals of transfers, commercial dealings with tenements, The registration system</p>
Estimated/proposed number of participants	20 participants
Planned duration of activity	Two weeks (10 days involving morning and afternoon sessions) of intensive learning, each 3 - 4 day period covering a single component.

Working title of activity/program	Regulatory Frameworks for Managing Sustainable Resource Developments
Name of coordinating organisation	SMI – All Centres
Target audience for activity/program	<ul style="list-style-type: none"> • Senior government regulators involved with environmental approval and monitoring processes • Academics in universities with mineral industry teaching and resource focus
Aim and objectives of the activity/program	This course is designed to provide participants with exposure to the practical issues associated with applying regulatory frameworks in order to achieve sustainable outcomes from resource developments.
Intended outcomes of the activity/program	<ul style="list-style-type: none"> • Increased understanding of specific legislative issues with respect to management of social and environmental impacts. • An appreciation of the role of monitoring and potential implementation mechanisms for this to occur. • An understanding of the importance of integration of relevant approaches across government departments.
Program Design	<ul style="list-style-type: none"> • The program is designed as an interactive workshop, with presentations from government, industry and academic experts in various aspects of the subject. • Includes examples of relevant legislation, roles of different sections of government, integration mechanisms, assessment and approval processes, monitoring regimes. Areas to cover include water, land management and social impacts.
Proposed number of participants	20 participants
Planned duration of activity	Two weeks including field components (could be extended for relevant conference).
Proposed timing of activity (month/year)	It would be possible to align this program with several industry conferences on related themes, providing participants with an additional opportunity to hear from a wide range of experts and develop a network of relevant contacts. Examples include include: Life of Mine 2012 in Brisbane; Mine Closure 2012 in Brisbane
Suggested location of activity, including any site visits	<ul style="list-style-type: none"> • UQ • Visits to relevant government departments • Study tour to Central Queensland or North West Queensland

Working title of activity/program	Understanding and Managing Cumulative Impacts in Resource Regions
Name of coordinating organisation	CSRM and SMIKT
Target audience for activity/program	<ul style="list-style-type: none"> • Senior government regulators involved with environmental approval and monitoring processes • Academics in universities with mineral industry teaching and resource focus • Industry practitioners and representatives
Aim and objectives of the activity/program	This course is designed to give regulators, practitioners, and leading academics a greater understanding of dealing with cumulative social, environmental and economic impacts in the resources sector.
Intended outcomes of the activity/program	<ul style="list-style-type: none"> • An increased understanding of the expectations of policy makers, regulators and community to address cumulative impacts • Enhanced understanding of the systematic and strategic approach to dealing with cumulative social, environmental and economic impacts • Practical examples of what works and what doesn't work at the local and regional level • A network of industry and government contacts with responsibilities to assess and manage cumulative environmental and social impacts
Program Design	<ul style="list-style-type: none"> • The program is designed as an interactive workshop, with presentations from government, industry and academic experts in various aspects of the subject.
Proposed number of participants	20 participants
Planned duration of activity	<ul style="list-style-type: none"> • 3 day workshop • Associated one week field trip to Hunter Valley
Proposed timing of activity (month/year)	March/April/May 2012
Suggested location of activity, including any site visits	Brisbane

Working title of activity/program	Introduction to Mineral Systems and Exploration Targeting Models
Name of coordinating organisation	Centre for Exploration Targeting, School of Earth and Environment, UWA
Target audience for activity/program	Governmental, non-governmental and academic agencies using geospatial technologies for mining exploration.
Aim and objectives of the activity/program	This unit would provide an introduction to both empirical and conceptual technique and how they translate an understanding of mineral systems into exploration targeting models. How to collate and visualize geoscience datasets to generate and rank targets from mine to regional scale using computer models.
Intended outcomes of the activity/program	<ul style="list-style-type: none"> • Develop an understanding of geographic phenomena and data acquisition • Acquire basic knowledge and skills in GIS and conceptual techniques • Exploration technologies (detection methods including geochemistry, geophysics, remote sensing)
Program Design	<p>The program will be designed around 3 components:</p> <p>Introduction to empirical and conceptual techniques – participants will learn the theoretical and operational fundamentals of computer methodology and geoscience datasets.</p> <p>Introduction to mineral systems – participants will learn the fundamentals of mineral systems.</p> <p>Geoscience datasets problem solving – participants will build upon the skills gained in the first 2 components to apply their knowledge to generate and rank targets from mine to regional scale to solve real world problems in minerals exploration</p>
Estimated/proposed number of participants	20-30 participants
Planned duration of activity	Three weeks (15 days involving morning and afternoon sessions) of intensive learning, each week covering a single component.

Courses to be delivered in-country in year 1

Working title of activity/program	Leading Practice Water Management and Accounting for the Resources Sector
Name of coordinating organisation	CWiMI
Target audience for activity/program	<ul style="list-style-type: none"> • Senior government regulators involved with environmental approval and monitoring processes • Academics in universities with mineral industry teaching and resource focus
Aim and objectives of the activity/program	To provide an overview of key issues relating to management of water on and around mineral operations.
Intended outcomes of the activity/program	<p>Following completion of this course participants will:</p> <ul style="list-style-type: none"> • be cognisant of the wider issues associated with sustainability and water use in mining • understand leading practice water accounting from a whole-mine-site perspective • have developed a 'systems view' of water accounting from unit processing level to regions
Program Design	The program is designed as an interactive workshop, with presentations from government, industry and academic experts in various aspects of the subject.
Proposed number of participants	20 -30 participants
Planned duration of activity	3-4 Day Water Management workshop plus 1 day Water accounting

Working title of activity/program	Building Productive Community Relationships for the Resources Sector
Name of coordinating organisation	SMI – CSRM
Target audience for activity/program	<ul style="list-style-type: none"> • Senior regulators with resource management accountability in the area of community engagement • Academics in universities with mineral industry teaching and resource focus • Representatives of non-government stakeholder groups • Industry representatives
Aim and objectives of the activity/program	The aim of this course is to review the way in which community engagement in and around resource development is being implemented, and to present current leading practice in the area.
Intended outcomes of the activity/program	<p>Workshop participants will:</p> <ul style="list-style-type: none"> • Increase their practical skills in engaging and working closely with different communities • Provide guidelines for the development of social impact management plans • Increase their cultural awareness • Increase their confidence in addressing community issues • Better understand conflict and behaviour in community conflict • Increase their awareness of the many issues associated with community engagement and development
Course Design	<ul style="list-style-type: none"> • The program is designed as an interactive workshop, with presentations from government, industry and academic experts in various aspects of the subject. • It will include modules on key topic areas such as complaint and grievance management, community engagement and development frameworks, gender and human rights.
Proposed number of participants	20-30 participants
Planned duration of activity	<ul style="list-style-type: none"> • 3 day classroom-based activity including guest presentations from academics, government and industry representatives

Working title of activity/program	Introduction to Management of Mine Site Pollution
Name of coordinating organisation	Australian Centre for Geomechanics, Faculty of Engineering, Computing and Mathematics, UWA
Target audience for activity/program	Representatives of government, academic agencies and non-government organisations.
Aim and objectives of the activity/program	The course will present the basic geochemical concepts that enable mine site pollution to be managed. It will promote awareness, enable recognition and assist management through the application of appropriate techniques.
Intended outcomes of the activity/program	<ul style="list-style-type: none"> • Develop an understanding of geochemical processes, • Acquire basic knowledge and skills in assessing potential pollution risk • Develop appropriate cost effective management protocols for mining and the storage of tailings and waste rock
Program Design	<p>The Program will be designed around 3 components:</p> <ul style="list-style-type: none"> • Introduction to geochemical processes– participants will learn about the processes of change in the chemical composition of rocks and minerals, as well as of melts and solutions from which the rocks were formed • Assessing potential pollution risk -understanding tailings (the refuse material resulting from the concentration of minerals and waste rock can be environmental pollutants) and the mining process • Cost effective management protocols for the storage of tailings and waste rock - participants will learn the fundamentals of tailings (which contains a lesser amount of the valuable component than does the initial raw material) that must be assessed for environmental hazards and appropriate containment (I,e groundwater, air, dust)
Proposed number of participants	20 - 30 participants
Planned duration of activity	5 days of intensive learning, each 1- 2 day period covering a single component.
Suggested location of activity, including any site visits	AIM-Alliance, Business School, UWA

Working title of activity/program	Introduction to Mine Closure
Name of coordinating organisation	Australian Centre for Geomechanics, Faculty of Engineering, Computing and Mathematics, UWA
Target audience for activity/program	This course will benefit professionals (mining, government and academic) involved in the planning and conduct of environmental risk assessment associated with mine investigation and closure activities.
Aim and objectives of the activity/program	This course will give an overview of key concepts, methods and application (case study examples) of mine closure including mine covers, water management and key risk “driver” issues with important implications to mine closure.
Intended outcomes of the activity/program	<ul style="list-style-type: none"> • To provide an understanding of risk assessment in environmental decision-making (including mine closure). • To provide a solid basis on the design of covers for mine closure, covering both theoretical and practical considerations. • To provide an understanding of strategies for mine water management for closure
Program Design.	<p>The program will be designed around 3 components:</p> <ul style="list-style-type: none"> • Introduction to risk assessment for environmental managements – where participants will develop an appreciation of the importance of risk assessment in environmental decision-making • Introduction to mine covers – where participants will learn the fundamentals of cover design for mining waste, incorporating recent experience in the closure of hard rock mine sites as well as oil sands projects, and applications for both tailings and waste rock • Strategies for mine water management for closure – where participants will understand strategies and methods for 1) assessing and predicting mine water quantities and quality, and 2) evaluating mitigation measures, including active and passive water treatment approaches
Estimated/proposed number of participants	20- 30 participants
Planned duration of activity	One week (5 days involving morning and afternoon sessions) of intensive learning, each 1 – 2 day period covering a single component.
Suggested location of activity, including any site visits	AIM Alliance, Business School, UWA

4.3. Education and Training Program for Years Two to Four

The Education and Training program for years two to four of the IM4DC will be developed through the IM4DC's annual planning process, informed by the analysis work to be undertaken in year one and from input from stakeholders including the IM4DC Advisory Committee.

Appendix 3 provides a list of existing IM4DC partner university courses that sit in the 'ready' and 'adapt' categories, organised according to the three IM4DC themes. This list forms the platform from which the Education and Training Programs for years two to four will be developed from.

Adaptation of existing courses and development of new courses will be driven by needs analysis.

4.4. Recruitment and Registration

IM4DC will draw upon its existing industry and in-country networks and Australian Government agency networks to identify potential participants from target nations and regions. Systems for registration and administration of courses will be developed from existing systems and processes within IM4DC's universities.

5. Visiting Fellows Program

5.1. Objective

An important objective of the IM4DC and the Australian Government's Sustainable Mining Program overall is to assist developing nations to build local capacity for improved resources, industry governance and management.

The aim of the IM4DC Visiting Fellows Program is to assist target developing nations to increase the skill level of senior government officials and academics, better equipping them to govern and manage an emerging resources industry. In the case of academics, to produce high quality graduates, skilled in the required breadth and depth of disciplines required by that industry.

The IM4DC Visiting Fellows Program will be a multi-layered program, linked strongly to the IM4DC themes and the IM4DC Action Research Program. Fellows from target developing nations will engage with the IM4DC to undertake research, education and/or communications activities of direct benefit to their home nation.

The objectives of the IM4DC Visiting Fellows Program are therefore to:

1. Provide opportunities for senior government officials and academic faculty to become familiar with resources sector operations in Australia and to experience the relationships between industry and government/academe in Australia.
2. Provide opportunities for academic faculty to observe teaching practices in undergraduate programs and to observe the structure of postgraduate training and research through IM4DC.
3. Support Visiting Fellows in research and or the development of education and communications material that are highly relevant and are of a high quality for the benefit of their home nation.
4. Develop relationships between Visiting Fellows and IM4DC that are enduring and which, through the IM4DC Alumni Program will continue to bring benefit to target developing nations into the future.

5.2. Visiting Fellows Program Elements

IM4DC Distinguished Fellows

At the heart of the IM4DC Visiting Fellow program will be a group of IM4DC Distinguished Fellows. Distinguished Fellows will be high level individuals with the capacity to implement the outputs of their fellowship to bring about lasting and significant change in their home country. Distinguished Fellows will have involvement and impact across the spectrum described in Figure 1 and, will:

- undertake research and/or education activities aligned with one or more of the IM4DC themes;
- undertake analysis to identify the needs of their home nation in that theme;
- be supported to increase their own English language skills and/or other skills as required;

- work under the supervision of IM4DC academic staff to produce comprehensive research and or education outputs;
- implement those research and/or education outputs in their home nation with continued advice and support from IM4DC;
- produce, communications materials that are appropriate for wide dissemination in their home nation to maximise the benefits of the work undertaken and implemented as a result of the Fellowship;
- remain engaged with IM4DC through the IM4DC Alumni Program, forming a local point of contact for future IM4DC activity in that nation.

Costs associated with IM4DC Distinguished Fellows will be met from the IM4DC Visiting Fellows Program Budget. It is envisaged that two Distinguished Fellows will be recruited in year one of the IM4DC, expanding to ten in the fourth year. The Distinguished Fellows will be geographically spread to cover target regions taking into account the findings from IM4DC needs analysis work.

In year one, recruitment of initial Distinguished Fellows will be from regions where SMI (UQ) and EMI (UWA) have existing strong relationships and an existing understanding of regional needs.

Other IM4DC Fellows

In addition to the Distinguished Fellows, the IM4DC will offer other fellowship opportunities. These will include research higher degree (PhD and Master level) students studying with IM4DC and supported through scholarships under the broader Sustainable Mining for Development Initiative. Direct support for these students would not come through the IM4DC budget however their research may be supported through the IM4DC Action Research Program where they are not already supported by another funding scheme.

Fellows may also include government officials or academics from target nations that engage with IM4DC on projects or activities that are shorter, and more specifically targeted than the work of the Distinguished Fellow. This might include Fellows engaged to:

- undertake needs analysis work;
- work on specific projects within the IM4DC Action Research Program;
- assist in the adaptation of IM4DC education programs to suit national cultural and/or language context; or
- assist in the development of reports, guides or other communications materials to suit national context.

The work of these Fellows would be supported through the budget for that research, education or communications project.

All IM4DC Fellows would become IM4DC Alumni, giving them access to IM4DC Alumni Program benefits and enabling a continued association with IM4DC for mutual benefit.

6. Practical Guides and Tools Publication Program

6.1. Objective

As illustrated in Figure 1 a major output of the IM4DC will be the production of reports, guides and other materials. The objective of this set of activities is to assist provide target nations with practical tools and information that will:

- assist in the establishment of effective governance processes and frameworks;
- assist in resolving specific challenges or issues faced in particular nations or regions; and
- increase understanding amongst regulators and officials about the nature of resource deposits and their extraction.

Drawing upon a pool of expertise within IM4DC and contracted third parties, the IM4DC will design and deliver guides and tools for target nations and regions that is developed with reference to:

- previously published general guides and handbooks on relevant energy and minerals industry issues;
- existing knowledge with IM4DC; and
- new knowledge generated through the IM4DC Action Research Program.

6.2. Key Outputs and Outcomes

Outputs will include:

- A regular annual publication on contemporary issues regarding energy and minerals industries in developing nations. This publication will be of general application and able to be disseminated to a wide audience, including IM4DC alumni.
- Generation of practical guides on a range of key issues that can be disseminated to multiple nations facing similar issues.
- Preparation of bespoke, tailored advice and guidance specific to the needs to individual nations.

Publication modes may include books, articles, reports, online tools and plans.

The topics and issues covered in IM4DC publications will be tightly linked to the IM4DC themes. The precise mix of publication outputs and the topics they cover will be determined through the initial needs analysis process undertaken in the first year and ongoing needs identification throughout the funding period.

7. Australian Government Advisory Services

The IM4DC represents a significant body of expertise across a wide range of disciplines associated with energy and minerals that are highly relevant in an international development context. The Australian Government seeks to draw upon that pool of expertise from time to time to advise it on contemporary issues.

7.1. Key Outputs and Outcomes

The IM4DC will facilitate access for the Australian Government to experts within UQ and UWA with the requisite knowledge and experience to provide high level advice. The areas and fields in which this expertise is available will be aligned with the themes of the IM4DC.

The advisory services provided under this program within the IM4DC will include:

- short turn around responses to specific questions;
- preparation of written advice in response to specific queries or issues;
- involvement in high level discussion forums or workshops; and
- other services upon agreement with IM4DC management.

This advisory pool of expertise will be available to Government at a per diem charge rate up to a maximum amount. For budgeting purposes, a cap of 25 consulting days has been established. Where requests for assistance and/or advice through this channel appear likely to result in more significant pieces of work, with longer time frames, IM4DC management will assist in identifying an alternative means of meeting the need, to be funded outside of this program.

8. Annual Conference

8.1. Key Outputs and Outcomes

One of the key deliverables of the proposed Sustainable Mining for Development Initiative is the conduct of an annual high-level conference to communicate its results, in conjunction with electronic and printed materials and an annual publication. The IM4DC will host an annual International Mining for Development Conference, commencing in 2012.

UWA has the capacity to replicate the strong platform created by its 'In the Zone' international affairs conference as a template to establish a high-level event that showcases the suite of expertise possessed by the UQ and UWA in this field and more broadly. While the IM4DC conference will target a different market, the experience and format of 'In the Zone' demonstrates the capacity of the partners to deliver this key output. UQ will also draw on SMI's extensive experience in conference facilitation from participating with Gecamin in Chile and the AusIMM.

This event would bring together a range of international, national and local stakeholders to share ideas, inform the ongoing development of the initiative and to promote Australia as a global centre for mining expertise of relevance to developing nations.

The conference would serve to communicate the messages of the initiative to all relevant stakeholders, and promote Australia as a centre for resource-related expertise and services.

The conference could be used as a platform to:

- Launch/release an annual publication (alternatively the publication could be developed using collateral derived from the conference and disseminated later in the year).
- Announce grant recipients, scholarship winners and other key milestones.
- Develop a database of stakeholders and deepen linkages through networking, site visits and so on.
- Disseminate relevant information about affiliated programs and resources through display materials.
- Profile IM4DC Fellow's.

Conference Themes

- Overall objectives of establishing initiative.
- Promote specific and broad capacity and resources of governments, universities and companies available.
- Showcase case studies of cooperation in mining, services and cross-disciplinary research (providing opportunities for further collaboration in key fields).
- Prioritisation of key challenges for the next four years and outline of how these challenges can be met.
- Establishing strong relationships with key countries, developing systemic and long-term institutional ties.
- Assessing strategic international climate – geopolitical framework for engagement – and establishing Australia as an ideal gateway for relationship building.
- Drawing in other Australian expertise to contributed to IM4DC's strengths.

The conference would be supported by a fit-for-purpose audio-visual presentation that showcases the objectives and capabilities of the initiative. Stakeholders will assist in communicating key messages with simplicity and ensure that stakeholders can be involved regardless of geography.

Pre-recorded speeches and live streaming of content could also be used where relevant stakeholders are not able to be present.

Live streaming could also be used to involve students, and content could be recorded for storage on a website.

A comprehensive international and national media strategy could be developed to ensure content from the event was usefully disseminated.

Location and Timing

Held annually between 2012 and 2015 and alternating between UWA and UQ, the event could involve the following attributes:

- A one-day high-level conference at the host university's campus, consisting of plenary and concurrent sessions for all participants ending with a gala dinner.
- A second day of facilitated roundtable workshops designed around the previous days sessions but involving more interactivity with key speakers and the recording of input.
- A tour of the host university campus and/or city.
- One or more site tours of resource operations in the host state, focussed on particular themes of interest (tours could be scheduled either before or after the main two day event).
- Scheduled time-out for facilitated meetings between stakeholders of interest.

In 2012 the event could align with the successful Africa Down Under mining event held in Perth in August/September.

Invited Speakers

Invited speakers and participants could include:

- senior personnel from both universities involved in leadership and practice of relevant themes within the initiative;
- international commentators from the World Bank and other relevant non-government and government organisations;
- international stakeholders involved with or benefitting from the work of the initiative;
- government representatives, cabinet ministers from relevant jurisdictions;
- national commentators from non-government and government agencies to showcase the objectives and scope of the federal government in relation to this initiative;
- representatives from international, national and local resources companies with interests in developing nations.

9. Alumni Program

9.1. Key Outputs and Outcomes

A major outcome of the IM4DC will be the formation of a broad group of alumni across developing regions that have completed a component or components of the IM4DC's education program. This group will comprise current and future decision makers and leaders in developing nations and will therefore develop into a valuable group for the IM4DC and AusAID.

IM4DC alumni will include: IM4DC Distinguished Fellows; past participants in IM4DC education programs; all IM4DC research students and fellows and the in-country co-supervisors of research students.

The IM4DC will run a program for alumni to continue to build upon the personal development of participants (alumni) and to maintain alumni engagement with IM4DC to build the profile and reach of the initiative.

Intended Outcome of the Alumni Program

IM4DC alumni will benefit directly from a continuing program to engage with the IM4DC and to continue to build networks with fellow alumni from around the world. This ongoing engagement of alumni will enable continued personal development of past participants in IM4DC courses and foster transfer of knowledge and experience between alumni.

For IM4DC, the alumni group will form a vital network across target nations to assist with development and targeting of future IM4DC activities. The alumni will also provide a network of individuals, many of whom might themselves be able to take part in future IM4DC in-country course delivery. This is particularly the case with IM4DC Fellowships Program alumni.

Alumni Activities

The IM4DC Alumni Program will be developed during the first year of IM4DC funding with activities likely include

- Continued provision to past course participants of relevant information, research findings and leading practice information relevant to the course in which alumni participated.
- Invitation to attend future relevant courses to build upon knowledge and skills developed through IM4DC.
- Invitation to engage in IM4DC events including the major annual conference (year 2-4) and other thought-leadership events held around the world to promote engagement and networking between IM4DC alumni and involving inspirational speakers.

The major direct cost of the IM4DC Alumni Program in year one will be for the establishment of systems to track alumni. The cost of this to the IM4DC budget will be reduced by building on the existing alumni tracking and management systems of the partner universities.

Future year costs associated with running the Alumni Program will relate to hosting regional networking events in up to two locations internationally per year. Cost savings would be made through timing these events to coincide with delivery of IM4DC in-country courses.

10. Action Research Program

10.1. Objective

The IM4DC Action Research Program will be operating within the terms and focus on the knowledge domains to be consistent with and support directly the IM4DC's education program. There are two primary objectives:

1. The IM4DC's research activities will underpin the creation of new knowledge for the development of education program offerings that effectively target the needs of recipient nations.
2. The IM4DC's research budget will support research undertaken by and research supervision of postgraduate research students and visiting Fellows supported through the IM4DC.

10.2. Outcomes of the Action Research Program

The objectives of the IM4DC Action Research Program will be met through research activities in two streams, as set out in Figure 1:

- **Knowledge Adaptation and Application Research**
Specific projects to assist target nations/regions to address current, known challenges. This will draw on strengths with UQ, UWA and will involve the interpretation of existing knowledge for the national/regional context and research to develop new knowledge where gaps are identified. Examples of activity in this stream are around national resource deliration cumulative impacts and regional water accounting and management for application in a new region for which very limited information is available.
- **Knowledge Discovery Research**
Research to develop new knowledge to address major challenges faced by developing nations/regions that are complex and which may be poorly defined. Research projects will involve collaboration with other research organisations that may have experience complimentary to UQ and UWA. An example of activity in this stream could be research around informal mining (also referred to as artisanal mining), a major emerging issue in many of the IM4DC target regions upon which insufficient research has been undertaken.

The outcomes of the Action Research Program will therefore be realised through the usual human capital and publication awareness as well as the design and development of new education offerings related to major emerging issues in target nations/regions. These could not be developed based on knowledge available today. The results of research undertaken by the IM4DC will also flow through the communications materials produced by the IM4DC, including reports and tailored guides and tools prepared for target nations/regions.

The IM4DC will draw a number of postgraduate research students and visiting Fellows supported either directly by the IM4DC or through scholarships under the broader Sustainable Mining Initiative. The work of these Fellows will be directly aligned with the themes of the IM4DC and will in large part be supported through the IM4DC Action Research Program budget. The themes of the research undertaken will again be aligned with the needs of target nations, as reflected in the themes of the IM4DC education program.

It is important to acknowledge that the cost of research through the IM4DC will be higher than if procured directly from an Australian research organisation because the students and Fellows will need to come to Australia to undertake research that is focused on issues in their home country. In addition to the obvious costs associated with travel, there is an increased cost of in-country experimental, survey and data acquisition. Also in supporting these students and Fellows to work across language and cultural boundaries and the costs associated with ensuring skilled co-supervision is available at universities in the target nation will be important. It is imperative to the success of the IM4DC that these students and Fellows are supported to enable their success.

The important role played by the co-supervisors of research students from universities in the target nation will be recognised by incorporating co-supervisors into the IM4DC Alumni Program. This will provide a valuable extension to the alumni network of the IM4DC.

Both IM4DC partner universities are high-performing research and research training institutions with well established and effective structures in place for the supervision of research higher degree students and visiting Fellows. Student and Fellows joining SMI (UQ) and EMI (UWA) will join existing research teams lead by senior research academics in relevant fields. The IM4DC will therefore benefit from the value of these existing structures, with IM4DC research funding required only to support direct research costs of students and Fellows and the specific time spent by existing academic upon their supervision.

11. Operations, Management and Governance Framework

The IM4DC will be a collaboration between UWA and UQ sitting under an existing Letter of Agreement between the two universities dated October 2009 through which UWA and UQ agree to collaborate in research, education and related activities in areas of joint interest and expertise.

The IM4DC will report to a Board of Management, initially comprising the Director, EMI at UWA and the Director, SMI at UQ that will be guided by a mutually agreed set of principles.

The administrative headquarters of the IM4DC will be located at UWA and management services for the IM4DC's activities will operate under the policies, practices, procedures and corporate governance of UWA. The non-administrative activities of the IM4DC will be delivered by UWA and UQ, along with third party universities and other organisations that will be subcontracted to provide services in line with their expertise.

The IM4DC activities that are undertaken at each of the partner universities will be done so under the policies, practices, procedures and corporate governance of the relevant university, with reference to the overarching Memorandum of Understanding between the two universities, the defining principles above and the requirements of the IM4DC funding agreement.

The IM4DC funding agreement will be managed for the Australian Government by AusAID. AusAID's Mining Taskforce will be the primary point of contact for the IM4DC in relation to the IM4DC funding agreement.

Management Structure

The IM4DC will be led by a Director, to be located at UWA. The Director IM4DC will be formally line managed by the Director, EMI at UWA and will be responsible to deliver against the objectives of the IM4DC, with a requirement to report regularly to the IM4DC Management Board (Directors EMI and SMI) and the Australian Government, in line with reporting requirements of the IM4DC funding agreement. The Director IM4DC will also provide information and updates to the IM4DC Advisory Committee on the plans and activities of the IM4DC.

Reporting to the IM4DC Director will be two Deputy Directors, one to be located at each of the partner universities. The Deputy Director-Education and Australian Capability Coordinator will be responsible for the education activities of the IM4DC and the Deputy Director – Operations and Business Development will be responsible for IM4DC operations. Proposed position descriptions for the Director and two Deputy Directors are appended to this activity proposal [see **Appendix 4**].

To assist the Director and Deputy Directors in delivering against the objectives of the IM4DC additional staffing resources will be required. These are likely to include coordination of education activities, financial management support and administrative support for tasks including provision of secretariat support to the IM4DC Advisory Committee. To ensure value for money, the partner universities will draw on existing structures in finding and developing this staffing resource.

Additionally, The IM4DC will identify and subcontract relevant expertise within other Australian universities and other organisations to feed into the design, development and delivery of educational activities.

Advisory Committee

Purpose

An Advisory Committee will be established to provide advice and guidance to the IM4DC and to provide a channel for the views of stakeholders to be considered. The Advisory Committee will include representation from both partner universities, from AusAID, the Department of Foreign Affairs and Trade (DFAT), the Department of Resources, Energy and Tourism (DRET), from key stakeholder non-government organisations (NGOs) and representatives with industry knowledge and experience.

The IM4DC Advisory Committee will be an advisory structure providing advice, guidance contacts and ideas. The Advisory Committee will not be a governing board and neither the Committee nor its individual members will be liable for the operations of the IM4DC.

Composition

1. The IM4DC Advisory Committee will be led by an independent Chair to be appointed by the Foreign Minister with agreement by both partner universities. The independent Chair will preferably have significant experience and standing, with knowledge of the international minerals and energy sector and international development issues.
2. The Australian Government will nominate three members, each being high level (SES Band 2 or equivalent) representatives from AusAID and DRET and DFAT.
3. The partner universities will be represented through the IM4DC Board of Management members, the Director, EMI for UWA and the Director, SMI for UQ.
4. The IM4DC Director will be an ex-officio member of the Advisory Committee.
5. Other members will be drawn from the international development environment (including from international aid agencies, NGOs), the minerals and energy industry and other sectors considered appropriate to the activities of the IM4DC.
6. The IM4DC Advisory Committee will be limited to a maximum of 12 members including the Chair.
7. Efforts will be made to achieve gender equity in Advisory Committee composition

Appointment and term

1. Members will be appointed for a term of two years.
2. It is anticipated that these positions will be honorary however reasonable costs associated with attendance at meetings will be met by IM4DC.
3. The IM4DC Advisory Committee will meet no less than twice per annum.
4. Secretariat support to the IM4DC Advisory Committee will be provided by and funded through the IM4DC.

Terms of reference

The Terms of Reference for the Advisory Committee will be confirmed by the Australian Government in consultation with the two partner universities and are likely to include:

1. Provision of advice on the international development environment in relation to the energy and minerals sectors.
2. Provision of advice on the direction and strategy for the future operation of IM4DC.
3. Provision of advice on the content of the annual business plans for IM4DC.
4. Oversight of the financial performance of the IM4DC.
5. Oversight of performance benchmarks for the IM4DC.
6. Provision of advice on the education and training activities of the IM4DC.
7. Assistance to IM4DC in establishing high level international government, NGO and industry contacts.
8. Assistance in promoting the activities of the IM4DC to government, business and other appropriate sectors.
9. Liaison and provision of advice back to stakeholder organisations on the process and activities of the IM4DC.

12. Proposed IM4DC Program Budget

The development of the proposed IM4DC budget has included careful review of complementary and existing offerings through EMI and SMI to ensure an accurate and cost-effective program budget. The IM4DC budget makes a number of assumptions through each sub-program to ensure an appropriate allocation of resources to each initiative. These assumptions are listed below.

The IM4DC Director will be responsible for developing an annual budget for approval by the EMI Board of Management and inclusion in the annual activity plan to be submitted to AusAID. Adjustments to forward estimates will be made following negotiation with AusAID.

For the purposes of this proposal, forecast expenditure has not been inflated according to CPI changes.

Course development delivery and administrative support will be provided by staff employed through UWA and UQ and imputed costs of essential supporting infrastructure have been included in budget estimates.

All individual short courses (in Australia or delivered in-country) will develop a discrete budget and contingency cost estimate prior to approval and execution through the IM4DC.

A selection of key performance indicators that underpin the proposed IM4DC are summarised below.

KEY PERFORMANCE METRICS	2011/12	2012/13	2013/14	2014/15
Number of Short Courses – In Australia	6	8	10	12
Number of Short Courses – In Country	4	8	10	12
Total Number of Students – In Australia	120	160	200	240
Total Number of Students – In Country	160	240	300	360
Number of Visiting Fellows	2	4	8	10
Annual Conference Attendance	200	300	300	300
Australian Government Advice (consulting days)	25	25	25	25

Other budget assumptions include, for on-shore (in Australia) short course delivery:

- Average of 2 week courses
- 20 participants per course
- Differential costs for participants from Africa, Asia and Latin America
- Visa application and processing included
- Accommodation costs in Perth and Brisbane
- Translation services and pastoral care support
- Nominal per diem per student

For in-country course delivery:

- Average of 5 day programs
- Average of 30 participants per course
- Differential costs for participants from Africa, Asia and Latin America
- Travel and accommodation costs ex Perth and Brisbane
- Translation services and pastoral care support

For course development:

- Academic day-rate including imputed cost based on salary or infrastructure component based on project funding (methodology dependant upon university policy for cost-recovery)
- Development or modification of course material (day-rate)
- Library Resources and Copyright Costs
- On-line learning resource development and delivery
- Course administration
- Course quality review and maintenance
- Full cost recovery

For IM4DC Distinguished Fellows:

- Duration of visit (90 days)
- Differential costs for participants from Africa, Asia and Latin America
- Visa application and processing included
- Accommodation costs in Perth and Brisbane
- Translation services and pastoral care support
- Fellow per diem

For the Annual Conference and development of practical guides and tools:

- Assumed number of conference participants
- Conference sponsorship and administrative support
- Keynote and guest speakers support
- Sponsorship receipts
- Venue Hire
- Academic day-rate for IM4DC publication
- Library resources and copyright
- Online and printed publication costs

For the IM4DC advisory service to government and the action research program

- Academic day-rate including imputed cost based on salary or infrastructure component based on project funding (methodology dependant upon university policy for cost-recovery)
- Estimated number of days
- \$1m of action research per annum executed through EMI and SMI and building course delivery program, advisory services and leading practice publication activity

For the IM4DC alumni program

- Database and alumni tracking software
- Database administration

- Communications activities

The assumptions supporting the governance and administration of IM4DC and operational costs relating to Centre administration include:

- Additional start up costs in Year 1
- Lease expenses (Perth and Brisbane nodes)
- Employment costs for Centre Director and two Deputy Directors (one based in Perth, one in Brisbane)
- Office administration support not provided through EMI and SMI, including communications, recruitment and pastoral care
- Governance budget (IM4DC Advisory Committee and Board)
- Travel and Marketing Budget
- External Audit Fees in Year 4
- Year 4 contingency fund to manage wind up or transition arrangements

SUMMARY OF INCOME AND EXPENDITURE

INCOME	2011/12	2012/13	2013/14	2014/15	Total	
AusAID Grant	\$7,750,000	\$7,750,000	\$7,750,000	\$7,750,000	\$31,000,000	
Annual Conference Income	\$140,000	\$210,000	\$210,000	\$235,000	\$795,000	
TOTAL INCOME	\$7,890,000	\$7,960,000	\$7,960,000	\$7,985,000	\$31,795,000	
EXPENDITURE						
Education and Training	\$3,005,441	\$3,945,317	\$4,930,390	\$5,758,527	\$17,639,675	56%
Distinguished Visitors	\$118,366	\$236,731	\$473,462	\$591,828	\$1,420,387	5%
Practical Guides and Tools	\$43,470	\$43,470	\$43,470	\$43,470	\$173,880	1%
Annual Conference	\$229,500	\$256,500	\$283,500	\$310,500	\$1,080,000	3%
Government Advisory	\$84,375	\$84,375	\$84,375	\$84,375	\$337,500	1%
IM4DC Alumni Program	\$54,000	\$40,500	\$40,500	\$40,500	\$175,500	1%
Action Research Program	\$1,080,000	\$1,080,000	\$1,080,000	\$1,080,000	\$4,320,000	14%
IM4DC Leadership/Management	\$1,660,500	\$1,558,000	\$1,558,000	\$1,625,500	\$6,402,000	20%
TOTAL IM4DC COSTS	\$6,275,652	\$7,244,893	\$8,493,698	\$9,534,699	\$31,548,941	
CLOSING CASH BALANCE	\$1,614,348	\$2,329,456	\$1,795,758	\$246,059		

13. Addressing AusAID Criteria

13.1. United Nations Millennium Development Goals

The Millennium Development Goals (MDGs) are a set of eight targets⁸ developed and agreed upon by member nations of the United Nations and the world's leading development institutions in 2000 that will be achieved via an international framework by 2015. The eight MDGs encompass 21 quantifiable targets that are measured by 60 indicators.

1. End Poverty and Hunger	<ul style="list-style-type: none"> • Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day. • Achieve full and productive employment and decent work for all, including women and young people. • Halve, between 1990 and 2015, the proportion of people who suffer from hunger.
2. Universal Education	<ul style="list-style-type: none"> • Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.
3. Gender Equality	<ul style="list-style-type: none"> • Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.
4. Child Health	<ul style="list-style-type: none"> • Reduce by two thirds, between 1990 and 2015, the under- five mortality rate.
5. Maternal Health	<ul style="list-style-type: none"> • Reduce by three quarters the maternal mortality ratio. • Achieve universal access to reproductive health.
6. Combat HIV/AIDS	<ul style="list-style-type: none"> • Have halted by 2015 and begun to reverse the spread of HIV/AIDS. • Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it. • Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.
7. Environmental Sustainability	<ul style="list-style-type: none"> • Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources. • Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss. • Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation. • By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers
8. Global Partnership	<ul style="list-style-type: none"> • Targets cover: trading and financial systems, the special development needs of disadvantaged states, debt sustainability, affordable access to essential drugs and

⁸ Table modified from AusAID 2011-12 Budget – Ministerial Statement (http://cache.treasury.gov.au/budget/2011-12/content/download/ms_ausaid.pdf), p. viii

	access to information and communications technologies
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AusAID programs are designed to progress toward the accomplishment of the MDG targets and as such, the IM4DC's activities must be demonstrated to contribute toward the accomplishment of these targets.

The following table highlights discuss the MDGs, their respective targets and indicators and provides discussion as to how the IM4DC will contribute toward the accomplishment of these targets.

MDG	IM4DC Contribution
1. End Poverty and Hunger	The IM4DC will indirectly address the targets of MDG1 by making a substantial contribution to policy frameworks and technical capability in developing nations that will assist in transforming emerging resources industries in those nations into significant employers and contributors to the domestic economy. In countries characterised by significant portions of the population living under the international poverty line, particular attention will be paid to influencing development policy such that State revenue generated from the resources industry and CSR activities of mining companies operating in the jurisdiction are geared toward alleviating poverty as a priority.
2. Universal Education	<p>The IM4DC will indirectly address the targets of MDG2 by making a substantial contribution to policy frameworks and technical capability in developing nations that will assist in transforming emerging resources industries in those nations into significant employers and contributors to the domestic economy. The IM4DC will also directly address the targets of MDG2 through two primary mechanisms:</p> <ul style="list-style-type: none"> • The IM4DC will transfer knowledge to governments in developing nations through its education and communications programs on leading practice policy for transforming State income from minerals industry royalty and taxation receipts into critical civic infrastructure, a key component of which is broad community access to primary education; and • The IM4DC will transfer knowledge to industry and governments relevant to leading-practice corporate social responsibility, encouraging developing nation governments to incentivise resources companies to invest in civic infrastructure in the regions that are operating in, including primary education and other early literacy and numeracy programs. • IM4DC will directly contribute to university education capability and capacity in developing countries.
3. Gender Equality	The IM4DC will make all endeavours to optimise female participation in its programs to contribute to the gender equality target of MDG3. It will also ensure that gender equality is addressed in the delivery of programs by seeking optimal female participation in course delivery, leading practice literature, research projects and other contributions. The IM4DC will monitor the gender ratio in its alumni, including the portion of females rising to key positions of influence in government, industry and academia

	<p>in developing nations.</p> <p>The IM4DC will also promote corporate and government policies of gender quotas in key decision-making bodies.</p>
4. Child Health	<p>The IM4DC will indirectly address the targets of MDG4 by making a substantial contribution to policy frameworks and technical capability in developing nations that will assist in transforming emerging resources industries in those nations into significant employers and contributors to the domestic economy. The IM4DC will also directly address the targets of MDG4 through two primary mechanisms:</p> <ul style="list-style-type: none"> • The IM4DC will transfer knowledge to governments in developing nations through its training and communications programs on leading practice policy for transforming State income from minerals industry royalty and taxation receipts into critical civic infrastructure, a key component of which is broad community access to sustainable sources of nutrition, clean water, sanitation and child health services, including where appropriate vaccination programs • The IM4DC will transfer knowledge to industry and governments relevant to leading-practice corporate social responsibility, encouraging developing nation governments to incentivise resources companies to invest in civic infrastructure in the regions that are operating in, including access to sustainable sources of nutrition, clean water, sanitation and child health services, including where appropriate vaccination programs. • The IM4DC will more effectively interface with company programs.
5. Maternal Health	<p>The IM4DC will indirectly address the targets of MDG5 by making a substantial contribution to policy frameworks and technical capability in developing nations that will assist in transforming emerging resources industries in those nations into significant employers and contributors to the domestic economy. The IM4DC will also directly address the targets of MDG4 through two primary mechanisms:</p> <ul style="list-style-type: none"> • The IM4DC will transfer knowledge to governments in developing nations through its training and communications programs on leading practice policy for transforming State income from minerals industry royalty and taxation receipts into critical civic infrastructure, a key component of which is broad community access to antenatal care and family planning resources including effective contraception. • The IM4DC will transfer knowledge to industry and governments relevant to leading-practice corporate social responsibility, encouraging developing nation governments to incentivise resources companies to invest in civic infrastructure in the regions that are operating in, including access antenatal care and family planning resources including effective contraception

6. Combat HIV/AIDS	<p>The IM4DC will indirectly address the targets of MDG6 by making a substantial contribution to policy frameworks and technical capability in developing nations that will assist in transforming emerging resources industries in those nations into significant employers and contributors to the domestic economy. The IM4DC will also directly address the targets of MDG6 through two primary mechanisms:</p> <ul style="list-style-type: none"> • The IM4DC will transfer knowledge to governments in developing nations through its training and communications programs on leading practice policy for transforming State income from minerals industry royalty and taxation receipts into critical civic infrastructure, a key component of which is broad community access to preventative measures against key diseases including condoms and vaccinations as well as treatment for diseases. • The IM4DC will transfer knowledge to industry and governments relevant to leading-practice corporate social responsibility, encouraging developing nation governments to incentivise resources companies to invest in civic infrastructure in the regions that are operating in, including access to preventative measures against key diseases including condoms and vaccinations as well as treatment for diseases.
7. Environmental Sustainability	<p>The IM4DC will directly address the targets of MDG7 by transferring knowledge on leading practice environmental management policy and methodology as well as environmental management expertise to key current and future decision-makers in governments and companies operating in developing nations. This knowledge transfer will be effected through the training and fellowship programs, leading practice publication and conference activities delivered by the IM4DC. The IM4DC's capability in this area will be continually enhanced through research conducted in this area</p>
8. Global Partnership	<p>The IM4DC directly addresses the targets of MDG8 from a number of perspectives. Through its training and fellow programs, leading practice publications and conferences it will transfer knowledge to current and future key decision-makers in industry and government in developing nations pertaining to:</p> <ul style="list-style-type: none"> • Establishing and maintaining effective multinational trade agreements with other developing and developed nations. • Policy that ensure that very underprivileged developing nations implement mechanisms that ensure that their minerals resources are developed quickly and in the best interests of those nations and the State revenues from that activity is effectively and efficiently channelled into priority initiatives that address humanitarian issues. • Negotiating arrangements for the transportation of minerals from land-locked countries through other countries to seaports. • Macro-economic policy that is designed to move developing nations toward current and capital account surpluses.

13.2. Commonwealth Grant Guidelines

The Commonwealth Grant Guidelines are intended to improve the transparency and accountability of grants administration. The Government has mandated transparent and accountable decision-making processes for grants and timely public reporting through agency websites.

The IM4DC proponents recognise the importance of adopting processes that are in proportion to the scale and risk profile of grant activities, and the need to work collaboratively and in partnership with the Australian Government.

1. Robust Planning and Design

Robust planning and design underpins efficient, effective and ethical grant administration, particularly with respect to effective risk management processes.

The initial strategic and operation plan for the IM4DC was established in consultation between the University partners, AusAID and the Australian Government Department of Resources, Energy and Tourism. The initial planning process has drawn on minerals industry, developing nations issues expertise and relevant teaching and research experience within UWA and UQ. The planning has also been the subject of robust cost modelling.

The IM4DC will conduct a robust annual planning process to refine the activities of the Centre. In its first year of operations, a detailed needs analysis will be conducted to inform this process and in particular, the refinement of the content and structure of its proposed programs.

2. An Outcomes Orientation

An outcome orientation requires that grants administration focuses on maximising the achievement of intended outcomes from the available funding.

With a management expense ratio of approximately 20%, the vast majority of the grant funds are being invested directly in the delivery of the IM4DC's programs. The activities within these programs are either directly or indirectly designed to address the various MDGs and each activity has clear measureable outcomes such as number of participants in training and fellowship programs and conferences, reach of publications and number and portion of IM4DC alumni in positions of influence in industry, government and academia in developing nations. The impact of the IM4DC will also be indirectly measured by a target countries progress toward addressing the various MDG targets.

3. Proportionality

Proportionality requires that administrative processes and costs are commensurate with the scale, nature, complexity and risks involved in granting activity.

Given the complexity involved in bringing a large number of culturally and ethnically diverse people to Australia for training and fellowship programs and conferences and the broad range of complex academic issues that the IM4DC will be managing, a management expense ratio of approximately 20% is a prudent and efficient investment in administration of the \$31million program.

4. Collaboration and Partnership

Collaboration and partnership refers to a culture that promotes effective consultation and a constructive and cooperative relationship between the administrative agency, grant recipients and other relevant stakeholders, resulting in more efficient, effective and equitable grants administration.

Collaboration and partnership between UWA and UQ is underpinned by an existing collaborative agreement between the universities in teaching and research in the minerals and petroleum industries. The IM4DC is a natural extension of this collaboration and partnership. Both universities also already have effective grant relationships with AusAID. As such, the IM4DC is founded on an historic culture of collaboration between the administrative agency and the grant recipients and between the grant recipients as a partnership.

Furthermore, in its first year of operations, the IM4DC will endeavour to form additional collaborations with other development agencies working in target countries such as the African Development Bank and the Asian Development Bank to ensure efforts are not replicated and the IM4DC capitalises on opportunities to leverage its activities. The IM4DC will also endeavour to create relationships with other Australian universities that possess teaching and research capability that could enhance the services provided by the IM4DC.

5. Governance and Accountability

A robust grants administration governance framework clearly defines the roles and responsibilities of all relevant parties and establishes policies, procedures and guidelines that are necessary for defensible funding recipient selection. It also ensures administration processes comply with all relevant legal and policy requirements and supports public accountability for decision-making, grant administration and performance reporting requirements.

It is proposed that UWA will enter into grant agreement with AusAID for the development and operation of the IM4DC and that UWA will then sub-contract to UQ for co-delivery of the IM4DC programs.

The administering partner will be UWA. A director will be appointed to manage the centre. It is envisaged that the director will be a globally recognised expert in the minerals industry, with considerable experience in both developing nations and minerals academia. Up to two deputy directors will be appointed under the director to assist in the development and delivery of the programs and this management team will be supported by a small secretariat.

The director of the IM4DC will be accountable to the board of management and will take advice and guidance from the Advisory Committee, which will have representation from the university partners, the Australian government and independent experts in minerals education, policy and developing nations.

The Director will

- Lead the IM4DC to meet its mission and objectives.
- Participate actively in contributing to the goals of the Australian Government's Mining Initiative.

- Lead the development of the strategic direction and operational priorities for the IM4DC with support from the Deputy Directors and in consultation with the IM4DC Advisory Committee.
- Oversee and take overall responsibility for the operational and financial management of the IM4DC.
- Work with the Deputy Directors to identify, develop and implement initiatives to promote the development and growth of the IM4DC.
- Lead a comprehensive needs analysis process to identify the scope and focus of the IM4DC's education program, ensuring it meets the needs of target recipient nation governments and the Australian Government.
- Mentor staff and implement staff development policies to facilitate the necessary skill levels.
- Effectively manage the IM4DC as a collaborative centre between two universities.
- Oversee the development and management of relationships with third party providers to ensure effective development and delivery of the IM4DC program.
- Utilize and build upon existing strong international networks to develop, manage and facilitate productive relationships with governments, collaborators, providers and recipients of IM4DC services.
- Oversee and contribute to the design, development and implementation of the IM4DC education program.
- Contribute as appropriate to education program content and delivery in areas of personal expertise, for example in leadership or international governance.

6. Probity and Transparency

Probity and transparency requires that program administration reflects ethical behaviour that is in line with public sector values and duties. Systems must incorporate appropriate internal fraud control measures, ensure that decisions relating to granting activity are impartial, appropriately documented and publically defensible and comply with public reporting requirements

The governance, management and operational systems of the IMDC will employ the highest level of public sector standards with respect to transparency, ethical behaviour, fraud control measures, conflict management and documentation.

7. Achieving Value with Public Money

This is the primary consideration for all grant programs and requires grant programs to consider carefully the costs, options and risk.

The IM4DC partners have extensive background in international education, research and delivery of outcomes. Both UQ and UWA have extensive, mature and vibrant support structures for the IM4DC.

The IM4DC is a significant proposal to establish a fit-for-purpose Centre that will deliver short course format education and training in Australia and around the world in key developing regions, particularly in Africa, Latin America and Asia. With initial targets exceeding 1000, carefully selected participants from target regions around the world to receive IM4DC training in-country, along with over 600 participants coming to Australia and a distinguished visiting Fellows program that will bring at least 24 influential decision-makers to Australia for extended stays, the reach of the IM4DC will be

profound. An annual conference will act as both a catalyst to generate demand for more IM4DC knowledge products, and a showcase of Australian expertise and commitment to international aid. The value unlocked through targeted education and training activity, well-leveraged through experienced University provides, is extensive and will be reinforced through an action research program and a formal monitoring and evaluation program.

Operationally, both universities have well-developed infrastructure for functional support, e.g., human resources, financial, project management, IT, etc. SMI at UQ operates as an integrated cluster of discipline-based research centres. Integration of the needs of IM4DC is, therefore, very much in the normal operating mode of SMI. EMI at UWA is similarly well placed to deliver operational value.

In research and education, the IM4DC can leverage off an unparalleled existing capability to deliver short courses, course-work degree programmes and higher degree research programmes. This is a result of the long history of the two universities and the mineral-resource richness of their contexts. Both universities also have a wide network of collaborations within Australia. The necessary advisory mechanisms, course delivery requirements and people are in place and ready to contribute to IM4DC. Experience with Cooperative research centres, for example, indicates that most centres take a minimum of 6 months and up to one year to become fully operational. Because of the value add from UQ and UWA, the IM4DC will be immediately functional.

In the international arena, UQ and UWA have hundreds of formal agreements with partner universities. Both also have very strong and long-standing strategic relationships with universities in key resource-rich developing countries. For example, UQ has been in collaboration with The University of Cape Town in South Africa and Universidad de Concepcion in Chile for decades and more recently the Universidad Pontificia Universidad Catolica de Peru in Lima. UWA has strategic relationships with several institutions in Africa through the WAXI project, particularly the University of Ghana, the University of Ouagadougou (Burkina Faso) and the University of Pretoria in South Africa. Similarly, UQ and UWA have agreements with other world-class universities, e.g., Imperial College London, to develop and deliver courses into developing countries internationally. IM4DC can utilise these relationships immediately. The SMI technology transfer and commercialisation company, JKTech, will establish a physical presence in South Africa (Johannesburg) and in Chile (Santiago) in 2011/2012. These offices will be available in-country to the IM4DC without the cost of establishment and obviating the need to use of external agents. These two locations provide excellent springboards into Africa and Latin America, respectively.

13.3. Australian Aid Quality Criteria

The Australian Aid Quality Criteria assess the extent to which aid activities apply internationally recognised characteristics of good aid practice. The IM4DC will deliver activities that will demonstrate good aid practice.

1. Relevance

Relevance refers to how the activities contribute to higher-level objectives of the aid program (outlined in country, regional and thematic strategies) as well as partner strategic objectives, priorities and plans for development.

The IM4DC will:

- Support progress toward the United Nations MDG's and broader whole-of-government objectives globally
- Work to establish and maintain sustainable mining sectors in developing nations
- Reinforce Australia's position at the forefront of innovative and leading practice mining methods and technologies
- Improve governance and accountability through ethical and transparent regulation and operation in developing nations
- Strengthen economic and social outcomes globally through market reform, education and capacity building in developing nations
- Provide gravitas to Australia's reputation in the resources sector
- Positively promote the resources sector generally as a major contributor to economic development in developing nations

2. Effectiveness

Effectiveness refers to the extent to which the program is structured to achieve clearly stated, measurable objectives and to continually manage risk.

The IM4DC's program is structured around three clear education and training themes, underpinned by an action research program for continuous learning and improvement and with line-of-sight to measurable objectives that deliver benefits to targeted aid partners. The IM4DC's risk management framework is explained in Section 14 of this proposal and key accountabilities and risk mitigation strategies have been identified.

There is a direct relationship between the achieving in the emerging minerals and resource industries in developing countries:

- a competent and transparent system of industry governance and regulation;
- mechanisms for community and environmental sustainability;
- expertise and technology that facilitates operational effectiveness; and
- positive improvements in the quality of life of communities in those countries.

There will be is a foundation component of IM4DC programs to ensure that clearly stated, measurable objectives are established for each course. Through the IM4DC's participant evaluation and feedback, action research program, alumni network, annual conference and the influence of its Distinguished Fellows, the IM4DC will have a range of metrics available to measure and monitor its effectiveness. International economic transparency, development and quality of life measures will provide an important guide on the overall effectiveness of the IM4DC's mission.

3. Efficiency

Efficiency refers to the extent to which activity is managed to get maximum value for money from aid funds, staff and other resources and continually manage risks.

The IM4DC will operate as a collaboration of The Universities of Western Australia and Queensland. Both Universities adopt a systematic approach to managing risk with the aim of fully embedding an effective risk management culture throughout their organisations. All IM4DC staff will be officers of UWA or UQ and have a direct role in the management of risk and will be accountable under terms of their employment and relevant state and federal legislation dealing with OH&S.

The IM4DC will develop a specific risk management policy that will integrate into both Universities existing risk management frameworks for relevant areas of operations. The objectives of the IM4DC policy will be:

- To use risk management to support and enhance activities across all areas of the IM4DC's operations.
- To integrate risk management into management culture and to ensure it is an integral part of the decision-making process.
- To use a structured risk management program to minimise reasonably foreseeable disruption to operations, harm to people and damage to the environment and property.
- To foster an environment where IM4DC's employees (and associates) assume responsibility for managing risks.
- To strive for continuous improvement in risk management practices.

The IM4DC's policy will be based on the understanding that to achieve the objectives of the IM4DCs stakeholders, the organisation will need to pursue opportunities involving some degree of risk. Having this in mind, the IM4DC's policy will give full and due consideration to the balance of risk and reward, and, as far as practicable, to optimise the rewards gained from its activities.

IM4DC's rationale for its approach to risk management is that it:

- Provides a structured basis for strategic planning.
- Enhances the effectiveness and efficiency of the IM4DC's operations.
- Encourages a pro-active rather than reactionary style of management.
- Improves the quality of decision making throughout the IM4DC.
- Safeguards assets, people, finance and property.

The IM4DC Director will be accountable to a Board of Management, for the implementation of the risk management process and ultimately for the management of risk in the centre.

4. Monitoring and Evaluation

Monitoring and evaluation refers to the extent to which the progress of a program toward meeting its objectives can be effectively measured.

The IM4DC will undertake a rigorous planning and management program in support of its key initiatives. Elements of the IM4DC process will include:

- Wide and continuous consultation with stakeholders
- Active and formal strategic planning supported by industry/regional development analysis

- Development of a course portfolio that will include a framework for explicit attention to balancing risk
- Rigorous educational and research project development involving:
 - teams with emphasis on leadership, skills acquisition and balance (multi-disciplinary and multi-institutional)
 - Engagement with industry and regional development stakeholders in IM4DC planning
 - Formal project development and documentation
 - Pre-approval review of IM4DC programs with emphasis on alignment to the committed outcomes, feasibility and impact
- Regular review (internal and external) of operations, monitoring of progress and outputs (including provision for adaptation to deal with unanticipated outcomes and changing circumstances)
- Formal analysis of impact of outputs and outcomes
- Cooperation with the AusAID Monitoring and Evaluation program of the initiative

5. Analysis and Learning

Analysis and Learning measures the extent to which the design and operation of a program is based on sound technical analysis and continuous learning.

The IM4DC will conduct formal feedback processes for all short course, Fellow programs and other initiatives.

Building on the existing processes in successful programs offered through EMI and SMI, individual participants will be assessed both at the start and at the end of the module, so that the effectiveness of the training can be evaluated. This will consist of a series of short question and answer type enquiries provided via the online Moodle CMS (Course Management System). By placing this evaluation online we allow the parent institutions of the participants to assess the skill sets (and hence future training requirements) of other staff in their organisations.

In-course assessment will typically be project-based with participants working in groups of 2-3, as this will support the transfer of experiences between participants and help build long-term collaborative networks. Some courses may be suited to on-line assessment.

At the conclusion of each course the IM4DC will not only assess the progress made by individual participants, but will also ask them to assess the course providers in terms of content and delivery so that future courses can be improved.

The IM4DC's Action Research program will also be aligned to key findings from the Education and Training Program.

6. Sustainability

Sustainability refers to the extent to which the benefits delivered by the activity are sustained once the Australian contribution has ceased, with due account given to partner government systems, stakeholder ownership and phase-out.

The ultimate development objective for the IM4DC is to improve incomes, employment, enterprise opportunities and life outcomes for people in rural and urban areas of developing countries

including the long term establishment of world class mining industries to boost overall economic development

To achieve this objective, the IM4DC will deliver a range of practical advisory, education and training services to developing nation governments across a range of mining issues relevant to the development context.

The benefits of the IM4DC for developing nations will be realised through increased skill levels of key personnel within government, universities and other organisations to bring about:

- improved policies and practices in the governance and management of extractive industries,
- improved legislative frameworks,
- improved knowledge of the country's resources base, and
- An ability to continue to build local capacity in minerals governance and mining.

IM4DC Fellows will continue to build capability in their home nations beyond the term of the IM4DC through improved programs and curricula in universities within target nations. IM4DC course alumni will continue to draw upon their training as they continue in their work within their home nation. Additionally, the alumni network established through the IM4DC will continue to develop and continue to deliver benefit to individuals and their home nations well beyond the term of the IM4DC.

7. Gender Equality

Gender equality refers to the extent to which the program advances gender equality and promotes the role of women.

The IM4DC will make all endeavours to optimise female participation in its programs in order to contribute to the gender equality target of MDG3. It will also ensure that gender equality is addressed in the delivery of programs by seeking optimal female participation in course delivery, leading practice literature, research projects and other contributions. The IM4DC will monitor the ratio of females to males in its alumni, including the portion of females rising to key positions of influence in government, industry and academia in developing nations.










The IM4DC will also promote corporate and government policies of gender quotas in key decision-making bodies.

14. Risk Analysis

In support of this Activity Proposal an initial risk assessment has been undertaken.






Key risks have been categorised under four headings; outputs, governance and operations, external and stakeholders.

The following likelihood/consequence matrix was applied to determine low, medium and high risk ratings.








LIKELIHOOD	CONSEQUENCE		
	Minor	Moderate	Major
Certain			
Possible			
Unlikely			

The IM4DC Director will be accountable to a Board of Management, for the implementation of the risk management process and ultimately for the management of risk in the Centre.




Risk Area 1 – IM4DC Outputs


ID	Description	Likelihood	Impact	Risk Rating	Mitigation Action
1.1	Lack of demand for IM4DC products	Unlikely	Moderate		<ul style="list-style-type: none"> Develop annual recruitment and promotion strategy Develop communications and marketing plan, including stakeholder engagement
1.2	Too focused, or misaligned priorities	Possible	Moderate		<ul style="list-style-type: none"> Annual Activity Planning process to include stakeholder survey and input from Advisory Board
1.3	Non-delivery of IM4DC outputs	Unlikely	Major		<ul style="list-style-type: none"> Effective Board and Management Structure Adaptive management and effective reporting processes
1.4	IM4DC outputs competing with domestic priorities	Unlikely	Minor		<ul style="list-style-type: none"> IM4DC to undertake needs analysis in target regions and/or countries Stakeholder engagement plan to include in-country consultation
1.5	IM4DC outputs highlighting issues in developing countries	Possible	Moderate		<ul style="list-style-type: none"> Communication plan to address tactics to respond to specific issues arising from in-country IM4DC activities

Risk Area 2 – Governance and Operations





ID	Description	Likelihood	Impact	Risk Rating	Mitigation Action
2.1	Identifying and recruiting key staff with capacity to influence change	Possible	Moderate		<ul style="list-style-type: none"> • Direct action by senior EMI and SMI staff to identify targeted personnel
2.2	Safety and security of IM4DC staff	Possible	Major		<ul style="list-style-type: none"> • Travel risk assessment process and adhere to university policy framework, including extraction • Robust participant recruitment process and pastoral care support
2.3	Injury to or absconding course participants	Possible	Major		<ul style="list-style-type: none"> • Travel risk assessment process and adhere to university policy framework, including extraction • Robust participant recruitment process and pastoral care support
2.4	Financial mismanagement, qualified audit	Unlikely	Moderate		<ul style="list-style-type: none"> • Quarterly cash flow and financial statement review by Board • Independent Financial Audit per grant conditions
2.5	Loss of income through failure to meet grant obligations	Unlikely	Major		<ul style="list-style-type: none"> • Milestone management and reporting • Proactive engagement of AusAID program
2.6	Insufficient skills or content to deliver courses	Unlikely	Moderate		<ul style="list-style-type: none"> • Align action research program to education and training program, building talent and content pipeline
2.7	Conflict between Advisory Committee and Centre	Unlikely	Moderate		<ul style="list-style-type: none"> • Establish Committee Charter and joint membership of Centre Board and Committee for key members

Risk Area 3 – External

ID	Description	Likelihood	Impact	Risk Rating	Mitigation Action
3.1	Change of government policy direction	Unlikely	Major		<ul style="list-style-type: none"> • Regular progress reports to Minister and Departmental executive through Advisory Board
3.2	Negative reaction to IM4DC from NGOs, industry	Unlikely	Moderate		<ul style="list-style-type: none"> • Communication Plan to be developed in 2011/12 • Appropriate representation in Advisory Committee
3.3	Loss of reputation of Founding Members, not delivering on strengths	Unlikely	Moderate		<ul style="list-style-type: none"> • IM4DC Director to provide regular reports to IM4DC Management Board and participate in EMI and SMI planning activities

3.4	Negative reaction to donor funding mining	Possible	Moderate		<ul style="list-style-type: none"> Communication Plan to be developed in 2011/12 to include strategy to explain in-country benefits and outputs and alignment with Australian Aid Criteria and Millennium Development Goals
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Risk Area 4 – IM4DC Stakeholders

ID	Description	Likelihood	Impact	Risk Rating	Mitigation Action
4.1	Loss or withdrawal of Founding Member support	Unlikely	Major		<ul style="list-style-type: none"> EMI and SMI IM4DC Board representatives to provide regular reports on IM4DC activities to UWA and UQ Executive
4.2	Participants not using IM4DC activities to benefit their countries development	Possible	Moderate		<ul style="list-style-type: none"> Stakeholder Engagement Plan to be developed in 2011/12 Alumni Program to include metrics to identify participant impact on target country/region
4.3	Subsidy of private sector interests	Possible	Moderate		<ul style="list-style-type: none"> Stakeholder Engagement Plan to be developed
4.4	Perceived inappropriate competitive advantage for Australian firms	Possible	Moderate		<ul style="list-style-type: none"> Communications Plan 2011/12 to include strategy to explain in-country benefits and outputs and alignment with Australian Aid Criteria and Millennium Development Goals Careful and clearly documented process accounting for use of industry funds

Appendix 1: AusAID ODA Investments

Country	AusAID and other Australian Government OAD (2011-12)
Indonesia	AusAID: \$510 million (2011-12) Other Australian Government: \$48.1 million (2011-12)
Papua New Guinea	AusAID: \$436.5 million (2011-12) Other Australian Government: \$45.8 million (2011-12)
Bangladesh	Country Program Estimate: \$72.1 million (2011-12) Total Estimated ODA: \$92.0 million (2011-12)
Bhutan	Country Program Estimate: \$3.8 million (2010-11) Total Estimated ODA: \$8.0 million (2010-11)
India	Country Program Estimate: \$9.0 million (2011-12) Total Estimated ODA: \$25.0 million (2011-12)
Maldives	Country Program Estimate: \$3.5 million (2011-12) Total Estimated ODA: \$5.0 million (2011-12)
Nepal	Country Program Estimate: \$17.2 million (2011-12) Total Estimated ODA: \$26.6 million (2011-12)
Pakistan	Country Program Estimate: \$79.0 million (2011-12) Total Estimated ODA: \$92.8 million (2011-12)
Sri Lanka	Country Program Estimate: \$33.5 million (2011-12) Total Estimated ODA: \$43.5 million (2011-12)
Regional South Asia	South Asia Water Initiative: \$3.0 million (2009-12) SAARC-Australia Agricultural Research and Training: \$1.0 million (2009-10) Australia-Asian Development Bank Partnership Facility for South Asia: \$11.0 million (2006-11) Australia-World Bank Serve Delivery Improvement Facility for South Asia: \$15.7 million (2006-11) Prevention of HIV Among Drug Users in SAARC Countries: \$9.5 million (2007-12)
Burma	Total Estimated ODA: \$47.6 million (2011-12)
Cambodia	Country Program Estimate: \$57.3 million Total Estimated ODA: \$77.4 million
China	Country Program Estimate: \$22.5 million (2011-12) Total Estimated ODA: \$35.7 million (2011-12)
East Timor	Country Program Estimate: \$80.4 million (2011-12) Total Estimated ODA: \$123.7 million (2011-12)
Laos	Country Program Estimate: \$31.1 million (2011-12) Total Estimated ODA: \$42.1 million (2011-12)
Mongolia	Country Program Estimate: \$7.0 million (2011-12) Total Estimated ODA: \$12.2 million (2011-12)
North Korea	Country Program Estimate: \$7.0 million (2011-12) Total Estimated ODA: \$12.2 million (2011-12)
Philippines	Country Program Estimate: \$105 million (2011-12) Total Estimated ODA: \$123 million (2011-12)
Vietnam	Country Program Estimate: \$102.4 million (2011-12) Total Estimated ODA: \$137.9 million (2011-12)
Cook Islands	Country Program Estimate: \$2.2 million (2011-12) Total Estimated ODA: \$4.4 million (2011-12)
Federated States of Micronesia	Country Program Estimate: \$3.0 million (2011-12) Total Estimated ODA: \$5.1 million (2011-12)
Fiji	Country Program Estimate: \$18.5 million (2011-12) Total Estimated ODA: \$37.5 million (2011-12)
Kiribati	Country Program Estimate: \$18.3 million (2011-12) Total Estimated ODA: \$28.2 million (2011-12)
Nauru	Country Program Estimate: \$18.0 million (2011-12) Total Estimated ODA: \$26.2 million (2011-12)

Country	AusAID and other Australian Government OAD (2011-12)
Niue	Country Program Estimate: \$2.7 million (2011-12) Total Estimated ODA: \$4.6 million (2011-12)
Republic of Palau	Country Program Estimate: \$1.2 million (2011-12) Total Estimated ODA: \$2.1 million (2011-12)
Republic of the Marshall Islands	Country Program Estimate: \$2.1 million (2011-12) Total Estimated ODA: \$3.5 million (2011-12)
Samoa	Country Program Estimate: \$26 million (2011-12) Total Estimated ODA: \$43.7 million (2011-12)
Solomon Islands	Country Program Estimate: \$124.3 million (2011-12) Total Estimated ODA: \$261.6 million (2011-12)
Tonga	Country Program Estimate: \$19.0 million (2011-12) Total Estimated ODA: \$32.1 million (2011-12)
Tuvalu	Country Program Estimate: \$7.4 million (2011-12) Total Estimated ODA: \$9.9 million (2011-12)
Vanuatu	Country Program Estimate: \$53.0 million (2011-12) Total Estimated ODA: \$70.1 million (2011-12)
Africa	Total Estimated ODA: \$291.3 million (2011-12)
Afghanistan	Country Program Estimate: \$124.14 million (2011-12) Total Estimated ODA: \$165.14 million (2011-12)
Iraq	Country Program Estimate: \$30.0 million (2011-12) Total Estimated ODA: \$36.6 million (2011-12)
Palestinian Territories	Total Estimated ODA: \$56.0 million (2011-12)
Caribbean	Total Estimated ODA: \$20.7 million (2011-12)
Latin America	Total Estimated ODA: \$27.2 million (2011-12)

Appendix 2: Letter of Agreement – UWA and UQ



COPY

LETTER OF AGREEMENT

Recognising the mutual benefits to be derived from closer research collaborations between The University of Queensland and The University of Western Australia, we agree to promote staff and student interactions and exchanges, especially of post graduate students, post doctoral and early career researchers; collaborative research projects; joint workshops and the exchange of expertise and information on a regular basis.

To this end, each university will create a fund of \$200k per annum to support exchanges of post graduate students and post doctoral and early career researchers to support short term exchanges to work in each others' laboratories or with researchers and research groups at the other institution.

The major areas for collaboration will include physical sciences, minerals and energy, biomedical and health sciences, natural resource management (with a focus on the tropics) and history and cultural studies.

Please see attachment for a list of initial proposals.

The two Deputy Vice-Chancellors for Research will be responsible for the conduct of the enhanced research relationship and to report to the Vice-Chancellors on achievements on an annual basis.

This agreement will remain in place for five years at which time the relationship will be reviewed and a decision taken on renewal.

Vice-Chancellor
The University of Queensland

Date: 8 Oct 09

Vice-Chancellor
The University of Western Australia

Date: 22 Oct 09



The University of Queensland and The University of Western Australia

PROPOSALS

With the signing of the letter of cooperation, the following proposals will be developed:

- (1) Workshop on energy related research to develop collaborative proposals for research, funding and publications: Responsible officers: Professor Graham Schaffer (UQ, Executive Dean Faculty of Engineering, Architecture and Information Technology) and Mr Tim Shanahan (UWA, Director, Energy and Minerals Initiative)
- (2) Workshop to further collaboration around nano and developing centres of excellence – Professor Colin Raston and Professor Max Lu

Appendix 3: Course List

The following table provides a list of existing IM4DC partner university courses that sit in the 'ready' and 'adapt' categories, organised according to the three IM4DC themes. This list forms the platform from which the education and training program for years two to four will be developed. Adaptation of existing courses and development of new courses will be driven by needs analysis, advice and from new knowledge generated by the IM4DC Action Research Program.

Course/activity	Description	Centre	Previous delivery	Status
Theme 1: Governance and Regulation				
Occupational Health and Safety in the Mining Industry	5 day course designed for both industry and regulators, promoting global best practice in addressing safety in the resources sector.	SMI: MISHC	Australia, China	Ready
Understanding and Managing Cumulative Impacts in Resource Regions	3 day course designed to give practitioners, regulators, and leading academics a greater understanding of dealing with cumulative social, environmental and economic impacts in the resources sector	CSRM	Brisbane , Australia	Ready
Discounted Cash Flow Modelling and Financial Evaluation of Mining Projects	2 day course modeling and financial evaluation of investments in mining projects at the conceptual and pre feasibility stage.	UWA: CET	Perth	Ready
Financial Risk Analysis and Real Option Valuation of Mining Projects	2 day course focused on the principles of risk and decision analysis and Real Option Valuation (ROV) as applied to investments in mining projects from exploration to feasibility stage.	UWA: CET	Perth	Ready

Oil and Gas Agreements	5 day course on the following topics: the relationship between joint-venturers, the complicated planning and approval phase of a project, transportation and delivery of product, and the long-term nature of the purchase and sale arrangements.	UWA: Centre for Minerals, Energy and Natural Resources Law	Perth	Ready
Oil and Gas Law	5 day course covering: the legal nature and protection of oil and gas exploration and production rights, both generally and in Australia, the Australian regulatory and licensing regime control of operations operating and other agreements infrastructure issues regulation of downstream operations including gas codes fiscal arrangements.	UWA: CMENRL	Perth	Ready
Environmental Protection Law	5 day course covering the institutional framework and objectives of environmental protection law	UWA: CMENRL	Perth	Ready
Water Resources Law	5 day course exploring the main legal principles of water resources law and important emerging issues	UWA: CMENRL	Perth	Ready
Climate Change Law and Emissions Trading	5 day workshop covering: a) the Kyoto protocol b) mechanisms for pricing carbon c) key design elements of emissions trading and comparative perspectives d) treatment of EITE industry, offsets and reporting and compliance e) renewable energy and carbon capture and storage.	UWA: CMENRL	Perth	Ready
International Oil and Gas Law	5 day workshop will explore:	UWA: CMENRL	Perth	Ready

	a) characteristics of modern oil and gas law regimes b) international legal rules for international boundaries c) critical terms of production sharing d) negotiations with host countries e) international engineering and procurement.			
Introduction to Work Health and Safety Fits both theme one and two: CES and G&R	10 day course will provide an introduction to the fundamentals of Work Health and Safety legislation, compliance and procedures.	UWA: UWA Health and Rehabilitation Program	Perth	Ready
Public Private Partnerships in the Resources Sector	10 day program incorporating workshop and field elements, run for Mongolian Health delegation in conjunction with external organisation	SMI:CSRM	Brisbane	Adapt
Taxation Regimes	Study with the World Bank looking at taxation for the resources industry	UWA: CET	In country	Adapt
Leadership Imperative	Strategic decision making in the resources Industry	UWA: Australian Centre for natural Gas Management	Perth	Adapt
The Economic Imperative	The Economic Imperative: :Resources, Regulatory Issues and Economic Policy	UWA: ACNGM	Perth	Adapt
The Management Imperative	The Management Imperative: Strategic Procurement, Asset Management, Governance, Contracting & Project Management	UWA: ACNGM	Perth	Adapt
Theme 2: Community and Environmental Sustainability				
Community Aspects of	5 day workshop run as part	SMI: CSRM	Annually in	Ready

Mineral Resource Development	of Grad Cert program. Has included international students including Mongolia, Chile, PNG		Brisbane from 2008	
Sustainable development in the mineral industry context	5 day workshop covering the application of SD principles to the resources sector	All SMI	Brisbane	Ready
Land and water management in the minerals industry	3 day workshop designed for industry and regulators focussing on integrated approaches to managing land and water issues associated with mining developments.	SMI:CWiMI SMI:CMLR	Santiago	Ready
Safe and rapid productivity development for the mine	3 day course on new developments in mining	UWA:ACG	Perth	Ready
Mine closure	5 day course on the economic and socially acceptable closure of mines	UWA: ACG and UWA: CLR	Perth	Ready
Inter Cultural Briefings, Supplementary English Language, Communication and Presentation skills	Can design course from a few days to several months for any size group	UWA: Centre for English Language Training	Perth	Ready
Community Relations in the PNG Resources Sector	3 day workshop run in 2010 and 2011, building a community of practice in the PNG sector. Potential to extend to Pacific Island context.	SMI:CSRM	Port Moresby, Lae	Adapt
Building productive community relations	3 day workshop with a focus on Australian context	SMI:CSRM	Multiple locations in Australia	Adapt
Community Engagement, Conflict and Grievance Management In the Resources Sector	5 day workshop focussing on building the people centred approach to community engagement and developing effective approaches to community complaints and grievances	CSRM CSR	Perth, Australia	Adapt

	through leading practice conflict and grievance management.			
Sustainable Mining	4 day workshop designed primarily for African regulators and leading academics to improve technical, environmental, social policy and regulatory skills with regard to sustainable mining for African participants from many African countries.	SMIKT CMLR CSRM CWIMI	Brisbane, Australia	Adapt
Community Sustainability Program	Development of water and sanitation infrastructure within community	UWA: Faculty of Engineering Computing and Mathematics	In country	Adapt
Community Sustainability Program	Development of tertiary educational program for engineering in country university partners	UWA: Faculty of Engineering Computing and Mathematics	In country	Adapt
Community Sustainability Program	Development of sustainable industries within community	UWA: Faculty of Engineering Computing and Mathematics	In country	Adapt
Environment and Development	Effective management of environment and development from community perspective	UWA: Centre for Social Impact	Perth	Adapt
Groundwater management	Understanding and effective management of ground water and containment of contaminants	UWA: School of Environmental Systems Engineering	Perth/ In country	Adapt
Theme 3: Operational Effectiveness				
Global Mineral Industry Risk Management	5 day workshop on the application of risk management systems in the minerals industry	MISHC	Multiple international locations	Ready

Incident Investigation	3 day workshop for those focused on investigations of OHS incidents in the mining industry.	SMI:MISHC	Multiple locations	Ready
Water management and accounting for the mining industry	3 day course incorporating a full day on water accounting frameworks	SMI:CWiMI	Multiple locations in Australia	Ready
Planning For Sustainable Mine Closure	3 day course designed for both the resources sector practitioners, regulators, and leading academics to provide delegates with support and knowledge necessary to respond to the many challenges that occur in implementing best practice mine closure planning.	SMIKT CMLR	Brisbane, Australia	Ready
Workshop on Integrating Sustainability into Life of Mine Planning	5 day workshop run in 2010 with a focus on Life-of-Mine Planning, Landscape and Landform Design, Ecosystem Establishment, Ecosystem Management on and adjacent to Mine Sites	SMIKT	Perth, Australia	Ready
Advanced Ore deposit workshop	12 day series of workshops on mineral systems: including all commodities, with particular strengths in the mineral commodities iron, nickel, copper, uranium, zinc, lead, gold, silver and platinum group elements as well as oil and gas.	UWA: Centre for Exploration Targeting	Perth	Ready
Ore Deposit field excursion	14 day excursion to South Africa to examine world class deposits not common in Australia	UWA: CET	South Africa	Ready
Applied structural geology in mining and	12 day course, 5 days in classroom and 7 day field	UWA: CET	Kalgoorlie	Ready

exploration	excursion of Kalgoorlie Terrane of the Yilgarn Craton			
Exploration Targeting	10 day course on understanding mineral systems, visualize geoscience datasets and rank targets to regional scale	UWA: CET	Perth	Ready
Senior Exploration Management	4 day course covers the principles and practices of effective exploration management.	UWA: CET	Perth	Ready
Reduction of risk in the management of tailings and mine waste	7 day course on the full range of issues that constitute risk in the management of mine waste	UWA: ACG	Perth	Ready
Management of Rock Dumps, Stockpiles and Heap Leach Pads	4 day course exploring the significant developments in the design, operation and management of rock dumps	UWA: ACG	Perth	Ready
Rock slope stability in Open Pit Mining and Civil Engineering	3 day course exploring the novel and rapidly evolving slope monitoring and design technologies	UWA: ACG	Perth	Ready
Paste and Thickened Tailings	3 day course on the advances in the preparation, transportation and deposition of paste and the important part that paste technology plays in incremental rehabilitation and its impact on mine closure.	UWA: ACG	Perth	Ready
Rockburst – Unleashing Earth’s Energy	2 days - Geotechnical hazard awareness training explaining the phenomenon underlying mine seismicity and rockbursts.	UWA: ACG	Perth	Ready
Strategic versus tactical approaches in mining	5 days this international series of seminars has been running since 2005 and well attended by senior	UWA: ACG	Perth, South Africa and Canada	Ready

	mining professionals			
Deep and High Stress Mining	5 days learning the latest experiences and state-of-the-art technologies in the challenging and evolving area of deep and high stress mining	UWA: ACG	Perth	Ready
Introduction to Offshore Geomechanics	5 day workshop giving an overview of sediments, geohazards, site investigation techniques and approaches for offshore foundation and anchoring systems	UWA: Centre for Offshore Foundation Systems	Perth	Ready
Practical Short Course on Environmental Hazards and Risk	4 day course will include the theoretical concepts of environmental hazards and risks that can be encountered on mine sites.	CLMR SMIKT	Central Queensland	Adapt
Structural Engineering	Structural mechanics, design, analysis, dynamics and earthquake engineering, ground motion processing and simulation.	UWA: Faculty of Engineering Computing and Mathematics	Perth	Adapt
Geomechanics	Environmental geomechanics, foundation and offshore engineering, in situ properties of soil and mining mechanics.	UWA: Faculty of Engineering Computing and Mathematics	Perth	Adapt
Rock Mechanics	Fracture mechanics, mechanism of crack growth, and characterisation of stress-strain state in rock masses with interacting openings.	UWA: Faculty of Engineering Computing and Mathematics	Perth	Adapt
GIS applications in Resources Sector	Current AusAID Australia Award for Africa. The multi-week program would need to be modified for alternative delivery modes.	SMI:CMLR	Brisbane	Develop

Appendix 4: Draft Position Descriptions



THE UNIVERSITY OF
WESTERN AUSTRALIA

Position Title: Director – IM4DC

Position Classification: ‘Executive’ fixed term for 3 years

Position Number: xxxxxx

Faculty/Office: xxxxxx

School/Division: xxxxxx

Centre/Section: xxxxxx

Supervisor Title: Director, Energy and Minerals Initiative

Supervisor Position Number: xxxxxxxx

About the University

UWA has an international reputation for excellence and enterprise and has been rated as one of the best comprehensive universities in Australia. It is one of the country’s leading research institutions as demonstrated by our Nobel Laureates and is the only WA member of the prestigious “Group of Eight” research universities.

Vision and Values

UWA vision is achieving international excellence.

Its core values underpinning our activities are a commitment to:

- A high performance culture designed to achieve international excellence
- Academic freedom to encourage staff and students to engage in the open exchange of ideas and thought
- Continuous improvement through self-examination and external review
- Fostering the values of openness, honesty, tolerance, fairness, trust and responsibility in social, moral and academic matters
- Transparency in decision making and accountability
- Equity and merit as the fundamental principles for the achievement of the full potential of all staff and students

All staff are expected to comply with the Code of Ethics and the University’s Code of Conduct and demonstrate a commitment to its Equity and Diversity and Safety principles. Details of the University policies on these can be accessed at http://www.hr.uwa.edu.au/publications/code_of_ethics, <http://www.equity.uwa.edu.au> and <http://www.safety.uwa.edu.au/policies>.

About the work area

The IM4DC

The IM4DC is an initiative of the Australian Government, funded through AusAID under the Sustainable Mining for Development Initiative. The IM4DC’s goal is to strengthen the capacity of partner developing countries to translate economic richness into significant and sustainable economic and social benefits. The IM4DC delivers training programs, prepares and disseminates practical guides and tools, and provides technical advice on all aspects of mining and development, including contemporary issues concerning mining and developing countries.

The Universities of Western Australia and Queensland are the joint-founding partners of the IM4DC. Both are leading universities within Australia’s Group of 8 with research and education programs strategically aligned to the major resource economies of their host states. Both institutions are active in national and international

research and education collaborations in minerals and energy and have highly complementary relationships and capabilities based on commodities and geography.

The IM4DC will be located in Perth, and is a collaboration between UWA (UWA) through its Energy and Minerals Institute (EMI) and The University of Queensland (UQ) through the Sustainable Minerals Institute (SMI).

IM4DC will deliver a range of practical advisory, education and training services to developing country governments in Africa, Asia, Latin America and the Pacific across a range of mining issues relevant to the development context.

The programs formulated in partnership with communities and government and conducted through IM4DC will develop new knowledge and understanding in priority areas that will lead to innovative education and training, new-generation technologies, processes and techniques that build indigenous capacity in areas to ensure the sustainability of mining industries and position Australia at the forefront of providers towards a sustainable future for developing countries.

The Energy and Minerals Institute (EMI)

The EMI is a network institute which draws together the experience and expertise across the University's 10 faculties and more than 30 schools to provide a comprehensive response to complex problems, and a gateway for external engagement to leading researchers on innovative solutions. UWA is a key stakeholder in Western Australia's growth as a globally significant minerals and energy destination. The EMI is guided by an accomplished Board of Trustees with extensive industry and international experience. The themes of oil and gas, minerals and mining, business leadership and international relations are reflected in the expertise brought by the Institute's board. The board ensures the intellectual leadership and cutting-edge research conducted at the University are transferred to industry, government and the community.

The Sustainable Minerals Institute (SMI)

The Sustainable Minerals Institute at the University of Queensland (UQ) is one of UQ's eight internationally significant research institutes. SMI is an initiative of industry, The University of Queensland and the Queensland Government to boost capacity in research and education in sustainable development in the minerals sector. SMI aims to participate in the transition of global mining and minerals recovery to a new level of performance and societal acceptance by being a world leader in providing knowledge-based solutions to the sustainability challenges of the global minerals industry. SMI is unique internationally in its discipline breadth across engineering, science and social sciences, with over 300 staff and students working across six inter-related research centres. SMI's work covers geology, minerals extraction, water management issues, minerals processing, workplace health and safety, mine rehabilitation and community engagement. With disciplinary roots in production, environment and people, SMI has experience in minerals research, education, consulting and commercialisation. SMI's strategic direction and activities are overseen by an Advisory Board comprising executive level representation from government and major minerals sector companies. Each of SMI's centres is also guided by an advisory board with knowledge area appropriate representation from industry, government and other stakeholder groups. Detailed information about SMI's centres is available at: www.smi.uq.edu.au.

Role Statement

The Director will be a dynamic, experienced professional with significant experience operating internationally, preferably in developing countries. He or she will lead an outcome-focused team of professional educators and researchers across two leading universities and ensure that the IM4DC meets the objectives of its partner organisations and the overall objectives of the Australian Government's Mining Initiative.

The role will draw upon the incumbent's international relationships, considerable, high level experience working in an international context, knowledge of government processes and foreign aid policy and knowledge of the international minerals and energy industries. Direct experience working in the higher education sector is not essential although a thorough understanding of government the ability to quickly develop a good knowledge of the higher education sector is essential.

The Director will be required to work collaboratively across multiple universities and suppliers, and to liaise with governments in recipient nations. The effectiveness of these relationships is crucial to the success of the IM4DC and its international education program.

The Director will also need to effectively manage a collaborative centre, balancing the needs of the partner institutions and to work effectively with the advisory committee of the IM4DC. The Director will be supported by two Deputy Directors, one focussed on Operations and Business Development and the other on Education and Australian Capability Coordination. It is envisaged that technical development and delivery will be the task of the two Deputy Directors.

The responsibilities of the Deputy Directors will include:

1. Deputy Director – Education and Australian Capability Coordination
 - Development and management of the IM4DC education program;
 - Identification and incorporation of relevant capabilities across other Australian institutions ;
 - Development and management of the IM4DC alumni network; and,
 - Coordination of all IM4DC activities at UQ.
2. Deputy Director – Operations and Business Development
 - Operational management and financial control of the IM4DC;
 - Management of all contracts including the Australian Government funding agreement;
 - Development and management of the IM4DC Fellowships program; and,
 - Coordination of all IM4DC activity at UWA.

Key Responsibilities

Duties and responsibilities include, but are not limited to:

Development

- Lead the IM4DC to meet its mission and objectives.
- Participate actively in contributing to the goals of the Australian Government's Mining Initiative.
- Lead the development of the strategic direction and operational priorities for the IM4DC with support from the Deputy Directors and in consultation with the IM4DC Advisory Committee.
- Oversee and take overall responsibility for the operational and financial management of the IM4DC.
- Work with the Deputy Directors to identify, develop and implement initiatives to promote the development and growth of the IM4DC.
- Lead a comprehensive needs analysis process to identify the scope and focus of the IM4DC's education program, ensuring it meets the needs of target recipient nation governments and the Australian Government.
- Mentor staff and implement staff development policies to facilitate the necessary skill levels.

Collaboration

- Effectively manage the IM4DC as a collaborative centre between two universities.
- Oversee the development and management of relationships with third party providers to ensure effective development and delivery of the IM4DC program.

Internationalisation

- Utilize and build upon existing strong international networks to develop, manage and facilitate productive relationships with governments, collaborators, providers and recipients of IM4DC services.

Education

- Oversee and contribute to the design, development and implementation of the IM4DC education program.
- Contribute as appropriate to education program content and delivery in areas of personal expertise, for example in leadership or international governance.

Reporting Relationships

Line management of the position will be via the Director, EMI at UWA. Management of the performance of the position and of the IM4DC will be via the IM4DC Board of Management, comprising the Directors SMI (UQ) and EMI (UWA).

Location of Position

The IM4DC will be headquartered at UWA in Perth and the Director will be located there. It is intended that the Deputy Director – Operations and Business Development position will also be located in Perth, with the Deputy Director – Education and Australian Capability Coordination located at The University of Queensland in Brisbane.

Specific Work Capabilities (Selection Criteria)

- Postgraduate qualifications in a governance, business or mining based discipline
- Extensive experience in an international environment in strategic management and business development.
- Experience leading major initiatives with accountability for strategic, operational and financial management to meet objectives and performance targets.
- The ability to develop and implement a vision for the IM4DC.
- Experience working with government and an ability to comprehend and influence policy as it relates to international aid and to resources industries in developing nations.
- The ability to deliver strong and effective relationships at a national and international level, building on an extensive personal international network of contacts in government and the resources industry and a demonstrated ability to create international collaborations
- Strong leadership skills, demonstrated project management skills and business acumen.
- Ability to swiftly develop an effective understanding of the higher education sector.
- Excellent interpersonal and communication skills. The ability to communicate with government, industry and higher education contacts at the highest levels and to relate effectively with peers and staff.
- Demonstrated capability to form, manage and lead a diverse group of people, fostering a cooperative team environment, supporting multiple disciplines and creating the required culture and vision.

POSITION DESCRIPTION

Job Title:	Deputy Director – Education and Australian Capability Coordination
Organisation Unit:	International Mining Centre for Development (IM4DC)
Reference Number:	
Type of Employment:	HEW 10, Fixed Term- 3 years
Classification:	
Remuneration:	Attractive remuneration package consisting of a base salary, plus employer superannuation of 17%
Closing Date:	xxxxxxx
Further Information:	Tim Shanahan, Director Energy and Minerals Institute Telephone: +61 8 6488 4608, Email tim.shanahan@uwa.edu.au Chris Moran, Director Sustainable Minerals Institute Telephone: +61 401 991 765, Email chris.moran@smi.uq.edu.au

BACKGROUND

Organisational Environment

The International Mining for Development Centre (IM4DC)

The IM4DC is an initiative of the Australian Government, funded through AusAID under the Sustainable Mining for Development Initiative. The IM4DC's goal is to strengthen the capacity of partner developing countries to translate economic richness into significant and sustainable economic and social benefits. The IM4DC delivers training programs, prepares and disseminates practical guides and tools, and provides technical advice on all aspects of mining and development, including contemporary issues concerning mining and developing countries.

The Universities of Western Australia and Queensland are the joint-founding partners of the IM4DC. Both are leading universities within Australia's Group of 8 with research and education programs strategically aligned to the major resource economies of their host states. Both institutions are active in national and international research and education collaborations in minerals and energy and have highly complementary relationships and capabilities based on commodities and geography.

The IM4DC will be located in Perth, and is a collaboration between The University of Western Australia (UWA) through its Energy and Minerals Institute (EMI) and The University of Queensland (UQ) through the Sustainable Minerals Institute (SMI).

IM4DC will deliver a range of practical advisory, education and training services to developing country governments in Africa, Asia, Latin America and the Pacific across a range of mining issues relevant to the development context.

The programs formulated in partnership with communities and government and conducted through IM4DC will develop new knowledge and understanding in priority areas that will lead to innovative education and training, new-generation technologies, processes and techniques that build indigenous capacity in areas to ensure the sustainability of mining industries and position Australia at the forefront of providers towards a sustainable future for developing countries.

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faculties and more than 30 schools to provide a comprehensive response to complex problems, and a gateway for external engagement to leading researchers on innovative solutions. UWA is a key stakeholder in Western Australia's growth as a globally significant minerals and energy destination. The EMI is guided by an accomplished Board of Trustees with extensive industry and international experience. The themes of oil and gas, minerals and mining, business leadership and international relations are reflected in the expertise brought by the Institute's board. The board ensures the intellectual leadership and cutting-edge research conducted at the University are transferred to industry, government and the community.

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Information for Prospective Staff

Information about the University, State of Queensland, living in Brisbane and employment at the University is at the University's web site. (<http://www.uq.edu.au/>) For a comprehensive guide to family friendly work practices and services visit the Work and Family web site at <http://www.uq.edu.au/equity/index.html?page=11661>

The University of Queensland Enterprise agreement (Academic Staff) outlines the position classification standards for Levels A to E.

Adopt sustainable practices in all work activities and comply with associated legislation and related sustainability responsibilities and procedures developed by the University (see the University's web site at <http://www.uq.edu.au/sustainability/responsibilities>).

DUTY STATEMENT

Primary Purpose of Position

The Deputy Director – Education and Australian Capability Coordination works closely with the IM4DC Director and the Deputy Director – Operations and Business Development, with the three positions forming the leadership group of the IM4DC.

The Deputy Director – Education and Australian Capability Coordination has primary responsibility for the design, development, delivery and assessment of a program of education and training products around resource governance, resource management and the development of sustainable extractive industries. The IM4DC education program will include seminars, study visits, short courses/continuing professional development courses, and for-award postgraduate courses for delivery in Australia and in target developing nations. These elements will be delivered by a range of providers including the two partner universities, other contracted tertiary institutions and external training organisations. This position is responsible for ensuring the program is academically coherent, professionally presented, value-adding to recipient nations and strongly promoted. This position will also be responsible for the development and effective management of the IM4DC alumni network for future benefit.

The Deputy Director – Education and Australian Capability Coordination will be an experienced education professional with considerable experience in an education leadership role within a university setting. Experience

working internationally and in managing the development of course content suited to participants from non-English speaking backgrounds is essential.

The IM4DC is a collaborative centre involving two universities and the Deputy Director – Education and Australian Capability Coordination must have the ability to work effectively across both institutions. Extensive, effective collaboration with recipient nation governments and with third party providers in Australia and overseas will also be required. The Deputy Director – Education and Australian Capability Coordination will use and build on his or her existing strong networks to identify relevant capability within other Australian organisations and cultivate relationships enabling that expertise to be brought into the IM4DC.

The Deputy Director – Education and Australian Capability Coordination will be responsible for the coordination of all IM4DC activity across the University of Queensland. This responsibility is mirrored at UWA by the Deputy Director – Operations and Business Development.

Duties

Duties and responsibilities include, but are not limited to:

Strategic and management activities

- As a member of the IM4DC Directorate, participate actively in the strategic planning for the IM4DC
- Provide advice to the Director and Deputy Director – Operations and Business Development on the strategic management of the IM4DC, including the identification, development and implementation of initiatives to promote its development and growth
- Establish and manage effective relationships within UWA, UQ, other collaborating and contracted organisations to ensure the success of the IM4DC's educational activities
- Development and management of the IM4DC alumni network including overseeing an information management system
- Recruit, develop and manage staff working on the IM4DC education program to facilitate the necessary skill levels and promote excellence.
- Coordinate the activities of the IM4DC across the University of Queensland. This coordination role will be mirrored at UWA by the Deputy Director- Operations and Business Development.

Education activities:

- Utilize and build upon national and international networks to identify and access the capabilities required by the IM4DC to successfully meet its objectives.
- Assist the Director in a process of needs analysis with target developing nations to identify the scope and focus of the IM4DC's education program
- Lead and oversee the design and development of a program of education and training activities to meet the objectives of the IM4DC
- Manage resources for the design, development, delivery and assessment of the IM4DC's education activities, including financial and staffing resources.
- Lead the development of annual activity programs and budgets for the IM4DC's educational activities
- Provide information regarding the IM4DC's education program to the partner universities, the IM4DC Advisory Committee and other bodies as required.

Reporting Relationships

The position reports functionally to the IM4DC Director (located at UWA) while line management reporting will be to the Director of the Sustainable Minerals Institute.

Location of Position

The IM4DC will be headquartered at UWA in Perth and the Director will be located there. It is intended that the Deputy Director – Operations and Business Development position will also be located in Perth, with this position, the Deputy Director - Education and Australian Capability Coordination located at The University of Queensland in Brisbane.

SELECTION CRITERIA

Qualifications

- A degree or postgraduate qualification in an energy, minerals or sustainable development related discipline.

Knowledge, skills and experience

- Considerable experience in an education leadership role in the area of mining, energy and/or sustainable development within a university setting.
- Experience in the development and delivery of education programs both in and outside of Australia including to participants from non-English speaking backgrounds.
- The ability to collaborate in the development and implementation of a vision for IM4DC's education functions.
- Existing strong networks across the university sector and industry in relation to minerals and energy sector education activities and the ability to identify capabilities relevant to the IM4DC.
- Excellent interpersonal and communication skills. The ability to communicate with industry and research peers at the highest level and to relate effectively with peers and staff.
- Experience working with government agencies both in Australia and overseas in relation to the development and delivery of education activities.
- Ability to lead multi-party collaborations including forming and maintaining effective and productive relationships across institutional boundaries to deliver programs of work in line with objectives and targets.
- Demonstrated project management skills and ability to deliver a major program of work in line with objectives and targets.



Position Title: Deputy Director – Operations and Business Development (IM4DC)

Position Classification: Level 10 Grade 2 fixed term for 3 years

Position Number: xxxxxx

Faculty/Office: xxxxxx

School/Division: xxxxxx

Centre/Section: xxxxxx

Supervisor Title: Director, IM4DC

Supervisor Position Number: xxxxxxxx

About the University

UWA has an international reputation for excellence and enterprise and has been rated as one of the best comprehensive universities in Australia. It is one of the country's leading research institutions as demonstrated by our Nobel Laureates and is the only WA member of the prestigious "Group of Eight" research universities.

Vision and Values

UWA vision is achieving international excellence.

Its core values underpinning our activities are a commitment to:

- A high performance culture designed to achieve international excellence
- Academic freedom to encourage staff and students to engage in the open exchange of ideas and thought
- Continuous improvement through self-examination and external review
- Fostering the values of openness, honesty, tolerance, fairness, trust and responsibility in social, moral and academic matters
- Transparency in decision making and accountability
- Equity and merit as the fundamental principles for the achievement of the full potential of all staff and students

All staff are expected to comply with the Code of Ethics and the University's Code of Conduct and demonstrate a commitment to its Equity and Diversity and Safety principles. Details of the University policies on these can be accessed at http://www.hr.uwa.edu.au/publications/code_of_ethics, <http://www.equity.uwa.edu.au> and <http://www.safety.uwa.edu.au/policies>.

About the work area

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Role Statement

The Deputy Director – Operations and Business Development works closely with the IM4DC Director and the Deputy Director – Education and Australian Capability Coordination, with these three positions forming the leadership group of the IM4DC.

The Deputy Director – Operations and Business Development is responsible for the operational management of the IM4DC's financial, human and infrastructural resources. This will include the preparation of operational business plans, the development and management of budgets and associated reporting.

This position is responsible for the management of the IM4DC funding agreement with the Australian Government and management of all subsidiary contracts and agreements covering the delivery of the IM4DC's program of work. This includes the development, negotiation and management of contracts with organisations both within and outside of Australia. This includes responsibility for the preparation of all reports required in line with the IM4DC funding agreement and reports under the partnership arrangements between UWA and UQ.

This position is responsible for establishing and managing the IM4DC Fellowship program including international liaison and marketing, selection of appropriate candidates and establishment of effective work programs for Fellows that meet IM4DC objectives.

The Deputy Director – Operations and Business Development is also responsible for the coordination of all IM4DC activity across the UWA. This activity is mirrored at UQ by the Deputy Director – Education and Australian Capability Coordination.

Key Responsibilities

Duties and responsibilities include, but are not limited to:

Strategic and management activities

- As a member of the IM4DC Directorate, participate actively in strategic planning for the IM4DC
- Provide advice to the Director and Deputy Director – Education and Australian Capability Coordination on the strategic management of the IM4DC, including the identification, development and implementation of initiatives to promote its development and growth
- Operational management of the financial, human and infrastructural resources of the IM4DC
- Financial control including development and management of budgets for the IM4DC's annual activity programs.
- Manage the IM4DC funding agreement with the Australian Government
- Develop, negotiate and manage all subsidiary agreements for the delivery of IM4DC activities.
- Develop and manage the IM4DC Fellowships program.
- Coordinate appropriate secretariat services for the IM4DC Advisory Committee
- Recruit, develop and manage staff working within the IM4DC to facilitate the necessary skill levels and promote excellence.
- Report on the IM4DC's operations to the IM4DC to the partner universities and other bodies as required.

Liaison and relationship management

- Coordinate the activities of the IM4DC across UWA. This coordination role will be mirrored at UQ by the Deputy Director- Education and Australian Capability Coordination.
- Establish and manage effective relationships within UWA, UQ, other collaborating and contracted organisations to ensure the success of the IM4DC's activities
- Form and maintain effective relationships with AusAID as the IM4DC funding body and with other government agencies

Reporting Relationships

The position reports to the IM4DC Director

Location of Position

The IM4DC will be headquartered at UWA in Perth and the Director will be located there. It is intended that the Deputy Director – Operations and Business Development position will also be located in Perth, with the Deputy Director – Education and Australian Capability Coordination located at The University of Queensland in Brisbane.

Specific Work Capabilities (Selection Criteria)

- Relevant tertiary qualification(s) in a business or other relevant field and extensive, relevant management experience in a university or other complex environment.
- Experience in financial management of a complex organisation
- Demonstrated knowledge of contemporary business management concepts and issues, with the capacity to apply this knowledge to the accountabilities of this position
- Knowledge of and experience in contract and IP management
- Knowledge of the structures and operations of government and mining industry organisations in relation to business opportunities for the Centre
- Demonstrated experience in providing strategic and operational advice to senior management on a wide range of topics including presenting business cases, leading major projects and achieving significant planned outcomes.
- Highly developed communication skills, particularly the ability to liaise and consult; to prepare reports and submissions; to negotiate; and to communicate with diverse groups both within and external to the Centre
- Exceptional relationship management skills to persuade and influence others in support of business objectives including leadership in strategic committee roles, projects and engagement of key stakeholders.
- Ability to act creatively and flexibly and to take initiatives without direction within established University and Centre policies and guidelines