

Annual Report 2013 – 2014

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International Mining for Development Centre

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The **International Mining for Development Centre** was established to promote the more sustainable use of minerals and energy resources in developing nations by assisting governments and civil society organisations through education and training, fellowships, research and advice. Our focus is three core themes—governance and regulation, community and environmental sustainability, and operational effectiveness.

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Abbreviations

AAA	Australia Award for Africa
AAPF	Australia Africa Partnership Facility
ACG	Australian Centre for Geomechanics
AMDC	Africa Minerals Development Centre
AusAID	Australian Agency for International Development
AusIMM	Australian Institute of Mining and Metallurgy
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe (German Federal Institute for Geosciences and Natural Resources)
CBU	Copperbelt University
CIDA	Canadian International Development Agency
CIPL	Centre for Innovation in Professional Learning
DMP	Department of Mines and Petroleum
EITI	Extractive Industries Transparency Initiative
EMI	Energy and Minerals Institute
ETAEMR	Education and Training Agency of the Ministry of Energy and Mineral Resources, Indonesia
GASI	General Agency for Specialized Inspection, Mongolia
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IM4DC	International Mining for Development Centre
KPI	Key Performance Indicator
M4D	Mining for Development
MEF	Monitoring and Evaluation Framework
MIREM	Ministério dos Recursos Minerais, Mozambique
MOU	Memorandum of Understanding
OHS	Occupational health and safety
RET	Department of Resources, Energy and Tourism
SIMTARS	Safety in Mines Testing and Research Station, Queensland
SMI	Sustainable Minerals Institute
TVET	Technical and Vocational Education and Training
UEM	Universidade Eduardo Mondlane, Maputo, Mozambique



UNZA	University of Zambia
UQ	The University of Queensland
UWA	The University of Western Australia

1 Overview and summary

1.1 Scope of report

The Annual Report 2013-14 reviews implementation of the International Mining for Development Centre (IM4DC or the Centre) Annual Plan 2013-14. It covers the period from 1 July 2013 to 30 June 2014. It reports against key performance indicators set out in the Annual Plan as well as noting key impacts resulting from these.

There are some aspects of the activities and associated indicators reported in this document, which reflect variations from the Annual Plan. These have emerged during refinement of the Centre's program during the year, in response to requests from DFAT and improved understanding of specific demand for IM4DC services. There have also been delays in recruitment of Fellows and ongoing low take-up of the Advice to Government activity.

1.2 IM4DC program strategic focus

During 2013-14, IM4DC ramped-up its delivery of courses and other activities, enhanced its systems, build on its experience, and refined its program further tailored to each developing country's needs, demand and context.

The Centre utilises its strategic framework Figure 1 (page 10) to target and prioritise of the Centre's delivery against development needs. Drawing on this, IM4DC has implemented a comprehensive monitoring and evaluation process to assess the effectiveness of its activities.

IM4DC's alumni system has been refined and expanded to enable ongoing engagement of the growing alumni cohort and importantly, facilitate interactions between alumni.

IM4DC's two years and eight months of experience of implementation of its program and close engagement with developing countries has enabled the Centre to refine its theory of change on realising development outcomes through development of mineral and energy resources.

1.3 Integrated approach

Guided by the strategic framework, IM4DC delivers an integrated program of activities that interact and mutually reinforce to deliver sound development outcomes.

In seeking to empower individuals and institutions to bring about transformational change, IM4DC also adopts an integrated approach to activity development, selection of participants, activity monitoring, end and post activity feedback, and ongoing monitoring of participants' activities on return to their workplace.

IM4DC's integrated program is subject to a rigorous monitoring and evaluation process that drives continuous improvement to lift the level of performance and effectiveness constantly.

This approach and experience continues to enable IM4DC to its theory of change informing the understanding and articulation of demonstrated impact.

1.4 IM4DC program delivery

1.4.1 Mid Term Review

In early 2014, IM4DC was subject to an independent Mid Term Review (MTR), commissioned by DFAT. The findings of the review were positive, reporting that the centre had to date delivered high quality programs in a cost-effective manner, and that there was strong support for this type of activity-based integrated program from key stakeholder groups and Australian missions in countries and regions where IM4DC had been active.

The MTR include a number of specific recommendations for the final year of the current Grant Agreement. In summary, the recommendations were:

- The program should continue for its final year and build on the momentum established
- IM4DC activities should be increasingly targeted to support the Australian Government's economic diplomacy agenda
- The Australian mining industry and other stakeholders should be brought into the program more closely
- More competition should be introduced to the selection of expertise for IM4DC activities
- IM4DC should continue activities in Africa and Latin America even if the bilateral and regional aid programs to these regions have been reduced
- IM4DC and DFAT should agree on a more rigorous set of expectations in relation to gender and mining.

The Annual Plan 2014-15 sets out how IM4DC is addressing the recommendations.

1.4.2 Delivery highlights

IM4DC has met most targets set for the activities articulated in the 2013-14 Annual Plan. At the end of June 2014, IM4DC's delivery had met, or was ahead of, most cumulative targets since operations began in October 2011. During the 2013-14 period, the Centre has:

- Delivered 18 courses and workshops in Australia for 293 participants from 34 countries
- Delivered 18 courses overseas for 617 participants from 48 countries
- Received reports from 22 Action Research projects
- Provided support for 16 Student Research activities
- Engaged 6 IM4DC Fellows
- Engaged with education and research institutions in developing countries in a variety of modes to design and commence capacity-building partnerships
- Implemented an online Community of Practice to extend IM4DC's alumni engagement
- Developed and implemented its Monitoring and Evaluation system.

Chapter 2 provides more detail of IM4DC activities in the 2013-14 year.

1.4.3 Program progress against Key Performance Indicators

Selected Key Performance Indicators (KPIs) for the IM4DC program were defined in the Centre's Grant Agreement. These, plus additional KPIs set by IM4DC, provide delivery benchmarks for the program.

Table 1 sets out performance against these KPIs for the IM4DC program since inception, and projected to the end of the 2013-14 year.

The IM4DC program has achieved most targets set out in the Annual Plan 2013-2014, as demonstrated by the delivery highlights above. Planned appointment of several Fellows has been delayed due to ongoing difficulties with recruitment. Fellowships remain a priority to mobilise in the first quarter of the 2014-15 program. Advice to Government assignments are demand driven and did not reach expected levels of uptake.

Table 1: Key Performance Indicators 2011-12 to 2014-15

	Key Performance Indicator ^a	Planned KPIs and delivery 2013-14			Delivery 2011-12	Delivered 2012-13	Delivery targets and Plan KPIs 2011-12 and 2012-13 combined		Comments
		Planned 2013-14	Revised target for 2013-14	Delivered 2013-14	Delivered 2011-12	Delivered 2012-13	Delivered 2011-12, 2012-13 and 2013-14	Grant agreement KPIs 2011-12, 2012-13, and 2013-14	
	Training – in Australia								
1.1	Number of courses	18	18	18	5	15	38	24 ^b	On track to exceed Grant Agreement KPIs
1.2	Participant training days	3742	3742	3005	221	2589	5815	4800	
1.3	Total number of students Female/Male (target >20%F)	302	302	293 88F/205M	95 20F/75M	262 79F/183M	650 187F/463M	480 ^b ns	
1.4	Number of repeat students	Not specified	Not specified	50	N/A	10	60	ns	
1.5	% of participants overall satisfaction positive	80%	80%	96.1%	88.4%	96.4%	94.9%	ns	
	Training – in country								
1.6	Number of courses	22	21	18	5	10	33	14 ^b	On track to exceed Grant Agreement KPIs
1.7	Participant training days	2284	2284	2701	816	1212	4729	3500	
1.8	Total number of students Female/Male (target >20%F)	402	402	617 166F/451M	284 69F/215M	298 110F/188M	1199 345F/854M	700 ^b ns	
1.9	Number of unique or repeat students	Not specified	Not specified	79	N/A	26	105	ns	
1.10	% of participants overall satisfaction positive	80%	80%	90.7%	83.4%	92.7%	88.8%	ns	

	Key Performance Indicator ^a	Planned KPIs and delivery 2013-14			Delivery 2011-12	Delivered 2012-13	Delivery targets and Plan KPIs 2011-12 and 2012-13 combined		Comments
		Planned 2013-14	Revised target for 2013-14	Delivered 2013-14	Delivered 2011-12	Delivered 2012-13	Delivered 2011-12, 2012-13 and 2013-14	Grant agreement KPIs 2011-12, 2012-13, and 2013-14	
	Visiting Fellows								
2.1	Distinguished Fellows Female/Male (target >20%F)	4	4	2 1F/1M	0 N/A	0	6	14 ^b ns	Recruitment difficulties and delays in mobilisation have led to shortfall
2.3	Development Fellows (target >20%F)	10	10	4 1F/3M	0	10 2F/8M	14	ns	Development Fellowships were implemented in response to requests, but limited take-up due to time commitment required for fellowships
	Annual Conference								
3.1	Annual Conference attendance (target >30%F)	300	300	0	120	685	805	800 ^b	2013-14 Conference attendees and sponsor places nil due to DFAT request not to hold event
3.2	IM4DC supported places (target 20%F)	30	30	0	0	65	65	90 ^b ns	
3.3.	% of conference participants overall satisfaction positive	80%	NA	86%	N/A	86%	86%	ns	
	Technical Advice								
4.1	Advice to Government (days)	25	25	16	1.5	9	26.5	120 ^b	
4.2	Timeliness / quality - % of clients rating overall satisfaction positive	80%	80%	100%	N/A	100%	100%	ns	

	Key Performance Indicator ^a	Planned KPIs and delivery 2013-14			Delivery 2011-12	Delivered 2012-13	Delivery targets and Plan KPIs 2011-12 and 2012-13 combined		Comments
		Planned 2013-14	Revised target for 2013-14	Delivered 2013-14	Delivered 2011-12	Delivered 2012-13	Delivered 2011-12, 2012-13 and 2013-14	Grant agreement KPIs 2011-12, 2012-13, and 2013-14	
	Action Research / Tailored Advice		80%						
5.1	Number of new competitive Action Research/Tailored Advice projects	10	10	21	12	8	41	20 ^b	
5.3	Student and fellowship research support	42	80%	16	6	6	28	16 ^b	
5.4	% of projects that meet IM4DC quality needs	90%		100%	100%	100%	TBC	90%	
5.5	Number of publications	20	8	18	3	1	22	30	Some publications lagging due to lodgement delays by authors and consequent release delays
	Alumni		0						
6.1	Number of alumni meetings (in country)	3	NA	2	0	0	2	4 ^b	
6.2	Alumni attending alumni meetings in-country	60	NA	23	na	55	55	100 ^b	
6.3	Alumni attending annual conference	30	25	88	0	55	143	45 ^b	
	Institutional linkages		80%						
7.2	Activities conducted with partner institutions in developing countries	30	16	6	0	6	6	ns	

^a This table is based on data the Annual Plan 2013-14 where notes are provided on KPI measures, including identification of KPIs included in the original Grant Agreement and new KPIs

^b Indicates KPIs set out in the original Grant Agreement

1.5 Management, operations and finance

1.5.1 Personnel and contractors

The management and operations of the Centre are supported by a team comprising 12.6 EFT positions with 9.6 located in Perth and 3 located in Brisbane. Of these, 6 positions are engaged in program delivery. The balance of 7.6 EFT positions is for management and administration. The core team is supplemented by casual staff and contractors engaged as required for activity delivery. The Centre is supported by the two partner universities through provision of central administrative, financial, legal, IT and HR services.

1.5.2 Financial position

As at 31 July 2014, the Centre had spent 85% of the reforecast annual budget, as detailed in Chapter 3. In July 2014, IM4DC will have extended 80% of previous funding tranche and will be invoicing DFAT for the next tranche. DFAT has indicated that in the context of the wider aid program it will be seeking to make quarterly payments of the final \$9 million tranche due in 2014-15.

Figure 1: International Mining for Development Centre Strategic Framework

Goal						
To support developing countries to transform their extractive resource endowment to inclusive and sustainable economic growth and social development						
Themes						
Governance and Regulation		Community and Environmental Sustainability			Operational Effectiveness	
Improved governance and accountability through effective and transparent regulation and management of extractive industries		Strengthened economic, social and environmental outcomes from mining in developing countries through education and training, institutional strengthening, and capacity building			Implementation of policies and processes that ensure that resources developments result in substantial, inclusive and sustainable development	
Strategic Programming Areas						
Regional and local economic and social development	Sub-national governance of the mining sector	Minerals policy, regulation and agreements	Community engagement and consultation	Health and safety of workforces and resources communities	Environmental management and regulation	
Outcome: Alignment of project economic activity with broader societal development objectives.	Outcome: Enhancement of governance capacity at local and regional levels involving multiple stakeholders.	Outcome: Development of well-designed policy and regulatory frameworks.	Outcome: Improvements in the processes used by industry and government stakeholders to engage with local communities.	Outcome: Implementation of appropriate regulatory and management approaches for occupational health and safety in the resources sector.	Outcome: Improvements in the capacity of all stakeholders to understand and manage the environmental aspects of resource projects.	
Through processes such as: regional planning and infrastructure development; local content and enterprise development; control of small-scale and artisanal mining	Focused on local accountability, understanding and monitoring of mining operations, and capacity to manage agreement negotiation and implementation processes	That establish platforms for: the management of geoscience data and exploration; the negotiation of project agreements and approvals; tax regimes and revenue management	To ensure: understanding and communication of impacts at the local level; fair and effective community agreements processes; open and transparent engagement with Indigenous communities	Including: regulatory frameworks for OHS built on modern risk management principles; community health and resource projects; operational aspects of managing and monitoring safety practices	Including: effective and inclusive environmental impact assessment processes; integration of land and water management; mined land rehabilitation practices; operational environmental management and monitoring	
Program Activities						
Education and training	Action Research	Fellowships	Advice to governments	Conference	Institutional linkages	Publications
Participants receiving training through in-country short courses and in Australia short courses and study tours	To assist with implementation and application of existing knowledge to address specific developing country issues	Current and future leaders visiting Australia for training, experience, research and collaboration, and transferring knowledge to home countries	Short reviews, advice or contributions to larger projects, to a maximum of 10 days per activity	Gather stakeholders around the performance of mining and oil and gas contribution to economic and social progress in developing countries	Capacity-building linkages with selected developing country institutions including universities and the African Minerals Development Centre	Provide target nations with practical tools and information that will assist them in facilitating development of sustainable mining industries
Target Outcome						
IM4DC alumni and partner institutions effecting change through transformational leadership in mining for development and related activities						

2 Program delivery

2.1 Short course program

2.1.1 Overview

In the 2013-14 year, IM4DC delivered 33 individual courses in its own right and co-delivered three study tour and workshop activities with the DFAT-funded Australia Africa Partnership Facility (AAPF). Course durations have ranged from one-day workshops on key mining for development issues, taking advantage of the presence of groups undertaking Study Tours or Fellowships, to four-week programs conducted in Perth and Brisbane.

Highlights were:

- Delivery of 36 courses and workshops (18 in-Australia and 18 in-country) to 910 participants from 53 countries
- Overall female participation rate of 29 per cent
- Positive feedback through program surveys, achieving an overall positive satisfaction rate of 93 per cent
- Evidence of implementation of return to work plans and continued interaction between participants.

The courses and workshops involved participants from Africa, Asia, the Pacific and Latin America. A feature of these programs has been the diversity of experience across different contexts and the opportunities to share knowledge amongst participants and course facilitators. The combination of academic, civil society and government participants from individual countries has also proved to be an effective approach to encouraging dialogue, both within and between countries, during and following the courses.

Reports on each short course are in Appendix A.

2.1.2 Program delivery

Some programs have been developed at short notice in response to specific requests, for example the Study Tour for the Malawi Government. Programs have also been developed in response to needs identified in DFAT-commissioned country Scoping Studies.

A number of courses have been delivered in collaboration with other agencies or organisations, for example the program on Open Cut Slope Stability, which was facilitated in Mongolia through IM4DC's partnership with the BGR (Germany) development assistance program in that country. Such arrangements have allowed IM4DC and partner organisations to optimise delivery synergies in terms of content, delivery and management of logistics.

Table 2: IM4DC in-Australia short courses July 2013 to June 2014

Activity	Duration (Days)	Participant number	Countries	Location	Date
Australian Flagship courses – aligned with Strategic Program areas. Generally include field trip components. All have a leadership framework and return to work planning process as part of course.					
1. Community Aspects of Resource Developments	20	20	Global	Brisbane	July
2. Occupational Health and Safety Leadership	20	17	Global	Perth	October
3. Environmental Management	20	21	Global	Brisbane	February
4. Regional Development	20	15	Global	Perth	February
5. Mineral Policy and Economics	20	20	Global	Perth	June
6. Resource Governance	20	20	Global	Brisbane	June
Australian other courses and workshops – responding to country program requests, and also to take advantage of opportunities to build programs around relevant conferences and study tours.					
7. African Gold Mining and Fraud Prevention Workshop (in conjunction with AAPF study tour)	1	37	Africa	Perth	July
8. Agriculture and Mining (with AAPF; linked to Africa Down Under conference)	5	13	Africa	Perth	August
9. Water in Mining (with AusIMM Water in Mining 2013 conference)	15	16	Global	Brisbane	November
10. Mongolian Government - Large Scale Underground Mining	9	8	Mongolia	Brisbane	November
Australian additional flexible courses/support - additional courses, workshops or study tours during the year, in particular for countries emerging as priorities.					
11. Kenyan Parliamentary Delegation	1	8	Kenya	Perth	September
12. Indonesian Coal and Minerals Policy Study Tour	4	12	Indonesia	Brisbane and Central Queensland	October
13. Indonesian Geology Study Tour	5	9	Indonesia	Perth, Kalgoorlie	October
14. Mining and Gender Study Tour	1	32	Global	Brisbane	November
15. Malawi Government Mining Revenue Study Tour	3	9	Malawi	Perth	April
16. Mediation Workshop	6	17	Global	Perth	May
17. Negotiation Roundtable with African Resource Negotiation Network (ARNN)	3	13	Africa	Perth	May
18. Indonesian Mines Inspector Framework Design Workshop	5	6	Indonesia	Brisbane	May

Table 3: IM4DC in-country short courses - July 2013 to June 2014

Activity	Duration (Days)	Participant number	Countries	Location	Date
In-country courses and workshops					
1. Mining Negotiation Roundtable	2	17	Africa	Yaounde, Cameroon	July
2. Sub-national and Local Development of Resource Regions	10	20	Africa	Accra, Ghana	August
3. GIRAF – the 3 rd Geoscience Information in Africa Workshop (with BGR)	5	27	Africa	Accra, Ghana	September
4. Mining Negotiation Frameworks (in conjunction with IDEP Minerals Policy and Contract Negotiations short course)	1	25	Africa	Dakar, Senegal	September
5. OHS Incident Investigation	5	13	Zambia	Kitwe, Zambia	November
6. Connecting mining activity with human development goals	5	28	Latin America	Santiago, Chile	November
7. Dialogue and EIA processes			Latin America	Lima, Peru	November
– Workshop 1	2	51			
– Workshop 2	2	54			
8. Management of Large Volume Waste and Minesite Rehabilitation	5	20	West Africa	Tarkwa, Ghana	November
9. Application of GIS for Geoscience and Policy	10	23	Africa	Lusaka, Zambia	January
10. Emerging Leaders in African Mining (in conjunction with African Mining Indaba)	10	26	Africa	Cape Town, South Africa	January
11. Improving Mining Tax and Administration Collection Frameworks	4	33	Africa	Johannesburg, South Africa	February
12. Mine Waste Landform Management and Closure	3	73	Philippines	Quezon City, Philippines	February
13. Open Cut Slope Stability	5	24	Mongolia	Ulaanbaatar, Mongolia	April
14. OHS Incident Investigation	7	18	Africa	Kitwe, Zambia	May
15. Improving Mining Tax Administration and Collection Frameworks	4	37	Africa	Dar es Salaam, Tanzania	May
16. Indonesian Safety and Environmental Management Workshop	2	77	Indonesia	Bandung, Indonesia	May
17. Connecting Mining Activities with Human Development Goals	2	53	Madagascar	Madagascar	June
18. Water in Mining Summer School	9	33	Colombia	Bogota, Colombia	June

2.1.3 Participant diversity

IM4DC activities included participants from 63 countries, as detailed in Figure 2. A contributing factor to the high number of countries were the African workshops on *Improving Tax Administration and Collection Frameworks*, which have aimed to target at least one or two participants from most African countries with significant .

During the reporting period, the overall level of female participation was 29%. This is summarised by region in Table 4. Gender disaggregated participation by course is included in Appendix B.

Table 4: Gender disaggregated participation by region

Region	Female	Male	Totals
Africa	236	714	950
Asia/Pacific	290	492	782
Latin America	119	226	345
Total	645	1432	2077

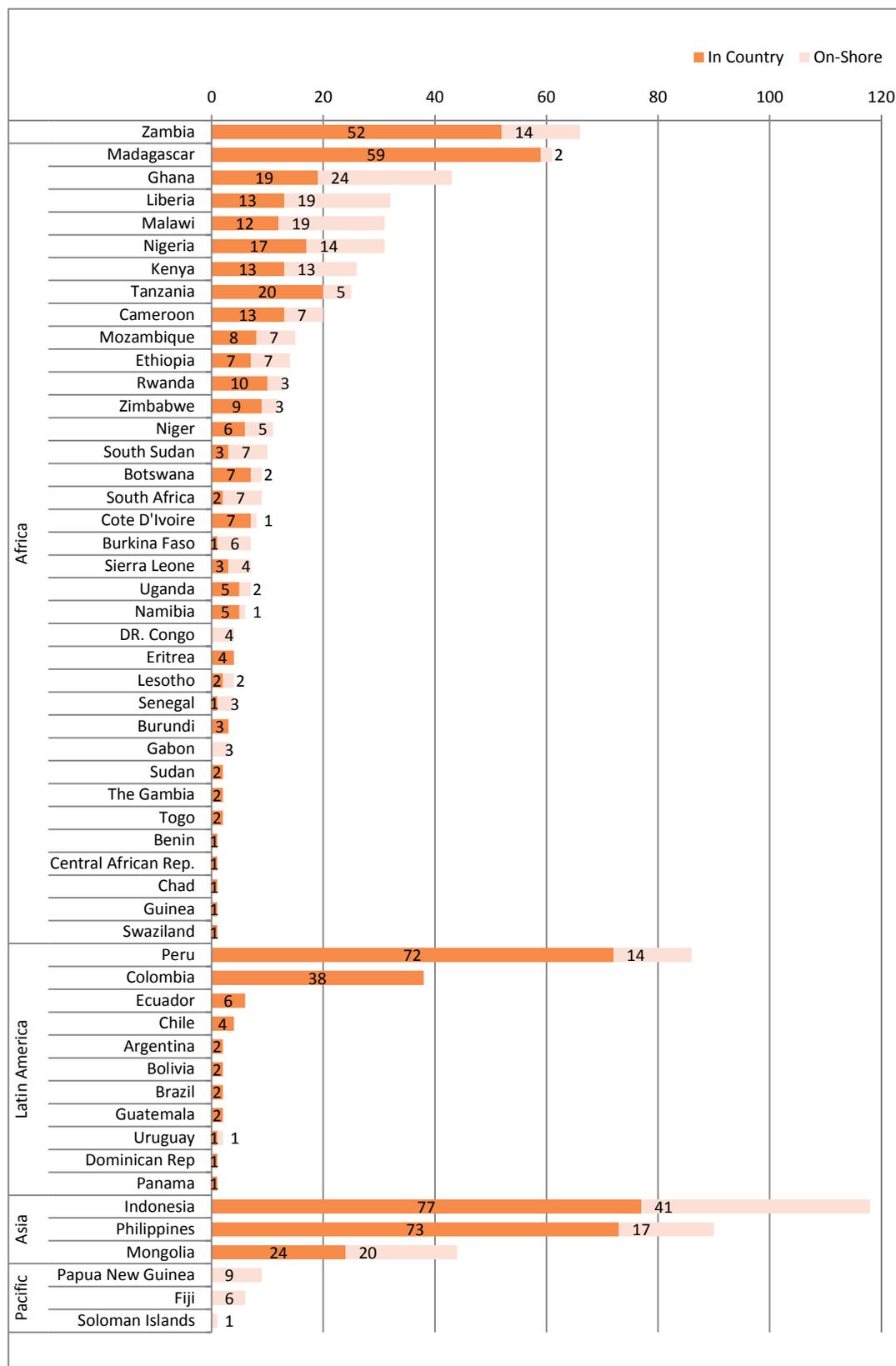
Participants included representatives from various levels of government¹, academic institutions and from civil society and similar groups across the programs delivered during 2013-14. This is summarised in Table 5 and disaggregated by course in Appendix B.

Table 5: Summary of sectors represented by short course participant sectors

Category	In-Australia		In-country		Totals	
	Number	%	Number	%	Number	%
Government	219	74.7	311	50.4	530	58.2
Private sector	5	1.7	36	5.8	41	4.5
Civil society	18	6.1	76	12.3	94	10.3
Academic	49	16.7	125	20.3	174	19.1
Undisclosed	2	0.7	69	11.2	71	7.8
Total	293	100	617	100	910	100

¹ 58.2% of participants in the reporting period identified themselves as government, which Australian aid reports in headline results reporting on public servants trained

Figure 2: Number of course participants by country and mode



2.1.4 Participant feedback

Course completion surveys

Participants were surveyed at the completion of each course and two workshops using a standardised evaluation form. Feedback on four key criteria is summarised in the tables below. The scores indicate the percentages of respondents rating each criterion positively, neutrally or negatively on a five-point scale. Detailed information on participant feedback from each course is included in the Course Summaries in Appendix A.

Table 6: Summary of participant feedback of courses overall

2013-14 Short courses	Overall				
	Positive	Neutral	Negative	No response	Total
In-Australia sub-total	96.1	2.8	0.6	0.6	100.0
In-country sub-total	90.7	5.9	1.8	1.5	100.0
Total	93.6	4.2	1.1	1.0	100.0

Table 7: Summary of participant feedback of course components

	Australia courses				In-country courses			
	+ve %	Neutral %	-ve %	No resp %	+ve %	Neutral %	-ve %	No resp%
Overall	96.1	2.8	0.6	0.6	90.7	5.9	1.8	1.5
Preparation	95.6	3.0	0.7	0.8	93.3	3.9	2.1	0.6
Program content and delivery	96.0	2.8	0.3	0.9	89.5	7.1	1.6	1.7
Workshop planning	95.1	3.7	1.1	0.1	86.4	8.2	3.8	1.6
Benefits	95.6	3.1	1.0	0.4	94.0	3.8	0.8	1.4

Participants have provided sustained positive feedback on IM4DC program. They largely recognise the program content has been relevant to their own contexts, and they say that have benefited from obtaining an understanding of the approaches taken by Australia in specific areas. IM4DC consistently receives feedback that a key benefit is opportunity to hear from their peers in the programs, and to share their own experiences. Increased opportunities for participants to share information and to increase the opportunities for field activity are the suggested areas for improvement.

Box 1: Samples of qualitative feedback at course completion

“I learned so much from my peers about their situation and problems regarding EITI. Also it was very helpful to learn the different tool kits, framework and acts we can use to analyse laws, CSR programs and community planning and how to monitor advances in these areas” – Peruvian participant on the Community Aspects of Resource Development (CARD) course, Brisbane, July 2013.

“I am really delighted to have learnt on the social, economic, environment and governance issues affecting the mining industry in the world with a particular emphasis on the participating countries” – Zambian participant on the Regional Development and Mining course, Ghana, August 2013.

“All sessions were interested and give me experience and new things. Class discussion and focus group discussion were very good and inspiring. ERGT [Emergency Response Training] practice good because we practice about safety and have experience to do job with safe behaviour” – Indonesian participant on the Occupational Health and Safety Leadership course, Perth, November 2013.

Follow-up surveys

In addition to end of course evaluations, the Centre conducted six monthly follow-up surveys in December 2013 and June 2014. This collected data is for courses during the 2013 calendar year. A total of 287 surveys were sent out, with 87 responses received – a response rate of 30 per cent. The results of this feedback are summarised in Table 5. For activities conducted from January to June 2014 follow up surveys will be conducted in December 2014

Table 8: Summary of participant feedback from course alumni follow up survey

Question	Not at all %	To a small extent %	To some extent %	To a moderate extent %	To a large extent %	No response %	Total responses (n)
Application of skills and knowledge							
To what extent are you applying the skills and knowledge you gained from the IM4DC courses?	0	0.0	12.5	25.0	62.5	0	24
To what extent have you shared these skills and this knowledge with others in your organisation?	0	0.0	21.7	39.1	39.1	0	23
To what extent have you been able to implement your return to work plan?	0	4.3	30.4	43.5	21.7	0	23
Alumni networks							
How much contact have you had with other course participants from your own country since the IM4DC course?	4	4	28	28	36	0	25
How much contact have you had with other course participants from other countries since participating in the IM4DC course?	16	20	40	20	4	0	25

The commentaries that accompanied these responses were also positive. Respondents confirmed that they had been able to use the information gained from the courses in their own contexts, and had shared this information more widely within their organisations. All of the longer programs have engaged participants in developing individual Return to Work plans to formalise their approach to how they will use their new-found knowledge to effect changes in their own countries. Box 2 provides samples of feedback.

Box 2: Samples of qualitative feedback from follow-up survey

“Mining has now become part of our work at African Centre for Energy Policy [ACEP]. Previously we concentrated on oil but IM4DC gave the opportunity to start influencing our organization to transfer some of our energies to the mining sector. Going forward we have a programme with IBIS West Africa to do advocacy on revenue generation from the mining sector and how to link revenues to community development.”

“[Participation in IM4DC activities has] brought good changes which include: 1- Improved Inspection skills of Mining Operations; 2 - Improved risk assessment skills and now in process of formulation of risk management plan for Mining operations in Malawi; 3- Accidents prevention techniques which can be used on staff inductions of mine workers; 4- In house staff training/sharing of Risk Management skills learnt .”

“I am now handling courses in sustainable development studies at the graduate program of the university. I have integrated in the syllabus mine closure and mined land rehabilitation as important subject matter in the conservation of land and water resources. I am also a member of the research committee of the university on the area of responsible mining.”

“Together with a Ghanaian colleague who also attended the workshops and conference, we're developing proposals for research in abandoned mine areas in the Western Region of Ghana. We intend to investigate the impacts of those abandoned mines on groundwater quality in the area, and make recommendations for appropriate restoration measures. The results will also inform the development of the necessary legal framework to protect water resources in mining areas.”

“ [My participation in the course] has increased engagement and partnerships with mining companies. Some mining companies have come on board to assist the Local Authority in areas where it is experiencing challenges such as waste management, land, disaster preparedness and management and environmental management.”

“I'm in the process of introducing a course on mine water management. This is a direct result of the workshops we attended in Brisbane in Australia.”

“[As a result of participating in an IM4DC program] 1. We have now begun a system of discussing and analysing together as a team whenever there is a major accident that requires investigation. People who attended the course help the investigating officer with questions and possible leads. Using the tactics we try to come up with a solution to the cause of accident and how to prevent it in future. 2. My personal approach to investigations has changed. I am now more focused.”

“I have been involved as research collaborator with UWA's "International Safety Survey". This has given me an avenue to connect to mining industries in the country.”

2.1.5 Coordination and collaboration with other institutions and activities

IM4DC closely coordinates with other course and study tour programs both in Australia and in other countries to ensure complementary course and study offerings and to minimise duplication. Examples from the 2013-14 year included:

- Significant inputs into Australia Africa Partnerships Facility Study Tours on Gold Fraud Prevention, Agriculture in Mining and Gender in Mining

- Delivery of a course on Open Cut Slope Stability, Mongolia with Germany's Federal Institute for Geosciences and Natural Resources (BGR) Mongolia
- Delivery of Geoscience Resources in Africa (GIRAF) Workshop, Ghana, with BGR
- Contribution to Mineral Policy and Contract Negotiations Short Course, Senegal, presented by African Institute for Economic Development and Planning (IDEP)
- Delivery of two workshops on Design and Administration of Mineral Taxation Frameworks in Johannesburg and Dar es Salaam, collaboration with the World Bank and Centre for Exploration Targeting (third workshop in November 2014 to include African Minerals Development Centre as partner)
- Presentation of a workshop on Connecting Mining Activities to Human Development Goals, Madagascar, in collaboration with the World Bank
- Delivery of the Emerging Leaders in African Mining program with African Minerals Development Centre, University of Cape Town and University of Cambridge Institute for Sustainability Leadership
- Development and delivery of Mining Law in West Africa <check> short course, with University of Ghana
- Co-delivery of all in-Indonesia short courses and workshop with Education and Training Agency for Energy and Mineral Resources.

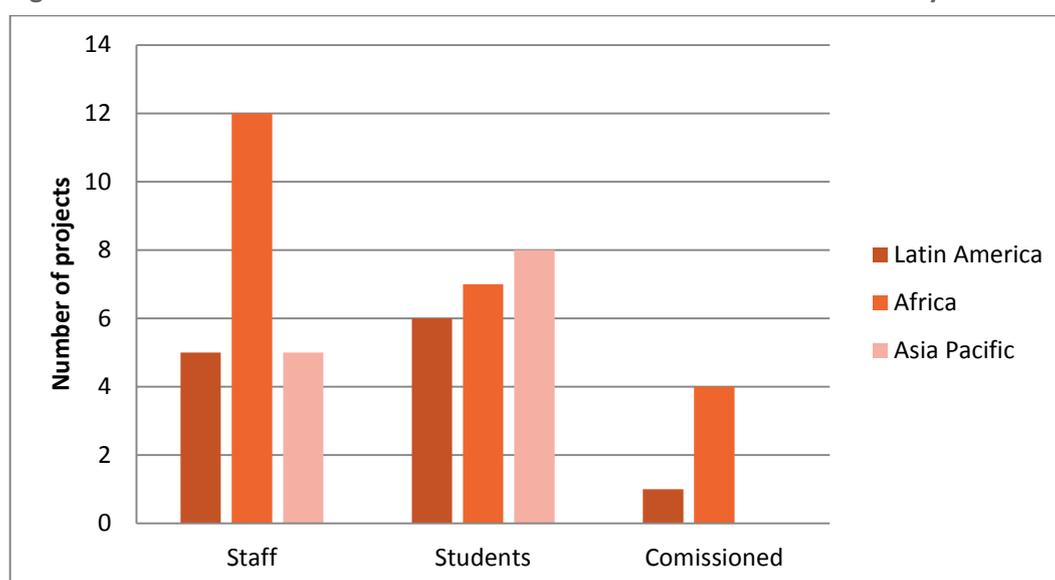
2.2 Action research

2.2.1 Overview

The Action Research program is split into three elements: an allocation for proposals submitted by Centres and Schools across UWA and UQ on a competitive basis; discretionary funds available to be allocated to specific issues as required; and top-up funding designed to support students from developing countries focussed on mining issues to enhance and expand their research activity.

During the reporting period, 22 Final Reports were provided to IM4DC. This included ten staff, three commissioned and nine student reports. Final Reports are reviewed and posted on the IM4DC web page at <http://im4dc.org/programs/action-research/action-research-reports/> As well, reports are often dissemination by authors through usual academic channels.

A summary of IM4DC Action Research outputs is at Appendix C. In addition to final reports, IM4DC has collated 41 Action Research Update Reports for activities which are ongoing or recently submitted. Update reports are found at Appendix D.

Figure 3: Focus countries for Action Research activities received June 2013 - July 2014

A total of 33 of the activities identified one or more collaborations or links with others as part of activity as summarised in Table 9.

Table 9: Research collaborations between IM4DC delivery centres and other institutions

Type of collaboration	Number
Country	
Australia or other developed country	17
Africa	14
Latin America	5
Asia Pacific	7
Sector	
Universities	26
Government	8
Industry	3
NGO/Community	7

Many projects involve in-kind time from the researchers, PhD supervisors and communities being interviewed, with 25 activities specifically identifying in-kind² contributions as part of the activity.

² In-kind contribution reported as: The researcher's or supervisor's time; Collaborator's time; Interviewee's time; On-site accommodation and meals; On-site logistical support; Hosting workshops; Supporting workshop participants with accommodation and travel costs; Interpreting services; Conference travel for researcher; Hosting of on-line GIS application; Data provision; Sample provision; Laboratory testing

2.2.2 Competitive round for Action Research

A competitive round for action research bids was opened in August 2013, with successful applicants notified in October 2013. A particular focus of this round was the development of linkages with institutions in developing countries. Ten new projects were supported as follows.

Table 10: New supported Action Research activities 2013-14

Project title	Research organisation
Mining and river ecosystem services in Peru, Ecuador and Bolivia	UQ SMI-CWiMI
Positive community engagement experiences: communities telling their stories to inform future practice	UWA School of Engineering
Best practice corporate social responsibility for mining in Africa	UWA School of Agriculture
Opportunities and challenges for local food procurement by mining companies in Southern Africa: case studies from Malawi and Mozambique	UQ SMI-CSR
Mitigating acid mine drainage in the Asam-Asam coal basin, South Kalimantan, Indonesia	UQ SMI-CMLR
Building environmental sustainability in the mining sector of the Philippines through advanced environmental monitoring, assessment and management programs	UQ SMI-CMLR
Building linkages to maximise IM4DC funding outputs in the area of health and safety	UQ SMI-MISHC, International Water Centre, UWA School of Psychology
Parliaments and mining agreements - the forgotten arm of Government	UWA School of Law
A GIS-based mineral prospectivity analysis of Central Africa	UWA-Curtin Centre for Exploration Targeting
Evaluating the attractiveness of fiscal regimes for new gold developments: African & South American peer country comparisons	UWA-Curtin Centre for Exploration Targeting

During the reporting period, four Action Research projects were completed. Action Research outputs, including those currently under review, are listed in Appendix B.

2.2.3 Commissioned research and tailored advice

During the period, 11 research projects were directly commissioned in response to program priorities, emerging opportunities and information needs.

Table 11: Commissioned Action Research output 2013-14

Project	Lead Researcher	Notes
Evaluation of Impact - A proposal to support the review of IM4DC educational programs	Professor Mark Griffin, UWA School of Psychology	
Dialogue groups on mining and sustainable development in Latin America	Diana Arbalaez-Ruiz	Research aligned with delivery of workshops in Peru
Environmental geochemistry of abandoned mines in the Puno Region of Peru – to guide strategic planning for regional development and legacy site management	Dr Mansour Edraki and Corinne Unger, UQ SMI Centre for Mined Land Rehabilitation	Collaboration with INGEMMET (Institute of Geology, Mining and Metallurgy), Peru

Project	Lead Researcher	Notes
Establishing a Stakeholder Dialogue to develop a Shared Agenda for Mining Development in The Philippines	Professor Emmy Manlapig, UQ SMI Julius Kruttschnitt Mineral Research Centre	Collaboration with University of South-East Philippines
Learning through failures: preparation of a series of lectures for teaching of mine waste management best practice	Winthrop Professor Andy Fourie, School of Civil, Environmental and Mining Engineering	Drawing on experience in IM4DC-sponsored teaching and research in Zambia and Ghana
A GIS-based exploration in initiative to steer sustainable development	Dr Steven Micklethwaite UWA-Curtin Centre for Exploration Targeting and Bernadetta Devi, UQ SMI Centre for Social Responsibility in Mining	Collaboration with Office of Energy and Mining, Southeast Sulawesi
Defining best practice for corporate data delivery to national African geological surveys: regulation, technical implementation and compliance	Professor John Miller, UWA-Curtin Centre for Exploration Targeting	Consultation with African geological surveys
Developing on-line training system for geosciences in Africa to increase knowledge-sharing	Professor Mark Jessell, UWA-Curtin Centre for Exploration Targeting	Cooperation with Universities of Ghana, Dakar, Bamako, Ouagadougou
Integrating HIV and gender-related issues into environmental assessments for Australian mining companies operating in Africa	Angus Morrison-Saunders, Murdoch University	In collaboration with AAUN
Listening to the Voices of Displaced and Resettled Communities in Mozambique	Associate Professor Deanna Kemp, UQ SMI Centre for Social Responsibility in Mining	In collaboration with Oxfam
Strengthening Indigenous Governance in Bolivia through Mining	Professor Mark Moran, UQ Institute for Social Science Research	In collaboration with World Vision

A summary of project updates is provided in Appendix D. Completed reports, where available, can be located on the IM4DC website.

2.2.4 Student and Fellows research support

During the period, IM4DC awarded top-up funding to 16 students from developing countries in Australian universities who are currently undertaking postgraduate studies relating to mining. Projects are set out in Table 12.

Table 12: Student research top-up funding 2013-14

Project title	Student/Institution	Country
Improving outcomes for government-managed resettlement in Vietnam	Mai Vo, UQ SMI-CSRM	Vietnam
Photogrammetric method of distant reconstruction of displacement fields in deformable solids	Ghulam Mubashar Hass, UWA School of Civil and Resource Engineering	Pakistan
Mine planning in the face of economic uncertainties	Kwasi Darkwa Ampofo, UQ SMI-BRC	Ghana
Artisanal mining: challenges and opportunities for the large-scale mining industry	Isabel Buitrago-Franco, UQ SMI-CSRM	Colombia
The response of wetland plants to the geochemical conditions of discharged water from nickel mining operations in eastern Indonesia	Radjali Amin, UQ SMI-CMLR	Indonesia
Controlled and monitored natural attenuation strategies for arsenic pollution	Roberto Gregorio García Fragoso, UQ SMI-CMLR	Mexico
Environmental consequences of airdeck blasting in open pit mining in Sudan	Abdulla, UNSW	Sudan
Mapping and developing a landscape scale ecosystem services metric for promoting sustainable mining in SW Madagascar	Trivedi, UNSW	Madagascar
Sustainable management tools used in the Australian mining industry and applicable to an artisanal gold mining operation in the Pacific region of Choco-Colombia	Andrea Garzon, UNSW	Colombia
Impacts of extreme weather events and climate change on mining operations in Peru	Francisco Gonzalez, UNSW	Peru
Community consultation and the new legal framework for mining in Colombia	Mario Paredes, UNSW	Colombia
Compound effect of multiple potential mining projects in north west Ghana	Abdul-Wadood Mooman, Curtin University	Ghana
Non-toxic gold extraction	Benson Chanda, Curtin University	Cameroon
Feasibility of using seismic reflection surveys to discover Iron Oxide Copper Gold (IOCG) in the Gawler Craton, South Australia	Okan Evans Onojasun, Curtin University	Nigeria
Ore-body delineation using bore-hole seismic techniques for hard rock exploration	Menu Felix, Curtin University	Ghana
Joint inversion: magnetotelluric and seismic methods	Cuong LeVan Anh, Curtin University	Vietnam

2.3 Conferences

IM4DC had planned to hold its the annual International Mining for Development Conference at the start of July 2014 during the semester break at The University of Queensland in Brisbane. DFAT requested that IM4DC not continue to arrange the conference in 2014. Prior to receiving the request to not progress arrangements the 2014-15 conference IM4DC had commenced preparatory activities and incurred some costs.

IM4DC will hold its next conference in April-May 2015.

2.4 Fellowship program

In 2014-15 IM4DC hosted 6 visiting Fellows, made up of two Distinguished fellows and four Development Fellows. This was below target, due to ongoing difficulties in recruiting fellows whose organisations will release them for extended periods, and also visa delays for extended visits. Recruitment is advanced for 2014-15 Fellows, however, and Fellowships should meet the target for the coming year.

Table 13: Visiting Fellows - delivered in 2013-14

	2013-14 Target (Annual plan)	2013-14 Revised (Progress Report)	2013-14 Actual
Distinguished Fellows	4	4	2
Development Fellows	10	10	4

2.4.1 Distinguished Fellowships

During the period, IM4DC funded a Distinguished Fellow, Dr Ousmane Wane, Head of the Department of Geology, University of Sciences, Technical and Technology of Bamako in Mali. He undertook research with the Centre for Exploration Targeting at UWA and Curtin University with a focus on:

- Enhancing research and training links between the Universities
- Improving current approaches to understand and analyse mineral systems in Mali
- Input into the development of a new Masters program at his university.

Professor Dieudonne Musibono from the University of Kinshasha in the Democratic Republic of the Congo commenced a ten week Fellowship in June 2014. His fellowship focussed on the role of multi-national companies in the DRC, and environmental management and mining issues. During his fellowship, Professor Musibono:

- Worked on developing new courses that he will to be implemented in DRC
- Prepared joint publications with colleagues at the CRSM focusing on the environmental and social impact of Australian investment in DRC
- Visited mining operations to gain an understanding of the Australian mining context.

2.4.2 Development Fellowships

In July and August 2013, IM4DC hosted two Senior Mines Inspectors from the Mines Inspectorate Division of Minerals Commission in Ghana. The program was of six weeks' duration and involved workshops and placements with State Government Mines departments and training institutions, site visits and workshops at tertiary education institutions. This was the second cohort of Ghanaian Senior Mines Inspectors to be hosted as Development Fellows. The first group of two was hosted in May and June 2013.

In June and July 2014, IM4DC also hosted two representatives of the Ghana Geological Survey Department, who worked with the UWA Centre for Exploration Targeting on methodologies to improve analysis of geological data. The Fellows also spent time visiting the WA Geological Survey to review processes for managing and disseminating geological information.

2.5 Publications

IM4DC released the latest in its series of Australian Practice Guides, focussed on the Management and Use of Public Geological Information. IM4DC also progressed development of other publications during the 2013-14 year, with several slated for issue in the first quarter of 2014-15.

Table 14: Publications developed during 2013-14

Activity	Authors	Status
Australian Practice Guide to Management of Small Mines	Ms Andrea Shaw	With editor
Australian Practice Guide to Management and Use of Public Geological Information	Prof Margaretha Scott	Published
Infrastructure Practice Guide (with World Bank)	Dr Jim Limerick Mr Ian Satchwell	With editor
Mining and Agriculture – a summary of the Crawford Fund Conference	Ms Andrea Shaw	With designer

Some 18 Action Research projects also generated publications of various types, which are listed in Appendix C. Another 23 Action Research projects generated summary reports.

2.6 Advice to government

2.6.1 Government advisory services

The Advice to Government activity provides rapid-delivery advice of up to five days per assignment to Australian and priority country governments on policy, legislation, systems and technical matters.

Only a small number of requests for advice were received during the period. These included:

- IM4DC provided advice under this activity to DFAT and the Government of Kenya in regard to the draft mining policy and legislation.

- At the request of DFAT Africa, IM4DC supported the attendance of Associate Professor Jill Howieson of the UWA Faculty of Law at the Columbia Centre Workshop on Negotiation Support for Extractives in New York in June 2014
- At the request of the Manila DFAT Post, IM4DC also funded Prof David Brereton to attend a workshop in the Philippines on Land and Property Rights in the Bangsamoro in June 2014
- Collation of data on Australia's mining-related investment and trade internationally
- Preparation of a paper on how mining-related development assistance aligns with Australia's interests.

2.6.2 Mining for Development Advisory Committee

IM4DC provided the secretariat for the Mining for Development Advisory Committee to DFAT. A planned meeting to be held in Mongolia in September 2013 did not occur and no other meetings were held in the reporting period.

Following a review by the incoming government, the committee was dissolved.

2.7 Alumni

IM4DC's alumni program assists participants in IM4DC activities to implement their learning in their own regional contexts, and to develop a community of practice where participants assist each other in addressing issues of extractive resource governance. The successful ongoing engagement of alumni and development of a global 'community of practice' are critical success factors for IM4DC and the Mining for Development initiative.

The Centre has some 1600 active alumni as at the end of 2013-14. IM4DC staff have had informal meetings with groups of alumni during visits to Ghana and Kenya, and has engaged alumni in follow-up surveys and interviews.

2.7.1 Alumni Forum

The IM4DC annual Alumni Forum, which had been planned to run following the Annual Conference, was held as a two day event at the University of Queensland in July 2014. The timing was influenced by venue availability, and was programmed to coincide with two IM4DC Flagship courses, which commenced in June. The forum featured a theme of *Leadership. Collaboration. Governance* and involved 20 alumni invited to help facilitate the program, plus a further 52 currently in Australia on existing programs. Alumni were invited to facilitate the program based on their leadership profiles and demonstrated roles in progressing mining for development outcomes locally and globally. Australia Awards mining for development students studying in Australia were also invited to participate.

The event was highly interacted and designed to provide a significant networking opportunity for the groups involved. It featured a keynote by Dr Anthony Hodge, President of the International Council on Mining and Metals, and panel discussions and workshops on the themes of Leadership and Collaborative Governance. The alumni forum has been documented and reports, including video, made available via the IM4DC website.

2.7.2 Alumni support

A new element in the alumni program this year has been the allocation of funds to support alumni participation in other events. IM4DC has supported several such activities in 2013-14:

- Alumnus Gisselle Vila Benites, of Pontifical Catholic University of Peru, attended a workshop on training for artisanal miners in Ecuador
- Another Peruvian alumnus, Professor Miguel Santillana, attended a seminar and workshop on shared use of mining-related infrastructure, presented by Columbia Center on Sustainable Investment in New York
- Dr Bunda Besa of the University of Zambia School of Mines attend the Australia Africa Universities Network Mining Workshop convened by the University of Pretoria, on behalf of IM4DC
- IM4DC supported Richard Kofi Afenu of the Ghana Minerals Commission to attend the IAIA Conference in Santiago, where he presented a paper.

2.7.3 Community of Practice – M4DLink

IM4DC has established a dedicated website, *M4D Link*, to facilitate ongoing interaction between individuals participating in courses between each other and with course faculty. The prototype was launched at the May 2013 Conference and *M4D Link* was further developed and refined during the reporting period. The website is being used to support the Return to Work process involved in IM4DC's course program, a key mechanism in maintaining contact with alumni and encouraging ongoing peer interactions

IM4DC has agreed with DFAT for *M4D Link* to be used as a forum for all DFAT mining for development alumni. Incorporation of 400 M4D alumni from AAPF occurred in April 2014, and the platform has also been used to support UQ-based Australia Africa Awards mining short courses.

2.8 Institutional linkages

IM4DC is facilitating collaborative linkages between Australian universities and key institutions in priority developing countries and regions, in order to strengthen the capacity of these institutions to play a key role in mining for development. There is a particular focus on co-delivery of courses with tertiary institutions, as well as the strengthening of research capacity.

In addition, IM4DC has established collaborative partnerships with policy and training institutions, notably with the Education and Training Agency of the Indonesian Ministry of Energy and Mineral Resources and the African Minerals Development Centre.

Table 15: Institutional linkages

Institution and targeted linkage	Engagement in reporting period
<p>Africa Minerals Development Centre (AMDC) IM4DC has been asked to provide support to, and collaborate with the new AMDC. As the AMDC governance arrangements are finalised, IM4DC will seek to define this linkage in the context of its strategic priorities and the AMDC business plan.</p>	<ul style="list-style-type: none"> • AMDC-IMDC collaboration meeting was held for two days in October at AMDC offices in Addis Ababa, with a follow-up meeting in May 2014; with text for a MoU was agreed at the meeting and has now been ratified by UWA, UQ and UNECA. • IM4DC worked with AMDC to select African course participants and put arrangements in place to collaborate on course presentations in 2014 • IM4DC was invited to attend the African Conference of Mines Ministers meeting in Mozambique in December; and included participation in the AMDC skills roundtable • AMDC co-presented the Emerging Leaders in African Mining program in Cape Town.
<p>University of Zambia (UNZA) Improved research capacity in relevant M4D areas, and enhanced capacity to deliver relevant postgraduate and professional development courses.</p>	<ul style="list-style-type: none"> • IM4DC sponsored Dr Buda Besa to attend the AAUN meeting at the University of Pretoria in September as an IM4DC Alumnus • Attendance of several UNZA staff at IM4DC Australia courses • Involvement of UNZA representative in Cameroon workshop • UNZA staff involved in delivery of Incident Investigation course in Kitwe in November and May. UNZA Staff are now delivering the program in their own right • UNZA also attended and presented at GIRAF workshop in Accra • Joint hosting of GIS course in February 2014.
<p>Copperbelt University (CBU), Zambia Improved research capacity in M4D areas; enhanced capacity to deliver postgraduate and professional development courses.</p>	<ul style="list-style-type: none"> • Attendance of several CBU staff at IM4DC Australia courses • CBU staff involvement in coordination of Incident Investigation course in Kitwe on two occasions • CBU staff engaged in Indicators project case study with UWA and UQ.
<p>University of Mines and Technology, Ghana</p>	<ul style="list-style-type: none"> • Initial scoping visit in September 2013 • Hosting of large volume waste course in November, including provision of case study lectures and coordination of field trip • UMaT staff member involved in emerging Leaders program and alumni forum.
<p>Ghana Institute of Management and Public Administration (GIMPA), Ghana</p>	<ul style="list-style-type: none"> • Hosting of Regional Development course in August 2013 • Participation of staff in Resource Governance program in Brisbane June 2014

Institution and targeted linkage	Engagement in reporting period
<p>Ghana Minerals Commission</p>	<ul style="list-style-type: none"> Continuation of Fellowship program for an additional two senior Mines Inspectors MC Staff involved in presenting keynote session at GIRAF Workshop Involvement of Mines Inspectors in follow-up research project scoping OHS issues in small-scale mining Involvement of MC staff on several Flagship programs.
<p>Mines Safety Department, Zambia Improved capacity to monitor and regulate OHS conditions in Zambian mining industry.</p>	<ul style="list-style-type: none"> Attendance of several staff on IM4DC training courses in Australia Delivery of Incident Investigation training for group of new Mines Inspectors in Kitwe.
<p>Indonesia Education and Training Agency for Energy and Mineral Resources (ETAEMR) Improved capacity to train new Mines Inspectors at the local and regional government levels.</p>	<ul style="list-style-type: none"> Attendance of staff on IM4DC training courses in Australia, including mines inspector master training courses Hosting of Study Tour groups including ETAEMR and Ministry personnel Support for ETAEMR Workshop on Environmental and Safety Management in Bandung Collaborative workshop with ETAEMR staff on Training Framework design for Mines Inspectors.
<p>Universidade Eduardo Mondlane, Mozambique (UEM) Improved capacity to deliver University programs in mining-related disciplines.</p>	<ul style="list-style-type: none"> Involvement of UEM representative in Cameroon workshop and follow-on ARNN activities Involvement of UEM representative in lecturing at GIRAF workshop.
<p>Mongolian University of Science and Technology Improved research capacity in relevant M4D areas, improved capacity to deliver University programs in mining-related disciplines.</p>	<ul style="list-style-type: none"> Attendance of several staff on IM4DC training courses in Australia Hosting of Open Cut Slope Stability course.
<p>General Agency for Specialized Inspection (GASI), Mongolia Increased capacity to manage social and environmental aspects of mining.</p>	<ul style="list-style-type: none"> Attendance of several staff on IM4DC training courses in Australia. Study Tour on Underground Mining and Environmental Management Delivery of Open Cut Slope Stability course to GASI staff in collaboration with BGR project.
<p>Australia Africa University Network</p>	<ul style="list-style-type: none"> IM4DC attended the AAUN Forum on Mining and African Steering Group Meeting. Subsequently IM4DC contributed to AAUN research on <i>Cross country comparison of labour and community enrichment in mining</i>

3 Financial analysis

3.1 Income and expenditure

The Centre's annual expenditure and income are shown in Tables 9 and 10 respectively. The key points include the following:

- The Centre expended \$9,531,439 million in 2013-14
- The carry forward to 2014-15 is less than that brought into 2013-14. It includes cost for the activities that ran over the end of the financial year and commitments for ongoing action research
- The second tranche of funding was received from DFAT in September 2013.

The current projection for expending over 80 per cent of the current of grant funding tranches is July 2014, enabling invoicing of DFAT in September 2014. DFAT has requested a variation to the grant agreement for the final annual tranche to be paid as an annual tranche. DFAT advises this is consistent the aid program new performance framework. A variation to reflect this change has been agreed between the Universities and DFAT.

The following financial analysis has been prepared under an accrual basis. It shows that the Centre has underspent by 15% (2012-13, 28%) against the reforecast annual plan. A significant part of the underspend is associated with the timing of end-of-year activities linked to the Alumni Forum, and the holding of the 2013-14 Alumni Forum in July instead of May as originally planned.

The Centre has also incurred further conditional commitments that are not recorded as accruals in the University's financial management system. Conditions for these additional commitments are expected to be met and are summarised in Table 8. The level of expenditure generally aligns with achievements against KPIs.

The 2013-14 underspend against budget sees the Centre carry forward \$2,955,075 into the 2014-15 program.

Table 16: Committed funds as at end 2013-14

Expenditure Item	Committed funds at 30 June 2014 (\$)
Short Courses	1,447,649
Distinguished Fellowships	85,042
Action Research	1,840,212
Alumni Management	278,864
Publications and Guides	75,998
Total	3,727,765

Centre Administration and Employee Benefits costs have been excluded from the commitment calculation

Table 17: IM4DC expenditure to 30 June 2014

Expenditure Item	Original Budget \$	Reforecast \$	Actual \$	ACT v BUD Variance \$	Variance %	Comments
Courses	61,384	5,734,572	5,200,723	-533,849	-9%	<p>The variance is due to:</p> <ul style="list-style-type: none"> Over and under budgeting on various courses, net amount totalling \$16K (-3%) A number of the courses were cancelled and a number of additional courses were delivered, with the net result of unspent course funds of \$377K There has also being delay receiving invoices from suppliers totalling \$172K.
Distinguished Fellowships	288,832	131,852	73,894	-57,958	-44%	<ul style="list-style-type: none"> Delays recruiting fellows Reforecast based on hosting two fellows, however only one fellows hosted in year.
Development Fellowships	396,528	232,528	286,609	54,081	23%	<ul style="list-style-type: none"> Includes expenditure from the Afghanistan program (\$130K) The income relating to this program was received in previous financial year. The program ended late in June 2013 and several invoices were received in the 2013-14 year Following the reforecast prepared in May 2014, with the original budget reduced to reflect the YTD activity, an additional Fellowship agreement was implemented by 30 June 2014.
Annual Conference	464,600	114,600	111,926	-2,674	-2%	<ul style="list-style-type: none"> Reforecast reflected expenditure and commitments when conference cancelled. Deliveries and commitments applied where possible to Alumni Forum.
Advice to Australian Government	144,000	24,000	51,709	27,709	115%	<ul style="list-style-type: none"> When the reforecast was prepared in May 2014 and the original budget reduced to reflect the YTD activity it was not anticipated there would be additional demand for services, which have now eventuated.

Expenditure Item	Original Budget \$	Reforecast \$	Actual \$	ACT v BUD Variance \$	Variance %	Comments
Action Research	1,908,904	1,790,018	990,167	-799,851	-45%	<ul style="list-style-type: none"> It was expected that \$631K worth of additional 2013-2014 agreements would be finalised and signed and the first instalment paid to the grantees would have occurred prior to 30 June 2014, but this did not occur It was estimated that \$168K worth of 2012-2013 projects would be finalised and final reports from the grantees would be received by 30 June 2014; but there has been delivery delays hence final instalments have not been made These funds have been included as forward commitments and are included in the 2014-2015 budget and expended in the coming year.
Alumni	360,273	344,192	105,201	-238,991	-69%	<ul style="list-style-type: none"> Alumni Day took place in July 2014 Expected to have more invoices presented by the suppliers and paid by 30 June for the Alumni Forum but that has not occurred These funds have been included as commitments and will be included in the 2014-2015 budget and actuals.
Publications and Guides	90,450	111,996	106,224	-5,772	-5%	<ul style="list-style-type: none"> Expended less than expected due to delays in lodgement of manuscripts by authors.
Institutional Linkages	116,200	116,200	92,193	-24,007	-21%	<ul style="list-style-type: none"> Expended less than expected Unspent funds allocated in 2014-2015 budget.
Core Staff (Dir and 2 x Dep Dir)	724,262	744,281	763,773	19,492	3%	
Board costs	31,950	31,950	20,883	-11,067	-35%	<ul style="list-style-type: none"> Expended less than expected Unspent funds allocated in 2014-2015 budget.
Monitoring and Evaluation	109,264	118,385	119,590	1,205	1%	

Expenditure Item	Original Budget \$	Reforecast \$	Actual \$	ACT v BUD Variance \$	Variance %	Comments
Travel	120,000	180,000	174,202	-5,798	-3%	<ul style="list-style-type: none"> Expended more than original budget due to additional travel to Africa for AMDC and DFAT discussions and some Secretariat travel being associated with activity delivery.
Advisory Committee Travel and Meeting Costs	119,300	-	-			<ul style="list-style-type: none"> DFAT Mining for Development Advisory Committee not met in 2013-14 and now dissolved.
Independent Audit	25,000	26,768	26,768	0	0%	
Other Centre Administration	1,450,209	1,495,220	1,407,577	-87,642	-6%	
TOTAL EXPENDITURE	12,511,156	11,196,562	9,531,439	(1,665,122)	-15%	

Table 18: IM4DC income to 30 June 2014

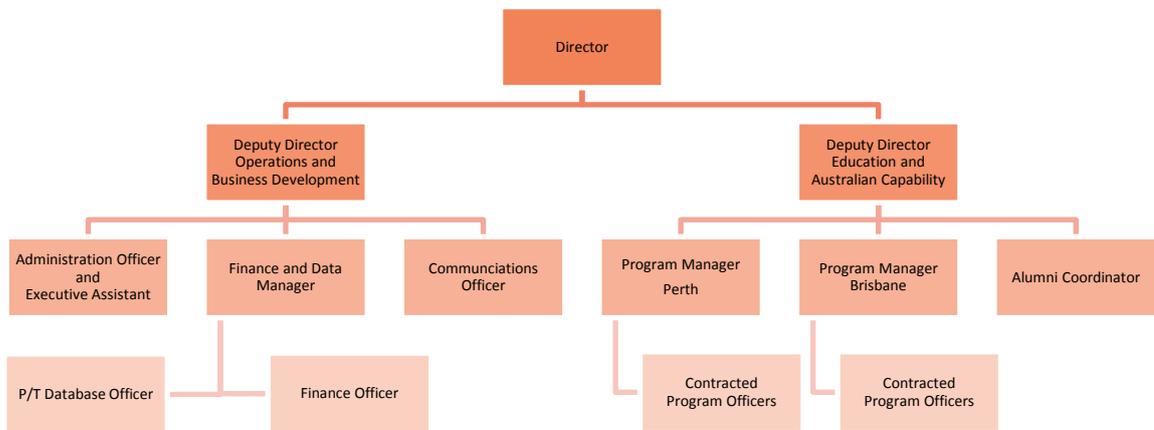
Income Item	2013-14 Budget \$	Reforecast \$	Actual \$	Variance \$	Variance %	Comments
2012-2013 rollover	3,639,879	3,639,880	3,639,880	0	-	
Tranche of core DFAT funding	8,000,000	8,000,000	8,000,000	0	-	
Estimated Interest	150,000	846,634	846,634	0	-	
Other Income		0	0	0	-	
TOTAL INCOME	11,789,879	12,486,514	12,486,514	0		
Surplus (Deficit) for 2013-14	(721,277)	1,289,952	2,955,075	1,665,122		
Net balance carried forward to 2014-15	(721,277)	1,289,952	2,955,075			

4 Centre operations

4.1 Staff and contractors

The management and operations of the Centre were supported with 12.6 positions (EFT basis) during 2013-14. Of these, 9.6 positions are located in Perth and 3 in Brisbane. Out of total staffing, 5 positions undertake program delivery. Casual staff and contractors supplement the core team as needed for program delivery.

Figure 4: IM4DC staff structure



UWA and UQ support IM4DC administration through provision of accounting, legal, information technology and human resource services.

Contractors are engaged by the Centre to support program logistics, communications, audit and monitoring and evaluation.

4.2 Governance and reporting

Governance of the Centre is via the Management Board consisting of the Directors of SMI and EMI. During the reporting period July 2013 – June 2014, the Management Board met in August, October and December in 2013, and February, April and June 2014.

The partner universities are still to establish the proposed multi-stakeholder Advisory Group to the Universities on IM4DC and related mining for development university engagement.

Regular discussions continued between the relevant DFAT Resource and Energy Section Director, and the IM4DC Director to support program direction and communication. Frequent communication between the IM4DC team, DFAT Resources and Energy team in Canberra and DFAT country programs continued around program development, coordination and implementation.

The Centre provides activity and financial reports to both UWA and UQ, meeting the Universities' reporting and accountability requirements. This includes working with the Universities' calendar year budgeting, and review and reporting cycle. The Centre has met these requirements, overseen by EMI.

In addition to the Six Monthly and Annual Reports provided to DFAT by UWA, as provided for under the Grant Agreement, IM4DC provided frequent reports to DFAT Canberra and posts.

4.3 Monitoring and evaluation

The IM4DC Monitoring and Evaluation Framework (MEF) was extensively reviewed and revised during the reporting period and is being actively utilised in the Centre's ongoing M&E activities and reporting.

In implementing the MEF, IM4DC has initiated the following during the period:

- Commissioned the Accelerated Learning Laboratory (ALL), The University of Western Australia to undertake approximately 30 semi-structured interviews with participants as the inputs to an Evaluation of Impact <http://im4dc.org/wp-content/uploads/2013/09/IM4DC-ALL-Final-Report.pdf> +
- Engaged Dr Linda Kelly of Praxis Consultants to prepare and facilitate reflection workshops in Perth and Brisbane with implementers of the IM4DC education and research activities in December 2013
- Compiled consolidated IM4DC Alumni Reports for 2011-12 and 2013-14
- Compiled a draft IM4DC Action Research Overview for the program life to end 2013
- Engagement with the DFAT commissioned Mid Term Review
- Updated the articulation of the Centre's theory of change.

4.4 Operations manual and risk management

The Centre Operations Manual was reviewed, updated and supplemented during the period.

The Centre's Risk Policy and Framework and Risk Register are set out in the Operations Manual. The Risk Register is revised regularly and updates are reviewed at each Management Board meeting.

4.5 Wind down plan

Recognising that the current grant arrangement ends at the end of June 2015, the Board has approved a wind down strategy for the centre. The plan includes a wind down timeline the key activities which will see a formal wind down plan being done before the end of 2014. IM4DC management reports to the Management Board against the wind down plan at each meeting.

A 2013-14 Short Course Summaries

Mining Negotiation Roundtable	
Course overview	IM4DC, in conjunction with the Cameroon Government, hosted a Negotiation Program Roundtable. Local and regional consultants, government, university and institutional representatives attended from a range of countries and institutions to share their experiences and expertise.
Objectives	The Negotiation Program Roundtable was convened to discuss and develop a negotiation handbook and training manual to strengthen the capacity of African governments to negotiate extractive industry contracts.
Where?	Yaounde, Cameroon (4), Ghana (3) Liberia (2),
When?	3 – 4 July 2013 (2 Training Days)
Who attended?	17 participants (16M, 1F) from a range of private, academic and government institutions, across 7 African countries as follows: Cameroon (4), Ghana (3), Liberia (2), Malawi (2), Mozambique (3), Niger (1) and Zambia (2).
Program Lead	Jill Howieson, UWA
Partners	Government of Cameroon.
Content and delivery	<p>The participants recognised the need for a co-ordinated approach to capacity building initiatives in resources negotiation and agreed to:</p> <ul style="list-style-type: none"> • develop and design a Negotiation Handbook which would include a roadmap of the mining negotiation process and what is required to negotiate well at each stage • develop and design a Negotiation Training Manual which would include a negotiation training curriculum and courseware • establish the African Resources Negotiation Network
Programming rationale	<p>In December 2012, Jill Howieson (UWA) and Leanne Howie (USyd) undertook a scoping mission to Africa to investigate the main issues and options that AusAID should address in the design and implementation of a Negotiation Program in, and for, Africa. In January 2013, Andrew Edge (AusAID) and Jill Howieson attended the Humboldt-Viadrina -VCC steering committee meeting in Berlin, which focussed on extractive industries negotiation support for African governments.</p> <p>The roundtable emerged from discussions between Fabien NKOT, University of Yaounde II and Office of the Prime Minister, Cameroon, IM4DC and UWA at the M4D 2013 Conference. Dr Jill Howieson’s presentation at the conference was of particular relevance to the Government of Cameroon and subsequent discussions highlighted the need for assistance in this area. The Government of Cameroon partly funded aspects of the roundtable and provided in-kind support for its delivery.</p> <p>Strategic Programming Area: 3) Minerals policy, regulation and agreements</p>
Feedback	Due to the nature of the activity, no formal feedback was undertaken.
Other outcomes	<p>The Roundtable was the first instance of collaboration between the Government of Cameroon, IM4DC and UWA. The area of negotiation frameworks has received a great deal of interest and partner countries have identified it as an area where expertise and assistance is required. Subsequent activities have included the delivery of a Mining Negotiation Frameworks module at an African Institute for Economic Development and Planning (IDEP) ‘Mineral Policy and Contract Negotiations’ short course, held in Dakar, Senegal, in September 2013, and a Roundtable follow-up held in Cameroon in January 2014.</p>

Community Aspects of Resource Developments

Course overview	Four week in Australia flagship course addressing community engagement and development issues associated with mineral operations.																																										
Objectives	To equip participants to better deal with complex corporate community relations issues by developing knowledge and skills to identify and analyse, and formulate appropriate responses to these issues.																																										
Where?	Brisbane, including day excursions to nearby locations and a one week field trip to Central Queensland.																																										
When?	July 8 - August 2 2013 (20 training days).																																										
Who attended?	A very diverse group. 20 participants: 14 men and 6 women from government, academia and civil society and NGOs. A range of ages and levels of seniority from mature senior academics and administrators to younger academics and activists. 5 from Ghana, 5 from Liberia, 3 from Zambia, 1 each from: Indonesia , Mozambique, Nigeria, Papua New Guinea, Peru, Philippines and Solomon Islands.																																										
Program Lead	Lynda Lawson, SMI - Centre for Social Responsibility in Mining																																										
Partners	Uniquist																																										
Content and delivery	The themes explored ranged from the global context of mining, development issues, policy, multi-stakeholder collaborations and governance to specific issues such as local content and employment, gender impacts, resettlement and community engagement. Field trips, visits and reflective activities were integrated into the program as is the development and writing of the participants' return to work plan. An online community of practice for participants was launched to provide participants with opportunities for continuing to collaborate after the completion of course.																																										
Programming rationale	The program addressed the two strategic programming areas of Local Socio-Economic Development and Community Engagement and Consultation. The program need was identified during the IM4DC planning process and is aligned with its strategic programming areas.																																										
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Response Data (Estimated from Chart)</caption> <thead> <tr> <th>Category</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Opportunities for continued engagement</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Allowed engagement with other participants</td> <td>75%</td> <td>25%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Deliver education and training</td> <td>65%</td> <td>35%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Managing complex issues</td> <td>65%</td> <td>30%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Develop multi-stakeholder policy</td> <td>80%</td> <td>20%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Best practice in relating to CD</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Category	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Opportunities for continued engagement	85%	15%	0%	0%	0%	Allowed engagement with other participants	75%	25%	0%	0%	0%	Deliver education and training	65%	35%	0%	0%	0%	Managing complex issues	65%	30%	5%	0%	0%	Develop multi-stakeholder policy	80%	20%	0%	0%	0%	Best practice in relating to CD	100%	0%	0%	0%	0%
Category	Strongly agree	Agree	Neutral	Disagree	Strongly disagree																																						
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Best practice in relating to CD	100%	0%	0%	0%	0%																																						
Other outcomes	An outstanding feature of this particular course was its diversity and the way participants engaged with each other and shared ideas. Examples include a project to compare ASM gold mining in Ghana and Peru and connections between CSR work with Liberia.																																										

African Gold Mining and Fraud Prevention Workshop (with AAPF)	
Course overview	IM4DC delivered a one-day workshop as part of a broader Australia-Africa Partnerships Forum (AAPF) Gold Mining and Fraud Prevention Study Tour to Australia. The study tour, which ran from 7-19 July 2013, was targeted at representatives from ministries such as Mines and Internal Affairs, finance and taxation authorities and governance and enforcement agencies involved in gold and mineral security.
Objectives	The study tour had three broad objectives: 1) to provide an overview of (a) Australia's gold mining history, and (b) the quality assurance of Australia's gold supply chain; 2) Explore the main ways gold fraud is carried out (methods and systems) and current trends in gold stealing at different levels of the process; 3) Examine Australia's system of combating gold fraud. This will include a review of anti-fraud legislation and policies as well as mechanisms put in place in order to closely monitor the security of the gold sector.
Where?	Perth, Western Australia
When?	The IM4DC workshop component of the study tour was held on 16 July 2013 (1 training day)
Who attended?	37 participants (35M/2F) from 11 countries, as follows: Burkina Faso (6), Cameroon (3), Democratic Republic of Congo (3), Ethiopia (3), Gabon (3), Ghana (3), Niger (4), Nigeria (3), Senegal (3), South Sudan (3) and Tanzania (3)
Program Lead	Ian Satchwell, Director IM4DC
Partners	AAPF
Content and delivery	Session 1 – A community development approach to Artisanal Small-scale Mining Session 2 – Government's and Industry's role in gold mining fraud prevention Session 3 – Strengthening the Policing, Security and Investigations aspects of gold mining and fraud prevention
Programming rationale	This was a synergistic opportunity to undertake an activity, at minimal cost, as part of a broader AAPF study tour. Theme: Operational Effectiveness; Strategic Programming Area: Minerals policy, regulation and agreements.
Feedback	Due to the nature of the workshop and its duration, no formal feedback was gathered solely for the purposes of this activity. Informal feedback provided by participants indicated a great deal of interest in forensic accounting/branding of gold throughout the mineral chain and how it might be implemented in developing countries.
Other outcomes	The workshop continued the strong working relationship between IM4DC and AAPF. Participants from the Democratic Republic of Congo expressed a strong desire to understand how to implement a system where gold can be tracked through the mining chain, using unique identification technologies. IM4DC will explore how further collaboration in this area might be undertaken.

Sub-National and Local Development of Resource Regions

Course overview	A two-week training course focused on how developing areas can enhance the economic and social benefits from mining. The course targeted government, private sector, academia and civil society participants and gave explicit consideration to regional investment; employment generation; enterprise development; local firm integration into resource projects; infrastructure and service development; landholder management; and regional governance																																																	
Objectives	To provide participants with a thorough grounding in the theory and practice of development planning and management practices in the mining sector within a range of international and national contexts.																																																	
Where?	GIMPA Executive Conference Centre, Accra, Ghana, West Africa																																																	
When?	August 5-16, 2013 (10 participant training days)																																																	
Who attended?	20 participants (13M, 7F) from the following African nations: Ghana (4), Kenya (6), Liberia (2), Nigeria (3), Tanzania (1) and Zambia (4). There were 12 Government representatives, 6 from the Academia and 2 NGO representatives. (See Appendix 1 for details of the participants).																																																	
Program Lead	Dr Paul Huddleston, Dr Veronica Huddleston, Dr Matthew Tonts – School of Earth and Environment, UWA (See Appendix 2A for the profiles of the UWA lecturing staff.)																																																	
Partners	Regional Extractive Industries Knowledge Hub (REIK), Ghana Institute of Management and Public Administration (in charge of course logistics and pastoral care of participants)																																																	
Content and delivery																																																		
Programming rationale	Regional and local socio-economic development																																																	
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices).</p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly Agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly Disagree</th> <th>No Response</th> </tr> </thead> <tbody> <tr> <td>The program increased my capacity to make changes in my country to development practices...</td> <td>70%</td> <td>30%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to meet best practice in developing policies and/or practices...</td> <td>65%</td> <td>35%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to develop effective strategies for managing complex regional...</td> <td>70%</td> <td>30%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to deliver education and training programs related to...</td> <td>75%</td> <td>25%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program allowed engagement with other participants to develop cross-country collaboration...</td> <td>65%</td> <td>30%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program provided opportunities for continued engagement with the IM4DC.</td> <td>75%</td> <td>25%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response	The program increased my capacity to make changes in my country to development practices...	70%	30%	0%	0%	0%	0%	The program increased my ability to meet best practice in developing policies and/or practices...	65%	35%	0%	0%	0%	0%	The program increased my ability to develop effective strategies for managing complex regional...	70%	30%	0%	0%	0%	0%	The program increased my ability to deliver education and training programs related to...	75%	25%	0%	0%	0%	0%	The program allowed engagement with other participants to develop cross-country collaboration...	65%	30%	5%	0%	0%	0%	The program provided opportunities for continued engagement with the IM4DC.	75%	25%	0%	0%	0%	0%
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Other outcomes	<p>The exposure of, and lessons learned by, REIK Hub and GIMPA to this particular course augurs well for future IM4DC courses to be conducted in Ghana.</p> <p>The involvement of the Australian High Commissioner in the closing ceremony was also opportune not only in providing first hand exposure to the IM4DC program activities but also in terms of exposure to the facilities offered by GIMPA.</p>																																																	

Agriculture and Mining Study Tour (with AAPF)																													
Course overview	The 'Mining Governance and Africa Down Under Study Tour' was coordinated by the Australia-Africa Partnerships Facility (AAPF), with support from IM4DC. In week 1, the study tour participants were split into three sub-groups with different technical focus areas. IM4DC was responsible for delivery of the 'Mining and Agriculture' sub-group. During the second week of the study tour participants attended the Africa Australia Research Forum and the Africa Down Under (ADU) Conference in Perth.																												
Objectives	The objectives of the IM4DC 'Mining and Agriculture' Study tour were: <ul style="list-style-type: none"> • Examine how agriculture and mining interact in the areas of water, land use, infrastructure, workforce, local economies and communities; • Demonstrate best practice dry land agriculture and land rehabilitation; and • Explain natural resources management, water management and land management in the context of mining and agriculture. 																												
Where?	Perth, Esperance & Ravensthorpe																												
When?	August 20th – August 23rd 2013; 27 August 2013 (5 training days)																												
Who attended?	13 participants (3M/10F) from the following countries: Botswana (2), Lesotho (2), Sierra Leone (3), South Africa (4) and Tanzania (2). Government – 13																												
Program Lead	Bridey Kerwick, AAPF																												
Partners	AAPF, AgWest																												
Content and delivery	The IM4DC component of the study tour consisted of 1 day of lectures and presentations, a 3 day field trip, and 1 day research forum. Day 1 – UWA UniClub; Presentations on Mine Rehabilitation, Alkaloam, Ravensthorpe case study, Mining and agriculture: opportunities for Africa & Mining and Agriculture An historical perspective from Western Australia Days 2-4- Field Trip and meetings with Goldfields Esperance Development Commission, Esperance Chamber of Commerce, Department of Agriculture and Food Western Australia – Esperance Downs Research Station & Shire of Esperance; Esperance Ports Sea and Lands, Shire of Ravensthorpe, Ravensthorpe Agricultural Initiative Network (RAIN); Farm visit Day 5 – IM4DC sponsored - Africa Australia Research Forum - "Mining, Agriculture and Development: Bread from Stones"																												
Programming rationale	Subnational governance of the mining sector; minerals policy, regulation and agreements																												
Feedback	A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices) <div style="text-align: center;"> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Objective</th> <th>Strongly Agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly Disagree</th> <th>No Response</th> </tr> </thead> <tbody> <tr> <td>Did the Study Tour examine how agriculture and mining interact in the areas of water, land use, infrastructure, workforce, local economies and communities</td> <td>70%</td> <td>10%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Did the Study Tour demonstrate best practice dry land agriculture and land rehabilitation</td> <td>65%</td> <td>15%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Did the Study Tour explain natural resources management, water management and land management in the context of mining and agriculture</td> <td>60%</td> <td>10%</td> <td>25%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table> </div>	Objective	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response	Did the Study Tour examine how agriculture and mining interact in the areas of water, land use, infrastructure, workforce, local economies and communities	70%	10%	15%	5%	0%	0%	Did the Study Tour demonstrate best practice dry land agriculture and land rehabilitation	65%	15%	15%	5%	0%	0%	Did the Study Tour explain natural resources management, water management and land management in the context of mining and agriculture	60%	10%	25%	5%	0%	0%
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Other outcomes	The participants indicated that the IM4DC organised sub-group tour articulated very well into the broader AAPF study tour elements, including covered during the AARF & The Crawford Fund's events together and also better relate them to their home countries through the greater understanding derived from the study tour the previous week.																												

Kenyan Parliamentary Delegation	
Course overview	The Kenyan Departmental Committee on Environment and Natural Resources from the Kenyan National Assembly visited Australia in September 2013 to study the Australian Mining Sector. IM4DC programmed a one-day workshop to provide details of Australian mining history and context, linkages with development and IM4DC's activities in Kenya, Africa and globally.
Objectives	To deliver a one-day workshop on Australian mining history and context, linkages with development and IM4DC's activities in Kenya, Africa and globally.
Where?	Perth, Western Australia
When?	20 September 2013 (1 training day)
Who attended?	8 participants (7M, 1F) from Kenya; 7 members of Parliament and a senior research officer.
Program Lead	Ian Satchwell, Director IM4DC
Partners	
Content and delivery	Australian and Western Australian mining history; current mining context in Western Australia, Australia, Regionally and Globally; Mining and Development; Mining Regulation; social responsibility and mining; Governance issues in developing regions; Presenters: Dr Sarah Prout, University of Western Australia; John Southalan, Lawyer; Richard Slattery, IM4DC
Programming rationale	This was an opportunity to undertake a workshop as part of the Kenyan Development Committee's broader program. The Department Committee spent a number of days in Perth and visited a number of mine sites and the Parliament of Western Australia. The relevant strategic programming area was 3) Minerals policy, regulation and agreements.
Feedback	Due to the nature of the workshop and its duration, no formal feedback was gathered as part of this workshop. Informal feedback received indicated that participants were appreciative of the extent of expertise across a range of mining and development issues.
Other outcomes	The workshop built on linkages between IM4DC and the Government of Kenya. Ian Satchwell travelled to Kenya to participate in the IMF Conference on Kenya's Macroeconomic Prospects and Challenges in Nairobi from 17 to 18 September and then to attend various meetings with Government of Kenya personnel. Ian gave a presentation on the topic "The Case for Socially Responsible Mining: Lessons from Australia" at the Conference. His program also included meeting with the Cabinet Secretary for Mining, Hon. Najib Balala, and hosting a mining breakfast for Australian alumni and opinion leaders in business.

GIRAF – 3rd Geoscience Information in Africa Workshop (with BGR)																													
Course overview	A two day course on Sustainable Mining held in conjunction with GIRAF 2013 - The 3rd Geoscience InfoRmation in Africa Workshop.																												
Objectives	<ul style="list-style-type: none"> To outline some of the frameworks used in the area of mining and sustainable development, including the Africa Mining Vision; To help increase participants' abilities for describing some of the critical elements of mining and sustainable development; and To allow for participants to develop a broader network of contacts relevant to their roles and interests. 																												
Where?	Accra, Ghana																												
When?	The course on Sustainable Mining and the was held on Tuesday 24th September and Wednesday 25th September 2013, complemented by 3 days of the GIRAF workshop sessions (5 training days).																												
Who attended?	IM4DC provided funding for 27 participants, 8 female and 19 male, from Cameroon (1), Cote D'Ivoire (3), Ethiopia (4), Ghana (1), Kenya (3), Liberia (1), Mozambique (1), South Africa (1), Sudan (1), Tanzania (6), Uganda (2), Zambia (2) and Zimbabwe (1). Approximately 90 people attended both events.																												
Program Lead	Ian Satchwell, Director IM4DC																												
Partners	BGR and Geological Survey of Ghana.																												
Content and delivery	The Sustainable Mining workshops covered frameworks for mining and sustainable development; the use of geoscience and management systems; small-scale mining; building human and institutional capacity. It featured keynote sessions from the CEO's of the Ghana Chamber of Mines and Ghana Minerals Commission, and also included four IM4DC alumni amongst the presenters. Each session was structured around three panel presentations and interactive Q&A.																												
Programming rationale	The program aligns most with the IM4DC Strategic Programming area covering Minerals Policy, Regulation and Agreements. The GIRAF network is coordinated by BGR, and the program offered an opportunity to partner with both BGR and the Geological Survey of Ghana. It built on previous IM4DC activity in the area of geoscience policy and management.																												
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree ■ No response </p> <table border="1"> <caption>Feedback Response Data (Estimated from Chart)</caption> <thead> <tr> <th>Topic</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> <th>No response</th> </tr> </thead> <tbody> <tr> <td>Frameworks in the area of mining and sustainable development, including the Africa Mining Vision</td> <td>60%</td> <td>30%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Describe some of the critical elements of mining and sustainable development</td> <td>40%</td> <td>50%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Develop broader network of contacts relevant to role and interests</td> <td>60%</td> <td>30%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Topic	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No response	Frameworks in the area of mining and sustainable development, including the Africa Mining Vision	60%	30%	10%	0%	0%	0%	Describe some of the critical elements of mining and sustainable development	40%	50%	10%	0%	0%	0%	Develop broader network of contacts relevant to role and interests	60%	30%	10%	0%	0%	0%
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Other outcomes	The program established links with the Geological Survey of Ghana, and provided the opportunity for a number of IM4DC alumni to be involved in presentations.																												

Mining Negotiation Frameworks (with IDEP)	
Course overview	The African Institute for Economic Development and Planning (IDEP) conducted its annual Mining/Mineral Policy and Contracts Negotiation course in Dakar, Senegal, between 16 and 27 September 2013. Jill Howieson, representing IM4DC, was invited to attend to present a module on 'Perspectives on Negotiation.'
Objectives	The overarching objective of the course was to contribute to the development of a critical mass of highly skilled middle and senior policy officials and decision makers who will be suitably or better equipped to design and manage mining policy for the development of their countries, sub-regions and the continent
Where?	Dakar, Senegal
When?	24 September 2013, (1 Training day)
Who attended?	There were 25 participants (21M/4F) from the following African nations: Burkina Faso (1), Burundi (1), Cameroon (2), Central African Republic (1), Chad (1), Cote d'Ivoire (1), Ethiopia(1), Gambia(2), Guinea (1), Madagascar (1), Malawi (2), Niger (2), Nigeria (1), Rwanda (1), Senegal (1), Sudan (1), Swaziland (1), Tanzania (2), Togo (1) and Zambia (1) Participants were middle and senior ranking officials from Government departments, primarily Ministries concerning mining and minerals policy.
Program Lead	For IM4DC component, Dr Jill Howieson, UWA
Partners	African Institute for Economic Development and Planning (IDEP), Africa Mineral Development Centre (AMDC);United Nations Economic Commission for Africa (UNECA).
Content and delivery	Module 9: Perspectives on Negotiation: This module provides an introductory overview to negotiation processes. It explores the various approaches to negotiation including; strategic, structural, concession and behavioural considerations as an integral part of bargaining, conflict resolution and ensuring that the interests of all stakeholders are accommodated as much as is technically and financially feasible.
Programming rationale	The course was designed to respond to the expressed needs of African governments for a corpus of skilled mid-level and senior personnel who are adequately equipped to design, implement and evaluate policies for the operation and governance of mining activities and the promotion of national development through mining contracts agreed with private, mainly foreign companies. The module forms part of an ongoing suite of activities designed to provide assistance to African governments in the area of negotiation and contracts management. Strategic Programming Area: 3) Minerals policy, regulation and agreements
Feedback	Due to the nature of the activity, being 1 module of a much larger program, no formal IM4DC feedback was undertaken. Please see the attached report for an evaluation report completed by Dr Howieson following the delivery of the module and complementary discussions and meetings.
Other outcomes	The module builds on other activities undertaken in the area of African mineral policy and negotiation frameworks, including a scoping mission undertaken by Dr Howieson in December 2012, a Berlin negotiation summit held in January 2013, and the Yaoundé Mining Negotiation Roundtable, held in Cameroon in July 2013. Given the interest in the field, the demand for ongoing assistance and expertise, and the willingness for parties to provide financial and in-kind support, it is likely that a number of IM4DC activities will be rolled out in collaboration with its African partner institutions.

Indonesian Coal and Minerals Policy Study Tour	
Course overview	A Study Tour that included a two day field trip to Central Queensland and operations in Gladstone as well as presentations on policy approaches to the two focus areas.
Objectives	The objective of the Study Tour was to provide exposure for a group of senior officials from the Indonesian Ministry of Energy and Mines to Australian approaches to co-ordination of pit-to-port regional planning in coal regions, and policy approaches to encourage value-adding in downstream processing.
Where?	Central Queensland and Gladstone
When?	The Study Tour was held from Tuesday 1st October to Friday 4th October 2013. (4 training days)
Who attended?	11 males and 1 female from the Indonesian Ministry of Energy and Mines attended.
Program Lead	Bruce Barrie, JKTech
Partners	Yancoal, QER, GAPDL and DSD
Content and delivery	The Study Tour included presentations from State Government on policy approaches to the two focus areas of Minerals Policy and Regional Development, a two day field visit to a coal operation in Central Queensland and operations in Gladstone, and presentations from experts in regional planning and coal processing.
Programming rationale	The Study Tour directly addressed the two strategic programming areas of Minerals Policy and Regional Development. It focussed on a key stakeholder institution, Ministry of Energy and Mines, in an IM4DC priority country, Indonesia. The key stakeholder institution expressed the desire to learn from Australia's experience in the area of local processing as it has passed a new legislation addressing the question of local processing.
Feedback	No formal M&E data was collected for this activity. The participants did make a presentation on their return within their Ministry, and also provided verbal feedback to the AusAID staff in Jakarta.
Other outcomes	The study tour provided an opportunity to engage with the mainstream Ministry more deeply, on topics of significant interest to the Indonesian government. In particular, the group was very interested in the use of State Development Areas to promote development of value-adding activities.

Indonesian Geology Study Tour

Course overview	A study tour for representatives of the Indonesian Education and Training Centre for Geology and Education and Training Centre for Minerals and Coal to highlight Australian activities in these areas.																																			
Objectives	To provide an overview of Australian (particularly Western Australian) approaches to training and education of geologists and mining professionals. Aspects include curriculum design, articulated learning pathways, pedagogical approaches. Secondary objectives included the discussion of potential collaborative activities between IM4DC, partner institutions and the Education and Training Centre for Minerals and Coal and development of a plan for future engagement.																																			
Where?	Perth and Kalgoorlie																																			
When?	21-25 October 2013; (5 training days)																																			
Who attended?	9 participants (7M/2F) from the Education and Training Agency of the Indonesian Ministry of Energy and Mineral Resources: 4 representatives from the Education and Training Centre for Geology; 3 from the Education and Training Centre for Minerals and Coal and 2 staff from external relations and general affairs. Heads of both training centres were in attendance.																																			
Program Lead	Ian Satchwell, Director, IM4DC																																			
Partners	N/A																																			
Content and delivery	Australian mining history and context; workforce planning; training and education options and pathways; applied research for Geologists; training and research examples; Kalgoorlie field trip with site visits to Goldfields Institute of Technology, WA School of Mines, WA Mining Museum and KCGM Superpit.																																			
Programming rationale	Theme: Operational Effectiveness; Strategic Programming Areas: Minerals policy, regulation and agreements and Sub-national governance of the mining sector																																			
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. Unfortunately, due to time constraints the survey was only issued after participants had returned home. As a result, only 3 responses (from 9 participants) were received. See evaluation section for analysis (Full details can be found in the appendices)</p> <table border="1"> <caption>Feedback Data from Chart</caption> <thead> <tr> <th>Statement</th> <th>Strongly Agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly Disagree</th> <th>No Response</th> </tr> </thead> <tbody> <tr> <td>The study tour increased my knowledge of Australian education and training practices in geology and minerals</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The study tour will lead to changes in education and training practices in geology and minerals in Indonesian training centers</td> <td>33%</td> <td>67%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>As a result of the study tour, I will take different approaches to my own work in education and training</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The study tour will lead to greater collaboration in education and training between Indonesia and Australia</td> <td>67%</td> <td>33%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response	The study tour increased my knowledge of Australian education and training practices in geology and minerals	100%	0%	0%	0%	0%	0%	The study tour will lead to changes in education and training practices in geology and minerals in Indonesian training centers	33%	67%	0%	0%	0%	0%	As a result of the study tour, I will take different approaches to my own work in education and training	100%	0%	0%	0%	0%	0%	The study tour will lead to greater collaboration in education and training between Indonesia and Australia	67%	33%	0%	0%	0%	0%
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Other outcomes	A planning session for collaborative activities between IM4DC and the Education and Training Centres was undertaken and provided a range of positive outcomes that will inform future activities and will help to ensure that activities align with needs and capabilities.																																			

OHS Incident Investigation																																					
Course overview	An offshore course that included five days training in accident and incident investigation and analysis processes and practices for participants from Zambian Mines Safety Department.																																				
Objectives	The objective of the visit was to provide a 5 day incident investigation and analysis training program for participants to increase the capacity of the MSD to effectively investigate incidents.																																				
Where?	Kitwe, Zambia																																				
When?	The course was held from Monday 28th October to Friday 1st November 2013 (5 training days).																																				
Who attended?	13 male senior mining inspectors from Zambia attended.																																				
Program Lead	Carmel Bofinger, MISHC.																																				
Partners	Dr Bunda Besa, The University of Zambia, and Mr Myiwa Songolo, Copperbelt University																																				
Content and delivery	The content of the course was equivalent to the course MINE7042 Incident Investigation and Analysis course that is provided by MISHC as both an on-line course and an intensive short course. This course is presented as part of the Graduate Certificate in Risk Management. Program topics and structure. The course included presentations, group exercises, individual exercises, video presentations, and reference materials such as examples of good practices in the application of incident investigations and analysis processes and templates. A retired Zambian judge, Honourable Magistrate C Kambanja, also presented as a guest covering the legal aspects of court.																																				
Programming rationale	The course directly targeted an IM4DC priority country and addressed the strategic programming area of Health and safety of workforces and resources communities. The AusAID Scoping Study for Zambia and the subsequent Training Needs Analysis identified a lack of formal incident investigation and analysis training and skills in the Mines Safety Department(MSD) in Kitwe, Zambia.																																				
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Feedback Response Data (Estimated from Chart)</caption> <thead> <tr> <th>Category</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Robust investigation into an incident</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Understand, discuss and determine</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Selection of most appropriate technique</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Incident investigation into a significant incident</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Write and critique</td> <td>50%</td> <td>40%</td> <td>10%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Category	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Robust investigation into an incident	100%	0%	0%	0%	0%	Understand, discuss and determine	60%	40%	0%	0%	0%	Selection of most appropriate technique	60%	40%	0%	0%	0%	Incident investigation into a significant incident	60%	40%	0%	0%	0%	Write and critique	50%	40%	10%	0%	0%
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Other outcomes	The course provided opportunities to strengthen the linkages with MSD, UNZA and CBU.																																				

Occupational Health and Safety Leadership

Course overview	The OHS Management short course provides an overview of the nature and management of occupational health and safety in the resources sector, particularly within the Australian mining context.																																			
Objectives	The objectives of the course were threefold: (1) to provide participants with greater technical understanding of safety practices relevant to mining; (2) to provide personal development opportunities to maximise learning and proactivity; and (3) to provide safety leadership development and insights into change management.																																			
Where?	Classroom activities were undertaken at the Accelerated Learning Laboratory (ALL) at the University of Western Australia. There were a number of day trips to facilities in the Perth Metropolitan Area and a 4 day field trip to Kalgoorlie, Western Australia.																																			
When?	Monday 28 October to Friday 22 November 2013, 20 Participant training days.																																			
Who attended?	A total of 17 participants from 11 countries, as follows: Cote d'Ivoire (1), Ethiopia (1), Indonesia (4), Liberia (1), Malawi (1), Mongolia (1), Nigeria (2), Peru (2), Philippines (2), Rwanda (1), Zambia (1). There were 12 male participants and 5 female participants.																																			
Program Lead	Assistant Professor Karina Jorritsma, Accelerated Learning Laboratory (ALL), University of Western Australia																																			
Partners	N/A																																			
Content and delivery	<ul style="list-style-type: none"> • The History of mining in an Australian context • Occupational Health and Safety analysis tools, such as: accident causation; root cause analysis; Strength-Weakness-Opportunity-Threat (SWOT) analysis; job hazard analysis; hazard identification; behaviour-based safety and error taxonomies • Personal development, goal setting, influencing and proactivity; maximising learning outcomes; • Australian and International industry standards • Safety leadership and culture • Change management • Job design and work stress • Content and activities concerning the Return to Work Projects 																																			
Programming rationale	5) Health and Safety of resources communities and workforces																																			
Feedback	<p><i>A formal M&E form was used to gather participant feedback, with the following responses:</i></p> <p> ■ Strongly Agree ■ Agree ■ Neutral ■ Disagree ■ Strongly Disagree ■ No Response </p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly Agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly Disagree</th> <th>No Response</th> </tr> </thead> <tbody> <tr> <td>The program increased my ability to understand principles of occupational health and safety in the Australian context</td> <td>80%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to understand the broad legal context for safety, regulatory environments and relevant frameworks</td> <td>70%</td> <td>25%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to understand the role of leadership in process safety and managing safety</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to understand the nature and development of safety culture</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response	The program increased my ability to understand principles of occupational health and safety in the Australian context	80%	15%	5%	0%	0%	0%	The program increased my ability to understand the broad legal context for safety, regulatory environments and relevant frameworks	70%	25%	5%	0%	0%	0%	The program increased my ability to understand the role of leadership in process safety and managing safety	85%	15%	0%	0%	0%	0%	The program increased my ability to understand the nature and development of safety culture	85%	15%	0%	0%	0%	0%
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<h2 style="text-align: center; color: #E67E22;">Connecting Mining Activities to Human Development Goals (with 2nd International Conference on Social Responsibility in Mining)</h2>																																																		
Course overview	A five day program comprising two days educational workshop followed by participation in a three day conference.																																																	
Objectives	To build capacity in capturing and analysing human development outcomes for local people impacted by resource development in professionals working for government, civil society and academic institutions.																																																	
Where?	Santiago, Chile																																																	
When?	The program was held from Monday 4th November to Friday 8th November 2013 (5 training days).																																																	
Who attended?	28 participants; 10 women, 18 men; 15 Peruvians, 4 each from Colombia and Ecuador, 2 each from Bolivia and Chile, 1 from Uruguay; government, NGOS, community and indigenous groups.																																																	
Program Lead	Cristian Parra, CSR - SMI, UQ																																																	
Partners	Pablo Valenzuela, Fundacion Casa de la Paz																																																	
Content and delivery	<p>Day 1:</p> <ul style="list-style-type: none"> Conceptual background for understanding the relationship between ‘mining development’ and ‘human development’ in developing countries. (Cristian Parra) Evaluating the social conditions of the most vulnerable groups: Types of indicators, multidimensional indicators and the human development approach. (Cristian Parra, Pablo Valenzuela, and Fitsum Weldegiorgis) <p>Day 2:</p> <ul style="list-style-type: none"> Analysis of Potential effects on Human Development. (Cristian Parra and Pablo Valenzuela) Presenting to communities (Lynda Lawson) Case analysis about Impact on Poverty Reduction and Human Development (Cristian Parra and Pablo Valenzuela) Presentation and analysis by groups of a Regional Development Plan. <p>Discussion and debate. (Cristian Parra, Pablo Valenzuela, Fitsum Weldegiorgis, and Lynda Lawson)</p> <p>Days 3-5</p> <ul style="list-style-type: none"> Attendance at SR Mining Conference 																																																	
Programming rationale	The program addressed strategic programming areas of Regional and Local Socio-economic Development, Sub-national Governance of the Mining Sector, and Community Engagement and Consultation. The program addressed the failure of many mining endeavours to meet the human development needs of the most vulnerable and fragile communities in their midst. It drew on extensive research by Cristian Parra in Latin America and many years’ experience of Casa de la Paz, one of Latin America’s most well reputed NGOs operating in this area.																																																	
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree ■ No Response </p> <table border="1" style="margin-top: 10px;"> <caption>Feedback Response Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> <th>No Response</th> </tr> </thead> <tbody> <tr> <td>Meet best practice in developing policies relating to Conectar actividades mineras con metas de desarrollo...</td> <td>60%</td> <td>35%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Develop policy that takes into account multi stakeholder groups (community, government, and industry)</td> <td>50%</td> <td>45%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Develop, manage and monitor effective strategies for Conectar actividades mineras con metas de desarrollo...</td> <td>50%</td> <td>30%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Get involved and collaborate with other stakeholders to identify and develop collaborative networks</td> <td>50%</td> <td>30%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Deliver education and training programs related to Conectar actividades mineras con metas de desarrollo...</td> <td>80%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Opportunities for continued engagement with IM4DC</td> <td>80%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No Response	Meet best practice in developing policies relating to Conectar actividades mineras con metas de desarrollo...	60%	35%	5%	0%	0%	0%	Develop policy that takes into account multi stakeholder groups (community, government, and industry)	50%	45%	5%	0%	0%	0%	Develop, manage and monitor effective strategies for Conectar actividades mineras con metas de desarrollo...	50%	30%	15%	5%	0%	0%	Get involved and collaborate with other stakeholders to identify and develop collaborative networks	50%	30%	15%	5%	0%	0%	Deliver education and training programs related to Conectar actividades mineras con metas de desarrollo...	80%	15%	5%	0%	0%	0%	Opportunities for continued engagement with IM4DC	80%	15%	5%	0%	0%	0%
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Other outcomes	Participants were encouraged to contribute to the IM4DC online discussion forum. There were considerable opportunities to engage with the Peruvian Government for further research in the area of social responsibility and mining with senior officials. There is a possibility for potential research in collaboration with the Director of Social Affair - Ministry of Mining and Energy of Peru.																																																	

Mining and Gender Study Tour	
Course overview	One day forum coordinated for AAPF Study Tour, focussed on questions of Mining and Gender
Objectives	As per AAPF Outline
Where?	Brisbane – Hilton Hotel
When?	November – 1 training day
Who attended?	32 participants (21 female, 11 male) from Cameroon (2), Ethiopia (3), Ghana (3), Kenya (3), Liberia (3), Madagascar (2), Malawi (3), Namibia (1), Nigeria (3), South Africa (3), South Sudan (3), Zambia (3)
Program Lead	Facilitator – Ann Harrup, IM4DC Lead Robin Evans
Partners	AAPF
Content and delivery	Three sessions on Gender Diversity – an Industry Perspective; Mining Communities and Gender; and Stories of Change
Programming rationale	Strategic programming areas, how the program need was identified
Feedback	No formal M&E data were gathered for this event, as AAPF were separately collecting feedback on the overall Study Tour. Verbal feedback from the participants was very positive. The AAPF Lead Facilitator was extremely satisfied with the event, with the format facilitating good interaction between presenters and participants.
Other outcomes	

Mongolian Government Large Scale Underground Mining																									
Course overview	A Study Tour that included a four day field trip to North Queensland as well as presentations on environmental and OHS issues, and trends relevant to the Mongolian context.																								
Objectives	<ul style="list-style-type: none"> To outline the key environmental and occupational health and safety issues in the Australian minerals industry; To explain how these issues are managed through regulatory frameworks and the Australian inspectorates; and To help increase participants’ abilities for managing these issues within the Mongolian context. 																								
Where?	Brisbane and North Queensland (Charters Towers and Townsville)																								
When?	The Study Tour was held from Tuesday 5th November to Friday 15th November 2013 (9 training days).																								
Who attended?	A group of 8 participants (7 M, 1F) from Mongolia’s GASI attended.																								
Program Lead	Robin Evans, IM4DC, Bruce Barrie for field activity, JKTech.																								
Partners	CMLR, Simtars, MISHC, JKTech, Glencore Xstrata, Sun Metals Corporation, Charters Towers Regional Council, Resolute Mining Ltd, Citigold Corporation Ltd, DNRM, and CSRM.																								
Content and delivery	The topics addressed in the classroom sessions included regulatory approaches to managing environmental impacts and regulation of operations, and latest developments in OHS management. The field trip was designed to cover a range of environmental and social aspects associated with underground and open cut mining. Presentations were delivered in English with sequential translation, also allowing time for question and answer sessions in each block.																								
Programming rationale	The program addressed the two strategic programming areas of Environmental Management and Occupational Health and Safety. The program was structured around the needs identified by GASI in the months preceding the trip.																								
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Feedback Results Data</caption> <thead> <tr> <th>Topic</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Outlined environmental and occupational health and safety issues in the Australian minerals industry</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Explained how the issues are managed through regulatory frameworks and the Australian inspectorates</td> <td>80%</td> <td>20%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Increased participants' abilities to manage the issues within Mongolian context</td> <td>80%</td> <td>20%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Topic	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Outlined environmental and occupational health and safety issues in the Australian minerals industry	85%	15%	0%	0%	0%	Explained how the issues are managed through regulatory frameworks and the Australian inspectorates	80%	20%	0%	0%	0%	Increased participants' abilities to manage the issues within Mongolian context	80%	20%	0%	0%	0%
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Other outcomes	The sessions offered the opportunity to review GASI priorities for further work in a number of areas.																								

Dialogue and EIA Processes Workshops	
Course overview	Two consecutive two- day workshops focussed on dialogue processes in the mining sector and their role in conflict management and prevention in Environmental Impact Study (EIS) assessment and approval processes.
Objectives	The first workshop entitled “Open dialogue on mining and sustainable development in the mining sector: building on the Latin American experience” focused on the experience of multiple Peruvian and Latin American dialogue spaces for the mining sector. The second workshop on “Political and Institutional Aspects of Environmental Impact Study Approval Processes in the Mining Sector: Conflict management and prevention” dealt with how to enhance conflict management and prevention during the EIS assessment and approval process. Both workshops invited participants to reflect and share ideas based on concrete Latin American experiences and built on the results of previous CSRM research.
Where?	Lima, Peru
When?	19-22nd November 2013
Who attended?	The two workshops attracted 51 and 54 participants each respectively, with some overlap between the two. 45 of the total 105 were female. Participants came largely from Peru and also from Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Guatemala and Panama. Civil society organisations, dialogue spaces on mining and sustainable development, academia, government and industry were represented. Participation was by invitation in a process managed in conjunction with local stakeholders.
Program Lead	Diana Arbelaez-Ruiz, UQ SMI-CSRM
Partners	Societas Consultora de Análisis Social and the Grupo de Dialogo Minería y Desarrollo Sostenible of Peru
Content and delivery	The workshops featured presentations from all organisations represented, and interactive dialogue sessions.
Programming rationale	This workshop arose from an earlier IM4DC Action Research project. It aligns with the Strategic Programming Area
Feedback	A formal M&E form was used to gather participant feedback. The responses were in Spanish, and the feedback is still being translated and collated – it will be available for the final 2013/14 report.
Other outcomes	The workshops were used to support an Action research project, involving individual interviews with a number of stakeholders involved in the dialogue processes around mining in Latin American countries.

Management of Large Volume Waste and Minesite Rehabilitation

Course overview	Short course focusing on life of mine management of waste rock dumps and tailings storage facilities, including waste site rehabilitation. The course was led by Winthrop Professor Andy Fourie, School of Civil and Resource Engineering, The University of Western Australia.																																										
Objectives	To provide an understanding of design, management and monitoring principles for large volume waste facilities associated with mining operations, across the full life cycle of a mine. To provide an understanding of planning principles, design and management of rehabilitation and revegetation activities on mine sites.																																										
Where?	University of Mines and Technology (UMaT) campus, Tarkwa, Ghana																																										
When?	Monday 25- Friday 29 November 2013 – 5 Participant training days																																										
Who attended?	20 participants (18M/2F) comprised primarily of State and Federal Government employees in the field of environmental management and mining, and 5 UMaT lecturers. Participants were from: Cote d'Ivoire (1), Ghana (6), Liberia (4), Malawi (1), Niger (2), Nigeria (5) and Rwanda (1).																																										
Program Lead	Winthrop Professor Andy Fourie (School of Civil and Resource Engineering, UWA); Dr Longbin Huang (Centre for Mined Land Rehabilitation (CMLR), SMI, UQ).																																										
Partners	Dr Elias K. Asiam – University of Mines and Technology (UMaT), Tarkwa, Ghana																																										
Content and delivery	2 and a half days of Large Volume Waste Management lectures, discussions and group material, led by Prof. Fourie 2 days of mined-land rehabilitation and revegetation lectures, discussions and group activities, led by Dr Huang 2 guest presentations by UMaT Professors Elias Asiam, and Samuel A. Ndur Field trip to Goldfields Tarkwa Mine																																										
Programming rationale	Strategic programming areas: Primary: environmental regulation and management; Secondary: health and safety of resources communities and workforces; community engagement and consultation; regional and local socio-economic development. The program has been developed because there is need for improving and strengthening mine environmental management and positive mine closure outcomes in African countries where mineral resource exploration is an important part of national economic activities.																																										
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <table border="1"> <caption>Participant Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly Agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly Disagree</th> <th>No Response</th> </tr> </thead> <tbody> <tr> <td>Increased my ability to meet best practice in mine closure.</td> <td>65%</td> <td>30%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Increased my ability to design, develop and identify regulatory frameworks for mine closure</td> <td>50%</td> <td>45%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Increased my ability to develop effective systems for managing knowledge related to mine closure.</td> <td>55%</td> <td>40%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Increased my ability to support education and training</td> <td>45%</td> <td>35%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Allowed engagement with other participants to develop cross-country collaboration networks.</td> <td>55%</td> <td>30%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No Response	Increased my ability to meet best practice in mine closure.	65%	30%	5%	0%	0%	0%	Increased my ability to design, develop and identify regulatory frameworks for mine closure	50%	45%	5%	0%	0%	0%	Increased my ability to develop effective systems for managing knowledge related to mine closure.	55%	40%	5%	0%	0%	0%	Increased my ability to support education and training	45%	35%	15%	5%	0%	0%	Allowed engagement with other participants to develop cross-country collaboration networks.	55%	30%	10%	0%	0%	0%
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Other outcomes	The workshop was the first opportunity for collaboration with the University of Mines and Technology (UMaT). The workshop was a success and the conference facilities were appropriate for the delivery of IM4DC activities. The ability to combine classroom activities with a mine site field trip component is a particular advantage; however, there are logistical challenges with regional course locations.																																										

Water in Mining (with AusIMM Water in Mining Conference)																									
Course overview	A training and knowledge exchange event on 'Water in Mining' aimed at IM4DC priority countries, consisting of a conference, workshops and field visits.																								
Objectives	1. Illustrate examples of good practice in mine water management; 2. Identify training and research needs in IM4DC priority nations. 3. Build collaborations between Australian institutions, and government and academic institutions in IM4DC priority nations. 4. Facilitate networking for delegates with a range of Australian mine water management experts. The broad scope of the proposed event is designed to bring out the important links between mine water management and governance, environmental risks and communities as stakeholders.																								
Where?	Brisbane Sofitel Hotel; The University of Queensland, St Lucia; Central Queensland mine sites.																								
When?	25 Nov – 13 Dec 2013 (15 training days)																								
Who attended?	16 delegates (12M, 4F) attended – Ghana (2), Indonesia (1), Mongolia (4), Peru (3), Philippines (3) and Zambia (3), representing research and training organisations and government. A table with full details is in the appendix.																								
Program Lead	Neil McIntyre, CWiMI-SMI																								
Partners	SMI-CWiMI, SMI-CMLR, SMI-CSR, SMI, JKTech, Uniquist, The University of Western Australia, Queensland Government's Department of Natural Resources and Mines																								
Content and delivery	Week 1: 2 days welcome and induction sessions; 3 days participation in Ausimm's Water in Mining Conference held in Brisbane. Week 2: 4 days of interactive workshops at The University of Queensland including presentations by each delegate; and 1 day of seminar attendance and networking/business meetings. 4 homework assignments. Week 3: 4 days field trips to central Queensland mine sites; field trip report; ½ day feedback and reporting session.																								
Programming rationale	The programme topics were broad within the general theme of 'Water in Mining'. This was due to lack of prior knowledge of priority training needs within the theme. This dictated the need for the aforementioned partnerships in delivering the event. The event was aimed at knowledge exchange. As well as presentations and discussion aimed at training in good practice, the delegates presented and discussed their own work challenges; and time was dedicated to networking at the Ausimm conference and in SMI. The field trips were recommended, from experience of IM4DC staff, as a valuable training component. The trips were run in the last week of the 3-week event to maximise time for organisation (although feedback indicates they would have been better in week 2). 'Homework' was included to formalise the learning aspect of the event.																								
Feedback	A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices) <div style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </div> <table border="1"> <caption>Feedback Results Summary</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>The program increased my knowledge of good practice in mine water management</td> <td>~75%</td> <td>~25%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to exchange knowledge about current challenges, best practice and scientific research in mine water management</td> <td>~50%</td> <td>~45%</td> <td>~5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program allowed me to develop a broader network of contacts relevant to my role and interests</td> <td>~65%</td> <td>~35%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	The program increased my knowledge of good practice in mine water management	~75%	~25%	0%	0%	0%	The program increased my ability to exchange knowledge about current challenges, best practice and scientific research in mine water management	~50%	~45%	~5%	0%	0%	The program allowed me to develop a broader network of contacts relevant to my role and interests	~65%	~35%	0%	0%	0%
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Other outcomes	The event was used to facilitate a survey of training needs related to water in mining and recommendations for delivery potentially in collaboration with IWC and UWA, which will be delivered in a separate report. Sheyla Bethsy Palomino Ore of Peru's Ingmet government research agency has proposed a follow-up project with SMI-CMLR; and has expressed interest in applying for a Peruvian scholarship to undertake post-graduate study in UQ. Patricia Calderon of the Universidad Nacional de Ingeniería, continues to express interest in doing a PhD in SMI. SMI-CWiMI has been asked to enter into a training agreement with Pontifica Universidad Catholica Peru.																								

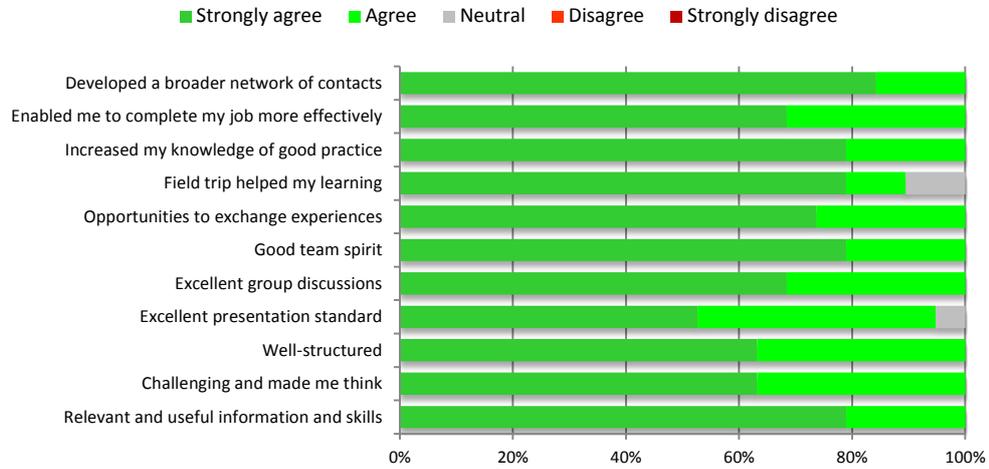
Application of GIS for Geoscience and Policy

Course overview	The course was designed as an introduction to the use of GIS in geosciences, cadastral systems and mineral exploration. It addressed introduction and review of GIS in geology/environmental science, geographic analyses, remote sensing, spatial statistics, GIS data acquisition and storage, and GIS (geology) data standards. One-day practical field-data acquisition was carried out. Both free (QGIS) and proprietary (ArcGIS) software packages were introduced during the course. Majority of the time was spent on practical hands-on exercises.																																																
Objectives	The objective of this program was to introduce geographical information systems (GIS) in the resources sector. The participants should have gained practical experience working with geospatial data and: <ol style="list-style-type: none"> 1) Understand principles of GIS and Remote sensing 2) Understand basic geographical analysis operations, coordinate systems, and data acquisition 3) Understand the concept of spatial databases 4) Understand the concept of spatial statistics 5) Understand applications of GIS in geological mapping, environment monitoring, tenement management, geological risk assessment, and exploration targeting 6) Understand geological and GIS data standards 																																																
Where?	The School of Mines, University of Zambia, Lusaka																																																
When?	20 th – 31 st January, 2014; 10 training days																																																
Who attended?	African mid-ranking and senior government officers working with GIS and the resource industry, African academics with a GIS in mining focus, 23 participants (21M, 2F) in total coming from 11 African countries: Benin (1), Ethiopia (1), Ghana (1), Kenya (1), Malawi (1), Niger (1), Nigeria (3), Rwanda (2), South Sudan (2), Tanzania (1) and Zambia (9)																																																
Program Lead	Centre for Exploration Targeting, University of Western Australia (Vaclav Metelka)																																																
Partners	University of Queensland (David Pullar), The School of Mines, University of Zambia (Osbert Sikazwe)																																																
Content and delivery	Core topics: GIS and Remote sensing, Geographical analyses, GIS data acquisition and processing, Spatial databases, Spatial statistics, Geological and GIS data standards, GIS in geological mapping, Environment monitoring, Geological risk assessment, Tenement management, Exploration targeting Classroom lectures including presentations from industry/academia (Simon Nkemba) Practical hands-on exercises in ArcGIS and QGIS One-day field data acquisition exercise																																																
Programming area	Sub-national governance of the mining sector; Minerals policy, regulation and agreements; Environmental regulation and management																																																
Feedback	A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices). <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Opportunities were provided to exchange...</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>There was a good team spirit amongst the...</td> <td>95%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The level of difficulty was suitable for the audience</td> <td>35%</td> <td>45%</td> <td>15%</td> <td>5%</td> <td>0%</td> </tr> <tr> <td>The facilitation of the group discussion was excellent</td> <td>80%</td> <td>15%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The standard of presentations was excellent</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The quality of the resource material provided was...</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The material presented was relevant</td> <td>55%</td> <td>40%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Opportunities were provided to exchange...	85%	10%	5%	0%	0%	There was a good team spirit amongst the...	95%	5%	0%	0%	0%	The level of difficulty was suitable for the audience	35%	45%	15%	5%	0%	The facilitation of the group discussion was excellent	80%	15%	5%	0%	0%	The standard of presentations was excellent	90%	10%	0%	0%	0%	The quality of the resource material provided was...	85%	10%	5%	0%	0%	The material presented was relevant	55%	40%	5%	0%	0%
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Other outcomes	New linkages on national and sub-national levels for all participants, possible groundwater monitoring research project between UNZA and UQ, possible fellowship opportunities for UNZA staff at UWA																																																

Emerging Leaders in African Mining (in conjunction with African Mining Indaba)																															
Program overview	A two-week program that included a workshop focused on leadership themes interlaced with contextual material related to the minerals industry, attendance at Indaba, meetings with industry and government leaders, and a final wrap-up day.																														
Objectives	<ul style="list-style-type: none"> To provide with insights into the global minerals industry and emerging trends in the sector; To provide with exposure to current thinking about the relationship between mining and development and how to strengthen those linkages; To provide an enhanced understanding of what is required to be an effective leader; To provide practical guidance on how to analyse complex problems, devise effective responses and think strategically; and To provide a unique opportunity to build networks and to interact with decision-makers from the mining industry, government and other sectors. 																														
Where?	Cape Town, South Africa																														
When?	The program was held from Monday 27 th January to Friday 7 th February 2014 (10 training days).																														
Who attended?	A group of 26 participants from young leaders in the African mining industry attended: Cote D'Ivoire (2), Eritrea (1), Ethiopia (1), Ghana (4), Kenya (1), Liberia (4), Nigeria (1), Rwanda (1), Sierra Leone (3), South Africa (1), South Sudan (1), Tanzania (2), Togo (1), Uganda (1) and Zambia (2) (refer to appendix for full list of participants).																														
Program Lead	Prof David Brereton, SMI - UQ																														
Partners	AMDC - UNECA, CPSL, Ghana Minerals Commission, RBM - Rio Tinto, South African Institute of International Affairs, and UCT																														
Content and delivery	The first week consisted of a workshop that included activities for each day based on the respective themes of Setting the Context, Leadership, Exercising Influence, Taking Responsibility and Looking Ahead. The second week included attendance at Indaba, additional meetings with industry and government leaders, and a final wrap-up day.																														
Programming rationale	The program addressed the four strategic programming areas of Regional and Local Economic and Social Development, Sub-national Governance of the Mining Sector, Minerals Policy, Regulation and Agreements, and Community Engagement and Consultation. Human capacity development had been identified as one of the key activity area for the Arica Mining Vision. The work of the Development Leadership group co-ordinated through the Australian Aid program also highlighted the need for a focus on this area.																														
Feedback	<p>A formal M&E form was used to gather participants' feedback. The following are the top four responses that were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Very Good ■ Good ■ Average ■ Poor ■ Very Poor </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Component</th> <th>Very Good (%)</th> <th>Good (%)</th> <th>Average (%)</th> <th>Poor (%)</th> <th>Very Poor (%)</th> </tr> </thead> <tbody> <tr> <td>Overall Experience of the Program</td> <td>85</td> <td>10</td> <td>5</td> <td>0</td> <td>0</td> </tr> <tr> <td>Opportunity to Gain Self-awareness as a Leader</td> <td>80</td> <td>15</td> <td>5</td> <td>0</td> <td>0</td> </tr> <tr> <td>Exposure to New Ideas and Ways of Thinking</td> <td>75</td> <td>15</td> <td>10</td> <td>0</td> <td>0</td> </tr> <tr> <td>Opportunities for Peer Networking</td> <td>70</td> <td>15</td> <td>10</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Component	Very Good (%)	Good (%)	Average (%)	Poor (%)	Very Poor (%)	Overall Experience of the Program	85	10	5	0	0	Opportunity to Gain Self-awareness as a Leader	80	15	5	0	0	Exposure to New Ideas and Ways of Thinking	75	15	10	0	0	Opportunities for Peer Networking	70	15	10	0	0
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Environmental Management	
Course overview	<i>Environmental Management in Mining</i> was a 4-week training course that allowed delegates to acquire new skills and knowledge about best practices in environmental management in mining, with the overall aim being to build the capacity of developing countries to develop their minerals and energy resources in an environmentally responsible manner.
Objectives	<ol style="list-style-type: none"> 1) Illustrate examples of best practice in environmental management in mining, and provide skills and information for delegates to implement best practice approaches in their home countries 2) Identify training and research needs in IM4DC priority nations 3) Build collaborations between Australian institutions, and government and academic institutions in IM4DC priority nations 4) Facilitate networking for delegates with a range of Australian environmental management experts.
Where?	The University of Queensland, and field sites in Central Queensland
When?	3-28 February 2014. Total of 15 days in class (4 x 90 min sessions per day) and 5 days field trip.
Who attended?	<p>Number and gender: Total of 21 participants: 8 female, 13 male.</p> <p>Countries: 12 countries represented from Africa (Ghana 1, Liberia 2, Malawi 2, Nigeria 1, Zambia 1), Asia (Indonesia 2, Fiji 1, Mongolia 1, Papua New Guinea 2, The Philippines 4), and South America (Peru 3, Uruguay 1).</p> <p>Sector: 14 participants from government (all from mining/minerals resource ministries), 7 from universities (various disciplines including biology, zoology, environmental management, minerals processing, geology).</p> <p>Seniority: Early to mid career government officials and academics, with some senior staff</p>
Program Lead	Dr Talitha Santini, Centre for Mined Land Rehabilitation and School of Geography, Planning, and Environmental Management, The University of Queensland
Partners	<p>Prof David Mulligan, Centre for Mined Land Rehabilitation, The University of Queensland</p> <p>Mr Bruce Barrie, JKTech Pty Ltd</p>
Content and delivery	<p>Through a combination of lectures, tutorials, field trips, and discussions with fellow delegates, this course equipped delegates with the skills required to critically assess mining and refining operations and implement best practice management approaches to mitigating associated environmental impacts. This course also explored the influence of various stakeholders including government regulators, industry groups, and local communities, and economic considerations on shaping management strategies.</p> <p>Brief course outline was as follows; a detailed program is provided in the Appendices.</p> <p>Week 1: Identifying and assessing impacts of mining and refining operations (lectures and tutorials)</p> <p>Week 2: Management of post-mining landscapes (lectures and tutorials)</p> <p>Week 3: Field trips to central Queensland mine sites; application of skills developed in Weeks 1 and 2</p> <p>Week 4: Innovative approaches and best practice in environmental management in mining (lectures and tutorials)</p>
Programming rationale	<p>The overall aim of this course was to build the capacity of developing countries to develop their minerals and energy resources in an environmentally responsible manner, by providing an opportunity for delegates to acquire new skills and knowledge in best practice environmental management techniques relevant to the resources sector. This aim contributes mainly to the 'Community and Environmental Sustainability' theme, but also to the 'Governance and Regulation' and 'Operational Effectiveness' themes by demonstrating links between government policy and industry practices.</p> <p>This course was the flagship activity within the 'Environmental Regulation and Management' strategic programming area. The first half of the course addressed the key aspects within this programming area of (a) effective and inclusive environmental impact assessment processes; and (b) operational environmental management and monitoring; and the second half addressed (c) integration of land and water management; and (d) mined land rehabilitation practices. The roles of stakeholders in shaping environmental assessments and management plans were also discussed. Consideration of socioeconomic factors contributing to impact assessments and management plans broadened the scope of the proposed course to include elements of other strategic programming areas including 'Community Engagement and Consultation', 'Regional and Local Socio-economic Development', and 'Sub-national Governance of the Mining Sector'.</p>
Feedback	<i>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</i>

Environmental Management



Other outcomes

Several linkages were established during the course and formally articulated in Return to Work plans, including:

1. Research and teaching collaboration between the University of Queensland, and Universidad de Ingegneria y Tecnologia, Peru
2. Research collaboration in lead mobility and toxicity associated with artisanal gold mining in Nigeria (University of Lagos and University of Queensland)
3. Development of teaching materials for environmental management in mining courses (Mindanao State University, The Phillipines, Universidad de la Republica, Uruguay, and the University of Queensland)
4. Development of training packages for artisanal and small scale miners (Ministry of Lands, Mines, and Energy, Liberia, Ministry of Mining, Malawi, and the University of Queensland)
5. Investigation of barriers to success of mine rehabilitation in Ghana (University of Cape Coast and University of Queensland)

Five participants (Emmanuel Mwachungu, Malawi; Oscar David Matallana Tost, Peru; Angel Chavez, Peru; Angeli Valera, The Phillipines, Samuel Wilson, Liberia) expressed interest in completing MPhil and PhD degrees through the University of Queensland, and were introduced to potential supervisors and given information regarding scholarship and admission processes. Discussions are continuing.

Regional Development																																																	
Course overview	Targeted at government, private sector, academia and civil society participants, this course focuses on how developing countries can enhance the economic and social benefits from mining.																																																
Objectives	To provide participants with a thorough grounding in the theory and practice of development planning and management practices in the mining sector, both within national and international contexts																																																
Where?	Crawley Campus, The University of Western Australia, Perth, Western Australia																																																
When?	February 3-28, 2014 (15 days of training and a 5-day study tour to Kalgoorlie and Esperance)																																																
Who attended?	A total of 15 participants attended this training course - 10 males and 5 females; 6 from government, 4 from academe and 5 from NGO/civil society groups; and 6 with executive/senior management positions and 9 with middle management positions. There were 10 African participants (Kenya 1, Malawi 1, Niger 1, Nigeria 2, Rwanda 2, Uganda 2 and Zambia 1), 4 Asian participants (Mongolia 3 and Philippines 1), and 1 Latin American participant from Peru. Please refer to Appendix 1 for a detailed list of the participants.																																																
Program Lead	Dr Veronica Huddleston and Dr Paul Huddleston, The University of Western Australia																																																
Partners	N/A																																																
Content and delivery	Utilising a multi-method delivery approach (lectures, readings, group discussions/presentations, video clips, database explorations, role play and group debate), the course covered the following topics: <ul style="list-style-type: none"> • The Mining and Regional Development Framework • The Macroeconomic Context of Mining • Mining, Employment Generation and Labour Migration • The Political Context of Mining and the Need for Governance • Business Formation and Linkages and Mining Companies' Participation in Regional Development • The Social Dimensions of Mining and Regional Development • Mining and Economic and Social Infrastructure • The Environmental Dimensions of Mining and Regional Development • Mining and Uneven Regional Development 																																																
Programming rationale	Regional and local socio-economic development																																																
Feedback	<p>The formal M&E form prepared by IM4DC to gather participant feedback generated the following responses from the participants. UWA/SEE also conducted unit evaluations using 12 standard items and two open-ended comment questions designed to provide feedback on the teaching and the unit content (Please refer to Appendix 3 for further details).</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Feedback Data</caption> <thead> <tr> <th>Item</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Materials presented were relevant</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The quality of resource materials was excellent</td> <td>75%</td> <td>25%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Standard of presentations was excellent</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Facilitation of group discussions was excellent</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Level of difficulty was suitable for audience</td> <td>40%</td> <td>45%</td> <td>15%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Good team spirit existed amongst the participants</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Opportunities to exchange experiences were provided</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Materials presented were relevant	85%	15%	0%	0%	0%	The quality of resource materials was excellent	75%	25%	0%	0%	0%	Standard of presentations was excellent	85%	15%	0%	0%	0%	Facilitation of group discussions was excellent	85%	15%	0%	0%	0%	Level of difficulty was suitable for audience	40%	45%	15%	0%	0%	Good team spirit existed amongst the participants	85%	15%	0%	0%	0%	Opportunities to exchange experiences were provided	85%	15%	0%	0%	0%
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Other outcomes	Establishment of the potential for academic linkages between UWA and the universities represented by the representatives from the academe and channels for networking																																																

Improving Mining Tax and Administration Collection Frameworks

Course overview	Training workshop in mining tax administration for officials from Finance and Mines Ministries in African countries																																																
Objectives	<p>The workshop will provide an opportunity to exchange on the Sourcebook and the principles of an efficient mining tax administration in the Africa region. The following topics will be covered:</p> <ul style="list-style-type: none"> • Success factors for an efficient mining tax administration system in the African context; • Types of royalties systems, principles of their administration including valuation points, costs deductibility, assessments and auditing; • Elements of mining specific components of Corporate income tax and related administrative issues; • Private sector outlook on mining fiscal policies and administration; • Human resources, institutional collaboration, coordination, capacity building, and information sharing; <p>The delegates will be able to discuss specific issues about royalties' administration, corporate income tax administration and budget forecasting of mining revenues during dedicated working sessions.</p>																																																
Where?	Johannesburg, South Africa																																																
When?	10 February – 13 February 2014 (4 Training Days)																																																
Who attended?	33 Participants (22M/11F): Botswana (7), Lesotho (2), Malawi (5), Mozambique (4), Namibia (3), Tanzania (2), Zambia (5) and Zimbabwe(5)																																																
Program Lead	Professor Pietro Guj, Centre for Exploration Targeting, The University of Western Australia																																																
Partners	World Bank (WB) and the Centre for Exploration Targeting (CET)																																																
Content and delivery	During dedicated working sessions, delegates will discuss specific issues about royalty administration, corporate income tax administration and budget forecasting of mining revenues.																																																
Programming rationale	<p>In 2012 the World Bank (WB) contracted the Centre for Exploration Targeting (CET) to conduct in-field reviews of the mining taxation administration and collection systems and procedures of a number of West African countries. Along with confidential country-specific reports, this assignment culminated in a co-operative World Bank-CET publication entitled "How to improve mining tax administration and collection frameworks: A source book". This source book, together with the appended questionnaire, provides a structured and systematic first step to assist the Ministries of Finance and Mines within developing countries in assessing and improving the effectiveness and efficiency of their mining revenue collection regimes, as well as the related administrative systems. An initial draft of this publication was used to support a successful World Bank hosted workshop on "improving mining tax administration frameworks" conducted in Ghana in September 2012. There is a consensus that, following recent redrafting and modernisation, the mining taxation legislation of most African countries is by and large quite adequate. By contrast, the administrative systems, capacity and critical skill sets necessary for the relevant government instrumentalities to effectively and efficiently enforce and administer their fiscal regimes tended to lack behind, creating a critical need for institutional strengthening. Focused training and the development and retention of appropriately skilled staff are central to building the administrative capacity of the ministries and departments charged with mining tax administration and collection.</p>																																																
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Opportunities were provided to exchange...</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>There was a good team spirit amongst the...</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The level of difficulty was suitable for the audience</td> <td>70%</td> <td>25%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The facilitation of the group discussion was excellent</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The standard of presentations was excellent</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The quality of the resource material provided was...</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The material presented was relevant</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Opportunities were provided to exchange...	85%	10%	5%	0%	0%	There was a good team spirit amongst the...	85%	10%	5%	0%	0%	The level of difficulty was suitable for the audience	70%	25%	5%	0%	0%	The facilitation of the group discussion was excellent	85%	10%	5%	0%	0%	The standard of presentations was excellent	85%	10%	5%	0%	0%	The quality of the resource material provided was...	90%	10%	0%	0%	0%	The material presented was relevant	90%	10%	0%	0%	0%
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Mine Waste Landform Management and Closure																																																	
Course overview	The program will enable participants to understand the key issues associated with mining in the Philippines and better understand and question the technical documents prepared to support mining applications																																																
Objectives	<p>The aim of this program is enable participants to understand the key issues associated with mining in the Philippines and better understand and question the technical documents prepared to support mining applications by providing participants with:</p> <ul style="list-style-type: none"> • A high level overview of the mining regulatory environment in the Philippines which will be contrasted with the current regulatory developments in Australia; • An explanation of the overall mine lifecycle model and the issues to be considered in planning and developing mine waste landforms; • Basic principles behind the design of successful tailings storage facilities and conventional waste rock dump structures; • An awareness of the methodology for managing the key risks of these waste landforms including geophysical and geochemical aspects affecting stability and acid mine drainage; • A review of both local and international waste landform failure case studies; • An overview of key aspects that should be considered in the mine closure process, focussing on the decommissioning, rehabilitation and closure of mine waste landforms including the presentation of case studies to illustrate different approaches; and • An open forum to enable participants to discuss the effectiveness and adequacy of current waste landform management and closure practices in the Philippines. 																																																
Where?	Manila, Philippines																																																
When?	24 February to 26 February 2014 (3 Training Days)																																																
Who attended?	73Participants (38M/35F) [Philippines:73]																																																
Program Lead	Ken Mercer, The Australian Centre for Geomechanics (ACG), The University of Western Australian																																																
Partners	Centre for Environmental Concerns, Philippines																																																
Content and delivery	<p>The program will run over three days from Monday 24th to Wednesday 26th February 2014 in Manila, Philippines. Participants will attend lectures, conduct role plays exercises and participate in open forum discussions. The topics to be covered are listed under the three main themes of the workshop which are:</p> <ul style="list-style-type: none"> • Mining, hazards and regulation in the Philippines • Mine waste management • Mine closure 																																																
Programming rationale	Strategic programming areas - Environmental regulation and management																																																
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Opportunities were provided to exchange...</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>There was a good team spirit amongst the...</td> <td>65%</td> <td>25%</td> <td>10%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The level of difficulty was suitable for the audience</td> <td>60%</td> <td>30%</td> <td>10%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The facilitation of the group discussion was excellent</td> <td>75%</td> <td>20%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The standard of presentations was excellent</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The quality of the resource material provided was...</td> <td>85%</td> <td>10%</td> <td>5%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The material presented was relevant</td> <td>95%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Opportunities were provided to exchange...	85%	10%	5%	0%	0%	There was a good team spirit amongst the...	65%	25%	10%	0%	0%	The level of difficulty was suitable for the audience	60%	30%	10%	0%	0%	The facilitation of the group discussion was excellent	75%	20%	5%	0%	0%	The standard of presentations was excellent	90%	10%	0%	0%	0%	The quality of the resource material provided was...	85%	10%	5%	0%	0%	The material presented was relevant	95%	5%	0%	0%	0%
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Other outcomes	The workshop provided an opportunity to connect IM4DC stakeholder groups in the Philippines around this issue																																																

Malawi Government Mining Revenue Study Tour																															
Course overview	The Managing Mineral Revenue study tour was a 3-day study prepared for senior officials from the Malawian Ministries of Finance, Mines and the Mineral Revenue Authority. Over the course of the three days, participants were introduced to best practice, as well as government and industry perspectives of the management of mining fiscal regimes.																														
Objectives	<ul style="list-style-type: none"> • Strengthen understanding of the management of mining fiscal regimes • Share best practice in mining tax administration • Share effective strategies to encourage investment and facilitate mining operations 																														
Where?	Perth																														
When?	5 – 9 April 2014 (3 training days)																														
Who attended?	9 Senior government officials from Malawi; 1 female and 8 male. The delegation was accompanied by a consultant from Adam Smith International, who has been contracted to support the review of the Malawi's mining fiscal regime.																														
Program Lead	Sanyu Mugambwa, IM4DC																														
Partners	Adam Smith International (consultant travelled with delegation)																														
Content and delivery	The study tour consisted of three days of presentations and workshops: Day 1: Department of Mines and Petroleum: Presentations on mining governance in WA and Australia, use of state agreements, interagency coordination, data capture, encouraging investment, royalties and legal administration; Day 2: Meeting with the AAMIG and a workshop on mineral tax administration and collection frameworks; Day 3: Industry briefing session (CMEWA and AMEC);																														
Programming rationale	Focus areas for the study tour were identified by the delegation, which together represent Malawian agencies that have responsibility for reviewing Malawi's mining fiscal regime.																														
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Feedback Data</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Did the program enable the delegates to develop a broader network of contacts relevant to their role...</td> <td>35%</td> <td>65%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Did the study tour increase understanding of effective strategies to encourage investment and...</td> <td>35%</td> <td>65%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Did the study tour increase understanding of best practice in mining tax administration</td> <td>35%</td> <td>65%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Did the study tour increase understanding of the management of mining fiscal regimes?</td> <td>65%</td> <td>35%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Did the program enable the delegates to develop a broader network of contacts relevant to their role...	35%	65%	0%	0%	0%	Did the study tour increase understanding of effective strategies to encourage investment and...	35%	65%	0%	0%	0%	Did the study tour increase understanding of best practice in mining tax administration	35%	65%	0%	0%	0%	Did the study tour increase understanding of the management of mining fiscal regimes?	65%	35%	0%	0%	0%
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Other outcomes	Participants expressed a strong interest in participating in other IM4DC activities, as well as accessing to support to build capacity and transfer knowledge within the relevant line ministries.																														

Open Cut Slope Stability																																											
Course overview	The training will provide theoretical and practical training in the geomechanics of open pit mining and provide a basis for the Geology and mining inspectors from the General Agency for Specialized Inspection (GASI) and its offices in the provinces (Aimags), the “Inspectorate”, to develop an understanding of what to look for when conducting their visits.																																										
Objectives	The objectives of the visit were to provide a theoretical and practical seminar on: <ul style="list-style-type: none"> • A general awareness of slope instability and the driving forces involved • The approaches used in design and the difficulties experienced in slope design where data is limited • Failure mechanisms and photographs which demonstrated these mechanisms • Influence of physical processes on stability (weathering, alteration, and groundwater) • Influence of insitu stress on stability • Methods for stabilising slopes • Methods for slope monitoring and • Methods for collecting data 																																										
Where?	Ulaanbaatar, Boroo Gold Mine, Darkhan Metallurgical Plant (DMP) and Tumurtolgoi Iron ore mine, Mongolia																																										
When?	22 April to 29 April 2014 (7 Training Days)																																										
Who attended?	24 Participants (24M) [Mongolia: 24]																																										
Program Lead	Winthrop Prof. Dr. Phil Dight, Professor of Geotechnical Engineering, Australian Centre for Geomechanics (ACG)																																										
Partners	Federal Institute for Geosciences and Natural Resources (BGR) & General Agency for Specialised Inspection (GASI)																																										
Content and delivery	Tuesday 22 April – Saturday 26 April – Theory course on “Geomechanics in open pit mining” Monday 28 April – Tuesday 29 April - Practical course & mine site visits																																										
Programming rationale	Strategic programming areas – Environmental management and regulation & Health and safety of workforces and resources communities																																										
Feedback	<p><i>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</i></p> <p> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Opportunities were provided to exchange...</td> <td>40%</td> <td>40%</td> <td>20%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>There was a good team spirit amongst the...</td> <td>30%</td> <td>40%</td> <td>30%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The level of difficulty was suitable for the audience</td> <td>40%</td> <td>40%</td> <td>20%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The facilitation of the group discussion was excellent</td> <td>25%</td> <td>40%</td> <td>30%</td> <td>5%</td> <td>0%</td> </tr> <tr> <td>The standard of presentations was excellent</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The material presented was relevant</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Opportunities were provided to exchange...	40%	40%	20%	0%	0%	There was a good team spirit amongst the...	30%	40%	30%	0%	0%	The level of difficulty was suitable for the audience	40%	40%	20%	0%	0%	The facilitation of the group discussion was excellent	25%	40%	30%	5%	0%	The standard of presentations was excellent	90%	10%	0%	0%	0%	The material presented was relevant	90%	10%	0%	0%	0%
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The standard of presentations was excellent	90%	10%	0%	0%	0%																																						
The material presented was relevant	90%	10%	0%	0%	0%																																						
Other outcomes	N/A																																										

OHS Incident Investigation																																					
Course overview	An offshore course that included five days training in accident and incident investigation and analysis processes and practices for participants from Zambian Mines Safety Department. This was a repeat of the course run in the same location in November 2013 due to demand.																																				
Objectives	The objective of the visit was to provide a 5 day incident investigation and analysis training program for participants to increase the capacity of the MSD to effectively investigate incidents.																																				
Where?	Kitwe, Zambia																																				
When?	The course was held from Monday 5 th May to 9 th May 2014 (5 training days).																																				
Who attended?	13 personnel from the Mine Safety Department, Zambia 2 Inspectors from the Minerals Safety Department, Tanzania 1 Chief Inspector (Mines), Malawi 2 personnel from the University of Namibia																																				
Program Lead	Carmel Bofinger, MISHC.																																				
Partners	Dr Bunda Besa, The University of Zambia, and Mr Myiwa Songolo, Copperbelt University																																				
Content and delivery	The content of the course was equivalent to the course MINE7042 Incident Investigation and Analysis course that is provided by MISHC as both an on-line course and an intensive short course. This course is presented as part of the Graduate Certificate in Risk Management. Program topics and structure. The course included presentations, group exercises, individual exercises, video presentations, and reference materials such as examples of good practices in the application of incident investigations and analysis processes and templates. A retired Zambian judge, Honourable Magistrate C Kambanja, also presented as a guest covering the legal aspects of court.																																				
Programming rationale	The course directly targeted an IM4DC priority country and addressed the strategic programming area of Health and safety of workforces and resources communities. The AusAID Scoping Study for Zambia and the subsequent Training Needs Analysis identified a lack of formal incident investigation and analysis training and skills in the Mines Safety Department(MSD) in Kitwe, Zambia.																																				
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Feedback Response Data (Estimated from Chart)</caption> <thead> <tr> <th>Category</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Robust investigation into an incident</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Understand, discuss and determine</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Selection of most appropriate technique</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Incident investigation into a significant incident</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Write and critique</td> <td>50%</td> <td>40%</td> <td>10%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Category	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Robust investigation into an incident	100%	0%	0%	0%	0%	Understand, discuss and determine	60%	40%	0%	0%	0%	Selection of most appropriate technique	60%	40%	0%	0%	0%	Incident investigation into a significant incident	60%	40%	0%	0%	0%	Write and critique	50%	40%	10%	0%	0%
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Write and critique	50%	40%	10%	0%	0%																																
Other outcomes	The course provided opportunities to strengthen the linkages with MSD, UNZA and CBU.																																				

Indonesian Safety and Environmental Management Workshop																			
Program overview	A program that included a two-day workshop on the curriculum development of the Indonesia mine inspector training course focussing on health, safety and environment (HSE) themes; and related meetings with representatives of two universities and with some officials of the ministry of energy and mineral resources.																		
Objectives	The main objective of the program was to provide significant inputs to the curriculum development for the Indonesia mine inspector training course, through: <ul style="list-style-type: none"> the provision of insights into the current Indonesia’s policy and practices in HSE in mining; the provision of insight into the current Australia’s policy and practices in HSE in mining; meetings with related/supporting institutions to develop a more cost-effective delivery of the mine inspector training course. 																		
Where?	In Bandung, Indonesia for the workshop; In Jakarta and Bandung for the meetings.																		
When?	The workshop was held from Wed to Thu, 7-8 May 2014; Meetings were on Mon, Tue & Fri – 5,6 & 9 May 2014.																		
Who attended?	A group of 77 participants, including mine inspectors or mine officers from central and district offices in Indonesia (refer to appendix for full list of participants).																		
Program Lead	Mr Ian Satchwell, IM4DC Director.																		
Partners	Ministry for Energy and Mineral Resources (MEMR) of Indonesia, University of Indonesia (UI), Bandung Institute of Technology (ITB)																		
Content and delivery	The first two days consisted of meetings in Jakarta, followed by a two-day workshop in Bandung and concluded with meetings in Bandung on the last day.																		
Programming rationale	The program addressed the current policy and practices on HSE in mining in Indonesia and the proposed curriculum for Indonesia mine inspector training. The Australia counterparts were to provide the Australia’s experiences in managing the HSE in mining.																		
Feedback	<p>A formal M&E form was used to gather participants’ feedback. The following are the top four responses that were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <div style="text-align: center;"> <p> ■ Very Good ■ Good ■ Average ■ Poor ■ Very Poor </p> <table border="1" style="margin-top: 10px;"> <caption>Feedback Data</caption> <thead> <tr> <th>Category</th> <th>Very Good (%)</th> <th>Good (%)</th> <th>Average (%)</th> <th>Poor (%)</th> <th>Very Poor (%)</th> </tr> </thead> <tbody> <tr> <td>Benefits</td> <td>90</td> <td>10</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Program Content & Delivery</td> <td>85</td> <td>15</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> </div>	Category	Very Good (%)	Good (%)	Average (%)	Poor (%)	Very Poor (%)	Benefits	90	10	0	0	0	Program Content & Delivery	85	15	0	0	0
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Benefits	90	10	0	0	0														
Program Content & Delivery	85	15	0	0	0														
Other outcomes	<ul style="list-style-type: none"> Meeting in Jakarta with UI: Possible cooperation with the University of Indonesia and/or Bandung Institute of Technology in developing distance learning course for mine inspectors; Meeting in Jakarta with ETAEMR and DGMC: Possible cooperation with the Education and Training Agency for Energy and Mineral Resources (ETAEMR) and the Directorate General of Mineral & Coal (DGMC) in the development of overall education & training policy, programs and activities. Meeting in Bandung with ETCG: Possible cooperation with Education and Training Centre for Geology (ETCG) for the development of its capability; Significant inputs for the follow-up workshop in Brisbane to further develop the HSE curriculum (12-16 May 2014). 																		

Indonesian Mines Inspector Framework Design Workshop																			
Program overview	A one-week program that included a workshop focused on the curriculum development on environment competence of the Indonesian mine inspector training program; a site visit to SIMTARS to get inputs on Queensland's policy and practices on mine inspection and to look at the SIMTARS' training and research facilities.																		
Objectives	The main objective was to revise the environmental curriculum that can, partly, be delivered through distance learning platform.																		
Where?	In Brisbane, Australia for the workshop and the site visit.																		
When?	The workshop was held from Mon to Fri, 12-16 May 2014; except on Wed, 14 May 2014, which was used for a site visit to SIMTARS.																		
Who attended?	A group of 6 participants (4M, 2F) from the Ministry of Energy and Mineral Resources (MEMR) attended, plus IM4DC's facilitators and invited speakers from SMI-UQ and TEDI-UQ (refer to appendix for full list of participants).																		
Program Lead	Mr Robin Evans, Deputy Director.																		
Partners	Education & Training Agency for Energy and Mineral Resources (ETAEMR); SIMTARS; TEDI-UQ																		
Content and delivery	The week was spent to revise the current mine inspector training program towards the development of remote modules on environmental competence. Inputs were sought from partners.																		
Programming rationale	The program aimed to re-design the current environmental curriculum towards the development of remote modules, in order to cut down the class meeting times of candidates who come from district offices throughout Indonesia.																		
Feedback	<p>A formal M&E form was used to gather participants' feedback. The following are the top two responses that were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <table border="1"> <caption>Feedback Data</caption> <thead> <tr> <th>Category</th> <th>Very Good</th> <th>Good</th> <th>Average</th> <th>Poor</th> <th>Very Poor</th> </tr> </thead> <tbody> <tr> <td>Content & Delivery</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Benefits</td> <td>85%</td> <td>15%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Category	Very Good	Good	Average	Poor	Very Poor	Content & Delivery	85%	15%	0%	0%	0%	Benefits	85%	15%	0%	0%	0%
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Benefits	85%	15%	0%	0%	0%														
Other outcomes	None																		

Mediation Workshop																															
Course overview	A national mediation accreditation training course for people working within the mining industry																														
Objectives	To introduce participants to the process and skills of mediation																														
Where?	University of Western Australia, Perth																														
When?	12 – 17 May 2014 Five training days and one day of assessment																														
Who attended?	17 participants; 3 female and 14 male. Representatives from government, university/training institutions, private sector and NGOs. Participants came from Cameroon (1), Fiji (2), Ghana (3), Indonesia (1), Liberia (3), Malawi (1), Mozambique (3) and Philippines (3)																														
Program Lead	Associate Professor Jill Howieson, UWA Bradley Chenoweth, Centre of Dialogue, ANU																														
Partners	UWA Law Faculty																														
Content and delivery	The mediation workshop was delivered over 5 days (38 hours) to meet the training requirements of the National Mediation Accreditation System. On Day 6, participants were given the opportunity to undertake formal assessment for accreditation. Participants were introduced to a proven mediation process adaptable to different types of mediation, and a theoretical framework to embed the process and skills, practical tools and strategies to generate options and break impasses. The workshop included nine role-plays, some of which included feedback and coaching from professional mediators.																														
Programming rationale	Minerals policy, regulation and agreements (negotiation of mining project agreements and approvals). Community engagement and consultation																														
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices).</p> <p> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Response Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>The program allowed me to develop a broader network of contacts relevant to my role and interests</td> <td>45%</td> <td>45%</td> <td>10%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to develop effective strategies for managing potential responses to high emotion, power imbalances and impasse</td> <td>55%</td> <td>45%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to mediate in various contexts, including stakeholder facilitation, neutral contract facilitation and dispute resolution</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased my ability to facilitate constructive negotiation, problem solving and agreement making</td> <td>65%</td> <td>35%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	The program allowed me to develop a broader network of contacts relevant to my role and interests	45%	45%	10%	0%	0%	The program increased my ability to develop effective strategies for managing potential responses to high emotion, power imbalances and impasse	55%	45%	0%	0%	0%	The program increased my ability to mediate in various contexts, including stakeholder facilitation, neutral contract facilitation and dispute resolution	60%	40%	0%	0%	0%	The program increased my ability to facilitate constructive negotiation, problem solving and agreement making	65%	35%	0%	0%	0%
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Other outcomes	Strong linkages and collaborations were established between members of the ARNN and IM4DC. This includes with tertiary institutions such as the University of Ghana and Yaounde and Columbia University and government and training organisations. The mediation learning links to many other IM4DC activities as conflict resolution is an integral part of mining activities.																														

Improving Mining Tax Administration and Collection Frameworks

Course overview	Training workshop in mining tax administration for officials from Finance and Mines Ministries in African countries																																																
Objectives	<p>The workshop will provide an opportunity to exchange on the Sourcebook and the principles of an efficient mining tax administration in the Africa region. The following topics will be covered:</p> <ul style="list-style-type: none"> • Success factors for an efficient mining tax administration system in the African context • Types of royalties systems, principles of their administration including valuation points, costs deductibility, assessments and auditing • Elements of mining specific components of Corporate income tax and related administrative issues • Private sector outlook on mining fiscal policies and administration • Human resources, institutional collaboration, coordination, capacity building, and information sharing. <p>During dedicated working sessions, delegates will discuss specific issues about royalty administration, corporate income tax administration and budget forecasting of mining revenues.</p>																																																
Where?	Dar es Salaam, Tanzania																																																
When?	12 May – 15 May 2014 (4 Training Days)																																																
Who attended?	37 Participants (32M/5F): Burundi (2), Cameroon (6), Eritrea (3), Kenya (2), Madagascar (5), Nigeria (4), Rwanda (5), Tanzania (4), Uganda (2), Zambia (1) and Zimbabwe (3)																																																
Program Lead	Professor Pietro Guj, Centre for Exploration Targeting, The University of Western Australia																																																
Partners	World Bank (WB) and the Centre for Exploration Targeting (CET)																																																
Content and delivery	During dedicated working sessions, delegates will discuss specific issues about royalty administration, corporate income tax administration and budget forecasting of mining revenues.																																																
Programming rationale	<p>In 2012 the World Bank (WB) contracted the Centre for Exploration Targeting (CET) to conduct in-field reviews of the mining taxation administration and collection systems and procedures of a number of West African countries. Along with confidential country-specific reports, this assignment culminated in a co-operative World Bank-CET publication entitled “How to improve mining tax administration and collection frameworks: A source book”. This source book, together with the appended questionnaire, provides a structured and systematic first step to assist the Ministries of Finance and Mines within developing countries in assessing and improving the effectiveness and efficiency of their mining revenue collection regimes, as well as the related administrative systems. An initial draft of this publication was used to support a successful World Bank hosted workshop on “improving mining tax administration frameworks” conducted in Ghana in September 2012. There is a consensus that, following recent redrafting and modernisation, the mining taxation legislation of most African countries is by and large quite adequate. By contrast, the administrative systems, capacity and critical skill sets necessary for the relevant government instrumentalities to effectively and efficiently enforce and administer their fiscal regimes tended to lack behind, creating a critical need for institutional strengthening. Focused training and the development and retention of appropriately skilled staff are central to building the administrative capacity of the ministries and departments charged with mining tax administration and collection.</p>																																																
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Opportunities were provided to exchange...</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>There was a good team spirit amongst the...</td> <td>95%</td> <td>5%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The level of difficulty was suitable for the audience</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The facilitation of the group discussion was excellent</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The standard of presentations was excellent</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The quality of the resource material provided was...</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The material presented was relevant</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Opportunities were provided to exchange...	90%	10%	0%	0%	0%	There was a good team spirit amongst the...	95%	5%	0%	0%	0%	The level of difficulty was suitable for the audience	90%	10%	0%	0%	0%	The facilitation of the group discussion was excellent	90%	10%	0%	0%	0%	The standard of presentations was excellent	90%	10%	0%	0%	0%	The quality of the resource material provided was...	90%	10%	0%	0%	0%	The material presented was relevant	90%	10%	0%	0%	0%
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Negotiation Roundtable with African Resources Negotiation Network (ARNN)																									
Course overview	The 2 nd Roundtable workshop with members of the African Resources Negotiation Network (ARNN)																								
Objectives	The Negotiation Roundtable will be focused on finalising the Negotiation Handbook and further developing the Negotiation Training Manual. The Handbook and Manual will assist in the building of extractive industries negotiation capacity across the African continent.																								
Where?	Perth, Western Australia																								
When?	19-21 May 3 training days																								
Who attended?	13 participants (10M, 3F): Cameroon (1), Democratic Republic of Congo (1), Ghana (3), Liberia (3), Malawi (1), Mozambique (3) and Zimbabwe (1)																								
Program Lead	Associate Professor Jill Howieson Professor Nadja Alexander																								
Partners	Government of Cameroon Department of Foreign Affairs & Trade																								
Content and delivery	The Roundtable was facilitated by Jill Howieson and Nadja Alexander and involved the discussion and design of the Training Manual, an International Standard for resources negotiations, a Code of Conduct for negotiators and negotiation trainers, and ideas and planning for the progress of the ARNN.																								
Programming rationale	Sub-national governance of the mining sector, including building negotiation capacity Minerals policy, regulation and agreements Community engagement and consultation																								
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>The program consolidated the work of the ARNN</td> <td>60%</td> <td>25%</td> <td>10%</td> <td>5%</td> <td>0%</td> </tr> <tr> <td>The program significantly furthered the development of a Negotiation Training Manual</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The program increased the ARNNs ability to produce a Negotiation Training Manual</td> <td>60%</td> <td>40%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	The program consolidated the work of the ARNN	60%	25%	10%	5%	0%	The program significantly furthered the development of a Negotiation Training Manual	60%	40%	0%	0%	0%	The program increased the ARNNs ability to produce a Negotiation Training Manual	60%	40%	0%	0%	0%
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Other outcomes	Strong linkages and collaborations were established between members of the ARNN and IM4DC. This includes with tertiary institutions such as the University of Ghana and Yaounde and Columbia University and government and training organisations. Collaborations and research activities were also established between UWA and ANU (Jill Howieson and Bradley Chenoweth) and between participating members. The Roundtable also links to mediation and many other areas of IM4DC activities as it involves negotiation and conflict resolution skills, which are pertinent to many areas of mining.																								

Water In Mining Summer School	
Course overview	A 9-day school on 'Water in Mining' aimed at final-year science and engineering students.
Objectives	<p>The overall objective of the course is to provide an extensive introduction to good practice in mine water management. Week 1 includes the following specific objectives:</p> <ul style="list-style-type: none"> To give hands-on training in internationally accepted methods of mine water accounting and reporting. To introduce the importance of energy-water interactions and illustrate tools for quantifying water-energy risks. To illustrate the principles and applications of floods and water scarcity risk management in the mining context. To teach about the role of mining in catchment water management, including integrated approaches to catchment management, the different values attached to water, and pollution estimation and control. To show how water management affects community perceptions of mining and examples of how this can be managed. <p>Week 2 has the specific objective of giving insight into how a mine water management plan is developed and the range of challenges faced, using a team-work case study project.</p>
Where?	Los Andes University, Faculty of Engineering, Bogota, Colombia
When?	9 Jun – 19 Jun 2014 (9 training days)
Who attended?	33 delegates (16M, 17F) attended. All were final year engineering students, mostly environmental engineering. A table with full details is in the appendix.
Program Lead	Neil McIntyre & Natasha Danoucaras, CWiMI-SMI
Partners	Nacional University (Medellin), SMI-CSR. The summer school was co-funded by Los Andes University and IM4DC.
Content and delivery	<p>Week 1: 5 days of lectures, computer labs, and assessment via a homework assignment and 3 quizzes.</p> <p>Week 2: 3 days of developing inputs to a case study mine water management plan; 1 day of reporting. In the three days after the school, students completed written reports.</p>
Programming rationale	<p>Los Andes University is Colombia's prime private university. It runs a program of summer schools each year on topics considered to be useful complements to undergraduate curricula. Professors from international institutions are invited to deliver these schools.</p> <p>Large-scale mining is rapidly developing in Colombia and is an important part of the national development strategy. Colombia's capacity to support sustainable mining is limited, and students and graduates in relevant science and engineering programs often receive little or no training on sustainable mining methods, even though many of them will take an important role in the industry's development.</p> <p>The rationale behind the summer school is to complement science and engineering knowledge of final year students with an extensive introduction into water in mining, to provide better knowledge of challenges, prospects and solutions for sustainable use of water in mining.</p> <p>The school was also advertised externally to government and industry; however the focus was on students.</p>
Feedback	An on-line evaluation was done immediately following the school including scoring and comments on numerous aspects of the course. An extensive set of feedback comments were received. The course was generally considered useful, interesting and well-delivered. The comments contained several suggestions that will help refine the course for the next time.
Other outcomes	<p>The support of IM4DC has allowed development of material to support a 9-day water in mining course. This material will be used for future similar events.</p> <p>Los Andes University have indicated that this school should be repeated due to its relevance and the high level of interest among students. They have also offered to host a training event focussed more on industry/government; and have offered to host workshops connected with research projects.</p> <p>The involvement of Nacional University in delivering the school contributes to strengthening UQ's partnership with Nacional's Faculty of Mines.</p> <p>Professor McIntyre used his two-week stay in Bogota to have meetings related to SMI's proposal for a Colombia-based Centre of Excellence in Sustainable Mining, including with the National Agency of Mines, National Agency of Hydrocarbons, Agency for International Cooperation, and AngloGold Ashanti.</p>

Mineral Policy and Economics																																																	
Course overview	The short course will provide an understanding of the fundamental principles and concepts of minerals policy that informs regulatory frameworks and economics in the resource sector.																																																
Objectives	<p>The program provided participants with</p> <ul style="list-style-type: none"> • An enhanced understanding of minerals policy as it informs mining law and mineral economics • A deeper understanding of mineral economics and mineral economics • A clear understanding of the drivers of public and private sector economic returns across the minerals sector • An enhanced understanding of regulatory frameworks for the resource sector. <p>In the final week of the program, participants will attend the IM4DC Mining for Development conference, and an Alumni forum day in Brisbane.</p>																																																
Where?	Perth, Kalgoorlie & Brisbane																																																
When?	23 June to 18 July 2014 (20 Training Days)																																																
Who attended?	20 Participants (13M/7F) [Fiji: 1, Ghana: 1, Indonesia: 2, Liberia: 1, Malawi: 1, Mongolia: 2, Nigeria: 1, PNG: 3, Peru: 2, Philippines: 2, Sierra Leone: 1, South Sudan: 1, Zambia: 1, Zimbabwe: 1]																																																
Program Lead	Allan Trench, Centre for Exploration Targeting (CET), The University of Western Australian																																																
Partners	N/A																																																
Content and delivery	The program will run over four weeks from Monday June 23 to Friday July 18. Participants will attend lectures, conduct interactive exercises and participate in open forum discussions. Lectures will be held at The University of Western Australia, Perth. A study tour to the regional mining centre, Kalgoorlie, Western Australia will take place during the third week. Participants will visit mine sites and local government authorities. In the final week participant will attend the IM4DC Mining for Development Conference and Alumni day at The University of Queensland, Brisbane																																																
Programming rationale	Strategic programming areas – Minerals policy, regulation and agreements																																																
Feedback	<p><i>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</i></p> <p> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Data (Estimated from Chart)</caption> <thead> <tr> <th>Statement</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Opportunities were provided to exchange...</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>There was a good team spirit amongst the...</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The level of difficulty was suitable for the audience</td> <td>90%</td> <td>10%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The facilitation of the group discussion was excellent</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The standard of presentations was excellent</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The quality of the resource material provided was...</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>The material presented was relevant</td> <td>100%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Opportunities were provided to exchange...	100%	0%	0%	0%	0%	There was a good team spirit amongst the...	100%	0%	0%	0%	0%	The level of difficulty was suitable for the audience	90%	10%	0%	0%	0%	The facilitation of the group discussion was excellent	100%	0%	0%	0%	0%	The standard of presentations was excellent	100%	0%	0%	0%	0%	The quality of the resource material provided was...	100%	0%	0%	0%	0%	The material presented was relevant	100%	0%	0%	0%	0%
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The material presented was relevant	100%	0%	0%	0%	0%																																												
Other outcomes	N/A																																																

Master Class on Resource Governance

Course overview	A four week long master class to provide an understanding of the fundamental principles and concepts of governance in the mining sector.																		
Objectives	To provide participants with: <ul style="list-style-type: none"> • Increased knowledge of the principles and frameworks relevant to the governance of resource developments • Improved understanding of the roles of different stakeholders in governance processes 																		
Where?	Brisbane and a one week field trip to Central New South Wales.																		
When?	The Master Class was held from Monday 30 th June to Friday 25 th July 2014.																		
Who attended?	A group of 20 (14 Males and 6 Females) representatives, mostly mid-level to senior personnel in government, civil society organisations, think tanks and universities, engaged in various aspects of the governance and analysis of resource sectors in their countries and regions attended.																		
Program Lead	Prof. David Brereton, Sustainable Minerals Institute																		
Partners	Centre for Social Responsibility in Mining (CSRMI) WH Bryan Mining and Geology Research Centre (BRC) Centre for Mined Land Rehabilitation (CMLR) Minerals Industry Safety and Health Centre (MISHC) UQ International Development																		
Content and delivery	<p>The master class explored specific thematic areas of Mining Law and Policy, Transparency and Revenue Management, Mineral Resource Management and Utilisation, Environmental Regulation, Occupational Health and Safety Regulation, Social Impact Management, and Artisanal and Small Scale Mining. The program had a strong interactive focus and allowed participants to share experiences with their peers and a range of expert presenters.</p> <p>During the second week, participants visited Central New South Wales. This was organised to enable the participants to interact with Industry personnel on the ground.</p> <p>Participants attended an Alumni Forum and AusIMM Life-of-Mine 2014 conference during the third week. These events provided the opportunity to explore broader aspects of governance of resource projects.</p>																		
Programming rationale	<p>The Master Class on Resource Governance is a flagship program. It addresses IM4DC’s priority theme Governance and Regulation. The program also addresses issues relevant to IM4DC’s other two priority themes that are Community and Environmental Sustainability, and Operational Effectiveness.</p> <p>There has been a strong demand for this program from IM4DC priority countries. Improving governance is seen as a critical step in enabling these countries to obtain better development outcomes from mining.</p>																		
Feedback	<p>A formal M&E form was used to gather participant feedback. The following responses were received from the participants. See evaluation section for analysis (Full details can be found in the appendices)</p> <p style="text-align: center;"> ■ Strongly agree ■ Agree ■ Neutral ■ Disagree ■ Strongly disagree </p> <table border="1"> <caption>Feedback Data</caption> <thead> <tr> <th>Topic</th> <th>Strongly agree</th> <th>Agree</th> <th>Neutral</th> <th>Disagree</th> <th>Strongly disagree</th> </tr> </thead> <tbody> <tr> <td>Knowledge of the principles and frameworks</td> <td>55%</td> <td>35%</td> <td>10%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Understanding of the roles of different stakeholders</td> <td>60%</td> <td>30%</td> <td>10%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Topic	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Knowledge of the principles and frameworks	55%	35%	10%	0%	0%	Understanding of the roles of different stakeholders	60%	30%	10%	0%	0%
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B Course participation disaggregated by gender and sector

Course Title	MALE CATEGORY						FEMALE CATEGORY						TOTALS		
	No. Male	Government	Private	NGO	Academic	Unspecified	No. Female	Government	Private	NGO	Academic	Unspecified	% Male	% Female	No. Participants
In Australia															
Agriculture and Mining with AAPF	3	3					10	10					23.1	76.9	13
Community Aspects of Resource Developments	14	8		4	2		6	2	1	1	2		70.0	30.0	20
Environmental Management	13	11			2		8	3			5		61.9	38.1	21
African Gold Mining and Fraud Prevention Workshop	35	34			1		2	2					94.6	5.4	37
Indonesian Coal and Minerals Policy Study Tour	11	11					1	1					91.7	8.3	12
Indonesian Geology Study Tour	7	7					2	2					77.8	22.2	9
Indonesian Mines Inspector Framework Design Workshop	4	4					2	2					66.7	33.3	6
Kenyan Parliamentary Delegation	7	7					1	1					87.5	12.5	8
Malawi Government Study Tour	8	8					1	1					88.9	11.1	9
Mediation in Mining Workshop	14	7	1		6		3	2		1			82.4	17.6	17
Mineral Policy and Economics	13	8	1	2	2		7	5			2		65.0	35.0	20
Mining and Gender Study Tour	11	10		1			21	18	1	1	1		34.4	65.6	32
Mongolian Government - Large Scale Underground Mining	7	7					1	1					87.5	12.5	8
Negotiation Roundtable with AARN	10	3		1	6		3	3					76.9	23.1	13
OHS Leadership	12	8	1		3		5	4			1		70.6	29.4	17
Regional Development	10	5		3	2		5	2		1	2		66.7	33.3	15

Course Title	MALE CATEGORY						FEMALE CATEGORY						TOTALS		
	No. Male	Government	Private	NGO	Academic	Unspecified	No. Female	Government	Private	NGO	Academic	Unspecified	% Male	% Female	No. Participants
Resource Governance	14	12		1	1		6	1		3	2		70.0	30.0	20
Water In Mining (with AusIMM Conference)	12	5			6	1	4	1			3		75.0	25.0	16
In Country															
Application of GIS for Geoscience and Policy	21	18			3		2	1			1		91.3	8.7	23
Connecting Mining Activity to Human Development Goals (SR Conference) Santiago	18	2		1	1	14	10			2	1	7	64.3	35.7	28
Connecting Mining Activities to Human Development Goals - Madagascar, June 2014	34	24		1	5	4	19	11		3	1	4	64.2	35.8	53
Dialogue and EIA Processes - Peru (Summary)	42	8	7	4	3	20	28	7	4	4	2	11	60.0	40.0	70
GIRAF – 3rd Geoscience Information in Africa Workshop	19	7	2		7	3	8	1	1		3	3	70.4	29.6	27
IDEP Mining Negotiation Frameworks	21	21					4	4					84.0	16.0	25
Indonesian Safety and Environmental Management Workshop - Bandung, Indonesia	67	54	6		7		10	8			2		87.0	13.0	77
Management of Large Volume Waste and Minesite Rehabilitation	18	12		2	4		2	1			1		90.0	10.0	20
Emerging Leaders in African Mining – Mining Indaba	19	12	1	3	2	1	7	3	1	1		2	73.1	26.9	26
Mining Negotiation Roundtable	16	5		1	7	3	1	1					94.1	5.9	17
OHS Incident Investigation	18	15			3		0						100.0		18
OHS Incident Investigation	13	11			2		0						100.0		13
Open Cut Slope Stability	24	12	7		4	1	0						100.0		24

Course Title	MALE CATEGORY						FEMALE CATEGORY						TOTALS		
	No. Male	Government	Private	NGO	Academic	Unspecified	No. Female	Government	Private	NGO	Academic	Unspecified	% Male	% Female	No. Participants
Sub-national and Local Development of Resource Regions - Ghana	13	6	1	3	3		7	5			2		65.0	35.0	20
Mine Waste Landform Management and Closure	38	5		16	13	4	35	5		15	14	1	52.1	47.9	73
Improving Mining Tax Administration and Collection Frameworks - 1 South Africa	22	16	2	4			11	10		1			66.7	33.3	33
Improving Mining Tax Administration and Collection Frameworks – 2 Tanzania	32	23	4	5			5	3		2			86.5	13.5	37
Water in Mining Summer School	16				16		17				17		48.5	51.5	33

C Action Research Outputs June 2013 - July 2014

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
Jun-14	Final Report - staff	A GIS-based mineral prospectivity analysis of Central Africa	http://im4dc.org/programs/action-research/action-research-reports/	Arianne Ford	Centre for Exploration Targeting, UWA	Central Africa
Jul-14	Final Report - staff	Participatory water monitoring scoping study and SWAP (Social Water Assessment Tool) pilot in Ghana	http://im4dc.org/programs/action-research/action-research-reports/	Natasha Danoucaras	SMI Centre for Water in the Minerals Industry, UQ	Ghana
Jul-14	Final Report - staff	Investigating approaches to working with artisanal and small-scale miners: a compendium of strategies and reports from the field	http://im4dc.org/programs/action-research/action-research-reports/	Nina Collins	SMI Centre for Social Responsibility in Mining, UQ	Madagascar, Ethiopia, Mozambique
May-14	Final Report - staff	Mining and community engagement in Peru: communities telling their stories to inform future practice	http://im4dc.org/programs/action-research/action-research-reports/	Caroline Baillie	School of Civil, Environmental and Mining Engineering, UWA	Latin America
Jun-14	Final Report - staff	Mining company-community conflict analysis: Case studies from Indonesia	http://im4dc.org/programs/action-research/action-research-reports/	Julia Keenan	SMI Centre for Social Responsibility in Mining, UQ	Indonesia
Sep-13	Final Report - staff	Facilitating learning and development during IM4DC short courses	http://im4dc.org/programs/action-research/action-research-reports/	Sharon Parker	Accelerated Learning Laboratory, UWA	Africa, Indonesia, Mongolia
Jul-13	Final Report - staff	IM4DC Open Data - A central-African geodata information system	http://im4dc.org/programs/action-research/action-research-reports/	Vaclav Metelka	Centre for Exploration Targeting, UWA-Curtin University	Central Africa
Feb-14	Final Report - staff	Benchmarking the "Status of safety": Safety risks, practices, and beliefs in developing countries	http://im4dc.org/programs/action-research/action-research-reports/	Mark Griffin	Accelerated Learning Laboratory, UWA	Africa, Indonesia, Mongolia

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
May-14	Final Report - staff	Mining and River Ecosystem Services	http://im4dc.org/programs/action-research/action-research-reports/	Neil McIntyre	SMI Centre for Water in the Minerals Industry, UQ School of Civil, Environmental and Mining Engineering, UWA	Peru, Ecuador, Bolivia
Aug-13	Final Report - staff	Developing effective mineral resource policy for sustainable livelihoods through geoscience	http://im4dc.org/programs/action-research/action-research-reports/	Margaretha Scott	SMI W.H. Bryan Mining and Geology Research Centre, UQ	Zambia
Feb-14	Final Report - commissioned	Investigate the OHS issues associated with small scale and artisanal mining in Ghana	http://im4dc.org/programs/action-research/action-research-reports/	Danellie Lynas	SMI Minerals Industry Safety and Health Centre, UQ	Ghana
Apr-14	Final Report - commissioned	Mining and Communities: a simulation game as an educational tool for the International Mining for Development Centre	http://im4dc.org/programs/action-research/action-research-reports/	Caroline Baillie	School of Civil, Environmental and Mining Engineering, UWA	General application
May-13	Final Report - commissioned	Scoping visit to Mines Safety Department, Zambia	http://im4dc.org/programs/action-research/action-research-reports/	Carmel Bofinger and Karina Jorritsma	SMI Minerals Industry Safety and Health Centre, UQ School of Psychology, UWA	Zambia
Jun-14	Final Report - student	Oil and gas royalty, taxation and revenue management in East Africa: An opportunity for regional development		Don Binyina Bwesigye	Curtin University Graduate School of Business	East Africa
Mar-14	Final Report - student	The environmental impacts of air-deck blasting		Mohammed Abdalla	School of Mining Engineering, UNSW	Sudan
Apr-14	Final Report - student	Previous consultation and the legal framework for mining in Colombia		Mario Paredes Campana	Institute of Environmental Studies, University of New South Wales	Colombia
Apr-14	Final Report - student	Australian mining management tools and their applicability towards the sustainable development of Chocó-Colombia		Andrea Garzon	Institute of Environmental Studies, University of New South Wales	Colombia

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
Jun-14	Final Report - student	Assessment of potential extreme rainfall impacts on the mining industry of Peru		Francisco Gonzalez	Australian Centre for Sustainable Mining Practices, UNSW	Peru
Apr-14	Final Report - student	Mapping and developing a landscape-scale ecosystem services metric for promoting sustainable mining in Southwest Madagascar		Nayruti Trivedi	Institute of Environmental Studies, University of New South Wales	Madagascar
Mar-14	Mid-candidature Report - student	Transforming Andean space: local experiences and mining development in Peru		Gerardo Castillo	SMI Centre for Social Responsibility in Mining, UQ	Peru
Feb-14	Final Report - student	Development of a multi-objective spatial suitability model: WA-Lawra greenstone belt, Upper West Region, Ghana		Abdul-Wadood Moomen	Department of Spatial Sciences, Curtin University	Ghana
Apr-14	Final Report - student	Visit to mines in Pakistan		Ghulam Mubashar Hassan	Computer Science & Software Engineering, UWA	Pakistan
Jul-14	Update Report - staff	A geoscience information model for improving the efficiency and transparency of the mining approvals process in North Africa	-	David Pullar Arianne Ford	Geography, Planning, Environmental Management, UQ and Centre for Exploration Targeting, UWA-Curtin University	North Africa
Jul-14	Update Report - staff	Opportunities and challenges for local food procurement by mining companies in Southern Africa	-	Kathryn Sturman	SMI Centre for Social Responsibility in Mining, UQ	Malawi, Mozambique
Jul-14	Update Report - staff	Mitigating acid mine drainage in the Asam-Asam coal basin, South Kalimantan, Indonesia	-	Mansour Edraki	SMI Centre for Mined Land Rehabilitation, UQ	Indonesia
Apr-14	Update Report - staff	Building environmental sustainability in the mining sector of the Philippines through advanced environmental monitoring, assessment and management programs	-	Trang Huynh	SMI Centre for Mined Land Rehabilitation, UQ	Philippines

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
Jul-14	Update Report - staff	Building linkages to maximise IM4DC funding outputs in the area of health and safety	-	Danellie Lynas Sarah Goater	SMI Minerals Industry Safety and Health Centre, UQ International Water Centre	General application
Aug-14	Update Report - staff	Evaluating the attractiveness of fiscal regimes for new gold developments: African & South American peer country comparisons	-	Allan Trench	Centre for Exploration Targeting, UWA-Curtin University	Africa, South America
Jul-14	Update Report - commissioned	Dialogue groups on mining and sustainable development in Latin America	-	Diana Arbelaez-Ruiz	SMI Centre for Social Responsibility in Mining, UQ	Latin America
May-14	Update Report - commissioned	Rapid assessment frameworks for mining and regional development	-	Matthew Tonts	School of Earth and Environment, UWA	General application
Jul-14	Update Report - commissioned	Integrating HIV and gender-related issues into environmental assessments for Australian mining companies operating in Africa	-	Megan O'Callaghan	Australia-Africa Universities Network Secretariat	Africa
Aug-13	Update Report - student	Participatory action-research to evaluate and ensure community engagement and sustainable community development – A case of Thar coalfield development, Pakistan	-	Muhammad Makki	School of Journalism and Communication & SMI Centre for Social Responsibility in Mining, UQ	Pakistan
Jul-14	Update Report - student	Viability of an inclined soil cover with capillary barrier effect in a high-rainfall environment	-	Christopher Gonzales	Centre for Mined Land Rehabilitation, UQ	Philippines
Jul-14	Update Report - student	Artisanal mining: Challenges and opportunities for the large-scale mining industry	-	Isabel Buitrago-Franco	Sustainable Minerals Institute & School of Geography, Planning and Environmental Management, UQ	Colombia

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
Jun-14	Update Report - student	The response of wetland plants to the geochemical conditions of discharged water from nickel mining operations in eastern Indonesia	-	Radjali Amin	Centre for Mined Land Rehabilitation, UQ	Indonesia
Jul-14	Update Report - student	Controlled and monitored natural attenuation strategies for arsenic pollution	-	Roberto Gregorio García Fragoso	Centre for Mined Land Rehabilitation, UQ	Mexico
Jul-14	Update Report - student	Methods for reconciling the mineral fiscal contents of multi-stakeholders and the resulting implications in Papua New Guinea	-	Ken Ail	Western Australian School of Mines, Curtin University	Papua New Guinea
Jul-14	Update Report - student	The feasibility of using 3D seismic reflection surveys to discover Iron Oxide Copper Gold (IOCG) deposits in the Gawler Craton	-	Evans Okan	Department of Exploration Geophysics, Curtin University	Nigeria
Jul-14	Update Report - student	Ore-body delineation using bore-hole seismic techniques for hard rock exploration	-	Felix Menu	Department of Exploration Geophysics, Curtin University	Ghana
Jul-14	Update Report - student	Joint inversion: Magnetotelluric and seismic methods	-	Van Anh Cuong Le	Department of Exploration Geophysics, Curtin University	Vietnam
Mar-14	Update Report - student	Improving outcomes for government-managed resettlement in Vietnam	-	Mai Vo	SMI Centre for Social Responsibility in Mining, UQ	Vietnam
Non-report outputs						
2014	Book chapter	Vo, M. and Brereton, D. (2014). Involuntary Resettlement in the Extractive Industries: Some Lessons from Vietnam. In: Governance of Extractive Industries in Southeast Asia: Any Regional Framework for ASEAN. ASEAN Study Center for the University of Indonesia and the Institute of Essential Services Reform.		Mai Vo	SMI Centre for Social Responsibility in Mining, UQ	Vietnam

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
2014	Journal Paper	Arbeláez-Ruiz, D. and Franks, D. (2014). Getting to the table: how a new generation of organizations is improving dialogue and reducing conflict about mining in Latin America. <i>Americas Quarterly</i> , Vol.8, Issue 2, pp. 111–113 (Also available in Spanish)	https://www.csr.uq.edu.au/publications/sentandose-a-la-mesa	Diana Arbelaez-Ruiz	SMI Centre for Social Responsibility in Mining, UQ	Colombia/Peru
2014	Conference Paper	C. Gonzales, T. Baumgartl and A. Scheuermann (2014). Transient soil moisture profile of a water-shedding soil cover in north Queensland, Australia. EGU General Assembly (27April-2May 2014) in Vienna, Austria	c.gonzales@uq.edu.au	Christopher Gonzales	SMI Centre for Mined Land Rehabilitation, UQ	Philippines
2014	Conference Paper	C. Gonzales, T. Baumgartl, A. Scheuermann and A. Soliman (2014). Soil Moisture Profile of a water-shedding cover design in Central Queensland. UNSAT Conference (2-4July 2014) in Sydney, NSW	c.gonzales@uq.edu.au	Christopher Gonzales	SMI Centre for Mined Land Rehabilitation, UQ	Philippines
2014	Conference Paper	C. Gonzales, T. Baumgartl, M. Edraki and A. Soliman (2014). Mine wastes as cover materials in a water-shedding soil cover in northwest Queensland. Life-of-Mine Conference (16-18 July 2014) in Brisbane, Queensland	c.gonzales@uq.edu.au	Christopher Gonzales	SMI Centre for Mined Land Rehabilitation, UQ	Philippines
2014	Conference Paper	T. Baumgartl and C. Gonzales (2014). Managing water flow through rock covers on mine sites. 20th World Congress of Soil Science (9-13 June 2014) in Jeju, Korea	c.gonzales@uq.edu.au	Christopher Gonzales	SMI Centre for Mined Land Rehabilitation, UQ	Philippines
2013	Conference Paper	T. Baumgartl and C. Gonzales (2013). Controlling water flow in waste rock covers. <i>enviromine2013: 3rd International Seminar on Environmental Issues in Mining</i> (4-6 Dec 2013) in Santiago, Chile	c.gonzales@uq.edu.au	Christopher Gonzales	SMI Centre for Mined Land Rehabilitation, UQ	Philippines

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
2014	Conference Paper	A.Scheuermann, C. Gonzales, J. Fan, B. Braga, T. Baumgartl, and D. Lockington (2014). Spatial time domain reflectometry in geo-environmental engineering. IEEE Sensors Applications Symposium (18-20February 2014) in Queenstown, New Zealand	c.gonzales@uq.edu.au	Christopher Gonzales	SMI Centre for Mined Land Rehabilitation, UQ	Philippines
2014	Conference Paper	Buitrago, I. & Robertson, S. (2014). Mine Life Cycle Planning - Creating Lasting Value for Communities. Paper presented at the Life-of-Mine Conference 2014, Brisbane.		Isabel Buitrago-Franco	SMI Centre for Social Responsibility in Mining, UQ	Colombia
2014	Other paper	Muhammad Makki, Saleem, H. Ali and Kitty Van Vuuren (2014). 'Religious Identity and Coal Development in Pakistan': Ecology, Land Rights and the Politics of Exclusion. CSRM Occasional Series	https://www.csr.uq.edu.au/publications/religious-identity-and-coal-development-in-pakistan-ecology-land-rights-and-the-politics-of-exclusion	Muhammad Makki	SMI Centre for Social Responsibility in Mining, UQ	Pakistan
2013	Media article	National Geographic article on the field visit to the remote Tharparkar coal region of Pakistan, the challenges of communal harmony and a diversified approach to addressing Pakistan's energy crisis	http://newswatch.nationalgeographic.com/2013/05/02/pakistan-coal/	Muhammad Makki	SMI Centre for Social Responsibility in Mining, UQ	Pakistan
2014	Teaching Resource	Artisanal and small-scale mining (ASM): Training and governance initiatives & group activity		Nina Collins	SMI Centre for Social Responsibility in Mining, UQ	Various
2014	Teaching Resource	Mining and Communities: a simulation game as an educational tool for the International Mining for Development Centre		Caroline Baillie	School of Civil, Environmental and Mining Engineering, UWA	Various
2014	Powerpoint presentation	Mining company-community conflict analysis: Case studies from Indonesia		Julia Keenan	SMI Centre for Social Responsibility in Mining, UQ	Indonesia
2014	Powerpoint presentation	Transforming Andean Space: Local experiences and Mining Development in Peru - PhD mid-candidature presentation		Gerardo Castillo	SMI Centre for Social Responsibility in Mining, UQ	Peru

Report date	Output	Title/topic	Link	Contact	Research organisation	Country geographic focus
2014	Online resource	A survey on major risks, current practices used to manage safety and people's beliefs about safety with regard to mining activities in developing countries	https://s.accelwa.com/ISS/	Mark Griffin	Accelerated Learning Laboratory, UWA	Global
2013	Online resource	IM4DC Open Data - A Central-African Geodata Information System	http://im4dc.org/resources/im4dc-opendata/	Vaclav Metelka & Mark Jessell	Centre for Exploration Targeting, UWA	West Central Africa
2013	Online resource	A GIS software prototype, which includes procedures for loading and maintaining tenement data, via a web mapping interface implemented with Google Earth	http://ww2.gpem.uq.edu.au/CRSSIS/tools/im4dc/	David Pullar	School of Geography, Planning and Environmental Management, UQ	Africa
2013	Online resource	Integrated data-base of data collected during OSH training		Sharon Parker	Accelerated Learning Laboratory, UWA	Various
2014	Online resource	Prospectivity maps and two additional datasets on IM4DC server	http://im4dc.org/resources/im4dc-opendata/	Arianne Ford	Centre for Exploration Targeting, UWA	West Central Africa
2014	Video	Planning for sustainable communities in mining regions: the Colombian case	https://www.youtube.com/watch?v=DmEPxIhVacQ	Isabel Buitrago-Franco	SMI Centre for Social Responsibility in Mining, UQ	Colombia



D Action Research Progress Reports

The Environmental Impacts of Air-Deck Blasting

Progress Report 10 March 2014

Delivery organisation and personnel	Mohammed Abdalla - student; Ros Taplin - supervisor School of Mining Engineering, University of New South Wales					
Collaborating Organisation(s) and Key Personnel	Dr Mohammed Abu Fatima Ariab Mining Company, Sudan					
Summary of Action Research Activity	<ul style="list-style-type: none"> Conducting a set of blast trials and measuring the environmental impacts of these blasts Recording any hazards resulted from blasting at mine sites and neighbouring structures 					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input checked="" type="checkbox"/> Regional and local economic and social development	<input checked="" type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Blasting, air-deck, ground vibration, flyrock, air pressure					
Dates of activity	Commencement			Completion		
	2/1/2014			27/01/2014		
Status	<input type="checkbox"/> Yet to commence		<input type="checkbox"/> On Going		<input checked="" type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Pre-investigation data collection			completed		
	Blast designs			Completed		
	Conducting nine trials			completed		
	Recording post- blasting data			completed		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			\$10,000		
Summary of findings to date						
Key regions and/or countries visited or involved and key people and organisations engaged to date	The Red Sea state, Sudan School of Mining Engineering, UNSW Prof. Ros Taplin & Dr. Farshad Rashidi Nejad Ariab Mining Company (AMC) Dr Abu Fatima & Mr Issiyakou Mahamadou.					

<p>Summary of activities to be completed and expected completion date</p>	<p>The research was conducted with Ariab Mining Company Ltd (AMC) in Sudan in order to test the efficiency of air-deck blasting to reduce the environmental impacts associated with blasting. The work was divided into three sections:</p> <ul style="list-style-type: none"> • Identifying the environmental issues as a result of blasting processes • Implementing the suggested solutions • Assessing the outcomes of the recorded data <p>The mine sites under study were in the Hassai area, around 450 km North East of the capital Khartoum, in the Red Sea State, eastern Sudan.</p> <p>Based on the blasting history in Ariab, there was evidence of negative impacts of blasting at the site, such as deformation of mine walls and nearby infrastructure that resulted from ground vibration, and concern about the unpredictability of rock throw (flyrock) hazards had been raised due to the geological nature of the blasted materials (hard green schist and quartzite rock) and the frequent use of secondary blasting. Also, it had been noticed that there is a high accumulation of explosive fumes due to the use of ANFO (Ammonium nitrate/fuel oil explosive) in shallow blast holes with a low amount of stemming material.</p> <p>Seven blast trials were conducted and their results recorded (five air decked and two conventional blasts). There was a considerable reduction in ground vibration when using air-decks within the explosives column charges, especially with lower air-decks. Limited ranges of flyrock were recorded due to the reduction in explosives used with air-decking. Lower levels of fumes (CO and NOx) were noticed due to applying air-decking with an optimum amount of stemming and using less explosives.</p> <p>The company is advised to adopted different techniques in blasting, such as air-decking, to eliminate the hazards mentioned above. It is strongly recommended that the whole work force at Hassai mines should undertake a full safety training, in particular those in contact with explosives and blasting operations.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	
<p>In-kind contributions provided to the project/activity</p>	

Methods for Reconciling the Mineral Fiscal Contents of Multi-stakeholders and the Resulting Implications in Papua New Guinea

Progress Report 3 July 2014

Delivery organisation and personnel	Ken Ail – PhD student Western Australian School of Mining, Curtin University					
Collaborating Organisation(s) and Key Personnel	Associate Professor Bryan Maybee and Professor Daniel Packey Department of Mineral and Energy Economics, Curtin University					
Summary of Action Research Activity	Mineral fiscal allocation efficiency amongst stakeholders in a complex multicultural setting can be harnessed through recognising the distinct fiscal needs of each stakeholder. The challenges facing the PNG mining industry relate to how the fiscal framework affects and benefits each stakeholder at the micro level. The suitability of each tax instrument could reflect how a stakeholder's fiscal expectations can affect that of another. The mainstream literature on mineral taxation often views the industry and government as the only stakeholders, which is reflected in many legislative frameworks, including that of PNG. This view tends to externalise the fiscal expectations of the community, which in turn affect the fiscal expectations of the industry and the government. This study examines whether the PNG mineral taxation regime has equitably fulfilled the fiscal expectations of all stakeholders within its existing framework. A hybrid model, which involves pairing the real option valuation (ROV) and discounted cash flow (DCF) methods, will be used to model the existing mineral taxation instruments of PNG as they apply to different scales of undeveloped real mineral projects.					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input checked="" type="checkbox"/> Regional and local economic and social development	<input checked="" type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Mineral fiscal framework, Efficient tax policy, Papua New Guinea, Multi-stakeholder analysis					
Dates of activity	Commencement			Completion		
	February 25, 2014			March 2015		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Travel to PNG for data collection (Jun 28-Aug 31)			Candidacy Passed		
	Analysis of collected data			First draft of introduction and literature review completed		
	Develop and recommend taxation model			First draft methodology chapter completed and reviewed		
	Drafting and revision of thesis chapters					
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			\$4,500		
Summary of findings to date	Not Applicable					
Key regions and/or countries visited or involved and key people and organisations engaged to date	Contact has been made with the government of PNG, regional government offices within PNG and the Lihir mine site in anticipation of field visit.					

<p>Summary of activities to be completed and expected completion date</p>	<ul style="list-style-type: none"> • Data collection at government office in Lae (July 1, 2014) • Initial data collection at government offices in Port Moresby (July 27, 2014) • Data collection at mine site in Lihir (August 1, 2014) • Data collection at government office in Keviang (August 6, 2014) • Data collection at government office in Porgera (August 12, 2014) • Data collection at government office in Wabag (August 18, 2014) • Affirm and reconcile collected data in Port Moresby (August 30, 2014) • Return to Perth (August 31, 2014) • Modeling and analysis of data (December 31, 2014) • Develop recommendations (March 31, 2015) • Thesis Write-up (August 31, 2015)
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<p>Not Applicable</p>
<p>In-kind contributions provided to the project/activity</p>	

The Response of Wetland Plants to the Geochemical Conditions of Discharged Water from Nickel Mining Operations in Eastern Indonesia

Progress Report 23 June 2014

Delivery organisation and personnel	Radjali Amin – PhD Student Centre for Mined Land Rehabilitation, Sustainable Minerals Institute, The University of Queensland					
Collaborating Organisation(s) and Key Personnel	N/A					
Summary of Action Research Activity	The funds are being used for an experiment as part of a PhD project to remove chromium from mine drainage at a nickel laterite mine in Indonesia. Currently in Indonesia, the size of the impacted area and the volume of wastewater produced due to nickel mines are increasing, but information about effective methods of wastewater amelioration is limited.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Chromium, wetland, nickel mines, Indonesia					
Dates of activity	Commencement			Completion		
	12 May 2014			Estimated 31 Jan 2015		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Paperwork (risk assessments, SOPs, glasshouse space order)			Done		
	Purchasing materials (plants, chemicals, tubs, etc.)			Partially done, on going		
	Installation of mesocosms, including preparation of solution and sediments for the trial			July 2014		
	Running the trial			Jan 2015		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$9,900			\$4,268.60		
Summary of findings to date	None yet					
Key regions and/or countries visited or involved and key people and organisations engaged to date	Indonesia: visiting 2 mining companies					

<p>Summary of activities to be completed and expected completion date</p>	<p>Running the trial. Materials and trial space are identified and available. It is expected that the trial will be carried out for 1-2 quarters and be completed early January 2015.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<p>None yet</p>
<p>In-kind contributions provided to the project/activity</p>	

Conflict Transformation in the Mining Sector: Building the Links between Dialogue and Regulatory Processes

Progress Report 4 July 2014

Delivery organisation and personnel	Diana Arbelaez-Ruiz, Daniel Franks, Armando de la Flor Centre for Social Responsibility in Mining, University of Queensland					
Collaborating Organisation(s) and Key Personnel	Laura Soria, Gerardo Castillo: Societas Consultora de Analisis Social Jose Luis Lopez: consultant and member of Peru's Dialogue Group on Mining and Sustainable Development					
Summary of Action Research Activity	<p>This is a participative research project about dialogue processes in the mining sector and their role in conflict management and prevention in Environmental Impact Study (EIS) assessment and approval processes.</p> <p><u>The Project focuses on two main aspects:</u></p> <ol style="list-style-type: none"> 1. The role of multiple dialogue models on conflict management in the mining sector, with an emphasis on open, non-binding dialogue models 2. The relationship between dialogue, EIS processes and the potential for conflict at the EIS approvals stage <p><u>The project has four main objectives:</u></p> <ol style="list-style-type: none"> 1. Understanding the factors that define and contribute to a successful dialogue process and the way various dialogue mechanisms are connected 2. Documenting ways in which inclusive dialogue is promoted (e.g. gender consideration, inclusive of minorities) 3. Identifying ways to manage conflict in the approvals stage of an EIS (including project life-cycle considerations) 4. Understanding the relationship between dialogue and conflict in the approval stage of an EIS <p><u>Project components</u> The Project includes a review of publicly available documentary sources about dialogue and regulatory processes in mining; experience and knowledge exchange activities (two workshops); individual and/or group interviews; and the production of written and visual media materials to share the outcomes of the project.</p>					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input checked="" type="checkbox"/> Regional and local economic and social development	<input checked="" type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Max 5)	Dialogue, conflict, participation, mining, environmental impact studies/assessment					
Dates of activity	Commencement			Completion		
	September 2013			August 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Literature review			Ongoing		
	Workshops			Completed		
	Interviews			Completed		
	Report and media production			Ongoing		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$42,343			\$21,171.50		
Summary of findings to date	<p>Many Latin American countries have observed significant conflicts surrounding key mining projects. These conflicts occur throughout the life-cycle, but have a marked presence during the early stages of projects, including the EIA stage. A number of civil society organisations from Latin America are working to promote multi-stakeholder dialogue in the mining sector. They promote dialogue as an approach to the issues that emerge in extractive industries. The dialogue spaces that result help build bridges between actors that would normally not come to the table. Government organisations are also making efforts to promote dialogue and prevent or transform conflict. At the same time, several sub-national governments and mining projects are engaging in dialogue exercises, as a way to build agreements that can form the basis of productive relationships between mining projects and host regions. The experiences of these various dialogue and conflict processes demonstrate that:</p> <ul style="list-style-type: none"> • Dialogue must begin early in the life cycle of projects 					

	<ul style="list-style-type: none"> • Non-binding dialogue serves to create relationships that can be beneficial later on • It is crucial to create trust in information because lack of trust is often the trigger of conflicts in the sector • Participatory or independent monitoring processes for mining projects and communities serve as one of the mechanisms to build trust and reliable information • Project proponents need to understand the political and institutional contexts to respond proactively to conflict potential • Institutional limitations, lack of government presence and historic disadvantage are amongst the factors that can contribute to conflict potential • It is necessary to have coherent connections between dialogue processes, regional planning, agreement making and impact assessment processes
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>The research draws on the experience of more than 70 specialists from 10 countries in the Americas: Argentina, Brazil, Canada, Chile, Colombia, Dominican Republic, Ecuador, Guatemala, Panama and Peru, with representatives from Australia. More than 60 people took part in the workshops and 14 were interviewed individually or in groups. The organisations that offered <u>presentations in the workshops</u> included:</p> <ul style="list-style-type: none"> • Dialogue groups on mining and sustainable development, most of whom belong to civil society organisations including Fundacion Casa de la Paz (Chile), Cambio Democratico (Argentina) and Avina (Brazil) • Peru’s National Office for Dialogue and Sustainability • CARE Peru • Centro Peruano de Estudios Sociales • Peruvian Ombudsman (Defensoria) • Goldfields SA • Minera Yanacocha • A third mining company operating in Peru (anonymous participation) • Oxfam America (Peru) • National Leaders Network (Peru’s dialogue group) • Social Management Office, Peru’s Ministry of Energy and Mines • Peruvian Society of Environmental Law • Environmental Area, Peru’s Ministry of Energy and Mines • Board of Advisors, Peru’s Ministry of Environment • FEDEPAZ (Peru) • Environmental Authority of Arequipa, Peru • Canadian International Resources and Development Institute <p><u>Workshop participants belonged to a much wider range of organisations from Peru.</u> The 14 interviewees belong to civil society organisations, industry, government and the leaders network of Peru’s Dialogue Group on Mining and Sustainable Development.</p>
<p>Summary of activities to be completed</p>	<p>The literature review and report writing are ongoing. Media outputs will be based on report contents. The expected completion date is August 2014.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • Spanish: Arbeláez-Ruiz, D. and Franks, D. (2014) Sentándose a la Mesa: Cómo una nueva generación de organizaciones está mejorando el diálogo y disminuyendo el conflicto sobre minería en América Latina. Americas Quarterly, Vol.8, Issue 2, pp. 111–113 https://www.csr.mq.edu.au/publications/sentandose-a-la-mesa • English: Arbeláez-Ruiz, D. and Franks, D. (2014) Getting to the table: how a new generation of organizations is improving dialogue and reducing conflict about mining in Latin America. Americas Quarterly, Vol.8, Issue 2, pp. 111–113 <p><u>In progress:</u> workshop memoires, research report and media output (videos).</p>
<p>In-kind contributions provided to the project/activity</p>	<ul style="list-style-type: none"> • Dialogue Group on Mining and Sustainable Development (Peru) provided in-kind support for the workshop: access to their network of contacts, pastoral care to participants and accommodation for one participant • Dialoga Project, CARE Peru provided in-kind support for the workshop: Access to facilities for planning; Facilitator for one session; Accommodation and plane tickets for four participants from outside Peru

Artisanal Mining: Challenges and Opportunities for the Large-scale Mining Industry

Progress Report July 2014

Delivery organisation and personnel	Isabel Buitrago-Franco – PhD Student Sustainable Minerals Institute & School of Geography, Planning and Environmental Management The University of Queensland					
Collaborating Organisation(s) and Key Personnel	School of Mines, National University of Colombia Centre for Social Responsibility in Mining, University of Queensland					
Summary of Action Research Activity	This project, part of ongoing PhD research, aimed to increase our understanding of the opportunities for intensifying stakeholder engagement between community members (community leaders, artisanal miners) and large scale mining companies to deliver enduring socio-economic outcomes for resource regions over the life of a mine. The escalation of large-scale mining has resulted in social conflict and critical social and environmental issues, such as loss of livelihood and pollution in the environment and water streams, just to name a few. However, current engagement between local communities and multinationals has increased the opportunities for both parties to overcome many of the aforementioned challenges. This project provides an examination of these engaging dynamics to build knowledge and raise awareness of the potential of these approaches for stakeholders in creating lasting value for communities in resource regions of Colombia and elsewhere.					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input checked="" type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input checked="" type="checkbox"/> Regional and local economic and social development	<input checked="" type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Colombia, stakeholder engagement, socio-environmental conflict, artisanal mining, social sustainability					
Dates of activity	Commencement			Completion		
	February, 2014			Expected July 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Focus groups – data collection			Three focus groups for data collection were conducted in Risaralda, Santander and Antioquia		
	Focus groups – sharing preliminary PhD findings			Three focus groups were conducted to share preliminary PhD findings, in Risaralda, Santander and Antioquia		
	PhD Thesis review			PhD Thesis review was successfully undertaken on 3 rd April, 2014		
	Publications and multimedia material			One peer reviewed publication and video material have been delivered		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$9,992			\$9,992		

<p>Summary of findings to date</p>	<p>The Antioquia and Risaralda cases differ substantially in terms of corporate contributions to community livelihoods. The research identified that companies operating in Risaralda have demonstrated stronger commitment towards social sustainability, resulting in positive livelihood outcomes for the community, as confirmed by community, company and government stakeholders. On the other hand, due to the complex context and governance dynamics, companies undertaking exploration and mining operations in Antioquia have not been able to play such a strong role in creating enduring value for locals. Armed conflict in Antioquia led to the death of community members in natural resource-rich regions. Illegal groups like guerrilla, paramilitary groups and nowadays bracrim (criminal bands) have destroyed traditional livelihoods, preventing companies from creating relevant livelihood options for locals. In addition, despite collaboration processes between governments and companies, there is no agreement between government and corporate policy agendas in this regard.</p>
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p><i>Colombia:</i> Risaralda, Colombia: Mining Roundtable (Mining Companies, State Government of Risaralda, Local Government of Quinchia, Police, Community Leaders, SSM Associations and Media)</p> <p><i>Bucaramanga, Colombia:</i> CDBM, State Government of Bucaramanga CATIE, Mining Companies, Local Universities</p> <p><i>Antioquia, Colombia:</i> SSM Associations, Universidad Nacional de Colombia, State Government, Local Government, BIORED Project</p>
<p>Summary of activities to be completed and expected completion date</p>	<p>The PhD Thesis will be submitted before June 30, 2014.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<p><i>Peer Reviewed Publication:</i> Buitrago, I. and Robertson, S. (2014). Mine Life Cycle Planning - Creating Lasting Value for Communities. Paper presented at the Conference Life-of-Mine 2014, Brisbane.</p> <p><i>PhD Thesis Chapters:</i> Key findings from this research are contained in chapters 5 to 7 in the PhD thesis: "Building Sustainable Communities: Enhancing Human Capital in Resource Regions"</p> <p><i>Video and multimedia material:</i> A video was edited during fieldwork to show preliminary research findings funded by the IM4DC: https://www.youtube.com/watch?v=DmEPxlhVac0</p>
<p>In-kind contributions provided to the project/activity</p>	<p>N/A</p>

Previous Consultation and the Legal Framework for Mining in Colombia

Progress Report 7 April 2014

Delivery organisation and personnel	Mario Paredes Campana – student Institute of Environmental Studies, University of New South Wales					
Collaborating Organisation(s) and Key Personnel	Dr Graciela Metternicht Natalia Saldarriaga Institute of Environmental Studies, IM4DC, Australian Centre for Sustainable Mining Practices					
Summary of Action Research Activity	The present research project intends to achieve a better understanding of the process of Previous Consultation for mining projects in Colombia and the reasons why it failed to deliver any agreement in the case of Law 1382 of 2010, a legal framework developed to attract foreign investment. Special attention is paid to finding the elements that contributed to the failure of the process, and the different positions that lie behind them.					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programming Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Stakeholder Participation Previous Consultation Mining in Colombia Legal Framework Ethnic Minorities					
Dates of activity	Commencement			Completion		
	04/10/2013			07/04/2014		
Status	<input type="checkbox"/> Yet to commence		<input type="checkbox"/> On Going		<input checked="" type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Field work (interviews)			Completed		
	Qualitative analysis			Completed		
	Report writing			Completed		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$9,790			\$5,446.36		

<p>Summary of findings to date</p>	<p>The Previous Consultation process in Colombia is a fundamental right guaranteed by the Colombian Constitution to ethnic minorities, but its incomplete regulation and enforcement are generating high levels of conflict for all stakeholders involved in mining projects.</p> <p>Stakeholders hold conflicting perceptions about mining, its role for development, and the definition of development. In turn, these perceptions frame the concerns that each stakeholder has regarding the consultation process and the government role in this issue.</p> <p>The conflicted nature of Consultation for mining projects is acknowledged by all stakeholders, and they all are aware of the need to conduct a debate to produce clear definitions and agreements in order to solve it. The key elements of this debate are:</p> <ul style="list-style-type: none"> • A clear definition of development • The role of mining within this definition of development • The purpose, legal boundaries, and instrumentality of Previous Consultation within this definition of development <p>Within this context, the passing of Law 1382 of 2010, its failed consultation process and its subsequent repeal, is a symptom of the lack of definitions and clarity observed. Even if all stakeholders had a clear representative body (which wasn't the case) the positions are so distant in some aspects, that it is unlikely that they would have achieved a meaningful result within the set timeframe.</p> <p>Until agreements are reached over these foundational issues, any new attempts to pass laws or reforms to the Mining Code risk facing similar problems as those faced by Law 1382 of 2010, and the conflict between worldviews risk being perpetuated with all the negative effects that this entails.</p>
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>Key regions visited:</p> <ul style="list-style-type: none"> • Bogota D.C., Colombia <p>Key regions involved:</p> <ul style="list-style-type: none"> • Ancestral lands in Colombia <p>Key people and organisations engaged:</p> <ul style="list-style-type: none"> • Ms. Gloria Amparo Rodríguez, Director of the Environmental Law Postgraduate Program at the Universidad del Rosario, Bogota D.C. • Mr. Julio Cesar Estrada, Director of the Organisation of Indigenous Peoples of the Colombian Amazon (OPIAC), Bogota D.C. • Mr. Eduardo Chaparro Ávila, Executive Director of the Miners Chamber of the National Association of Colombian Entrepreneurs, Bogota D.C.
<p>Summary of activities to be completed and expected completion date</p>	<p>All activities are completed.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	
<p>In-kind contributions provided to the project/activity</p>	

Transforming Andean Space: Local Experiences and Mining Development in Peru

Progress Report 20 June 2014

Delivery organisation and personnel	Gerardo Castillo – PhD student Centre for Social Responsibility in Mining; The University of Queensland					
Collaborating Organisation(s) and Key Personnel	None					
Summary of Action Research Activity	Fieldwork in order to gather data for the doctoral research project “Transforming Andean Space: Local Experiences and Mining Development in Peru”.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input checked="" type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum of 5)	Fieldwork, doctoral research, social transformations, mining, Peru					
Dates of activity	Commencement			Completion		
	18 of April 2013			27 of March 2014		
Status	<input type="checkbox"/> Yet to commence		<input type="checkbox"/> On Going		<input checked="" type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Participatory ethnographic observations during three main fieldtrips to the research area in May, July – September and November – December: approximately 85 days.			All activities have been completed.		
	In-depth extended interview sessions with 14 families: 7 in La Granja , 4 in Quercoto, 2 in Chiclayo, and 1 in Ojo de Toro. The time involved with each family varied from 8 to 40 hours, with an average of 20 hours. This totalled 280 hours of conversation.					
	Interviews with 20 key informants in Lima, Chiclayo and La Granja: 13 local informants, 4 academics and social consultants, and 3 employees of Rio Tinto La Granja project.					
	Gathering of secondary data from public sources and updating of database in Excel.					
	Preliminary organisation of primary data.					
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			\$10,000		

<p>Summary of findings to date</p>	<p>For a number of resource-endowed countries, mining is a major component of economic growth. However, evidence suggests that mining development also causes and contributes to mixed social, cultural, environmental and economic transformations in the regions where mining development takes place. State agencies, the industry and civil society groups have implemented a range of social and economic measures in response to these effects. Local populations also employ a range of strategies to resist and confront mineral developments and, to date, research has focused on the perspective of the local populations, the resilience of communities and their responses. However, there is a need to explore other dimensions of local population's experiences in the context of mining-driven transformations, which do not necessarily involve resistance or social conflict. A narrow understanding of local experiences seriously limits our comprehension of the role that mining plays in processes of social transformation and the agency of local communities.</p> <p>This research builds an understanding of the transformations experienced by rural societies in the context of mining development in the Peruvian Andes, using a novel approach taken from geographical theories of "production of space". The research analysed four spatial dimensions: i) access to space; ii) production in the space; iii) spatial mobility; and iv) spatial representations. In turn, the research investigated what these spatial changes tell us about larger social transformations in the region in terms of urbanisation, market integration, migration and representations of the city and the countryside. In brief, through the conceptual lenses of "production of space" the research describes and analyses local practices and experiences in the context of mining development. Further, it compares these experiences with accounts of social change, with the purpose of establishing a debate about the particularities of social transformations in rural societies that have been triggered by resource development.</p> <p>The research followed the experiences of fourteen families over the past twenty years in the vicinity of La Granja copper project, in Cajamarca, northern Peru. It considered a range of perspectives (male family heads and their partners, local leaders and qualified informants, company employees and social scientists) and made use of different sources of information and techniques (in-depth interviews, ethnographic observations, socio-economic secondary data and local information).</p> <p>Analysis of the social transformations found four features:</p> <p>i) the resulting urbanisation process is not a binary or one-way change from rural to urban lives, but a mixed and fluid one, where families use their networks in order to bridge both spaces; ii) market integration is reached more through the increase in waged labour and consumption of external goods (e.g. rice or mobile phones) than through farming productivity gains; iii) social relationships have not necessarily become more individualistic and anonymous, and kinship and social networks (e.g. region/locality bonds or membership of community-protection organisations) remain central for individual's lives; however, some social relationships and identities are increasingly challenged, especially gender ones; iv) constructions of social representations of the city and the country-side are strongly shaped by lines of gender and age, as well as collective and individual experiences.</p> <p>This view implies that the larger outcomes could be understood as a social transformation process, where kinship and local networks act as a distribution system and safety net. In other words, a good part of the distribution of goods and services and many of the decisions dealing with mining development at a local level are regulated by extended kinship networks and not exclusively by State institutions or company policies.</p>
<p>Key regions and/or countries visited or involved and key people & organisations engaged to date</p>	<ul style="list-style-type: none"> • The fieldwork was conducted in the city of Lima and the region of Cajamarca, Peru • 20 people were interviewed: 13 local informants, 3 academics (from GRADE, Catholic University of Peru, and Societas Consultora), 1 social consultant (from ERM) and 3 industry employees (from Rio Tinto La Granja project)
<p>Summary of activities to be completed and expected completion date</p>	<p>All activities have been completed.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • The final output will be the thesis • Partial outputs are a Mid-candidature review document and an Excel database with quantitative socio-economic data from secondary sources
<p>In-kind contributions provided to the project/activity</p>	<p>None</p>

Participatory Water Monitoring in Ghana

Progress Report 4 July 2014

Delivery organisation and personnel	Natasha Danoucaras Centre for Water in the Minerals Institute University of Queensland					
Collaborating Organisation(s) and Key Personnel	Kathryn Sturman: Centre for Social Responsibility in Mining, Sustainable Minerals Institute Adam Babatu: Consultant					
Summary of Action Research Activity	<p>Conflicts between communities and mining operations have the potential to stop or delay mining projects, depriving the community of economic development opportunities. Participatory water monitoring, where community members in conjunction with technical experts and the mining company are involved in defining objectives, sampling design, sample collection, analysis, data interpretation or/and communication to the broader public, has the potential to resolve or avoid conflict. A study was conducted in a region that currently has mining activity in Ghana to scope the potential of using participatory water monitoring to resolve conflicts due to mining impacts on water in Ghana.</p> <p>Golden Star Resources is a Canadian gold company with two operating mines in Ghana; the Bogoso/Prestea concession and Wassa Hwini-Butre. The study region was the Golden Star Resources Bogoso/Prestea mine site. The purpose of the action research was to undertake a scoping study to identify the stakeholders and to understand their water issues. The scoping study was carried out using the newly developed Social Water Assessment Protocol (SWAP). The SWAP is a series of questions classified within fourteen themes to capture the intersection of a mine site's water management with the local water context beyond its operational boundaries. The study was an opportunity to pilot the SWAP and provide feedback for the developers to revise the questions.</p>					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Participatory water monitoring Social assessment					
Dates of activity	Commencement			Completion		
	April 2013			August 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Task 1 – application of SWAP desktop review/phone/emails			Done		
	Task 2 – Field trip to study region October 2013			Done		
	Task 3 – Incorporate results of field trip into report. Tailored summaries			On-going		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$80,330.80 including GST \$73,028 without GST			\$36,514		

<p>Summary of findings to date</p>	<p>The key results that arose from the SWAP were that the community and the mining company were both reliant on groundwater because the surface water was contaminated from current artisanal scale mining, pesticides from farming and coliforms from a lack of sanitary facilities. There were three suppliers of the groundwater to the community: a private supplier, district assembly and the mining company. In general, there was good access to the water, but some communities expressed concerns that their particular water points contained an oily residue which made the water unpalatable. In those communities, most people bought drinking water and used the groundwater for cooking and bathing. It was known that the groundwater had a high iron content, so the residue may be caused by an iron oxidizing bacteria, which is not harmful to drink, but does make the water unpalatable.</p> <p>The SWAP results also showed that there was a poor relationship between the company and the communities with several community members indicating that complaints were not acknowledged and that meetings between the community and the company were not occurring, which was contrary to the company's responses.</p> <p>The results showed that the community's main water issue – the poor quality of the groundwater – was outside the scope of a participatory water monitoring program, because the company was not the sole supplier of water. However, the company could consider embarking on a capacity building program to improve its standing with the community.</p> <p>Application of the SWAP showed that the tool had been well designed to capture the key elements of the social context of the region. The outcomes of the pilot study were that it refined some questions but most importantly, the pilot created a table identifying the data sources and stakeholder groups to collect the information contained in the themes.</p>
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>Bogoso/Prestea region in Ghana Main contact at Golden Star Resources: Akwasi Owwusu-Bi on site and Mark Thorpe at the corporate office Main contact for the community: Justice Oppong</p>
<p>Summary of activities to be completed and expected completion date</p>	<p>Task 3 – The report has been written but is being refined and circulated amongst the project team. In addition to the executive summary within the report, a project deliverable was that the executive summary would be tailored to the three stakeholder groups – community, government and company; this has yet to be done. We anticipate this being finalised by the end of July 2014.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • Report to IM4DC • Tailored summaries to identified stakeholder groups • Journal article on the pilot
<p>In-kind contributions provided to the project/activity</p>	

Mitigating Acid Mine Drainage in the Asam- Asam Coal Basin, South Kalimantan, Indonesia

Progress Report July 2014

Delivery organisation and personnel	Dr Mansour Edraki and Dr Thomas Baumgartl Centre for Mined Land Rehabilitation, Sustainable Minerals Institute, The University of Queensland					
Collaborating Organisation(s) and Key Personnel	Professor Rudy Sayoga Gautama and Dr Ginting Jalu Kusuma: Laboratory of Mining Environment, Faculty of Mining & Petroleum Engineering, Institut Teknologi Bandung Dr Ali Munawar: Department of Soil Science, Bengkulu University Dr Lana Saria and Ms Sujatmiko from the Directorate General of Minerals and Coal Resources, the Ministry of Energy and Mineral Resources - Kepala Puslitbang Tekmira, Jl. Jenderal Sudirman No. 623 Bandung					
Summary of Action Research Activity	<p>There is evidence of acid mine drainage (AMD) being an issue and increasingly a major problem at many of the mines and mining sites in the Asam-Asam Coal Basin in the South Kalimantan Province of Indonesia. Given that many of the active and inactive mining sites are also due to the activities of illegal miners, the AMD problem in this area has (and has the potential to much further) seriously impacted on the environment. Unfortunately, this issue is not well defined, nor is it formally documented, because of a lack of monitoring and control by the government authorities. Not only are the illegal operations uncontrolled by any mechanism, but most of the small-scale miners themselves do not monitor the mine-impacted water in their operational areas that would likely be an AMD risk to the external environment.</p> <p>The objectives of the proposed project are to:</p> <ul style="list-style-type: none"> • Evaluate the AMD problem in the basin • Identify the AMD source lithology • Prioritise local AMD sensitive areas in the region/basin • Suggest potential AMD mitigation methods 					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Acid Mine Drainage, Coal mining, Pit lakes, Indonesia					
Dates of activity	Commencement			Completion		
	15/10/2013			30/08/2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Field work at Jorong Barutama Greston coal mine in Jorong District, South Kalimantan			Completed		
	Meetings and project Discussions at Bandung Institute of Technology (ITB)			Completed		
	Interim report to IM4DC			Completed		
	Final report to IM4DC			80% completed		
Budget	Total budget			Payments to date		
	\$50,000			\$50,000		

<p>Summary of findings to date</p>	<p>Our study showed there are three major aspects of mining in Asam-Asam area that requires improvement, either by collecting appropriate monitoring data or by stakeholder consultation and engagement.</p> <ol style="list-style-type: none"> One major issue is related to the shallow (up to 35 m deep) pit lakes in the area with volumes from approximately 1.7 to 3.6 million cubic meters. The pH of the lakes varies between 2.8 and 3.1. The pit lakes mainly fill with runoff water because of high annual rainfall (2600 mm/year). The pH of the input water is around 6.0 and with interaction with surface geology it turns acidic and overflows into local streams. The areas surrounding the pits have been rehabilitated and the company has been using lime dosing as a mitigation measure. Nevertheless, there are frequent episodes of AMD discharge and also the induced alkalinity is not homogeneously distributed at depth. With the current management practice, the pit lakes will continue to discharge AMD after mine closure. For sustainable management of the pit lakes, we will provide recommendations for material characterisation, water quality monitoring and water balance studies. Many of the active and inactive mining sites are the result of illegal mining and as a consequence, the AMD problem in this area has the potential to extend much further and seriously impact on the environment. Unfortunately, there is a lack of monitoring and control by the government authorities and most of the small-scale miners themselves do not monitor the mine-impacted water in their operational areas. Because of illegal mining, the mine planning, selective handling of the spoil and hence AMD management is hampered, as the mining company takes a random mining approach for good quality coal to hide the resource from the illegal miners. Stakeholder engagement and consultation, including government and local community, is needed. There are uncertainties in the current geochemical protocols adapted by the company for the characterisation of rocks and AMD assessments and predictions. In the conventional approach to the calculation of Net Acid Production Potential (NAPP), usually Maximum Potential Acidity is compared with the Acid Neutralising Capacity of rocks. Often this comparison is based on total sulphur, which can be misleading, if non-pyrite sources of sulphur are present in the sample. In the new approach taken by the company, the Chromium Reducible Sulphur (CRS) (or sulphide sulphur) is measured on site and “Net Total Acid Production Potential (NTAPP)” is calculated by the difference between “Maximum Titratable Acidity (MTA)” (which is the sum of CRS and total actual acidity). This new set up, established in 2013, is a better way of assessing the AMD risk of each sample. However, it ignores an important source of acidity and metals which is metal acidity or secondary acidity as the result of the dissolution of secondary minerals. In other words, the correlation between the mineralogy of spoils and the type and amount of acid produced and the type and amount of metals released is not clear. This is particularly important, as water quality results show for example high manganese concentrations. A better understanding of the types of acidity (i.e. primary acidity as the result of sulphide oxidation and secondary acidity due to dissolution of minerals) is necessary for better management of AMD. <p>We will provide our recommendations in the final report and will contribute to a proposal, in collaboration with ITB, to the company for follow-up studies targeted at these aspects.</p>
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>Apart from the Institut Teknologi Bandung and the mine site in Kalimantan, we also had meetings with Mr Yuni Rusdinar from Freeport. Yuni is an executive with Freeport in their Jakarta office. His role is liaising with government on environmental regulations. In his previous role as a site geotechnical manager, he conducted his PhD project with us, which was a site-based study.</p> <p>We would like to continue our collaboration with the Indonesian Network for Acid Drainage (INAD) and in that sense, endorsement of key mining companies such as Freeport is important for us.</p>
<p>Summary of activities to be completed and completion date</p>	<p>We are currently in the process of finalising the final report. The expected completion is end of August 2014.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training</p>	<p>Apart from the final report, we will prepare a proposal for the company, in collaboration with ITB for a study at JBG mine.</p>
<p>In-kind contributions provided to the project/activity</p>	<p>There have been in-kind contributions from our research collaborators through assistance with data management.</p>

Controlled and Monitored Natural Attenuation Strategies for Arsenic Pollution

Progress Report 15 July 2014

Delivery organisation and personnel	Roberto Gregorio García Fragoso – MSc Student Mansour Edraki, Thomas Baumgartl, David Mulligan Centre for Mined Land Rehabilitation, Sustainable Minerals Institute, The University of Queensland					
Collaborating Organisation(s) and Key Personnel	Prof Margarita Gutiérrez, Dr Francisco Romero: Universidad Nacional Autónoma de México (UNAM) Mr Dagoberto de la Fuente: Grupo México					
Summary of Action Research Activity	This project involves the development of a collaboration with the National Autonomous University of Mexico and Grupo Mexico key personnel. Geochemical analysis and sequential extraction will be done on tailings and copper, zinc, lead extraction process samples.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input checked="" type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Arsenic, natural attenuation, Geochemistry, San Luis Potosí, México					
Dates of activity	Commencement			Completion		
	15 January 2014			15 January 2015		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Sampling program			100 %		
	Shipping and clearance costs			85 %		
	Geochemical analysis			25 %		
	Stakeholders and community presentation			0 %		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			\$7,350		
Summary of findings to date	<ul style="list-style-type: none"> Arsenic tailings from Charcas, in San Luis Potosí, contain around 180 mg/kg of Arsenic, 1700 mg/kg of zinc, 160 mg/kg of Pb A system for tailings oxidation simulation has been designed and created <i>ex profeso</i> for the leaching experiments on samples Stakeholders from the mine site had little knowledge and they were interested in arsenic natural attenuation and in the outcomes of the project 					
Key regions and/or countries visited or involved and key people and organisations engaged to date	Charcas, 190 km N of San Luis Potosí, San Luis Potosí, México Universidad Nacional Autónoma de México: Prof Margarita Gutiérrez, Dr Francisco Romero Grupo México: Mr Dagoberto de la Fuente					

<p>Summary of activities to be completed and expected completion date</p>	<ul style="list-style-type: none"> • Geochemical analysis and sequential extraction are to be completed in the next four months • A collaboration agreement with researchers of the Universidad Nacional Autónoma de México (National Autonomous University of Mexico) will be completed in the next four months • A presentation of the results to stakeholders and collaborators will be given at the end of the project
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • Writing of scientific papers of the composition of tailings and natural attenuation pathways of arsenic is in progress • An agreement for collaboration with the National Autonomous University of Mexico (<i>Universidad Nacional Autónoma de México</i>) for doing collaborative research in the areas of Geochemistry of tailings, arsenic pollution, arsenic natural attenuation has been progressed
<p>In-kind contributions provided to the project/activity</p>	<p>The project is progressing as a result of the provision of samples for the geochemistry analysis and oxidation simulation experiments</p>

Australian Mining Management Tools and their Applicability towards the Sustainable Development of Chocó-Colombia

Progress Report April 2014

Delivery organisation	Andrea R. Garzon – MSc student Institute of Environmental Studies, University of New South Wales					
Collaborating Organisation(s)	Malika Virah Sawmy (Supervisor) Institute of Environmental Studies, University of New South Wales					
Summary of Action Research Activity	This investigation sought to contribute to knowledge in terms of management tools used in mining to achieve sustainable development in a global market by balancing human health and safety, environmental sustainability and the socio-economic effectiveness of mining operations, in particular for artisanal and small-scale mining. The objective was to identify, describe and analyse these types of management tools at political, environmental, social, technological, economic and legal levels in Colombia and Australia and suggest recommendations for their effective application to the bio diverse and culturally unique region of Chocó-Manabí Corridor.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input checked="" type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input checked="" type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords	Tools; Sustainable development; Global market; Artisanal and small scale mining; Colombia					
Dates of activity	Commencement			Completion		
	September 2013			July 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Field work			February 2014		
	Translating interviews and information gathered			Ongoing		
	Analysis of information gathered			Ongoing		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$12,000			\$12,000		
Summary of findings to date	<ul style="list-style-type: none"> • The government needs to formalise mining activity starting from owners of farms and properties, as they are the ones that allow, in a way, the operations to occur • There can be two mining titles, so small-scale and artisanal miners (ASM) can work the alluvial deposit and large-scale miners (LSMs) work the bedrock • The mining titleholder can let local miners work, by giving them a percentage of what they make, and the mining title-holder (usually LSMs) can provide technical consultation to the ASM members • LSM should include local miners in their projects and by employing them or partnering with them • LSMs' social feasibility personnel have made the communities conscious of what is the project purpose prior to the geologist entering the associated territory • LSMs organise meetings where they show the community the processes they are going to undertake before activity commences. They sometimes provide assistance such as food or training, which has been helpful • One of the greatest challenges to foreign companies is the time the government takes to approve projects; exploration companies shorten the application time for foreign companies • For illegal miners to have to wait 8 to 10 years for the legal process is unacceptable, so it is best to incorporate them into the big projects • The Ministry of Mines and Energy and the Ministry of Environment have two different perspectives, so one encourages mining, the other one does not (respectively). Therefore, they need to create common policies 					

	<ul style="list-style-type: none"> • Colombia needs an organisation to educate the public on responsible mining. Ten large-scale mining companies have organised themselves to do it, but small and medium scale operators are not represented • Exploration companies have a role to act between community, government and big mining companies • Bringing foreign investors to see a project in the middle of the jungle is very unlikely due to the conditions Colombia still finds itself in (after 50 years of armed conflict) • There have been mistakes within the consultation process with the communities. It is not because the local community is opposed to mining; the community have seen themselves vulnerable facing the mining companies. Prior Consultation is a way of bringing personnel from the government and the companies together with members of the community. Without it a project cannot go ahead • The Colombian government needs the technical capacity to regulate the mining operations • The only companies that stay afloat are the ones with financial capacity to resist the failure of a project as they have other projects to cover the failed ones • In Peru, processing plants are built to avoid ASMs using mercury; the ore from the ASMs is received at the plant and they get paid according to the analysis of the ore received. Private industry needs to be involved in this with the encouragement of the government • Australia has very good processing plants where there is no use of mercury, so a plant with all the technology located in an area where many ASMs can process their ore would be ideal • Colombia is a violent country, the community lives in fear. Bribes have to be given to absolutely everybody. • The future of mining in Colombia will be recovering the “tails”, the parts the dredging equipment drops. 25 years ago the company did not have gold recovery equipment and only sold 30% of the gold mined • Since ASMs have done everything in an empirical fashion, they need foreign investors who believe in them and partner with them to move the machinery they have as they need to move large volumes of ore • Colombia needs to educate educators in the real issues for small and medium scale mining, and large scale mining; including not only passing on knowledge from mining engineers, geologists and mining economists, but also from people with field experienced in living in a mine site • Colombia needs visits from people who understand how LSM mining can be done well. Small and medium-scale miners should be invited who have not seen the responsible mining option • Australian investors should be involved, as producers of medium and large equipment, compressors, rail preparation and basic mining machinery and infrastructure • Colombian people get very enthusiastic and speculate but they do not supply facilities such as metallurgic laboratories to support the natural resources demand • A national strategy for a Colombian biodiversity monitoring system should be developed; the main cause of loss of biodiversity is the decreasing quality and quantity of available habitats and lack of knowledge 																								
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<table border="1"> <thead> <tr> <th>Category</th> <th>Category Specifics</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Colombian Government</td> <td>Colombian National Government</td> <td>Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (Res. Inst. of Biological Resources Alexander Von Humboldt)</td> </tr> <tr> <td>Colombian Local Govt</td> <td>Alcaldia Mayor de Zaragoza (Zaragoza-Antioquia Major)</td> </tr> <tr> <td>Academia</td> <td>Universidad del Rosario (Univerity of Rosario)</td> </tr> <tr> <td rowspan="2">Colombian NGO's</td> <td>Large Scale Mining members NGO's</td> <td>ANDI Asociacion Nacional de Industriales (National Association of Entrepreneurs)</td> </tr> <tr> <td>Small Scale Mining members NGO's</td> <td>Confederacion Nacional de Pequeños Mineros (National Confederation of Small Scale Miners)</td> </tr> <tr> <td rowspan="2">Private</td> <td>Large Scale Mining</td> <td>Grupo de Bullet-Director</td> </tr> <tr> <td>Small Scale Mining</td> <td>Gerardo</td> </tr> <tr> <td rowspan="2">Community</td> <td rowspan="2">Small Scale Mining associated members</td> <td>Melissa Rodriguez</td> </tr> <tr> <td>Christian Sossa</td> </tr> </tbody> </table>	Category	Category Specifics	Name	Colombian Government	Colombian National Government	Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (Res. Inst. of Biological Resources Alexander Von Humboldt)	Colombian Local Govt	Alcaldia Mayor de Zaragoza (Zaragoza-Antioquia Major)	Academia	Universidad del Rosario (Univerity of Rosario)	Colombian NGO's	Large Scale Mining members NGO's	ANDI Asociacion Nacional de Industriales (National Association of Entrepreneurs)	Small Scale Mining members NGO's	Confederacion Nacional de Pequeños Mineros (National Confederation of Small Scale Miners)	Private	Large Scale Mining	Grupo de Bullet-Director	Small Scale Mining	Gerardo	Community	Small Scale Mining associated members	Melissa Rodriguez	Christian Sossa
Category	Category Specifics	Name																							
Colombian Government	Colombian National Government	Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (Res. Inst. of Biological Resources Alexander Von Humboldt)																							
	Colombian Local Govt	Alcaldia Mayor de Zaragoza (Zaragoza-Antioquia Major)																							
	Academia	Universidad del Rosario (Univerity of Rosario)																							
Colombian NGO's	Large Scale Mining members NGO's	ANDI Asociacion Nacional de Industriales (National Association of Entrepreneurs)																							
	Small Scale Mining members NGO's	Confederacion Nacional de Pequeños Mineros (National Confederation of Small Scale Miners)																							
Private	Large Scale Mining	Grupo de Bullet-Director																							
	Small Scale Mining	Gerardo																							
Community	Small Scale Mining associated members	Melissa Rodriguez																							
		Christian Sossa																							
<p>Summary of activities to be completed</p>	<p>The investigation is complete and was undertaken from January to June 2014 through a series of semi-structured interviews to the different and main stakeholders of this topic and by analysis of relevant information.</p>																								
<p>Outputs</p>	<p>None</p>																								
<p>In-kind</p>	<p>None</p>																								

A Water-shedding Soil Cover Configuration in Northwest Queensland

Progress Report 21 July 2014

Delivery organisation and personnel	Christopher Gonzales and Thomas Baumgartl Centre for Mined Land Rehabilitation, University of Queensland					
Collaborating Organisation(s) and Key Personnel	Ahmed Soliman and Tamara Groves: Glencore Mt Isa Mines Ulf Barnekow: Wismut GmbH					
Summary of Action Research Activity	Physico-chemical characterisation of mine wastes as cover materials Site visit of a rehabilitated Uranium mine in Chemnitz, Germany					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input checked="" type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Acid mine drainage, water-shedding cover, mine closure					
Dates of activity	Commencement			Completion		
	April 2013			October 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Soil cover material sampling and analyses			May2013 to March 2014		
	Hydrological characterisation of cover trial plots at Mount Isa Mines			On-going and to be completed by October2014		
	EGU General Assembly and Wismut GmbH Mine site visit			27 April – 7 May 2014		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			To be finalised		
Summary of findings to date	<ul style="list-style-type: none"> • Mine wastes have potential use as soil cover materials in a water-shedding soil cover configuration • The visit to the mine site undergoing rehabilitation provides insight on water shedding soil cover and long term performance of these built structures 					
Key regions and/or countries visited or involved and key people and organisations engaged to date	Northwest Queensland, Australia /Glencore Mount Isa Mines Ahmed Soliman, Principal Advisor, Geotechnical, and Tamara Groves, Environmental Adviser					
	Chemnitz Germany / Wismut GmbH Ulf Barnekow, Head of Dept. Mine Remediation/Geotechnics					
Summary of activities to be completed and expected completion date	Final report writing October 2014					

<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<p><i>Controlling water flow in waste rock covers</i> T. Baumgartl and C. Gonzales Environmine (4-6Dec 2013) in Santiago, Chile</p> <p><i>Spatial time domain reflectometry in geo-environmental engineering</i> A.Scheuermann, C. Gonzales, J. Fan, B. Braga, T. Baumgartl, and D. Lockington IEEE Sensors Applications Symposium (18-20February 2014) in Queenstown, New Zealand</p> <p><i>Transient soil moisture profile of a water-shedding soil cover in north Queensland, Australia</i> C. Gonzales, T. Baumgartl and A. Scheuermann EGU General Assembly (27April-2May 2014) in Vienna, Austria</p> <p><i>Managing water flow through rock covers on mine sites</i> T. Baumgartl and C. Gonzales 20th World Congress of Soil Science (9-13 June 2014) in Jeju, Korea</p> <p><i>Soil Moisture Profile of a water-shedding cover design in Central Queensland</i> C. Gonzales, T. Baumgartl, A. Scheuermann and A. Soliman UNSAT Conference (2-4July 2014) in Sydney, NSW</p> <p><i>Mine wastes as cover materials in a water-shedding soil cover in northwest Queensland</i> C. Gonzales, T. Baumgartl, M. Edraki and A. Soliman Life-of-Mine Conference (16-18 July 2014) in Brisbane, Queensland</p>
<p>In-kind contributions provided to the project/activity</p>	<p>Use of Centre for Mined Land Rehabilitation (CMLR) Laboratory facilities CMLR support for multiple air travel to Mount Isa Mines</p>

Assessment of Potential Extreme Rainfall Impacts on the Mining Industry of Peru

Progress Report 20 June 2014

Delivery organisation and personnel	Francisco Gonzalez – PhD student Australian Centre for Sustainable Mining Practices (ACSMP), School of Mining Engineering, University of New South Wales					
Collaborating Organisation(s) and Key Personnel	Professor Roslyn Taplin, Research Director Australian Centre for Sustainable Mining Practices, School of Mining Engineering, University of New South Wales					
Summary of Action Research Activity	<p>The impact that climate change may play in the future sustainability of mining projects has been clearly highlighted by several researchers in recent years with the most significant areas of concern being impacts on mine infrastructure, supply chains, health and safety conditions, environmental management, community relations and exploration. This is particularly relevant to mining in a country as climatically vulnerable and biologically diverse as Peru.</p> <p>This report focuses on assessment of the potential vulnerability of mining regions in Peru to extreme rainfall events associated with climate change. The study assesses the impacts that different extreme weather events may have on mining in the country in the future. From a mine design and planning perspective, this study is conceived as a first step to illustrate the importance of considering the impacts of different climatic scenarios on mining in Peru. Given the operational consequences and economic losses that an extreme event can inflict on a mining project, it is necessary to assess the vulnerability implications this aspect has from the first stages of mine development up to closure and rehabilitation. Analysis has been done using global climate projections and documented case studies of mining projects in Peru that have been designed to cope with, or have been affected by extreme rainfall episodes. It has been possible via examination of future scenarios for climate change to identify mining regions across Peru with differing potentials of being affected by extreme rainfall events in the next few decades.</p> <p>The approach proposed in this study which assists identification of potential vulnerability to extreme rainfall events associated with a changing climate for several mining regions in Peru could relatively easily be extended for other extreme weather events. For instance droughts, which are also relevant in the Peruvian mining context, or temperature extremes to other South American countries.</p>					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input checked="" type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Climate change adaptation Mining industry Peru Extreme rainfall events Climate projections					
Dates of activity	Commencement			Completion		
	December 2013			June 2014		
Status	<input type="checkbox"/> Yet to commence		<input type="checkbox"/> On Going		<input checked="" type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Background on Peru			Literature review and writing of report section (completed)		
	Significance of the mining industry for Peru			Literature review and writing of report section (completed)		
	Extreme rainfall events and impacts in Peru			Literature review and writing of report section (completed)		
	Mining case studies			Identification and selection of case studies of mining projects with documented impacts or designs adapted for extreme rainfall		

	Climate models and data	Identification and selection of publicly available climate modelling data, adequate to be used in this study and other alike studies
	Assessment of mining case studies	Evaluation of future possible climate scenarios and assessment of potential extreme rainfall impacts for the selected mining case studies
Budget	<i>Total budget</i>	<i>Payments to date</i>
	\$9,100	\$8,442
Summary of findings to date	<p>Future mining projects in Peru will have to take into account impacts both from social, financial and environmental perspectives, especially given the country's megadiverse status. Vulnerability to floods has already been highlighted in near future climate projections to 2030.</p> <p>Based on the relevance of the mining industry to Peru's economic growth, future mining will need to address adaptation to climate change. This involves assessment of climate projections and potential impacts of extreme rainfall events, as well as taking biodiversity offsetting into account due to recent changes in EIA requirements.</p> <p>Findings in this research point out at an increasing vulnerability to extreme rainfall events in the regions of Ancash, Junín and Pasco, of significant zinc and silver reserves, that may be compromised in future mining projects. Cajamarca and La Libertad (more than 80% of gold reserves combined) show less signs of increasing vulnerability to potential extreme rainfall impacts in the future.</p> <p>For Arequipa, Moquegua and Tacna, regions with significant copper reserves, a decrease in projected extreme rainfall events is observed. This in term could lead to an eventual decrease in total precipitation and consequently a deficit in water availability during the next three decades.</p>	
Key regions and/or countries visited or involved and key people and organisations engaged to date	<ul style="list-style-type: none"> Country: Peru Regions: Ancash, Arequipa, Cajamarca, Junín, La Libertad, Moquegua, Pasco, Tacna 	
Outputs, such as publications, software, systems, databases, webpages and training programs	<ul style="list-style-type: none"> Sixth International Conference on Climate Change: Impacts and Responses, Iceland, June 2014 (proposal accepted and confirmed schedule of presentation) The International Journal on Climate Change: Impacts and Responses (paper to be submitted during 2014) 	
In-kind contributions provided to the project/activity	<ul style="list-style-type: none"> Research staff time contribution from ACSMP and Climate Change Research Centre at the University of New South Wales 	

Building Environmental Sustainability in the Mining Sector of the Philippines through Advanced Environmental Monitoring, Assessment and Management Programs

Progress Report 4 July 2014

Delivery organisation and personnel	Trang Huynh, Mansour Edraki and David Mulligan Centre for Mined Land Rehabilitation (CMLR), Sustainable Minerals Institute, The University of Queensland					
Collaborating Organisation(s) and Key Personnel	Prof. Elpidio R. Octura: Mindanao State University- General Santos (MSU-GS) A/Prof. Carmelita P. Martinez: University of Southeastern Philippines (USEP) Ludivina Mercado: University of the Immaculate Conception (UIC) Olie Dagala: Mindanao Development Authority (MinDA)					
Summary of Action Research Activity	<p>The Philippines, including Mindanao, is resource-rich and there is much potential for large-scale mining project development. As an example, the case study area, the Tampakan project, will involve the development of a large-scale open-pit copper-gold mine and associated mine on-site and off-site infrastructure. It also involves the development of human resources and expertise in environmental research and management, to focus on and promote education, environmental sustainability management, rural development and economic growth. The research knowledge and capacity-building initiatives resulting from this proposal will focus on the environmental health issues associated with the mining sector and specifically the contaminant issues linked to elevated (and potentially toxic) metal and metalloid levels in waterways.</p> <p>CMLR/UQ are supporting research staff from MSU-GS, USEP, UIC and MinDA to identify the current and future needs and issues on “environmental sustainability” research in the Mindanao regions.</p> <p>The objectives of the project are:</p> <ol style="list-style-type: none"> 1. Assist the development and application of environmental assessment and risk framework guidelines that initially focus on implementing new approaches for assessing specific components of the local aquatic ecology and the potential risks to such biota through potential exposure to heavy metals in these environments 2. Collate, analyse and assess any existing monitoring data on water and sediment quality in both pristine and impacted waterways in southern Mindanao, to investigate the potential sources and pathways of contaminants in waters and sediments 3. Initiate and develop opportunities for joint research projects with MSU-GC, USEP, UIC and MinDA in the areas linking geochemistry and aquatic toxicity in actual and potential mining-impacted environments 					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Environment, Water, Sediment, Collaboration, Management					
Dates of activity	Commencement			Completion		
	1 Feb 2014			30 August 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Establish the research collaboration			Four meetings organised (February- March 2014) between UQ, USEP and MSU-GS		
	Data analysis			Analysed the existing data on the water and sediment quality of Mindanao region		

	Workshop	A workshop was organised at the University of Southeastern Philippines (9-14 June 2014)
	Site visit	Site visit (11 June): Four sites at two water catchments of Matanao and Malni Balasiao river catchment. Visit to analytical laboratory at Science Resource Centre, University of the Immaculate Conception, Davao City
Budget	<i>Total budget</i>	<i>Payments to date</i>
	\$50,000	\$50,000
Summary of findings to date	<p>A number of projects on environmental issues related to mining activities, particularly small-scale mining, have been conducted at MSU-GC and USep. However, there are some gaps in knowledge, and the technical methodology for water and sediment quality research needs to be addressed.</p> <p>The existing environmental monitoring and assessment approaches do not include some aspects of fundamental and applied geochemistry research to assist with identifying any potential risks to ecological (and thereafter human) health in the current and planned mining areas.</p> <p>The current water quality guidelines in the Philippines (DAO 34, PNSDW 94A and LWUA) do not include all the environmental indicators for the environmental assessment. There is no national guideline for the sediment quality assessment. The agriculture soil guidelines from the Bureau of Soils and Water Management (PEL guideline) and Canadian sediment guideline have been used to assess the sediment quality in the environmental studies.</p> <p>The proposed Tampakan copper mine has a high arsenic copper ore, therefore the baseline studies on arsenic levels in water and sediment of the river catchments in the surrounding area are important prior to mine operation. The results of the arsenic study will assist the assessment of the impact of the Tampakan project on arsenic levels in water and sediment.</p> <p>Studies by MSU-GC on “Heavy Metal Contamination in Sarangani Bay Waters and Sediments and Its Uptake on Fish, Shellfish, and Seaweeds: Benchmark for Policy Advocacy and Environmental Management” indicated high levels of mercury (Hg) in the water and sediment and significant Hg uptake in fish. Although the use of Hg in mineral processing has been strictly regulated by the Mindanao government in the last 5 years, the levels of Hg in water, fish and sediment in Sarangani Bay, Gen San still exceeded the guidelines. Therefore, more research should be done on the pathways of Hg in the environment in the Mindanao regions.</p> <p>A new research collaboration program called MinDA-ERA (MinDA-Environmental Research Alliance) has been discussed. The alliance includes UQ, MUS-GC, USep, UIC and MinDA. Two research projects on environmental issues were identified, discussed and proposed during the visit. “Baseline of Mercury (Hg) Levels in Taplan River, Tampakan, South Cotabato” was proposed by MSU-GC and will be submitted to the Department of Science and Technology. The USep group has proposed a study on “Lead pathways at Compostela Valley” to submit to APEX mining company. The CMLR/UQ team assisted in preparing these proposals.</p>	
Summary of activities to be completed and expected completion	<p>Data analysis</p> <p>Report writing</p> <p>Expected completion date 30 August 2014</p>	
Outputs, such as publications, software, systems, databases, webpages and training	A Final Report will be produced	
In-kind contributions provided		

Cooperative Inversion of Seismic and Magnetotelluric Methods

Progress Report 1 July 2014

Delivery organisation and personnel	Van Anh Cuong Le – PhD Student and A/Prof Brett Harris (Supervisor) Department of Exploration Geophysics, Curtin University					
Collaborating Organisation(s) and Key Personnel	Deep Exploration Technologies - Cooperative Research Centre					
Summary of Action Research Activity	This PhD research is focused on cooperative inversion of co-located seismic reflection and magnetotelluric data. This is a key and increasingly important area of geophysical research. It is rapidly evolving and can take advantage of modern supercomputer architectures. This project involves use of the Magnus Cray Cascade supercomputer (Pawsey Centre). It potentially has significance for mine development, minerals exploration, water resource assessment and environmental assessments.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input type="checkbox"/> Community and Environmental Sustainability		<input checked="" type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Cooperative-inversion, seismic reflection, Magnetotelluric methods, Geophysics					
Dates of activity	Commencement 04/03/2013			Completion		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Automatically extract constraints from 3D seismic reflection data (field data)			Import 3D seismic data		
	Run constrained MT inversion on Cray Cascade super computer			Import 3D Magnetotelluric data		
	Create synthetic model and run numerical seismic and MT surveys			Run Magnetotelluric inversion on Super computer		
Budget	Total budget			Payments to date		
	\$10,000			\$10,000		
Summary of findings to date	A method for semi-automated extraction of key geo-electrical boundary constraints from large 3D seismic volumes has been identified and is being developed.					
Key regions and/or countries visited or involved and key people and organisations engaged to date	The PhD Student Van Anh Cuong Le is a Vietnamese National with an AusAID scholarship. His Principle supervisor is A/Prof. Brett Harris (Australian) and Associate supervisors are A/Prof. Anton Kecip (Australian) and Dr Eric Takam (Cameroon).					
Summary of activities to be completed and expected completion date	<ul style="list-style-type: none"> • Testing of semi-automated extraction of MT inversion boundary constraints from 3D seismic data • Analysis of results to establish and demonstrate a significant improvement over conventional methods (i.e. do the methods recover the correct subsurface conductivity distribution) • Application of the methods over several mineral projects and a synthetic deposit 					

Outputs, such as publications, software, systems, databases, webpages and training programs	<ul style="list-style-type: none">• Outputs will be in the form of publications
In-kind contributions provided to the project/activity	<ul style="list-style-type: none">• NA

Building Linkages to Maximise IM4DC Funding Outputs in the Area of Health and Safety

Progress Report July 2014

Delivery organisation and personnel	Danellie Lynas Minerals Industry Safety and Health Centre (MISHC), University of Queensland Sarah Goater International Water Centre					
Collaborating Organisation(s) and Key Personnel	Mark Griffin and Melissa Pearce (Chapman) School of Psychology (Accelerated Learning Laboratory), University of Western Australia					
Summary of Action Research Activity	This project links three Australian research institutions in an effort to maximise IM4DC funding outputs in the area of health and safety. Water was used as a focal issue to create a collaborative environment and expand the traditional Occupational Health and Safety (OHS) discipline to encompass water-related health, safety and sanitation issues affecting artisanal miners and affected communities. The project supported two post-graduate student projects focused on OCA as selected by the student (Ghana and Philippines).					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input checked="" type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input checked="" type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (5)	Livelihoods, Safety, Water, Sanitation, Artisanal					
Dates of activity	Commencement: March 2014 (expected commencement was October 2013)			Completion: expected completion August 2014 (indicated completion on proposal June 2014)		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Facilitated Workshops (1 Brisbane & 1 Perth)			Brisbane workshop 13 & 14 March 2014 Perth workshop 1 & 2 May 2014		
	Funding for 2 post graduate students			Completed		
	1-2 page Summary			Completed and submitted 31 May 2014		
	Co-badged discussion paper			Ongoing: awaiting post-graduate student examination results for conversion to publication		
	Project Report			Ongoing: awaiting requested revisions from Philippines post-graduate student (revised completion date Aug 2014)		
	Business Case			N/A See project report		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$49,200 + GST			IWC \$10,000		
Summary of findings to date	<p>This project comprises two distinct phases. 1. The action research element of this project combines desktop research, semi structured interviews and topic expert reviews of two case study locations to inform and prioritise topics areas for a future IM4DC capacity development short course. 2. The market needs analysis determines demand, supply and prospective sources of finance to contextualise action research findings with respect to novel and sustainable short course offerings. Key project findings are below.</p> <p>Action research: Water-related occupational health, safety and sanitation issues characterised by the study ranged from limited access to clean water for drinking and domestic use, exposure to water borne and communicable diseases, through to lack of technical and procedural information to inform safe mining practices. Points of commonality between the case studies included exposure to water borne disease, lack of access to health services and information and lack of personal protective equipment. Accidents and deaths are the main safety issues among ASM, while water related health and sanitation issues are diseases that result from water pollution and poor disposal of wastes. Based on the case study, water related health, safety and sanitation issues are driven by poor governance, perceptions of the ASM sector by government and donor groups, as well as increasing poverty levels. Focussing capacity building for stakeholders in three key areas: policy and</p>					

	<p>regulation, environmental protection and community empowerment, would help address community concerns related to livelihoods, mining and social aspects.</p> <p>Using a Sustainable Livelihoods Framework as a foundation of the research design, and adopting an expanded water and sanitation focus, enabled an holistic identification and exploration of assets among ASM and affected communities. Preliminary research findings indicate ASM and affected communities have relatively good access to human, social, physical and natural assets but financial assets are lacking; which in turn exacerbate community vulnerability and entrapment in the poverty cycle. Custom designed adult education courses informed by an SLF approach, offers the opportunity for a novel, integrated training and knowledge transfer in occupational and community health and safety improvements, tailored to both strengths and weaknesses of individual ASM communities. Top down and bottom up approaches to capacity building are needed; with emphasis on participatory engagement of influential ‘change agents’ or ‘leaders’ across institutional and community based stakeholders to maximise both reach and positive, measurable outcomes.</p> <p>Global market analysis: The global market needs analysis indicated a dearth of information on adult learning initiatives relating to ASM and water-related health, safety and sanitation. Increasing interest from prospective donors and research groups, however, suggests a range of learning packages (from cross institutional education and professional development programs, to train the trainer tool kits) exists to meet specific in-country and community based needs. Organisations working in this space should be seen as potential collaborators.</p> <p>Conclusions: IM4DC course development should focus on encouraging a multi-stakeholder approach to ASM and the affected communities' health, safety and sanitation issues. ASM cuts across a number of sectors that need to work in collaboration to address ASM water related health, safety and sanitation issues.</p> <p>Effective policy formulation, record keeping, injury management, community sanitation and hygiene, and law enforcement, as well as a review of currently decentralised government processes, would be useful initial topics. Techniques to develop participant’s leadership and influencing skills to effect change should be a core component of all topic materials generated. Expansion of the SLF action research approach adopted here to other countries would assist in refining course materials to address ASM issues more globally.</p> <p>Meeting local demand and understanding fully the behavioural changes required to bring about change, will be critical to success. Thus, future training programs need to go ‘beyond delivery’ to offer ongoing support and reflection to maximise implementation in the workplace and transfer to the communities.</p> <p>Recommendation: Workshop outcomes indicate positive future collaboration between UWA (ALL), IWC and UQ (MISHC). Further on-the-ground research needs to be done to inform the development of robust study materials. The complexity of ASM warrants a multi-stakeholder and multi-disciplinary approach to manage ASM issues.</p>
Key regions and/or countries visited or involved and key people and organisations engaged to date	<p>Key countries for case study phone interviews: Philippines (8 participants) and Ghana (10 participants)</p> <p>Workshop 1: Mark Griffin, Danellie Lynas, Sarah Goater, Gern Logrosa, Evelyn Kamanga, Ben Fawcett, Lynda Lawson, Natasha Danoucaris, David Cliff, Martin Ayisi, Nina Collins, Melissa Chapman, Carmel Bofinger</p> <p>Workshop 2: Mark Griffin, Melissa Chapman, Helen Langley, Sarah Goater, Gern Logrosa, Evelyn Kamanga, Carmel Bofinger</p>
Summary of activities to be completed and completion date	<ul style="list-style-type: none"> • Completion of Project Report: end of August 2014 • Completion of peer reviewed publication: end of August 2014
Outputs	<ul style="list-style-type: none"> • Completion of peer reviewed publication: end of August 2014
In-kind contributions provided to the project/activity	<ul style="list-style-type: none"> • Sarah Goater and Danellie Lynas – in-kind time to project \$4000 (conservative estimate) • IWC co-contribution \$6000 to post – graduate student costs • Professor David Cliff (MISHC), W/Prof Mark Griffin (UWA School of Psychology) – In-kind time

Religious Identity and Coal Development in Pakistan

Progress Report August 2013

Delivery organisation and personnel	Muhammad Makki – PhD student School of Journalism and Communication & Centre for Social Responsibility in Mining Sustainable Mineral Institute, The University of Queensland					
Collaborating Organisation(s) and Key Personnel	Dr Daniel Franks: Centre for Social Responsibility in Mining (Supervisor)					
Summary of Action Research Activity	<p>This research was conducted March-April 2013. Data were collected in six rural communities of District Tharparkar, Pakistan through a structured face-to-face survey supplemented with focus group discussions.</p> <p>The survey was conducted with 121 respondents and included male and female members of the Hindu and Muslim communities. To understand the structured theme areas of the survey in detail, additional qualitative data was collected from ten focus group discussions with 129 participants.</p> <p>The survey aimed to capture community perceptions of the Thar coal project. Methods were designed to capture perceived positive and negative impacts associated with the project development, such as local job opportunities, infrastructure and community development, project-induced displacement and resettlement, environmental impacts and socio-cultural impacts.</p>					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Coal, Conflict, Hindu, Muslim, Pakistan, Thar, Tharparkar					
Dates of activity	Commencement			Completion		
	March 2013			April 2013		
Status	<input type="checkbox"/> Yet to commence		<input type="checkbox"/> On Going		<input checked="" type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Survey			Survey completed with 121 respondents		
	Focussed Group Discussions			10 FGDs completed with 129 participants		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000					

<p>Summary of findings to date</p>	<p>This research discusses the complex relationship between resource development, land attachment and conflict by examining the role of religious identity in the context of a coal development project in District Tharparkar in Pakistan. Research was conducted in six rural communities lying in the vicinity of the coal project.</p> <p>The results obtained are important for two reasons:</p> <ul style="list-style-type: none"> • They provide insights into the heterogeneous composition of communities based on religious identity, which explain contrasting perceptions towards project development • They entail a practical dimension that suggests that in the process of assessment, development and management of coal resources, differences related to religious and community identity must be recognised and taken into account to minimise community conflict <p>The research reveals that the difference in views towards resource development between Hindus and Muslims in Tharparkar is best explained by the eco-regional identity that is linked to a fear of exclusion within the broader national fabric of Pakistan; a fear that migration into the area spurred on by resource development will dilute the Hindu community. However, the ultimate root of such fears may be that the Hindu community has gained an ecological identity from the Tharparkar desert, in a country in which they are otherwise a persecuted minority. The environment has thus given them a feeling of authenticity, which has allowed for positive relations to develop with their Muslim co-inhabitants of the desert. Ecology has thus provided a bonding force in an otherwise fractured ethno-religious national state of affairs.</p>
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>Pakistan (Cities: Karachi, Tharparker, Islamabad)</p> <p>Sindh Coal Development Authority Sukaar Foundation (NGO) Underground Coal Gasification Project, Tharparker LEAD (Leadership in Environment and Development)</p>
<p>Summary of activities to be completed and expected completion date</p>	<p>Fieldwork is complete</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<p>Based on the finding, a paper was published as a CSRSM Occasional Paper Series (co-authored with Prof. Saleem H Ali and Dr Kitty van Vuuren) and can be downloaded via: https://www.csrsm.uq.edu.au/publications/religious-identity-and-coal-development-in-pakistan-ecology-land-rights-and-the-politics-of-exclusion (Also, the above article has been submitted to Journal of Asian Development – Sage)</p> <p>An article was published in May 2013 in National Geographic (News Watch) reflecting the IM4DC fieldwork. http://newswatch.nationalgeographic.com/2013/05/02/pakistan-coal/</p> <p>In April 2013, I presented IM4DC findings at a seminar hosted by LEAD-Pakistan (Leadership in Environment and Development) in Islamabad.</p>
<p>In-kind contributions provided to the project/activity</p>	<p>I wish to express special thanks to Dr Daniel Franks (Deputy Director – Strategy and Mineral Policy) at the Centre for Social Responsibility in Mining, who supervised this project.</p>

Orebody Delineation Using Borehole Seismic Techniques for Hard-Rock Exploration

Progress Report 3 July 2014

Delivery organisation and personnel	Felix Menu – PhD Student and Anton Kepic (supervisor) Department of Exploration Geophysics, Curtin University					
Collaborating Organisation(s) and Key Personnel	Ghana Education Trust Deep Exploration Technologies - Cooperative Research Centre					
Summary of Action Research Activity	Evaluate the effectiveness of borehole-to-borehole reflection imaging to delineate massive ore bodies. Studies so far are on massive sulphides, in particular Massive Ni sulphides.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input type="checkbox"/> Community and Environmental Sustainability		<input checked="" type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Geophysics, Mineral Exploration, Komatitite Orebody, Nickel Orebody					
Dates of activity	Commencement			Completion		
	Dec 2011			Dec 2015		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Model borehole-to-borehole seismic reflection for Ni orebody on an ultramafic contact			Simulate data of Longshaft Mine, Kambalda WA		
	Images created with different bandwidth and borehole configurations			Simulations of different acquisition settings for borehole-to-borehole survey for Longshaft Mine		
	Collect some real data using hydrophone array			ZVSP and WVSP survey collected over Longshaft Mine, WA		
	Publish work as a case history			DET CRC report created for Longshaft Orebody simulation		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			\$10,000		
Summary of findings to date	Borehole-to-borehole seismic reflection is feasible in mapping between holes; however, hole trajectory can mean there are blind spots where the orebody cannot be imaged. Higher frequency energy from the seismic source can cause ringing in the data due to inter-bed multiples, or thin-bed tuning. This resonance effect may limit the ability to resolve orebody thickness or multiple layers of ore.					
Key regions and/or countries visited or involved and key people and organisations engaged to date	The PhD Student Felix Menu is a Ghana National with a Government of Ghana Education Trust scholarship. His Principal supervisor is A/Prof. Anton Kepic (Australian) and Associate supervisors are A/Prof. Milovan Urosevic (Australian) and Dr Andrew Greenwood (New Zealand).					

<p>Summary of activities to be completed and expected completion date</p>	<ul style="list-style-type: none"> • Further refinement of Ni target models • Simulation of VMS style of deposits (Zn-Pb-Cu-Au) • Development of a methodology to collect borehole-to-borehole reflection data • Develop acquisition methodology for borehole-borehole seismic reflection
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • Journal Publication and Expanded Abstracts • DET CRC Technical Reports for Industry
<p>In-kind contributions provided to the project/activity</p>	<ul style="list-style-type: none"> • Accommodation and site access to Longshaft mine and boreholes • Petrophysical measurements and supporting geological data from Independence group (Owner of Longshaft Mine)

Integrating HIV and Gender-Related Issues into Environmental Assessments for Australian Mining Companies Operating in Africa

Progress Report 13 July 2014

Delivery organisation and personnel	Megan O'Callaghan Australia-Africa Universities Network Secretariat (AAUN)					
Collaborating Organisation(s) and Key Personnel	Angus Morrison Saunders, Ian James, Ryan Admiraal, Anne Surma, Renae Desai, David Doepel, Mark McHenry: Murdoch University Frans Viljoen, Josua Loots, Meetali Jain: University of Pretoria Patrick Mangeni wa'Ndeda: Makerere University					
Summary of Action Research Activity	This proposal originates from meetings at the mining investment conference INDABA in Cape Town, South Africa, between Murdoch University representatives, the CEO and Chairman of the Board of the Australia Africa Mining Industry Group (AAMIG), and the Director of the Southern African Institute for Environmental Assessment, Bryony Walmsley, who is the author of the 2012 United Nations Development Programme (UNDP) Report entitled "Guidelines for Integrating HIV and Gender Related Issues into Environmental Assessment in Eastern and Southern Africa". The guidelines primarily target governments and civil society stakeholders and a major opportunity exists to engage commercial mining and infrastructure entities.					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		• <input type="checkbox"/> Community and Environmental Sustainability		• <input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	• <input type="checkbox"/> Sub-national governance of the mining sector	• <input type="checkbox"/> Minerals policy, regulation and agreements	• <input type="checkbox"/> Community engagement and consultation	• <input type="checkbox"/> Health and safety of workforces and resources communities	• <input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Environmental assessment; Gender; HIV; Africa					
Dates of activity	Commencement			Completion		
	July 2014			Oct 2014		
Status	<input checked="" type="checkbox"/> Yet to commence		<input type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Pre- award Feb 2014: meetings at INDABA between Murdoch, AAMIG, and the Southern African Institute for Environmental Assessment in Cape Town					
	March 2014: Communication between existing partners to prepare AAUN application					
	April 2014: Development of the targeted workshop concept paper					
	May 2014: Collaborative peer review of the targeted workshop content and focus					
	June 2014: Logistical preparation for the targeted workshop					
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$14,000 + GST			\$7,000 +GST		
Summary of findings to date	NA					

<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>NA</p>
<p>Summary of activities to be completed and expected completion date</p>	<p>July 2014: The targeted workshop to be hosted at Murdoch University in Perth in the days prior to the 20th International AIDS Conference in Melbourne (20-25th July) August 2014: Development of strategic funding and application plans September 2014: continue to develop the strategic funding plans, and a follow up meeting African Australian Research Forum at Africa Down Under October 2014: October and subsequent months, prepare and submit applications to external funding agencies</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<p>NA to date</p>
<p>In-kind contributions provided to the project/activity</p>	<p>AAUN \$7000 \$30,000 (Comprised of in kind contributions from co investigations and the hosting of the targeted workshop at Murdoch University)</p>

The Feasibility of Using 3D Seismic Reflection Surveys to Discover IOCG Deposits in the Gawler Craton

Progress Report 3 July 2014

Delivery organisation and personnel	Evans Okan – PhD Student and Anton Kepic (supervisor) Department of Exploration Geophysics, Curtin University					
Collaborating Organisation(s) and Key Personnel	Deep Exploration Technologies - Cooperative Research Centre Federal University of Petroleum Resources, Effurun, Nigeria					
Summary of Action Research Activity	Model the expected seismic response of significant Iron Oxide Copper Gold (IOCG) deposits, such as Olympic Dam and Prominent Hill. Evaluation of the modelled geophysical data with respect to real seismic data and other geophysical data for relative exploration merit.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input type="checkbox"/> Community and Environmental Sustainability		<input checked="" type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Geophysics, Seismic Reflection, Iron Oxide Copper Gold (IOCG), copper exploration					
Dates of activity	Commencement			Completion		
	Jul 2012			Jul 2015		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Seismic, Mag and Gravity Models of Hillside			Modelling completed of potential field and seismic data		
	Evaluation of relative merits of geophysical methods for Hillside			Comparison of modelled and actual geophysical data		
	Olympic Dam and Vulcan IOCG modelling			Basic modelling of Olympic Dam and Vulcan IOCG done		
	Conference paper/presentation			EAGE poster and expanded abstract done		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			\$10,000		
Summary of findings to date	Gravity and magnetic modelling of three deposits (Hillside, Olympic Dam and Vulcan) indicate that the petrophysics and structural models are valid as they match real potential field data well. The modelled seismic response in the case of all three deposits matches real data and has the hypothesised characteristics. Thus, the seismic method appears to be a valid exploration method to find IOCG deposits.					
Key regions and/or countries visited or involved and key people and organisations engaged to date	The PhD Student Evans Okan is a Nigerian National with a scholarship from Federal University of Petroleum Resources, Effurun. His Principal supervisor is A/Prof. Anton Kepic (Australian) and Associate supervisors are A/Prof. Milovan Urosevic (Australian) and Peter Williams (Industry advisor, Australian). Evans has presented at the SAGA conference (2013) in Kenya to many mineral explorers and researchers that are active in Africa					
Summary of activities to be completed and expected completion date	<ul style="list-style-type: none"> • Complete evaluation for at least 4 deposits covering three principal IOCG deposit scenarios • Improve petrophysics data by collecting rock core sample measurements • Case studies created from the evaluation of modelled and real data • Optimal seismic survey design for implementing regional deployment 					

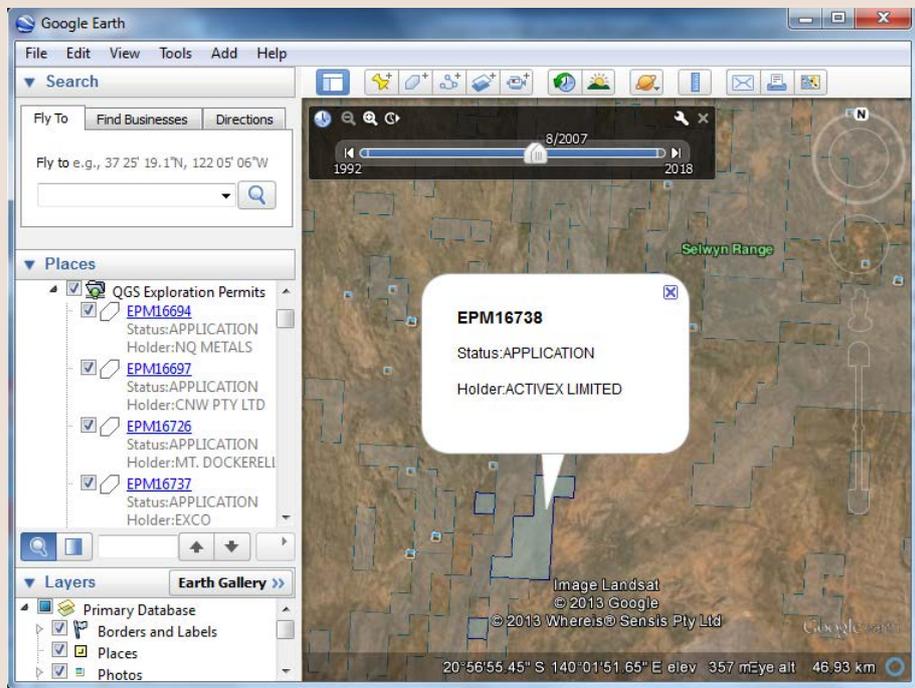
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • Publication in journals • Technical Reports to Industry via DET CRC
<p>In-kind contributions provided to the project/activity</p>	<ul style="list-style-type: none"> • Petrophysics provided by BHPB and Rex minerals • Seismic data from Geoscience Australia and Rex Minerals • On-mine-site facilities and accommodation provided by Rex Minerals

A Geoscience Information Model for Improving the Efficiency and Transparency of the Mining Approvals Process in North Africa

Progress Report 10 July 2014

Delivery organisation and personnel	David Pullar Geography, Planning and Environmental Management, UQ					
Collaborating Organisation(s) and Key Personnel	Arianne Ford Centre for Exploration Targeting, UWA					
Summary of Action Research Activity	<p>There is a growing international interest in mineral exploration in North Africa, which has highlighted the need for more transparent and effective management of mining-related information. This project aims to assist geoscience agencies in developing countries, like North Africa, to build computer management applications with geographical information system (GIS) technology for streamlining mining approvals and exploration reporting. The project will address spatial information aspects of the mining approval process for:</p> <ul style="list-style-type: none"> • Mining permits, tenures and land rights • Harmonisation to ensure transparency and fairness • Approaches to rapidly move from paper-based systems to digital GIS • Incorporating assessment services on land uses and environmental issues • Modelling linkages between exploration reporting and regional geoscience information 					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Tenements, Geoscience Information, Management, GIS, Web					
Dates of activity	Commencement			Completion		
	1 June 2012			July 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> Ongoing		<input type="checkbox"/> Completed	
Progress in activities	Planned		Undertaken to date			
	1. User requirements survey.		Meetings and emails with Mineral Commissions in Ghana and Ethiopia to decide on data model and understand the system requirements. Meetings with Queensland Geological Survey and Geoscience Australia to discuss standards and developments.			
	2. Developing a generic model for tenements with linkages to other geoscience information.		Tenement model based on above meetings. Adopted format from Geoscience Australia. Geodatabase implementation with historical tracking and data integration queries. Compile online workshop for training purposes. Modify to INSPIRE standard; discussed with Geoscience Australia.			
	3. Develop prototype system to run use cases for mineral exploration approvals and reporting workflows.		Prototype implemented in Google Earth and web services as proof of concept. All outputs suitable for training materials. To be completed: Disseminate prototype and trial in North African country.			
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$49,500					

<p>Summary of findings to date</p>	<p>The output is a prototype suitable for adoption in African countries. Importantly it illustrates how to connect tenement information to the web (Google Earth), so that information on mining activities and land rights is made accessible to the community at large.</p> <p>The final report is in preparation.</p>
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>Peter Kofi Awuah, Minerals Commission, Ghana.</p> <p>Tesfaye Kassa, Mineral Licensing & Administration Department, Ministry of Mines of F.D.R. Ethiopia.</p> <p>Mark Thornton, Queensland Geological Survey. Chair Australian Government Geoscience Information Committee.</p> <p>Raymond Oliver, Information Management , Geoscience Australia. IUGS Commission for the Management and Application of Geoscience Information.</p>
<p>Summary of activities still to be completed and expected completion date</p>	<ul style="list-style-type: none"> • The prototype was to be trialed in a North African country. Our alternative proposal is to run a 2-day training short course as a follow-on to the IM4DC GIS Mining Short Course , or at a conference in Africa (the Africa GIS Conference in Ethiopia www.gsdi.org/gsdiconf/gsdi14/ in November 2013 would be ideal) • Make output available on web as an online tutorial. This may be compiled from the interim report content.
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • The GIS software prototype, which includes procedures for loading and maintaining tenement data. Demonstration queries for use case scenarios • Web mapping interface implemented with Google Earth and custom web service: http://ww2.gpem.uq.edu.au/CRSSIS/tools/im4dc/ • Online tutorial compiled from interim report (on going) • Paper on Temporal data management of mining land information <p>Below is an example of the interface to tenement information using Google Earth, as described in the interim report. Users can see the tenements list on the left side within the viewing window and click on a particular tenement which displays an information window. The time-slider can be used to see changes over time.</p>



Opportunities and Challenges for Local Food Procurement by Mining Companies in Southern Africa

Progress Report 10 July 2014

Delivery organisation and personnel	Kathryn Sturman and Fitsum Weldegiorgis Centre for Social Responsibility in Mining, University of Queensland					
Collaborating Organisation(s) and Key Personnel	Dr Ola Bello South African Institute of International Affairs					
Summary of Action Research Activity	Opportunities and challenges for local food procurement by mining companies in Southern Africa: Case studies in Mozambique and Tanzania					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Mining procurement, community, enterprise development					
Dates of activity	Commencement			Completion		
	December 2013			September 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Literature review & selection of case studies			Completed January-March 2014		
	Field research in Tanzania			Completed May 2014		
	Field research in Mozambique			Completed May 2014		
	Write up of case studies and integrated report			To be completed in August/September 2014		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$49,800			\$24,900		
Summary of findings to date	<p>The project selected two case studies: Tancoal, a small coal mining company operating in Ruvuma province of Tanzania, and Rio Tinto's coal mine in Tete province, Mozambique. The original proposal for a case study of Paladin's uranium mine in Malawi was changed after production was suspended.</p> <p>The case study in Tanzania profiles an effective local community development project by a single mining company on a smaller scale, which enables local women to grow and process food to supply the mine and other local markets. The case study in Mozambique focuses on a large multinational company's strategy to foster regional linkages between mining and agriculture, in the context of livelihood challenges for the local community resettled to the Mualadzi area.</p> <p>Interviews determined each company's policy and process of local food procurement, as well as other relevant contextual factors, such as resettlement of local communities and the wider community investment programs of each company. Data on the types of food and other products sourced locally was collected for both case studies.</p> <p>The potential in the Tanzania case study lies in the longevity, rather than the scale of coal mining in the region. The mine is planned to operate and expand over the course of more than 50 years. The market for food and other services will benefit a relatively small number of people; however, it could act as a springboard to other, more profitable and sustainable small business development for the local communities, such as charcoal briquette-making. It will provide local livelihoods and community development in the long-term, rather than regional economic growth based on large-scale agriculture. However, this case has set a best practise model and standard for other mining companies to follow.</p>					

	<p>The anticipated scale and duration of coal mining in Tete province, Mozambique means that the potential development effect of a successful local food procurement strategy is considerable, particularly if integrated into multi-stakeholder regional development plans, such as the Beira Agricultural Development Corridor (AgDevCo). However, local food procurement is conducted by Rio Tinto through ‘middlemen’, who negotiate contracts with local suppliers. It is therefore less direct and flexible than the process used by the smaller company in Tanzania. The comparative analysis of the two case studies focuses on these differences between a large company operating in an urban area, versus a small company operating in a remote area with only two small villages in the vicinity of the mine.</p>
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p><i>Mbinga district, Ruvuma province, and Dar es Salaam, Tanzania, interviews:</i></p> <ol style="list-style-type: none"> 1. Leah Kayombo, General Manager, Mbalawala Women’s Organization (MWO) 2. Edward Mkony, Tancoal Community Relations Manager 3. David Mason, Intra Energy Corporation, Director 4. Tarn Brereton, Tancoal Chief Operating Officer 5. Hamid (surname?), Site manager, Tancoal 6. Joyce Haule, Operations Manager, MWO 7. Ritha Semizigi, MWO financial manager 8. Arafat Sinare, Legal counsel to Tancoal 9. Bosco Kawonga, MWO chef for Ngaka mine 10. Kristom Mbawala, Ruanda village elder, leader of Usilale Women’s Group 11. John Raphael Komba, Ruanda village chairman 12. John Nyambo, Ntunduwaro village chairman <p>Informal and group meetings with Ruanda and Ntunduwaro villagers and the MP for Mbinga district.</p> <p><i>Tete and Maputo, Mozambique:</i></p> <ol style="list-style-type: none"> 1. Rama Krishna, Rio Tinto Procurement Manager 2. Samuel Matusse, Rio Tinto 3. July Choto, Kurimani Povo (KPC) Farm Technician 4. Kegan (surname?), Kurimani Povo (KPC) Field Supervisor 5. Mugumwa (surname?), Kurimani Povo (KPC) Regional Manager 6. Lucitano Francisco J. Fernando, UPCT Programme Official 7. Dorica Amosse Nota, UPCT Presidenta 8. Freddy Estevene, UPCT Vice President 9. Rosanne Whalley, AgDevco Country Manager 10. Mayanyi Sande Resettled Mualadzi Poultry farmer 11. Paulo Domingos, World Vision Programme Officer 12. Emmy Bosten, EnergyWorks Director (fmr RT)
<p>Summary of activities to be completed and expected completion date</p>	<ul style="list-style-type: none"> • Write-up of two country case studies – 12 August • Write-up of conference paper based on case studies – 21 August • Presentation of paper at IESE Conference in Maputo – 25 August (Dr Ola Bello) • Completion of project report – 14 September • Post country case studies on CSR website and IM4D link – 30 September
<p>Outputs, such as publications, software, systems, databases, webpages and training programs</p>	<ul style="list-style-type: none"> • Presentation of conference paper in Mozambique – 25 August • Write-up conference paper for journal submission – 30 November • Webpage of country case studies on CSR website and IM4D link • Slide presentation on case studies on local food procurement to be used in IM4DC training programs (e.g. included in Kathryn’s presentation to the IM4DC Resource Governance Master Class in July 2014)
<p>In-kind contributions</p>	<p>\$5,000 in kind contribution of Dr Bello’s time from the South African Institute of International Affairs</p>

Rapid Assessment Frameworks for Mining and Regional Development

Progress Report 23 May 2014

Delivery organisation and personnel	Matthew Tonts and Sarah Prout School of Earth and Environment, University of Western Australia					
Collaborating Organisation(s)	Professor Saleem Ali Centre for Social Responsibility in Mining, University of Queensland					
Summary of Action Research Activity	The purpose of this project is to develop a novel framework for the rapid assessment of the impact of mining on development. Central to this is the development of reliable indicators of development that can be applied in, or at the very least, adapted to a range of different local and regional contexts. These will include a range of economic, social, health and political indicators. The framework potential offers IM4DC, and the wider Mining For Development initiatives, a key tool to test and evaluate the underlying hypothesis and focus underpinning the centre and its activities.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords	Mining; development; rapid assessment; indicators; toolkit					
Dates of activity	Commencement			Completion		
	17th June 2013			28th June 2015		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Discussion Paper 1 (Indicator Working Paper)			Completed (copy provided)		
	Refereed Journal Paper			Substantially completed. Submission due June following final formatting for the journal <i>Society and Extractive Resources</i>		
	Draft Indicators Workshop			A series of indicator workshops were held with the project team and in-country partners: <ul style="list-style-type: none"> Perth 28 Aug 2013 – Project team UQ/UWA Brisbane 12 Nov 2013 – Project team UQ/UWA Ghana 2 Apr 2014 – UWA/GIMPA in-country partners Zambia 8 Apr 2014 – UWA/Copperbelt University Perth 2 May 2014 – Project team UQ/UWA 		
	IM4DC Update Report			Completed		
	Critical analysis and review of the framework workshop			A project meeting was held in Perth 2 May 2014, where results from the series of indicator workshops were discussed and analysed, leading to further revisions of Indicator Working Paper		
	IM4DC Update Report			Completed in May 2014 due to early completion of milestone 5		
Budget	Total budget			Payments to date		
	\$515,000 (original allocation); 592,250 (revised)			\$100,000 to UWA; \$50,000 to UQ		
Summary of findings to date	The key finding from the literature review is that there is currently a gap in both the literature and applied research on conceptual frameworks for assessing resource impacts on development at local and regional scales, that takes into account stakeholder perceptions of the relevance and importance of various indicators. Based on the literature review, it was determined that it would be useful to select and organise the indicators in accordance with a 'five capitals framework'. The five capitals framework is based on the underlying theory of the sustainable livelihoods approach. Alternately constructed as a way of thinking, a set of principles and a framework for analysis, the sustainable livelihoods approach draws together several major ideas in international development and has been tested empirically in various contexts since the 1990s.					

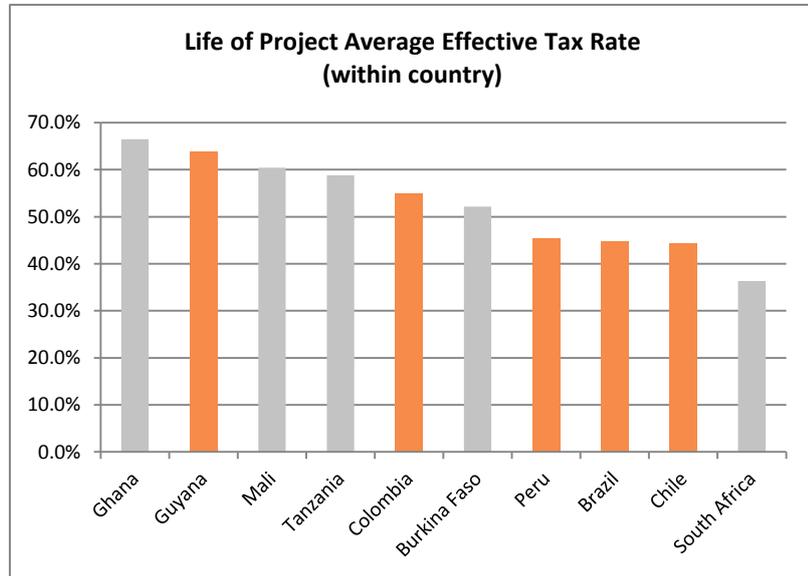
	<p>Underlying the sustainable livelihoods approach and the five capitals framework is the theory that people draw on a range of capital assets to further their livelihood objectives. Indicators measuring development in these terms are generally grouped under each of the ‘capitals’ as follows:</p> <ul style="list-style-type: none"> • Human capital: eg. labour power, health and nutritional status, skills and knowledge • Natural capital: eg. access to land, water, wildlife, flora, forest • Social capital: ie. social trust, norms and networks that people can draw upon to solve common problems • Physical capital: eg. houses, vehicles, equipment, livestock • Financial capital: eg. savings, gold/jewellery, access to regular income, net access to credit, insurance <p>To date, there has been limited application of sustainable livelihoods approach and the five capitals framework in mining contexts. The Indicator Working Paper sets out a proposed framework of indicators using this approach tailored to take into account known impacts of mining from the literature.</p> <p>The indicator workshops found that from an initial selection of more than 50 indicators, approximately 25 would be the most useful in the context of measuring the impacts of mining on local and regional development.</p> <p>The indicator workshops also found there was strong convergence amongst participants on a certain range of indicators that were viewed as most important, as more fully explained in the Indicator Working Paper.</p> <p>In the course of the workshops some ambiguity and difference of opinion arose as to whether the indicators valued as important by participants and stakeholders can be directly linked to mining impacts, or whether they are rather an expression of what stakeholders view as desirable objectives of development per se.</p> <p>At the project meeting on 2 May 2014, where a critical analysis and review of the indicator workshops was undertaken, it was decided to revise the proposed journal article and Indicator Working Paper, to address this ambiguity and better link the selected indicators to known impacts of mining on development in the literature.</p>																				
<p>Key regions and/or countries visited or involved and key people and organisations engaged to date</p>	<p>Ghana <i>Dates visited:</i> 1 April to 7 April 2014 <i>Organisations engaged:</i> Ghana Institute of Management and Public Administration (GIMPA), Artisanal Mining Network, Friends of the Nation, African Centre for Energy Policy <i>Key People:</i> Ms. Violet Bawuah, Director (Training), GIMPA; Mr Ben Boakye, African Centre for Energy Policy; Solomon Ampofor, Friends of the Nation; Nii Mensah, Artisanal Mining Network</p> <p>Zambia <i>Dates visited:</i> 7 April to 14 April 2014 <i>Organisations engaged:</i> Copperbelt University, Kitwe City Council <i>Key people:</i> Professor John Lungu, School of Business and Management; Professor Jacob Mwita, School of Natural Resources and Management; Ms. Yaki Namiluko, School of Mining; Ms. Priscilla Mushiba Kachapulula, School of Built Environment; Ms. Martha Mutalange, Kitwe City Council</p> <p>Rwanda <i>Dates visited:</i> 25 January to 31 January 2014 <i>Organisations engaged:</i> University of Rwanda <i>Key people:</i> Professor Rama</p> <p>Indonesia <i>Dates visited:</i> 28 April to 1 May 2014 <i>Organisations engaged:</i> University of Indonesia <i>Key people:</i> Professor Dody Prayogo</p>																				
<p>Summary of activities to be completed and expected completion date</p>	<table border="1"> <thead> <tr> <th>Activity to be completed</th> <th>Expected completion date</th> </tr> </thead> <tbody> <tr> <td>1. Discussion Paper 2</td> <td>July 2014</td> </tr> <tr> <td>2. Refereed Journal Paper 2</td> <td>August 2014</td> </tr> <tr> <td>3. IM4DC Update Report</td> <td>December 2014</td> </tr> <tr> <td>4. Review and refine the final analysis and reporting protocols workshop</td> <td>February 2015</td> </tr> <tr> <td>5. Refereed Journal Paper 3</td> <td>February 2015</td> </tr> <tr> <td>6. Publication and communication of the Rapid Assessment Framework</td> <td>March 2015</td> </tr> <tr> <td>7. Training Program</td> <td>April 2015</td> </tr> <tr> <td>8. Refereed Journal Paper 4</td> <td>April 2015</td> </tr> <tr> <td>9. IM4DC Update Report</td> <td>April 2015</td> </tr> </tbody> </table>	Activity to be completed	Expected completion date	1. Discussion Paper 2	July 2014	2. Refereed Journal Paper 2	August 2014	3. IM4DC Update Report	December 2014	4. Review and refine the final analysis and reporting protocols workshop	February 2015	5. Refereed Journal Paper 3	February 2015	6. Publication and communication of the Rapid Assessment Framework	March 2015	7. Training Program	April 2015	8. Refereed Journal Paper 4	April 2015	9. IM4DC Update Report	April 2015
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9. IM4DC Update Report	April 2015																				
<p>Outputs</p>	<p>Journal article(s): A draft scholarly paper offering a critical analysis of ‘mining and indicators of development’ has been prepared for the Journal of Extractive Industries. Three other papers are planned.</p> <p>A training programme on Rapid Assessment Framework is being developed.</p>																				
<p>In-kind</p>																					

Evaluating the Attractiveness of Fiscal Regimes for New Gold Developments: African and South American Peer Country Comparisons

Progress Report August 2014

Delivery organisation and personnel	Allan Trench Centre for Exploration Targeting (CET), UWA					
Collaborating Organisation(s) and Key Personnel	John Sykes: Department of Mineral & Energy Economics, Curtin Graduate School of Business, Curtin University of Technology Will Featherstone: Department of Spatial Sciences, WA School of Mines, Curtin University of Technology					
Summary of Action Research Activity	Analysis of the fiscal regimes that apply to gold mining in contrasting jurisdictions to determine relative attractiveness					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Mineral Policy, Government-Take, Average Effective Tax Rate, Mineral Royalties					
Dates of activity	Commencement			Completion		
	September 2013			Originally June 2014; now expected October 2014		
Status	<input type="checkbox"/> Yet to commence		<input checked="" type="checkbox"/> On Going		<input type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Financial Model of Gold Mine in 10 contrasting jurisdictions			Draft model complete Verification and error checking outstanding		
	Collation of mineral policy and fiscal regime information pertinent to gold mining in 10 different jurisdictions			Complete		
	Analysis of relative attractiveness of mineral policy			Complete (subject to verification of financial model)		
	Write-up of key insights and publication/socialisation of research findings			Not yet commenced: The study write-up will involve a number of academics from the CET to further validate and draw out the study's conclusions to achieve highest impact		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$50,000			\$25,000		
Summary of findings to date	The project is now well advanced. The following stages have been completed: <ol style="list-style-type: none"> 1. Collation of detailed information on the royalties, corporate tax, withholding tax and meta-data fiscal information for all 10 countries 2. Creation and testing of a financial model pertaining to a 'standardised' gold mine in each country 					

3. Determination of the collective effect of the fiscal policy on the returns to both public (Government) and private sectors (mining company investors and debt providers). The ‘same’ mine has been modelled for mine development under reasonable gold market conditions and mining cost assumptions, but ‘moving’ the location of the mine to each of the 10 countries in the study



The key insights from the study – other than the ranking of the different jurisdictions – is that the headline royalty and corporate tax rates are not of themselves a trustworthy simple indicator of the attractiveness of each jurisdiction.

The write-up of the study will focus on this aspect; identifying methods through which:

- The industry can increase transparency of the attractiveness (or otherwise) of a project
- The Government can better communicate to citizens the magnitude of its expected return

The impact of the study could be highly significant in shaping the way public and private sectors interact in order to better communicate the economic impacts of gold mine developments.

<p>Key regions and/or countries visited or involved; key people and organisations engaged to date</p>	<p>The study has researched current mineral policy in 10 significant gold-producing countries.</p> <p>Africa: Burkina Faso, Ghana, Mali, South Africa, Tanzania</p> <p>South America: Brazil, Chile, Colombia, Guyana, Peru</p>
<p>Summary of activities to be completed and expected completion date</p>	<p>Notably, some of the preliminary findings of this project have been incorporated into teaching materials presented at the IM4DC Mineral Policy and Economics Masters Class, delivered over a period of 4 weeks in June-July 2014.</p> <p>The preparation of the results of the study for publication will continue through August-October.</p>
<p>Outputs, such as publications, software, systems, databases, webpages and training</p>	<p>The initial published output from this study will target publication in the CET Newsletter in December 2014, thereby communicating the results to over 60 companies who are CET corporate members. The financial model will be made available via the CET web portal thereafter (and via IM4Dc web channels as required).</p>
<p>In-kind contributions provided to the project/activity</p>	<p>To date, Professor Allan Trench and Mr John Sykes of the CET have committed significant time to the project over and above the budgeted level for the project. This additional contribution has been absorbed into the CET budget as an in-kind contribution. Materials produced will be used in all future IM4Dc mineral economics courses.</p>

Mapping and Developing a Landscape-Scale Ecosystem Services Metric for Promoting Sustainable Mining in Southwest Madagascar

Progress Report 7 April 2014

Delivery organisation and personnel	Nayruti Trivedi and Malika Virah Sawmy Institute of Environmental Studies, University of New South Wales					
Collaborating Organisation(s) and Key Personnel	WWF Madagascar					
Summary of Action Research Activity	The goal of this study was to contribute towards a better understanding of ecosystem services and the current and future impacts of current conservation and mining policies on these services. Within this framework, the specific objectives of this study were to: (1) quantify key ecosystem components linked to ecosystem services in different community forest zones and savannah zones around the park; (2) measure the condition of key ecosystem components through time; (3) investigate relationships between maintenance or degradation of ecosystem components and social factors.					
Relevant IM4DC Key Theme	<input type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input checked="" type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Ecosystem services Southwest Madagascar					
Dates of activity	Commencement			Completion		
	December 2013			June 2014		
Status	<input type="checkbox"/> Yet to commence		On Going		<input checked="" type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Analysis of satellite images			Analysis of satellite images		
	Analysis of social surveys			Conducted social surveys		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$9,110					
Summary of findings to date	<ul style="list-style-type: none"> Highly biodiverse forested sites are being put under park management or community forest management in SW Madagascar At the same time, less biodiverse sites such as savannahs are being increasingly put under mining concessions Both mining and conservation policies are seriously affecting ecosystem provisioning for local communities In fact, both policies, intended to balance national interest for conservation and economic development, have not taken into consideration sustainability of their policies in terms of livelihoods impacts of changes in ecosystem provisioning This has the potential to create more harm than good to both livelihoods and conservation of biodiversity 					

Key regions and/or countries visited or involved and key people and organisations engaged to date	Madagascar
Summary of activities to be completed and expected completion date	
Outputs, such as publications, software, systems, databases, webpages and training programs	
In-kind contributions provided to the project/activity	Time of researchers

Improving Outcomes for Government-managed Resettlement in Vietnam

Progress Report July 2014

Delivery organisation and personnel	Mai Vo – PhD candidate Centre for Social Responsibility in Mining, Sustainable Minerals Institute, the University of Queensland					
Collaborating Organisation(s) and Key Personnel						
Summary of Action Research Activity	The overarching aim of this project was to improve the implementation and governance processes of resettlement through enhancing knowledge, practice and policy development in Vietnam. To achieve this aim, institutional challenges and limitations of government-managed resettlement in Vietnam were identified, based on the results of fieldwork carried out in a mine-induced resettlement project underway in Central Vietnam – <i>Thach Khe</i> Iron Ore mine. Key findings associated with institutional challenges and limitations were reviewed and examined through intensive engagement with multiple stakeholder groups, with the aim of proposing practical recommendations for improving the outcomes of government-managed resettlement in Vietnam. The main research methods applied were semi-structure interviews, focus group discussions and workshops. A total of 55 stakeholders participated in the research.					
Relevant IM4DC Key Theme	<input checked="" type="checkbox"/> Governance and Regulation		<input checked="" type="checkbox"/> Community and Environmental Sustainability		<input type="checkbox"/> Operational Effectiveness	
Relevant IM4DC Strategic Programing Area	<input type="checkbox"/> Regional and local economic and social development	<input checked="" type="checkbox"/> Sub-national governance of the mining sector	<input checked="" type="checkbox"/> Minerals policy, regulation and agreements	<input checked="" type="checkbox"/> Community engagement and consultation	<input type="checkbox"/> Health and safety of workforces and resources communities	<input type="checkbox"/> Environmental management and regulation
Keywords (Maximum 5)	Government-managed resettlement, institutional challenges, capacity, mining, Vietnam					
Dates of activity	Commencement November 2013			Completion March 2014		
Status	<input type="checkbox"/> Yet to commence		<input type="checkbox"/> On Going		<input checked="" type="checkbox"/> Completed	
Progress in activities	Planned			Undertaken to date		
	Semi-structured interview			Completed		
	Focus group discussions			Completed		
	Workshops			Completed		
Budget	<i>Total budget</i>			<i>Payments to date</i>		
	\$10,000			\$10,000		
Summary of findings to date	<p>Key findings on institutional challenges and limitations under government-managed resettlement in Vietnam, particularly for the <i>Thach Khe</i> Iron Ore mine project:</p> <ul style="list-style-type: none"> • Unclear and confusing responsibilities • Inadequate representative structure • Lack of collaboration between government agencies • A lack of capacity and resources in government, particularly at the local level where responsibility for implementation sits • Marginalisation of the company and a general lack of capacity • Failure to ensure, prior to project approval, that funds were available to cover the costs of resettlement • Poor communication processes • An absence of external monitoring and oversight <p>Recommendations for improving the outcomes of government-managed resettlement in Vietnam:</p>					

	<ul style="list-style-type: none"> • <i>Process standardisation:</i> The Vietnamese government should develop a National Resettlement Policy and issue relevant legal instruments to fill the current policy void. In developing that policy and framework, the Vietnamese government should take into account the follow aspects: <ul style="list-style-type: none"> ○ The design of development projects so as to minimise or avoid involuntary resettlement wherever possible ○ The enhancement, or at least protection, to the maximum extent possible of livelihoods of affected people where involuntary resettlement is unavoidable ○ The minimisation and full compensation of economic and asset losses incurred by affected people prior to physical relocation ○ The economic and social assistance provided to affected people along with additional assistance to vulnerable groups and ethnic minorities ○ Compulsory resettlement planning to be an integral part of the project design ○ Involvement of key actors in all stages of the project cycle of the resettlement process ○ Public participation and consultation process to be an integral part of all resettlement activities ○ All civil works should start only after compensation payments for affected people are completed • <i>Organisational Human Resources:</i> The identification of agencies responsible for resettlement activities should be clearly defined and assigned at both national and local levels • <i>Public participation in the resettlement process:</i> Affected people and communities should be actively involved and consulted during the resettlement process and proper approaches for public participation should be clearly stated in the regulatory policy and framework in Vietnam
Key regions and/or countries visited or involved and key people and organisations engaged to date	<p>Vietnam: Hanoi, Ha Tinh, Hue</p> <p>Organisation engaged:</p> <p>Ministry of Industry and Trade, Vietnam</p> <p>Ha Tinh University, Vietnam</p> <p>Ha Tinh Provincial People’s Committee</p> <p>Thach Ha District People’s Committee, <i>Thach Khe</i> Commune People’s Committee, Pan Nature Organisation, Vietnam</p> <p>Hue University</p> <p>Key people: Leaders of organisations engaged and affected people in <i>Thach Khe</i> Iron Ore mine project</p>
Summary of activities to be completed and expected completion date	All desk-top and fieldwork activities were completed
Outputs, such as publications, software, systems, databases, webpages and training programs	<p>Publication:</p> <p>Vo, M. and Brereton, D. (2014). Involuntary Resettlement in the Extractive Industries: Some Lessons from Vietnam. In: <i>Governance of Extractive Industries in Southeast Asia: Any Regional Framework for ASEAN</i>. ASEAN Study Centre for the University of Indonesia and the Institute of Essential Services Reform.</p> <p>3 workshops: one with government officials at province and district level; one with representatives from local authorities, the mining company and representatives of affected people; and a community forum</p>
In-kind contributions provided to the project/activity	N/A