



# MARINE MINERAL RESOURCES OF AFRICA'S CONTINENTAL SHELF AND ADJACENT INTERNATIONAL SEABED AREA

ISA Technical Study: No. 20



Prospects for Sustainable Development of the African  
Maritime Domain in Support of Africa's Blue Economy



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the African Maritime Domain in  
Support of Africa's Blue Economy

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Kampala, Uganda  
2-4 May 2017

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NATIONAL LIBRARY OF JAMAICA CATALOGUING-IN-PUBLICATION DATA

Marine mineral resources of Africa's continental shelf and adjacent international seabed area : prospects for sustainable development of Africa's maritime domain in support of Africa's blue economy,  
Kampala, Uganda, 2 to 4 May 2017.

p. : col. ill., col. maps; cm – (ISA technical study, 20).

ISBN 978-976-8241-52-8 (pbk)

ISBN 978-976-8241-53-5 (ebk)

1. Marine mineral resources – Africa
2. Continental shelf – Africa
3. Ocean mining – Africa
4. Economic zones (Law of the sea) – Africa
- I. Series

551.46 dc 23

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International Seabed Authority

14-20 Port Royal Street

Kingston, Jamaica

Tel: +1 876 922-9105

Website: [www.isa.org.jm](http://www.isa.org.jm)

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# EXECUTIVE SUMMARY

The workshop on Marine Mineral Resources of Africa's Continental Shelf and Adjacent International Seabed Area – Prospects for Sustainable Development of Africa's Maritime Domain in support of Africa's Blue Economy was organized by the International Seabed Authority (ISA) and the Republic of Uganda in partnership with the African Mineral Development Centre (AMDC) and GRID-Arendal (Norway) and with the support of the African Union Commission (AUC), United Nations Economic Commission for Africa (UNECA) and the PEW Charitable Trust. Held in Kampala, Uganda from May 2 to 4, 2017, the workshop brought over sixty participants from government mining ministries, international organisations, partner institutions, universities and other mining stakeholder groups.

The workshop was able to raise awareness among African States about the importance of the sustainable development of activities on the Africa's continental shelf and adjacent international seabed area (the Area) carried out by African nationals. It also considered the significance of the International Seabed Authority and other entities created by the UNCLOS, as well as to discussed strategies that could help African States and nationals to build capacity, engage in deep seabed activities in the Area and promote sustainable use of the maritime areas around Africa.

The following were the main outcomes of the workshop:

- Raised awareness among African States, including the LLGDS, about the importance of the Law of the Sea for the African continent and, in particular, for the sustainable development of activities in the African continental shelf and adjacent international seabed areas. It also issued recommendations on how to strengthen the African legal framework in a way that it will better support the sustainable development of Africa's Maritime Domain and Africa' Blue Economy.
- Raised awareness among African States, including the landlocked countries, about the political-strategic and socioeconomic importance of the African continental shelf and adjacent international seabed areas, as well as help identified potential areas for scientific and technical cooperation.
- Produced guidelines on how to strengthen the Africa-based production, management and dissemination of geospatial information and how to create spatial data infrastructures (SDIs).
- Issued recommendations for the establishment of African Centres of Excellence, to provide African States with increased access to marine geoscientific information and high quality marine research, education and training.
- Issued recommendations on how best to promote prospecting and exploration activities in the African continental shelf and adjacent oceanic areas by African initiatives.

Ultimately, the workshop provided an opportunity to demonstrate how the deep seabed could contribute to a sustainable African Blue Economy narrative that better reflects the kinds of development goals, partnerships, and forms of social reciprocity that African societies need as they move further into the 21st century.



# INTRODUCTION

The workshop on Marine Mineral Resources of Africa's Continental Shelf and Adjacent International Seabed Area – Prospects for Sustainable Development of Africa's Maritime Domain in support of Africa's Blue Economy was organized by the International Seabed Authority (ISA) and the Republic of Uganda in partnership with the African Mineral Development Centre (AMDC) and GRID-Arendal (Norway) and with the support of the African Union Commission (AUC), United Nations Economic Commission for Africa (UNECA) and the PEW Charitable Trust.

The workshop brought together experts from the international legal and scientific community with national and regional government officials, scientists, researchers and academics. It discussed issues associated with the United Nations Convention on the Law of the Sea (UNCLOS) and the work of the ISA on marine mineral resources development and the protection and preservation of the marine environment from activities in the international seabed Area ('The Area').

The workshop discussed and proposed mechanisms for improving regional cooperation and participation of African countries in the deep seabed regime. In particular, it addressed special interests of landlocked African countries. These issues were addressed in the framework of the United Nations Sustainable Development Goals (SDGs). In particular, SDG 14, which refers to "*conservation and sustainable use of the oceans, seas, and marine resources for sustainable development.*"

Specifically, the workshop was planned to motivate African States to:

- build relevant technical capacity in relation to activities in the deep seabed;
- increase participation in decisions that affect the Area;
- take part of the activities in the Area;
- define and enable sustainable activities on Africa's continental shelf; and
- contribute to the sustainable development of Africa's Blue Economy.

The workshop also intended to contribute to the discussions and achievements of Africa's Blue Economy in the context of the African Decade of Seas and Oceans (2015–2025), which was launched by the African Union on July 25th, 2015.

## Objectives

The workshop was proposed to raise awareness among African States about the importance of the sustainable development of activities on Africa's continental shelf and adjacent international seabed area (the Area) carried out by African nationals, as well as to discuss strategies that could

help African States and nationals to build capacity, engage in deep seabed activities in the Area and promote sustainable use of the maritime areas around Africa. It also took into consideration the special interest of landlocked countries.

Divided into five different sessions reflecting key issues and topics, the workshop was organised with the following objectives:

- To consider the importance of the International Seabed Authority (ISA) and other entities created by the United Nations Convention on the Law of the Sea (UNCLOS), as well as the significance of the laws of the sea and related rules, regulations and procedures on the sustainable development of the African continent.
- To consider the State of Art of marine mineral activities in the world oceans and the prospects for development of responsible prospecting, exploration and exploitation activities on the African continental shelf and adjacent international seabed area.
- To discuss the importance of the geological, mineral and environmental information to support decision-making, investment and governance of the African continental shelf and adjacent international seabed areas.
- To discuss strategies for the establishment of African Centres of Excellence on seabed mapping and spatial planning.
- To discuss possible Private and Public Partnerships (PPPs), as well as the prospects and requirements for application for plan of work for exploration in the Area by African companies and governmental agencies, including those from landlocked countries.

Ultimately, the workshop provided an opportunity to demonstrate how the deep seabed could contribute to a sustainable African Blue Economy narrative that better reflects the kinds of development goals, partnerships, and forms of social reciprocity that African societies need as they move further into the 21st century.



# BACKGROUND

## **The International Seabed Authority (ISA) and activities in the international seabed Area (The Area)**

The United Nations Convention on the Law of the Sea (UNCLOS) states that the seabed and subsoil located beyond the limits of national jurisdiction, known as the “Area”, and its mineral resources, are the common heritage of mankind. It also establishes the ISA as an autonomous international organization within the United Nations system through which States Parties to UNCLOS organize and control activities in the Area, particularly with a view to management of its mineral resources.

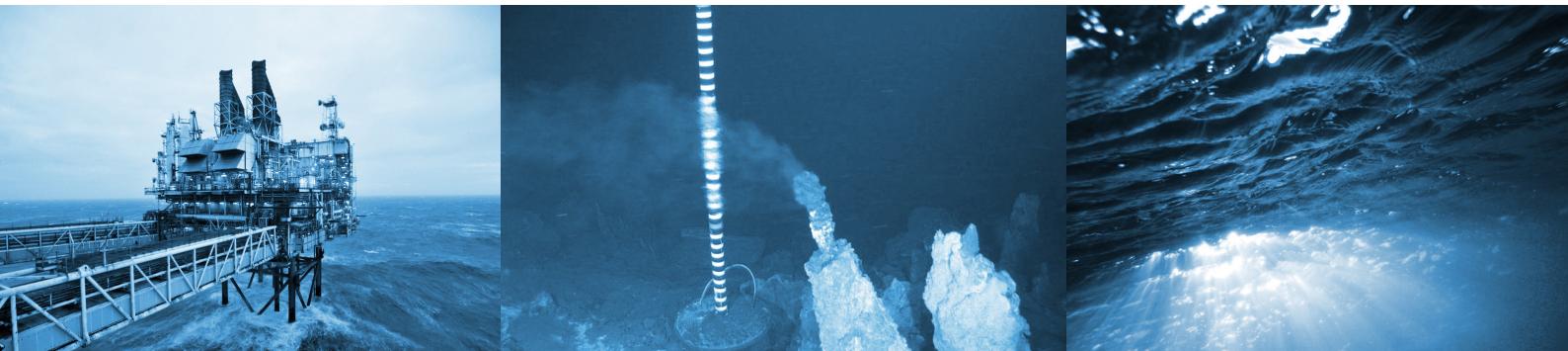
“The increased issuing of contracts by the ISA... provides a motivation for African States to explore avenues for their enhanced participation in the international seabed regime.”

All States Parties to UNCLOS are automatically members of the ISA. Under UNCLOS, the ISA has the responsibility to process applications, monitor activities, and adopt rules and regulations for the conduct of exploration and mining activities in the Area.

To date the ISA has issued regulations governing prospecting and exploration for three different mineral resources: polymetallic nodules (2000, updated 2013), polymetallic sulphides (2010) and cobalt-rich crusts (2012). Currently, the ISA is working on draft regulations for the exploitation of these mineral resources.

With improving technology there is a growing interest in the Area and presently there are twenty contractors, both state-owned and private enterprises, including several Pacific Small Island Developing States (SIDS), which have engaged with activities in the Area by obtaining exploration contracts from the ISA. No contractors come from the African region.

The increased issuing of contracts by the ISA, including to a number of SIDS from the Pacific region, provides a motivation for African States to explore avenues for their enhanced participation in the international seabed regime.



## Africa's Blue Economy

Africa is a huge continent bordered by the Indian and Atlantic Oceans, as well as by the Mediterranean and Red Sea. Described as a big 'Island Continent', Africa has 38 out of its 54 States as coastal States. Maritime zones under Africa's jurisdiction include about 13 million square kilometres of Territorial Seas (TS) and Exclusive Economic Zones (EEZ) and more than 6.5 million square kilometres of extended Continental Shelf. This is about 20 million square kilometres of maritime areas, which can contribute to sustainable development of the African continent.

The vast natural resources, both living and non-living, contained in the waters within and around the African Continent, has led to a growing interest in the African Blue Economy. This is reflected in the African Union (AU) 2050 Africa's Integrated Maritime (AIM) Strategy (January 2014), and in the publication by the United Nations Economic commission for Africa (UNECA) of "Africa's Blue Economy: A Policy Handbook" (March 2016).

The African Union (AU) plays a crucial role in developing and implementing the Blue Economy policy and strategy in the African region. Over the past decade, the African Union Commission (AUC) has built an enlarged Africa-wide consensus regarding the critical role that the Blue Economy could play in fostering structural transformation in Africa during the next decade. The AIM Strategy describes the Blue Economy as the "new frontier of African Renaissance." In addition, the Blue Economy is at the centre of the AU's Agenda 2063, at which it was unanimously declared to be "Africa's future" and recognized as a catalyst for socioeconomic transformation. In July 2015, the African Union launched the African Day (25 July) and Decade of Seas and Oceans (2015–2025) to rally action on the Blue Economy.

In addition, the African Blue Economy is interlinked in a variety of ways with the majority of the Sustainable Development Goals (SDGs) adopted by the United Nations. In particular, SDG 14 refers to "Conserve and sustainably use the oceans, seas, and marine resources for sustainable development." The SDG 1 forecast that aquatic and marine resources play a crucial role in supporting an array of economic sectors that provide livelihoods and employment opportunities to end poverty.

The African continent presently sits at a crossroads of opportunity to re-evaluate its development pathway within the context of the Blue Economy, taking into account socioeconomic, political, and environmental considerations. Africa needs to define its own understanding of prosperity and progress, while promoting innovative thinking and practices that will enhance human and ecological well-being.

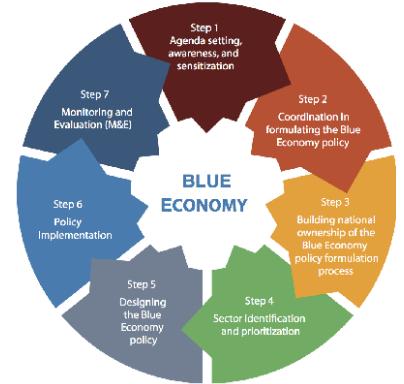


### A step-by-step guide

#### Towards a Blue Economy policy

This policy handbook proposes following a step-by-step guide in order to frame the development of a Blue Economy policy. These steps are identified in Figure 9.

Figure 9: Sequencing and steps of the Blue Economy policy development process



## The Africa's Maritime Domain

The AIM Strategy proposes the concept of "Africa's Maritime Domain (AMD)" without prejudice to maritime zones as established by UNCLOS (map on the cover page). The AMD refers to all

areas and resources of, on, under, relating to, adjacent to, or bordering on an African sea, ocean, or African lakes, intra-coastal and inland navigable waterways, including all African maritime-related activities, infrastructure, cargo, vessels and other means of conveyance. It also includes the air above the African seas, oceans, lakes, intra-coastal and inland navigable waterways and to the oceans electromagnetic spectrum as well.

One of the challenges for the concretization of the AMD is the establishment of the African outer limits of the continental shelf, which are the border with the Area.

UNCLOS provides that the coastal State shall have rights and jurisdiction over an economic exclusive zone (EEZ), which shall not extend beyond 200 nautical miles from its land territory and internal waters (the Baseline as defined in UNCLOS). The UNCLOS provides also that the coastal State shall delineate the outer limits of its continental shelf, where the shelf extends beyond 200 nautical miles.

To confirm its entitlement to a continental shelf beyond 200 nautical miles, the coastal State must make a submission to the Commission for the Limits of the Continental Shelf (CLCS). Based on the submissions, the CLCS shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. This recommendation would be regarded as 'final and binding'.

The UNCLOS also provides that a coastal States shall deposit with the Secretary-General of the United Nations (and with the Secretary-General of the ISA) charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf.

In 2008, the African Union Assembly at its tenth ordinary session, engaged with the issue of the extended continental shelf of African coastal states and adopted a decision that was stated to be made with the consciousness of: "the major geopolitical and strategic stakes linked to the African continental shelf and of its abundant mineral and biological resources, which constitute an important source of foreign currency earnings for the economic development of the continent".

The task therefore before African coastal states with extended continental shelf is to first secure their extended continental shelf in line with UNCLOS. Presently, most African coastal states succeeded to make full submissions to the CLCS. Those few who could not complete full submissions due to the complexities and technicalities involved in the preparation of submissions, succeeded in submitting the required preliminary information by the May 2009 deadline.

Submissions and preliminary information showed that Africa potentially could incorporate more than 6.5 million squares kilometre of outer continental shelf, which may contain natural resources that could generate wealth for African and potentially provide necessary funds to promote development in such states.

In essence there is a need for the establishment of an African strategy and a coordination framework to assist African coastal states to

- progress the appropriate submissions to the CLCS;
- advise and assist them in a manner that meets the peculiar needs of Africa;
- evaluate the potential benefits from resources of the extended continental shelf of Africa; and
- comply with obligations imposed by UNCLOS with respect to these national and international seabed spaces.

## **The African current situation in relation to exploration activities in the Area**

Recently, the Deputy to the Secretary-General of the ISA at the sensitization seminar held in South

Africa (2015) expressed concerns over the lack of participation by African states in the deep seabed regime. This is even more so since UNCLOS, after declaring the Area and its resources as the Common Heritage of Mankind, goes on to explicitly encourage the participation of developing states in deep seabed activities by stating:

The effective participation of developing States in activities in the Area shall be promoted as specifically provided for in this Part (Part XI of the UNCLOS), having due regard to their special interests and needs, and in particular to the special need of the land-locked and geographically disadvantaged among them to overcome obstacles arising from their disadvantaged location, including remoteness from the Area and difficulty of access to and from it.

However, Africa is the only regional group which has so far not engaged with activities in the Area by obtaining exploration contracts from the ISA.

The drivers behind the requests for mineral exploration sites in the Area include:

- the strategic importance of participating in the international seabed regime;
- the economic and strategic value of the exploration sites granted by the ISA;
- the need for the identification of new strategic reserves;
- the expansion and protection of the national mining sector; and
- the need for development of scientific knowledge and mastering new technologies.

A well-thought out strategy towards promoting Africa's engagement with the international seabed regime would ensure that, at some point, African states and their nationals, both natural and juridical, would have the opportunity to engage in deep seabed exploration activities in this part of the sea. Also, it would facilitate the development of appropriate institutions that would enable Africa to actively participate in this vital regime of the sea.

Although deep seabed exploration and mining is a capital intensive industry, which may be burdensome to single African states to embark upon on their own, this may be overcome by African states pooling resources together, under the auspices of the AU, in order to engage in deep seabed activities in the Area.

It is pertinent here to mention that the idea of an African institution to engage in deep seabed mining was actually proposed as far back as 1988, during the third regional minerals conference held at Kampala, Uganda, where the idea of forming an African deep seabed mining corporation was put forward. While it is appreciated that this did not come to fruition in 1988 when the possibility of deep seabed exploitation was remote, there is currently no strategy for the establishment of such an institution, especially with the imminence of deep seabed exploitation and since states, corporations and other entities in other regional groups in the world are already engaging with what promises to be a major source of mineral wealth for the future.

The participants of the third regional mineral conference in Kampala, Uganda agreed that Africa should have a strategy to put in place some type of African deep seabed Mining Corporation that would participate in the exploitation of this part of the sea. On the other hand, a more short-term strategy option to engage in deep seabed activities, pending the establishment of such African corporation, could be the approach adopted by several Pacific Small Island Developing States (P-SIDS), such as the Republic of Nauru and the Kingdom of Tonga, where local companies sponsored by their respective government, obtained a contract for exploration in the part of the Area reserved by the ISA for developing countries. This could be an option available to African states, with the possibility of such states acquiring some equity interest in such subsidiary corporations and also encouraging their nationals to do so, if they wish.



*"The UNCLOS and the ISA Mining Codes foresee that states, both developed and developing, have a direct obligation to ensure that seabed mining activities are carried out in accordance with the precautionary approach, while employing best environmental practice and conducting effective prior environmental impact assessment."*

Furthermore, there could be significant economic benefits, which could accrue to African states that sponsor deep seabed mining exploitation in the Area. Potentially this could benefit such states in the following ways: by contributing to its government revenues through taxes and/or royalties, by creating jobs and training opportunities, as well as strengthening the domestic private sector, encouraging foreign investment, the funding of public service improvements, contributing to infrastructure development and supporting other economic sectors.

One of the key issues that African States would have to engage with in regard to deep seabed mining is the impact such mining activities in the Area would have on the marine environment. For instance, recently the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea (ITLOS) in its advisory opinion on Responsibilities and Obligations of States sponsoring persons and entities with respect to activities in the sea, pointed out that state laws and regulations governing seabed mining should be 'no less effective than international rules, regulations and procedures' such as the UNCLOS and the ISA Mining Codes.

The UNCLOS and the ISA Mining Codes foresee that states, both developed and developing, have a direct obligation to ensure that seabed mining activities are carried out in accordance with the precautionary approach, while employing best environmental practice and conducting effective prior environmental impact assessment. Therefore, all African states would need to adopt appropriate national legislative framework that would ensure that any entity located within their territory complies with best environmental practice and actually conducts appropriate environmental impact assessment and generally complies with all relevant international obligations.

In addition to environmental protection, such legislation would have to deal with other pertinent issues, such as foreign investment and fiscal management of deep seabed mining, as well as seek to regulate possible tensions between deep seabed mining activities and other competing activities, for e.g. fisheries, maritime transport, conservation of marine species, research, laying down of submarine telecommunications cables etc., which may impact the domestic economy.

Despite the various ongoing activities in preparation for eventual commercial exploitation of Area, as well as the sensitization seminar on the work of the ISA, and the Secretary-General of the ISA's presentation to the Commission of the African Union, African States did not yet produce a clear strategy reflecting some kind of African position with regard to deep seabed mining activities.

Recent study on this matter suggests that there is need for an African coordinating body, perhaps in liaison with the African Union office of the legal counsel, to develop model deep seabed legislation and seek to encourage interested African states to get their legislature to enact appropriate legislation on this. The study also suggests that although there are potentially several bodies that could take up this role if their mandate is expanded, the recently launched African Minerals Development Centre (AMDC), established to strategically coordinate the implementation of the African Mining Vision (AMV), provided with a specific expanded mandate with regard to deep seabed mining, could be an appropriate coordinating institution.



# PROGRAMME OF WORK

## Session 1. Law of the Sea regime and its importance for the sustainable development of the African continent

### **Objectives**

To consider the politic-strategic and socio-economic importance of the International Seabed Authority and other entities created by the United Nations Convention on the Law of the Sea, as well as the significance of the law of the sea and related rules, regulations and procedures, for the sustainable development of the African continent.

### **Chairperson**

Patrick Mugoya, Permanent Secretary, Ministry of Foreign Affairs, Republic of Uganda

### **Rapporteur**

Dorca Auma Achapa, Member of the ISA's Legal and Technical Commission, Head of International Law Department

### **Presentations**

#### I.1 The Law of the Sea Regime: maritime spaces, entities, conduct of activities, protection and preservation of environment, international cooperation

*By James Kateka, Judge, International Tribunal on the Law of the Sea (ITLOS), Tanzania*

Certain issues affect the realization of Africa's economic development on the basis of the continent's rich natural resources though blue prints that deal with Africa's natural resources and their sustainable use are available. Those prepared by the African Union and by the United Nations include the 2050 Africa's Integrated Maritime Strategy or 2050 AIM Strategy, Agenda 2063, 2030 Agenda for Sustainable Development and the Sustainable Development Goals, in particular relevance SDG 14 on conservation and sustainable use of the oceans, seas and marine resources for sustainable development. Though both the AU and the UN are motivated by good intentions in



*"The discovery and exploitation of vast resources on land have led to unprecedented economic growth in many countries. The aim should be to duplicate this success in the maritime domain."*

proclaiming the above blue prints, previous experience shows that at times, the international community which operates through institutions set up by member states tend to be over ambitious.

There is a need of public awareness to the work of the institutions established by UNCLOS. Firstly, the International Seabed Authority (ISA) is tasked to "organize and control activities in the Area, particularly with a view to administering the resources of the Area". Secondly, the Commission on the Limits of the Continental Shelf, established by the 1982 convention is tasked to consider the data and other material submitted by coastal states concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles, and to make recommendations in accordance with Article 76 of the Convention. The limits established by a coastal state on the basis of these recommendations shall be final and binding. Thirdly, the International Tribunal for the Law of the Sea (ITLOS) has jurisdiction over any disputes concerning the interpretation or application of the Convention submitted in accordance with Part XV on dispute settlement.

In spite of the many political, economic and social challenges facing Africa, the continent is not better placed to handle them. African and the AU have learned and gained experience over the years. The discovery and exploitation of vast resources on land have led to unprecedented economic growth in many countries. The aim should be to duplicate this success in the maritime domain. There is need to cooperate in overcoming some of the challenges. This has been done through joint effort to overcome IUU fishing, piracy and the transit issues of land-locked countries. The joint submission to the CLCS by the seven West African States is an example of such cooperation at a sub-regional level. Finally, African states should be encouraged to enact domestic legislation incorporating some important international instruments such as the Convention on the Law of the Sea. Some states have already done this in the field of marine living resources. They should do the same for non-living resources.

## 1.2 The ISA Mining Code and its importance for the African continent (Mining Code, the Enterprise, Article 82 issues)

By Michael Lodge, Secretary-General, International Seabed Authority (ISA), Jamaica

The International Seabed Authority (ISA) is an intergovernmental body that was established to organize, regulate and control all mineral-related activities in the international seabed area beyond the limits of national jurisdiction, an area underlying most of the world's oceans. It is an organization established by the Law of the Sea Convention. Currently, the Authority has 167 members and the European Union, composed of all parties to the Law of the Sea Convention.

The presentation focused on the Common Heritage of Mankind, the definition of "the Area" and the structure and role of ISA, particularly in deep seabed mining. It emphasized that access to the Area is for qualified applicants only on the basis of a contract with the ISA acting on behalf of mankind as a whole. Applicants should be a state Party to UNCLOS (168), a state enterprise sponsored by a State Party, a natural or juridical person sponsored by a State Party, or The Enterprise, the commercial arm of ISA. It further highlighted the specific jurisdiction ISA has over deep seabed mining in the Area: (I) ISA regulates exploration and exploitation

activities; (2) collects royalties, and (3) distribute benefits. The presentation pointed out ISA's capacity building efforts such as allocating \$3.5 million Endowment Fund, aimed to aid experienced scientists and technicians from developing countries to participate in deep-sea research organized by international and national institutions and initiating mandatory training programmes.

The presentation concluded on the current membership status of African countries in ISA. Although there are 47 African countries that are parties to the ISA, 19 never attended a meeting and 26 are in arrears of contribution or never paid. A call was made for active participation and collaboration among African countries, particularly in considering the prospect of engaging in deep seabed mining activities.

### **1.3 Issues related to the delimitation of the African outer continental shelf (current situation and next steps)**

*By Kristina Thygesen, Programme Group Leader - Marine and Coastal Resources, GRID-Arendal*

The majority of coastal states have a good knowledge and expertise in United Nations Law of the Sea (UNCLOS). Most countries around the continent of Africa have put in a submission for extended continental shelf still, there are a few missing which to focus on. The next step will be to maintain and utilize the capacity gained in the process of writing the Submission while waiting for recommendations. The Commission of the law of the Sea are working on providing recommendation to countries and have until now provided 26 recommendations. Around Africa, Ghana Mauritius and Seychelles have received recommendations. While waiting for recommendations it is important to follow the work of the commission and optimize once submission with new data and research. Also, getting Ocean Governance on high on the political agenda to be well prepared to govern new ocean space.

### **1.4 Role and functions of the Division of Ocean Affairs and the Law of the Sea in relation to the United Nations Convention on the Law of the Sea**

*By Carlos Fuentes, Legal Officer, DOALOS*

The Division for Ocean Affairs and the Law of the Sea (the Division) of the United Nations Office of Legal Affairs has consistently been recognized for its role in contributing to the wider acceptance, and rational and consistent application of the United Nations Convention on the Law of the Sea (the Convention). Its mandate, as spelled out by the General Assembly of the United Nations, is to carry out the responsibilities entrusted to the Secretary-General upon the adoption of the Convention and fulfil the functions associated with its entry into force. The Division also provides secretariat services to the Meetings of States Parties to the Convention and to the Commission on the Limits of the Continental Shelf (CLCS). The Division further performs a number of functions mandated by General Assembly resolutions on oceans and the law of the sea and on sustainable fisheries, including providing substantive services to a several intergovernmental bodies and processes.

The presentation addressed the role and functions of the Division regarding the mandates contained in the Convention, while also noting those mandates that

*"While waiting for recommendations, it is important to follow the work of the commission and optimise once submission with new data and research."*

relate to the work of the General Assembly in ocean and law of the sea matters. The presentation then focused on the role and functions of the Division as secretariat of the CLCS, and the progress of work of the CLCS twenty years after its establishment.

### **1.5 Africa's Blue Economy Principles in relation to the Sustainable Development Goals**

*By Yannick Beaudoin, Chief Scientist, GRID-Arendal*

Africa's 'Blue World' is made of vast lakes and rivers and an extensive ocean resource base. All water bodies, including lakes, rivers, and underground water; in addition to seas and the coast are unique resources, yet neglected and often forgotten. The largest sectors of the current African aquatic and ocean-based economy are fisheries, aquaculture, tourism, transport, ports, coastal mining, and energy. And who is to say what kinds of activities may emerge in the future. The Blue Economy approach emphasizes interconnectedness across sectors, disciplines and societal scales, is responsive to emerging and frontier issues, and supports important social considerations, such as gender mainstreaming, food and water security, poverty alleviation, wealth retention, and jobs creation.

At a time when an increasing number of economic system failures (e.g. climate change; biodiversity loss; financial instability; social inequality; resource conflicts; air and water pollution; food waste; etc.) are being highlighted at the top levels of major industrialised countries, Africa has an opportunity to lead a post-conventional development approach that could easily be inspired by how it chooses to relate to its 'Blue World'. A sustainable and beneficial Blue Economy approach can play a major role in Africa's structural transformation and influence how progress-based development could become the new norm.

### **1.6 Opportunities for improvement of the AIM Strategy and other related African legal regimes to support the sustainable development and coordination of activities in the Africa's Maritime Domain and Africa's Blue Economy**

*By Edwin Egede, AMDC Consultant, Senior Lecturer, Cardiff University*

The notion of blue economy is a multifaceted subject that includes deep seabed mining for mineral resources in the Area(DSM), which has been declared as the Common Heritage of Mankind(CHM) under the United Nations Convention on the Law of the Sea (UNCLOS) 82, as modified by the 1994 Implementation Agreement. Despite, the various ongoing exploration activities in the Area by several entities having contracts with the International Seabed Authority(ISA), the African region remains the only region (using the ISA regional groupings), which so far has not sponsored an entity to engage in exploration activities in the Area. Interestingly, the 2050 Africa's Integrated Maritime(AIM) Strategy, adopted by the African Union in January 2014, as an African-driven long-term strategy to harness the African blue economy, does not engage with DSM. The presentation explores this gap in the AIM Strategy, the African Union's Agenda 2063, as well as the progress in adopting Annexes to the African Charter on Maritime Security, Safety and Development (Lome Charter) 2016, and identifies opportunities available for African States to obtain exploration contracts from the ISA and engage in DSM activities in the Area in line with Article 148 of



UNCLOS 82.

### **Discussions and session recommendations**

The first session considered the socio-economic, political and strategic importance of the International Seabed Authority and other entities created by the United Nations Convention on the Law of the Sea. It also considered the significance of the law of the sea and related rules, regulations and procedures, for the sustainable development of the African continent.

The topics of discussions and recommendations of Session I focused on the development of legal framework with regards to Africa's Blue Economy, engagement in sustainable development of marine mining activities and how to further raise awareness about deep seabed mining among African states.

- A recommendation on strengthening the legal framework of African countries was made after a discussion on the engagement of the countries in deep sea mining activities. In this respect, the AU, ISA and AMDC were suggested provide a deep sea mining framework that would serve as a basis for the development of the legal frameworks of individual African countries. This legal framework will also serve as a map for African countries to get involved in deep sea mining activities in a sustainable manner. Thus, legislation within the countries have to adapt to the development of the deep sea mining activities. Domestic legislation that impacts deep sea mining activities should also allow the openness for treaties and regional cooperation in deep sea mining activities. Consequently, the African Union is recommended to be practically involved in assisting in legislation, creating a cooperative forum, and bringing African countries together as they seek to develop Africa's blue economy.
- Africa's blue economy is relatively new and it brings about benefits to the bottom line. These benefits and opportunities should be emphasized to the public. African countries that seek to capitalize the benefits of deep sea mining should therefore raise more awareness within their network of stakeholders.
- As interest in blue economy and in particular deep sea mining increase, understanding and awareness on the legal implications of the common heritage of mankind is needed within the policy circle.
- African countries need to work together by forming continuous communication channels to engage in the activities in "the Area". The model of cooperation between Pacific countries in deep mining activities should be considered by African countries, as regional cooperation proves to be vital.
- Workshops in blue economy and deep sea mining are extremely important to stakeholders and policy makers alike. These should be encouraged as they will provide opportunities to sensitize potential investors and policy makers.
- The African Union, UNECA and other partner organisations were recommended to be involved in creating awareness and disseminating information about deep sea mining activities, technology and development.



## Session 2. Prospecting, exploration and exploitation activities in national continental shelves and international seabed area

### **Objectives**

To consider the State of Art of marine mineral activities in the world oceans and the prospect for sustainable development of activities in the African continental shelf and adjacent international seabed area. The discussions and recommendations focused on the International Seabed Authority and its scope, participation of African countries in the ISA, and the potential for prospecting, exploration and exploitation activities in African continental shelf and in the adjacent international seabed area.

### **Chairperson**

Joshua Tuhumwire, Member of the LTC, Director and Founder, Gondwana Geoscience Consulting Ltd.

### **Rapporteur**

Raj Mohabee, Chargé de Mission, Indian Ocean Commission, Quatre-Bornes

### **Presentations**

#### **2.1 Continental shelf capacity building and future opportunities – utilising data and human capacity**

*By Kristina Thygesen, Programme Group Leader - Marine and Coastal Resources, GRID-Arendal*

When developing non-renewable geological resources, it is important to have a long-term plan with national control, participation and maximum benefits for the wider population. Not just in dollars but by building national skilled workforce, generate high paid and high educated jobs, keep control over the resource through well-thought-of partnerships and remember that with exploitation and use comes conservation and protection. Already through the process of making a submission for extended continental shelf states have qualified personal to start on the task and build good ocean governance for current and future generations.

#### **2.2 Environmental issues of deep seabed mining**

*By Yannick Beaudoin, Chief Scientist, GRID-Arendal*

For many of the countries in Africa deep sea mining represents an entirely new frontier. As countries consider the possibility of pursuing deep sea mining exploration and development, it will be important for all parties involved to create an environment of transparent and open information-sharing, consultation, investigation, and reporting. This environment will enable continuous prediction and assessment of benefits and negative impacts to ensure that related plans – including impact assessment and mitigation, community relations plans, and closure/rehabilitation plans – take into account the considerable range of issues that may be associated with mining projects. States should strive to engage in a viable and mutually beneficial way with the deep sea minerals industry, while operating within the ecological limits of sensitive ecosystems and ensuring an equitable distribution of wealth and benefits.

*"As countries consider the possibility of pursuing deep sea mining exploration and development, it will be important for all parties involved to create an environment of transparent and open information-sharing, consultation, investigation, and reporting."*

## 2.3 Deposit-scale studies of deep-seafloor mineral deposits

By Bramley Murton, Senior Scientist, National Oceanography Centre

We report here initial results from two multinational research programmes, aimed at understanding the formation, fate and preservation of seafloor mineral deposits at a deposit scale. Our motivation is to help source scarce elements that are critical to securing a low-carbon future. During 2016 we spent four months at sea surveying and sampling seafloor massive sulphides and cobalt-rich crusts in the Atlantic. These studies form part of two programmes: the EU-funded 'Blue Mining' project (agreement 604500), and the UK/Brazilian-funded 'Marine E-tech' project.

The SMS study was made at the TAG hydrothermal field, 26°N, Mid-Atlantic Ridge and involved two cruises. Autonomous underwater vehicles were deployed to map the seafloor following which we conducted near-sea floor surveys using innovative seismic and electromagnetic systems to image the sub-seafloor. Once the area was mapped, we deployed a robotic drilling rig to recover core from deep beneath seafloor massive sulphide deposits. The drilling rig, RD2 built by the British Geological Survey, was deployed to the seafloor at 3500m depth. It successfully drilled 12m deep holes in to the SMS deposits, although recovery was poor (~25-30%). Our cobalt-rich crusts study was made at Tropic Seamount, one of the Sahara Seamounts off the coast of Northwest Africa. Here, we deployed an AUV to map the 40km diameter seamount and on the basis of acoustic backscatter, we deployed an ROV to drill and collect hundreds of samples of cobalt-rich crust. In addition, we deployed 4000m long moorings to map the current regime over a lunar cycle as well as deploying landers and the AUV to track sediment plumes generated by the ROV. Our work was integrated with real-time hydrographic modelling that informed our surveying priorities and modified our experimental approach.

The take-home message from these studies is that to effectively map SMS and cobalt-rich crusts requires a combination of ship-board and near-bottom mapping systems combined with seafloor drilling technologies. These technologies are also essential to monitor the environmental impact of future sea floor mining activities. Access to these technologies for developing nations is challenging and at the very least capacity should be built to ensure experts from those nation states are fully cognoscente of the capabilities and limitation of the technology, and are trained in their use.

### Discussions and session recommendations

The second session considered the State of Art of marine mineral activities in the world oceans and the prospect for sustainable development of activities in the African continental shelf and adjacent international seabed area.



*"Once the area was mapped, we deployed a robotic drilling rig to recover core from deep beneath seafloor massive sulphide deposits."*

The discussions and recommendations focused on the International Seabed Authority and its scope, participation of African countries in the ISA, and the potential for sustainable prospecting, exploration and exploitation activities in African continental shelf and in the adjacent international seabed area.

- Currently, there are 47 African countries that are members of the International Seabed Authority though there is almost no attendance nor representation of these countries to ISA. Therefore, it is recommended that African states have to realize the importance of their membership in ISA.
- The Pacific islands were able to capitalize on regional cooperation and collaboration that resulted to a number of positive deep sea mining activities. Initiatives that sought participation and involvement among Pacific islands were formed, along with capacity building, governance and advocacy projects that raised awareness among stakeholders. This example calls for African countries to model regional cooperation and collective action as they seek to engage in deep sea mining activities.
- Cost-benefits analyses are essential tools for due diligence and for better understanding of deep sea mining activities. There are no cost-benefits analysis available to date though a new operation in Papua New Guinea is being completed. This project will provide an opportunity to analyse the return of investments, social and ecological cost of deep sea mining and will inform ISA member countries when considering whether to commence deep sea mining activities or not.
- Environmental sustainability has always been an important consideration in mining activities. In order to make sure that mining practices adhere to environmentally sustainable standards, regulatory frameworks and policies have to be in place in order to mitigate or minimize the environmental impact of mining activities.
- The ISA allows regional entities to be members as long as they have the mandate to act in behalf of the states they represent, for instance, the European Union. For the African Union to become a member of ISA, there has to be a transfer of competence from the AU Member States to the AU, allowing it to act in behalf of its member states in ISA. This could be done through a treaty.
- Deep sea mining can prove difficult for countries that have no experience in the sector. ISA therefore allows countries to cooperate and sponsor an entity to do the mining, rather than doing it themselves.
- Regular mining activities within national boundaries fall under domestic law, while deep seabed mining is under the international law regime. ISA provides an international framework for deep seabed mining and developing the environmental framework needed to regulate mining practices within “the Area”. ISA also manages deep seabed mining contracts. The question on how to reconcile regular mining activities of landlocked African countries vis-à-vis deep seabed mining is something that African countries can answer collectively, through regional cooperation and partnership.

### **Session 3. Production, management and dissemination of geological, mineral and environmental information**

#### **Objectives**

To discuss the importance and how to strengthen the Africa-based production, management and dissemination of geological, mineral and environmental information to support decision-making, investment and governance of the African continental shelf and adjacent international seabed areas.



*ISA provides an international framework for deep seabed mining and developing the environmental framework needed to regulate mining practices within "the Area".*

#### **Chairperson**

Joshua Tuhumwire, Member LTC, Director and Founder, Gondwana Geoscience Consulting Ltd.

#### **Rapporteur**

Conn Nugent, Project Director, Environment, Pew Charitable Trusts

#### **Presentations**

**3.1 Geological, mineral and environmental knowledge as a tool for decision-making, investment and governance of marine mineral activities: Best Practice**

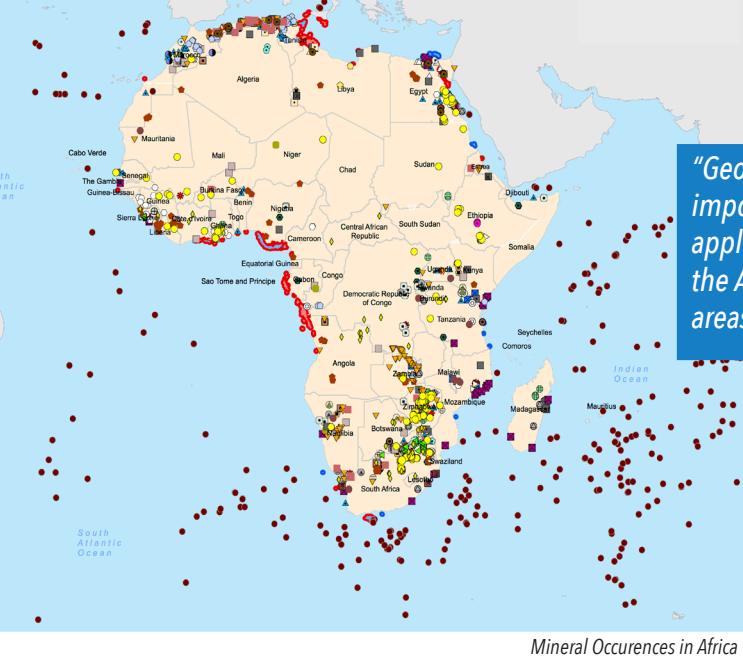
**3.2 Data and information of the Atlantic Ocean organized in Geographic Information System (GIS): Best Practice**

*By Kaiser De Souza, Head, Geology and Mineral Information Systems Section, African Minerals Development Centre, UNECA*

*(These two complementary talks were merged into a single presentation)*

Geological and mineral information is crucial for several important legal, economic, social and environmental applications with regard to the African continent, as well as to the African continental shelf and adjacent international seabed areas. It is essential for the formulation and implementation of public policies in resource development, environmental protection, public health and safety, land use, and infrastructure planning.

Lack of geological and geospatial information has long been identified as a major constraint upon African nations' ability to maximise the potential of their mineral resources. These information gaps have resulted in countries being disadvantaged when it comes to: land use planning, the development of strategies for minerals exploitation, the development of infrastructure, and during contract



*Mineral Occurrences in Africa*

*"Geological and mineral information is crucial for several important legal, economic, social and environmental applications with regard to the African continent, as well as to the African continental shelf and adjacent international seabed areas."*

negotiations.

The key task is to develop information systems that provide reliable and compatible data on seabed areas. Information systems should cover geological, environmental, and mineral data for a particular area.

An effort that concentrated on developing an information system on the EEZs of African coastal states could be extremely helpful. It would be an ambitious undertaking: the combined EEZs of African states constitute 2.5 million square kilometres, an area half as large as the African mainland. Moreover, the quantity and quality of the data should meet high standards: good information and good accessibility. Information should also include social and environmental data. "Layers upon layers of information through consistent information flows: both data and meta-data."

There are examples from various sectors of relevant Best Practices in the establishment and development of high-quality information systems: offshore oil and gas; marine protected areas; and various long-term scientific projects to inventory natural resources, most notably efforts on the shelf areas off Brazil and throughout the South Atlantic.

In the case of the African EEZs, it would be important to inventory all significant mineral deposits pertinent to industrial, agricultural, and energy-production uses and then to assess them for potential social and environmental repercussions. Particular attention should be paid to the effects of climate change on natural and human communities of the African shoreline.

As a general rule for the extractive sector, information impels activity. In Brazil, for example, data on coastal seabed areas prompted the Brazilian mining industry to seek exploration contracts at an unprecedented rate. Authorities should see to it that environmental data-gathering and environmental protections constitute integral elements of EEZ mineral exploration and exploitation.

Thanks to the support of the ISA and various ISA member-states (Brazil, France, Russia, and Germany in particular), data collection and assessments in the South Atlantic have increased markedly in recent years. This allowed the elaboration of the Project "Geology, Mineral Resources and Environment of the South Atlantic Ocean – Data organized in Geographic Information System", which is a

collaborative project proposed by the International Seabed Authority (ISA).

Similar data-acquisition and data-organization efforts are underway in the Indian Ocean, and hence could be of particular interest to nations on the African East Coast. It has been noted that the Indian Ocean could likely become the site of deep-sea mining operations conducted for strategic reasons rather than for strictly commercial purposes.

Ultimately, there should be “Global Information Systems” (GIS) for all the ocean waters surrounding Africa: Atlantic Ocean, Indian Ocean, Mediterranean Sea, Red Sea. These data – and mega-data – should be available to all ISA member states over the Internet. The data should be developed into a single standardized framework that could spare would-be ISA contractors from superfluous prospecting or scientific investigations.

### 3.3 Marine Mineral Resource Classification

*By Tunde Muitala Arisekola, Vice Chair Resource Classification, Nigerian Geological Survey Organization*

The principal objective of UNFC is to enhance international communication by providing a generic classification framework for reporting and management all energy and mineral resources on land, continental shelf and seabed worldwide. With energy and mineral sectors facing a myriad of challenges related to economics, environmental and social aspects, including the commitments of the Paris Accord and aspirations of Sustainable Development Goals (SDGs), UNFC has become the only system that is capable of being a robust tool for all stakeholders, which has got the core concepts of sustainability as its foundation. UNFC has been developed to meet, to the extent possible, the needs of applications pertaining to global energy and mineral studies, government resource management functions, corporate business processes and financial reporting standards.

*“A key benefit of UNFC is the potential to provide a common basis for management minerals and energy sectors, including renewables.”*

A key benefit of UNFC is the potential to provide a common basis for management minerals and energy sectors, including renewables. Though the system has been developed primarily for solid minerals and petroleum, it now addresses the increasingly overlap between the extractive industries and the renewable energy sectors. UNFC also includes the application to injection projects for geological storage and management of wastes and end-of-life materials, collectively termed as anthropogenic resources. An example of this overlap, include the mining of natural bitumen or coal for processing into synthetic oil or gas. The importance of environmental and social issues in the context of resource and energy productions are appropriately recognized in line with Africa Mining Visions (AMV) and SDGs.



UNFC-2009 is a principle-based system in which quantities are classified by three fundamental criteria of Economic and Social viability (E); Field project status and feasibility (F), and Geology Knowledge (G), using a numerical coding system. The combination of these criteria creates a flexible three-dimensional system. It is important to note that this framework classification was developed by United Nations to capture all mineral endowments around the world either economically viable today or not. It allows Governments of member States of United Nations and the industry stakeholders to accurately document and track all categories of minerals resources, especially the non-commercial, undiscovered and the un-recoverable quantities. This allows management of resources over a significantly larger timeframe, with due considerations for environmental and social aspects through the entire lifecycle of the project. UNFC assures the public on sound management of environmental outcomes and de-risks the industry stakeholders from making costly mistakes. Guidelines for competent person are developed by the Expert Group on Resource Classification (EGRC). Also, as UNFC is significantly updated, there is an opportunity for Africa to submit all necessary inputs that are relevant to Africa as a significant buy in for the global development of UNFC.

### **3.4 Prospects for an integrated African Marine Spatial Data Infrastructures (SDIs)**

### **3.5 From data to planning – available resources to support marine spatial planning activities in Africa**

*By Miles Macmillan-Lawler, Programme Lead for State of the Environment and Spatial Planning Programme, GRID-Arendal*

(These two complementary talks were merged into a single presentation)

Spatial Data Infrastructure (SDI) is a web-based system for storing spatial data and metadata. It is the answer to “What’s out there?”. SDI has the capacity to visualize data, e.g., through the creation of thematic map, and capacity to access data or to restrict access to data. An SDI can accommodate Proprietary systems, open-source systems, and custom systems. It also has the capacity to share data and metadata between information systems.

SDI is needed both to spur economic growth and to realize Sustainable Development Goal #14's call for both replenishment of natural resources and the setting aside of 10% of the world's ocean as conservation reserves. And – significantly – Africans have said they want SDI.

SDI systems vary, and can be custom-fitted. SDI can be country-specific or regional; managed through a central portal or through a federation of portals; feature data or metadata; and offer raw data or Derived Products. Marine Cadastre SDIs in Australia and the United States have served as repositories for official data used to make regulatory decisions on setting marine boundaries, lease areas, MPAs, and aquaculture facilities. The PacGeo.org system for Pacific Island states contains 929 data layers pertinent to boundaries, bathymetry, coastal infrastructure project management, and disaster response.

There already exists SDIs pertinent to African uses and African issues, but the continent lacks a custom-designed African system. Africa needs one. Nonetheless, there are resources currently available to support Marine Special Planning in African waters. MSP is an essential tool for preventing conflict among various ocean uses. Best MSP practices require a nine-step data-



acquisition process: 1) Bathymetry; 2) Description and classification of benthic and water-column systems; 3) Locations of seeps, vents, and tectonic plates; 4) Analyses of currents; 5) Seafloor-to-surface temperature gradients; 6) Regulatory boundaries (MPAs, VMEs, etc.); 7) Human uses (cables, shipping, fishing, etc.); 8) Biological / ecological communities (seagrass, mangroves, corals, etc.); and 9) designated EBSAs (Ecologically and Biologically Significant Areas). Data must be brought to bear.

### **Discussions and session recommendations**

The third session discussed the importance and how to strengthen the Africa-based production, management and dissemination of geological, mineral and environmental information to support decision-making, investment and governance of the African continental shelf and adjacent international seabed areas.

The discussions and recommendations focused on the rationale behind deep seabed mining investments, African geological and mineral information systems and creating data centre to support policymaking and stakeholder engagement in marine mining activities.

- Research and due diligence are crucial when considering deep sea mining. The quantity of mineral deposits in deep sea nodules must be enough to justify the cost of deep sea mining. As a commercial activity, seabed mining has to be profitable, though currently, most of the research are state-backed as the cost is still beyond the norm of a mining company. The current model of Germany, Japan and South Korea shows that the initial investments of seabed mining were done by these states and later adopted by private companies.
- Monitoring existing deep seabed mining activities should be done by an independent body and not by mining companies themselves. For monitoring and evaluation of mining practices to be cost-effective, they should be included in the financial model before the mining activity starts. It is recommended that ISA can serve as a monitoring body and its activities can be contracted by countries sponsoring the mining activity.
- Currently, there is a host of African institutions and organisations (i.e. GRID-Arendal) doing research related to marine activity. These platforms include fish stock management, offshore mining (oil and gas), habitat mapping and geological mapping. It is suggested then that these research efforts may be integrated in order to inform possible deep seabed mining activities so that African countries will have a starting point if they choose to engage in seabed mining.
- One example of capacity building that African countries can consider is the Interidge project. Interidge started a programme that provided ten students funding and placement in research vessels to go out to the ocean range. The scheme was cheap to run as it brokered between researchers and exploration vessels. The programme was able to provide actual training for the researchers and learn about deep seabed mining technology and its capability.
- ISA has an established capacity building framework. Currently, it is running a programme with a vision of training 200 geologists around the world. However, outreach and network has remained a challenge. Thus, African countries are highly encouraged to engage ISA as it builds capacity for marine geology and sea bed mining.

*These recommendations are specific to the AMDC in partnership with the ISA, GRID-Arendal and other international, regional and national organizations:*



- Strengthen national geological surveys organizations (GSOs) and research institutions.
- Strengthen national and regional capacities to standardize manage geological and geospatial information.
- Strengthen national and multi-national geographic survey capacities. Develop uniform data systems. Gather new data and integrate new data and old data into a uniform African Geographic Information System with the capacity to integrate economic, environmental, and social considerations.
- Engage universities and other centres of expertise.
- Develop a continent-wide African Blue Economy strategy.
- Increase mapping and geological surveying activities in the African continental shelf and adjacent oceanic areas.
- Develop mineral inventory program for the African continental shelf and adjacent oceanic areas.
- Develop international cooperation for activities in the international seabed areas.

## Session 4. African Centres of Excellence on seabed mapping and spatial planning

### **Objectives**

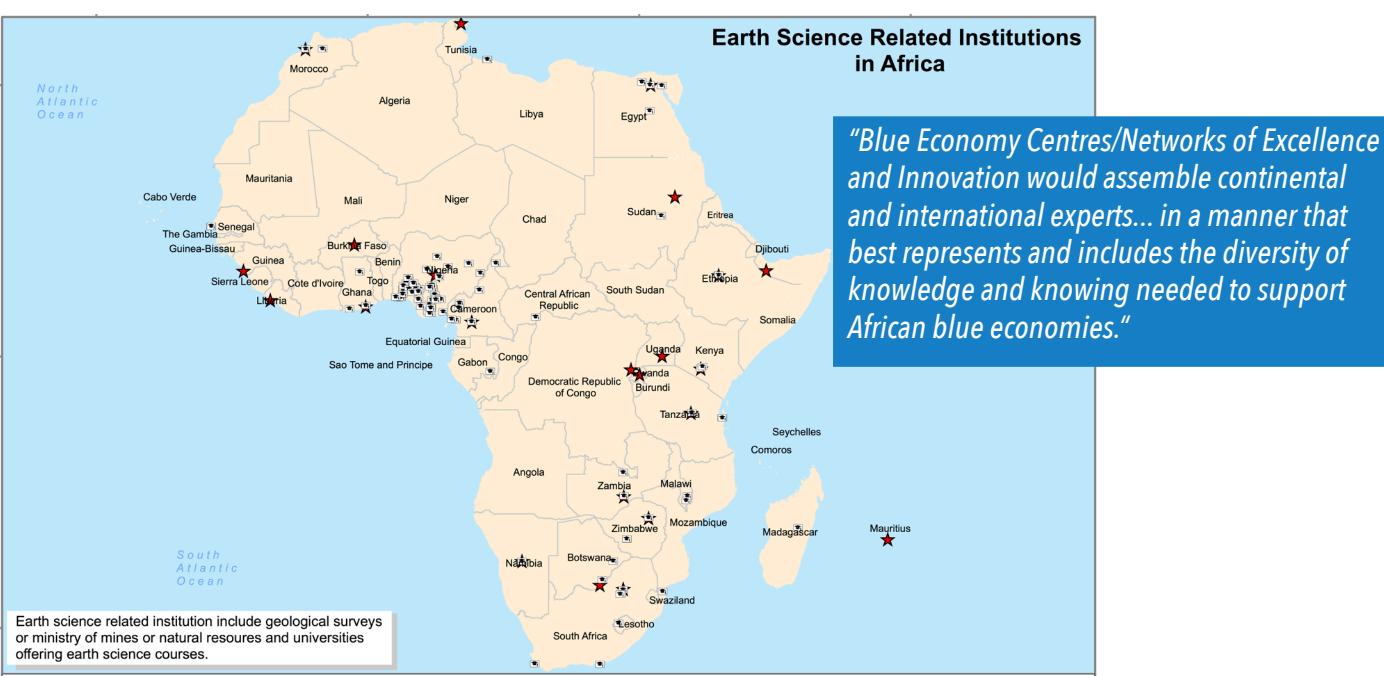
To discuss strategies for the establishment of African Centres of Excellence on seabed mapping and spatial planning.

### **Chairperson**

Alexander Ndubuisi Nwogbu, President of the Organization of African Geological Survey

### **Rapporteur**

Gbenga Okunlola, President Geological Society of Africa (GSAf), President Nigerian Mining and Geosciences Society



## **Presentations**

### **4.1 Best practice for the implementation of Centres of Excellence around the world**

*By Yannick Beaudoin, Chief Scientist, GRID-Arendal*

Underpinning any designing and implementation of sustainable and beneficial blue economy strategies across the continent will be the need to encourage: a) critical thinking of existing models and theories, b) original thought promoting new knowledge and potential solutions and c) Africa-based innovation that reflects cultural contexts, social diversity and bio-physical realities. Although external (i.e. beyond Africa) models, science, knowledge, policy processes etc. can be very useful to help inform potential solutions and actions, overreliance on outside knowledge that is not always compatible with social, environmental and economic realities of a given context, often leads to stagnation, inaction or failure. The rich knowledge and innovation base of the continent is a severely untapped resource. Blue Economy Centres/Networks of Excellence and Innovation would assemble continental and international experts inclusive of citizen experts, industry, small and medium enterprise, local to national government, academia etc. in a manner that best represents and includes the diversity of knowledge and knowing needed to support African blue economies.

*"IOC calls for regional collaboration and partnerships among African countries, and interested international bodies (AMDC, ISA, GRID-Arendal, etc.)."*

### **4.2 Potential African Centres of Excellence for the Atlantic and Indian Oceans**

*By Raj Mohabeer, Deputy Permanent Secretary, IOC- Indian Ocean Commission (IOC), Mauritius*

The Indian Ocean Commission is an intergovernmental organization that was created in 1982 and institutionalized in 1984 by the Victoria Agreement in Seychelles. The IOC is composed of five African Indian Ocean nations: Comoros, Madagascar, Mauritius, Réunion, and Seychelles. IOC's principal mission is to strengthen the ties of friendship between the countries and to be a platform of solidarity for the entire population of the African Indian Ocean region. IOC's mission also includes development, though projects related to sustainability for the region, aimed at protecting the region, improving the living conditions of the population and preserving the various natural resources that the countries depend on. Currently, the IOC has ten international partners and twelve undergoing projects, eight of which deal with ocean issues. These include sustainable management of coastal zones and ecosystems, ports infrastructure and maritime connectivity and trade, maritime security, marine sustainable potential and sustainable fisheries.

IOC's strategy forward is to contribute to food security; poverty alleviation; the mitigation of and resilience to the impacts of climate change; enhanced trade and investment; enhanced maritime connectivity; economic diversification; job creation and socio-economic growth. Consequently, IOC specified activities to implement this strategy. However, given certain issues, IOC calls for regional collaboration and partnerships among African countries, and interested international bodies (AMDC, ISA, GRID-Arendal, etc.). It further calls to set in motion the establishment of the JACEIO with clear aim, objective and principles. It will serve as a platform with technical support from complementary partners.

The presentation concludes in specifying the role of a joint African centre of excellence. These are (1) promoting partnership and networking of African key institutions, coordination with key related stakeholders and eventually establish a regional framework; (2) acting as a hub for lessons and experiences, supporting the transfer of technology and promotion of transfer of know-how and knowledge; (3) facilitating the elaboration of national strategies and action plans; (4) promoting the improvement of the business environment and the involvement of the public and private actors of the region; (5) facilitating access to international funding and capacity building, sea-bed mapping and spatial planning; (6) promoting the emergence of a data base/pool of regional competence/expertise, training programmes and HR/skills development; and (7) monitoring and evaluating progress based on set aim, objectives and principles.

#### **4.3 Cooperation mechanisms for the establishment of centres of excellence**

#### **4.4 Lessons from continental to Oceanic Mining: Governance, Legal Regimes, Royalties**

*By Kojo Busia, Director, African Minerals Development Centre, UNECA*

(These two complementary talks were merged into a single presentation)

Africa is well endowed with mineral resources and has a long history of mining, but has so far not reaped the developmental benefits from these resources. This is largely due to the weak integration of Africa's mining sector into national economic and social activities.

In 2009, the African Mining Vision (AMV) was endorsed with this objective in mind. The AMV offers a unique, Pan-African pathway to finally reverse the old paradigm regarding the management of our mineral wealth. The Vision is designed to support our governments in addressing the complex linkages that must be unlocked to make mineral resources truly developmental. These include improving governance in resource management; linking minerals to industries; building a solid knowledge base; enhancing the capacity of our people to negotiate fair and equitable contracts; breaking down trade and infrastructure barriers; integrating small-scale mining into the broader economy; and improving our people's livelihoods.

In 2013, the African Minerals Development Centre (AMDC) was set up to implement the Vision and its Action Plan, in response to the need for a central and strategic organisation. AMDC is currently working globally with international institutions; regionally with Regional Economic Communities; and, in half of the Member States of the African Union, supporting our countries to develop Country Mining Visions to meet country-specific needs. Through its multi-stakeholder engagement, AMDC is contributing to improvements in the lives of communities - for example, through its work on artisanal and small-scale mining and its compact with the private sector to foster private-public dialogues.

*"AMDC's vision is to become a Centre of Excellence and the facilitator of choice to enable AU Member States to realise the Africa Mining Vision. It seeks to enable African countries to confront challenges post by mining in general in particular deep sea mining."*

AMDC's vision is to become a Centre of Excellence and the facilitator of choice to enable AU Member States to realise the Africa Mining Vision. It seeks to enable African countries to confront challenges post by mining in general in particular deep sea mining. African countries have to realise that developing mining potential takes collaboration and partnership as it requires technology, robust governance institutions. With regards to deep sea mining, African states can benefit from aligning to ISA standards and coordinate existing capacities- both international

regional organisations, centres of excellence and non-governmental institutions to name a few.

#### **4.5 Country experience: Namibia**

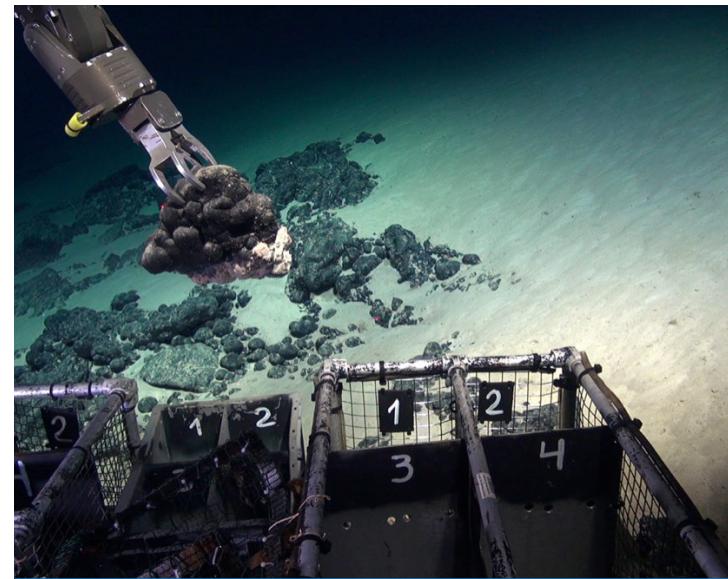
By Aphary Muyongo, Acting Deputy Director,  
Geological Survey of Namibia

The Geological Survey of Namibia, as custodian of Namibia's rich endowment of geological resources, facilitates the responsible development and sustainable utilisation of these resources for the benefit of all Namibians. It provides geoscientific information through research to promote sustainable development and investment in Namibia and guides land-use decisions to ensure the availability and sustainability of resources for the current and future welfare of the society. The Geological Survey also stimulates investment in Namibia's Mining Sector in order to contribute to the development of Namibia's economy and creates awareness of the earth sciences in order to enhance the understanding of the geo-environment and its interaction with the life-supporting system of the Namibian people.

Currently, the Geological Survey of Namibia has enabled access to mineral special data in terms of licenses within a given area. It has drawn a policy on data infrastructure and standardization of data collection and handling to ensure that government institutions and GSOs know how to collect data properly.

Namibia has a number of offshore activities and is a pioneer in seabed mining. It has pending applications for two phosphate mining licenses and has given a diamond mining license before. Based on Namibia's experience, marine mining is a very sensitive issue and more participation from seabed mining specialists are encouraged, particularly in the area of marine ecosystem management. Careful consideration has to be given in the marine special planning phase and initiatives have to be planned with regards to planning seabed mining activities. In terms of data management in offshore activities, Namibia has an agreement with Angola and South Africa in data and information sharing. Committees in Namibia collected available data from other government institutions and used the information to map its seabed.

The Geological Survey of Namibia has leveraged itself to be a centre of geological data collection, including marine geological data. It has established an organized system of data collection, handling and access and requires all private companies to submit their reports. The policy set in place to protect and ensure that data collection is standardized enable Namibia to further develop a seabed mining in the future. With its track record, Namibia has excellent potential to be a centre of excellence in the southern African region.



*"The Geological Survey of Namibia has leveraged itself to be a centre of geological data collection, including marine geological data."*

## **Discussions and session recommendations**

The fourth sessions discussed strategies for the establishment of African Centres of Excellence on seabed mapping and spatial planning.

The discussion and recommendations focused on the establishment of African Centres of Excellence, inter-institutional and regional collaboration and partnerships, and research and training platforms that can be used to inform industry and government on deep seabed mining issues.

- Engagement in deep sea mining activities can prove daunting to a single country, particularly if the country in question has no prior experience in the said activities. There is a strong rationale behind exploitation of deep sea minerals and their economic value cannot be ignored. Thus, it is recommended that the AU forms a maritime strategy and so that collectively, African countries can have a cohesive position with regards to deep sea mining.
- Although there is a strong argument on the economic benefits of mining operations, African countries are also recommended to focus on education, knowledge-building and capacity building, and not just on monetary profitability of mining activities. The benefits of these linkages in the long-run create a rationale for a more holistic approach to mining development.
- Colonial data proved to be an important starting point with regards to the experience of Namibia. Currently, geological data is available online though it has a long way to go in terms of fully modernizing its data collection and housing technology. In terms of capacity building, Namibia has successfully trained a number of researchers and scientists in mapping and oceanography.
- One of the projects of AMDC is building regional centres of excellence to host geological data and in support of Africa's blue economy. The development of similar centres of excellence that are regional, multi-disciplinary and inter-institutional is thus highly encouraged.
- In prior discussions, the significance of the GMIS and proper data collection to the mining value chain has been outlined. In this regard, geo-spatial mapping data is valuable and the modernisation of database management and cataloguing technologies are needed. The importance of historical databases has to be taken into consideration and catalogued as well. Data is also available from various resources and it is recommended that these resources could be tapped using localised initiatives. For instance, the experience of the Council of Geological Sciences of South Africa proves to be significant in perfecting techniques in marine geosciences using local sources, simplified instruments and network opportunities.
- Research can be promoted by centres of excellence but done by countries where their interests lie. This can be done through reinforced, complementary roles of centres with individual research activities. The importance of linking up institutions will give a new dimension to mining, and in particular deep seabed mining. Currently, most of institutional operations are highly compartmentalized, thus needing to synergize to achieve some level of resonance.
- Communicating deep sea mining is extremely important: finding realistic solutions by coordinating with educational institutions to design curricula for future marine leaders is one of the outreach activities that can prove crucial in communicating mining to all stakeholders.
- Communicating mining in general presents challenges as it can be too technical and too



multi-dimensional. According to stakeholder experience, mining also presents a divergence of perspectives as the government, the mining companies, CSOs and local community could have different interpretations of what constitute mining activities and their profitability. Results of mining operations are also not immediately tangible and communication lines between stakeholders are not open. In this regard, proper communication and advocacy strategies have not been more vital and the use of innovator media tools, stories and unique partnerships between stakeholders to minimize these communication challenges have to be taken into consideration.

#### *Recommendations specific to AMDC:*

- Identify the various institutions in Africa that are involved in marine mineral resources data gathering, mapping, explorations etc. The OAGS and the GSAF can help out.
- Harmonize the capacities and capabilities of these institutions and organizations through a workshop where they are all or regionally be invited to present their capacities and capabilities.
- Put together a scoping study document of the potential capacities and capabilities for African marine mineral resources institutions and organizations. These may also involve a summary of the findings over the years as presented by these organizations.
- Select regional centres based on the aforementioned information gathered.
- Worked on modalities of operations, scope and coverage of this regional centres.
- Organise a stakeholders meeting involving potential investors, collaborators (research) and states to present the status of data and then a way forward for the development of African marine mineral endowments..
- AMDC in partnership with international, regional and national organizations should support the establishment of Regional Centres of Excellence (RCEs) in Blue Economy in Africa, ideally one in the Indian Ocean and two in the Atlantic Ocean (one in the North and one in the South).

### **Session 5. Prospects for Public and Private Partnership for preparation of application for plan of work for exploration in the Area by African nationals**

#### **Objectives**

To discuss possible Private and Public Partnerships (PPP)s for the development of African marine activities, as well as the prospects and requirements for the preparation of application for plan of work for exploration in the Area by African companies and governmental agencies.

#### **Chairperson**

Hussein Hassan, Head of Trade and Industry Department, African Union Commission

#### **Rapporteur**

Edwin Egede, AMDC Consultant, Senior Lecturer in International Law & International Relations, School of Law and Politics, Cardiff University



## **Presentations**

### **5.1 Requirements for application for plan of work for exploration in the Area**

*By Chapi Mwango, Chief – Contract Management Unit, International Seabed Authority*

Applying for a plan off work for exploration is the first step towards obtaining a contract with the International Seabed Authority for exploration of marine mineral resources in the international seabed Area.

The presentation considers who qualifies to apply to the Authority for a plan of work, obtaining a certificate of sponsorship, proving technical and financial capabilities, the application fees and contents of the application documents. It discusses eligibility and the process to apply for exploration in a reserved area. It further pointed out that developing States are eligible to apply to explore the reserved areas under the parallel system of mining the Area. It concludes by explaining the evaluation process once the application has been submitted.

### **5.2 Presentation by exploration contractor**

*By Kris Van Nijen, General Manager, Global Sea Mineral Resources, Deme-Group*

Global Sea Mineral Resources NV (GSR), a subsidiary of the DEME-Group (Belgium) has been developing deep seabed mining since 2010. Given the 150 years' experience in the dredging industry, moving this expertise into the deep sea is one of the different diversification strategies of DEME. In 2012, GSR's plan of work for exploration in the Clarion Clipperton Fracture Zone (CCFZ) was approved by the International Seabed Authority (ISA). Since then, GSR has organised two expeditions towards the CCFZ, gathering information on the resource, the environment and in-situ soil information. Currently GSR is mobilising for its third expedition and has the intention to test the first (umbilical powered) tracked vehicle in the CCFZ, including the deployment of deep sea mooring buoys. This component test is one more step towards de-risking the exploitation technology necessary for sustainable harvesting of polymetallic nodules. Whilst environmental and engineering data is being gathered by the contractors, the ISA is in the process of developing the exploitation code a prerequisite for further investment in seabed mining.

### **5.3 Capacity building and training**

*By Chapi Mwango, Chief – Contract Management Unit, International Seabed Authority*

The Authority has the responsibility to promote training and capacity building aimed at qualified candidates from developing States. The objective is to ensure that developing member States will have the necessary technical know-how to participate in marine mining when it starts.

The Authority fulfils this responsibly through two principle means: administration of the contractor training programme and administration of the endowment fund for marine scientific research.

The presentation details the legal basis of the two programmes and describes how the Authority administers these. It further discusses the successes of the programmes, the challenges faced and future opportunities presented.

## **Discussions and session recommendations**

The fifth session discussed possible Private and Public Partnerships (PPP)s for the development of African marine activities, as well as the prospects and requirements for the preparation of application for plan of work for exploration in the Area by African companies and governmental

agencies.

The topics of discussion and recommendation for Session 5 focused on capacity building on responsible deep seabed mining activities.

- Most African countries are encountering challenges in sensitising their mining policies and legislation in order to be AMV and ISA compliant. It is then recommended for AMDC to engage with African Countries to enact and develop domestic legislation related to UNCLOS 82.
- There is a need to engage with existing African institutions on marine scientific research to reassemble the existing data. This would enable African Countries to know what they already have and what they need to develop.
- It is noted that some Africans have already been trained through the ISA Contractors training programs and the ISA Endowment Fund. There is a need to obtain information from ISA of contact details of African nationals who have been trained to involve them in the process of capacity building. It was suggested that a directory of African experts, including those in diaspora, in the Blue Economy, including deep seabed mining be developed.
- Effective dissemination of training opportunities is available through the ISA. It is recommended that since deep seabed mining is multidisciplinary, the strategy for dissemination should be multidimensional to reach the widest number of potential candidates in the African continent.
- There was concern about the huge underrepresentation of female candidates in the trainings offered by ISA/Contractors. It was recommended that the opportunities for training be widely circulated amongst relevant women's associations such as the Association of Women in Geosciences and the African Women in Mining Association, as well as Women in Maritime in Africa (WIMAFRICA) to encourage more female candidates to apply.
- One of the ways that can help in overcoming issues of communicating deep seabed mining is the use of simple language instead of technical language for the message to be inclusive. This has been done with regards to the Blue Economy before and should be multiplied and used to make sure that all stakeholders understand the tenets of deep seabed mining operations.
- African States are recommended to sponsor contractors to engage in Deep Seabed exploration activities in reserved areas. This could be done by adopting the Tonga-Nauru type models of sponsoring multinational corporations and forming consortia.

# CONCLUSION & RECOMMENDATIONS

The workshop on Marine Mineral Resources of Africa's Continental Shelf and Adjacent International Seabed Areas – Prospects and Considerations for Sustainable development of Africa's Maritime Domain in support of Africa's Blue Economy was able to raise awareness among African States about the importance of the sustainable development of activities on the Africa's continental shelf and adjacent international seabed area (the Area) carried out by African nationals. It also considered the significance of the International Seabed Authority and other entities created by the UNCLOS, as well as to discussed strategies that could help African States and nationals to build capacity, engage in deep seabed activities in the Area and promote sustainable use of the maritime areas around Africa.

The following were the main outcomes of the workshop:

- Raised awareness among African States, including the LLGDS, about the importance of the Law of the Sea for the African continent and, in particular, for the sustainable development of activities in the African continental shelf and adjacent international seabed areas. It also issued recommendations on how to strengthen the African legal framework in a way that it will better support the sustainable development of Africa's Maritime Domain and Africa' Blue Economy.
- Raised awareness among African States, including the landlocked countries, about the political-strategic and socioeconomic importance of the African continental shelf and adjacent international seabed areas, as well as help identified potential areas for scientific and technical cooperation.
- Produced guidelines on how to strengthen the Africa-based production, management and dissemination of geospatial information and how to create spatial data infrastructures (SDIs).
- Issued recommendations for the establishment of African Centres of Excellence, to provide African States with increased access to marine geoscientific information and high quality marine research, education and training.
- Issued recommendations on how best to promote prospecting and exploration activities in the African continental shelf and adjacent oceanic areas by African initiatives.

Ultimately, the workshop provided an opportunity to demonstrate how the deep seabed could contribute to a sustainable African Blue Economy narrative that better reflects the kinds of development goals, partnerships, and forms of social reciprocity that African societies need as they move further into the 21st century.

## Recommendations

The presentations and discussions that followed during the workshop on Marine Mineral Resources of Africa's Continental Shelf and Adjacent International Seabed Areas brought out a

comprehensive list of recommendations for stakeholders that were represented in the meeting.

### ***Recommendations for African countries***

Specific recommendations for African countries were made with regards to their involvement and engagement to the sustainable development of mining activities in Africa' continental shelf and the international seabed area. The following recommendations were put forward:

- Raise more awareness domestically and regionally about the importance and impact of deep seabed mining, using established networks of institutions, experts, initiatives and organisations.
- Encourage governments of ISA-member countries to be actively involved in the Authority's activities and encourage governments to consider membership to ISA.
- Stimulate better understanding and more awareness of the legal implications of the common heritage of mankind as it will inform policy-making.
- Form a collaborative body among African states to develop interest in deep seabed mining, taking the Pacific countries as a model of cooperation in deep seabed mining activities. This partnership can be organised regionally and will embody collective action among its members with regards to seabed mining operations. This can be utilised to sponsor contractors to engage in deep seabed exploration activities in reserved areas.
- Include environmental sustainable standards in African states' mining legislation, regulatory frameworks and policies in order to mitigate or minimize the environmental impact of mining activities.
- Develop a strategic approach in geo-spatial data collection, utilising local sources, consortium of existing initiatives, research institutions, and historical data, integrating these in a modernized data management system and cataloguing technologies.
- Engage the International Seabed Authority in building capacity for marine geology and seabed mining.
- Explore capacity building opportunities in deep seabed mining, particularly traineeship and scholarship schemes offered by ISA, Interidge and other grant-giving bodies.
- Consider linkages of mining practices to the bottom-line, and developing education, knowledge-building and capacity building to develop experts in the field of deep seabed mining.
- Establish regional centres of excellence that are multi-disciplinary and inter-institutional. Synergize local institutions to contribute to these centres of excellence.
- Develop comprehensive communications strategy to sensitise deep seabed mining, using current technologies, media tools and simple language.

### ***General Recommendations for the AU, ISA and AMDC***

- Organise regional and country workshops to sensitise Africa's Blue Economy and Deep seabed mining.
- Provide a deep seabed mining policy framework that would serve as a basis for the development of the deep seabed mining legal frameworks of individual African countries.
- Work with partner organisations in creating awareness and disseminating information about deep seabed mining activities, technology and development.
- AU to improve the African Integrated maritime Strategy to consider a cohesive position of African States on deep seabed mining and extension of outer continental shelf.
- AMDC in partnership with the UNECA AUC, ISA and other international, regional and

national organizations should support the establishment of Regional Centres of Excellence (RCEs) in Blue Economy, in Africa, ideally and one in the Indian Ocean and two in the Atlantic Ocean (one in the North and one in the South). The RCEs should provide the framework for inter-governmental and inter-agency cooperation for seabed mapping, spatial planning and ocean resource management.

- Carry out similar workshop in each African region.
- Prepare an Atlas of the African Blue Economy to raise more awareness and to support countries with geo-scientific information.

### ***Recommendations for the International Seabed Authority***

- Organise other workshops to sensitise deep seabed mining to African States.
- Serve as an independent monitoring body in existing deep seabed mining activities.
- Share information of about African nationals who have participated in ISA training programmes so government institutions will be able to engage them in potential deep seabed mining-related activities.
- Reach the widest number of potential candidates for marine geology and deep seabed exploration traineeship programmes through effective dissemination of information, utilising various channels including government ministries, African mining networks, GSOs, and other stakeholder groups.
- Circulate opportunities for training amongst relevant women's associations such as Association of Women in Geosciences, the African Women in Mining Associations, and Women in Maritime in Africa (WIMAfrica) to encourage female representation in deep seabed mining.
- Support the establishment of African Centres of Excellence on Blue Economy

### ***Recommendations for the African Minerals Development Centre***

- Develop communication and advocacy strategies to sensitize Africa's Blue Economy and deep seabed mining
- Identify the various institutions in Africa that are involved in marine mineral resources data gathering, mapping, explorations etc. (i.e. The OAGS and the GS Af )
- Harmonize the capacities and capabilities of these institutions and organizations through a workshop where they are all or regionally be invited to present their capacities and capabilities.
- Put together a scoping study document of the potential capacities and capabilities for African marine mineral resources institutions and organizations. These may also involve a summary of the findings over the years as presented by these organizations.
- Select regional centres of excellence based on the aforementioned information gathered.
- Work on modalities of operations, scope and coverage of this regional centres.
- Organise stakeholders meetings involving potential investors, collaborators (research) and states to present the status of data and then a way forward for the development of African marine mineral endowments.



- Strengthen national geological surveys organizations (GSOs) and research institutions.
- Strengthen national and regional capacities to standardize manage geological and geospatial information.
- Strengthen national and multi-national geographic survey capacities. Develop uniform data systems. Gather new data and integrate new data and old data into a uniform African Geographic Information System with the capacity to integrate economic, environmental, and social considerations.
- Organize data and information of the South Atlantic and Indian oceans, as well as the Mediterranean and Red Seas in geographical information systems.
- Engage universities and other centres of expertise.
- Develop a continent-wide African Blue Economy strategy.
- Increase mapping and geological surveying activities in the African continental shelf and adjacent oceanic areas.
- Develop mineral inventory program for the African continental shelf and adjacent oceanic areas.
- Develop international cooperation for activities in the international seabed areas.

### **Recommendations for the Geological Mineral Information System (GMIS)**

- Strengthen national geological surveys organizations (GSOs) and research institutions.
- Strengthen national and regional capacities to standardize manage geological and geospatial information.
- Strengthen national and multi-national geographic survey capacities. Develop uniform data systems. Gather new data and integrate new data and old data into a uniform African Geographic Information System with the capacity to integrate economic, environmental, and social considerations.
- Engage universities and other centres of expertise.
- Develop a continent-wide African Blue Economy strategy.
- Increase mapping and geological surveying activities in the African continental shelf and adjacent oceanic areas.
- Develop mineral inventory program for the African continental shelf and adjacent oceanic areas.
- Develop international cooperation for activities in the international seabed areas.

### **Recommendations for other partners**

- Engage in information sharing, data research and capacity building efforts in deep seabed mining activities (of African states)
- Open channels of communication to inform possible mining activities so that African States will have a starting point if they choose to engage in seabed mining operations



# APPENDICES

## Opening Remarks by Hon. Sam Kutesa

*Delivered by Mr. Duncan Laki, Legal Advisor Permanent Mission of Uganda to the United Nations*

Opening remarks by Hon. Sam Kutesa, Minister of Foreign Affairs of Uganda, at the regional workshop on marine mineral resources of Africa's continental shelf and adjacent international seabed area- prospects for sustainable development of the African maritime domain in support of African's Blue Economy, 2-4 May 2017.

His Excellency, Mr. Michael Lodge, Secretary General of the International Seabed Authority,  
Your Excellences, Members of the diplomatic corps,  
Distinguished Guests, Ladies and Gentleman

It gives me great pleasure to welcome you to Uganda and to the opening session of this Workshop on Marine Mineral Resources of Africa's Continental Shelf and Adjacent International Seabed Area, whose central theme is "Prospects for Sustainable Development of Africa's Maritime Domain in support of Africa's Blue Economy."

I wish to express my gratitude to you all, ladies and gentlemen, for your presence here which demonstrates the great interest and importance attached to this event by the governments as well as public and private sector institutions that you represent.

I am also disposed to register my appreciation to the International Seabed Authority which, in partnership with the African Mineral Development Centre (AMDC), the Pew Charitable Trusts, Grid-Arendal (Norway), the African Union Commission (AUC) and the United Nations Economic Commission for Africa (UNECA), has organised this important workshop.

I note, with heartfelt satisfaction, that this Regional Workshop has brought together experts from the international legal and scientific community; as well as national and regional government officials, researchers and academics.

The over-arching purpose of the event is:

- To discuss issues pertaining to the United Nations Convention on the Law of the Sea (UNCLOS);
- Consider the work of the International Seabed Authority (ISA) on marine mineral resources development and protection/preservation of the marine environment;
- Propose mechanisms for improving regional cooperation and participation of African countries in the deep seabed regime;

- Address special interests of landlocked African countries such as Uganda;
- Discuss strategies that could help African states and their nationals to build capacity. Engage in deep seabed activities in the international seabed area and promote sustainable use of the maritime area around Africa; and
- Take stock of, and evaluate the achievements registered so far in, the African Decade of Seas and Oceans (2015-2015) which was launched by the African Union on 25th July, 2015.

These issues will be addressed in the broad context of the UN Sustainable Development Goals; particularly SDG 14 which refers to “conservation and sustainable use of oceans, seas and marine resources for sustainable development.”

Needless to mention, Uganda, the host country for this event, is a landlocked, least developed country situated in eastern Africa; in the Lake Victoria basin. It is bordered in the East by the Republic of Kenya, in the North by the newly created Republic of South Sudan, in the West by the Democratic Republic of Congo, in the South and South-west by Tanzania and Rwanda respectively. Uganda covers a total area of approximately 241,038 square kilometres. The country has a multi-ethnic population of approximately 34.9 million people. (2014 statistics)

Distinguished participants,

38 of Africa's 54 polities are coastal states. The vast maritime zones under the continent's jurisdiction (i.e. the Territorial Sea, the Exclusive Economic Zones and the Continental Shelf) and their natural resources, can significantly contribute to the structural transformation of Africa. Indeed, Sustainable Development Goal 1 recognises the central, may continuing role that marine and aquatic resources play in supporting a multiplicity of economic sectors and activities that create employment opportunities and livelihoods which, in turn, contribute to achievement of poverty eradication. Additionally, the African Union's "205 Africa's Integrated Maritime Strategy" (AIM) of January 2014, recognises the potential of this Blue Economy to foster sustainable development of Africa.

Africa's Blue Economy has been appropriately described as "the new frontier of African Renaissance". The AU's Agenda 2063 bills this Blue Economy as the fulcrum for the continent's socio-economic advancement. We must remind ourselves that in July 2015, the AU set apart the 25th day of July as the "African Day" and inaugurated the Decade of Seas and Oceans (2015-2025), in order to galvanise action with respect to the continent's Blue Economy.

Excellences, Ladies and Gentlemen,

Given the foregoing fortifications, African countries should bestir themselves and participate more meaningfully and with keener interest in the deep seabed regime and its resources; aptly referred to as the Common Heritage of Mankind by the United Nations Convention on the Law of the Sea (UNCLOS). It is particularly gratifying that this Convention encourages developing countries to effective participate in deep seabed exploration and mining in the international seabed regime. It also draws attention to their special interests and needs, and in particular to the special needs to the landlocked and geographically disadvantaged among developing countries. This is with a further view to

*"Given the foregoing fortifications, African countries should bestir themselves and participate more meaningfully and with keener interest in the deep seabed regime and its resources"*

overcoming obstacles arising from their disadvantaged location, including remoteness from the International Seabed Area and difficulty of access to and from (Part XI of the UNCLOS).

It is my hope that this Workshop will, among other things, register the following outcomes:

- Raising awareness among African States about the importance of the sustainable development of activities on Africa's continental shelf and adjacent international seabed area carried out by African nationals;
- Build relevant technical capacity in relation to activities in the deep seabed;
- Increase African participation in decisions that affect the international seabed area;
- Define and enable sustainable activities on Africa's continental shelf; and
- Generate a narrative on how best to strengthen the African Legal framework in a way that will support the sustainable development of Africa's Maritime Domain and Blue Economy.

I thank you all for coming to Uganda, the Pearl of Africa, and I wish you very fruitful deliberations.

-- End --

### **Speech by Mr. Michael Lodge Secretary General, International Seabed Authority**

Ambassador Laki, Deputy Permanent Representative of Uganda to the United Nations, Dr Kojo Busia, Coordinator of the AMDC,  
Dr Hassan Hussein, representative of the African Union Commission,  
Distinguished delegates, ladies and gentlemen,

On behalf of the International Seabed Authority, welcome to the workshop on marine mineral resources of Africa's continental shelf and the international seabed.

**"UNCLOS provides that all States, including the least developed, geographically disadvantaged and landlocked States, are to have access to these resources and are to benefit from their exploitation."**

This is the first ISA sponsored event to be held in a landlocked country. This is something that is long overdue and I am particularly pleased to be able to hold this event in Uganda, in the presence of my good friend Ambassador Duncan Laki. Ambassador Laki has been a great supporter of the work of the ISA over many years, including as a member of the Finance Committee, flying the flag for Uganda and for the developing landlocked States, and I was therefore delighted when he suggested Kampala as the venue for this event.

Let me also acknowledge the presence of Joshua Tuhumwire, who was elected as a member of the Legal and Technical Commission for 2017-2021: the first time Uganda has held a position on this body. As well, let me recognize Dora Achapa, LTC member from Kenya, Theophile Ngdousa, LTC member from Cameroon, and former LTC member Dr Adesina Adegbie from Nigeria.

I also wish to acknowledge the presence and support of our partners in this workshop. AMDC, who are doing such excellent work in the region from their headquarters in Addis Ababa, together with UNECA and the African Union.

Our friends and partners from GRID-Arendal, who are providing their technical expertise and input to both AMDC and ISA. Pew Charitable Trusts, whom I wish to especially thank for their support for this workshop. Civil society has an increasingly important role to play in development, and I wish to acknowledge Pew's constructive engagement with ISA and our work over the past several years. Your interest in and willingness to work with us in convening this workshop is I believe an important step forward in building an effective partnership to advance the aims and objectives of UNCLOS.

Also wish to acknowledge the presence of Judge Kateka from Tanzania, Judge of the International Tribunal for the Law of the Sea, as well as a representative of DOALOS.

At first sight, it may seem strange for ISA to convene a workshop in a landlocked country in the heart of Africa. After all, we are concerned with the development of non-living resources from the deep ocean seabed. Frontier resources in the most technologically and financially challenging environment on the planet. What possible relevance could this have to Africa?

In fact, this workshop is long overdue. As we will hear in the next two days, the resources of the deep seabed are resources that belong to us all. They are the common heritage of mankind. As such, the UNCLOS provides that all States, including the least developed, geographically disadvantaged and landlocked States, are to have access to these resources and are to benefit from their exploitation. It is a matter of concern that, so far, few if any benefits have accrued to African States from the tremendous scientific and technical advances that are being made in relation to the resources of the deep seabed and continental shelf.

In a few short weeks, the world will be meeting in New York for the United Nations conference on the implementation of SDG14 – the conservation and sustainable use of the resources of the oceans and seas. The focus of much of the conference will be on conservation: the urgent need to protect the ocean from pollution (mainly from land), the problem of plastics in the ocean, and the over-exploitation of its living resources. It should also be remembered, however, that a significant aspect of SDG14 is the recognition that the resources of the ocean, which include the mineral resources of the deep seabed, are to be used in a sustainable manner for the benefit of mankind as a whole, and they make an important contribution to the development of the blue economy.

I thank you all for your presence and look forward to constructive discussions and exchange of ideas over the next two days.

-- End --

*"A significant aspect of SDG14 is the recognition that the resources of the ocean, which include the mineral resources of the deep seabed, are to be used in a sustainable manner for the benefit of mankind as a whole, and they make an important contribution to the development of the blue economy."*

## Speech by Dr Abdalla Hamdok

Executive Secretary, United Nations Economic Commission for Africa –  
UNECA, Ethiopia

Delivered by: Dr. Kojo Busia, Director, African Minerals Development Centre, United Nations Economic Commission for Africa

Your Excellency, Sam Kutesa, the Honourable Prime Minister,

*"Mineral resources, on land or under water, are the common heritage of the people in this region, and its sustainable management can definitely propel African in a development trajectory."*

Excellency, Mr. Michael Lodge, Secretary-General, International Seabed Authority  
 Excellency, Hon. Peter Lokeris, Minister of State for Energy and Mineral Development (Minerals), Uganda,  
 Excellency, Ambassador Duncan Laki, Legal Adviser at the Permanent Mission of Uganda to the United Nations  
 Excellency, H.E. Albert M. Muchanga, Commissioner Trade, Industry and Mines, African Union Commission- AUC

Distinguished representatives of the various geological information and mineral information initiative in Africa,  
 Distinguished partners, Ladies and gentlemen,

Let me first join my colleagues who spoke before me in thanking the Government and the People of Uganda for hosting us in this beautiful city of Kampala for this important workshop that will deliberate and discuss on critical aspects regarding our marine mineral resources in the context of sustainable development.

In fact, this event is more than just a workshop. Issues that will be discussed in the next three days are of utmost geopolitical and strategic importance. What is at stake here, is our desire to embrace a sustainable approach to master and manage resources we have within our continental shelf and its adjacent international seabed area, which, as we all know, includes abundant natural resources, having substantial development prospects for our people.

As I join you in this much-anticipated event on marine mineral resources, I feel energized and optimistic. Today is one of those opportunities where we can concretely move forward to achieve the objectives we all agreed to, notable in the context of the United Nations 2030 Sustainable Development Goals and the African Union's Agenda 2063, so that the potential of mineral resources can be tapped as an accelerator for development.

This is also at the core of the African Mining vision- the pioneering and innovative African Union continental framework for the mining sector; which has been adopted by all African countries. The African Mining Vision seeks to create a transparent, equitable and optimal exploitation of all mineral resources to underpin broad-based sustainable growth and socio-economic development.

Given all these aspirations and new markers on the road for a better development future, the path is clear: Mineral resources, on land or under water, are the common heritage of the people in this region, and its sustainable management can definitely propel African in a development trajectory.

Distinguished participants,

Let me put our conversation into perspective. African is a huge continent surrounded by large bodies of water: It is surrounded by the sea, with 38 out of our 54 Member States with coastlines, around the Indian Ocean to the Atlantic and Red Sea and is also rich in inland water resources, with its vast lakes and rivers. This beautiful country, Uganda, is itself home to Lake Victoria, the largest lake on the continent and one of the sources of the Nile River, the longest river in the world.

The maritime zones under Africa's jurisdiction consists of about 13 million

square kilometres of Territorial Seas and Exclusive Economic Zones and more than 6.5 million square kilometres of extended Continental Shelf. Altogether, this represents almost 20 million square kilometres of maritime areas.

More impressive than the number is the potential, barely uncovered that those resources represent to our economies. If used in a sustainable manner, the can indeed propel our socio-economic development upwards.

But to do so, we need a balanced approach, which requires being clear about our objectives and setting out a sustainable framework within which we would all be bound to work, because, let us not forget the legacy we want to leave to our children. There will be no question of compromising over the sustainable management and conservation of our resources.

Within such a balanced approach, African must also be able to benefit from its maritime jurisdiction but also, from the "Area" a common heritage of mankind, located beyond the limits of national jurisdiction.

As it stands today, Africa is the only regional group, which has so far not engaged with activities in the Area by obtaining exploration rights from the International Seabed Authority. This contrasts sharply the rising interests and presence from developed countries to secure access to maritime resources, for strategic reasons.

Although many may say that these are intensely capital-intensive activities, and countries may not be in a position to engage in activities individually, I believe in our ability to take strategic and collective approach to this issue. It is amazing to see how small Pacific islands like Nauru and Tonga have managed to obtain contracts for exploration and are moving forward. There is no reason why we cannot succeed. Some of the challenges can be overcome by working together and pooling our resources in an efficient manner.

Ladies and gentlemen,

I am delighted that our 3-day event will discuss precisely concrete avenues to finally catch up and move forward regarding maritime resources. We have in this room an excellent combination of experts- scientist, researchers, academics, and government officials- to brainstorm and think strategically as to how our continent can shape its future in this domain. This is what the AMV is all about- development that is equitable, sustainable, and inclusive.

I am looking forward to the richness of our deliberations. Also, this will be an important time, where issues associated with the Law of the Sea and the work of the International Seabed Authority on marine mineral resources development and the protection and preservation of the marine environment from activities in the international seabed Area will be discussed.

Ladies and gentlemen,

Beyond strategic discussions regarding our resources, this event is also an excellent opportunity for us to hunker down and discuss on how to strengthen regional cooperation when it comes to our deep seabed assets. This is a continental endeavour; including our landlocked African member states, so we can all exchange and build relevant technical capacity in relation to activities in the deep seabed.

**"African must be able to benefit from its maritime jurisdiction but also, from the "Area" a common heritage of mankind, located beyond the limits of national jurisdiction."**

Having a continental approach will help us increase participation in decision that affect the Area; define and enable sustainable activities on Africa's continental shelf, and lastly, contribute to the sustainable development of Africa's Blue Economy.

As we embark on these series of discussion, it is interesting to bookmark in our minds that we are in the swell of the African Decade of the Seas, which was launched by the African Union on July 2015. Let us make sure this decade marks our proactive engagement regarding the sustainable development of African marine mineral resources.

Distinguished guests,

Our partner, the International Seabed Authority, is an autonomous international organization within the United Nations system, with the responsibility to process applications, monitor activities, and adopt rules and regulations for the conduct of exploration and mining activities in the Area.

It is therefore an honour, that we have ISA with us today; as they share their knowledge on prospecting and exploration for different marine resources. Although not yet in Africa, a number of its member states, especially small-island developing states, have obtained exploration contracts from the ISA.

We therefore look forward for a fruitful partnership with ISA, in particular in exploring avenues for their enhanced participation of African countries in the international seabed regime.

The AMDC, which is a new Observer at the ISA will contribute to the work of ISBA in the process of developing and reviewing policy/regulatory frameworks for the deep sea mining sector, including the fiscal and legal regime and environmental regulation and management.

AMDC also has the technical expertise to mobilize African States in harnessing the economic benefits of deep sea mining and together with its knowledge in environmental geological and mineral information, the partnership between AMDC and ISA will further promote development-related activities in marine areas.

-- End --

### **Speech by H.E. Albert M. Muchanga**

**Commissioner Trade, Industry and Mines, African Union Commission - AUC,  
Ethiopia**

*Delivered by Dr. Hussein Hassan, Head of Trade and Industry Department, African Union Commission*

Excellency, Mr. Michael Lodge, Secretary General International Seabed Authority, Excellency, Ambassador Duncan Laki, Legal Adviser at the Permanent Mission of Uganda to the United Nations,

Dr. Kojo Busia, Coordinator of the African Minerals Development Centre, who is also representing the Executive Secretary of the United Nations Economic Commission for Africa,

Distinguished guests, ladies and gentlemen,

*"Having a continental approach will help us increase participation in decision that affect the Area; define and enable sustainable activities on Africa's continental shelf; and lastly, contribute to the sustainable development of Africa's Blue Economy.*

Among other drivers of the African Development Agenda as contained in the Agenda 2063 and other AU instruments is the importance of the Maritime Domain of Africa (MDA) which has the potential impact on the prosperity of the continent through their contributions to social, economic and political stability, and safety and security.

This meeting is therefore important to the African Union, as it aims at building a more progressive continental approach towards harnessing our marine mineral resources through the identification of strategic approaches for coherence and harmonization of our continental efforts.

Ladies and gentlemen,

The African Union recognizes that Africa's inland waters, ocean and seas are under pressure due to the intensification of traditional maritime activities, such as shipping, fisheries, aquaculture and offshore renewable energy among others. It is also important to note that the rise in intensity of activities at sea is taking place against the backdrop of insecurity, various forms of illegal trafficking, degradation of the marine environment, falling biodiversity and aggravated effects of climate change.

It is estimated that the past decade, the direct aggregate losses of revenue from illegal activities in Africa's Maritime Domain (AMD) amounted to hundreds of billions of US dollars, not to mention the loss of lives.

Ladies and gentlemen,

It is against this background that in 2012, the African Union adopted the 2050 African Integrated Maritime (AIM) Strategy. The development of the AIM 2050 strategy was a clear indicator of the continent's recognition that the AMD has vast potential for wealth creation and that AU Member States face common maritime challenges and opportunities, and indeed, significant responsibilities for generating the desirable political will for addressing the challenges.

Accordingly, the 2050 AIM Strategy provides a broad framework for the protection and sustainable exploitation of the AMD for wealth creation.

You may also recall that in October 2016, the African Union adopted a binding charter on maritime security and safety in Lomé, Togo, with the aim of making maritime space the key driver of Africa's economic and social development.

The whole notion of the 2050 AIM Strategy and the Maritime Security and Safety Charter and other AU-led initiative is to ensure that the Marine and aquatic Resources use their transformative role to contribute towards structural transformation of African economies and to attain the Goals of Agenda 2063- inclusive growth and sustainable development through resource-based industrialization.

The AMD offers all African nations, vast growth opportunities and a network of sea-lanes of enormous importance for their security and prosperity. It is of huge importance in terms of natural resources and energy, trade and industry, scientific and leisure activities. International commerce by water affects people

*"The AMD offers all African nations, vast growth opportunities and a network of sea-lanes of enormous importance for their security and prosperity."*

*"We need common rules on competition policy, regulatory systems, fiscal regimes that provide African countries with opportunities to maximize the benefits from marine mineral resources.*

and industries throughout the entire continent, including landlocked countries. In addition, the numerous vessels, ports, shipyards, and support industries in the AMD provide thousands of jobs for Africans. Clearly, disruptions or inefficiencies in Africa's maritime system with its supply chains and industries can thus have costly impact on a large number of participants in the economies of many African countries.

Excellences, ladies and gentlemen,

It is against this backdrop that the African Union commission is fully committed to supporting African Union Member States in consolidating efforts towards ensuring collective partnerships, ownerships, and the integration of roles of various stakeholders in helping realize the objectives of a unified continent.

We therefore expect that this three-day meeting will go a long way in elaborating practical steps towards operationalizing related issues through the support of our partners, the International Seabed Authority and our representative institution, the African Minerals Development Centre.

As we engage in serious discussions at this meeting, it is imperative that we focus on strategies that can help African unearth in a sustainable manner the strong potential of our marine resources. Its time African identifies way to strengthen marine minerals led social and economic linkages. We need to agree on common investment rules that help the continent reap the benefits of our marine mineral resources in sustainable ways. We need common rules on competition policy, regulatory systems, fiscal regimes that provide African countries with opportunities to maximize the benefits from marine mineral resources.

For Africa to achieve marine-led sustainable development, there is now an urgent need to build and strengthen formal strategies and mechanism including partnerships at all levels.

Finally, let me stress that the African Union Commission is fully committed to ensure that Marine resources become a major sector for the promotion of broad-based development and structural transformation of Africa.

We look forward to the strategic outcomes of this meeting and their effective implementation in the coming years.

I thank you.

-- End --

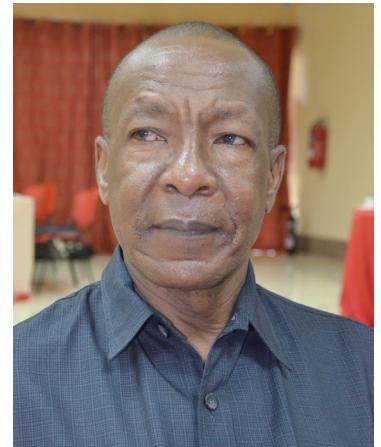
# DIRECTORY



**Adesina Adegbie**  
Director, Nigerian Institute for  
Oceanography and Marine Research  
Nigeria



**Alexander Ndubuisi Nwengbu**  
President, Organisation of African  
Geological Survey  
Nigeria



**Hon. Martinez A. Mangusho**  
Ambassador, Ministry of Foreign  
Affairs  
Uganda



**Angel Rusoke**  
Geologist, DGSM/MEMD  
Uganda



**Aphary Muyongo**  
Acting Deputy Director, Geological  
Survey of Namibia  
Namibia



**Audun Fostvedt-Mills**  
2nd Secretary  
Norwegian Embassy in Ethiopia



**Bramley Murton**  
Southampton NOC  
UK



**Carlos Fuentes**  
Legal Officer, DOALOS  
United Nations



**Chapi Mwango**  
Chief, Contract Management Unit  
International Seabed Authority



**Conn Nugent**  
Project Director, PEW Charitable Trust  
USA



**Daisy Diamante Leoncio**  
Communications Manager, African  
Minerals Development Centre  
UNECA



**Desiderious Chapewa**  
Senior Geologist, Geological Survey  
Department  
Zambia



**Dinah Mukase**  
Ugandan Christian University  
Uganda



**Dorcas Auma ACHAPA**  
Member LTC, Head of International  
Law  
Kenya



**Duncan Laki**  
Legal Advisor, Permanent Mission  
Mission of Uganda to the United  
Nations



**Edward Isabirye Mugaddu**  
Principal Geologist, Directorate of Geological Survey and Mines  
Uganda



**Edwin Egede**  
Senior Lecturer in International Law & International Relations, School of Law and Politics, Cardiff University  
UK



**Elias Xavier Felix Daudi**  
National Director, National Directorate of Geology and Mines  
Mozambique



**Eriya Tusubira**  
Minister of Foreign Affairs  
Uganda



**Faustino Orach-Meza**  
Dean, School of Science,  
Nkumba University  
Uganda



**Hans Christophersen**  
Counsellor, Trade and Energy,  
Norwegian Embassy in Ethiopia



**Hayley Cawthra**  
Council for Geoscience  
South Africa



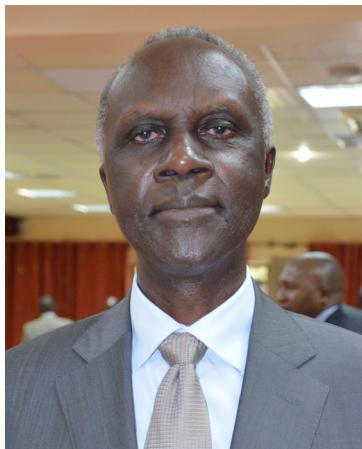
**Hussein Hassan**  
Head of Trade and Industry  
Department  
African Union Commission



**Isa Lugaizi**  
Lecturer, Nkumba University  
Uganda



**Isaac MBA Okorie**  
Deputy Director  
Nigerian Geological Survey Org.  
Nigeria



**Hon. James Kateka**  
Judge, International Tribunal for the  
Law of the Sea



**James Olwa**  
Geologist, Geological Survey Uganda  
Uganda



**Joshua T. Tuhumwire**  
Director, Gondwana Geoscience  
Consulting Ltd  
Uganda



**Juliet Nassuna**  
Advocate  
Uganda



**Julius Twesigye**  
Partner, Philadelphia Consulting  
Uganda



**Kaiser De Souza**  
Head, Geology and Mineral  
Information Systems Section, AMDC  
UNECA



**Kojo Busia**  
Director, African Minerals  
Development Centre  
UNECA



**Kris Van Nijen**  
General Manager, Global Sea Mineral  
Resources, DEME-Group  
Belgium



**Kristina Thygesen**  
Programme Lead, Ocean Governance  
and Geological Resources Programme,  
GRID-Arendal, Norway



**Liesbeth Lijnzaad**  
Legal Adviser, Head of the  
International Law division, Ministry of  
Foreign Affairs  
Netherlands



**Mbabazi Sarah**  
Foreign Service Officer, Ministry of  
Foreign Affairs  
Uganda



**Michael Lodge**  
Secretary General  
International Seabed Authority



**Milles Macmillan-Lawler**  
Programme Lead, State of the  
Environment and Spatial Planning  
Programme, GRID-Arendal, Norway



**Mohabeer Raj**  
Officer-in-Charge, Indian Ocean  
Commission  
Mauritius



**Natukunda James F.**  
Ministry of Energy and Mineral  
Development  
Uganda



**Nyonyintono James Musoke**  
Coring Engineer, Halliburton Oil and  
Gas  
Uganda



**Olga Rwemereza**  
Project Engineer, Halliburton Oil and  
Gas  
Uganda



**Olugbenga Okunlola**  
President Geological Society of Africa  
(GSAf)  
Nigeria



**Phiona Lutaaya**  
Nkumba University  
Uganda



**Proscovia Nakazinga**  
Wireline Engineer  
Uganda



**Rakotoarimanana Pamphile**  
Mining General Manager, Department  
of Mines and Oil  
Madagascar



**Refilwe Shelembe**  
Geologist, Council for Geoscience  
South Africa



**Robert Kibuuka**  
Geographic Explorers  
Uganda



**Rosemary Ola**  
Geologist, African Minerals  
Development Centre  
UNECA



**Sidney Kemble**  
Legal Officer, Ministry of Foreign  
Affairs  
Netherlands



**Sylver Kyogalanyi**  
Ministry of Foreign Affairs  
Uganda



**Temba Hawadi**  
Department of Geological Surveys  
Zimbabwe



**Théophile Ndongsa Mbarga**  
Associate Professor of Exploration  
University of Yaounde  
Cameroon



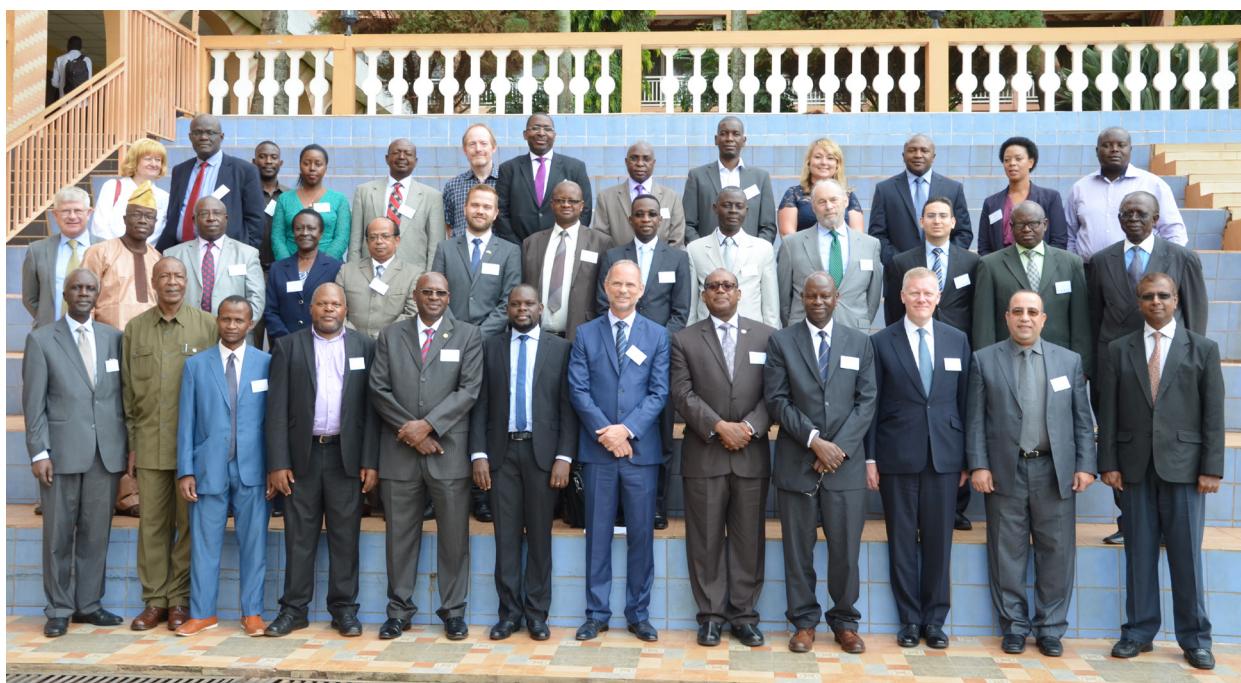
**Tunde Muitala Arisekola**  
Vice Chair Resource Classification  
Nigerian Geological Survey  
Organization Nigeria



**Yannick Beudoin**  
Chief Scientist, GRID-Arendal  
Norway

#### Participants not pictured

**Diana Kyobutungi**, Lawyer, Uganda  
**Mawajje Peter**, Ministry of Energy and Mineral Development, Uganda  
**Mulina Denis**, Minister of Foreign Affairs, Uganda  
**Njakaasi Harma**, Researcher, Uganda  
**Ssgujja Julian**, Geological Research, Uganda



ISBN 978-976-8241-53-5

A standard linear barcode representing the ISBN number 978-976-8241-53-5.

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