



GMASSURE WORKSHOP REPORT

17 to 21 November 2014, Safari Hotel & Court,

Windhoek, Namibia

BACKGROUND

Like the rest of Africa, the Southern African Development Community (SADC) region needs to maximize food production while at the same time safeguarding the environment through sustainable agricultural practices. Agricultural production in Southern Africa is currently at a crossroads. Countries in the region are investing in agricultural biotechnology and particularly in the application of GM crops. However there remains considerable debate around GMOs, with conflicting viewpoints and legislation emanating from different government departments.

In the Southern African environment, policy makers and regulatory authorities are heavily reliant on expertise within universities and research institutions to advise them as to the safety of GMOs and their derived products. The general level of biosafety expertise amongst both government officials and scientists is low, and there is a lack of confidence to make decisions. There is also a lack of hands-on experience in biotechnology techniques and much knowledge remains theoretical. A better understanding of biotechnology and biosafety issues amongst key role players will assist in the making of informed choices concerning the role of advanced biotechnology in the STI goals and priorities of participating countries

This workshop was targeted at scientists and government officials in the SADC region, complemented by outreach to farmers, consumers and other stakeholder groups. Participants were provided with the knowledge and expertise that will enable them to initiate training programmes on biotechnology and biosafety in their institutions to ensure sustainability. Knowledge gained by participants will support policy makers and decision makers in the individual countries and in SADC as a whole.

The following is a summary of the proceedings of the five day GMASSURE Workshop held from the 17 to 21 November 2014 at Safari Hotel & Court, Windhoek, Namibia and includes summary of presentations made and corresponding comments and questions posed to the different presenters. The presentations are referred to within text and can be found at <http://www.gmassure.org/general-biosafety-training-17-21-nov-2014>

Day 1 (17 November 2014)

- The facilitator **Dr Percy Chimwamurombe** welcomed everyone and welcomed **Dr Martha Kandawa-Schulz** to the podium to make the official welcome.
- Welcome from the Namibian partner University of Namibia by Dr Martha Kandawa-Schulz.
- Dr Kandawa Schulz welcomed the delegation to Namibia and wished them productive discussions.
- The workshop was officially opened at 08:50am.
- The facilitator then called **Dr John Becker** to do a presentation on the workshop objectives and expectations, as well as the GMASSURE activities (Folder Day 1 pres1 Welcome and activities).

After Tea Break

- The facilitator then introduced the next speaker, **Dr Hennie Groenewald** who made a presentation on Biotechnology Defined: Genetic Engineering and Traditional Biotechnology (Folder Day 1 Pres 2 Biotechnology Defined) and a second on Agricultural Biotechnology: Implications for the third world?

Questions and comments arising from these presentations:

- Discussion on Social Economic Considerations (SECs) in Malawi where small scale farmers faced litigation due to planting Genetically Modified (GM) crops without Intellectual Property Rights.
- An issue was raised about small scale farmers not being able to understand the full picture as they are misinformed and will for instance plant herbicide tolerant maize without even buying Roundup Ready (herbicide).
- Comment made on whether farmers rather require agronomic interventions and not new technologies
- A question was asked about why we need risk assessments if the language used in workshops such as this one promotes the GM technology as safe, the question was answered by saying that this technology should be used in the context with the environment and every application is analysed on a case by case basis as it can be that new products may not adhere to regulators' requirements.

After Lunch

- The facilitator then called **Ms Jhill Johns**, who presented on Biotechnology and Food Security: How GMOs contribute to the economy, food security and livelihoods.

Questions arising from presentation

- Question was asked about whether GM technology will address food affordability to poor farmers who cannot even afford to buy seeds for the next growing season, also poor farmers usually plant the same seeds harvested in the previous season and so can biotechnology contribute to a sustainable seed supply for such farmers? The presenter answered that it will increase total availability but decrease accessibility as less people are farming on larger pieces of land. Also it was added that food security cannot be answered fully by biotechnology.
- A comment was made that the increase in production if any due to biotech crops should be compared to conventional crops.
- Another comment was that there is a need to have alternative traits that best fit the need of the country and not just *Bt* maize.
- A comment was made that it is the choice of the farmer, if he gets more by planting GMO or conventional.

After Tea break

- **Ms Doreen Mnyulwa-Shumba** presented on Case studies from developing countries on the implication of agricultural biotechnology on livelihoods (Folder Day 1 Pres4). The presenter highlighted the importance of assessing whether this project was a technological success or an institutional failure. **Ms Mnyulwa-Shumba** highlighted that increase in yield is not the only advantage of GM technology; in fact, it is rather misleading to quote this issue it is known that good agronomic practices will result in better yield. The presenter also made a suggestion to Namibia to consider a crop like Water Efficient Maize for Africa, which will do well in such an arid environment.

Questions and comments arising from presentation:

- In light of the fact of the presenters' discussion on the Makhatini flats, a question was asked on whether the new project of Ubongwa, referred to within the text of the presentation, consists of the same people from the Makhatini flats project. The presenter answered by saying that some of the farmers were the same from the original project and highlighted that the farmers built confidence from the original project and have built a more structured way of decision making. They review their processes often; and make

recommendations. Farmers also have more knowledge and understanding and even make decisions on which varieties to grow.

- A question was raised on how resistance is taken into account as cotton by nature needs an intensive pest management system. The question was answered that the Agricultural Research Council (ARC) in South Africa takes care of research and monitoring resistance in this area.
- Question was asked whether there was any difference in the hectares planted from the original project of Makhatini flats and the current project of Ubongwa. The presenter answered and said that there cannot be a difference because of lack of inputs and farmers are allocated specific area of land as they have to share with neighbours in the same community. Also if some farmers did not have political connections they were unable to acquire more land. Another observation was that if farmers used good agronomic practices, they benefitted.
- Question was asked about the use of a small scale farmer growing cotton and it was answered that even before the project, there was a lack of options. In fact, it was easier for farmers to now access this GM cotton.
- A comment was made by one of the delegates stating that it is better to introduce this technology in a well-established system rather than a broken system
- A question was asked about the price of Burkina Faso's GM cotton variety, and whether it was made cheaper for small scale farmers, it was answered that the Biosafety Authority of Burkina Faso are funded by Monsanto and it is believed that that government brokered a deal with the company to subsidize seed, but the presenter could not be sure.
- After this presentation, **Dr Hennie Groenewald** presented on public awareness issues (continued presentation from: Folder Day 1 Pres 2 Biotechnology Defined). He presented on the importance of teaching the public to understand this technology and the benefits of involving anti-GMO groups in Biosafety activities and educating them as well. It was also noted that public awareness is not really an issue; it is rather the anti-GMO voices that claim to be speaking for the consumers or on behalf of the community that sensationalise negative perception of GMOs.

Questions and comments:

- A question was posed to the presenter about the effect of GMOs from South Africa on Swaziland; the answer was that Swaziland should put in place measures which align to their framework, as they are a sovereign nation.

END OF DAY 1

Day 2 (18 November 2014)

- The facilitator was **Dr Gladys Kahaka**, she welcomed everyone and called countries to make presentation on the status of Biosafety & Biotechnology in their respective countries, presentations were made as follows: (Folder Day 2: Pres 0 Status Africa and Pres 1 to 9 for individual countries):
- Status of Africa presented by Dr Peter Weesie: made a brief presentation on Africa in general. One of the delegates felt that the African Biosafety Network of Expertise (ABNE) map on the Status of Crop Biotechnology in Africa needed to be updated and cited Zimbabwe specifically as having had confined field trials (CFTs), but the map did not show that.
- Botswana presented by **Ms Lesedi Poloko** from Attorney General's Chambers

Questions & comments:

- Presenter was asked what she meant by public awareness, whether it meant lack of understanding. Presenter answered that that it meant lack of understanding, presenter was told by the other delegate from Botswana.
- Malawi by **Mr Walunji Msiska** from Environmental Affairs.

Questions & comments:

- Presenter was asked about whether there has been some public awareness through media or debates, the presenter answered that there has been some scientific articles, but not live debates. The presenter was asked to explain general release in the Malawian context, he explained that unlike in South Africa, general release means Multi Locational Field Trials (MLTs) and Malawi differentiates between MLTs and Confined Field Trials (CFTs), the CFTs are performed before the MLTs and both have separate guidelines. Another question was asked on whether Malawi regulates commodities, the presenter answered saying that it is provided for in the legislation but they have no expertise. Another question was asked about involving the Minister in the administrative process and whether or not this politicises GMOs, the answer was that the Minister does not get involved in the administrative part of the process and that it is the registrar who mainly makes the recommendation which the minister then signs and the minister is at liberty to ask for clarifications.

A comment was made that most procedures for applications in many countries, except for Australia and Canada, have political influence.

- Mozambique by **Mr Marcelino Xavier** from the Ministry of Science & Technology

Questions & comments:

- It was noted that Mozambique has received an application for Water Efficient Maize for Africa project.

- Namibia presented by **Mr Vincent Nowaseb** of the National Commission on Research, Science & Technology.

Questions & comments:

- The presenter was asked about whether or not he views the fact that NCRST is regulating and promoting the technology as a conflict of interest, he answered that there will be a clear separation between the Biosafety and Biotechnology subdivisions.
- The presenter was asked whether the issue of liability is addressed in the Namibian legislation, the presenter answered that it is expected this issue will be addressed in the regulations.
- Comments were made on public awareness campaigns: the limitation in resources hinders prioritization of issues related to GM technology.

After the Tea break

- South Africa presented by **Mr Thabang Bambo** of the Department of Science & Technology. No comment was made on this presentation.
- Tanzania presentation by **Mr Makuru James Nyarobi** from the Vice President's Office of the United Republic of Tanzania.

Questions & comments:

Comment was made about the inclusion of SECs in Tanzania regulations being unique.

- Zambia presentation by **Mr Filippo Zulu** from the National Biosafety Authority.

Questions & comments:

- Question was asked on what the role of the ministry of Justice is, it was answered that this Ministry is there to make sure there is alignment in the different legislations and also the Biosafety legislation which is drafted by scientists, so they need legal input.
- Comment was made that Zambian law covers pharmaceuticals and is exploiting the idea of having an interagency forum which interfaces with the medicines regulatory council.
- Zimbabwe presentation by **Mr Collin Kabudura**, Ministry of Agriculture, Mechanisation & Irrigation Development. No comment was made on this presentation.
- Following the country presentations, was **Ms Immolatrix Geingos-Onuegbu** (Folder Day 2: Pres 10 Biosafety Training 18 November 2014 ppt. 1) who presented on Regulatory framework, Cartagena Protocol on Biosafety, Regulating Biotechnology in SADC and the Namibia Regulatory System. Ms Geingos emphasised the need for harmonisation within the SADC region, as our borders are porous and since we trade more with each other than outside the region.

Questions and comments:

- A question was asked about whether one country can do field trials in a neighbouring country, whose regulations are not fully implemented or a country which is not able to properly monitor activities due to lack of expertise. She answered that that is an ethical and political issue and the legality of that can be challenged as well.

After Lunch

- **Dr Hennie Groenewald** presented on the South African regulatory system (Folder Day 2: Pres 11 GMASSURE SA regulatory system 18Nov14)

Questions and comments:

- Question was asked on public awareness, Dr Groenewald commented that personally he felt that involvement of the public can be very emotive and prefers using sound scientific judgement, but a comment was made by one of the delegates saying that SECs may be undermined by scientific information, the presenter answered this by saying that a scientific study can include and/or quantify SECs if it thorough.
- **Ms Immolatrix Geingos-Onuegbu** presented on the Namibian Regulatory System (Folder Day 2: Pres 12 Biosafety Training 18 November 2014 ppt. 1).

Questions & comments:

- Question was asked whether there were any specific products Namibia has interest in and presenter said that it's not specified as interest may be broad, there may be an interest expressed for stacked varieties in the South (use irrigation systems) and drought tolerant varieties in the northern areas (rain fed systems).
- **Dr Martha Kandawa Schulz** presented on Biosafety Clearing House (Folder Day 2: Pres 12 BCH CBD 2014), no comments and questions.

After Tea break

- **Dr Hennie Groenewald** presented on Defining Biosafety- What, Why & How (Folder Day 2: Pres 14 GMASSURE GM sustainability 18Nov14). The presenter spoke on issues to do with development, regulation and sustainable use of GM products.

END OF DAY 2

Day 3 (19 November 2014)

- **Dr Hennie Groenewald and Ms Jhill Johns** presented on Risk Assessment, Risk Management and A framework for socio-economic impact assessment. (Folder Day 3: Pres 1 GMASSURE Risk assessment 19Nov14). The presenter spoke about the tiered approach to risk management and said in South Africa contained use refers to laboratory and greenhouses. Ms Jhill Johns commented that the South African law is vague in terms of SECs.

Questions & comments:

- There was a comment about farmers in Malawi not being able to compete on a global scale and that they may suffer in the event of one Seed Company monopolising the market.
 - The presenter commented that the GMO debate is not rhetoric but is rather value based.
 - A question was asked on why the public is sceptical about the issues related to GM technology, the presenter answered that it is because the issue is controversial and regulators and producers are afraid to express any opinion. A comment was made that the GM debate has evolved but only with respect to the science.
 - Question was asked about whether a product would be removed from the market if it was found to have negative social impacts. It was answered that South Africa has a permit system and if a product on the market is found to no longer be safe, the permit will not be re-issued.
 - A question was put to Ms Johns, about what she meant by the law being vague and she answered that it for instance refers to “indigenous” people, but does not clarify who is indigenous.
 - One of the delegates commented that the law, by using such words, aims to be broad (and not vague).
 - A rhetorical question was asked as to what conventional breeders did right when they first introduced hybrid seeds and whether this method should perhaps be followed by those breeding GM seeds, with respect to public acceptance of the technology.
- **Ms Muffy Koch** then presented on Appropriate Biotechnology Regulation for Africa and did an interactive group exercise (Folder 3 Day 3: Pres 2 Appropriate Biotechnology Regulation for Africa Nov 2014). Ms Koch emphasised having a fit for purpose regulatory system instead of a complicated structure which cannot be maintained, she cited an example of an eastern African country having established a biosafety authority which is a full structure with permanent staff which only deals with one application annually. The presenter noted that it is important to review your resource base also before setting up a regulatory framework. She stated that it may be important to look at the following aspects:
 - Effectiveness

- Affordability
- Sustainability
- Easily applicable
- Risk should be balanced with resources
- Take into account the demand i.e. number of applications received and decisions to make.

The presenter then conducted an exercise for setting up appropriate regulations for

- Bt cotton –seen as low risk
- Ebola vaccine in maize –seen as high risk.

The participants had to discuss the following about these two products:

- Concerns
- Harm
- Likelihood
- Consequence
- Risk management
- Acceptable or unacceptable risk

Answers from group exercises are tabulated below:

	Bt Cotton	Ebola vaccine
Concerns	<ul style="list-style-type: none"> • Gene flow; • Production costs; • Profits and market • Non-target species • Development of resistance 	<ul style="list-style-type: none"> • Gene flow; • Production costs; • Profits and market • Non-target species • Development of resistance
Harm	Likely to affect the environment and other conventional varieties.	Implication of eating this maize, is it not better to put a vaccine in tobacco or another non edible crop.
Likelihood	Low(has been in existence for many years)	High
Consequence	Possible	Catastrophic
Risk Management	Because the crop has been on the market for a while it is likely there are records from other countries of work that has already been done. Should consist of a tier study for classifying species that are found in the environment when a CFT is being performed	May need a lot of justification as no existing scientific information is currently available
Risk Acceptable?	Yes	No

After Lunch

- Dr Sjaak Swart spoke on Science, technology & Society (Folder 3:Pres 3 Science Technology & Society). The presenter spoke about how science and society interact and on the status of research and development (R&D) in the world. He elaborated on the levels of innovation and spoke about and compared the green and gene revolution. The presenter said the green and/or gene revolution is likely to replace subsistence farming.

Questions & comments:

- A comment on whether green and/or gene revolution will replace subsistence farming was contested by one of the delegates as unlikely, especially for Africa and Asia where many subsistence farmers grow their indigenous crops for own consumption and keep to many of their traditional preservation methods.
 - One of the delegates asked what is gray literature? The presenter answered that it is reports not seen as scientific papers written about science.
 - A comment was made that Africa has what can be termed as indigenous technology and could be counted as innovations.
 - A question was asked on why farmers still grow indigenous varieties for their own consumption but grow GM for selling, it was answered by one of the other delegates by saying that growing GM for selling is more of a business decision than an issue of taste or preference for eating. If the GM crop performs better and provides more yield, it means that the income will be more.
- Dr Sjaak Swart presented interactive group work in the form of a game (Folder Day 3:Pres 4 Role game intro 2).

The game consists of different players that form a decision making body: the Platform on Biotechnology; which serves an advisory committee to ministry responsible for regulating biotechnology in a fictional country called Nimobia. The platform consists of:

AABC: The African Association of Biotechnology Companies

AFGR: The African Foundation for Genetic Research

AAIN: The African Agricultural Innovation Network

NFN: The Nimobian Farmers Network

ANPO: The African Nature Protection Organisation

NECS: The Nimobian Ethical Citizens Society

EC: The president and the secretary of the Platform (The administrative body)

The game focused on discussion for approval of an application to have field trials of a herbicide tolerant maize. Decisions are made by consensus.

Delegates were split into the above groups and deliberated on their position for some time and one of the representatives from all groups sat down to have their first meeting, their thoughts are summarised in the table below:

Organisation	Benefits	Concerns
AABC: The African Association of Biotechnology Companies	Technology will bring more jobs, improve quality of harvest and we always need to move with the times and biotechnology as an innovation is worth investing in	None
AFGR: The African Foundation for Genetic Research	Effects of the technology are controlled; risks are small and no principle danger is foreseen from this technology	None
AAIN: The African Agricultural Innovation Network	Two parental maize lines are being evaluated and the environmental and food safety issues have been addressed	None
NFN: The Nimobian Farmers Network	Could benefit from increased use, better seed, less time spent on weeding	Not against new technology but would like to continue using a diversity of seeds, including conventional varieties. Will this technology affect employment and will it create a monopoly for multi nationals?
ANPO: The African Nature Protection Organisation	None	The technology will cause damage to the environment, and use of herbicides will contaminate natural water sources. What measures will be taken to protect the genetic diversity of the areas and surrounding farmers growing conventional varieties and for the environment in general? The herbicide tolerant trait limits biodiversity. Rather advise to stick with organic farming which gives better market prices.

NECS: The Namibian Ethical Citizens Society	None	This technology may cause health issues to the people of Namibia and may take away jobs from poor people in rural areas. Should introduce improved variety of local seed not a seed that is from elsewhere and brought to Namibia for profit
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After tea

- A second meeting was held after a recess of 30 minutes to discuss issues that arose in the first meeting, the groups came together for further deliberation. The issues of gene flow were answered by putting measures in place that will ensure that the applicant complies with a 200m distance separation from conventional maize and the effect on the environment was addressed by keeping the land fallow in the next planting season. The applicant also stated that he will use irrigation systems to avoid the subsistence farmers' growing season which is rain fed. The applicant also stated that it will kill all volunteer plants with a broad spectrum herbicide.
- An initial vote was taken and the NECS and ANPO voted against granting a permit while the other four organisations voted for the technology.
- NECS requested that more time be given for this decision
- President states that the minister urgently needs this recommendation, and the request for an extension cannot be granted.
- NECS then request that a condition of liability be added to this permit.
- Consensus was reached on the following conditions from the two opponent groups after an initial vote of four to two out of the six groups.

The NECS asked that SECs be taken into consideration, what is the effect on our farmers, and if prices will go up and unemployment will rise. Requests that there be public platforms and awareness campaigns to sensitise the public.

The ANPO asked that a post-monitoring plan be put in place to mitigate the effect on the environment, non-target species and natural water bodies.

The presenter highlighted the importance of realising that consensus, although it may not be real consensus gives room to get everybody's priorities recognized.

- An article about this maize variety causing cancer appeared in the news the day after, but the EC chooses to relook at these issues using scientific evidence.

END OF DAY 3

Day 4 (20 November 2014)

- First presentation was from Dr Sjaak Swart on Ethical and Social considerations (Folder 4: Pres 1 Ethical and Social Considerations), the presenter spoke on:
 - Ethics
 - Risk perceptions
 - Uncertainty
 - Regulation

Questions and comments:

- A comment was made that permits in the US can also be strict at times but just not as strict as in the EU, this was to the presenter saying that the permits in the US are not strict.
- A comment was made that mutation breeding should actually be considered as modification.
- A comment was made on how GM microorganisms are carefully left out in the EU's legislation because they are the biggest producers of these products.
- A comment was made on the 0.9 percent threshold being an expensive exercise and if it is about the right to know why not just label it "GM" or "GM free".
- Comment of the EU having a double standard with respect to processing where they do not regard products produced from GM ingredients after processing as GM products.
- Comment was made that labelling is more about marketing than the right to know and is used unethically in that way by certain communities.
- Another delegate disagreed and cited that in the Netherlands for instance, labelling is more about the consumers right to know than marketing.
- Another delegate commented that they were not convinced that some of these anti-GM groups represent society, they rather represent whoever is funding them at the time.
- A comment was made that labelling should be practical and implementable.
- Another delegate felt that scientists should be more proactive to inform the public on more scientifically sound information as it is their responsibility, because they know and understand this technology.

After Tea

- Second presentation was made by **Ms Doreen Shumba-Mnyulwa** on Biosafety Socio-economic considerations and impacts in SADC (Folder Day 4: Pres 2 Biosafety Socio economic considerations and impacts in SADC).The presenter made a comparison between

the Cartagena Protocol on Biosafety with National Regulations in SADC related to Socio-Economic Considerations.

Questions & Comments

- The presenter was advised to update the USA and Canada positions as USA in 2007 implemented the NEMA Act which includes SECs.
- Comment was made that Mexico has the same stance as Brazil. Kenya and Uganda both have risk assessments that include SECs and presenter should refer to the current laws of both countries.
- Question was asked on when, why and how the AU Model Law is implemented, what the economic implications are and who is important, the presenter answered that the Model Law implies that SECs be considered for all activities and be used to guide countries when drafting their own laws.
- Comments were made that the presenter should generally update some slides referring to laws in Tanzania and Mozambique.
- Comment was made on the problem of implementing SECs is that the regulators must do their due diligence and there has been studies (Ribisi study on COMESA-common markets of Easter & Southern African) showing that SADC trade more with each other than outside the region, therefore harmonisation in this area may be beneficial.
- Next presentation was from Dr Peter Weesie who spoke on Science Communication, highlighting the following (Folder Day 4: Pres 3 Science communication 2014):
 - Defining science communication
 - History, example UK
 - Science Communication & Participation today
 - Some practical hints for good science communication
- Dr Weesie then gave a separate presentation on practical instruction “Writing a press release”(Folder Day 4: Pres 5: Press Release for Regulators 2014)

Questions and comments:

- Question arose about dealing with public participation in the African context. The presenter answered that public platforms of debates can be used.
- Comment was made that when writing a press release it is important to maintain the right language.

Lunch

- The last presentation of the day was made by **Ms Doreen Shumba-Mnyulwa** on African Positions on Biotechnology (Folder Day 4: Pres 5 African Positions on Biotechnology final)

The presentation reflected on the following points:

- What role did the international biotechnology governance frameworks play in the making of national choices on GM technology by countries?
- What was the prevailing institutional environment (structures) during the national biotechnology policy making process? (Specifically which actors had access to the policy making process and what role did they play?)
- What informed the interest group actions?
- What external partnerships did countries enter into and how did actions by these external partners influence the national choices on GM technology? To be explicit, at the beginning of our argument we adopted the broad definition of governance as decisions or “rules, institutions, practices and power through which collective life is organized, administered, and regulated”
- The presenter then introduced an interactive session where delegates divided themselves into three groups
 - Farmers
 - Scientists
 - Regulators.
- These groups then asked themselves questions relevant to their positions (Folder Day 4: Pres 6 Exercise 20 November 2014)

Questions and Comments:

- Comment was made that it may be wrong to call this the “country position” of the country as this may not be reflective of the situation.
- The presenter commented that commercial farmers want this technology more from interviews she conducted.

END OF DAY 4

Day 5 (21 November 2014)

- **Dr Hennie Groenewald** (Folder Day 5: Pres 1 GMASSURE discussing GM science 21Nov14) made the first presentation on the last day speaking on Breaking the myths-discussing the concerns and what is scientifically known or proven. The presenter spoke on how one paper, such as the Seralini study, caused a stir and the importance of communicating scientifically sound information.

Questions and comments

- A comment was passed about scientific uncertainty as scientists within their own fraternities do not agree with each other and regulators also become conflicted, another

delegate countered this by saying that peer-reviewed journals debate controversial papers but this information is never given in lay terms.

- Question was asked why huge pharmaceuticals not feeling a backlash if people are afraid of big seed companies having a monopoly, it was answered that they have but the debate for pharmaceutical does not get as emotional as the food debate.
- A question was asked on how we can preserve local varieties as there is this issue of gene flow and the unknowns are a worry for generations to come, for example: people used DDT for years before it was proven unsafe what about our children, our next generation, the presenter answered that this was rather a complicated issue and commercialised GM crops have been proven equal to conventional varieties and that our beloved landraces were also once new.
- **Ms Immolatrix Geingos-Onuegbu** was the second presenter of the day and spoke on Convergence of Biotechnology and Trade (Folder Day 5: Pres 2 Convergence of Biotechnology & trade). The presenter spoke on the following:
 - Biosafety Challenges & Impacts on Trade
 - Regulating Biotech in SADC
 - Benefits & Drawbacks of Regional Harmonisation
 - WTO Rules: The Trade Biosafety Challenge
 - General Agreement on Trade & Tariffs (GATT) 1994
 - Technical Barrier to Trade (TBT) Agreement
 - Sanitary & Phytosanitary (SPS) Agreement
 - US- EC (United states- European Commission) (Biotech Products Case)
 - Regulatory Implications for Developing Countries

Questions and comments:

- A question was asked on what happened to merits of harmonising the legal framework in SADC, answer was that countries were at different levels in terms of their framework. Political and trade implications may also have resulted in lack of harmonisation, if for instance a country has a niche market in Europe, they may not be willing to sacrifice it as they have to satisfy the need of their importer.
- A comment was made that we should avoid duplication such as Southern African Development Community (SADC) and Common Markets of Eastern & Southern Africa having biosafety committees, Programme for Biosafety System, African Biosafety Network of Expertise and GMASSURE which have almost the same mandate.
- A comment was made that SADC should rather strive for sharing of resources than harmonisation.

- Comment was made on SADC biosafety committee having run out of funding and inactive; but still exists and the same thing having happened with AU committee on biosafety, and its time Africa invested in what it cares about.

After Tea Break

- The facilitator then asked the delegates that they list some issues they would like to see in the next workshop and what is important to note (Folder Day 5Way Forward) Three aspects that stood out were:
 - The need to make the current systems and frameworks work for us
 - Analysis of applicable laws that may overlap
 - Need to make various ministries within the country's biosafety framework coordinate better.
- Prof Idah Sithole-Niang then closed the meeting and welcomed everyone to the next workshop in Harare, Zimbabwe in March 2015.

Lunch

END OF DAY 5

CONCLUSIONS & WAY FORWARD

In concluding the workshop, delegates were of the opinion that the following should be taken into consideration:

- The importance of communication i.e. the need for the general public to be informed on this technology;
- Involvement of policy makers in the workshops for well informed decisions on issues such as training;
- Accessibility of funds for biosafety/biotechnology initiatives and that biotechnology initiatives should be given priority;
- SADC should consider a coordinated effort/coordination in areas of biosafety research; legislation and lay out short and long term strategic goals;
- Creation of a platform where SADC members can communicate;
- Revision of regulations in SADC member countries to allow harmonisation in the region;
- The project should also strive to promote coordination at AU level for example through ABNE (NEPAD organ on biosafety, should represent the entire Africa);

- Finalising biosafety legislation in countries that are still behind with their legislation;
- Introduce a biosafety course or subjects at undergraduate level and/or make it part of the secondary school curriculum;
- Since Zimbabwe is the current chair of SADC, delegates felt that this platform can be used at the next meeting to put biosafety on the SADC agenda.

In conclusion, delegates reacted positively to this experience and expressed the need for similar platforms where different member countries can learn from each other. A summary of the feedback is provided below.

FEEDBACK FROM DELEGATES

Feedback from delegates was generally positive. The responses to the first five questions from the evaluation form are detailed below. Respondents had to indicate whether they strongly disagreed with the statements (1) or strongly agreed with the statements (5) put forward. The score which most respondents selected is indicated in bold.

	1	2	3	4	5
1. Logistical and administrative arrangement of the workshop was good	0	0	3	3	5
2. Workshop venue was:	1	2	3	4	5
Comfortable	1		1	7	2
Well located		1	2	3	5
Food and refreshments were adequate		2	2	2	5
3. Workshop content was:	1	2	3	4	5
Relevant			1	3	7
Comprehensive			4	3	4
Easy to understand			1	4	6
Objectives were clear		1	2	4	4
4. Delivery Methods and Quality were:	1	2	3	4	5
The workshop was well structured to achieve the learning outcomes (there was a good balance of lectures, activities, role plays, etc.)		1	1	5	3
The learning and teaching methods encouraged participation.			4	2	4
The workshop stimulated my interest and thought on the subject area			2	3	5
The pace of the workshop was appropriate			5	2	3

Ideas and concepts were presented clearly		1	1	5	3
5. The presenters were:					
	1	2	3	4	5
Good communicators			2	5	3
Knowledgeable on the topics		1		2	7
Well-prepared			1	4	5
Responsive to participants' questions			1	3	5
Comments:					

In addition, several comments were received from the respondents. Highlighted below are a summary of those which respondents were in agreement about:

- A visit to a GM testing facility would add greatly to the programme.
- Respondents enjoyed the group exercises.
- The status update of biosafety and biotechnology in the various SADC countries was very informative.
- Ensure that a variety of stakeholder groups are represented.
- Many felt that some of the presentations were too long, and should be kept to less than an hour.
- Reading materials could be provided beforehand to prepare delegates and thus have better interaction during sessions.
- The workshop programme was quite intense and the content should be adapted for the available days. In conjunction, increase the time available for discussions.
- The same facilitators should not cover many topics.
- Repetition should be avoided where possible.
- All respondents indicated that they would recommend the workshop to colleagues.