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African Biosafety
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&

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Integrated Vector
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Biosafety Sensitization and Awareness Creation for High-Level Policymakers in Zimbabwe



Group picture of participants

Zimbabwe has shown interest to harness biotech crops to enhance agricultural production and has requested AUDA-NEPAD to facilitate a one-day workshop to sensitize parliamentarians & other key stakeholders. The objective of this technical support was to share global and regional experiences on the regulation and adoption of biotech crops to instil confidence in the regulated introduction and adoption of biotech crops.

The meeting took place on 23 September 2022 in Harare and brought together 106 participants including parliamentarians. Parliamentarians came from four parliamentary standing committees: Science & Technology, Environment, Agriculture and Health.

The workshop was opened by His Excellency Prof. F. Tagwira, Principal Secretary, Ministry of Higher & Tertiary Education, Science, Technology & Development. Prof. Tagwira emphasized that Zimbabwe had now approved the confined field-testing of GM crops (namely cotton), the country's adoption of the GM crops would be based on the test results. He also noted the importance of socio-economic considerations such as impact on the seed sector, seed security and seed sovereignty while making decision on the adoption of GM crops.

AUDA-NEPAD's Programme Officers made presentations on basic concepts of biotechnology as well as global and

continental experiences on the adoption of biotech crops, highlighting the risk of unauthorized transboundary movement of seeds wherever the biosafety regulatory system is too slow to respond to the desire of farmers to access GM seeds once they are aware of the benefits from the neighbouring countries. Presentations were also made by an academic and an industry representative (focusing on insect-resistant GM cotton approved for field testing) and the Director of the National Biotechnology Authority (NBA).

The conclusions and achievements of the workshop were wrapped up by Hon. L. Maphosa, Parliamentary Portfolio Chair for Higher and Tertiary Education, Science, Technology & Development. She stressed that Parliamentarians would not want to be told about perceptions of GM crops and foods next time they meet, but they would expect to be told about the results of the GM crop experiments that would soon be tested in the field.

Training Workshop on Biotechnology and New Emerging Technologies for the African Biosafety Communication Network

AUDA-NEPAD held a training workshop on biotechnology, gene editing, gene drive and synthetic biology for the African Biosafety Communication Network, from 26-25 October 2021 in Accra, Ghana. 16 communication experts from 13 African countries took part in this meeting.

In his opening remarks, Mr. Eric Okoree, CEO of the National Biosafety Authority of Ghana and Chair of the meeting, welcomed participants and thanked AUDA-NEPAD for such a capacity-building initiative. Dealing with complex domains like biotechnology and related emerging technologies is a big challenge, in particular when these technologies seem beyond the understanding of the layman. Media experts play a key role in helping fill the knowledge gap with well-

balanced and fact-based information.

Dr. Jeremy T. Ouedraogo, Head of AUDA-NEPAD ABNE and IVM Programmes, also highlighted the importance of communication in the success of programme activities. "I am glad such a training initiative is taking place as it will help to fully involve communication practitioners and to capacitate them so that they adequately support the implementation of activities on the ground", he said.

During these two days, participants could hear from experts on biotechnology basics, genome editing, gene drive principles, and synthetic biology basics. They also benefited from an introduction to the biosafety communication approach as well as proposed approaches in communicating emerging



A view of participants during the meeting

gene technologies.

Participants also discussed the different issues faced by the African Biosafety Communication Network and made recommendations. Among the recommendations, they highlighted the need to strengthen the communication component of biotechnology and biosafety programmes, in particular with adequate funding as effective communication comes with costs.

In-country biosafety communication efforts must specifically be supported for increased public understanding of the complex concepts of biotechnology and biosafety. Participants also recommended holding periodic meetings of the members of the communication network virtually as well as in person and to diversify the communication platforms by adding for instance an online TV channel that would showcase most of the achievements in the field.

Training of the National Biosafety Authority Staff in Senegal on the Review of GM Applications

AUDA-NEPAD, in partnership with Agence National de Biosecurité (ANB) in Senegal organized a capacity-building workshop on

the review of applications for genetically modified organisms intended for use as food, feed, or for processing (GMO-FFP)

from 21 – 20 October 2022 in Saly Portudal, Senegal. Around 20 participants drawn from ANB, Cheikh Anta Diop University, and the Ministry of Economy took part in the training. Senegal recently enacted its amended biosafety law. This development calls for regulatory capacity strengthening for the implementation of the law. Hence, the importance of this training. This capacity-building effort will help the country deal with requests for the import of genetically modified organisms intended for use as food, feed, or for processing (GMO-FFP) as essential food for those who lack access to adequate food and nutrition.



Group picture of part of participants in the meeting in Saly, Senegal

The main objective of the training was to provide support to the competent national authority in the effective discharge of its mandate including food and feed safety assessment in line with international best practices.

During the meeting, participants were taken through the key aspects of the review of biosafety applications, in particular, key provisions in the Cartagena Protocol and the national biosafety law on the handling of requests for import of GMO-FFPs; key administrative tools for handling requests for import of GMO-FFPs; administrative steps in receiving and processing applications for review and decision making; utilizing databases in the conduct of risk assessment reviews; conducting a review and making recommendations; drafting a

risk assessment report.

The different sessions of the workshop were particularly appreciated by participants. In his concluding remarks, Mr. Yero Dé, Chairperson of the Orientation Council of ANB said that the meeting really built the capacity of ANB staff. "As regulators, we should be able to always provide accurate responses to the different inquiries from the public. We are grateful to AUDA-NEPAD for providing us with the technical skills that will allow us to adequately deal with clarifications needs from the public and the media. The training also provided us with the necessary tools and methodologies for the safe use of biotechnology opportunities," he said.

Workshop on Genome Editing Regulation and GM Variety Registration Procedure in Burkina Faso

AUDA-NEPAD in partnership with Agence Nationale de Biosécurité (ANB) in Burkina Faso held a workshop on the registration of GM varieties and genome editing regulation, from 15 – 11 October 2022 in Loumbila, Burkina Faso. A dozen of experts from ANB and other key national institutions took part in this meeting.

The workshop aimed to develop regulatory instruments that would help improve the regulation of products derived from gene editing technologies as well as the mechanism for GM crop variety registration.

In his opening remarks, Dr. Oumar Traoré, Director General of ANB and Chair of the meeting, welcomed participants and stated that “the two aspects of the topic of the meeting are very important and will help provide Burkina Faso with new development tools. There are areas to be urgently clarified in the regulation of emerging technologies such as genome editing”.

Dr. Jeremy Ouedraogo, Head of ABNE and IVM programmes also welcomed participants on behalf of the AUDA-NEPAD CEO. He highlighted the importance of the meeting and said that “Burkina Faso can be proud of the results achieved so far in terms of technology development but the county must keep strengthening these results in particular in new areas such as emerging technologies.” He reaffirmed AUDA-NEPAD’s availability to continue to provide technical support as required by the country.

Unlike DNA recombinant biotechnology, genome editing is a more affordable and more precise tool that can help speed up the crop improvement cycle in order to adequately address critical agricultural challenges including droughts, poor soils, pest attacks, the poor nutritional value of commodities, etc. During the meeting, presentations and discussions allowed participants have a common understanding of the implications of



From left to right: Dr. Moussa Savadogo, AUDA-NEPAD Consultant, Dr. Jeremy Ouedraogo, Head of ABNE and IVM, and Dr. Oumar Traoré, DG of ANB, during the opening ceremony

gene editing regulation as well as the GM variety registration procedure.

In terms of outcomes, participants developed three (3) draft instruments that are of critical importance for streamlining the regulatory practices in the country. First is a draft decision that clarifies that an approved GM event can be transferred into another variety of the same crop species without a need for a new risk assessment dossier. Second is a guidance document that helps separate biosafety approval processes from crop variety registration mechanisms, as it is of

international best practices. The third is a draft guidance paper for national regulators to help them decide if a gene-edited crop product will be regulated as a GMO or as a conventional product. This also perfectly aligns with existing best practices.

This fruitful meeting shows once more how the support from AUDA-NEPAD helps African countries like Burkina Faso to continuously strengthen their regulatory systems as required to safely embrace emerging and innovative technologies for development.

Preparatory Meeting for ECOWAS Delegates Towards the Upcoming CBD Meeting in Montreal



Group picture of participants during the meeting

AUDA-NEPAD organized a preparatory meeting towards the United Nations Convention on Biological Diversity (CBD) negotiations planned to take place in December 2022 in Montreal, Canada. The preparatory meeting took place from 3 to 5 November 2022 in Dakar, Senegal. 21 country delegates from ECOWAS countries, essentially in charge of biotechnology regulatory aspects in crop and health in their countries, participated in the meeting.

The preparatory meeting sought to inform participants about the latest developments in the process for the preparation of the Post2020- Global Biodiversity Framework (GBF) linkages with the Cartagena Protocol with regard to the biosafety component. It also aimed to provide a platform for the exchange of information, views, and experiences on key agenda items, and to identify the African interests and work towards advancing those interests during the negotiations.

Several meetings will be held concurrently during the important CBD conference in Montreal: the 15th meeting of the conference of parties (COP 15) of the CBD, the 10th meeting of the Parties to the Cartagena Protocol on Biosafety (COP/MOP 10), and the 4th meeting of the Parties to the Nagoya Protocol on Access and Benefit-sharing (COP/MOP 4). Hence the importance for African negotiators to have a common understanding of the issues at stake and agree on the best approaches to address these issues, from an

ECOWAS or a continental perspective.

This CBD meeting was originally scheduled to take place from 15 to 28 October 2020, in Kunming, China, but was postponed several times due to the COVID19- pandemic. In 2021, it was finally decided that the meeting would take place in two parts. The first part took place essentially in a virtual format, from 11 to 15 October 2021. The second part was expected to take place face-to-face in Kunming but was finally moved to Montreal.

In the previous CBD meetings, the African Union and AUDA-NEPAD, serving as Secretariat of the African Group of Negotiators, contributed to keeping member states abreast with the evolving state of the processes and discussions. As part of the strategy this year, this ECOWAS meeting is also expected to contribute to ensuring an organized and effectual participation of African Parties in the different concurrent meetings.

Biosafety Capacity Strengthening Workshop for Members of the Uganda National Biosafety Committee

AUDA-NEPAD's African Biosafety Network of Expertise (ABNE) and Integrated Vector Management (IVM) Programmes in partnership with the Uganda National Council for Science and Technology (UNCST) of the Republic of Uganda organized a biosafety capacity enhancement workshop for members of Uganda National Biosafety Committee (NBC) from -13 16 September 2022, in Entebbe, Uganda.

Thirty-three members of NBC took part in the

workshop, which focused on "Information sharing and capacity strengthening on risk assessment, application review and decision making for contained use of genetically modified mosquitoes (GMM) for malaria vector control".

In addition to the formal capacity enhancement on risk assessment, procedures, dossier review, and decision-making processes, participants benefited from the shared practical experience on "risk



A group picture of part of participants during the meeting

assessment on decision making for contained use application of GMM" from Burkina Faso which provided better contextualization of the processes. The NBC was also updated on the current and anticipated scientific developments in GM technology, in particular gene drive technology, and was better equipped to make sound regulatory decisions thereof.

This capacity enhancement workshop aligns with the current policy direction among AU member states in the control and elimination of malaria in Africa. Malaria is an endemic disease in Africa, and the continent is the most affected worldwide. Many vector control methods have been used for decades to eradicate the disease with little success. In 2018, the African Union High-Level Panel on Emerging Technologies (APET) recommended that African countries approve adding new technological options, such as gene drive to the

already existing toolbox to control malaria. The APET report was subsequently endorsed by the African Heads of State. Countries like Burkina and Mali have started scientific experiments on GM mosquitoes in preparation for implementing the gene drive technology. Other countries such as Uganda, Ghana, and Sao Tome and Principe also engage in the same direction.

Implementing gene drives, as well as other gene modification technologies, are thoroughly regulated in the international and also national spheres. Hence the importance of strengthening the capacity of regulators to appropriately make a regulatory determination on applications and monitor the process thereof. All these efforts will broadly lay the foundation for contributing to AU Agenda 2063 Aspiration -1 A prosperous Africa based on inclusive growth and sustainable development Goal -3 Healthy and well-nourished citizens.

Sensitization Workshop on Genome Editing and Launch of Three Biosafety Guidelines in Malawi

AUDA-NEPAD, in partnership with the Environmental Affairs Department in Malawi, conducted a sensitization workshop on genome editing applications and their regulation in agriculture from



Group picture of participants during the meeting

24-23 November 2022 in Lilongwe, Malawi. The second day of the meeting was principally dedicated to the launching of three important biosafety guidelines: Guidelines on Genome Editing, Guidelines on the Safety Assessment of Food and Feed Derived from GM Crops, and Guidelines on the Assessment of GMOs with Stacked Events.

Twenty-three participants attended the sensitization workshop on the first day. They were inducted to historical bases of modern crop improvement, from crop domestication by selection to classical breeding based on Mendelian genetics and genetic engineering, including genome editing. The impacts genetic technologies continue to make on the world food supply and the need for harnessing available and emerging technologies was highlighted with evidence. Thereafter, presentations were made on the science of genome editing and the worldwide evolving experiences of regulating genome editing in agriculture. Topics on environmental and food safety risk assessment and on Malawi's preparedness for the upcoming UN Biodiversity Conference (COP 15) were also presented and discussed.

Genome editing holds great promise to deliver high-yielding crop varieties that withstand various stresses such as droughts, floods,

insect pests, or diseases and that possess quality traits for use as food, feed, or for processing. A few countries in Africa, namely Malawi, Kenya, Ethiopia, and Nigeria, have produced guidelines that help regulate genome-edited crops that would facilitate the in-country development or the introduction, testing, and commercialization of genome-edited crop varieties developed elsewhere.

The launching of the three guidelines, on the second day, was presided over by the Honorable Eisenhower Nduwa Mkaka, MP, Minister of Natural Resources and Climate Change. In his opening remarks, he appreciated AUDA-NEPAD for supporting the launching and the sensitization events and the development, along with other partners, of the guidelines. He encouraged participants to keep the momentum up to enable Malawi to continue adopting safe and beneficial biotech, including genome editing, to spur agricultural development and economic growth. Remarks were delivered by the AUDA-NEPAD, by the Program for Biosafety Systems, and by the Principal Secretary for Natural Resources and Climate Change. An Overview of Biosafety Guidelines that were launched was subsequently presented by Dr. Lilian Chimphepo, Principal Environmental Officer

Capacity Building in Genome Editing Regulation in Ethiopia



Group picture of part of participants during the meeting

AUDA-NEPAD in partnership with the Environmental Protection Authority in Ethiopia organised a capacity-building workshop on genome editing regulation from 27 to 30 September 2022 in Addis Ababa. This meeting follows a request by the Environmental Protection Authority (EPA) for technical support from AUDA-NEPAD to help align Ethiopia's nascent regulation of genome editing with global best practices and to address gaps pertaining to socio-economic considerations in decision-making for the deliberate release of genetically modified organisms into the environment.

The meeting brought together around 40 participants from an array of technology and regulatory institutions. The intervention focused on sharing global and regional experiences and on assessing the adequacy

of the available regulatory tools for genome editing and for socio-economic considerations for deliberate release. Other key aspects addressed during the meeting include global regulatory experiences, domestic legal provisions pertaining to deliberate GMO release, science and technology of genome editing, and its agricultural applications.

The climax of the meeting was certainly the presentation of draft guidelines to regulate genome editing in Ethiopia. The document was adopted by participants, after making a few comments, and was recognized as adequate to guide the regulation of genome editing for agricultural applications in Ethiopia.

At the end of the meeting, H.E. Dr. Getahun Garede, Director General of EPA, appreciated the continuous

support AUDA-NEPAD is providing to improve the functionality of the biosafety regulatory system. He accentuated that closing doors on a potentially useful technology do in no way serve Ethiopia's interest. To this end, he called on biotech professionals from research institutes and universities to support the strengthening of science-based biosafety regulation for the safe adoption of biotechnology including products of genome editing.

Workshop on LMO Risk Assessment for Francophone African Regulators

The Secretariate of the United Nations Convention of Biological Diversity (CBD) in collaboration with AUDA-NEPAD and other partners, conducted a workshop on the risk assessment of Living Modified Organisms (LMOs) for Francophone African stakeholders, from 19 to 22 September 2022 in Dakar, Senegal.

In his opening remarks, Dr. Lamine Kane, the Focal Point of the Cartagena Protocol on Biosafety, welcomed participants on behalf of the Minister in charge of the environment in Senegal. He thanked the CBD and its partners for their constant capacity-building efforts for national stakeholders in Africa.



A view of part of participants during the meeting

Dr. Jeremy T. Ouedraogo, Head of the AUDA-NEPAD ABNE programme also commended the CBD Secretariate and its partners for this capacity-building initiative for Francophone Africa. "Risk assessment is relevant only when countries are committed to implementing the technologies that require such assessment," he said. He, therefore, encouraged participants to actively interact and get the most out of the meeting and, more important, make the necessary recommendations to their authorities back home to make sure the knowledge gained in this training generated tangible results. Dr Elisabeth Mrema, Executive Secretary of the CBD, also delivered a video message to participants. She highlighted that risk assessment is central to decision-making,

particularly in rapidly changing areas like modern biotechnologies. "Risk assessment provides science-based information for decision-making.. Assessing risks timely is critical to safely harness evolving technologies", she added.

During these 4 days, participants were taken through the legal framework of risk assessment of LMOs, the principles, and methodology of risk assessment, as well as practical case studies. At the end of the workshop, participants acknowledged the relevance of the meeting, which provided them with the necessary information on LMOs regulation and assessment. They, however, recommended that further trainings be organized to strengthen the initial knowledge gained in this workshop.

COP 15 in Montreal: Nations Adopt Important Biodiversity Protection Goals and Targets for 2030

Representatives of 188 governments took part in the United Nations' Convention on Biological Diversity (UN CBD) Conference of Parties/Meeting of Parties (COP/MOP), from 19-7 December 2022, at Montreal's Palais des Congrès, in Canada. During these two weeks, parties held marathon meetings that allowed them to finalize and approve measures for mitigating climate change effects and for the holistic protection of the environment.

Four goals and 23 targets in total were adopted. The goals are mainly about maintaining, enhancing, or restoring the integrity, connectivity, and resilience of all

ecosystems by 2050, sustainable use and management of biodiversity, fair and equitable sharing of the benefits of digital sequence information on genetic resources, and availing adequate means of implementation (financial resources, capacity-building, technical and scientific cooperation, transfer of technology). Key targets include protecting %30 of Earth's lands, oceans, coastal areas, and inland waters by 2030; reducing by 500\$ billion annual harmful government subsidies; Cutting food waste in half, and mobilizing at least 200\$ billion per year in domestic and international biodiversity-related funding from all sources – public and private.



A view of the high table during the closing ceremony

Delegates from 55 African countries were part of this important meeting. With technical support from the African Union Commission (AUC) and the African Union Development Agency – NEPAD (AUDA-NEPAD), they took a firm stance on key issues of critical interest for the continent. Among such issues are for instance the post-2020 Global Biodiversity Framework (GBF), resource mobilization, and digital sequence information of genetic resources.

The meeting approved a series of related agreements on implementing GBF, including planning, monitoring, reporting, and review. Concerning resource mobilization, it was agreed to help nations to build their capacity to meet their obligations. The Global Environment Facility was specifically requested to establish, as soon as possible, a Special Trust Fund to support the implementation of the GBF. The fund would complement existing support and scale up financing to ensure the timely implementation of the GBF with an adequate, predictable, and timely flow of funds.

Digital sequence information on genetic resources was one of the most debated topics at COP15, having commercial and non-commercial applications, including pharmaceutical product development, improved crop breeding, taxonomy, and the monitoring of invasive species. It was eventually agreed to establish within the GBF a multilateral fund for the equitable sharing of benefits between providers and users of DSI, to be finalized at COP16 in Türkiye in 2024.

It was also highlighted in the approved documents the need to foster the full contributions of women, persons of diverse gender identities, youth, indigenous peoples and local communities, civil society organizations, the private and financial sectors, and stakeholders from all other sectors. Thus, the need for a “whole-of-government and whole-of-society approach” to implementing the GBF was emphasized.