

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

Georgetown, Guyana,
18-21 April
2016

Programme Partners:



Empowered lives.
Resilient nations.

Event Partners:



ACP-EU Development Minerals Programme.
Implemented in Partnership with UNDP
www.developmentminerals.org

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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 April 18 to 21 2016, the Government of Guyana and the Caribbean Community partnered with the African, Caribbean, Pacific (ACP) Group of States, the European Union and the United Nations Development Programme to co-host the Caribbean Regional Training Workshop on Environment, Community, Health & Safety for the ACP-EU Development Minerals Programme.

The training was held in Georgetown, Guyana and was attended by 38 participants (see Appendix 1) from 6 Caribbean nations (Guyana, Haiti, Jamaica, Trinidad and Tobago, Suriname, and Dominican Republic). 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 training workshop in Georgetown was one of six workshops 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 implementation team, with the support of an internationally recognised trainer. The Government of Guyana and the Caribbean Community supported the UNDP programme team with advice, training and guidance materials to ensure that the curricula was aligned with 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 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 improved institutional capacity, governance, and management skills around the DM sector.

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 and 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 incredible 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.

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

Thirty-eight participants attended the workshop in Georgetown (see Appendix 1). Delegates represented six Caribbean countries, namely Guyana, Haiti, Jamaica, Trinidad and Tobago, Suriname, and the Dominican Republic.

Process for Selection of Training Participants

The Caribbean 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 groups 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 25th of February, 2016. 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 related to mining and sustainable development.
- 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 and Guest Speakers

The trainers of the workshop were as follows:

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

The opening ceremony was moderated by Mr. J. McKenzie, Permanent Secretary, Ministry of Natural Resources. Several high-level speakers made remarks including: His Excellency Raphael Trotman, Minister of Natural Resources, Guyana; Ambassador Videtič, EU Head of Delegation; Dr Douglas Slater, Assistant Secretary General, Human & Social Development, CARICOM Secretariat; and Ms. Khadija Musa, UN Resident Coordinator / UNDP Resident Representative, Guyana. A video address was made by Mr Viwanou Gnassounou, Assistant Secretary General of the African, Caribbean and Pacific Group of States. The Opening

Ceremony generated a significant interest from media in the Caribbean.¹

Guest speakers during the training included:

- Mr Newell Dennison, Commissioner, Guyana Geology and Mines Commission (GGMC)
- Dr Grantley W. Walrond, CEO of RMC Silica Co. Ltd, representing Guyana Transparency
- Ms Ulrica Primus, Chairperson of Guyanese Women in Mining
- Mr John Hercules Applewhite, Guyana School of Mining

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, 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 curricula 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 course is included in Appendix 2. The curricula was presented in English and French with simultaneous translation available.

Module on the General Concepts of Development Minerals

The main objective of this module was to standardize the knowledge of the participants on the basic concepts of Development Minerals. The module was presented as a blend of technical presentation and an interactive knowledge sharing session. It covered a wide range of issues including the importance of the minerals, basic understanding of the differences between industrial minerals, construction materials, dimension stones and semi-precious stones; and high value metals.

¹ A selection of online media sources are as follows:

<http://www.kaiteurnewsonline.com/2016/04/19/guyana-moves-to-develop-alternate-minerals-sector-trotman/>

<http://www.stabroeknews.com/2016/news/stories/04/21/neglected-minerals-can-boost-livelihoods-trotman/>

<http://guyanachronicle.com/it-cant-be-gold-and-diamond-alone-trotman-says-greater-emphasis-needed-on-neglected-development-minerals/>

<http://hgptv.com/workshop-on-mineral-sector-opens/>

<https://www.youtube.com/watch?v=nc3qZw1fcP8>

The module was delivered through a formal presentation, a guest presentation and group work. The guest presentation was delivered by Mr Newell Dennison, Commissioner of Guyana Geology and Mines Commission (GGMC). For the knowledge exchange component, 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 details provided by participants are shown in the Table 1. The information from Haiti is shown in Figure 1. There are a range of the minerals that are mined in the Caribbean region using surface extraction, mainly quarrying, with some dredging operations and limited underground operations.

Table 1 – Development Minerals in the Caribbean

Country	Commodity – Mined or identified	Production type	Licensing arrangements	Use – In country or export	Limitations / Market
Guyana	Construction stones and quarry stones. There are 14 categories	Surface extraction – drill, blast and crush	Application at GGMC for quarry licence	In country; Construction; Sea defence; Roads	No strategic plans to project demand
	Semi-precious stones e.g. Amethyst	Hand digging and stockpiling.	Under the geological survey act of the GGMC extract; Private persons may obtain a permit	In country; Cabochons Paperweights; Jewellery	No export market

Country	Commodity – Mined or identified	Production type	Licensing arrangements	Use – In country or export	Limitations / Market
Trinidad and Tobago	Major commodity - sand and gravel	Surface – strip mining	5 year licensing regime Plans and approval permits Bonds and rehabilitation	In country Construction / infrastructure Glass Pottery Concreting blocks	Demand from construction sector Price TT\$50/yard ³ – pit run TT\$150-200/yard ³ – processed mixed
	Limestone – blue and yellow	Surface		In country; Cement; road infrastructure construction – tiling agriculture	Price: TT\$150-200/yard ³ – crusher run; TT\$150/yard ³ - boulders
	Minor commodities Clay; Tar sands; Andesite; Porcellanite				
Haiti – details of the NDMs identified by the Haiti group are shown in Figure 1					
Jamaica	Limestone	Found island wide - Mechanised extraction involving ripping and blasting Private sector driven for production	Licensed – QAC/MGD	In country - Shoreline protection; Limited export	Cost US\$5 – 15 per tonne
	Sand and gravel	Mechanised extraction involving ripping and blasting Manual extraction with hand shovels	Ministry of Mining (MGD), Environment and other Government of Jamaica authorities; Quarry material belong to the land owner (QCA (1983/2015)	In country and export to other Caribbean states for construction. Government of Jamaica purchases large quantities	Cost – US\$8 – 22 per tonne
	Clay; Marble; Other dimension stones				

Country	Commodity – Mined or identified	Production type	Licensing arrangements	Use – In country or export	Limitations / Market
Suriname	Kaolin	Surface mining	Application through Geological and Mining Services (GMD)	Local - Building construction	Not known
	Silica sand				
	River sand	Dredging			
	Gravel				
	Shells	Surface mining	Approval by the Minister of Natural Resources	Road construction Parcel filling	
	Clays			Local; Pottery; Ceramics; Construction	
	Crushed stone			Local and export; Infrastructure: e.g. Road, dyke and building construction	US\$. 65/m ³

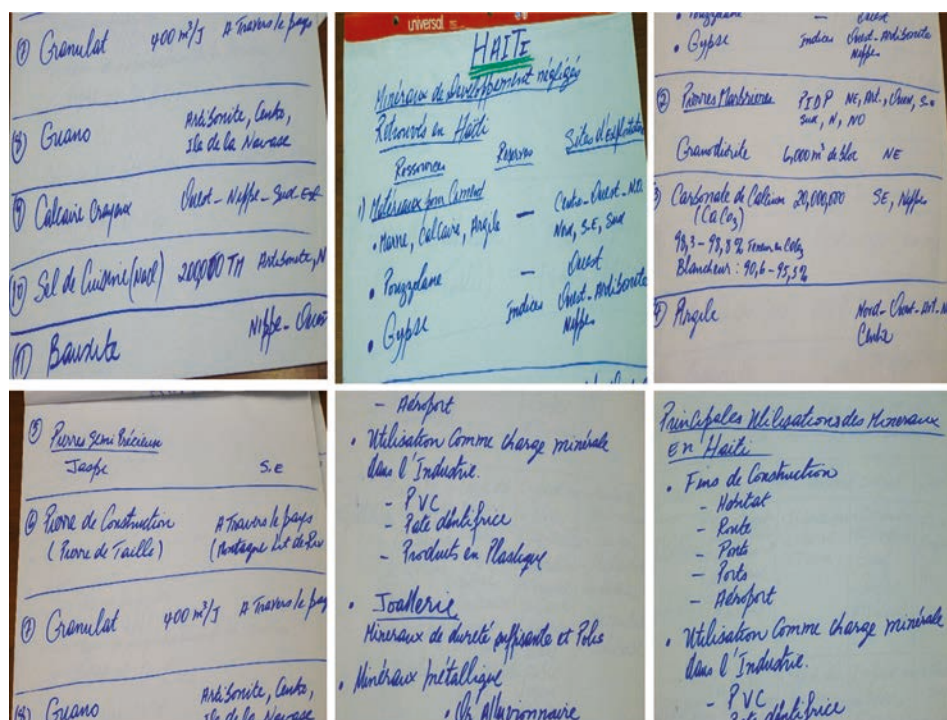


Figure 1. Development Minerals of Haiti

Country	Commodity – Mined or identified	Production type	Licensing arrangements	Use – In country or export	Limitations / Market
Dominican Republic	Semipreciosas: Ambar y pectolita llamada Larimar-	Los trabajos que se llevan a cabo en la mina son de manera subterránea, de forma rudimentaria, usando pozos y socavones sin causar daños significativos al medio ambiente. Utilizan como protección, madera para revestir el techo del túnel, con lo cual evitan derrumbes.	No existen procedimiento para licencias y permisos	Artesanal y joyería a nivel local •La mayor parte del material de Buena calidad es exportado en bruto de modo informal	Inversionista o asociación Minero Intermediario Comprador directo
	Materiales industriales: Arena, grava, caliza, yeso, sal, etc.-				
	Grandesrocas. Mármol	Los equipos o instrumentos que utilizan para hacer los trabajos son: pico, pala, carretillas, machetes, barras, cuerdas, poleas, cubetas, madera, plantas eléctricas, bomba sumergible, etc. Artesanal y semiartesanal •Subterránea •Por asociatividad •Con poco impacto sobre el medio ambiente			

Module on Environmental Impacts

The main objective of this module was to introduce the range of environmental impacts associated with neglected development minerals at all stages of the mine life cycle. The module was presented as a blend of technical presentation covering the environmental impacts associated with different commodities and the different stages of the mine life cycle, and the appropriate mitigation, avoidance and enhancement measures. The module included a presentation from a guest speaker, Grantley W. Walrond, CEO of RMC Silica Co. Ltd, representing Guyana Transparency.

The participants worked in country groups to identify the environmental impact of the most important commodities mined in their country. This exercise built on the knowledge sharing from module 1. The environmental issues identified included the direct environmental effects e.g. dust and noise, to others that affected the local communities in the long term e.g. loss of land or loss of biodiversity. Details are shown in Table 2.

The discussion relating to the control of environmental impacts indicated that although there were regulatory requirements 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.

Module on the Health & Safety and Gender

The main objective of this module was to raise awareness and knowledge of occupational and community health and safety issues and gender equality across the lifecycle of the mining of Development Minerals. The module introduces the concepts of hazards, risks and controls as a means to address health and safety issues at both company and community levels. A guest presentation was also made by Ms Ulrica Primus, Chairperson of Guyanese Women in Mining. The presentation was followed by a knowledge sharing session to create more awareness through inter-country exchanges.

The participants again worked in country groups to identify the workplace health and safety/ community health impacts of the most important DM commodities mined in their country. 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 information gathered is shown in Table 3.

Etapes	Sécurité	Environnement	Social	Santé
Exploitation	<ul style="list-style-type: none"> • Perte d'équilibre mine de l'État dans l'industrie • Accident de Terrain (FIRST AID) 	<ul style="list-style-type: none"> • Impact sur la Flore et la Faune 	<ul style="list-style-type: none"> • Génération d'Emplis • Grief • Conflit d'Intérêt 	<ul style="list-style-type: none"> • Faible Impact n° 2

Exploitation des puits	Bruit des Engins Lourds	Impact de l'Aggrégation	Impact sur la Flore	Maladie pulmonaire
<ul style="list-style-type: none"> • Glissement de Terrain • Déformation de la paroi • Fatalité 	<ul style="list-style-type: none"> • Impact visuel • Contamination de la nappe phréatique • Déséquilibre de la flore • Pollution de l'air (particules fines) 	<ul style="list-style-type: none"> • Condition de travail précaire • Exposition à la poussière • Impact économique sur la communauté 	<ul style="list-style-type: none"> • Maladie de la peau • Sinusite • Silicose 	<ul style="list-style-type: none"> • Cancer • Maladie de la peau • Sinusite • Silicose

Figure 2. Information from Haiti relating to the environmental, health and safety components

Table 2. Environmental, Health and Safety Impacts

Country	Commodity – Mined	Environmental Impacts	Health and Safety Impacts
Guyana	Construction stones and quarry stones	Land disturbance Dispersal of pollutions Dispersal of dust	Cuts; Muscular-skeletal issues Grinding and processing - hazardous chemicals; Noise; Dust
	Semi-precious stones - Amethyst	Land disturbance Dispersal of pollutions (polishing media, grinding) Dispersal of dust	Cuts; Muscular-skeletal issues Grinding and processing - hazardous chemicals Noise; Dust
Trinidad and Tobago	Sand and gravel	Dust; Noise Habitat fragmentation Loss of biodiversity Pollution of aquifers and watercourses Impacts on quality and quantity of water resources Aesthetics/visual impacts; Soil erosion	Dust; Noise Interactions with vehicles Vibration impacts Machinery emissions/effluent Natural hazards Respiratory disease
	Limestone	Noise; Dust Aesthetics; Biodiversity impacts Habitat loss/fragmentation	Falling rocks Landslides/subsidence Noise; Dust; Machinery failures/injuries/accident; Vibration
Haiti – information from the Haiti group relating to environmental and health and safety issues are shown in Figure 2			
Jamaica	Limestone Sand and gravel	Boreholes Trenches Disturbance to diversity/ecosystem Excessive areas cleared for mining	Warning signals PPE; Chemicals and hazardous substances Ingress and egress Noise and vibration; Dust Loads on haul trucks Use and maintenance of equipment
Suriname	Information on Suriname not recorded		

Country	Commodity – Mined	Environmental Impacts	Health and Safety Impacts
Dominican Republic	Industrial minerals	<p>Soil Deforestation Removal of vegetation land cover Destruction of the soil Modification of Topography Soil contamination by hazardous substances (mainly fuels) Air(impacts on health and the environment) : Noises Vibration</p> <p>Water: Water pollution (mainly due to increased suspended solids) Affection of the water cycle and pattern of runoff</p> <p>Biotic: Destruction of ecosystems Reduction of Biodiversity Reduction of protected species (bamboo, etc.)</p> <p>Socioeconomic: Increased migration pressure; Increased demand for basic services; Increased employment opportunities; Mining Environmental Liabilities generated by the exploitation from the small scale and artisanal mining.</p>	<p>Asphyxia Noise Dust Muscular-skeletal disorders Different levels of injuries Overpass fall</p>

Module on Community Relations, Dialogue and Rights

The main objective of this module is to introduce the basic principles and practices for effective community relations and to consider the unique circumstances of small-scale mining and quarrying and the applicability of various approaches. In a technical presentation, the module covered some best practices in community relations, dialogue and rights e.g. *"Grievance Handling Mechanism"* and open perspectives for participants to reflect on practical ways to community relations in small scale mining of Development Minerals.

Due to time constraints, the knowledge sharing for this topic was handled as an overall group discussion level. This generated some excellent comments as shown:

- Role of regulators and the need for legislation relating to community relations
- The gap between the community relations at the company and site levels
- How to move from community relations to social responsibility
- Problems with lack of power in community – rehabilitation plans are not respected
- What is the responsibility of government to consult before giving a licence?

The operators who were present also contributed from their perspective.

- Need to bring in employees from communities
- Importance of training and contact with the community
- Government has a role to play
- Importance of balancing the expectations of the community

Module on Local Business and Value Chain Development

The main objective of this module was to introduce the concepts of domestic economic linkages and value chains and consider how these linkages can be maximized in the Development Minerals sector for the benefit of businesses and employees at local and national scales. In a technical presentation, the module focussed on the importance of developing horizontal and vertical economic linkages, building business resilience, and integrating businesses into the local economy. This included the most easily achievable opportunities at the lower end of the value chain (e.g. the construction industry or the provision of services) where the opportunities require limited capital and skills.

The knowledge sharing section of this module was replaced by a short video on value adding using dimension stones from Portugal. The video was mainly about the uses of marble, granite and limestone in Portugal and especially the technologies that can apply. It was an

eye opening video as participants were taken to the heart of the stones industry in Portugal highlighting how the potentials of stones can be tapped even with limited or no technology.

Module on Policy and Regulation

The main objective of this module was to familiarize participants with legislative and regulatory approaches available to achieve the outcomes identified in each of the previous modules. The module was delivered to cover main legislative and regulatory approaches at the national and regional level and have with emphasize on the strengths and weaknesses of different approaches.

The guest speaker for this session was Ms Anya Thomas from the CARICOM Secretariat. Ms Thomas discussed the potential for the single market and economy of the Caribbean community (CARICOM).

The session then 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 3 Trinidad and Tobago group



Figure 4: Guyana group

Table 3. Legislation and Regulation

Applicable Legislation	Application to large and small scale	Suggested improvements
Guyana		
<p>Environment</p> <ul style="list-style-type: none"> • EP Acts and Regulations • Mining Acts and Regulations • Env Regulations for mining • MOU between GGMC and EPA, 1997; Health and Safety • Part 7 Mining Act and Regulations • Occupational health and safety Act • Draft OHS Regulations <p>Community Relations</p> <ul style="list-style-type: none"> • Part 8 Mining Act and Regulations • Amerindian Act; Business • Income Tax Act • Tax Act in aid of industry • Tax Act in aid of gold and diamond mining 	<p>Environmental - Specified as small, medium or large based on hazards and risks.</p> <p>Mining Act and Regulations have different requirements based on tech, financial components.</p> <p>EIA apply to large scale operations – not necessarily quarries.</p> <p>Medium has agreements which have conditions.</p> <p>OHS requirements based on Mining Regulations have different requirements based on scale.</p> <p>CR no different Regulations based on scale.</p> <p>Business – concessions based on mineral type</p>	<ul style="list-style-type: none"> • More field data collection to determine hazards and risks to adequately monitor. • Harmonisation of roles between field officers of different agencies g Env and OHS
Trinidad and Tobago		
<p>Minerals Act and Regulations</p> <p>Environmental Act</p> <ul style="list-style-type: none"> • CEC rules • Air pollution • Water pollution • Waste rules (WIP) <p>State Lands Act; Water Resources</p> <p>Town and Country Planning Act</p> <p>Occupational Safety and Health Act</p> <p>Forestry Act</p>	<p>Difference in bonds</p> <ul style="list-style-type: none"> • Performance • Rehabilitation <p>Licence fees;</p> <p>Environmental impact assessment applicability</p> <ul style="list-style-type: none"> • Size • Nature • Location 	<p>Improved sector organisation and regulation</p> <p>Establish mining zones/mapping resources</p> <p>Higher penalties/enforcement</p> <p>Standards/guidelines/communication and education drive</p>
Jamaica		
<p>National Resources, Conservation Authority Act</p> <p>Quarries Control Act</p> <p>Factories Act</p> <p>Mining (Safety and Health) Regulations</p> <p>Gun Powder and explosives Act</p> <p>Road traffic Act</p>	<p>No difference based on size of operations except for EIA which is required for quarries about a given size (annual production)</p>	<p>Self-regulation (Mining and Quarrying Association)</p> <p>Capacity building – training</p> <p>Greater monitoring and enforcement</p> <p>Sanctions and citations</p> <p>Revisit quarry zones</p> <p>Monitoring committees</p>

Haiti – information from the Haiti group relating to legislation and regulation issues are shown in Figure 5

Applicable Legislation	Application to large and small scale	Suggested improvements
Suriname		
Information on Suriname not recorded.		
Dominican Republic		
<p>Ley Minera no. 146, de fecha 4 de junio del 1971.</p> <p>Ley 64-00, sobre medioambiente y recursos naturales</p> <p>Ley 123, de mayo del 1971, que prohíbe la extracción de los componentes de la corteza terrestre llamados arena, grava, gravilla y piedras.</p> <p>Resolución R- MEM-REG-00010-2015, de fecha veintinueve (29) de junio del año dos mil quince (2015), que establece el Protocolo Técnico para Visitas de Fiscalización, Seguimiento y Control de Concesiones de Exploraciones y Explotaciones Mineras y Plantas de Beneficio.</p> <p>Resolución No. R-MEM-REG-002-2016, de fecha primero (1ero.) de febrero del año dos mil dieciséis (2016), que establece las cantidades, forma y peso de las sustancias minerales permitidas para extracción, en el período de exploración, con fines de análisis de laboratorios y ensayos.</p> <p>Ley No. 91-05, del 26 de febrero del 2005, que crea el Consejo Provincial para la Administración de los Fondos Mineros.</p> <p>Ley No. 507-05, del 22 de noviembre del 2005, que ordena transferir a favor de los municipios que integran las provincias de Monseñor Nouel, La Vega y Sanchez Ramirez, las 258,982 acciones de CORDE en la Falconbridge, C. por A.</p> <p>Ley No. 566-05, del 30 de diciembre de 2005, que crea el Consejo Provincial para la Administración de los Fondos mineros para la Provincia de La Vega.</p> <p>Decreto No. 527-06, del 30 de octubre de 2006, que ratifica el Consejo para el Desarrollo de la Provincia Monseñor Nouel, Juramentado el 23 de agosto de 2006, y crea e integra la Comisión Ejecutiva Responsable de Ejecutar las estrategias de Desarrollo y evaluar los proyectos emanados de dicho consejo.</p> <p>Decreto No. 222-08, del 30 de mayo de 2008, que ratifica el Consejo Provincial para la Administración de los Fondos Mineros de la provincia La Vega.</p> <p>Decreto No. 265-09, del 27 de mayo del 2009, que integra el Consejo Provincial para la Administración de los Fondos Mineros de la Provincia Sánchez Ramírez.</p> <p>Decreto No. 266-09, del 27 de marzo del 2009, que establece el Reglamento para la Aplicación de la Ley 31-05, del 26 de febrero del 2005, que crea el Consejo Provincial para la Administración de los Fondos Mineros.</p>	<ul style="list-style-type: none"> • Not regulation for small scale mining and quarrying companies • Construction materials- Just from the environmental perspective (Law 64-00) • Environmental norms for the Non-Methalic Mining 	

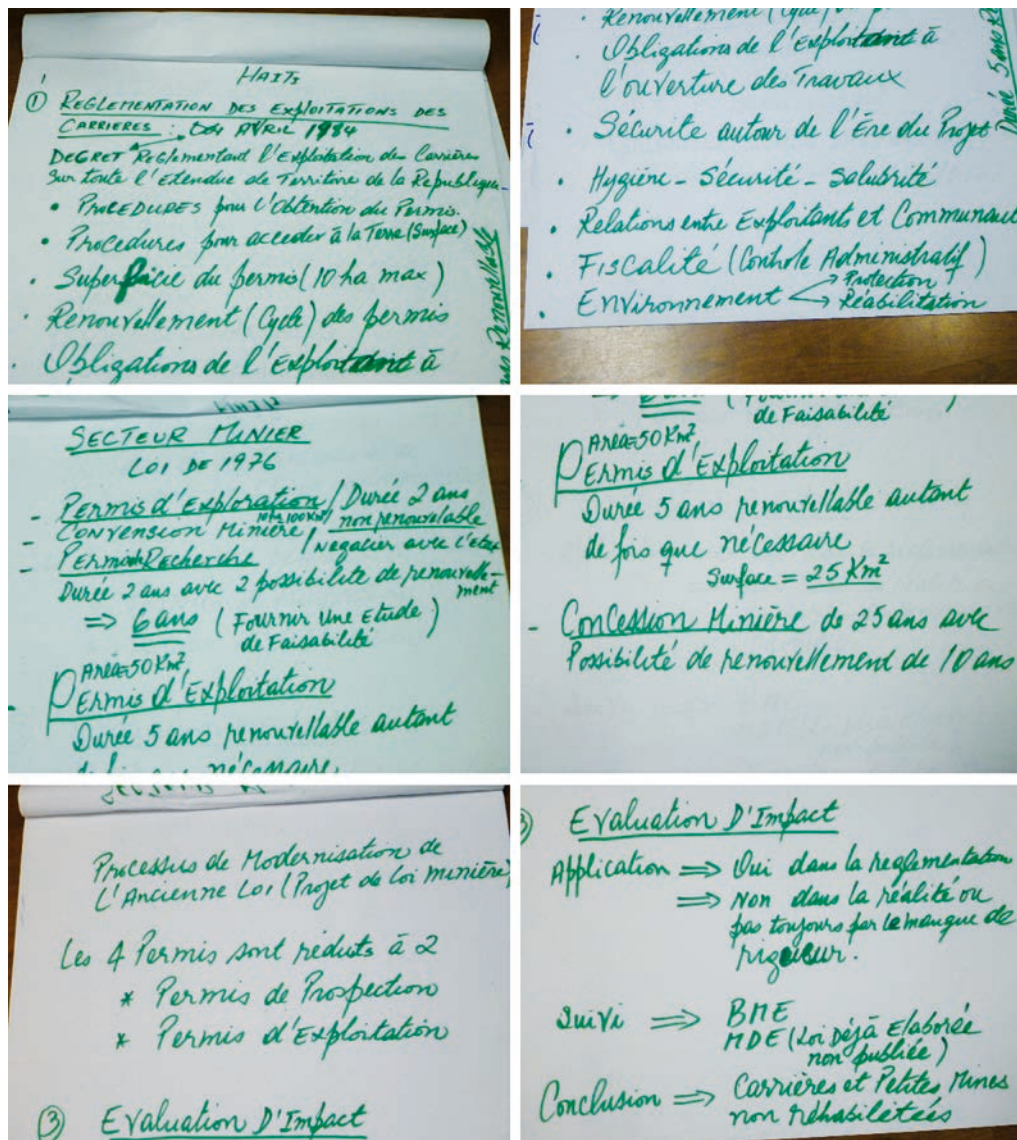


Figure 5. Legislation and Regulation applicable in Haiti

Module on Field Trip

The field trip visited a working quarry - BK International. Travel to the quarry involved a 90 minute bus drive from Georgetown to Pakira and a 90 minute boat trip up the Essequibo River. A field trip health and safety briefing was delivered by BK International on the afternoon before the trip. There was heavy rain during the visit and this impacted the amount of time available for the tour of the quarry. It was not possible to connect directly with the local community who were located on the opposite river bank but the participants did interact with some of the workforce and toured the worker accommodation and meal facilities.

BK International Quarry Operation.

BK Quarries forms part of the parent company, BK International, which also includes BK Construction, BK Marine and BK Farms. The BK Quarries operation at Teperu employs approximately 100 persons. The quarry is approximately 50 kilometres up the Essequibo River from Parika. The plant has the capacity to produce a total of 280 tons of aggregate per hour and produces between 20-40 thousand tons monthly.

The production process is fully mechanised. The quarries have been in operation by BK Quarries for 10 years. Product is transported down river by barge. The product is for the local market. The quarry is the largest quarry in the Caribbean. The working day is 10 hours.

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.



Table 4 Field Trip Analysis

COMMUNITY	
STRENGTHS	WEAKNESSES
Road maintenance Recreation facilities provided – waterfall area and football field Provision of potable water to community	No records kept for complaints, event, stakeholders meetings No formal social impact assessment done Absence of community representation Inability of employee's present to respond completely to questions
RECOMMENDATIONS	

COMMUNITY	
STRENGTHS	WEAKNESSES
Get ISO certified Conduct a social impact assessment Provide a complete picture of the entire operation when visitors visit the quarry	
HEALTH AND SAFETY	
STRENGTHS	WEAKNESSES
PPE for staff was used Recreational facilities for staff Working hours limited.	Recording and reporting of incidents – not recognised when reporting is required. Dust exposure Noise exposures
RECOMMENDATIONS	
Improve reporting processes	
ENVIRONMENT	
STRENGTHS	WEAKNESSES
	Aggregate runoff - Poor drainage No systematic way to control overburden - Land slippage observed Waste management Dust Noise
RECOMMENDATIONS	
Need for bigger drainage system – e.g. settling pond Need for appropriate landfill/recycling area Formal system for restoration of the land after removal of the minerals	
BUSINESS	
STRENGTHS	WEAKNESSES
Efficient production system Highly integrated and multi-disciplinary systems Gender equality Good business/welfare Efficient logistic system Involved in community based activities	Limited value added production Underutilisation of equipment Equipment graveyard proximate to operations Increased export potential – dimensional stones Wastage of some materials - boulders
OPPORTUNITIES GAPS	
Explore opportunities for dimension stones Hammering boulders Redesign layout – relocate equipment, better space management	

On the morning after the field trip the participants reviewed and discussed what they saw. The points identified by each group are shown in Table 4. The discussion shows the inter-relatedness of the aspects being considered with considerable cross-over in terms of the issues identified for community, health and safety and environment.



The comments on the community aspects were based on the limited information available for the site staff and the observations during the site tour.



The health and safety aspects were discussed with attention paid to the reporting requirements of which the site did not seem to be aware. Generally PPE was well used in the high dust and noise areas.

The need for control of run-off through improved drainage was considered to be the most significant point for the environment.

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. Guyana, Trinidad and Tobago, Jamaica and the Dominican Republic decided to work as a country group. Suriname and Haiti each proposed two projects. 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 will be finalised after completion of the course and sent to programme team

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.



Figure 6. Suriname Group



Figure 7. Jamaica Group

Table 5. - Summary of Return to Work Projects

Country	Project Title
Guyana	Gap analysis of quarry industry
Trinidad and Tobago	Development of an operational guidebook for operators
Jamaica	Quarry Zone protection - CSR
Haiti	1.Rational exploitation of quarries
	2.Salt exploitation and corporate responsibility
Suriname	Review of mining Act
	Development of training for NDM
Dominican Republic	Development of framework for small scale mining

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 and identifying synergies between projects.

At the end of the workshop, the Programme rewarded participants with certificates presented by Lacina Pakoun.

Training Effectiveness and Recommendations

The training workshop provided a good foundation to the capacity building and institutional strengthening objectives as outlined in the ACP-EU Development Minerals Program. The simultaneous translation for the French and Spanish speakers seemed to work well generally and both the Dominican Republic representatives and the Haiti representatives contributed to the workshop.

There was considerable interest in the Guyana Mining Training Centre and there is the potential for this to expand and influence training in other Caribbean countries. Together with the Training Center the Programme could develop standard training materials for vocational training towards a sustainable stakeholder's capacity development approach.

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 an operating quarry.

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 included government personnel and industry representatives, the themes of the 'return to work' plans were diverse and reflected the wide interests of the group. There was a good mix of public and private participants. This allowed the presentation and consideration of different points of view and this generated meaningful discussions particularly in the community area.

The training schedule was very intensive and some guest speakers extensively stretched beyond their allotted presentation time. This caused a couple of the knowledge sharing exercises to be reshaped.

Overall, the training workshop was an excellent start in the Caribbean 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.

Appendix 1 – Participant List

Name	Country	Stakeholder Category	Gender	Language
Gregorio Antonio Rosario Michel	Dominican Republic	Public Sector – Head of Information, Communication and Technology; National Geological Survey of the Dominican Republic	Male	EN
Rebeca Urena Alvarez	Dominican Republic	Public Sector– Head, Small-scale mining; Ministry of Energy and mines	Female	EN
Maria Laura Prota Castillo	Dominican Republic	Public Sector– Head, Mining promotion and development; Ministry of Energy and mines	Female	EN
Oscar Valenzuela Garcia	Dominican Republic	Social sector (CSO) – Lead, National strategy for extractive industries; Oxfam Intermon	Male	ES
Carlos Roberto Peterson	Dominican Republic	Social sector (CSO); Research Assistant; Dominican Observatory of Public Policy (ODPP)	Male	EN
Clinton George Thompson	Jamaica	Public sector – Commissioner of mines Mines and geology division; Ministry of Science, technology, energy and mining	Male	EN
Laurence Norman Neufville	Jamaica	Private sector – Manager; Blastec Company Ltd	Male	EN
Michelle Ann-Marie Shaw-Elliott	Jamaica	Private sector – Operations Manager; Shaw's Quarry	Female	EN
Novlet Amichele Green	Jamaica	Social sector – CSO; Director and Chief Executive Officer; Environmental Health Foundation	Female	EN
Johnil Morgan	Jamaica	Public Sector - Environmental Officer – Pollution Prevention Branch; National Environment & Planning Agency	Female	EN
Oral Burns Rainford	Jamaica	Public Sector – Principal director; Policy, planning, development and evaluation division; Ministry of Science, technology, energy and mining	Male	EN
Sekou Tyson Walters	Guyana	Public sector – Mining engineer; Guyana Geology and Mines Commission	Male	EN
Eulienne Francena Watson	Guyana	Public Sector – Technical officer, Mining; Ministry of Natural Resources	Female	EN
Janice Monica Bollers	Guyana	Public sector – Senior Environmental officer; Guyana Geology and Mines Commission	Female	EN

Name	Country	Stakeholder Category	Gender	Language
Albert Lyttle	Guyana	Public sector – Geologist; Guyana Geology and Mines Commission	Male	EN
Marissa Foster	Guyana	Public sector – Geologist; Guyana Geology and Mines Commission	Female	EN
Quincy Sylvester	Guyana	Public sector – Senior Environmental officer; Guyana Geology and Mines Commission	Male	EN
Kerion Marlow Husbands	Guyana	Public sector – Senior Environmental officer; Guyana Geology and Mines Commission	Male	EN
Colin McKinley Sparman	Guyana	Private sector - Administrative Coordinator, Guyana Gold and Diamond Miners Association	Male	EN
Donna Charles	Guyana	Social Sector (CSO) - 2nd Vice President, Guyana Women Miners Organisation	Female	EN
Dianne Allyson	Guyana	Public sector – Manager, Mines division; Guyana Geology and Mines Commission	Female	EN
Franndy Lesperance	Haiti	Social sector – CSO; Technical coordinator; Collectif Justice Mine	Male	FR
Rosemond Narcisse	Haiti	Public Sector; Senior Geologist/ Project director; Bureau of Mines and Energy	Male	FR/EN
Ruberne Bresier	Haiti	Public Sector; Deputy director – Geology and Mines; Bureau of Mines and Energy	Male	FR/EN
Robenson Pierre	Haiti	Public Sector – Head, Environmental and Social Impact studies; Ministry of Environment/National Bureau of Environmental Evaluation	Male	FR
Jean-Mick Deshommes	Haiti	Public Sector; Head – Mine Services; Bureau of Mines and Energy	Male	FR/EN
Marjory Kartini Danoe-Alimoenadi	Suriname	Public sector – Field officer, environmental and social assessment ; National Institute for Environment and Development	Female	EN
Ewald Poetisi	Suriname	Business Development (Academia); Researcher /Lecturer, Department of Geology & Mining; Anton de Kom University of Suriname (ADEKUS)	Male	EN
Anuradha Malti Monorath	Suriname	Public Sector – Head Policy Officer; Ministry of Natural resources	Female	EN
Janelle Natalia Caupain	Suriname	Public Sector – Policy Officer; Ministry of Natural resources	Female	EN

Name	Country	Stakeholder Category	Gender	Language
Andre Forster	Suriname	Private sector – HSEC Coordinator; NV Grassalco	Male	EN
Vishal Persad	Trinidad and Tobago	Public sector – Quarry management officer; Ministry of Energy and Energy Industries	Male	EN
Cherisse Chaka Khan	Trinidad and Tobago	Public sector – Quarry management officer; Ministry of Energy and Energy Industries	Female	EN
Dana Jeanice Massiah	Trinidad and Tobago	Public sector – Quarry management officer; Ministry of Energy and Energy Industries	Female	EN/FR
Ryan Simon Mohammed	Trinidad and Tobago	Business Development (Academia) – PhD Student (Aquatic Ecology) & Senior Biologist – Eco project ltd; University of West Indies	Male	EN/ES
Jiselle Nicole Joseph	Trinidad and Tobago	Public sector – Environmental programme officer; Environmental Management Authority	Female	EN
Ramdeo Persad	Trinidad and Tobago	Private sector – Quarry Association of Trinidad and Tobago, St Albans Sand & Gravel	Male	EN
Sandra Persad	Trinidad and Tobago	Private sector – St Albans Sand & Gravel	Female	EN
Addita Persad	Trinidad and Tobago	Private sector – St Albans Sand & Gravel	Female	EN
Aroon Persad	Trinidad and Tobago	Private sector – St Albans Sand & Gravel	Male	EN

Appendix 2 – Workshop Agenda

Day one: Monday, 18 April 2016		
Time	Opening Ceremony	Presenter
9.00 – 9.50	Welcome & opening remarks	<ul style="list-style-type: none"> Mr. J. McKenzie, Permanent Secretary, Ministry of Natural Resources. His Excellency Raphael Trotman, Minister of Natural Resources, Guyana Ambassador Videtič, EU Head of Delegation; Dr Douglas Slater, Assistant Secretary General, Human & Social Development, CARICOM Secretariat; Ms. Khadija Musa, UN Resident Coordinator / UNDP Resident Representative, Guyana. Mr Viwanou Gnassounou, Assistant Secretary General of the African, Caribbean and Pacific Group of States.
9:50 – 10:10	Introduction to ACP-EU Development Minerals Programme (Presentation + Video)	Daniel Franks, ACP-EU Development Minerals Programme Manager, UNDP
10:10 – 10:20	Overview of the Training Workshop	Lacina Pakoun, ACP-EU Development Minerals Programme, UNDP (Trainer)
10:20-10:50	Coffee / Tea Break	
Session 1: Neglected Development Minerals		
10:50 – 11:10	Module 1: Introduction to 'Development Minerals' and so called 'Low Value Minerals and Materials'	Daniel Franks, ACP-EU Development Minerals Programme Manager, UNDP
11:10 – 11:30	Guest Presentation: Industrial minerals, construction materials, dimension stones and semi-precious stones in the Caribbean	Mr. Newell Dennison, Commissioner of Guyana Geology and Mines Commission (TBC)
11:30 – 12:30	Knowledge Sharing: <ul style="list-style-type: none"> Which Development Minerals are available in your country? (resources/reserves and extraction sites) Describe the models of production and licensing procedures What are the main uses of the commodities mined in your country? Describe the market structure including prices where possible. 	Participants, facilitated by Trainers
12:30 – 13:30	Lunch	
Session 2: Environment		
13:30 – 13:50	Module 2: Environment	Carmel Bofinger, Trainer

Day one: Monday, 18 April 2016		
13:50 – 14:10	Guest Presentation: Civil society and Development Minerals in the Caribbean: Perspectives for a new engagement in a neglected sector	Grantley W. Walrond, Transparency Institute of Guyana (TIG)
14:10 – 15:00	Knowledge Sharing: <ul style="list-style-type: none">What environmental impacts that can be clearly identified in the production process of the Development Minerals mined in your country (choose only two commodities)?Take into account the mining life-cycle approach (exploration – mining – processing – closure/ rehabilitation)	Participants, facilitated by Trainers
15:00 – 15:20	Coffee / Tea Break	
	Session 3: Occupational Health and Safety (OHS) / Community Health	
15:20 – 15:50	Module 3: Occupational Health and Safety	Carmel Bofinger, Trainer
15:50 – 16:10	Guest Presentation: Gender and Neglected Development Minerals in the Caribbean	Ms Ulrica Primus, Chairperson of Guyanese Women in Mining,
16:10 -16:30	Questions & Answers	Participants, facilitated by Trainers
16:30 – 16:40	Wrap Up and Close	Trainers
19:00 – 21:00	Welcome Dinner at a cultural restaurant, Georgetown	UNDP
Day Two: Tuesday, 19 April 2016		
	Session 4: Community Relations, Dialogue and Rights	
9:00 – 9:10	Day 1 Reflections	
9:10 – 9:40	Module 4: Introduction to community relations, dialogue and Rights	Lacina Pakoun, UNDP, Trainer
9:40 – 10:30	Knowledge Sharing: <ul style="list-style-type: none">Brainstorm any additional practices and regulations aimed at improving community relations in mining.List the practical implementation challenges of each of the community relations approaches described in the Module or brainstormed above.What modifications could be made to adapt CR approaches to the small-scale mining and quarrying of Development Minerals?Present your best ideas to the class during report-back	Participants, facilitated by Trainers

Day Two: Tuesday, 19 April 2016		
10:30 – 10:50	Coffee / Tea Break	
	Session 5: Local Business & Value Chain Development	
10:50 – 11:10	Module 5: Enhancing the domestic economic linkages from Development Minerals	Lacina Pakoun, UNDP, Trainer
11:10 – 12:00	Knowledge Sharing : <ul style="list-style-type: none">• In groups map the full value chain of one or more Development Minerals 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 downstream economic linkages and present to the group.	Participants, facilitated by Trainers
12:00–12:30	Short video on value addition to marble, Portugal	
12:30 – 13:30	Lunch	
	Session 6: Policy and Regulation	
13:30 - 13:50	Guest Presentation: Development Minerals and Caribbean regional policy, current state and perspectives	Anya Thomas, CARICOM Secretariat
13:50 - 14:10	Module 6: Policy and regulation (impact assessment/ management plans/ licensing etc.)	Carmel Bofinger, Trainer
14:10 – 14:40	Knowledge Sharing: case study <ul style="list-style-type: none">• What are the regulations 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 and mid-sized mining?• How does impact assessment apply to small-scale mining and quarrying companies? Is it effective? Is it monitored?• What would you suggest for improved sector organization and regulation? (please refer to thematic areas)	Participants, facilitated by Trainers
15:20–16:20	Role play: Small scale quarry mine	
16:20 – 16:30	Coffee / Tea Break	

Day Two: Tuesday, 19 April 2016		
	Session 7: Field Trip Preparation	
16:30 – 17:00	Field Trip Overview and Safety Preparation: Location, agenda, site description; safety share and what to expect;	Facilitated by Trainers
17:00 – 17:10	Wrap Up and Close	
Day Three: Wednesday, 20 April 2016		
	Field Visit	
7:30 – 8:30	Depart and Travel to Site 1	
8:30 – 11:30	<ul style="list-style-type: none">• Meet with licensing and regulatory authorities; site management; workers and communities.• Direct observation, group discussion, notes taking.	Facilitated by Trainers
11:30 – 12:20	Depart and Travel to Site 2	
12:20 – 13:00	Lunch (packed lunch)	
13:00 - 16:00	<ul style="list-style-type: none">• Meet with licensing and regulatory authorities; site management; workers and communities.• Direct observation, group discussion, taking notes.	Facilitated by Trainers
16:00 – 17:30	Depart and Return to Hotel	
Day Four: Thursday, 21 April 2016		
	Session 8: Field Visit Reflection	
9:00 – 10:30	<p>Knowledge Sharing: Field visit reflection, presentation and discussion (group work)</p> <ul style="list-style-type: none">• What were the main environment, community, local business development, gender, and health and safety issues being experienced on sites? 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 could community play in the management/regulation of the issues?• What alternate management/policy approaches are available reflecting on those available in your own countries?	Participants, facilitated by Trainers

Day Three: Wednesday, 20 April 2016		
10:30 – 10:50	Coffee / Tea Break	
	Session 9: Return to Work Plan	
10:50 – 12:30	Knowledge Sharing: Return to Work 'speed dating' <ul style="list-style-type: none"> 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 	Participants, facilitated by Trainers
12:30 – 13:30	Lunch	
	Session 10: Return to Work Plan (continued)	
13:30 – 14:00	Knowledge Sharing : <ul style="list-style-type: none"> Work individually or in small groups to prepare a short (1-2 slide) overview of your RWP 	Participants, facilitated by Trainers
14:00 – 16:00	Knowledge Sharing : <ul style="list-style-type: none"> Short presentations and peer review of return to work plans (working coffee break) 	Participants, facilitated by Trainers
16:00 – 16:30	Wrap Up and Close (Presentation of Certificates)	Country Director UNDP, CARICOM, Trainers



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