



AUDA-NEPAD
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ABNE
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&

IVM
Integrated Vector
Management

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Gene Drive Regulation: Inception Training for the Institutional Biosafety Committee of the University of Bamako



Group picture of the Experts and the members of the IBC Committee at the University of Bamako

The IVM programme of AUDA-NEPAD supported The University of Bamako and the National Biosafety Committee to conduct an inception training session for the members of the recently established Institutional Biosafety Committee (IBC) of the University of Sciences, Techniques and Technologies (Université des Sciences, des Techniques et des Technologies de Bamako (USTTB) from September 21 – 20, in Bamako, Mali.

The key objective of the training was to strengthen the capacity of the newly appointed members of the USTTB Biosafety and Biosecurity Institutional Committee (CIPBB), and to brainstorm on the operationalization of the committee.

The meeting specifically aimed to (i) Introduce CIPBB members with the basics of Gene Drive technology and its potential applications for malaria vector control, (ii) the general context related to the development of

innovative strategies for malaria elimination, (iii) specific items of the international governance that are relevant to Gene Drive technology. Other objectives included familiarizing CIPBB members with biosafety regulatory framework in force in Mali, providing them with an update on the ongoing research on GM mosquitoes in the country and providing a platform for discussion on the roles and responsibilities expected from CIPBB in accordance with the regulatory provisions.

The meeting was opened jointly by the USTTB Deputy Vice-Chancellor, chairperson of the Institutional Biosafety Committee, on behalf of the Vice-Chancellor, and the representative of the AUDA-NEPAD IVM programme. The training was technically delivered jointly by the AUDA-NEPAD IVM team and experts from the Burkina Faso Biosafety Agency. Beyond the training, the convening provided a great opportunity for Malian stakeholders to discuss overarching issues



A view of participants during the meeting

associated with the Malian 2008 Biosafety law. Consensus was reached on the need to review the law and align it with the new context and requirements. Concerns were also raised about the poor linkages between various organs within the national biosafety system especially between CIPPB and the national biosafety committee.

The USTTB IBC was established through a decision by the Vice-Chancellor in March 2021 after a lengthy process started in 2015. It has a broader scope than usual IBCs and covers not only biosafety but also biosecurity. USTTB hosts the Malaria Research and Training Centre currently working on GM mosquitoes

to develop the Gene Drive technology. The 2008 Biosafety Law of the Republic of Mali provides that institutions that are engaged in modern biotechnology shall establish an institutional public biosafety committee. Thus, the University committee is named Comité Institutionnel Public de Biosécurité et Biosûreté (CIPPB).

Many more trainings and outreach are needed to ensure a greater awareness on genetically based vector control (GBVC) and its applications for human health. AUDA-NEPAD IVM will provide the necessary support for a robust regulatory system in Mali.

Technical Support for the Development of a Guidance Document on Genome Editing in Burkina Faso

AUDA-NEPAD ABNE in partnership with the Agence Nationale de Biosecurité (ANB), in Burkina Faso, provided technical support for the development of a guidance document on Genome Editing (GE) in Bobo-Dioulasso, from 20-16 August; 2021. Participants included Biosafety regulators from ANB, Scientists from the Agriculture Research Institute (INERA), the Health Research Institute (IRSS) and the University, and Ethics Committee Officers.

The main objectives of this meeting were to share up-to-date information on emerging technologies including synthetic biology, gene drive and gene editing and to provide the appropriate technical background for the development of the specific guidance document. The meeting also sought to review the country existing regulatory instruments and practices and discuss the gaps that need to be addressed before kick starting the process of developing the guidance document on genome editing.

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Group picture of participants during the meeting, August 2021, 17 – Bobo-Dioulasso

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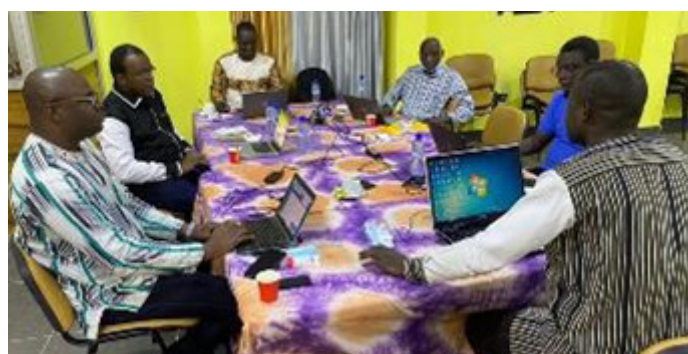
During the meeting, key topics such as gene editing with a case study on rice, gene drive with a case study on malaria vector mosquitoes were presented. An overview of the ongoing international negotiations on emerging technologies under the Convention on Biological Diversity (CBD) and a review of the national regulations were also discussed. As a key output of the meeting, a draft zero of the genome editing guidance was developed and pre-validated by the group.

Burkina Faso, as many other countries, strives to catch up with the fast-evolving emerging technologies by constantly updating and consolidating its national regulatory system. Soon after the adoption of the Cartagena Protocol on Biosafety, the country established an enabling system to explore modern biotechnology and related emerging technologies to address its socio-economic challenges.

Recently, as part of the Rice International Research Consortium, the Burkinabe Agricultural research institute (INERA) started experiments with rice lines that are genetically modified using genome editing techniques for resistance to bacterial blight disease which is the major threat to rice production globally and in Africa. Some of the most virulent strains of the bacteria *Xanthomonas oryzae* that causes the disease are found in Burkina Faso.

In Africa, Nigeria and Kenya have been working hard in the past months to develop their national guidelines on genome editing. The National Biosafety Agency (ANB) in Burkina Faso has just requested support from AUDA-NEPAD to start consultations for developing national guidelines on Gene editing.

Aside the main agenda of the technical support meeting, the AUDA-NEPAD team visited the gene edited rice experiments under greenhouse in Bobo-Dioulasso and interacted with the Principal Investigator on the preliminary data collected. The team also paid a courtesy visit to the Head of the Health Research Institute (IRSS) and conveyed AUDA NEPAD appreciations and congratulations to the research team who recently received the regulatory approval to start the Stage 2 phase of the gene drive technology development.



Two separate working groups worked in session to produce the draft guidance document.

Biosafety Training Focusing on Stacked Trait GM Events in Ethiopia

AUDA-NEPAD ABNE in partnership with the national biosafety regulatory body and partners conducted a biosafety training workshop on stacked trait GM events, from 23-21 July, 2021 in Ethiopia. The key objective of this training was to build the capacity of key stakeholders on stack trait development and regulatory management.

32 participants physically attended the training. They included members of the National Biosafety Advisory Committee and researchers drawn from a few agricultural research centers in the country as well as from other institutions such as the Ethiopian Institute of Biotechnology.

The training was facilitated by experts from AUDA-NEPAD and other international institutions that, for most of them, joined the meeting virtually. It was critical and timely as it truly enhanced the capacity of key stakeholders especially regulatory in stacked trait GM event regulations just when Ethiopia prepares to review its first stack trait application for decision making.

Through the successive biosafety service support provided by the AUDA-NEPAD and partners, Ethiopia has progressively been able to improve its biosafety regulatory system which has enabled it to safely introduce and adopt biotech crops for agricultural and economic development. Ethiopia has already commercialized Bt cotton and is in the process of reviewing an application for environmental release of genetically modified maize which is drought-resistant and insect-resistant, in a context where drought and fall army worms are causing big losses in African farms.



A view of participants during the meeting

Successful Working Session of the national Integrated Vector Management Platform in Burkina Faso

AUDA-NEPAD in collaboration with the Burkina Faso Biosafety Agency (Agence Nationale de Biosécurité (ANB) and the Integrated Vector Management (IVM) partner Institutions in Burkina Faso held a working session from 10-9 September at Loumbila, Burkina Faso.

The Burkina Faso IVM platform is multisectoral and multidisciplinary and includes representatives from the health sector, environment, science and innovation, biosafety, and communication. Coordination of the platform is ensured by the National Malaria Research and Training Center (Centre National de Recherche et de Formation sur le Paludisme (CNRFP) under the Ministry of Health, while the National Biosafety Agency (ANB) together with the AUDA-NEPAD Office in Burkina Faso serve as Secretariat to the platform.

The two-day working retreat was meant for the platform members to share up-to-date information on health-related emerging technologies and to discuss how best to operationalize the platform.

Attendance and participation in the meeting demonstrated a high-level engagement from the

representatives of key sectors including Ministry of health through the CNRFP, Ministry of Environment represented by the chairperson of international treaties, the CBD Focal Point, and the Nagoya Protocol on Benefit Sharing Focal Point. Ministry of Higher education, science, technology, and innovation was represented by the Biosafety Agency (ANB), the Agricultural Research Institute (INERA), and the Health Research Institute (IRSS).

Meeting participants adopted a workplan proposed by the platform core team and made recommendations to reinforce the platform. These include finalizing agreements with AUDA-NEPAD to avail resources to the Ministry of Health through the CNRFP to ensure national ownership of the platform, providing support to develop communication materials with harmonized messaging that align with the official statements supporting the Gene Drive technology and accelerating the implementation of the action plan of the platform. AUDA-NEPAD will continue provide technical support to the Burkina-IVM platform which serves as a pilot that aims to be a model for other countries in Africa.

Burkina Faso – IVM platform members during the working session



Capacity Strengthening Meeting on the Regulation of Stacked Trait Gene Technology in Nigeria



Two separate working groups worked in session to produce the draft guidance document.

AUDA-NEPAD ABNE in partnership with the National Biosafety Management Agency (NBMA) in Nigeria and other partners held a capacity strengthening meeting on the regulation of stacked trait GM technology from 27 – July in Abuja, Nigeria.

The two-day meeting brought together biotechnology and biosafety stakeholders from line ministries, sister Agencies and international partners who joined online.

In his opening remarks, Dr Rufus Ebegba, Director General of NBMA said that “stacked Gene organisms are nothing different from what we have had over times and the technology is a step further in the manipulation of genes of organisms for their intended benefits. It is a modification that has more than one gene in a particular organism”. He also added that the Agency from next month would start the process of drafting guidelines for a safe use of stacked gene technology in the country. He re-assured Nigerians of the NBMA’s efforts towards ensuring that GMOs considered unsafe would not be allowed into the country, and that Nigeria will continue to adopt new technologies that would help move the country forward, ensure food sufficiency and boost the economy.

Dr Jeremy Ouedraogo, Head of AUDA-NEPAD African Biosafety Network of Expertise commended Nigeria for the efforts made over the years to put in place the necessary regulatory framework for a safe use of biotechnology. “Nigeria is showing the best way of doing things by ensuring safety in the adoption of better technologies for the future, hence AUDA-NEPAD is pleased to be part of development of a guiding document that would move the process forward”, he said.

Dr. Matthew Dore, Country Representative for Program for Biosafety Systems recognized the tremendous effort of NBMA in its six years of existence and encouraged the Agency to maintain its tempo in leading Africa in Biosafety matter. He pointed out that the NBMA, under the auspices of the Honorable minister of environment, with the huge support of the government has achieved a lot and has made Nigeria proud among countries in Africa and beyond.

Creating Awareness on Biosafety and Biotechnology of Virus Resistant Cassava for Africa in Kenya

AUDA-NEPAD in partnership with Kenya's National Biosafety Authority and other partners carry out an awareness creation meeting on Biosafety and Biotechnology of Virus Resistant Cassava for Africa (VIRCA- resistant to Brown Streak Virus disease) among stakeholders from the Coastal region Kenya of Mombasa covering three counties Kwale, Kilifi and Mombasa from October 2021 ,6-5, in Mombasa.

This meeting was mainly physically attended by 19 participants in total that included farmers' representatives from Kwale County, Mombasa and Kilifi. Were also present cassava scientists, the Director of the KALRO Biotech Center and Principal Investigator of VIRCA, the Coast Cassava Breeder, representatives from the Kenya National Biosafety Authority including the CEO, AUDA-NEPAD staff and a representative from Program for Biosafety Systems. This meeting was mainly physically attended by 19 participants in total

that included farmers' representatives from Kwale County, Mombasa and Kilifi. Were also present cassava scientists, the Director of the KALRO Biotech Center and Principal Investigator of VIRCA, the Coast Cassava Breeder, representatives from the Kenya National Biosafety Authority including the CEO, AUDA-NEPAD staff and a representative from Program for Biosafety Systems.

resistant cassava to Kenya's National Biosafety Authority (NBA) and the application was approved for National Performance Trials. The last step before eventual commercial release of the GM cassava in Kenya is the approval by the National Seed Varieties Release committee. The purpose of this meeting was to create awareness and knowledge among stakeholders prior to commercial release of the GM cassava in the coastal region of Kenya.



Dr Silas Obukosia, Principal Programme Officer of AUDA-NEPAD and Prof. Dorington Ogoyi, Chief Executive Officer of Kenya NBA

Sensitization Forum for Stakeholders and Opinion Leaders in Nigeria



A group picture of part of participants during the forum

AUDA-NEPAD ABNE in partnership with the National Biosafety Management Agency in Nigeria held a sensitization forum for educating stakeholders and opinion leaders on biosafety (GMO safety and regulation) on 19 July 2021 in Lagos. Key stakeholders and media practitioners, comprising of forty (40) participants, participated in the sensitization workshop.

The Commissioners of the Lagos State Ministries of Health and Agriculture were ably represented. Enlightening presentations were made on overview of modern biotechnology, its products and biosafety concerns; GM food safety; biosafety as an imperative for socioeconomic development; global biosafety practice; and role of media in biosafety communication.

This was followed by an interactive session where questions and comments were addressed for better understanding of the participants. This resulted in an improved understanding of the biosafety regulation on the globe and in the country. The media practitioners resolved to provide the necessary support and to ensure right and factual public communication going forward.

Subsequent sensitization workshop will be held in other regions of the country to ensure wider coverage and facilitate increased public understanding and participation in biosafety regulation in the country.

Nigeria Approves an Application for Commercial Release of Drought Tolerant and Insect Resistant Maize

Following the submission of an application by the African Agricultural Technology Foundation (AATF) for the commercial release of drought tolerant and Insect resistant (TELA) maize, the application was reviewed by the National Biosafety Committee (NBC) and then the National Biosafety Management Agency (NBMA) of Nigeria organized a public presentation on the technology.

Subsequent to this public meeting, the NBMA issued a permit certificate approving the application on October 2021 ,8. After approval of Bt cotton and Bt cowpea in recent years by Nigeria, drought tolerant and Insect resistant maize is the third crop to be commercialized in the country. This clearly shows a strong commitment of Nigeria to safely harnessing science and technology opportunities for its development.

Capacity Building on Biosafety Focusing on Stack Trait Events in Malawi

The Environmental Affairs Department in Malawi with the support of AUDA-NEPAD, PBS and other partners organized a two-days training workshop on Biosafety focusing on stack traits genetically modified event, from 7th to 8th September 2021, in Lilongwe Malawi.

Participants to this meeting were drawn from the office of the Biosafety Registrar, members of the National Biosafety Regulatory Committee (NBRC) and the Agriculture Technology Clearing Committee (ATCC).

The training was facilitated by both international and local facilitators. Lead facilitators were from NEPAD/

ABNE while the other international facilitators from Australia, Argentina, Canada and South Africa. Due to covid19- pandemic international facilitators and a few participants attended virtually while local facilitators and the rest of the participants attended in person. Presentations, case studies and group discussions were the main methods used to deliver the training.

The presentations gave an overview of the activities being regulated under the current Biosafety Act which include Importation of GMOs, Trials (research) Confined Field Trials, Multi location Field Trial and general Release. Stack trait breeding being new in Malawi the



Group picture of part of participants during the meeting



One of the two working groups formed during the meeting

presentation highlighted that it may be subjected to risk assessment just like other GMOs. However, it was emphasized that biosafety decisions are based on scientific evidence and decisions are considered on case-by-case risk assessment, also focusing on history of safe use of each of the single trait product and unintended effects of the stack trait product on beneficial organisms 4.5 Biosafety Regulatory Needs/ Challenges and Opportunities for Engagement in Malawi 4.5.1 Opportunities for Using Stack Traits product.

The training closed with remarks by Mr. Benon Yassin, Deputy Director of Environmental Affairs Department. In his remarks, he thanked facilitators for the knowledge shared which is key for regulators as far as genetically modified organisms are concerned. He thanked all participants for the dedication demonstrated during the training and urged them to go through the materials provided after the training to refresh and master the topics learnt. He finally thanked all partners and peculiarly the Michigan State University and AUDA-NEPAD/ABNE for the technical and financial support respectively.

UN Biodiversity Conference Officially Opens in Kunming, China

The 15th meeting of the Conference of Parties to the Convention on Biological Diversity (COP15) opened on 11 October 2021 in Kunming, China. COP15 is being held concurrently with the 10th meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety (CP-MOP 10), and 4th meeting of the Conference of the Parties serving as the meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (NP-MOP 4). The meetings are being held in two Phases, a largely virtual Phase one from 11 to 15 October (including a High-Level Segment from 12 to 13 October) and an in-person Phase two meeting in Kunming, from 25 April to 8 May 2022.

The theme for COP15 is "Ecological Civilization: Building a Shared Future for All Life on Earth". The opening ceremony was chaired by HE Huang Runqiu, Minister of Ecology and Environment of China. It was physically attended by some Parties to the Convention on Biological Diversity (CBD) and observers from around the world along with officials of the Secretariat of the CBD and also virtually by many other Parties and observers who could not be present in-person due to the COVID19- pandemic.

Mrs. Elizabeth Maruma Mrema, current Executive Secretary of the CBD congratulated the President of the past COP, Dr Yasmine Fouad, Minister of Environment of Egypt, and her team for their strong

dedication together with the government of China and the CBD Bureau to making COP15 possible despite the challenges of our time. Mrs. Mrema also buttressed the importance of attaining the 2050 vision of living in harmony by reversing biodiversity loss and putting biodiversity on a path to recovery by 2030, at the latest.

Inger Andersen, the Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme, in her remarks noted that the world can no longer rely on biodiversity to operate like clockwork and deliver what humanity needs to survive and she reiterated the need for clear and tangible actions to deliver the post2020- global biodiversity framework that places nature at the heart of decision-making.

During this session, representatives of each region were given the floor to make statements on behalf of their regions. The current Chair of the African Union, the Democratic Republic of Congo, read a statement on behalf of the African region.

In his statement, Mr Mike Ipanga Mwaku congratulated the Chinese Minister of Ecology and Environment upon his election as President of the COP15 and reassured him of the commitment of the African continent to support him in his noble mission to help find the best solutions to biodiversity protection. "Africa is home to a rich biodiversity that acts as buffer to climate change. Nevertheless, the region is facing challenges of biodiversity loss, climate change and subsequent impacts", he said. He further stated that humanity is at a crossroad of saving the planet, a burning house, and urgent actions ought to be taken for present and future generations. "The post2020- global biodiversity framework is an opportunity for us to reaffirm our collective commitment to reverse biodiversity loss and to develop a holistic collaborative and coordinated approach to addressing not only biodiversity loss but also climate change. A post2020- global biodiversity framework, more robust, ambitious, realistic and achievable with the means and resources necessary for implementation should be our ultimate goal", he added.

The African Group of Negotiators, supported by the secretariat coordinated by the African Union Commission and AUDA-NEPAD, are working hand in hand to effectively contribute to the global discussions and decisions and defend Africa's interests on critical biodiversity issues such the post2020- global biodiversity framework, resource mobilization, digital sequence information and benefit sharing.



HE Huang Runqiu, Minister of Ecology and Environment of China, President of COP15



Mr Mike Ipanga Mwaku, Spokesperson of the African Region