

**Day 1: Status of National Frameworks for Research and Development of Gene Drive and Synthetic Biology Technologies**

**Session 1: Introduction to Gene Drive and Synthetic Biology**

| Time   | Topic  | Presenter(s)   | Session Chair  |
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| 8.00   | <b>Registration</b>  | NBA Kenya  | Prof Ogoyi     |
| 8.15   | <b>Welcome remarks</b>   | Welcome Remarks: <ul style="list-style-type: none"> <li>• Dorrington Ogoyi, Kenya</li> <li>• Dr Silas Obukosia, Representative from NEPAD</li> <li>• Dr Margaret Karembu, ISAAA</li> <li>• Mrs. Gertrude Ngabirano, Executive Secretary, EAC Science and Technology Commission.</li> </ul> | Willy Tonui    |
| 9.00   | <b>Purpose of Meeting and Pre-conference surveys</b>   | Willy Tonui  |                |
| 9.30   | <b>Introduction to gene drive technology and applications.</b> <i>This presentation reviewed the basics of gene drives, a comparison and contrast to GM and gene editing, and highlight the range of potential applications.</i> | Dave O'Brochta   |                |
| 10.30  | <b>Introduction to Synthetic Biology and applications.</b> <i>This presentation reviewed the basics of Synthetic Biology (SYNBio), a comparison and contrast to GM and highlight the range of potential applications.</i>        | Douglas Miano  |                |
| 11.00  | <b>Tea Break (Photo Session)</b>   |  |                |
| <b>Session 2: Regional Strategies and Pathways for Research and Status of Development of Gene Drives and Synthetic Biology</b> |  |  |                |
| 11.30  | <b>Regional policies and strategies for gene drive and Synthetic Biology Applications in Africa.</b> <i>This presentation reviewed AU's Position on Gene Drive and Emerging Technologies and the Report on Gene</i>              | Silas Obukosia, AU/NEPAD   | Charles Mugoya |

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|   | <i>Drives for Malaria Control and Elimination in Africa. It will describe plans by the Africa Union towards development of a regional approach to regulating new technologies (gene drive and Synthetic technology) in Africa.</i>  |   |                        |
| 12.00   | <b>Guidance Framework for testing genetically modified (GM) and Pathway to Deployment of Gene Drive Mosquitoes as a Potential Biocontrol Tool for Elimination of Malaria.</b> <i>This presentation reviewed WHO guidance framework that aims to foster quality and consistency among processes for testing and regulating new genetic technologies by proposing standards of efficacy and safety testing comparable to those used for trials of other new public health tools. This presentation will also review potential steps to be considered during field testing and release of gene drive mosquitoes.</i> | Hector Quemada  |                        |
| 12.45   | <b>LMOs and Synthetic biology in the context of the Cartagena Protocol Risk Assessment Guidance.</b> <i>This session reviewed the risk assessment process as described in Annex III of the Cartagena Protocol, in relation to risk assessment of LMOs and synthetic biology.</i>  | Wadzi Mandivenyi,   |                        |
| 13.15   | <b>Lunch Break</b>  |   |                        |
| <b>Session 3: Status of National Regulatory Frameworks for Development of Gene drives and Synthetic Biology</b> |   |   |                        |
| 14.00   | <b>Implementation of a Biosafety Regulatory Framework in Countries.</b> <i>This session provided an opportunity for regulators from countries with functioning Biosafety frameworks to share existing country laws and past experience on vector control, biocontrol, GM mosquitoes and steps being considered on new technologies (gene drive, gene editing and synthetic biology) and Preparation for COP-MOP.</i>  | <b>Country presentations</b> <ul style="list-style-type: none"> <li>• Eric Okoree- Ghana,</li> <li>• Prof Ogoyi-Kenya,</li> <li>• Lillian Chimphepo- Malawi,</li> <li>• Mama Daarra -Mali</li> <li>• Anabela Tivana -Mozambique</li> <li>• Kotchikpa Okoumassou -Togo,</li> <li>• Prof. Martha K. Schulz – Namibia</li> <li>• Charles Mugoya- Uganda</li> </ul> | Prof Yaye Kene Gassama |

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|  |  | <ul style="list-style-type: none"> <li>• Prof. Dr. Asim F. Abu Sarra- Sudan</li> <li>• Bongane Nkhabindze, Swaziland</li> <li>• Dr Tesfaye Disasa, Ethiopia</li> <li>• Ntakadzeni Tshidada- South Africa</li> <li>• Lackson Tonga- Zambia</li> <li>• Dr. Jonathan Mufandaedza- Zimbabwe</li> <li>• Khaled Hashem Radwan- Egypt</li> <li>• Andrew Kobogo - Rwanda</li> </ul> <p style="text-align: right;"><b>(15 Mins each)</b></p> |  |
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**Session 4: Regulatory Activities and Consensus building on Gene Drive**

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| 17.00 | <b>Group discussions.</b> This session provided an opportunity for participants to discuss potential ways of working together to develop a decision-making process on new technologies (gene drive technology, Gene Editing and Synthetic Biology) in their respective countries.   | Participants to break into groups and select Team leaders and Rapporteurs.<br><br>Willy Tonui and Margaret Karembu assisted the teams. | Mrs Gertrude Ngabirano |
| 18.00 | <b>Group presentations and consensus building on gene drive and Synthetic Biology.</b> Session provided an opportunity for Team leaders to present their group discussions.   | Group leaders and Rapporteurs.   |                        |
| 19.00 | <b>Dinner and Key note Speaker:</b> Prof Yaye Kene Gassama ; <b>Moderator:</b> Dr Margaret Karembu<br><i>Prof Yaye Kene Gassam is a professor of Plant Biotechnology at the University Cheikh Anta Diop in Dakar, Senegal. She is the current chair of the High-Level Panel for Emerging Technologies (APET) African Union Commission /NEPAD, which she initially co-chaired with late Prof Calestous Juma. She is also a former Minister for Scientific Research of Senegal (first woman to hold the position), chair of the Fundamental Applied Sciences and Innovation and the vice-chair of Senegal’s National Academy of Science and Techniques.</i> |  |                        |

**Day 2: Regulatory and Regional Processes and COP/MOP**

**Session 5: Institutional Readiness for Gene Drive and Synthetic Biology in Africa**

| Time | Topic  | Presenter/s  | Session Chair  |
|------|--|--|----------------|
| 8:00 | <b>Status of Scientific, Institutional and Ethical Review Committees in Target Research Organizations.</b><br><i>This session provided an opportunity for representative International and National Research Institutions in Africa to share</i> | <ul style="list-style-type: none"> <li>• Etienne Bilgo- IRSS, Burkina Faso,</li> <li>• Rasha Adam Omer- BBRC, Sudan</li> <li>• Agapitus Kato- UVRI, Uganda,</li> <li>• Damaris Matoke Muhia -KEMRI, Kenya</li> </ul> | Silas Obukosia |

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|  | <i>their capacities for and experience with scientific, ethical and biosafety review of research projects.</i>   | <ul style="list-style-type: none"> <li>• Mamadou Coulibaly – USTTB, Mali</li> <li>• Fredros Okumu – Ifakara, Tanzania</li> <li>• Paul Kazyoba -NIMR, Tanzania</li> <li>• Mohammed Ishiyaku, IAR, Nigeria</li> </ul> <p>(10 mins each)</p> |                  |
| 10.00  | <b>Discussions relating to gene drive, SynBio, and risk assessment at the COP-MOPs.</b> A review of the discussions relating to gene drive, SynBio and risk assessment at the last COP/MOP in Cancun and anticipated at the next COP/MOP Sharm el Sheikh   | Karen Hokanson  |                  |
| 10:45  | Tea Break  |   |                  |
| 11.15  | <b>Socio-economic Considerations in decision making: Update on discussions at the COP-MOPs.</b> This session provided an opportunity for an update on Socio-economic considerations under COP-MOP  | Sam Timpo   | Hector Quemada   |
| 11.45  | <i>Discussions relating to gene drive, SynBio, risk assessment, and socioeconomics at COP13/MOP8/MOP2 in Cancun, and the Africa Group positions at that meeting.</i>   | Discussants: Eric Okoree, Wadzi Mandivenyi, Sam Timpo   |                  |
| 12:15  | <b>Introduction to the procedures of COP/14/MOP9/MOP3.</b> This session introduced delegates, especially new ones, to the flow of activities at COP/MOP, to demystify the events that will take place. What happens at plenary sessions? What are working groups? What are contact groups? etc. Other participants will gain understanding of the decision-making process. | Discussants: Eric Okoree, Wadzi Mandivenyi, Sam Timpo   |                  |
| 13:00  | Lunch Break  |   |                  |
| <b>Session 6: Developing COP-MOP Consensus Positions</b> |  |   |                  |
| 14:00  | <b>Developing positions on the issues relevant to gene drive and Synthetic Biology.</b> In this Plenary session, the issues relevant to gene drive that will be agenda items at COP/MOP were discussed and   | All Focal Points<br>Discussants (Hector Quemada, Scott Shore)   | Rachel Shibalira |

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|                      | <i>participants considered possible positions on those issues.</i>   |  |                                |
| 16.00                | <b>Planned Gene Drive Regulatory Consultative Workshops.</b> <i>Session discussed curricula development and future training on Gene Drive, by NEPAD and Danforth Center.</i>   | Scott Shore  |                                |
| 16.30                | <b>Plenary Session to discuss way forward on future regional activities on gene drive and Synthetic Biology and selected agenda items.</b> <i>This Plenary Session provided an opportunity to discuss future regional activities, opportunities for collaborations and partnerships on gene drive in Africa.</i> | All  |                                |
| 17.00                | <b>Final discussions and commitment to action on gene drive and Synthetic Biology in Africa.</b> <i>In this Plenary session, the Heads of Regulatory and Institutions provided the way forward on gene drive in Africa through a Communique.</i>   | Discussants Regulatory agency CEOs: Charles Mugoya, Dorrington Ogoyi, Eric Okoree, Jonathan Mufandadaedza, and other Heads of Institutions discussed a communiqué. |                                |
| 17.30                | <b>Preparing and Next steps for COP-MOP 2018- Logistics, Communication etc</b>   | Margaret Karembu   |                                |
| 18.00                | <b>Post conference surveys, and closing</b>  | All  | NBA, EASTECO, NEPAD, and ISAAA |
| 18.30                | <b>Announcements and Adjourn</b>   | NBA  |                                |
| <b>END OF SUMMIT</b> |  |  |                                |