Pacific Regional Training Workshop on Environment, Community, Health & Safety

Suva, Fiji,
1-4 December
2015

Programme Partners:

Event Partners:

Empowered lives.
Resilient nations.

ACP-EU Development Minerals Programme.
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About the ACP-EU Development Minerals Programme: The ACP-EU Development Minerals Programme is an initiative of African, Caribbean Pacific (ACP) Group of States, coordinated by the ACP Secretariat, financed by the European Commission and United Nations Development Programme (UNDP) and implemented by UNDP. This €13.1 million capacity building program aims to build the profile and improve the management of Development Minerals in Africa, the Caribbean and the Pacific. The sector includes the mining of industrial minerals, construction materials, dimension stones and semi-precious stones.

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Introduction and Background

On December 1st to 4th 2015, the Government of Fiji and the Pacific Community partnered with the African, Caribbean, Pacific (ACP) Group of States, the European Union and the United Nations Development Programme to co-host the Pacific Regional Training Workshop on Environment, Community, Health & Safety for the ACP-EU Development Minerals Programme.

The DM sector includes the mining of construction materials (e.g. gravel, sand, clay and limestone), dimension stones (e.g. marble and granite), industrial minerals (e.g. gypsum, potash, salt, bauxite, graphite) and semi-precious stones. While these commodities may be considered of low value to international markets, they are of critical importance to domestic economies and are of incedible value to development. The DM sector has closer links with the local economy and the potential to generate more local jobs, and can, therefore, have a greater impact on reducing poverty.

The workshop was delivered over four days, including a field visit to three quarry sites. The training workshop in Suva is one of six workshops to be held in each of the ACP geographical divisions (East Africa, West Africa, Central Africa, Southern Africa, Caribbean, Pacific). The training was developed and delivered by the UNDP program implmentation team, with the support of two internationally recognised trainers. The Secretariat of the Pacific Community supported the UNDP programe team with advice, training and guidance materials to ensure that the curricula is aligned with the regional and national governance frameworks. Speakers with thematic expertise from a range of stakeholder groups provided important contributions in the delivery of the curricula.

The training was attended by 45 participants (see Appendix 1) from 6 Pacific nations (Papua New Guinea, Fiji, Solomon Islands, Vanuatu, Samoa and Tonga). The delegates represented public stakeholders such as regulatory agencies and local governments; private stakeholders such as small-scale mining enterprises, mid-sized quarries, mining and quarry associations, and business development centres; and social stakeholders such as civil society organizations and community groups.

The course introduced the participants to the Development Minerals (DM) sector specifically looking at the issues of environment, community, health and safety, business development and quarry management. The workshop was designed as a capacity building exercise drawing on south-south knowledge exchange, international best practices, interactive workshop methodologies, and field visits so as to grow awareness and build professional expertise aimed to improveld institutional capacity, governance, and management skills around the DM sector.

Training Workshop Objectives

The objective of the regional training workshop was to provide an opportunity for the selected participants to exchange experiences, gain awareness, work through country-specific governance issues, and observe field practices to improve the performance of this largely neglected extractive sector.

In particular, the training workshop provided the participants with:

- training and guidance materials prepared by the UNDP and international experts;
- 'knowledge sharing' exercises to raise awareness around understood and perceived issues on the topics of environment, community, health and safety, and business development;
- first-hand observation of quarry management noting in particular strengths, weaknesses, opportunities and gaps in areas of environment, community, health and safety, and business development performance;
- south-south knowledge exchange during non-workshop times for better understanding of regional and country-specific challenges around the DM sector.

As part of sponsorship, training participants were required to develop a return-to-work plan on a project that they undertook on their return, applying the knowledge and skills gained from the workshop to influence change. Return to Work projects are a valuable mechanism for workshop participants' personal and professional development. Periodic follow-up on the progress of implementation of the plan was undertaken by UNDP, with the first update at the 2-month mark and periodic follow-ups thereafter.

Workshop Participants

Forty-five (45) participants were selected to attend the workshop in Suva (see Appendix 1). Delegates represented six countries, namely Papua New Guinea, Fiji, Solomon Islands, Vanuatu, Samoa and Tonga.

Process for selection of training participants

The Pacific Regional Workshop on Environment, Community, Health and Safety used a competitive selection process and the submission of a detailed request for applications. The applications were assessed, with special care taken to ensure that all four key stakeholder gorups of the programme were represented, while ensuring adequate representation of women participants. The programme focal points within government ministries of the participating countries supported the selection process.

The Request for Applications was publicly announced on the 16th of October. The Request was sent to the Programme focal points in the represented countries, the embassies of the represented countries in Brussels, UNDP Country Office staff, and a large list of interested stakeholders. The announcement was posted in a range of for public fora.

The selection criteria for the participants was as follows:

- Experienced professionals working in at least one of the fields of environment, community, gender, or health and safety related to the mining of low value commodities.
- Minimum of 3 years of relevant professional experience in capacity building related to mining and sustainable development with a strong background in artisanal and small scale mining of low value minerals and materials.
- Working knowledge of one or more of the following commodity subsectors an advantage: construction materials; dimension stones; industrial minerals and semi-precious stones.
- Currently employed by an organization with relevance to the training thematic areas (unemployed participants will not be considered).
- Familiarity with international standards as well as industry best practice on mining governance, health & safety, environment, gender and community considered an asset.

Training Course delivery

Trainers & Guest Speakers

The trainers of the workshop were as follows:

- Associate Professor Carmel Bofinger, Minerals Industry Safety and Health Centre, Sustainable Minerals Institute, University of Queensland, Australia
- Dr Warwick Browne, RareFind, Cambodia
- Lacina Pakoun, Technical Specialist, ACP-EU Development Minerals Programme, UNDP
- Dr Daniel Franks, Chief Technical Advisor & Program Manager, ACP-EU Development Minerals Programme, UNDP

The guest speakers of the workshop included:

- Mr Akuila Tawake from the Secretariat of the Pacific Community who presented on the low value commodities in the Pacific
- Ms Sally Bailey from the WWF – Pacific who spoke on the environmental impacts of low value commodities in the Pacific.

Dignitaries who made remarks at the Opening Ceremony of the Workshop included:

- Mr. Peter Batchelor, Regional Manager, UNDP Pacific Centre
- Ms. Osnat Lubrani, UNDP Resident Representative Fiji
- Hon. Mereseini Vuniwaqa, Minister for Lands and Mineral Resources, Fiji
- Amb. Andrew Jacobs, Head of the EU Delegation to the Pacific

Course Content

The course content comprised practical elements and theoretical modules for better equipping the participants. The main topics of the course included: general concepts of Development Minerals and LVMM, environmental issues, gender and community health, community relations, dialogue and rights, local content and value chain development, policies and regulations and the return to work plans. The curicula combined trainer and guest presentations, and group knowledge sharing exercises. On day three the participants had a unique opportunity of carrying out field work and to observe ***in locus*** some of the issues discussed in the course. On the final day the participants developed return to work projects. The complete agenda for the Fiji course is included in Appendix 2.

Module on the General Concepts of Development Minerals & LVMM

The main objective of this module was to standardize the knowledge of the participants on the basic concepts of Development Minerals and LVMM. The module discussed the different uses of the four LVMM categories, namely industrial minerals and rocks, dimension stones, construction material and semi-precious stones.

The module was delivered through a formal presentation, a guest presentation by Mr Akuila Tawake, Pacific Community, and was followed by group work, where the participants were grouped by countries and answered the following questions:

1. Which of the described materials are produced in your country?
2. Describe the models of production and licensing procedures.
3. What are the main uses of industrial material mined in your country?
4. Describe the market structure including prices where possible.

At the end the groups made presentations of their discussions and responses as way to share the knowledge with other countries (see Table 1). This knowledge sharing session was followed by short plenary discussions seeking clarifications and exchange of information.

The participants described a range of DMs mined in the Pacific region using surface extraction, mainly quarrying, with some dredging operations. The licensing arrangements

described were a mix of formal requirements and local agreements with land owners. With the exception of some commodities mined in Fiji which are exported, all other DMs are used for local construction purposes.

Module on the Environmental Impacts

This module introduced the principles of environmental impacts resulting from DM operations at all stages, namely: exploration, mining, processing or treatment and mine closure and decommissioning. The module elaborated further on the environmental impacts resulting from DM operations, especially the air and water, dust, noise and vibration pollution. The module included a presentation from a guest speaker Ms Sally Bailey from WWF – Pacific.

In the knowledge sharing component The participants worked in country groups to identify the environmental impact of the most important DM commodities mined in their country. This exercise built on the knowledge sharing from Module 1. The environmental issues identified included the direct environmental effects eg. dust and noise, to others that affected the local communities in the long term eg loss of farming land or loss of biodiversity. The identification of controls was consistent with the information from Module 1 in terms of the formal regulatory controls. All countries reported that an Environmental Impact Assessment (EIA) was needed for development. The discussion relating to the controls indicated that although the regulatory requirements are present, these were sometimes not monitored effectively. This often related to the capacity and availability of human and physical resources in the regulatory bodies to provide the monitoring. Details are shown in Table 2.

Module on the Health & Safety and Gender

The main objective of the module was to introduce the health and safety issues that may arise from the LVMM operations at all stages of development. The Module discussed occupational health & safety, community health and safety and gender.

The module discussed in detail the critical issues related to OHS in the LVMM operations, describing the roles of both employer and employee. The module also highlighted the advantages of zero accidents and actions geared towards prevention of accidents and appropriate working environment and conditions. The fact that the communities are the direct host of LVMM operations means that negative social, environmental and health impacts may also rise in such communities. The module also discussed the responsibilities, risks and vulnerabilities.

The participants again worked in country groups to identify the workplace health and safety impacts of the most important DM commodities mined in their country. They were asked to do this in pictures as shown in Figures 3 – 9.

This exercise built on the knowledge sharing from Modules 1 and 2 and strongly identified the relationship and interdependence of workplace health and safety issues and environment

issues. The relevant controls that should be in place for the workplace tended to focus on PPE with limited recognition of the other controls that could be implemented. The controls for community health and safety better recognised the range of potential controls that could be used. The regulatory requirements for health and safety in the workplace are present, and again issues were identified in terms of the effectiveness of these monitoring processes similar to the environmental issues ie physical and human resource limitations.

Figure 1 Solomon Islands Group

Figure 2 Samoa Group

Table 1 – Development Minerals in the Pacific

Country	Commodity – Mined or identified	Production type	Licensing arrangements	Use – In country or export	Market – How are commodities sold
Fiji	River gravel	Surface extraction	• Statutory framework including • Environment Management • Quarry Act • Native Land Trust Act (NLTA) • Crown Land Act • Rivers and Streams Act • CP74	Local Export	Raw materials for Construction Infrastructure
	Sand	Dredging Surface extraction Digging		Local Export	Raw materials for Construction Infrastructure
	Limestone/ sandstones	Surface extraction		Local Export	Agriculture Roads Sold as lime Construction
	Hard rock – basalt and andesite	Surface extraction/ Quarrying		Local Export	Construction Coastal protection
	Coral	Surface extraction	Fisheries Act Both formal and informal frameworks	Local	Construction Aquarium trade

Table 1 – Development Minerals in the Pacific

Country	Commodity – Mined or identified	Production type	Licensing arrangements	Use – In country or export	Market – How are commodities sold
Vanuatu	Limestone	Surface	Formal Quarry Act No 9 of 2013	Local	F$65/$m^3$
	Volcanic sand	Surface Dredging	Formal Quarry Act No 9 of 2013	Local	F$60/$m^3$
	Beach sand	Surface	Formal Quarry Act No 9 of 2013	Local	F$40/$m^3$
	Basalt	Quarry	Formal Quarry Act No 9 of 2013	Local	F$20/$m^3$
	Scoria	Surface	Formal Quarry Act No 9 of 2013	Local	F$3/$m^3$
	River pebbles	Surface Dredging	Formal Quarry Act No 9 of 2013	Local	F$20/$m^3$
	Tuff	Quarry	Formal Quarry Act No 9 of 2013	Local	F$3/$m^3$
PNG	• Aggregates • Gravel • Sand • Basalt • Limestone	Surface mining Quarry	• Environmental permits for quarries • Compliance to safety requirement for mining purposes (Mining Act 1992) • Drill and Blast permit form Labour Dept Current • Internal arrangement with land owners and companies	Local	Raw materials – gravel for roads-K1.50/m^3 Private K5.00/m^3 Processed gravel K60/m^3 Processed aggregate K100/m^3

Table 1 – Development Minerals in the Pacific

Country	Commodity – Mined or identified	Production type	Licensing arrangements	Use – In country or export	Market – How are commodities sold
Tonga	Aggregates Gravel Sand Dust – crushed/ limestone Boulders Top soil	Surface extraction Dredging Beach mining	Formal arrangements under Mineral Act Business/license/ mining	Local	Aggregates - 60/m^3 Gravel - 26/m^3 Sand - 80/m^3 Dust – 60/m^3 Boulders - 60/ m^3 Top soil - 60/ m^3
Samoa	Gravel – sand Aggregate	Surface mining	Legal and formal arrangements • Mining permit • DC development consent	Local	Residential purposes - $5/$m^3$ Commercial purposes - $10/$m^3$
Solomon Islands	Construction • Sand • Gravel • Limestone Industrial • Limestone • Clay • Gravel Dimension Stones • Granite • Limestone • Schists Semi-precious - Present but not mined eg quartz, garnet	Surface extraction Crusher (Sieve into sizes) Marketing	• Land owners consent and company application • Environmental management plan and quarry plan • Mineral board decisions • Building material permit	Local use in Roads Wharves Bridges Buildings Bricks	Local market

Table 2 – Environmental Impacts

Country	Commodity – Mined	Environmental Impacts	Controls
Fiji	Limestone by quarrying	Noise Dust Vibration Surface run off Erosion Land loss Biodiversity loss	Regulations • Environmental impact assessment • Environmental management plan • Quarry management plan Monitoring Awareness Resource estimation
	River gravel by extraction	Bank erosion Sedimentation/siltation Biodiversity loss Geomorphological change	Regulations Monitoring Resource estimation Awareness Environmental impact assessment process
Vanuatu	Sand - surface mining	Coastal erosion Water pollution Noise pollution Loss of biodiversity Spillage during transport Landscape disturbance	Quarry management plan Beach profile Impose ban on sand mining Environmental impact assessment Monitoring Legislation/regulations Occasional permits to limit volume mined eg 500m^3
	Sand - dredging	Flooding/loss of properties Water pollution Spillage from machinery Increase water depth/ width Positive impacts • Control of algal bloom • Reduce backflow sediment • Straighten river channel	

Table 2 – Environmental Impacts

Country	Commodity – Mined	Environmental Impacts	Controls
PNG	River gravel used locally to build roads, houses and buildings. Excavated from river beds and processed in to various aggregate sizes eg road base, builder mix, sealing chips, fine sand	Silt/sedimentation Erosion Flooding and inundation River bed degradation Alteration of river bed Loss of biodiversity Water quality issues Incidental spillage from operating equipment Loss of food gardens, land and farming land	River management training For downstream communities • Provide alternative water supply • Compensation for land owners Build gabion baskets along the water waysRe-forestation Settling ponds Regulatory controls • Environment Act 2000 – level 2 activity needs extraction permit • Environmental management plan
	Limestone quarry – surface extraction	Noise Dust Clearing of vegetation and top soil Effect on flora and fauna Air pollution Contamination Scrap metal dumping	Compliance to environmental permitting requirement Compliance to safety requirement
Samoa	Basalt quarry • Drill, break rock • load into trucks	Dust Noise Air pollution Vibration, Loss of habitat	Development consent conditions/ PUM Act 2004 Environmental impact assessment regulations – Comprehensive environmental assessment report (CEAR) Noise policy
Tonga	Limestone mining • Blasting • Mechanical excavation	Upstream Clearance (deforestation) Road construction Plant loss Fuel spills Blasting (vibration) Crushing aggregates Downstream Dust Noise Vibration	Surveillance management plan Extraction guide Environmental impact assessment

Table 2 – Environmental Impacts

Country	Commodity – Mined	Environmental Impacts	Controls
Solomon Islands	River gravel • using excavator to extract from river • loaded in dump trucks • processing site - crusher	Extraction site • Impairment of water quality • Bank erosion • Ecological disturbance Transportation • Dust • Noise • Fuel spillage Processing • Dust • Noise • Vibration	Regulations • EIA – environment Act 1998: Environment Regulation s2008 • MMA 1990 • MMR 1996 • Rivers and Waters Act 1976 • Policies Community participation • Education talks and awareness raising

Figure 3 Fiji Situation 1

Figure 4 Fiji Situation 2

Figure 5 PNG Situation

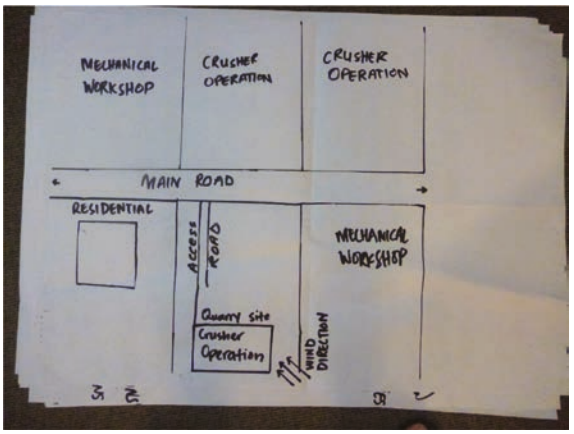

Figure 6 Samoa Situation

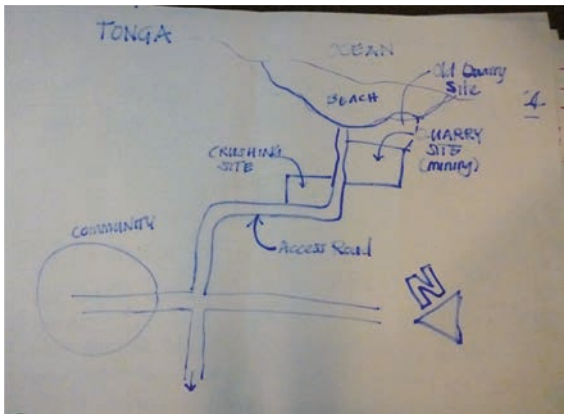

Figure 7 Tonga Situation

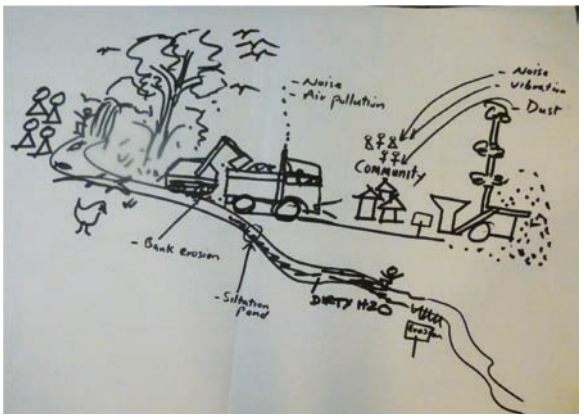

Figure 8 Solomon Islands Situation

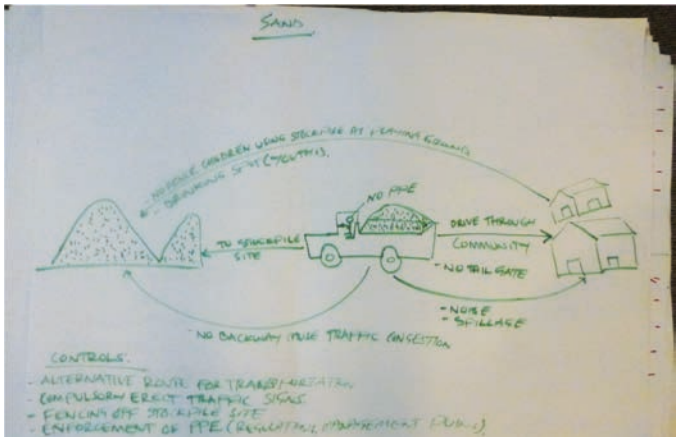

Figure 9 Vanuatu Situation

Module on Community Relations, Dialogue and Rights

The main objective of this module was to introduce the concepts on *Community relations, dialogue and rights in the LVMM operations*. The module discussed the ways to engage with the communities in terms of Best Practices and presented a Standard Grievance Management Mechanism. The module also elaborated on community relations challenges and perspectives for ASM of LVMM projects.

The Module on Community Relations Dialogue and Rights in the LVMM operations was delivered by Lacina Pakoun, Technical specialist, UNDP. He presented his experiences on the topic including from a variety of sources and practice.

The Module included a roleplay on stakeholder engagement. Participants in the workshop took the roles to represent a cross-section of stakeholders required for the role play. The details of the role play, and minutes from the exercise, are included in Appendix 3. The role play was very successful due to the strong engagement of the various country participants (see Figures 10-11).

Module on Local Business and Value Chain Development

The Module recognized that the nature of LVMM has more potential to develop local linkages and has ability to integrate into the local economy by tapping into the lower end of the value chain (i.e. construction industry and services - sand, bricks, aggregates, tiles, etc.) which require limited capital and limited inputs and energy.

The main objective of this module was to map and harness the potential linkages that can be developed or induced by LVMM operations. The Module also explored the mining value chain for LVMM and enhanced the main linkages that the sector can generate. The Module also introduced the concepts of Value Addition vs Value Added.

The module was delivered through formal presentation. The planned knowledge sharing excercise for this module was not undertaken due to additional time spent on the roleplay.

Module on Policy and Regulation

The Module explored all spheres of legislation that influence the development of LVMM, namely Environmental Law, Mining Law, Water Law and Land and Forestry Laws. The Module discussed in detail the licencing process including the ESIA process from LVMM. The Module also dwelled on challenges related to surface rights vs subsurface rights and the multiple structures that grant rights including the conflicting rights that might exist in some jurisdiction. The knowledge sharing component of the session asked the participants to identify the legislative requirements in their countries and also to consider the effectiveness legislation and regulation for DMs. The details are shown in Table 3.

The country groups identified many legislative instruments that are applicable, and most countries identified some applications of legislation that take into account the size of the operations. The effectiveness of the legislation due to resource constraints was again identified as an issue for some countries. The suggestions for possible improvements demonstrated the participants understanding of the issues facing the DM sector. In many cases these suggestions formed the basis for the return to work projects.

Figure 10 Preparation for role play

Figure 11 Role play panel

Table 3 – Relevant Legislation and Regulation

Country	Applicable Legislation	Application to large and small scale	Effectiveness for small mines and quarrying	Suggested improvements
Fiji	Quarries Act Mining Act Explosives Act Town and Country Planning Act Environmental Management Act Rivers and streams Act Crown Lands Act Land Use decree Fisheries Act OHS Native Lands and Fisheries Commission (NLFC) Fiscal (some laws)	There are more comprehensive regulatory requirements for large mines – dependent on the scale and type of the DM project	Some areas are effective eg. impact assessments are made but it depends on the scale of the project. Effectiveness is also dependent on resources available. Monitoring of controls is not effective This is under review to provide documentation of guidelines etc and review capacity of staff to enforce such regulations.	Improvements • Inclusion of international best practices into legislation eg IFC standards / FPIC • Have working guidelines • Categorise the levels according to mining production scales • Clear demarcation of roles for the various ministries and departments
Vanuatu	Mining Act Quarry Act (Building materials) Water Act Environment Act Land Act Employment Act	There are definitions for size of mine: • Large – > 50000m^3, 100ha, 10 years • Medium – 20000 – 49000m^3, 10 ha, 10 years • Small - <20000m^3, <5ha, 3 years Large scale mines require a feasibility study	Large scale mines require an EIA. For medium mines the EIA is dependent on the preliminary environmental assessment (PEA). Small scale mines only need a PEA. Monitoring is undertaken for all sizes of mines. There is a quarterly assessment for large scale mines.	Review Mining Act (Common wealth) Draft quarry regulations Develop OHS policies for mining/quarry practices Review royalty rates

Table 3 – Relevant Legislation and Regulation

Country	Applicable Legislation	Application to large and small scale	Effectiveness for small mines and quarrying	Suggested improvements
PNG	Quarry – limestone and gravel (other minerals not developed) Environmental Act 2000 Mining Act 1992 (for mining purposes only)	Application is dependent on the size of the project. For small mines and quarries the Conservation Environment Protection Authority (CEPA) applies and some on an ad hoc basis eg Works Department or labour Department	There are controls for small mines and quarries but these are not enforced because of different jurisdictions/ legislation	Review of legislation • Timely with the current review by the World Bank on the Mines and Minerals Act (1990) • Review of PNG national minerals policy (Jan 2016 – July 2016) Working together for DMs for new and neglected minerals
Tonga	Land Act Minerals Act 1949, 2009,2010 Environmental Impact Assessment Act 2003 Environmental Management Act 2010 Health Act Water Act 2000 Deep Sea Minerals Act	The same legislation applies to small and large scale.	Small operations need an impact assessment. The legislative processes are 50/50 effective. The controls are monitored	Review legislation capability

Table 3 – Relevant Legislation and Regulation

Country	Applicable Legislation	Application to large and small scale	Effectiveness for small mines and quarrying	Suggested improvements
Solomon Islands	General regulation for all areas – Mines and Minerals Act 1990	Legislation is basically for large scale mining – not clearly specific for covering artisanal, small, mid-scale mining. There is not specific legislation on DM. This is covered under section 64-69 Building Material Permit and Mines and Minerals Regulation , Regulations 36 paragraph 4	Companies prepare an environmental management plan but this was not considered to be effective and is not monitored	
Samoa	Planning and Urban Management Agency (PUMA) Act 2004 Revised Land and Survey Act 2010	There is no difference for large or small scale mines except: <50m^3 – Preliminary Environmental Essessment Report (PEAR) <500m^3 – EIA All quarries require – Comprehensive Environmental Assessment Report (CEAR) and Quarry Management Plan		Sustainable Management Plans (SMPs) should be in place for whole country

Module on Field Trip

The field trip visited two working quarries and one dis-used quarry that had been rehabilitated to an Eco resort – Colo-i-Suva. The participants were divided into 4 cross country groups and asked to consider the following aspects:

- Community
- Health and Safety
- Environment
- Business

The groups were provided with templates related to the area to be considered to guide the information to be gathered and the observations. After the field visits, the groups were asked to identify what they considered to be the strengths, weaknesses, opportunities and gaps for the sites. These observations are summarised in Table 4.

First quarry – Waimanu Quarry operated by Flame Tree.

This was a relatively new operation that started in 2012. The main product is lower class basalt for roads. The life of the quarry is expected to be 20 – 30 years. There are 26 employees and a number of sub-contractors e.g haulage. An EIA was completed prior to start of operation and an environmental bond paid. There are potential problems with silt in the river that the company is trying to manage through drainage. Traffic on the road is considered to be the most significant issue.

There is a safety meeting each week and health and safety concerns are raised. There is a formal induction for staff. There have been no major accidents or fatalities since the commencement of operation. There are first aid trained people on site.

The company considered there was a good relationship with the local community. Royalties of approximately FJ$800 000 have been paid to the community. These have been used to build houses and provide university scholarships. Land owners are also employed in the quarry.

The community, as represented by the local Mataqali, saw very positive aspects of the relationship with the quarry. The company pays royalties to the Community Trust and the Trust allocates the funds.

Second Quarry – Nasinu Quarry operated by Standard Concrete Industries Limited (SCIL)

This was an old operation (approximately 50 years) that had been taken over by the new operators (SCIL) about 2 months previously. There are 35 employees. The quarry is in a suburban area with close neighbours. The company conducts their own drill and blast

operations. Haulage trucks are sub-contractors. All other equipment is maintained on site and is old equipment.

There were a number of health and safety issues identified eg access by community members is easy; access and egress from plant is a problem due to the age of the plant; workers do not consistently use PPE; ramps are very steep. There is a perception that accidents are to be expected in a quarry operation and there had been two fatalities in the company with one on the visited site about 12 months ago.

Figure 12 Discussion at Waimanu Quarry

Figure 13 Mutaguli community visit

Figure 14 Rehabilitated Quarry

Figure 15 Induction at Nasinu Quarry

Table 4 Field Trip Analysis

COMMUNITY	
STRENGTHS	WEAKNESSES
Royalty Community development and relationship Lease (Ground rent) Training programs Employment opportunities	Traffic Dust Blasting/Crushing/Vibration Noise Waste management
OPPORTUNITIES	GAPS
Speed limit/signage Road upgrade Road sprinklers (trucks and dust) Restrict night operation Specify blasting times Sediment traps/ponds	Gender balance – employment Unskilled labour – landowners Skill training – local Local engagement – business opportunities Rehabilitation
HEALTH AND SAFETY	
STRENGTHS	WEAKNESSES
Flame Tree • No major incidents or accidents for this year with their staff • Waimanu – Sawani region is considered a wet region, hence dust is not a major concern • Good working relationship between the company and community • Provides employment for the community, causing a chain reaction of positive impacts • Quarry pit set up is isolated from the office and the communities (Land owning units) SCIL • Had a proper induction process for visiting personnel (presentation, check list/forms, visitors badges) • Given the large number of employees, safety measures taken for each was sufficient	Flame Tree • Failure of bench is evident which can cause a major accident in the current quarry face (degree of weathering/geological structures; this also depends on the operational machinery present) • Exposed electric explosives detonator at the hilltop that can be easily triggered (a simple mobile phone call can do this) • PPE regulations was not followed properly by employees (Safety specs were not worn) • Lack of fencing and signage around the stockpile area and the top of the hill • Lack of Communication tools– operation & emergency cases SCIL • 4 incidents for this year with their staff, and 1 major incident involving the accidental demolition of a house (due to miscommunication) • Lack of fencing and signage regarding routes of trucks • Creation of buffer zone at the stockpile area (too close to residential areas) • Poor benching set up • Steep road grading

HEALTH AND SAFETY	
OPPORTUNITIES	GAPS
Flame Tree • Improve on Signage, fencing and other safety measures • Promotion of working opportunities to the female population • More LOU involvement in operation-cartage of materials (only outside contractors at the moment) • More skilled workers from LOU in the future • Proper recreational facilities (basic amenities) SCIL • Communication opportunity? Lack of fencing and signage regarding routes of trucks • Creation of buffer zone at the stockpile area (too close to residential areas) • Poor benching set up • Steep road grading	Flame Tree • Lack of fencing and signage around the stockpile area and the top of the hill • Insufficient security measures around the magazine • Gender Imbalance (company is not against it, application is just limited) • Lack of involvement of LOU with regards to operational activities (business) • Lack of skilled workers from the LOUs SCIL • Lack of fencing and signage • Insufficient security measures around the magazine • Lack of involvement of LOU with regards to operational activities (business) • Lack of skilled workers from the LOUs • Daily safety briefings

ENVIRONMENT	
STRENGTHS	WEAKNESSES
Both sites had EIA reports Control of drainage and waterflow/settling ponds Benching of slopes Dust control	No rehabilitation plans Lack sedimentation control No provision of buffer zones Duping of topsoil on the river bank Incomplete PPE (no masks or earmuffs) Blocked drainage
OPPORTUNITIES	GAPS
Development and action of rehabilitation plans Replanting of buffer zones and exposed slopes and terraces Planting of Vertiver grass to exposed part at the river	Concrete drainage and ditches Financial assistance to local authority Complete PPE Lack of understanding on ecological importance of surroundings.

BUSINESS	
STRENGTHS	WEAKNESSES
Good company – community relations Capacity building for workers New/own plant and equipment Staff retention – pay and skills Big business chain	Not many business opportunities for landowners Unfavourable site location for business development Community/resident pressure to relocate
OPPORTUNITIES	GAPS
Increase in government budget allocation Landowners to be engaged for support service businesses Niche market identification Identify alternative quarry sites	Government budget evaluation Potential for further expansion in the aggregates industry Expansion to other business sectors Natural disasters need to be considered – landslides.

Module on Return to Work Plans

The participants were given the option of preparing individual return to work plans or to work in country groups to address an issue. Each country decided to work as a country group. The development of the return to work plans involved the following steps:

1. Based on preferred topic area, the participants met to discuss potential projects to address issues identified
2. Based on country, the participants then decided on the most appropriate issue to address
3. The group developed a draft plan
4. The plan was presented for peer review
5. The plan was finalised after completion of the course and sent to Lacina Pakoun (UNDP)

The course presenters stressed the need to make the project practical and manageable. The need to consider scope of the project, the resources (human, physical and financial) required and the likelihood of success were also stressed. A timeline was required to be included. The projects that the country groups decided on are shown in Table 5. The first drafts of the plans were generally too broad and optimistic in terms of success. The review by peers and workshop presenters was very beneficial in terms of more clearly defining the projects.

Table 5 - Summary of Return to Work Projects

Country	Project Title
Fiji	EIA processes for DMs
Vanuatu	Development of DMs in Vanuatu
PNG	Assessment of DMs in PNG
Solomon Islands	Establishment of National Minerals Policy and Formulation of Quarry Act
Tonga	Development of a better management system for aggregate resources
Samoa	Review of compliance

Training Effectiveness and Recommendations

The training workshop provided a good start to the capacity building and institutional strengthening objectives as outlined by the ACP-EU Development Minerals Program. The workshop went somewhat further in intention as there was considerable attention given to small-business opportunity directly and indirectly related to DM projects. This was a good addition as the nexus between sustainable community development and local business opportunity is important.

Of the four focus areas for the workshop, the strongest, as represented by participant knowledge and institutional strength, was that of Environment. For the other areas, Health and Safety, Business Development, and Community, these were largely outside most of the participant's professional exposure or institutional focus, and even perhaps in the public mind. It seemed apparent that proper attention and institutional arrangements had not developed well in these areas to ensure better DM and the extractive industry management as a whole. This was highlighted by the fact that most participants were keen to know more about social impact, remediation issues, grievance procedures and sustainable social benefits. In fact, requests were made for follow-up programme work on this specific topic. While this in itself is a worthwhile aim of the programme, it should not be forgotten that environment, health and safety, and business development are all integrally related and more programme work will be needed to demonstrate this integration.

The concern about human development, related to DM and extractive industries in general, also may reflect who the constituents of the workshop represented. Despite follow up with Ministries and other stakeholders during the application process insufficient applications were recieved from civil society and women.

Having made this point, it should not be forgotten that the workshop brought out the pressing need for government representatives to gain new knowledge and work through how they could possible become 'change-agents' in their respective departments. Naturally, their focus was mainly in the area of institutional strengthening and effectiveness – reflected in each country's 'return to work' plans. This factor may be a strength of the programme and for the sake of building on this three points need to be made:

1. The representatives work-plans must have strong follow-through from the ACP-EU Development Minerals Programme if their plans have any chance of meaningful progression.
2. The representatives themselves must be able to stay engaged in the programme to access the resources and support needed for them to be effective change-agents within their respective departments. There may be great value in also further regional workshops for the same representatives to build on the initial good work of the Suva training workshop.
3. That for the sake of more focused programme effectiveness, there may need to be specific targeting of government representatives to leverage institutional change - which would challenge the point made above about addressing the lack of participant balance.

Summary

The objectives of the training workshop were all met to a high degree of satisfaction. The feedback from the participants was very positive with a keenness for further follow-up workshops building on the knowledge and skills gained. Of particular interest for the participants were the inter-country 'knowledge sharing' sessions out of which came good south-south exchange and fresh ideas. This was aided by a very effective field-visit to see firsthand work of operating and rehabilitated quarry sites.

The proof of the effectiveness of the training workshop was the work around the key outcome – the 'return to work' plans for each country. As the workshop was dominated by middle-level government personnel, it is not surprising that the themes of the 'return to work' plans were around improved governance of the DM sector particularly in the areas of: collection and management of data; policy development; strengthening legislative and regulatory mechanisms; shoring up high-standards in environmental and social assessment; and quality assurance and compliance.

Overall, the training workshop was an excellent start in the Pacific to the capacity building initiatives as mandated in the ACP-EU Development Minerals Programme. Building skills and knowledge amongst key stakeholders of the programme's target countries directly meets the aspirations of the United Nations Sustainable Development Goals.

Appendix 1 – Participant List

COUNTRY	FIRST NAME	LAST NAME	GENDER	POSITION	ORGANIZATION	SECTOR
Papua New Guinea	Bobby	Yavi	M	Development Minerals Programme Focal Point – PNG ;Senior Mapping Geologist	Mineral Resources Authority	Public
Papua New Guinea	Pelis	Vatnabar	M	Exploration Coordinator	Mineral Resources Authority	Public
Papua New Guinea	Melinda	Kera	F	Acting Assistant Director	Legal Advisory Branch - Mineral Policy & Legislation Division Department of Mineral Policy and Geohazards Management	Public
Papua New Guinea	Leka	Bonoro	M	Assistant Secretary	Research & Materials Testing Branch, Department of Works	Public
Papua New Guinea	Lesley	M Bennett	F	Program Manager	Women in Mining and Petroleum Program	Public
Papua New Guinea	Chris	Buna	M	Business Development Coordinator	T.T. Angore Noa Hai Investment Limited	Private
Papua New Guinea	Keron	Kilip	F	Executive Director	Sondex Consultancy Services	Private
Papua New Guinea	Alfred	Pungump	M	Business Assessor	Institute of Banking and Business Management	Private
Papua New Guinea	Johnson	Pundari	M	General Manager	Institute of Banking and Business Management	Private
Papua New Guinea	Robert	Sine	M	Manager Industry Standards	Conservation and Environment Protection Authority	Public

COUNTRY	FIRST NAME	LAST NAME	GENDER	POSITION	ORGANIZATION	SECTOR
Papua New Guinea	Alphonse	Zuivani Begani	M	Lecturer	Department of Environmental Health, Faculty of Health Sciences ,Divine Word University	Academic
Papua New Guinea	John	Duguman	M	Senior Lecturer	Environmental Science and geography University of Papua New Guinea Papua	Academic
Papua New Guinea	Seymour	Pok	M	Chief Policy Officer (Technical)	Department of Mineral Policy & Geohazards Management Papua New Guinea	Public
Papua New Guinea	Rhonda	Eva-Gwale	M	Principal Technical Instructor	Papua New Guinea University of Technology	Academic
Fiji	Christine	Prasad Singh	M	Geologist	Geoscience Division, Secretariat of the Pacific Community	Regional Organization
Fiji	Sereima	Koli	M	Acting Senior Environment Officer	Mineral Resources Department	Public
Fiji	Akuila	Raibevu	M	Estate Officer	iTaukei Land Trust Board	Private Estate
Fiji	Raijeli	Taga	M	Principal Environment Officer	Mineral Resources Department	Public
Fiji	Apete	Soro	M	Manager	Geological Services Division, Mineral Resources Department	Public
Fiji	Nadidi	Taginaselala	M	Estate Officer	iTaukei Land Trust Board	Private Estate
Fiji	Vira	Atalifo	M	Project Support Officer	Geoscience Division, Secretariat of the Pacific Community	Regional Organization
Fiji	Kitione	Raratabu	M	Manager Health, Safety & Environment	Basic Industries Ltd.	Private Mining Co

COUNTRY	FIRST NAME	LAST NAME	GENDER	POSITION	ORGANIZATION	SECTOR
Fiji	Onisimo	Fonmanu	M	Senior Technical Officer Mines	Mineral Resources Department	Public
Fiji	Sakiusa	Waqanisau	M	Technical Officer	Ministry of Lands and Mineral Resources Department	Public
Fiji	Raymond	Mohammed	M	Acting Manager Mining Division	Mineral Resources Department	Public
Fiji	Noa	Tuiloma	M	Acting Technical Officer Mines/ Community Liaison Officer	Mining Mineral Resources Department	Public
Fiji	Kalara	Bari	F	Acting Technical Officer Mines,	Mineral Resources Department	Public
Fiji	Makerata	Takala	M	Mining Division	Mineral Resources Department	Public
Tonga	Penisimani	Vea	M	Senior Road Project Officer	Ministry of Infrastructure	Public
Tonga	Rennie	Vaiomounga	M	Senior Geologist	Ministry of Lands and Natural Resources	Public
Tonga	Hepisipa	Oko	M	Engineering Officer	Ministry of Infrastructure and Tourism, Land Transport Division	Public
Tonga	Tevita	Lavemai	M	Chief Road Engineer and Acting Director	Ministry of Infrastructure and Tourism, Land Transport Division	Public
Tonga	Sisi	Tonga'onevai	M	Geologist	Ministry of Lands and Natural Resources	Public
Solomon Islands	Hefford	Panapio	M	Principal Mining Inspector	Ministry of Mines and Energy and Rural Electrification	Public

COUNTRY	FIRST NAME	LAST NAME	GENDER	POSITION	ORGANIZATION	SECTOR
Solomon Islands	Rota	Bataanisia	M	Chief Mines Inspector	Ministry of Mines and Energy and Rural Electrification	Public
Solomon Islands	Jackson	Fako	M	Senior Tenement Officer	Ministry of Mines and Energy and Rural Electrification	Public
Solomon Islands	Steve	Sae Kapivio	M	Senior Mines Inspector (Environment)	Ministry of Mines, Energy and Rural Electrification	Public
Vanuatu	Camillia	Garae	M	Geologist	Geology and Mines Unit	Public
Vanuatu	Benjamin	Titus	M	Mining Engineer	Geology and Mines Unit	Public
Vanuatu	Rosine	Lawac	F	Assistant Quarry Warden	Geology and Mines Unit	Public
Vanuatu	Jason	Andrews	M	Senior Environment and Social Officer	Public Works Department	Public
Samoa	Sulamanaia	Malaga	M	Principal Urban Management Officer, Planning and Urban Management Agency	Ministry of Natural Resources and Environment	Public
Samoa	Namulauulu	Lameko Viali	M	Manager - Road Operation Division	Land Transport Authority	Public
Samoa	Kuinimeri	Faasalafa	M	Sustainable Development Officer	Ministry of Natural Resources and Environment	Public
Samoa	Siniva	Williams	M	Sustainable Development Officer	Ministry of Natural Resources and Environment	Public

Appendix 2 – Workshop Agenda

Day one: Tuesday, 1 December 2015		
Time	Registration	
8.15 – 8.30	Participant registration	
	Opening Ceremony	
8:30 – 8.35	Introduction by Opening Ceremony Chair	Mr. Peter Batchelor, Regional Manager, UNDP Pacific Centre
8.35 – 8.45	Welcome & Opening Remarks	Ms. Osnat Lubrani, UNDP Resident Representative Fiji
8:45 – 8:55	Keynote Address by Chief Guest	Hon. Mereseini Vuniwaqa, Minister for Lands and Mineral Resources, Fiji
8:55 – 9:05	Keynote Address	Amb. Andrew Jacobs, Head of the EU Delegation to the Pacific
9:05 – 9:20	Introduction to ACP-EU Development Minerals Programme (Presentation + Video)	Dr. Daniel Franks, Programme Manager, ACP-EU Development Minerals Programme, UNDP
	End of Opening Ceremony	
9:30 - 10:15	**Coffee Break & Participant collection of DSA**	
	Session 1: Low Value Minerals and Materials	
10:15 – 10:30	Overview of the Training Workshop	Co-trainers: Dr Warwick Browne & Associate Professor Carmel Bofinger
10:30 – 10:50	**Module 1:** Introduction to 'Development Minerals' and so called 'Low Value Minerals and Materials'	Dr. Daniel Franks, Programme Manager, UNDP
10:50 – 11:30	**Guest Presentation:** Low value commodities in the Pacific	Akuila Tawake, Head of Geo-survey and Geo-resources Unit, Geoscience for Development Programme, Secretariat of the Pacific Community
11:30 – 12:30	**Knowledge Sharing**: Which LVMM commodities are available in your country? (resources/reserves and extraction sites) Describe the models of production and licensing procedures. What are the main uses of LVMM commodities mined in your country? Describe the market structure including prices where possible.	Dr Warwick Browne
12:30 – 13:30	**Lunch**	
	Session 2: Environment	
13:30 – 14:00	**Module 2:** Environmental impacts of LVMM operations	Dr Warwick Browne

Day one: Tuesday, 1 December 2015		
14:00 – 14:40	**Guest Presentation:** The environmental impacts of low value commodities in the Pacific.	Ms Sally Bailey, WWF – Pacific
14:40 – 15:10	**Knowledge Sharing**: What environmental impacts can be clearly identified in the production process of LVMM in your country (choose only two commodities)? Take into account the mining life-cycle approach (exploration – mining – processing – closure/rehabilitation).	Co-trainers: Dr Warwick Browne & Associate Professor Carmel Bofinger
15:10 – 15:30	**Coffee Break**	
	Session 3: Occupational Health and Safety (OHS) / Community Health	
15:30 – 16:30	**Module 3:** Occupational Health and Safety & Community Health and gender	Associate Professor Carmel Bofinger
16:30 – 17:20	**Group exercise:** Occupational Health and Safety & Community Health	Associate Professor Carmel Bofinger
17:20 – 17:30	Wrap Up and Close	Dr Warwick Browne
19:00 – 21:00	Welcome Dinner	Banyan Room, Holiday Inn

Day Two: Wednesday, 2nd December 2015		
	Session 4: Community Relations, Dialogue and Rights	
9:00 – 9:10	**Day 1 Reflections**	
9:00 – 9:20	**Module 4:** Community Relations, Dialogue and Rights	Lacina Pakoun, Technical Specialist, ACP-EU Development Minerals Programme, UNDP
9:20 – 10:30	**Role Play:** Community Engagement – Graphite Schist EIA	Dr Warwick Browne
10:30 – 10:50	**Coffee Break**	
	Session 5: Local Business & Value Chain Development	
10:50 – 11:10	**Module 5**: Local Business and Value Chain Development	Dr Warwick Browne
11:10 – 12:30	**Knowledge Sharing**: In groups map the full value chain of one or more LVMM commodities in your country. Who are the upstream service providers and suppliers? What markets are the commodity supporting downstream? What local businesses are involved and how can they be supported? Develop a rough plan for enhancing business development associated with production and present to the group.	Dr Warwick Browne
12:30 – 13:30	**Lunch**	

Day Two: Wednesday, 2nd December 2015		
	Session 6: Policy and Regulation	
13:30 - 13:50	**Module 6:** Policy and Regulation (impact assessment/ management plans/ licensing etc.)	Associate Professor Carmel Bofinger
13:50 – 15:10	**Knowledge Sharing**: What are the regulations for LVMM in your country across all of the thematic areas already discussed? How do the laws and regulations related to large-scale mining differ to the artisanal, small-scale and mid-scale mining subsectors? How does impact assessment apply to small mining and quarrying companies? Is it effective? Is it monitored?	Associate Professor Carmel Bofinger
15:10 – 15:30	**Coffee Break**	
	Session 7: Field Trip Preparation	
15:30 – 16:00	Field Trip Overview: Locations, agenda, site description	Lacina Pakoun, UNDP & Onisimo Fonmanu, Mineral Resources Department
16:00 – 16:30	Field Trip Safety Preparation: Safety share and what to expect	Associate Professor Carmel Bofinger
16:30 – 17:00	Field Trip: Group work overview, formation of groups, planning	
17:00 – 17:10	Wrap Up and Close	

Day Three: Tuesday, 3rd December 2015	
	Field Visit
7:30 – 8:30	**Depart and Travel to Site 1**
8:30 – 11:30	Meet with licensing and regulatory authorities; site management; workers and communities. Direct observation, group discussion, taking notes.
11:30 – 12:20	Depart and Travel to Site 2
12:20 – 13:00	Lunch (packed lunch)
13:00 - 16:00	Meet with licensing and regulatory authorities; site management; workers and communities. Direct observation, group discussion, taking notes.
16:00 – 17:30	**Depart and Return to Suva**

Day Three: Tuesday, 3rd December 2015	
Evening Group work (left to your convenience)	**Knowledge Sharing**: Field visit reflection (group work) What were the main environment, community, local business development, gender, health and safety issues being experienced on site? Be sure to identify both good practices and poor practice. What practices did you observe to manage these issues? How does the corporate/site management and policy/legislative context influence performance? What advice would you give to the mine/quarry site/regulatory agency on the management of the issues? What role does/could community play in the management/regulation of the issues? What alternate management/policy approaches are available reflecting on countries of the Pacific?

Day Four: Friday, 4th December 2015		
	Session 8: Field Visit Reflection	
9:00 – 10:30	**Group Presentations and Discussion**	Dr Warwick Browne
10:30 – 10:50	**Coffee Break**	
	Session 7: Return to Work Plan	
10:50 – 12:30	**Knowledge Sharing:** Return to Work Speed Dating In small groups (first cross-country, then within country) share your draft RWP ideas and identify opportunities to reshape and/or join RWPs for larger impact.	Associate Professor Carmel Bofinger
12:30 – 13:30	**Lunch**	
	Session 8: Return to Work Plan	
13:30 – 14:00	**Knowledge Sharing:** Work individually or in small groups to prepare a short (1-2 slide) overview of your RWP	Co-trainers: Dr Warwick Browne & Associate Professor Carmel Bofinger
14:00 – 16:00	**Knowledge Sharing:** Short presentations and peer review of return to work plans (working coffee break)	Associate Professor Carmel Bofinger
16:00 – 16:30	Wrap Up and Close (Presentation of Certificates)	Ms. Osnat Lubrani, UNDP Resident Representative Fiji and Lacina Pakoun, UNDP

Appendix 3 – Stakeholder Engagement Role Play

Graphite Mine Project

COMMUNITY PARTICIPATION (EIA)

Role Play on Stakeholder participation and information disclosure - Example of EIA process – to design and share experiences

Group Roles

- Investor Graphite Zanda Mine Project from KEZAMTU
- Community representatives
- Government representatives (local and Provincial)
- Ministry of Environment representatives (Provincial and national levels)
- Representatives of the Civil Society
- Representative of the EIA consultancy firm
- Representative of the Farmers Associations
- Water authority representatives

Community Interests and Concerns

- The Community economic activities include farming (cassava, ground nuts, beans, maize, tobacco, and green vegetables etc.) fishing and hunting.
- Activity: Map the main concerns of the communities and summarize and make a representation in the Public Consultation meeting for the EIA.
    - Community need to clarify its concerns and need to be assured that all impacts on the community will be mitigated.
    - The community has external assistance of the International NGO

Government Interests and Concerns

- The Local Government sees the Project as source of tax and solution to the unemployment which is at 70% in the rural area and 60% in the District Capital, about 10 Km from the Mine.
- Government has also need to secure its vote from the community in the local elections next year.

- Activity: Map all interests and concerns from the local and provincial government
- Make a representation in the Public Consultation meeting for the EIA

Ministry of Environment concerns and interests

- The Representatives of the Ministry of environment are expected to observe the whole process and make sure that all technical issues, procedures, and interests of the parties are protected, especially those of the communities, nature and wildlife.
- The area of the concession falls in the buffer zone of the Quirimbas National Park.
  - Activities: Map all interests and concerns from the Ministry of Environment
  - Make a representation in the Public Consultation meeting for the EIA

Civil Society's interest and concerns

- An International NGO has localized in the area and has teamed up with local CBO and are trying to make sure that the Mine does not open. Some of the reasons include the cultural heritage of the communities that will be resettled, and the social and economic negative impacts of the Mine.
  - Activities: The group has to represent the NGO and Map all interests and concerns
  - Make a strong representation in the Public Consultation meeting for the EIA
  - And produce a press release to advocate your position.

Water authorities

- The water authority are responsible for regulating the harvest of surface and ground water and provide licenses for such activities. They are also responsible of guarantying the sustainable exploitation of water resources.
  - Activities: The group has to represent the Water Authority and Map all interests and concerns
  - Make a strong representation in the Public Consultation meeting for the EIA

Farmers' Association

- The area of the mining concession is very fertile land of a combination of low lands and river flood plains and high lands of granitic inselbergs. The area is quite productive and supply agricultural products to the District's Capital and Provincial Capital (125 km away).

- Activities: Considering the interest of the Farmers association, map all interests and concerns from these stakeholders
- Make a strong representation in the Public Consultation meeting for the EIA

EIA Consultant

- The consultant is hired by the Project in order to make sure that the Project complies with Governments policies and regulations.
  - Activities: Map all studies and the procedures that are required to secure the awarding of Environmental Licence to the project
    - In real life the consultant will make the presentation of the steps, stages, studies, results of the studies and final conclusions at the Public Consultation Meeting.
    - The consultant is also responsible for mapping the main stakeholders, interested and affected parties for the PC Meeting
    - The consultant moderate the meeting and produce minutes of the PC meeting.
- Time

  It is important that groups are formed and tasks are distributed a day before – in order to allow preparation as home work.
- The role play – will take one and half hours: presentations and discussions
  - Layout: The consultant will present the study (EIA), steps and procedures (based on the environmental law and regulations), the consultant will ask the Project team to present the project and the Consultant team will come back and present the results of the EIA.
  - The discussion will start with other stakeholders presenting their views (consolidated in one or two slide – not projected).
  - At the end the consultant's group will need to summarize the findings and allow government to intervene

PROGRESS OF ROLE PLAY

Stakeholders: Farmers/NGO's/Local Government/Water Authority/Ministry of Environment/ Communities

Ministry of Environment: as the regulating agency of the government we like to hear from various stakeholders to develop a TOR for the environmental plan for the mining project.

Farmers: depend on the integrity of the environment so very interested in the participation, seeing how the CBA can be carried out. Concern: affect their core business, effect it will have on the productivity of their farms, the ecosystem services that will be affected such as the availability of water for daily use/consumption, and the protein sources that we source from the rivers, loss of biodiversity from the rivers, when we lose that we will lose productivity and therefore will have to depend on the manmade chemicals for the farms. Concern also on the health and safety impact of the village, we want the EIA to take into regard the biodiversity of our ecosystem, the economic benefits, compensation, etc.

Object to the developments that are happening, prepared to consider how it's going to benefit the farmers. We notice that there are no hunters or fishermen on the table as they depend on the river for their livelihoods as well. We want the Min of Environment for the compensation agreement, for farmers to be compensated adequately – compensation for loss of land, business, and the use of the river. We would also want to partake in any community development agreement that's going to come about.

Water Authority: hydrogeology and hydrology survey – has there been any survey done? How much water supply does the community need? And how this will affect the livelihood of the people. How many space will the dam take? Any the discharges – summarise: a clear detail on the hydrogeology survey. Has there been any data on the water supply to the river system, e.g. Rainfall. We don't want the water table to come down too low that we cannot. Another concern the life of the mine? How long will the mine run for as this was not clarified we want to calculate how much water will be used in time and how much this will affect the community long-term.

We're regulating water allocation and harvesting in the country – so we want to have some say in the building of the dams, so therefore request a clear TOR on the life of the mine, etc.

Farmers: government need to understand the major impacts on our livelihood so we want to know how we want to be compensated. We also want to partner in the development.

Ministry of Environment: we should be chairing this panel as we are the only government department in the table.

Local Government: to the farmers, we are aware of your concern on the production impacts, and the loss of livelihood and compensation agreement. The developer should be here, but we discussed with them and another option is resettlement, the company will settle the cost of the resettlement.

Farmers: need to know more regarding this as you are resettling me.

Local Government: as per the settlement 60% will go to the farmers so you will be getting a lot out of this arrangement.

Community: we have cultural, burial sites, shrines for worshipping, and land for subsistence farming so such development will have a lot of impact on our lives. The new roads will affect our hunting grounds, and relocation is a big issue, so unless the company/government have some clear assistance that will benefit the communities, we will object this project.

Community: with this new proposed venture and the option of relocation. We have decided that if relocation is to be carried out, whatever infrastructure that was built in our original village to have in this new location.

NGO: We would like to consider ourselves as advisers to the communities. Would like to question why the company was not invited as most of the questions can only be answered by them.

Ministry of Environment: this is the first consultation so it's just for the stakeholders, after this the 2nd round of consultation will include the companies.

Communities: as already mentioned, the traditional sites, relocation will take away our ties to our history and our land – so you need to consider all of this. Also, with relocation, there are social issues that normally attach with relocation, so there needs to be control mechanisms in place, to address and contain issues. The standard of living should be similar or better than our original location. We also want to know what the government has in plan or assistance with regards to funding for capacity building and employment. We want to be engaged in security services, catering (etc.) for the new project.

Ministry of Environment: our duty is to draw up a TOR for the company to work with, so we have taken all your concerns into context. The requirements for the EIA should cover all of it or we will negotiate back. Transportation: will generate a lot of dust, so in the EIA will need to setup some clear guidelines on how they will minimise that and other related issues. They are damming the 2 streams, not the river, therefore we will create a model for the dam, so we can see how this can used for local services especially villages. All the issues will be taken into board and discussed with the company. A consultation will need to be done with the communities to clearly settle all disputes.

Farmers: suggest that company carries out of the flora and fauna so we can make proper decisions, so we can locate where the mining site should be done so to minimise impacts. We want you to please take the consultation to the communities as not all farmers can attend this event.

Ministry of Environment: not to worry, this is only consultation, so we are trying to open up awareness and acquire ideas on the proposed project to provide a win-win situation.

Consultants: yes this the first consultation and have taken all the issues raised to be relayed to the company so during the next consultation they should be able to respond to all the questions.

NGO's: suggest that the government do a social mapping of the demographics of the village so we can understand who should be benefit from the project, to avoid people moving in just to benefit from this project.

Local Government: to the farmers and communities that we are on your side so we just want to know your ideas for further consideration.

Ministry of Environment: all your issues that have been raised, we have taken that inboard and will put that in the EIA requirements for this project for further deliberation. We want to take a consultative approach and the next round of consultation will include the companies so they can have some answers for you.

OPEN FLOOR DISCUSSIONS:

From a government perspective, it is very important to consider the regulations, mine plan, to be settled upfront so its easy for stakeholders to understand and raise specific issues. The point is to get the right process from the beginning.

Why don't consultations typically include women, they should be part of the group and consultation. They are mostly the main people affected by these type of projects.

There should be enough awareness at a community level before the stakeholders meeting is called, as everyone's perspective in the community should be considered, not just a few.

For a thorough EIA to be conducted, maybe the government should perhaps consider developing the EIA so ample time can be given for consultations.

It is not the role of the government to conduct the EIA, it is however their role to assess it and see if it's appropriate. They should have the capacity and the skill set to assess it.

SPC does develop EIA's for countries for free as their role is to assist the countries, otherwise we can review if the EIA has been conducted.

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