NAMIBIAN - URANIUM - INSTITUTE

Annual Review 2017

Always learning, always improving the way we work

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Foreword

As part of its stewardship mission, the Namibian Uranium industry established the Namibian Uranium Institute (NUI) in 2009. The main purpose of the NUI is to promote knowledge and capacity building in specialised skills in the fields of environmental management, radiation safety and occupational health. It also acts as a communication hub for the uranium industry in Namibia. NUI therefore facilitates cooperation of all NUA members in order to improve environmental, safety, and health performance through the identification of world-class leading best practices and their implementation. NUI is guided by respected independent scientists who serve on NUA's Scientific Committee, the institute is working closely with the Namibian Government agencies, and also has close ties with the Namibian University of Science and Technology.

Mining is the backbone of the Namibian economy, and the Erongo Region is playing a leading role having the second largest economy of all Namibian regions. It is home to two of the largest towns in Namibia, bustling Swakopmund and Walvis Bay, but at the same time it's almost infinite, tranquil desert environment with its outstanding beauty, biodiversity and heritage resources is high on the agenda of Namibia's nature conservation efforts.

An outstanding 42% of the surface of Namibia enjoys one or the other form of conservation status, and the Erongo Region with its Namib-Naukluft and Dorob National Parks is no exception. However, 75% of Namibia's mining revenue comes from this high percentage of protected land, and a careful co-management of conservation and economic activities is therefore called for, rather than banning mining in protected areas. Mining and the associated developments are vital for the growth of the Namibian economy, and the country must therefore reconcile development objectives and mineral exploitation with environmental protection for its long-term socio-economic growth and stability. Clearly, an integrated approach is required so that development of one resource will not jeopardize the potential of another. NUI plays a leading role in facilitating and promoting such an integrated approach.

In this respect, NUI recognizes the importance of cumulative impacts on the environment emanating from uranium exploration and mining activities. While all NUA members carry out their environmental monitoring programmes in order to reduce their footprint as much as possible, NUI through its committees and working groups ensures that the aspect of cumulative impacts is dealt with by looking at the bigger picture and integrate environmental, economic and social aspects through all phases of mineral production from exploration through construction, operation and mine site closure. The Sustainable Development Committee with its Services, Radiation Safety, Water and Air Quality, and Swakop River Farmers Working Groups addressed a number of issues throughout the year and thereby facilitated the cooperation and coordination of activities dealing with environmental management and sustainable development. The committee also assesses and monitors all risks associated with health, environment and radiation safety. Namibian uranium mining companies also subscribe to the International Council on Mining and Metals' (ICMM) interpretation of sustainable development for the mining and metals sector. They are further bound by the fact that Namibia's 5th National Development Plan, which was drawn up with active participation of NUI, has the Global Sustainable Development Goals as underlying principles.

The NUI remains the focal point supporting the industry in meeting the many environmental and socio-economic challenges, and providing a point of contact and a communication hub for all its stakeholders. International market conditions for uranium have once again not been favourable during the course of 2017. Nevertheless, the Namibian uranium industry has continued to play a leading role in employment creation, and stayed committed to its Corporate Social Responsibility programmes, which focused on education and career guidance.

I would like to thank all stakeholders for their support and guidance during 2017, and in particular acknowledge the NUA board, our committee and working group members, and the NUI staff for their hard work and dedication. Our Health and Radiation Advisor, Dr Wotan Swiegers, has finalized his contract with the institute at the end of 2017, but he will keep his association with us in the form of Honorary Membership of the NUA Board. My gratitude goes out to him for his immense contributions made over many years, and the best wishes of all NUI staff members are with him!

Dr Gabi Schneider
Executive Director
Namibian Uranium Institute

The Namibian Uranium Institute at the Swakopmund Medical Centre

1 The History of the Namibian Uranium Institute

The so-called Uranium Rush around 10 years ago resulted in the establishment of the Namibian Uranium Institute (NUI). Initially, a Uranium Stewardship Committee (USC) was formed in 2008 under the auspices of the Namibian Chamber of Mines, in order to promote the Namibian uranium brand and to identify and propagate appropriate best practices within the Namibian uranium industry. Subsequently, in 2009, the Chamber of Mines' Uranium Institute (UI) was launched with a focus on improving environmental management, radiation safety and health care.

In 2013, the Chamber of Mines identified the pressing need to review the situation following the Fukushima tsunami, in order to establish a sustainable management and service delivery entity that can effectively address the key issues faced by the Namibian uranium industry. As a result, the Namibian Uranium Association (NUA) was established, and the UI became the NUI operating under the auspices of the NUA.

From the beginning, exploration and mining companies involved in the Namibian uranium sector have fully recognised that managing environmental issues, radiation, health and safety, and waste is of paramount importance in order to protect staff, the general public and the receiving environment. Responsible management of uranium mining and processing applies at all stages from planning, exploration, development and construction to operations, sale, transport, export, and finally decommissioning. This can best be achieved in a coordinated way with interaction of all players involved, and the NUI has become the vehicle of choice to accomplish this.

VISION

To be Namibia's leading source of advocacy, training and research on uranium related issues.

MISSION

To support the Namibian uranium exploration, mining and export industry through the continuous development of health, environmental and radiation safety best practices, accessible research, training and social responsibility.

VALUES

Integrity:	dignity, honesty, fairness
Transparency:	information, trust, clarity
Accountability:	responsibility, teamwork, leadership, engagement
Compliance:	both nationally and internationally

2 Committees and Working Groups of the Namibian Uranium Institute

2.1 The Sustainable Development Committee

The Trustees of the NUA resolved in 2013 to establish a Sustainable Development (SD) Committee to assist the uranium business in safeguarding its reputation as a safe and responsible industry. The committee was also established to assist NUA in promoting best practices with regard to Health, Environment and Radiation Safety and Security and in its oversight responsibilities by reviewing, monitoring, and when appropriate, advising NUA from a uranium industry-wide perspective. At the policy level, the SD Committee reviews and guides NUA policy formation to ensure that it incorporates principles of sustainable development early in the policy formulation process. These principles include public participation, inter-generational equity, sustainable use of natural resources and public access to information. The SD Committee's duties include the assessment and monitoring of all risks associated with health, environment and radiation safety and security matters of the uranium industry; assistance with the development and implementation of internal compliance and control systems and procedures to manage risks; coordination of assessment and monitoring of the effectiveness of controls instituted; and the review and making of recommendations to the NUA in relation to risk management.

The SD Committee is a standing committee which can appoint Working Groups to investigate any potential issue which could negatively impact on Sustainable Development.

Air Quality Monitoring

Namibian uranium mining companies subscribe to the International Council on Mining and Metals' (ICMM) interpretation of sustainable development for the mining and metals sector, namely that investments should be technically appropriate, environmentally sound, financially profitable and socially responsible. Best practice, i.e. setting standards of operation and practice that maintain international standing and reputation is applied as it is critical for any mining company to gain and maintain its "social license to operate" in the community. It is essential to integrate environmental, economic and social aspects through all phases of mineral production from exploration through construction, operation and mine site closure. The SD Committee plays an important role in ensuring such best practise. In order to achieve this, the SD Committee has also appointed four working groups, namely the Services Working Group, the Radiation Safety Working Group, the Water and Air Quality Working Group, and the Swakop River Farmer's Working Group.

Members of the Sustainable Development Committee

- Bob Meiring, Chair (Marenica Energy)
- Frances Anderson (Langer Heinrich Uranium)
- Carlene Binnemann (Swakop Uranium)
- Werner Ewald (Bannerman Resources)
- Sandra Müller (Areva Resources Namibia)
- Kaarina Nkandi (Areva Resources Namibia)
- Rainer Schneeweiss (Rössing Uranium)
- Dr Gabi Schneider (NUI)
- Dr Herman Strauss (Medixx Namibia)
- Dr Wotan Swiegers (Atomic Energy Board)
- Dr Gunhild von Oertzen (Rössing Uranium)

During the course of the year, the SD Committee participated in the air and water quality monitoring project of the Geological Survey of Namibia and the maintenance of the radon stations; it addressed biodiversity offsets, a road safety emergency plan and the Erongo Region Road Safety Forum, the Strategic Environmental Management Plan for the Namibian Uranium Province and associated annual reporting, waste management, the use of data for research programmes; and received feedback on the Rössing Health Study. New risks are a standing item on the agenda of the committee, and included the availability of medical services in the region, poor crops in the Swakop River, and the new regulations for the Environmental Management Act (Act No 7 of 2007) and the Water Resources Management Act (Act No 11 of 2013).

2.1.1 Services Working Group

The Services Working Group was formed to enhance the uranium mines' focus on power and water supply issues. Intermediate and long-term power supply security and the sourcing of sufficient quantities of bulk water at viable and cost-effective tariffs are the key issues this Working Group is dealing with.

Members of the Services Working Group

- Mike Leech, Chair (NUA)
- Jacklyn Mwenze (Rössing Uranium)
- Shaan van Schalkwyk (Rössing Uranium)
- Michael Introna (Langer Heinrich Uranium)
- Sandra Müller (Areva Resources Namibia)
- Werner Ewald (Bannerman Resources)
- Martin Hirsch (Reptile Mineral Resources and Exploration Ltd)
- Dr Gabi Schneider (NUI)

Two members of this Working Group represent the mining industry on the Water Advisory Council of the Ministry of Agriculture, Water and Forestry. There is also active participation in the Erongo Water Forum. Members contributed to the finalisation of the Ministry of Mines and Energy's new National Energy Policy and the formulation of an Integrated Resource Plan.

Desalination

2.1.2 Radiation Safety Working Group

Uranium mining has the potential to contaminate the environment and to affect the health of workers and the public by exposing them to ionising radiation. Consequently, the discipline of radiation safety in the Namibian uranium mining industry requires skilled professionals able to competently manage radiation safety in the workplace and in the environment affected by uranium mining. Effective radiation protection must ensure minimal harm from ionising radiation to people and the environment. This can only be achieved if adequately trained professionals manage radiation protection in the workplace. A structured uranium product stewardship program is required to ensure that public fears about radiation are addressed factually und unemotionally. The Radiation Safety Working Group was established to address the challenges associated with building and maintaining capacity in radiation safety in Namibia.

The Radiation Safety Working Group consists of members from the operating uranium mines in Namibia, as well as from exploration companies. The Working Group identifies issues relating to radiation protection that may potentially pose a risk to the industry; develops and promotes best practice guidelines for radiation protection in the uranium mining industry; suggests initiatives to promote awareness about radiation protection; and supports NUA in its initiatives towards building capacity in radiation protection.

Members of the Radiation Safety Working Group

- Dr Gunhild von Oertzen, Chair (Rössing Uranium)
- Nelao Endjala (Rössing Uranium)
- Temwani Kayira (Langer Heinrich Uranium)
- Christal Lebusa (Bannerman Resources)
- Ian Marshman (Langer Heinrich Uranium)
- Bob Meiring (Marenica Energy)
- Sandra Müller (Areva Resources Namibia)
- Augustinus Mungunda (Swakop Uranium)
- Kaarina Nkandi (Areva Resources Namibia)
- Tinus Prinsloo (Bannerman Resources)
- Bertram Schleicher (Rössing Uranium)
- Dr Gabi Schneider (NUI)
- Dr Wotan Swiegers (NUI)
- Mervyn Titus (Swakop Uranium)

During the course of 2017, the Working Group addressed Radiation Emergency Response Procedures, Radiation Management Plans, and Radiation Safety courses. The viability of a National Radiation Protection Association was deliberated on, and a collaborative network in radiation safety established by opening up the Working Group to all NUA member staff who are interested in the subject. A field visit was made to the Trekkopje Mine, where radiation safety measures were inspected. Regular feedback on the Rössing Health Study was given to the members.

Radiation Safety Working Group at the Husab Mine

2.1.3 Water and Air Quality Working Group

The Water and Air Quality Working Group was established to assist the uranium operations in safeguarding their reputation as a safe and responsible industry. The Working Group assists NUA in promoting and sharing leading practices and transferring knowledge with regard to water and air quality management and advises NUA and NUI from an industry-wide perspective. The Working Group also provides an opportunity to discuss and examine water and air quality related risks and advises the Sustainable Development Committee on the co-ordination and prioritisation of water and air quality risk management issues throughout the uranium industry. It aims to encourage and foster greater awareness of water and air quality risk management aspects at all levels in the uranium industry, which calls for the identification of risks and the understanding of pressing issues and their effects in the longer term.

During the course of 2017, the Water and Air Quality Working Group addressed the Air Quality Study of the Geological Survey of Namibia and the group's participation in it, the maintenance of the Water Quality Data Base, the Khan-Swakop Groundwater Model, service providers for monitoring equipment in Namibia, waste water and effluent disposal, abstraction permits, riparian vegetation, and dust sampling. A presentation on the Groundwater Model was prepared and presented at the Isaac Newton Forum.

Field visits were undertaken to the Langer Heinrich Mine, where the group was introduced to the mine's water management; to the Rössing Mine, where the water management and the tailings storage facility were studied; and to the Erongo Desalination Plant. Two courses were presented, namely a Water Management for Managers course, inclusive of a field visit to explain the concept of different aquifers; and a Hydrochemistry course with an emphasis on water quality analysis and data interpretation. The working group contributed significantly to the compilation of the 2016 Strategic Environmental Management Plan report, and has maintained a close working relationship with the Geological Survey of Namibia, Ministry of Mines and Energy.

Members of the Water and Air Quality Working Group

- Sandra Müller, Chair (Areva Resources Namibia)
- Carlene Binneman (Swakop Uranium)
- Michael Binneman (Swakop Uranium)
- Olga Coetzee (Adamas Drilling)
- Stefaans Gaeseb (Rössing Uranium)
- Martin Hirsch (Reptile Mineral Resources and Exploration Ltd)
- Delila Kalangula (Rössing Uranium)
- Julia Kamatoto (Rössing Uranium)
- Ian Marshman (Langer Heinrich Uranium)
- Bob Meiring (Marenica Energy)
- Vistorina Nangolo (Rössing Uranium)
- Kaarina Nkandi (Areva Resources Namibia)
- Tinus Prinsloo (Bannerman Resources)
- Rainer Schneeweiss (Rössing Uranium)
- Dr Gabi Schneider (NUI)
- Ilka Schröer (Swakop Uranium)
- Ignatius Shaduka (Rössing Uranium)

Water & Air Quality Working Group at Langer Heinrich Mine

Water Balance Model for the Khan and Swakop Rivers and Water Quality Monitoring Study

Taking into consideration that the alluvial aquifers of the Khan and Swakop Rivers are not homogenous, but separated into compartments created by outcropping bedrock and narrowing of the river gorge, the compartments are not replenished on a continual basis; and that Namibia has witnessed extraordinary rainfalls in 2011, followed by devastating drought conditions, as well as changing abstraction patterns; an update of the existing water balance model became necessary. It started in 2016, and was completed in 2017 by SLR Environmental Consultants and commissioned by NUI. The update included a recharge assessment using an integrated basin approach and a compartment model for the whole alluvial aquifer of the lower Swakop and Khan rivers; calibration of the model with runoff records by integration of available data on runoff modelling in the Swakop Basin; and updating the model and implementation as an operational model for water management and impact assessment. The Water Quality Monitoring Study of the Geological Survey of Namibia, Ministry of Mines and Energy, was also completed in 2017, and provided further valuable data.

Advanced Air Quality Management Study

The potential cumulative impacts of uranium exploration and mining on air quality were assessed during the Strategic Environmental Assessment (SEA). As a follow up, in 2016 the Geological Survey of Namibia commissioned a 3-year Advanced Air Quality Management Study programme, which has deployed new monitoring equipment including dust samplers and meteorological equipment in Arandis, Swakopmund, Walvis Bay and Henties Bay. The Working Group is making regular input into the study, and NUI facilitates the radon monitoring. Data is collected on an ongoing basis, and will be used to update the air dispersion model. Based on the outcome of the modelling, the atmospheric pathway portion of the public radiation dose assessment will also be updated, if required. The programme will also develop air quality guidelines for the Erongo Region, and develop a regional air quality management plan. It is carried out by Airshed Planning Professionals.

2.1.4 Swakop River Farmer's Working Group

The Swakop River Farmer's Working Group was put in place in order to address concerns of this particular stakeholder group. Farming in the immediate vicinity of mining operations can potentially lead to conflicting situations, such as competition for water, to name but one example. Indeed, the Swakop River farmers utilise a source of groundwater for their irrigation schemes, which is also utilised in part by the uranium mines, and a coordinated approach is therefore required. Of particular importance here is the quality of the water, as the irrigation schemes are downstream from the mines. Meetings are held to give information about projects and mining operations to the farmers, as well as availing them an opportunity to raise any concerns they might have.

Members of the Swakop River Framers Working Group

- Dr Wotan Swiegers, Co-Chair (Atomic Energy Board)
- Siegfried Eckleben, Co-Chair (Farmer)
- Frances Anderson (Langer Heinrich Uranium)
- Carlene Binneman (Swakop Uranium)
- Hartmut Fahrbach (Farmer)
- Valereis Geldenhuys-Venter (Farm Owner)
- Mike Leech (NUA)
- Bob Meiring (Marenica Energy)
- Sandra Müller (Areva Resources Namibia)
- Norwal Mwananawa (SEMP)
- Fanie van Niekerk (Farmer)
- Prof Gustav Obermair (Farmer)
- Tinus Prinsloo (Bannerman Resources)
- Rainer Schneeweiss (Rössing Uranium)
- Dr Gabi Schneider (NUI)

Olive farming in the Swakop River

2.2 The Communication Technical Advisory Committee

The Communication Technical Advisory Committee (C-TAC) was established in order to recommend to NUI the overall strategic direction of the institute's communications. It is an advisory committee tasked to advise and assist NUA through NUI in carrying out its mission and strategic plan by developing and monitoring communication protocols, initiatives and policies, and formulating and implementing a stakeholder engagement and communication strategy for the uranium mining industry in Namibia.

During 2017, the communication strategy was completed and approved by the board of NUA. This strategy can be described as a roadmap that aligns communications in support of NUI's vision, goals, values and priorities, thereby enhancing performance and reputation in a measurable way. It aligns specific groups of stakeholders, internally and externally, to act in support of each of these areas. The overriding objective of the strategy is to gain the public and stakeholders' recognition and respect as an industry that goes about its activities in a safe, environmentally-friendly and responsible manner. Further objectives are to co-ordinate communication by and between the various role players in the uranium industry; to ensure consistent communication and messages to all stakeholders; to develop a base of mutual trust and understanding with core stakeholders and key media personalities; to ensure controlled, factually correct information about the uranium industry and the uranium fuel-cycle; to address the many misconceptions about the uranium and nuclear power generation industries; to address the many myths about uranium mining and nuclear power generation; to minimise negative publicity and perceptions about the uranium industry; to highlight the socio-economic benefits of the uranium mining industry to the people of Namibia; to educate the general public about uranium mining and the uses of uranium; and to create a channel of communication that encourages the public to report observations that may affect their safety or the environment in an unacceptable manner.

Members of the Communications Technical Advisory Committee

- Botha Ellis, Chair (Rössing Uranium)
- Bernadette Bock (Langer Heinrich Uranium)
- Christine De Klerk (Areva Resources Namibia)
- Martin Hirsch (Reptile Mineral Resources and Exploration Ltd.)
- Linus Kamati (Langer Heinrich Uranium)
- Christal Lebusa (Bannerman Resources)
- Alwyn Lubbe (Rössing Uranium)
- Bob Meiring (Marenica Energy)
- Winnie Mukupuki (Swakop Uranium)
- Ailly Namupala (NUI)
- Kaino Nghitongo (Rössing Uranium)
- Dr Gabi Schneider (NUI)

The Hon Minister of Mines visiting the NUA booth at Mining Expo 2017

The C-TAC was very active during the course of 2017 and facilitated the participation of NUA in four events, namely the Chamber of Mines Mining Expo 2017, the Arandis Expo 2017, the Swakopmund International Trade Exhibition 2017 (SWAITEX), and the Arandis Uranium Festival 2017. The booth presented was a joint booth of all NUA members, carrying the message of the cooperation taking place in this sector of the mining industry. A new approach was used at SWAITEX, where NUA presented itself in an interactive fashion, for example, visitors to the booth could learn about measuring radiation. The activities at the booth generated a lot of interest, allowing NUA to provide information about the Namibian uranium industry. As the most prominent visitor, the Right Honourable Deputy Prime Minister, Hon Netumbo Nandi-Ndaitwah, graced the booth with her presence. C-TAC also participated in the West Coast Safety Initiative during the festive season, and a flyer explaining radiation and sunburn was distributed.

A highlight of the activities of C-TAC was the Erongo Career Fair under the theme "Fostering Awareness". The career fair aimed at creating career guidance and awareness, as well as to inform the community about different job and training opportunities in various career fields. It was organised by the Erongo Region Directorate of Education in partnership with the NUA, the Swakopmund Municipality and the Swakopmund branch of NCCI. A career booklet compiled by C-TAC and NUI was launched during the fair and proved to be highly successful.

The NUA booth at Mining Expo 2017

3 Training

An integral part of NUI's activities is teaching in order to improve knowledge, safety and the implementation of best practises in the field of occupational health, environmental management and radiation safety. As part of its stewardship mission, NUI has developed partnerships with various service providers to develop standards, guidelines and training courses to cater for the needs of the uranium industry. NUI is also officially registered with the Ministry of Labour and Social Welfare as an Approved Inspection Authority with competencies in the fields of health, environment and radiation safety and security in terms of the Regulations made under Schedule 1(2) of the Labour Act, 2007 (Act 11 of 2007). The following courses were presented during 2017:

- **Radiation Safety Officer Part 3**
- **Radiation Safety Officer Part 1**

- **Spirometry Full Course**
- **Spirometry Refresher Course**

- **Audiometry Full Course**
- **Audiometry Refresher Course**

- **Radiation Safety Refresher Spring School**
- **Radiation Safety for Transporting Radioactive Material**
- **Radiation Safety for Radioactive Sealed Sources**

- **Fall Protection: Integrated Solutions – 3M**
- **Light and Reflective Safety Solutions – 3M**

- **Introduction to Radiation for Members of the Public Workshop**

Fall Protection Course

Negotiations to have NUI's courses accredited through the Namibian University of Science and Technology (NUST) were started. Further input into educational aspects is provided through the NUI Director's position as the Chairperson of the Board of Trustees of the Namibian Institute of Mining and Technology, as a member of the Advisory Board of the Department of Mining and Process Engineering, Faculty of Engineering of NUST, and as a member of the Namibian Geoscience Council.

In 2017, NUI also commissioned a Radiation Safety Officer's Handbook, and the first draft was completed during the course of the year. The comprehensive book will be a welcome addition to the tools available for radiation safety officers, and fill a gap, as such an all-inclusive compilation has so far not been available.

The Organisation "Man on the Side of the Road" received logistical support for training courses, which took place at the NUI.

Strategic Environmental Management Plan (SEMP)

4 The Strategic Environmental Management Plan for the Namibian Uranium Province

Some 10 years ago, when prices for fuel for civil nuclear reactors were rising fast, resulting in a worldwide boom in uranium exploration and mining, the Namibian uranium industry recommended to the Namibian Government to undertake a Strategic Environmental Assessment (SEA) of the Namibian uranium province, where exploration for uranium was also expanding rapidly. Subsequently, such an assessment was carried out by the Geological Survey of Namibia, Ministry of Mines and Energy, and provided vision and generated a culture of cooperation between the uranium mining industry, Government and the public. The Strategic Environmental Management Plan (SEMP) was developed as a result of the SEA. It is an over-arching framework and roadmap addressing the cumulative impacts of existing and potential developments and the extent to which uranium mining is impacting the central Namib. The SEMP has 12 themes, called Environmental Quality Objectives (EQOs), each articulating a specific goal, providing context, setting standards and having a number of key indicators that are monitored. These themes include socio-economic development, employment, infrastructure, water, air quality, health, effect on tourism, ecological integrity, education, governance, heritage and future, and mine closure and future land use. NUI is actively contributing to the compilation of the Annual SEMP Reports.

The 2015 SEMP Report was released at the 2017 Chamber of Mines Mining Expo. The overall performance of the 2015 SEMP showed an improvement compared to the preceding years. This is partly due to 18 indicators being rated not applicable, either because the relevant activity did not take place in 2015, or because the required information was not collected and will not become available in future. Some of the latter indicators have in the past been rated not met or no data. In summary, 60% of the indicators were met, 35% were in progress, 3% exceeded and only 2% were not met. The Socio-economic Development (EQO 1), Employment (EQO 2) and Air Quality (EQO 5) objectives were 100% met. The objectives for Water (EQO 4), Governance (EQO 10), Heritage and the Future (EQO 11), as well as Mine Closure and Future Land Use (EQO 12) were mostly met while some indicators remained in progress. Mixed results ranging from exceeded to not met were obtained for the Infrastructure (EQO 3) and Education (EQO 9) objectives. Effect on Tourism (EQO 7) show the same percentages of indicators met and in progress, with one exceeded. The highest number of indicators in progress can be found in Health (EQO 6), while Ecological Integrity (EQO 8) has a ratio of about 60% in progress and 40% met. Only two indicators (2%) were not met; these can be found under Infrastructure (EQO 3) and were assigned because there is no legislation for pollution control and monitoring of waste sites. The indicators that were rated as exceeded were in the Infrastructure EQO (turnover time at Namport), in Effect on Tourism, where tourists' expectations of their visual experience in the Central Namib were mostly very positive, and in the Education EQO, as the percentage of wage cost allocated to skills development exceeded the 3% target for the operating uranium mines. The SEMP report can be downloaded from the MME and the NUA webpages.

It is also noteworthy that some of the recommendations of the original SEA are being implemented now, such as for example the tarring of the C 34 between Walvis Bay and Swakopmund behind the dunes.

5 Stakeholder Interaction and Cooperation

Sustained and effective communication is essential for every organisation. This is especially true for the uranium industry, where information and transparency are crucial. There is thus a continuous interaction with NUA members, the Namibian Government, local communities, the Namibian Chamber of Mines, NGOs, academic institutions and international partners such as the World Nuclear Association and the International Atomic Energy Agency (IAEA).

In support of local development, the NUI provides secretarial services to the Erongo Development Foundation (EDF) and hosts the EDF board meetings. Regular interaction with the Regional Governor takes place, and water and corporate social responsibility are central points of the discussions. Contributions were also made to the Erongo Regional Council Strategic Plan 2017-2022.

Taking into consideration that one of the Desired Outcomes of the fifth National Development Plan is that by 2022, Namibia will have integrated the mining industry with other sectors of the economy through up-stream, side-stream and down-stream linkages, a study on those linkages that already exist has been started.

Presentations on uranium, the economy and sustainable development were made to the Standing Cabinet Committee on Natural Resources, who visited the NUI, and at the International Uranium Conference of the Southern African Institute of Mining and Metallurgy, which took place in Swakopmund in September 2017. NUI also participated actively in the new review of the Regulations of the Environmental Management Act (Act No 7 of 2007).

The Standing Cabinet Committee on Natural Resources visiting NUI

Final Product for Shipment

5.1 Nuclear Suppliers Group

The Nuclear Suppliers Group (NSG) is a group of nuclear supplier countries that seeks to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of Guidelines for nuclear transfers and nuclear-related exports.

The NSG Guidelines also contain the so-called "Non-Proliferation Principle," adopted in 1994, whereby a supplier, notwithstanding other provisions in the NSG Guidelines, authorises a transfer only when satisfied that the transfer would not contribute to the proliferation of nuclear weapons. The Non-Proliferation Principle seeks to cover the rare but important cases where adherence to the Non-Proliferation Treaty or to a Nuclear Weapon Free Zone Treaty may not by itself be a guarantee that a State will consistently share the objectives of the Treaty or that it will remain in compliance with its Treaty obligations.

The NSG Guidelines are consistent with, and complement, the various international, legally binding instruments in the field of nuclear non-proliferation. These include the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), and a number of regional Treaties such the African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba). The NSG Guidelines are implemented by each Participating Government in accordance with its national laws and practices. Decisions on export applications are taken at the national level in accordance with national export licensing requirements.

Namibia has identified uranium as a strategic mineral and potential source of energy generation within the nuclear fuel cycle. The government of Namibia has furthermore expressed its desire to increase beneficiation to enhance economic development and is considering a nuclear power programme to augment its energy needs in the future. Namibia recognizes the Nuclear Suppliers Group as a key role player in mapping the direction of the nuclear industry and guiding policy decisions of major international suppliers within the nuclear fuel cycle. In recognition of its role as a major supplier of uranium, Namibia has decided to apply for membership in order to promote and safeguard the country's interests.

A National Technical Working Group on Namibia's Application for Membership of the Nuclear Suppliers Group was put in place by the Ministry of International Relations and Cooperations (MIRCO), and the Director of NUI represents NUA, as well as the Chamber of Mines of Namibia on that Working Group. This collaboration between industry and MIRCO is yet another example of the mutual assistance and good relations between the Namibian uranium sector and the Namibian government.

6 Conclusion

The year 2017 has been filled with activities and events, although the economic challenges for the uranium industry worldwide have continued unabated. While the uranium spot price recovered slightly, it is still far from being at a level that would allow the development of new mining operations. Nevertheless, the Namibian uranium industry has continued to position itself for a time when the uranium price will reach such levels in the future, as mineral markets have always been cyclic.

The lifting of the moratorium on issuing of nuclear fuel exploration licenses by the Ministry of Mines and Energy at the end of 2016 was a game changer and has brought new players into the field, as more than 70 new license applications were filed and one existing mining license has been amended to include nuclear fuels. As NUI continues to support the existing operations, we are also ready to assist a growing uranium exploration and mining community in our quest to promote knowledge and capacity building in specialised skills in the fields of environmental management, radiation safety and health.

The NUI Team