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Foreword by the Director, Division for Africa



Dear Colleagues,
Ladies and Gentlemen,

I am very pleased to introduce the first TC Africa Newsletter of 2021. While the pandemic continues, the Division for Africa is working committedly and

tirelessly to ensure that we deliver the TC Programme to our Member States efficiently, effectively and in innovative ways.

As I mentioned at the past two meetings of National Liaison Officers (NLOs), I encourage you to make the best use of the online tools and platforms available to us. This will ensure stronger coordination of the national TC programme. The big advantage of online tools is that they provide wider coverage. Given the current international travel restrictions, we are implementing the 2021 TC programme using a blended modality, with in-person activities where possible, and through virtual events. So far, NLOs and counterparts have shared a lot of successes in organizing virtual events with us. As the world adapts to new challenges and creates new solutions, I urge you to take the lead in applying these innovations in your daily work and thus promoting Africa as a successful example of adaptation, resilience and innovation.

As we approach the deadline for the finalization of the project designs for the 2022–2023 TC cycle, I encourage you to liaise with your counterparts and NLOs to ensure the submission of high quality project designs for the

next TC cycle. The IAEA team, led by the Programme Management Officers (PMOs), stands ready to provide further support in this process.

I take this opportunity to thank you all for your active engagement in the national TC programmes, and for your commitment, resilience, and leadership.

Shaukat Abdulrazak, Director, Division for Africa (TCAF)

Training for African practitioners explores advances in nuclear medicine

Nuclear medicine imaging has played a pivotal role in the clinical diagnosis and treatment of disease for decades, and, every year, research and technological advances expand its potential applications. To stay abreast of the latest developments and to ensure compliance with the relevant radiation safety measures, more than 60 nuclear medicine practitioners – physicians, technologists, medical physicists and radiopharmacists – from 19 African countries attended a virtual IAEA regional training course from 2 to 5 November 2020. The event was attended by a panel of experts from Algeria, Italy, South Africa and the United States of America, who shared their knowledge, experience and expertise with the participants.

During the training, the participants were introduced to the Agency's Quality Management Audits in Nuclear Medicine Practices (QUANUM) and to the Safety in Radiation Oncology (SAFRON) reporting system, two platforms developed to enhance delivery of safe and high-quality radiological services in the region.

Advanced diagnostic and treatment techniques in nuclear medicine including positron emission

tomography (PET) have become available for some African Member States and counterparts through the Technical Cooperation Programme.

In oncology, cardiology, neurology and other related clinical fields, nuclear medicine professionals are routinely required to either diagnose diseases, treat patients, or conduct research into new techniques and innovations. It is essential that Member States have the capacity to use available and new technologies to leverage the potentials of nuclear medicine, and that they are able to further apply these technologies to implement quality assurance and radiation safety, and address emerging challenges effectively.

Anna Grigoryan, PMOTCAF

IAEA delivers first Master's programme in radiopharmacy in French

The technical cooperation programme (TC project RAF6054) in collaboration with the Government of Morocco is delivering the first Masters (MSc) Programme in Radiopharmacy in French. The programme, initiated in 2019, will see its first graduates in July 2021.

The first four graduates are part of an intake of nine students from eight African Member States. A further set of eight pharmacists are now enrolled in a Master's programme, also in Radiopharmacy, taught in English, at Sefako Makgatho Health Sciences University in South Africa. Four of these students are expected to graduate this year. Some will be the first to hold this degree in their home country.

The programme was developed following the request of AFRA Member States for support to train a new generation of radiopharmacists, with the goal of addressing the severe shortage of well-trained radiopharmacists in Africa. The target is to have 28 radiopharmacists complete their Master's degree by 2025, and to increase the total to 50 by 2030.

Improving human health is a top priority for the TC programme in Africa. The availability of trained radiopharmacists not only supports the growing production of radiopharmaceuticals in the region, but more importantly, ensures its safe administration to patients.

Amal Elrefaei, PMOTCAF

NLOs set targets for 2025

One hundred and thirty-nine participants from 43 African countries attended the virtual Annual Meeting of African NLOs and National Liaison Assistants (NLAs) from 23 to 25 March 2021. Representatives of Permanent Missions to the IAEA led by HE Teolinda Rodrigues Coelho, Resident Representative of Angola and Chair of the Vienna-based African Group, also participated.



Shaukat Abdulrazak, Director TCAF, together with Section Heads and Programme Management Officers, attend a virtual meeting with National Liaison Officers and National Liaison Assistants from African Member States.

The Road to 2030

Shaukat Abdulrazak, Director TCAF, set the tone of the meeting in his opening remarks. “2025 is just around the corner, and we’re asking ourselves and asking you, what is the current situation? We must know where we stand, so that we may develop strategies that will take us to the next level, towards the 2030 SDGs. Therefore, we’ve been developing baseline data in selected areas, allowing us to better understand what’s available in terms of equipment, facilities, and human resources,” he said.

During the three-day meeting, NLOs and NLAs reviewed existing and proposed projects, and set targets, objectives and indicators for the 2022–2023 cycle. Two hundred national and 18 regional project designs have been proposed for the cycle. In recognition of the need to consolidate their efforts into fewer, but larger projects, the NLOs were also encouraged to develop proposals and designs using an integrated approach which focuses on relevant socioeconomic impact.

Anna Grigoryan, Amal Elrefaei, PMOTCAF

Strengthening TC programme development in Africa

The Division for Africa recently looked into a number of issues that relate to and would contribute to strengthen the TC programme in Africa. This includes an integrated approach to capacity building, integrated programming and the development of Country Programme Frameworks.

Capacity building

Capacity building in Africa has always been a challenge as most services are outsourced from institutions located outside the continent and concentrated in a small number of countries. A new approach is vital to provide a fresh perspective on how projects are designed, implemented, monitored and evaluated.

There are a range of regional, sub-regional and national institutions and networks with relevant missions or having notable convening power and resources (financial, knowledge, etc.). These can be tapped to expand the benefits of nuclear science and technology, to advance African Union's *Science, Technology, and Innovation Strategy* and to strengthen relationships in the region. These institutions can be transformed as TCAF partners and/or capacity development providers.

Solomon Haile, PMOTCAF

CPF development

The Country Programme Framework (CPF) is the main planning document for the technical cooperation programme in each Member State. The CPF identifies the highest priorities of the Government where nuclear techniques can support existing Government programmes. To develop an effective CPF and to keep the document focused, succinct and to the point, the following tips are highly recommended :

1. Assemble a national sectoral team with participants from major user ministries to work with the NLO and CPF Coordinator ;
2. Hold a national CPF workshop – virtually, if needed. Each member of the sectoral team presents a summary of national policies and strategies. The NLO can provide a presentation on high level strategies such as National Development Plans, United Nations Sustainable Development Cooperation Framework and the national Vision.

Transforming presentations into narrative format will largely complete the situation analysis.

3. Use available online resources to gather baseline data. These include UNDP Human Development Index, GLOBOCAN for cancer statistics, Radiation Safety Information Management System, UN Food Security Reports and many others.
4. Each priority area requires an outcome statement which should be achievable within the timeframe of the CPF. Realistic indicative outputs as well as SMART indicators should be developed. If this is done well, these elements can be transferred into PCMF project designs.
5. The CPF document using the current template usually does not need more than 25 pages including annexes.

Neil Jarvis, Section Head, TCAF

Other Recent Events ZODIAC National Coordinators in Africa meet to discuss ZODIAC

About 75% of newly emerging infections come from animals, and subsequently spread to and infect humans. Animal diseases which spread to humans are called zoonoses or zoonotic diseases. Every year, zoonotic diseases affect about 2.6 billion people worldwide, claiming the lives of 2.7 million people.

Launched in June 2020, in the midst of the ongoing COVID-19 pandemic, the IAEA's Zoonotic Disease Integrated Action ([ZODIAC](#)) initiative builds on the Agency's experience to leverage nuclear and nuclear-derived techniques to rapidly detect and identify pathogens which cause animal diseases or zoonotic diseases.

The IAEA has long experience in assisting its Member States to monitor and control zoonotic diseases, and has responded to emergencies around the world, including to outbreaks of Ebola, Avian Influenza, SARS, MERS, and COVID-19. The recent zoonotic disease outbreaks have underscored the necessity for an integrated, multi-disciplinary approach involving all relevant stakeholders to prepare for the next pandemic.

On 25 February 2021, 78 designated ZODIAC National Coordinators, National Liaison Officers and National

Liaison Assistants from Africa met virtually to better understand their roles, the science and the potential of ZODIAC to address future disease outbreaks.

The meeting was opened by IAEA Director General Grossi, who emphasized that the five complementary pillars of ZODIAC have been designed to provide cohesive and comprehensive support to IAEA Member States.



First Meeting of ZODIAC National Coordinators in Africa led by IAEA Director General Rafael Mariano Grossi, DDG-NA Najat Mokhtar and DDG-TC Hua Liu.

The successive speakers from the Secretariat—Najat Mokhtar, DDG and Head of the Department of Nuclear Sciences and Applications; Qu Liang, Director of the Joint FAO/IAEA Centre; May Abdel-Wahab, Director of NA Division of Human Health; Shaukat Abdulrazak, Director of TC Division for Africa; and Jean-Pierre Cayol, Programme Coordinator of NA Department—presented the five pillars of the ZODIAC initiative, which will facilitate access to coordinated research projects, as well as to new methodologies, equipment, technology packages, relevant guidance and training for the staff of the national diagnostic laboratories, delivered through the Agency’s technical cooperation programme.

Hua Liu, DDG and Head of TC Department, said in his closing remarks, “COVID-19 has affected every aspect of our lives. We must be prepared to prevent or minimize the risks of outbreak of new unknown diseases. ZODIAC can help us to achieve this ambitious project.”

*Michel Warnau, Section Head, TCAF,
and Omar Yusuf, Ass. Comm. Officer, TCPC*

IAEA and Africa CDC look forward to future collaboration

On 16 March 2021, representatives from the IAEA (NA and TCAF) and the Africa Center for Disease Control and Prevention (Africa CDC) held a virtual consultative meeting to discuss possible future collaboration to strengthen the capacity and capability of Africa’s public health, and explore partnerships to detect and respond quickly and effectively to disease threats and outbreaks.

Africa CDC was established in January 2016 by the 26th Ordinary Assembly of Heads of State and Government of the African Union and launched officially in January 2017. It is a specialized technical institution of the African Union, established to support public health initiatives of Member States and to strengthen the capacity of their public health institutions to detect, prevent, control, and respond quickly and effectively to disease threats.

Africa CDC is a partner of African Member States and serves as a platform to share and exchange expertise in public health infrastructure, human resource capacity, disease surveillance, laboratory diagnostics and preparedness and response to health emergencies and disasters. The meeting participants agreed to identify possible areas of collaboration.

Mickel Edwerd, Section Head, TCAF

IAEA & African Union Commission convenes to follow up actions on MoU

On 11 February 2021, the IAEA and African Union Commission (AUC) focal points convened a virtual meeting to review the results achieved in implementing the Practical Arrangements (PAs) signed between the two organizations on 15 February 2018.

The meeting enabled the exchange of information on ongoing activities. Common strategies to enhance partnership and move forward were explored. Priority actions were identified, including further increasing the visibility of the PAs, developing cooperation at senior level, and developing cooperation between IAEA technical Divisions and AUC committees and specialized institutions. Both parties expressed eagerness to advance partnership and identified common goals for future collaborations. The AUC focal

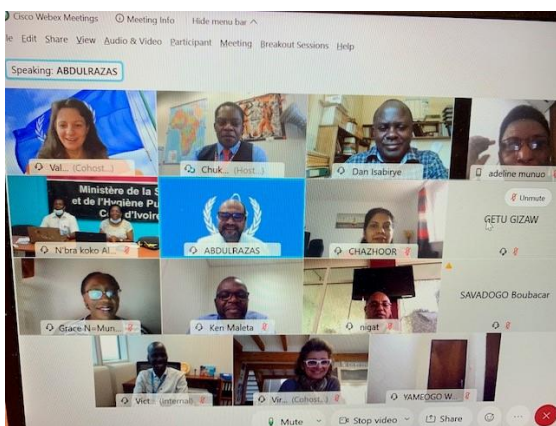
point also announced ongoing transitional reforms at the AUC.

Abdou Ndiath, PMOTCAF

Counterparts and technical officers commend success of project on childhood malnutrition

The Final Coordination Meeting (FCM) of TC project RAF6052 took place virtually from 8 to 9 December 2020. It was attended by representative from nine participating Members States – Burkina Faso, Cote d’Ivoire, Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Uganda, United Republic of Tanzania, Zambia – and the IAEA team.

The TC project RAF6052, ‘Using Nuclear Techniques to Assess Body Composition in Children Previously Treated for Moderate and Severe Acute Malnutrition and Their Medium-Term Benefits and Risks in Six Countries’ was launched in 2016 to support the efforts of nine African countries to improve national nutrition programmes targeting children with moderate or severe acute malnutrition. Using deuterium dilution, a non-invasive and accurate nuclear technique, body composition was measured and information on current nutritional status, risk of metabolic dysfunction, and physical activity levels were collected in individuals who had previously been malnourished in their childhood. The project is linked directly to SDGs 2 (Zero Hunger) and 3 (Good Health & Well-being), and



also aligns with SDG 17 (Partnerships for the Goals).

Participants in the RAF6052 FCM. Photo credit: Valentina Varbanova, PMOTCAF

Participants presented the results of the projects, shared lessons learned and agreed on the way forward. Once data analysis is finalized by all participating Member

States, the results will be shared with policymakers in the participating countries.

Valentina Varbanova, PMOTCAF

Meetings and events attended by TCAF Director

Shaukat Abdulrazak, Director TCAF, participated in several meetings both as speaker and participant during the 1st quarter of 2021:

- Joined DIR-NAPC and colleagues from the respective Divisions in a virtual meeting to discuss and explore potential cooperation in capacity building and human resource development with the African Lightsource foundation.
- Delivered a pre-recorded message and presented *Building Capacity and Quality/Safety Awareness in Africa-Introduction*, during the virtual European Congress of Radiology (ECR) 2021.

Met the newly appointed Resident Representative from Ghana, HE Mr Philbert Abaka Johnson and Mr Gustav Dovlo, Minister-Counsellor and Deputy Head of Mission, to discuss TCP and other matters related to Ghana.

- Attended discussion on joint water project proposal for the World Bank together with DDG-NA, DIR-TCPC, NAPC (Isotope Hydrology Section), and relevant SHs. The proposal will be enhanced following clarifications from the World Bank regarding its scope and nature.

- Under AFRA regional project RAF9064, ‘Improving the Capabilities of Member States in Radiation Protection of Patients (AFRA)’, DIR-TCAF provided opening remarks during the virtual meeting to introduce *ESR- iGUIDE in Diagnostic Imaging Facilities in Africa*. The *iGuide*, a tool developed by the European Society for Radiology, will help Member States to effectively embed and use referral guidelines for medical exposure in clinical environments to enhance radiation safety of patients. ESR offered *iGuide* to 31 African hospitals (14 countries) without cost. In total, 13 countries attended (three universities, 18 hospitals, seven Ministries of Health) with a total number of 30 participants.

- Delivered a talk at the *Moroccan Youth in Nuclear: Engaging the Next Generation of Leaders* event. In the

address, DIR-TCAF emphasized the importance of engaging the youth and working closely with Member States in Africa to increase the participation of young generation leaders in Agency programmes through mentoring and fellowship programmes. He highlighted TCAF activities for youth and women.

- Delivered closing remarks at the 11th Session of the PGEC on Radiation Protection and Safety of Radiation Sources for French -Speaking Countries held in Morocco. DIR-TCAF emphasized the importance of capacity building, technical cooperation among developing countries (TCDC), and the enhancement of safety infrastructure in African Member States with the support of the Agency.

- Presented the current status of the funding prospects of certain African Member States i.e. Benin, Chad, Cote d'Ivoire and Niger, in a follow-up meeting on the IAEA-IsDB Joint Task Force, which was held to assess progress made in the proposals submitted by Member States to the IsDB for soft loans to establish radiotherapy centres.

- As a follow-up to the invitation of the UN Special Adviser on Africa (OSAA), on 29 March 2021, DDG-TC, DIR-TCAF and SH-TCAF1 participated in the Interdepartmental Task Force on African Affairs (IDTFAA) meeting (Principal-Level). IDTFAA serves as a platform for strategic-level consultations and coordination among UN entities on their engagement and partnership with Africa, anchored on the 2030 Agenda for Sustainable Development and the AU's Agenda 2063. The meeting focused on addressing gaps and opportunities in the UN coordinated response to the COVID-19 pandemic in Africa. On behalf of the IAEA, DDG-TC highlighted IAEA assistance to 44 African Member States in 2020 in support of their efforts to address COVID-19 (provision of detection equipment including real time RT-PCR and diagnostic kits). DDG-TC also highlighted the ZODIAC initiative and IAEA efforts in various thematic areas relevant to the SDGs.

Webinars and Virtual Meetings for Q1/2021

- Virtual Event - RAF9063: Regional (AFRA) Training Course on Safe Transport of Radioactive Materials, held from 18 to 29 January 2021 with 23 participants from 14 Member States

- ZODIAC Senior Experts Meeting took place on 22, 24 and 26 Feb; In total there were 55 participants, of which 31 were experts.

- Information meeting for African ZODIAC National Coordinators was held on 25 Feb.

- The 4th webinar was held in Arabic to support molecular diagnostic laboratories on the basic configuration of the laboratory for COVID-19 detection, and on the interpretation of RT-PCR results with quality assurance and quality control.

- Virtual meeting with Nigerian stakeholders (NLO and Manager of the Gamma Irradiation Facility (GIF) at Sheda, Abuja) to discuss plans for the repair/maintenance of the GIF using the Government contributions made in late 2019 under NIR0010.

- A two-day virtual workshop was held on harmonized QC programmes in medical applications. Participants included counterparts from both projects RAF9064 (medical exposure control) and RAF6053 (medical physics in imaging).

- The AFRA First Joint Committees Meeting took place on 23 February. The meeting was chaired by the new AFRA Chair, Professor Pascal Hounngandan (Benin), and reviewed work done in 2020 and the way forward in 2021. Several topics related to reporting performance of Regional Designated Centres, project designs for the 2022–23 TC programme, and ownership were identified, all of which require innovative solutions from AFRA.

- Virtual meeting held between IAEA (DDG-NA, PC-NA, DIR-TCAF & TCAF colleagues) and the Africa Centres for Disease Control and Prevention (Africa CDC), to discuss possible future collaboration to strengthen the capacity and capability of Africa's public health institutions as well as partnerships to detect and respond quickly and effectively to disease threats and outbreaks. The meeting agreed to nominate their respective team members who will identify the areas of collaboration and propose a draft document based on which the two parties would envisage the development of a collaborative framework (MoU or PA).

- First Virtual Coordination Meeting of RAF5084 'Strengthening Food Contaminant Monitoring and Control Systems and Enhancing Competitiveness of Agricultural Exports using Nuclear and Isotopic Techniques (AFRA)', was held on 16-17 March. Thirty-one people from 27 Member States met to discuss and

agree on project KPIs for 2024-25 and on delivery modalities in the context of COVID-19 related restrictions.

- Upon request, TCAF participated in a virtual meeting with representatives of the US Institute of Nuclear Materials Management (INMM) and the European Safeguards Research and Development Association (ESARDA) to discuss the participation of African scientists in the INMM & ESARDA Annual Meeting and Diversity Initiative. As requested, TCAF submitted a proposal and proposed panelists from Kenya, Morocco, United Republic of Tanzania, and Zambia.

- All four regional ‘First ZNC Meetings’ were held (Africa – 25 Feb; Asia & the Pacific – 18 Mar; North, Central, South America and Caribbean - 25 Mar; Europe and Central Asia - 26 Mar).

ZODIAC – Currently (21 April), 132 Member States have officially nominated a ZODIAC National Coordinator (Africa: 40; Asia-Pacific: 30; Europe: 40; Americas: 22).

- Virtual meeting of National Liaison Officers ‘By 2025 Towards 2030’ took place from 23 to 25 March 2021. The meeting brought together NLOs and NLAs from 43 of 46 African Member States and six African Permanent Missions to the IAEA. The Ambassador/Resident Representative of Angola to the IAEA/Chair of the Vienna-based African Group and the DDG-TC addressed the meeting, highlighting the importance of enhancing communication with Permanent Missions and achieving greater impact in the TC programme. The Agenda included topics and the delivery of several presentations i.e. promoting women in nuclear science and technology, status and perspectives of TC programme key thematic areas such as food and agriculture, status of radiotherapy services, in radiation protection and nuclear safety, partnerships, ZODIAC to name a few.

- As a follow-up to the invitation of the UN Special Adviser on Africa on 29 March 2021, the DDG-TC, DIR-TCAF and SH-TCAF1 participated in the Interdepartmental Task Force on African Affairs (IDTFAA) meeting (Principal-Level). IDTFAA serves as a platform for strategic-level consultations and coordination among UN entities on their engagement and partnership with Africa anchored on the 2030 Agenda for Sustainable Development and the AU’s Agenda 2063. The meeting focused on addressing gaps and opportunities in the UN coordinated response to the COVID-19 pandemic in Africa. On behalf of the IAEA, the DDG-TC highlighted IAEA assistance to 44 African Member States in 2020 in their efforts to fight against COVID-19, through the provision of detection equipment including real time RT-PCR and diagnostic kits. He also highlighted the ZODIAC initiative and efforts on various thematic areas related to the SDGs.

- Virtual meeting between the project team members of EGY1027 took place to discuss the role of nuclear technology for the preservation of cultural heritage artefacts. The meeting also reviewed and finalized the technical specifications for the procurement of a fully integrated XPS instrument to be used to understand in detail the chemical phenomena present on the surface of archaeological and artistic objects.

Impressum

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