



NEPAD Planning and Coordinating Agency
Agence de Planification et de Coordination du NEPAD

ABNE | African Biosafety Network of Expertise

A science-based biosafety resource network for African regulators



Newsletter 4: December 2012

ABNE holds a Side Event at the African Green Revolution Forum 2012 (AGRF 2012)

ABNE successfully held a Side Event on September 26, 2012, at the African Green Revolution Forum 2012 (AGRF 2012), Arusha, Tanzania. Under the theme “Agricultural Innovation and the Establishment of Networks towards Building Functional Biotechnology Regulatory Systems in Africa,” the event comprised of the Regulators-Scientists platform, a panel of eminent personalities from Africa and Michigan State University (MSU) coalescing around the African Voices for New Science and Technology, and a gala dinner. About 50 participants gathered at this event.

In his opening remarks, Prof. Diran Makinde, the Director ABNE, emphasized the need for networking and building of partnerships to harness technical expertise, infrastructure, and information resources for empowering African regulators towards establishing functional biosafety systems in Africa.



Participants at the ABNE Regulators’ and Scientists’ Forum in Arusha, Tanzania, September 26, 2012.

He further reiterated that this biannual event provides opportunities for the exchange of ideas, knowledge, and experiences in leveraging technical resources and helps create an enabling environment for regional cooperation and regulatory coordination among African countries.

Speaking at the same event, Mr. Abdoul Salam Bello, representing Dr. Ibrahim Assane Mayaki, the NEPAD Agency (NPCA) CEO, outlined how ABNE objectives perfectly fit

into NPCA’s structure, mandate and vision. On his part, Prof. Aggrey Ambali, Advisor to the NPCA CEO on Science and Technology, and Coordinator of the Regional Centers, expressed his happiness for this opportunity, which enabled African Scientists and Regulators to meet again, two years after a similar event was held in Ouagadougou in 2010. He defined the event as a platform to plan for the future, saying “I urge you to seize the opportunity for a desktop review, take stock of ... and plan for future.”

He brought to the attention of the participants the creation of the Science, Technology and Innovation Hub (STIH) within the NPCA, and the on-going review of the Science and Technology Comprehensive Plan of Action (CPA).

The occasion was also graced by Prof. Karim Maredia, the Principal Investigator (PI) of the ABNE Project and Director of WorldTap at MSU. Prof. Maredia recalled that the Regulators’ and Scientists’ forum arose from the need assessment survey that was conducted in 16 African countries during the first Phase of the ABNE project. He commented that through the partnership with NEPAD Agency, MSU has contributed immensely in capacity enhancement of ABNE staff, training regulators and young scientists in biosafety through short courses, and promoting networking around the world with a special emphasis on South-South cooperation. He further pointed out that Michigan State University, the Gates Foundation and NEPAD Agency/ABNE share a common vision/goal of harnessing Science, Technology and Innovation (STI) to alleviate poverty and empower millions of lives of Africans for improved livelihoods.

African scientists made presentations on a number of biotech research projects currently on-going: nutritionally-enhanced cassava; banana biofortification; a sustainable strategy to reduce micronutrient deficiencies in Uganda; Bt maize for stem borer control in Kenya; developing and deploying novel Water Efficient Maize for Africa (WEMA); development of genetically improved African rice varieties with enhanced nitrogen-use efficiency, water-use efficiency

and salt tolerance (NEWEST); and development of genetically modified mosquitos. Regulators gave updates on the status of regulatory regimes in Kenya, Nigeria, Malawi, and Tanzania.

Key recommendations emerged at this forum: Firstly, the restrictive GMO laws and regulations in some African countries should be revised to allow research on GMOs to move forward. This would shorten the long approval process for field-testing or growing GMOs and also smoothen the way towards a regional approach for the harmonization of biosafety regulatory frameworks. Secondly, the delegates agreed that Science, Technology and Innovation (STI) should be promoted in Africa through building human and infrastructural capacity. To achieve this, policy changes would be necessary coupled with improved investment in research at the universities (the Maputo Declaration) to produce a critical mass of scientists (MSc, PhD), ready to spearhead the science agenda for sustainability of Africa's development. Inherently, such steps would be conducive in cultivating partnerships between institutions in Africa and those in the developed world.

Lastly, the forum endorsed regular interaction among scientists, regulators, and policy- and decision- makers for improved cooperation, trust and understanding of biotech in Africa.

For more information, contact Diran Makinde (diran.makinde@nepadbiosafety.net) and James A. Okeno (james.okeno@nepadbiosafety.net)

Tanzanian high level delegation visits Bt cotton fields in Burkina Faso



Hon Prof. Makame M. Mbarawa, Tanzania's Minister for Communication, Science and Technology (fifth right) and Prof. Diran Makinde, ABNE Director (fifth left) with other Tanzanian delegates during the visit to Bt cotton fields in Burkina Faso in November 2012.

ABNE organized a fact-finding tour for Tanzanian high level delegation to visit Bt cotton fields in Burkina Faso in November 2012. The delegation comprised of policy- and decision- makers, scientists and the media led by Hon Prof. Makame Mbarawa Mnyaa, Minister for Communication,

Science and Technology, made a five-day study tour of Bt cotton fields. Also in the entourage were Deputy Minister for Agriculture, Food Security and Cooperatives, the Deputy Minister for Environment at the Vice President's Office, members of Parliament and the Chairman of the Tanzanian Cotton Board. The visit was coordinated by ABNE's Dr. Moussa Savadogo (Environmental safety) and Ms. Betty Kiplagat (Legal and policy issues). Accompanied by Prof. Diran Makinde, Director of NEPAD Agency/ABNE, and other ABNE staff, the delegation saw Bt cotton, some members for the first time, being grown in a small-holder and resource poor farming system.

"We are here to learn ... this is the first time I have (personally) seen Bt cotton ... so yours is a very special lesson, accumulated over many years of experience," the Minister told Sanou Zessouma, the village farmer picked to brief him and his entourage.

On his part, the farmer remarked "I meet all my basic needs from farming cotton, it pays well." He further proclaimed, "I apply less fertilizer now ... since I started growing Bt cotton, I do not have to worry about pest infestations as well."

The Minister was so impressed with this tour, stating "We should forget what happened in the past ... it's time to move ahead. Look at a country such as Burkina Faso, with similar resource challenges like Tanzania, it's way ahead of us in this technology ... we should change."

He promised, while back home in Tanzania, to influence work on the biosafety law "so that experiments and studies can be carried out in Tanzania to see if the technology works the same way as in Burkina Faso." On his part, Prof Makinde appreciated the effort made by the delegation to be in Burkina Faso despite their tight schedules at home that whole week. He hoped the fact-finding mission will bring the desired change in Tanzania towards the technology and improve the quality of life for her farmers.

For more information, contact Diran Makinde (<mailto:diran.makinde@nepadbiosafety.net>), Betty Kiplagat (b.kiplat@nepadbiosafety.net) and Moussa Savadogo (moussa.savadogo@nepadbiosafety.net)

Ghana ready to conduct its first confined field trials with transgenic crops



Participants at a Communication Workshop in Accra, Ghana, August 21-22, 2012.

Communication and risk assessment training workshops to enhance capacity of Ghana's NBC members and stakeholders, drawn from various key ministries, departments and agencies responsible for regulating GMOs were held in Accra, from August 20 – 24, 2012. ABNE, in collaboration with the Ministry of Environment, Science and Technology (MEST), organized and facilitated these workshops. The communication training aimed at assisting the NBC develop a communication strategy for the upcoming national public sensitization exercise, whereas the risk assessment training targeted members of the Technical Advisory Committee (TAC) of the NBC and selected experts from academia and research institutions.

At the end of the training, steps were initiated by the NBC on the development of a biosafety communications strategy. Subsequently, TAC successfully reviewed and recommended for approval three confined field trials (CFTs) applications: Bt cowpea resistant to *Maruca* spp.; Nutritionally enhanced sweet potato with high protein elevation; and N-use efficiency, Water-use efficiency and Salt-Tolerant (NEWEST) enhanced rice varieties. These applications were submitted to the NBC between 2009 and 2012.

For more information, contact Samuel Timpo (sam.timpo@nepadbiosafety.net) and Godwin Lemgo (godwin.lemgo@nepadbiosafety.net)

African regulators participate in a study tour and internship in South Africa

As part of the regulatory capacity building efforts, ABNE, in collaboration with other service providers, organized an annual study tour of South Africa from May 13-20,

2012. The study tour sought to provide opportunities for regulators in countries with new and emerging regulatory systems to directly interact with their peers and industry practitioners. Among other objectives, the study tour enabled participants to obtain first-hand information on agricultural biotechnology and familiarize themselves with functional biosafety systems; have the opportunity to personally see GM crops in the field and directly interact with farmers growing these crops; learn first-hand from the regulatory experiences of their peers; and gain insight into the day-to-day practices and operational procedures of the South African regulatory institutions.

In all 13 regulators and media practitioners from Burkina Faso, Cameroon, Ghana, Kenya, Malawi, Mali, Mozambique, Nigeria, Tanzania, Uganda and Zambia participated. Participants noted that the study tour enabled them to build a network of regulators and practitioners, thus facilitating cross-learning and the sharing of experiences and lessons in the future.

In a similar vein, ABNE offered a two-week biosafety internship programme to African regulators from countries that are developing and setting up implementing systems and guidelines for the biosafety system to visit institutions in South Africa. Seven (7) regulators from Ghana, Kenya, Mozambique, Nigeria, Tanzania, and Uganda participated in the internship programme from May 6-20, 2012. At the end of the training, the interns indicated they acquired knowledge and skills in developing and implementing standard operating procedures (SOPs) and guidelines; handling and reviewing biosafety applications and best practices for the safe conduct, inspection and monitoring of confined field trials.

For more information, contact Samuel Timpo (sam.timpo@nepadbiosafety.net)



African regulators at the Study Tour and Internship Programme in South Africa in May 2012.

Authorities discredit the findings of the French rat study with GM maize

Controversies continue to arise from the study conducted by the French scientists led by Gilles-Eric Seralini, published online in September 2012 in the Journal of Food and Chemical Toxicology. The findings linked Monsanto's GM maize and herbicide Roundup (NK603) to cancer in a paper entitled, "Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize."

In this article, the authors claimed that rats fed with Monsanto's NK603 maize were at a significantly higher risk in developing cancers as compared to those fed with non-GM maize. This reported observation has elicited debates and is generating independent expert analyses globally. To mention a few, the European Food Safety Authority (EFSA) in its analysis concluded that there is insufficient scientific quality in the paper to be considered as valid for risk assessment, hereafter stating "EFSA's initial review found that the design, reporting and analysis of the study, as outlined in the paper, are inadequate. Therefore, based on the information published by the authors, EFSA does not see a need to re-examine its previous safety evaluation of maize NK603 nor to consider these findings in the ongoing assessment of glyphosate."

The German Federal Institute for Risk Assessment (BfR) questioned the methodology used and concluded that the authors' main statements are not sufficiently corroborated by experimental evidence. Moreover, BfR observed that due to deficiencies in the study design and in the presentation and interpretation of the study results, the authors' conclusions are not supported by the data. The Dutch Government Food Safety Authority alluded that the "...conception, execution and reporting is unsuitable... and that the authors make connections...that are not scientifically substantiated." Not to be left out, the French High Council for Biotechnology (HCB) and the Agency for Food, Environmental and Occupational Health & Safety (ANSES), stated that the study had "methodological flaws" and called for a further long-term assessment of this particular event.

Based on these independent authoritative expert opinions, ABNE is of the considered opinion that the French rat study does not meet the appropriate scientific standards and cannot be relied on as a basis to demonstrate harm associated with GMOs, which are currently in use.

For more information, visit <http://www.nepadbiosafety.net/abne-brief-on-the-long-term-toxicity-study-of-roundup-herbicide-and-roundup-tolerant-genetically-modified-maize-nk603-published-by-seralini-et-al> or contact Godwin Lemgo (godwin.lemgo@nepadbiosafety.net)

Zambian regulators acquaint themselves on how to handle and process GMO applications



Zambian regulators pose for a group photo with Kenya's NBA officials in July 2012.

ABNE facilitated Zambian regulators to visit Kenya from July 12-14, 2012 to learn from the National Biosafety Authority (NBA) on how to handle and process GMO applications for contained and confined experiments. Upon their arrival at the NBA, the group was met by Dr. Willy Tonui, CEO NBA; Prof. D. Ogoyi, the Deputy Director Technical Services; Mr. J. Itunga, the Deputy Director Administration and Finance; and other technical staff. The Zambian delegation was led by Dr. A. Sumani the acting Biosafety Registrar. Guided by ABNE's Ms Betty Kiplagat, Program Officer for Agricultural Biosafety and expert on legal and policy issues, the Zambian team also visited institutions that are involved in GMO R&D in Kenya. Institutions visited were Kenya Agricultural Research Institute (KARI) Biotechnology Center, African Agricultural Technology Foundation (AATF), International Livestock Research Institute (ILRI) and Kenya Plant Health Inspectorate Services (KEPHIS).

The study tour turned out to be a learning curve for the Zambian team, particularly on how to constitute Institutional Biosafety Committees and roles thereof. To wrap up the tour, the delegation paid a courtesy call on Honorable Prof. Margaret Kamar, Kenya's Minister for Higher Education, Science and Technology, who commented, "Biotechnology has been around for a long time and therefore, countries should adopt the technology, but in doing so they must balance human health, environmental safety and food safety issues."

For more information contact Betty Kiplagat (b.kiplagat@nepadbiosafety.net)

COP-MOP6 reaches consensus on key issues

The sixth meeting of the Conference of the Parties serving as the Meeting of the Parties (COP/MOP 6) to the Cartagena Protocol on Biosafety, organized by the CBD Secretariat took place in Hyderabad, India, from October 1-5, 2012. Some 1,500 delegates from more than 100 countries attended the five-day meeting.

ABNE was represented in this meeting by Prof. Diran Makinde, ABNE Director, Mr. Samuel Timpo (expert on socio-economic issues) and Ms. Betty Kiplagat (expert in legal and policy matters). The meeting reached consensus on a number of issues and adopted decisions on the Protocol's provisions, namely handling, packaging and identification of living modified organisms (LMOs); notification requirements; liability and redress; unintentional trans-boundary movements and emergency measures; risk assessment and risk management; socio-economic considerations; monitoring and reporting; and assessment and review, etc. The meeting also underlined the importance of science-based decision making and of balancing risks and benefits, and adopted an action plan on capacity building that is aligned with the ten-year Strategic Plan for the Protocol.

For more information, contact Betty Kiplagat (b.kiplagat@nepadbiosafety.net) and Samuel Timpo (sam.timpo@nepadbiosafety.net)

ABNE's Midterm evaluation concluded

The African Biosafety Network of Expertise (ABNE) Project underwent a midterm evaluation. The exercise, which kicked off on August 14, 2012, was conducted by Dr. Patrick Rudelsheim and Mr. Arthur Makara on behalf of the donor, the Bill and Melinda Gates Foundation. The exercise included meetings with ABNE staff both at Ouagadougou and Kampala nodes and visits to key stakeholders and partners in selected ABNE focus countries: Burkina Faso, Ghana, Mozambique, Nigeria, and Tanzania. The review was capped with a presentation by the evaluators to the ABNE Management on October 24, 2012. Emphasis during the evaluation was on the progress made for the last two and half years, challenges and ABNE's possible expansion to cover more countries as well as its preparedness for the next phase. ABNE's fact-based neutrality on the GMO technology was hailed as an essential success factor.

For more information, contact Diran Makinde (diran.makinde@nepadbiosafety.net), James A. Okeno (james.okeno@nepadbiosafety.net) and Karim Maredia (kmaredia@msu.edu)

ABNE receives grant from John Templeton Foundation

ABNE secured a research grant of \$240,570 from the John Templeton Foundation (JTF), USA, for a study titled "Analysis of biotechnology regulatory systems in Africa and implications for food security and improved rural livelihoods." The study, expected to commence November 1, 2012, is designed to be explanatory research to understand issues that impair the functionality of biosafety systems in Africa and seeks to adopt an issues-based approach in distilling policy issues and specific strategies that will ensure decision-making on biosafety applications.

Expected outputs include academic publications, policy briefs, and recommendations for stakeholders. The findings will serve as resources for training programs including workshops and for developing curricula and modules for biosafety education through joint short courses with African universities. The study results will also be used to provide support to national regulatory systems in the review of policies, regulations, standard operating procedures and guidelines and as inputs in ABNE's model guidance documents for member states.

For more information, contact Diran Makinde (diran.makinde@nepadbiosafety.net) and Samuel Timpo (sam.timpo@nepadbiosafety.net)

Bill and Melinda Gates Foundation grants ABNE supplemental funding

The Bill and Melinda Gates Foundation (BMGF) granted ABNE a supplemental funding of about USD 1.3 million in August 2012. The additional funding will enhance expansion of ABNE's activities in Nigeria. With this extra financial support, ABNE will organize a forum for local stakeholders, regulators and scientists to enhance their cooperation on biosafety issues; provide technical support towards the development of implementing biosafety regulations, guidelines and procedures; and enhance capacity of Nigerian regulators in various aspects of biosafety risk assessment, the application review process, inspection, monitoring and compliance to operationalize the National Biosafety Management Agency (NBMA). The Nigeria government has taken positive steps and is making progress towards building a functional regulatory system. Concomitantly, ABNE is readying itself to increase and intensify its biosafety services in Nigeria.

For more information, contact Diran Makinde (diran.makinde@nepadbiosafety.net) and Karim Maredia (kmaredia@msu.edu)

New Staff

Dr. James Aketch Okeno – Business Manager



Dr. James Aketch Okeno has joined ABNE on secondment from MSU as the business manager, based in Ouagadougou, Burkina Faso. Dr. Okeno is a plant breeder and geneticist with a PhD from the University of Giessen, Germany, MSc (Plant Breeding) and BSc Agriculture (Hons), both from the University of Nairobi, Kenya. Dr. Okeno

began his career as a Lecturer and later Senior Lecturer at Chepkoilel Campus of Moi University, Eldoret, Kenya. He taught plant breeding, biotechnology and research methods for 7 years. Dr. Okeno also worked for Africa Harvest Biotech Foundation International (Africa Harvest) in Nairobi, Kenya as Director Regulatory Affairs of the Africa Biofortified Sorghum (ABS) Project from 2005 to 2008, where he developed regulatory and biosafety dossiers for approval of transgenic sorghum in South Africa and Kenya. During this period, Dr. Okeno was also instrumental, technically in the development of Kenya's National Biotechnology Policy 2006 and its subsequent Biosafety Bills 2007, 2008. Prior to joining ABNE, Dr. Okeno was Policy and Research Associate at BIGMAP/Seed Science Center, Iowa State University (ISU), Ames, Iowa, USA. He was also the Project Manager at ISU for the Seed Enterprise Management Institute (SEMI), an AGRA-funded collaborative project between Iowa State University, University of Nairobi and CYMMIT to enhance the capacity of African seed company managers in seed technology, marketing and business management.

For more information on James A. Okeno, visit <http://www.nepadbiosafety.net/about/abne-team>

Mr. Godwin Lemgo – Program Officer for Food Safety



Mr. Godwin Lemgo has joined ABNE as program officer for food safety. He joined ABNE Ouagadougou node in June 2012. Mr. Godwin holds a Master's degree in Biosafety of Agricultural Biotechnology from the Marche Polytechnic University, Ancona, Italy and a BSc in Nutrition and Food Science from the University of

Ghana, Legon. Mr. Lemgo has conducted biosafety studies in the use of RNA-interference for the development of virus resistance in fruit trees. Prior to joining the NEPAD-ABNE team, Mr. Lemgo was a regulatory officer at the Foods and Drugs Board (FDB) in Accra, Ghana, where he played a pioneering role in the establishment of a biosafety unit for handling foods and feed derived from or containing genetically modified organisms (GMOs). He was

very active in the spreading of biosafety awareness and capacity within the organization.

For more information on Godwin Lemgo, visit <http://www.nepadbiosafety.net/about/abne-team>

Mr. Ladji Sidibe – IT Manager

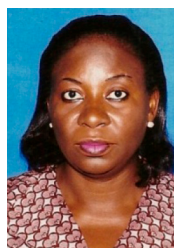


Mr. Ladji Sidibe has joined ABNE as the IT-Website and documentation center manager. He joined ABNE Ouagadougou node in November 2011. Mr. Sidibe has an MSc in IT from the University of Ouagadougou (Burkina Faso) and a BSc degree in database management system from "Institut Supérieur d'Informatique

et de Gestion (ISIG)", Ouagadougou, Burkina Faso. Prior to joining ABNE, Mr. Sidibe worked as a computer scientist for the University of Bobo-Dioulasso in Burkina Faso. Before this, Mr. Sidibe had worked as a laboratory technician at the University of Ouagadougou. He has also worked as a computer consultant in various NGOs, private companies and projects, gaining considerable experience. He holds a professional license in ICT (University of Limoges/France) and has attended several workshops on network security for Windows and Linux.

For more information on Ladji Sidibe, visit <http://www.nepadbiosafety.net/about/abne-team>

Mrs. Mariam Ouedraogo/Seynou – ABNE Secretary



Mrs. Mariam Seynou Ouedraogo/Seynou has joined ABNE as secretary. She joined ABNE Ouagadougou node in April 2012. Mrs Ouedraogo/Seynou holds professional degrees in business communication and secretarial studies from the "Institut Supérieur d'Informatique et de Gestion (ISIG)",

Bobo-Dioulasso, Burkina Faso. Prior to joining ABNE, Mrs Ouedraogo worked as an executive secretary at the Centre International de Recherche-Développement sur l'Élevage en Zone Subhumide (CIRDES), Bobo-Dioulasso. Earlier, Mrs Ouedraogo/Seynou worked as a secretary in charge of information management system in the department of Microfinance at the Catholic Relief Services (CRS), Ouagadougou, Burkina Faso. She also worked as a secretary for the Projet de Développement Rural Intégré Houet-Kossi-Mouhoun (PDRI/HKM) (Integrated Rural Development Project) in Houet, Kossi and Mouhoun provinces of Burkina Faso.

For more information on Mariam Ouedraogo/Seynou, visit <http://www.nepadbiosafety.net/about/abne-team>

ABNE Upcoming Events (December 2012 – January 2013)

December 1-9, 2012: Biotechnology/Biosafety scoping exercise in Ethiopia. Collaboration with the Agricultural Transformation Agency (ATA) **(Status: Confirmed)**

December 11-13, 2012: Training to strengthen regulatory capacity of national and institutional biosafety committees in Uganda. For more information, contact: b.kiplagat@nepadbiosafety.net **(Status: Confirmed)**

January 31 - February 1, 2013: ABNE TAC/MC meeting and launching of Nigerian Supplemental Grant. For more information, contact diran.makinde@nepadbiosafety.net **(Status: Confirmed)**

For more information on ABNE services, contact:

- **Prof. Diran Makinde**, Director
diran.makinde@nepadbiosafety.net
- **Dr. James Okeno**, Business Manager
james.okeno@nepadbiosafety.net

ABNE email : abne@nepadbiosafety.net
Website : www.nepadbiosafety.net

For technical assistance, please contact ABNE programme officers:

- **Dr. Moussa Savadogo**, Environmental biosafety
moussa.savadogo@nepadbiosafety.net
- **Mr. Godwin Nana Yaw Lemgo**, Food safety
godwin.lemgo@nepadbiosafety.net
- **Ms. Betty Kiplagat**, Legal aspects of biosafety
b.kiplagat@nepadbiosafety.net
- **Mr. Samuel E. Timpo**, Socio-economic aspects of biosafety
sam.timpo@nepadbiosafety.net