

**Report of the FAO Regional Training Workshop on
an Integrated Approach to Food Safety and Animal and Plant Health
(Biosecurity) and the Assessment of Capacity Needs**



Accra, Ghana, 30 May to 1 June 2007

1. Introduction

Biosecurity is a strategic and integrated approach to analysing and managing risks in food safety and animal and plant life and health. Biosecurity capacity is essential to protect human health, agricultural production systems, the environment and consumer confidence in agricultural and food products. It is necessary to meet requirements under international agreements that govern food safety, animal and plant health and life, biosafety and trade in food and agricultural products. However, many countries have inadequate biosecurity capacity. This lack of capacity jeopardizes the ability of countries to protect the health and well-being of their population, animals, plants and environment, threatens the economy and trade, and compromises the ability to meet international legal commitments.

As part of its mandate to support countries to develop and implement national biosecurity systems, FAO has developed a Biosecurity Toolkit that comprises a Biosecurity Principles and Components document (Part 1), a Guide to Assess Biosecurity Capacity (Part 2) and an Overview and Framework Manual for Biosecurity Risk Analysis (Part 3). To disseminate this toolkit and increase knowledge and skills about an integrated approach to biosecurity and assessing biosecurity capacity needs, FAO organized a series of regional training workshops in Latin America, Asia and Africa in May 2007 with financial assistance from the FAO Norway Cooperation Programme. The regional training workshop for Africa took place in the Novotel in Accra, Ghana from 30 May to 1 June 2007.

2. Purpose and objectives of the regional workshop for Africa on an integrated approach to biosecurity

The purpose of the regional training workshop on an integrated approach to biosecurity was to train sector experts from selected English-speaking countries in Africa about the principles and components of a biosecurity approach and to equip them with the skills necessary to apply the Guide to Assess Biosecurity Capacity at the country level.

The specific objectives were to:

- increase understanding and knowledge about an integrated approach to food safety, animal and plant health and life and biosafety (biosecurity) among sector experts;
- equip participants with the knowledge and skills to apply the FAO Guide to Assess Biosecurity Capacity at the national level; and
- develop a network of experts with specialized knowledge and skills on an integrated biosecurity approach to facilitate the development and delivery of biosecurity capacity building activities and training at the country and regional level.

3. Participants

Twenty nine experts in food safety, animal health and plant health from 15 countries attended the workshop. Efforts were made to ensure a balanced representation of experts from the various sectors involved. Eleven participants had a background in food safety, 10 in animal health and 8 in plant health.

Participants were selected through an open process, supported by FAO country offices, during which national authorities were asked to nominate officials who met the following criteria:

- i. expertise in food safety, animal life and health, and/or plant life and health (one official should represent an agency responsible for food safety, the other official should represent an agency dealing with animal health or plant health depending on the sector interests of most relevance in the country);
- ii. current responsibilities (director or assistant director level) for policy and management of food safety, animal life and health, and/or plant life and health;
- iii. experience in a food chain approach and cross-sectoral collaboration;
- iv. willingness to serve as facilitators and resource persons for future biosecurity activities in collaboration with FAO; and
- v. good working knowledge of, and ability to communicate verbally in, English.

The CVs and contact details of all the experts nominated have been recorded for possible involvement in future activities.

Dr Ruth Frampton, a biosecurity expert and former advisor to the Biosecurity Minister in New Zealand, was contracted to serve as a trainer and resource person for the workshop. FAO staff from the Regional Office in Accra, Ghana, the Sub-Regional Office in Harare, Zimbabwe and Headquarters were also involved in delivering lectures, supporting working group sessions and facilitating plenary discussions. A complete list of participants is attached as Annex 1.

4. Training approach and delivery of the workshop

The workshop was based on a training-of-trainers approach to enable participants to pass on their new knowledge and skills to others in their country/region, thereby enhancing the impact and sustainability of the training. It was conducted in English to facilitate an interactive discussion and sharing of experiences, and included a mix of short lectures, working group sessions and plenary discussions. A practical, hands-on approach was used to enable participants to build their knowledge and skills in use of the materials presented. The programme is attached as Annex 2.

5. Working group sessions and plenary discussions

After the introductory lectures on an integrated approach to biosecurity (Dr. Ruth Frampton) and the Guide to Assess Biosecurity Capacity (Marlynne Hopper, AGNS), participants were grouped into country clusters for group work exercises. Days 2 and 3 of the workshop worked step by step through the Guide; Dr Ruth Frampton and Catherine Bessy made presentations illustrating each step and the practical exercises. The purpose of these exercises was to focus participants on the benefits, requirements and challenges of moving towards an integrated approach to biosecurity and to give them an opportunity to work through the steps to assess capacity needs as presented in the Guide (Part 2 of the Biosecurity Toolkit).The topics for

group work exercises and key questions used to guide plenary discussions are attached as Annex 3. A list of the working groups is provided in Annex 4. Some of the outputs of the working groups are presented in Annex 5.

The group work and plenary discussions enabled participants to actively discuss the potential benefits, requirements, needs and challenges of adopting an integrated approach to biosecurity. The attendance of national experts from different sectors of biosecurity and from different countries with varying circumstances and conditions permitted a rich and intensive exchange of information. There was recognition that while the contextual factors (e.g. geography, borders, agricultural production base, population, etc.) facing their countries may vary, many of the challenges faced are similar (e.g. lack of awareness about biosecurity, competing priorities, overlapping mandates, limited information exchange and coordination across sectors, etc.).

Some of the main points discussed were as follows:

- Biosecurity is really not such a new concept but what is new is recognition of the importance and need for cross-sectoral collaboration and coordination in order to improve the outcomes of food safety, and animal and plant health.
- Importance of increasing awareness and knowledge about an integrated approach to biosecurity, selling the concept at all levels and bringing stakeholders together to discuss biosecurity. Creating understanding about the importance of biosecurity is a precondition to enable stakeholders (with their different interests, perspectives and agendas to sit around the same table). In this context, obtaining the support and commitment of national leaders and key decision makers, informing staff of government agencies about the linkages across biosecurity/SPS sectors, and increasing awareness among other concerned stakeholders will be essential. It will be necessary to acknowledge the role of individual players in their own right and recognize the value of their particular contribution to overall biosecurity. Stakeholders and people need to be aware why biosecurity is important and understand their specific roles. They should also be convinced that they will benefit from an integrated approach to biosecurity (e.g. through streamlined processes, one-stop shop for obtaining permits, authorizations etc. for agricultural and food imports/exports rather than having to get documentation approved by several ministries and departments, etc.). Ensuring that all the concerned stakeholders are involved was recognized as important to be able to develop common objectives and a sustainable and workable action plan, and to be able to take necessary follow-up actions (e.g. review and clarify mandates).
- Often attention will not be focused on the need for different sector agencies and departments to collaborate until there is a crisis facing the country. Therefore there is a need to discuss what biosecurity means in the country in the context of national priorities and to exploit any internal crises (e.g. avian influenza, food-borne disease scares, difficulties to comply with international food standards and problems affecting food and agricultural trade like the ban of fish and horticulture products from some East African countries to Europe) to increase awareness and promote better coordination across sectors. This can provide a basis to get political backing and support for biosecurity. External factors (e.g. SPS Agreement, World Health Regulations, trade requirements) can be used to improve biosecurity capacity in countries and highlight the benefits of cross-sectoral coordination and collaboration. For instance, participants from Kenya described how international requirements for exports and pressure from foreign markets stimulated

significant improvements in the plant and horticulture sector in their country while in comparison much less has been achieved in the animal sector.

- Given the challenges of adopting an integrated approach to biosecurity (e.g. competing priorities, large number of stakeholders involved, overlapping mandates, conflicts of interest, lack of policy framework, etc.) it would be beneficial to involve a neutral facilitator (such as FAO) to help bring together different stakeholders with roles and responsibilities for different components of biosecurity to discuss the practicalities of how to implement a coordinated approach. It was also discussed how in some countries, some government agencies may consider themselves more important than others and if one ministry calls a meeting to discuss biosecurity, other ministries may decline to participate. In these cases, obtaining commitment for biosecurity at the highest level (e.g. have the prime minister's office lead the process to assess biosecurity needs) may be useful. This question about who is the driver of biosecurity (high-level policy makers, line agency, competent authority, etc.) was seen by several participants as a critical factor that would influence efforts to promote collaboration and coordination. It was discussed that identifying this driver and ensuring its acceptance by other agencies involved might be a long and difficult process. In some countries, involving existing inter-agency structures or committees (such as SPS Committee) could be useful to get the process started.
- Problems concerning legislation related to food safety, animal health and plant health. In many countries, sector legislation is out-dated but the process to revise and update legislation is cumbersome and slow. Often, several roles and responsibilities as defined in legislation are overlapping but there are gaps in other areas.
- Duplication and overlaps in the organization and delivery of some biosecurity functions. There was discussion about how in some countries different government ministries and agencies are involved in inspection at border points and have their own laboratories which perform similar types of analyses. This results in an inefficient use of resources. However, there was acceptance that some agencies are reluctant to share or pool resources or to see their mandate reduced and it would be a challenge to streamline such services in the future.
- The importance of regional and sub-regional cooperation to effectively manage transboundary animal diseases and plant pests. In several countries in Africa, national borders are long and porous, with a great deal of informal movement of people, food products, animal and plants across them. Often, the capacity of border inspection staff is very limited. Trying to improve cross-border cooperation and information exchange including on monitoring and surveillance was seen as important in this respect.
- There was discussion on the existence of dual systems for the safety of food and agricultural products – one for foreign consumers and another one for domestic consumers, and the challenge to ensure that improvements in food safety were also accessible to domestic consumers.
- The importance of a risk-based approach for setting priorities for food safety, animal health and plant health and for biosecurity as a whole.
- The importance of reviewing and revising capacity needs and priorities as necessary during implementation of capacity building action plans.

- Emergency preparedness and response systems are not in place in most countries in the region and stakeholders normally seek to work together only when there is a crisis. There is a need to first develop and implement functional sector systems for monitoring and surveillance of plant and animal pests and diseases and food-borne diseases, etc. on which integrated systems for biosecurity emergency preparedness and response could be based.

6. Results of the workshop and proposed follow-up

The workshop provided an opportunity for participants to obtain new knowledge and skills regarding an integrated approach to biosecurity and become familiar with new FAO tools to assess capacity building needs in biosecurity. In particular, it covered:

- the principles, components and requirements for an integrated approach to biosecurity;
- new approaches and methodologies to assess capacity needs including techniques such as SWOT analysis;
- the development of a cross-sectoral biosecurity vision and goals; and
- the development of biosecurity capacity building strategies and action plans.

Observation of the working group sessions, active participation in plenary discussions and feedback from participants indicated that the workshop agenda and approach were effective in achieving the objectives. Participants indicated that the workshop's methodology and approach (including the limited number of formal lectures) stimulated participation and ensured increased understanding of the concepts. Several participants reported that the training was very useful and that it would be beneficial to carry out similar training at the country level. Participants commented that both Part 1 of the FAO Biosecurity Toolkit and Part 2 (Guide to Assess Biosecurity Capacity) were useful and practical documents and it would be beneficial to apply them in their countries.

Participants also reported that they acquired new knowledge and skills on the identification and prioritization of capacity building needs during the group exercises and plenary discussions that they could use on return to their countries. The workshop also provided an opportunity for experts from countries in the region to share information and experiences on common difficulties and challenges faced. It gave them an opportunity to develop new relationships and professional networks which could help to foster and improve cross-sectoral, sub-regional and regional cooperation among officials and competent authorities in the future.

For FAO, the workshop provided an excellent opportunity to launch Parts 1 and 2 of the new Biosecurity Toolkit and increase awareness and knowledge about the benefits of an integrated approach to food safety, animal and plant health. Furthermore, it permitted the development and testing of an approach and methodology for training in the assessment of biosecurity capacity needs. This methodology could be further refined and replicated in the future at regional, sub-regional or national trainings.

Many participants indicated that they would promote dialogue and collaboration with others stakeholders involved in biosecurity on return to their home country. The participants from Nigeria stated that they would write a joint report of the biosecurity training workshop, including recommendations for follow-up in Nigeria, which they would share with the heads of their sector agencies for approval and support. The participants from Botswana said that

they would be able to share the process of assessing capacity needs and the integrated approach at a planned meeting in their country to strengthen food safety. Participants from Zambia said that officials in their country have just completed work on a biosafety bill and are currently developing a food safety policy and that now would be a good time to link these sector initiatives as an integrated biosecurity approach.

Participants asked what kinds of support and assistance FAO plans to make available to countries to support an integrated approach to biosecurity in the future. Suggestions were made for FAO to provide assistance for the organization of national workshops to sensitize stakeholders in countries about an integrated approach to biosecurity, convene workshops to increase awareness about biosecurity among sub-regional organizations and economic trading blocs in Africa, and organize a similar workshop for francophone Africa.

At the end of the training workshop, Dr. Ndiaye presented participants were certificates on behalf of Dr. Edouard K. Tapsoba, FAO Representative in Ghana.

The following follow-up actions are recommended:

- Distribute the workshop report (including participants list) to all those who attended the workshop and FAO Offices in their countries.
- Distribute copies of the FAO Biosecurity Toolkit to participants once published.
- Discuss and follow-up on suggestion to organize a regional workshop on an integrated approach to biosecurity and needs assessment for French-speaking African countries.

The results of the workshop evaluation surveys, completed by 27 participants, have been compiled in Annex 5. These provide more details on the outcomes of the workshop from the perspective of individual participants, and ways in which they plan to change the way they carry out their activities based on learning at the workshop.

7. List of Annexes

Annex 1: List of participants

Annex 2: Workshop programme

Annex 3: Handouts for Group Work and Plenary Discussions

Annex 4: List of Working Groups

Annex 5: Some of the Outputs of the Working Group Sessions

Annex 6: Findings of the workshop evaluation survey

Annex 1: List of Participants

BOTSWANA

Mr. Molatlhegi Modise
Chief Plant Protection Officer
Private BAG 0091
Gaborone
Botswana
Tel: + 267 39 28 745/6/ , + 267 39 28 78 6
Fax : + 267 3928768
E-mail: molmodise@yahoo.co.uk

Mr. Keraptse Sehularo
Chief Veterinary Officer
Ministry of Agriculture
Department of Animal Health and
Production
Division of Meat Hygiene and Quality
Control
P/Bag 12 Lobatse
Botswana
Tel: + 267 5330243/4, + 267 71258440
Fax: + 267 5333255
E-mail: ksehularo@lycos.com

CAMEROON

Mr. Okala Georges
Sub-Director of Food and Nutrition
Ministry of Public Health
Department of Health Promotion
Sub-Direction of Food and Nutrition
Yaounde
Tel: + 237 77 75 83 65
Fax : + 237 22 22 11 17
E-mail: okalageorges@yahoo.fr

Maurice Tchoumtchoua
Sub Director of Seeds and Plant
Quarantine Regulation
Ministry of Agriculture and Rural
Development
Tel: + 237 22 31 02 69/ + 237 77 78 38 24
Fax: + 237 22 31 02 68
E-mail: mautchoun@yahoo.fr

ETHIOPIA

Dr. Taye Ephrem
Animal Health Department Quarantine and
Inspection
Veterinary. Public Health Division
Senior Veterinarian Inspector
Ministry of Agriculture and Rural
Development
Tel: 0115153260
Mobile: 0911923258
E-mail tayeephrem@yahoo.com

Mr. Elias Saheledengel
Plant Quarantine Inspector
Ministry of Agriculture and Rural
Development
P.O. Box 62722 Addis Ababa
Ethiopia
Tel: + 251911463388
E-mail:

GAMBIA

Ms. Mama Mariama Saho
Programme Leader in livestock Research
National Agricultural Research Institute
(NARI) Brikama pmb 615
Serekunda
Gambia
Tel: 44 84 931 / 991 2847
Fax: +22 44 84 926
E-mail: msaho_11@yahoo.com

Mrs. Oulaye Njie Taal
Head (Principal Programme Officer)
Food Quality and Safety Support Unit
The National Nutrition Agency (NANA)
PMB 162 Banjul
Tel: 8900022
E-mail: Oulaysadia@yahoo.co.uk

GHANA

Mr Vesper Suglo
Director Plant Protection and Regulatory
Services Directorate (PPRSD)
P.O Box : m 37
Accra
Tel: + 233 24 4388275
Fax:
E-mail: jackvesper@yahoo.com

Mr. Frederick Owusu Gyamera
Head Food Standards Division
Ghana Standards Board
P.O Box MB 245
Accra
Tel: + 233 27 740 5989
Fax: + 233 21 500092
E-mail: ogyams@yahoo.com

Dr. M . Mohammed-Alfa
Head of Food Inspectorate Department
Food and Drugs Board
P.O Box CT 2783
Accra
Tel: + 233 249 177580
E-mail: mushatfa107@yahoo.co.uk

KENYA

Mr. Washington Otieno
General Manager, Phytosanitary Services
Kenya Plant Health Inspectorate Service
(KEPHIS)
P.O. Box: 49592
Nairobi 00100, Kenya
Tel: + 254 20 88 45 45
Fax: + 254 20 88 22 65
E-mal: wotieno@kephis.org,
director@kephis.org

Dr Bernard M. Mugenyo
Deputy Director of Vet. Services
Department of Vet. Services
Private Bag- 00625
Kangemi
Kenya
Tel: 0733794006
E-mail: mugenyomaina@yahoo.com

MALAWI

Dr. Edwin Nkhulungo
Chief Animal Health and Livestock
Development Officer
Blantyre ADD
P/Bag 379, Chichiri,
Blantyre 3,
Malawi
Tel: + 265 (0) 9 923 968
Fax: + 265 01825116
E-mail: nkhulugo@yahoo.com

Mr. Lloyd C.S Liwimbi
Principal Agricultural Research Scientist
Department of Agricultural Research
Chitedze Research Station
P.O Box : 158
Lilongwe
Malawi
Tel: + 265 01 70 72 22 / 08509430
Fax: + 265 01 70 70 41
E-mail: sliwimbi@yahoo.com

MOZAMBIQUE

Mr. Fernando Rodrigues
Chief of Veterinary Public Health Division
Ministry of Agriculture
P. Herois C. Postal 1406
Maputo
Mozambique
Tel: + 258 21460494 / + 258 824825640
Fax: + 258 21 460 479
E-mail: f3rodrigues1@yahoo.co.uk

Mrs. Ana Paula CARDOSO
Chief Food Safety Division
Ministry of Health
Eduardo Mondlane Ave 1008
P.O.Box 264 Maputo
Mozambique
Tel: + 258 121 32 5178/ + 258 823016447
Fax: + 258 121 30 74 19
E-mail: apaulacardoso34@hotmail.com

NAMIBIA

Mr. François Joubert
Dep. Chief Veterinary Officer
Ministry of Agriculture, Water and
Forestry
Directorate Veterinary Services
P/Bag 12022 Windhoek
Namibia
Tel: + 264 61 208 7506
Fax: + 264 61 208 7779
E-mail: JoubertF@mawrd.gov.na

NIGERIA

Mr. Adesominu Jerome Adejimi
Deputy Director (Agriculture)
Federal Ministry of Agriculture and Water
Resources Area 11, Garki
Abuja
Tel: + 234 8055600270/ + 234
8065592980
E-mail: jeromeade@hotmail.com

Mrs. Hauwa J. Keri
Director, Registration and Registration
Affairs
NAFDAC Laboratory Complex
Apapa-Oshodi Express way
Lagos
Tel: + 234 1 4748627
Fax: + 234 1 4705647
E-mail: hkeri@yahoo.com

SOUTH AFRICA

Mr. Siyabongo Mbambo
Advisor to Agricultural Management
(Senior)
Private Bag x 343
Arcadia, Pretoria 0001
Tel: + 27 (012) 319 6728
Fax: + 27 (012) 319 7179
E-mail: siyabongoM@nda.agric.za

Ms. Marianna Theyse
Assistant Director International Standards
Directorate Plant Health Dept. Agriculture
Private Bag 14
Gezina, 0031,
South Africa
Tel: + 27 12 319 6091
Fax: + 27 12 319 6101
E-mail: mariannat@nda.agric.za

TANZANIA

Dr. Cletus A. Karigo
Principal Veterinary Officer
Ministry of Livestock Development
P.O Box 1952
Dar-Es-Salaam
Tel: + 255 75 430 5342
Fax : 0252802217
E-mail: drkarigoca@yahoo.com

UGANDA

Dr. Agaba Edson Friday
Principal Medical Officer
Ministry of Health
P.O. Box 7272
Kampala, Uganda
Tel: + 256 772 691 236
E-mail: agabafriday@hotmail.com
agabafriday@health.go.ug
Agaba_friday@yahoo.co.uk

Dr. Kyokwijuka Benon
Assistant Commissioner (Vet. Public
Health)
Ministry of Agriculture Animal Industry
and Fishers
P.O.Box 102
Entebbe
Uganda
Tel: +256 41 320 578/+256 772586710
Fax: + 256 41 321070
E-mail: benonkyokwijuka@yahoo.com

ZAMBIA

Mr. Albert Chalabesa
Deputy Director
Ministry of Agriculture and Cooperatives
Zambia Agriculture Research Institute
P/B 7CHILANGA
Zambia
Tel: + 260 1 278 213
Fax: + 260 1 27 8 130
E-mail: chala@zamnet.zn

Mr. Delphin M. Kinkese
Chief Policy Analyst Food Safety and
Cosmetics
Ministry of Health
P.O. Box 30205
Lusaka
Zambia
Tel: + 260 977 395 296
Fax: + 260 1 254 067
E-mail: dmkinkese@yahoo.co.uk

ZIMBABWE

Dr. Unesu Ushewokunze Obatolu
Director
Department of Veterinary Public Health
Diagnostics and Research
Ministry of Agriculture
Tel: + 263 4 791227
Fax: + 263 4 70 7952
E-mail dvts@africaonline.co.zw

Mr. Chinyavanhu Fredy
Deputy Chief GVT Analyst-Food Control
Ministry of Health
GVT Analyst Lab
P.O. Box: C 231 C/Way Harare
Zimbabwe
Tel: + 263 4 792026/7, 708526
Fax: + 263 4 705 261
E-mail: fchinyavanhu@heatlh.net.zw
fchinyavanhu@hotmail.com

FAO (to complete)

Cheikh Ndiaye
Senior Food and Nutrition Officer
FAO Regional Office for Africa
P.O. Box GP 1628, Accra, Ghana
Accra, Ghana
Tel: + 233-(0)21-7010930 (X3154)
Fax: + +233-(0)21-668427
E-mail: Cheikh.Ndiaye@fao.org

Hannah Clarendon
Crop Protection Officer
FAO Regional Office for Africa
P.O. Box GP 1628, Accra, Ghana
Accra, Ghana
Tel: + 233-(0)21-7010930 (X 3137)
Fax: + +233-(0)21-668427
E-mail: Hannah.Clarendon@fao.org

Georges Codja
Food and Nutrition Officer
FAO Sub-regional office for Southern and
East Africa
PO Box 3730
Harare, Zimbabwe
Tel: +263 4 253 656/791 407
Fax: + 263 4 703 497
E-mail: Georges.Codja@fao.org

Catherine Bessy
Food and Nutrition Officer
Food Quality and Standards Service
Nutrition and Consumer Protection
Division
FAO
Tel: + 39 06 570 53679
Fax: + 39 06 570 54593
E-mail: Catherine.Bessy@fao.org

Marlynne Hopper
Consultant
Food Quality and Standards Service
Nutrition and Consumer Protection
Division
FAO
Tel: + 39 06 570 54411
Fax: + 39 06 570 54593
E-mail: Marlynne.Hopper@fao.org

Dr. Ruth Frampton
C/- 587 Springston-Rolleston Road
R.D. 5
Christchurch 7675
NEW ZEALAND
Tel: + 64 3 347 8085
Fax: + 64 3 347 8085
E-mail: framptonr@critiquelimited.co.nz

**Programme for the FAO Regional Training Workshop on an
Integrated Approach to Food Safety and Animal and Plant Health (Biosecurity)
and the Assessment of Capacity Needs
Novotel, Accra, Ghana
30 May to 1 June 2007**



Day 1, Wednesday 30 May 2007	
8.30	Registration
9.00	Arrival of invited guests
9.10	Introduction of chairman, Mr Emmanuel Kyeremateng Agyarko, by Mr. K. Van-Ess, Deputy Chief Executive Officer, Food and Drugs Board, Ghana
9.15	Chairman's opening remarks by Mr Emmanuel Kyeremateng Agyarko, Chief Executive Officer, Ghana Food and Drugs Board (FDB)
9.25	Welcome Address by Dr. Edouard K. Tapsoba, FAO Representative in Ghana
9.40	Introduction to the workshop and overview by Dr. Cheikh Ndiaye, Senior Food and Nutrition Officer, FAO Regional Office, Ghana
9.55	Chairman's closing remarks
10.05	Vote of thanks by Mr. Michael Boateng, Food safety consultant
10.15	Introductions <ul style="list-style-type: none"> • FAO staff and external trainers Participants
10.30	Coffee Break
11.00	General introduction to an integrated approach to food safety and animal and plant health and life = biosecurity (based on Biosecurity Principles and Components document, Part 1 of the FAO Biosecurity Toolkit) by Dr. Ruth Frampton, International Biosecurity Expert / Workshop Resource Person
	<i>Lunch</i>

PM	<p>Presentation on the Guide to Assess Biosecurity Capacity (Part 2 of the Biosecurity Toolkit)</p> <ul style="list-style-type: none"> • Group work on potential challenges and benefits of adopting an integrated biosecurity approach and preparations for a biosecurity capacity assessment (Steps 1 and 2) • Groups report back to the plenary • Plenary discussion <ul style="list-style-type: none"> ~ Which agencies/individuals/groups would you involve in a biosecurity capacity assessment? Why? ~ What challenges (e.g. lack of high-level support, numerous stakeholders involved, inadequate resources, etc.) might you face in assessing biosecurity capacity needs? How could they be addressed? 	Marlyne Hopper, AGNS
	Summary and conclusions of Day 1	Georges Codjia, Sub-regional Food and Nutrition Officer

Day 2, Thursday 31 May 2007

AM	<p>Reviewing and analysing existing biosecurity capacity and performance</p> <ul style="list-style-type: none"> • Presentation on theory (covering Steps 3 and 4 of the Guide) • Group work / Exercises <ul style="list-style-type: none"> ~ For example: small groups do a SWOT analysis of existing biosecurity capacity in hypothetical countries • Groups report back to the plenary • Plenary discussion 	Ruth Frampton
	<i>Lunch</i>	
PM	<p>Developing a shared vision of the desired future biosecurity</p> <ul style="list-style-type: none"> • Presentation on theory (covering Step 5 of the Guide) • Group work / Exercises <ul style="list-style-type: none"> ~ For example: small groups discuss the vision of biosecurity and agree on medium-term goals and objectives • Groups report back to the plenary • Plenary discussion 	Ruth Frampton
	Summary and conclusions of Day 2	Georges Codjia

Day 3, Friday 1 June 2007

AM	<p>Identifying biosecurity capacity needs to reach desired future situation Generating options to address the identified biosecurity capacity needs</p> <ul style="list-style-type: none"> • Presentation on theory (covering Step 6 and 7 of the Guide) • Group work / Exercises <ul style="list-style-type: none"> ~ For example: small groups identify biosecurity capacity needs by comparing present situation with desired future situation. Brainstorm about options to address identified needs, likely benefits and challenges of different options. Discuss what is required for follow-up activities. • Groups report back to the plenary • Plenary discussion 	Catherine Bessy, AGNS
	<p>Workshop appraisal and evaluation Conclusions and wrap-up</p>	Catherine Bessy
	<i>Late Lunch</i>	
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Annex 3: Handouts for Group Work and Plenary Discussions

Day 1: Afternoon Session

Preparing to carry out a biosecurity capacity assessment (Steps 1 and 2)

Group Exercise 1

- Identify the types of stakeholders (e.g. specific government ministries, departments or committees, private sector groups, consumers, NGOs, other groups, etc.) that should be involved in assessing biosecurity capacity needs. Discuss why these groups are relevant? What could they contribute? Why would it be important to consult and/or involve them?
- Identify some of the challenges (e.g. lack of high-level support, inadequate resources, numerous stakeholders, etc.) you might expect to encounter in assessing biosecurity capacity. Discuss how you would try to overcome these challenges.

Key questions for plenary discussion

- What might stimulate countries to carry out an assessment of their biosecurity capacity needs?
 - Which agencies/individuals/groups in your country should be involved in a biosecurity capacity assessment?
 - Why should they be involved?
 - What are the potential benefits and drawbacks (if any) of involving all the various stakeholders interested in biosecurity?
 - What challenges might you face in assessing biosecurity capacity needs? How could these challenges be addressed?
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Day 2: Morning Session

Reviewing and analysing existing biosecurity capacity and performance (Steps 3 and 4)

Group Exercise 3

- Discuss the strengths, weaknesses, opportunities and threats facing biosecurity in your country scenario.
- Use the SWOT Analysis template to discuss and list the main strengths, weaknesses, opportunities and threats.
- See the example SWOT Analysis in Annex 3 for reference / assistance.

Key questions for plenary discussion

- What challenges might you expect to encounter in analysing existing capacity and performance? How could you address them?

- How could such challenges be best addressed in a real-world situation?
- What are the pros and cons of involving different types of stakeholders in an assessment of existing capacity?
- How else could you measure / assess the performance of biosecurity?
- How useful did you find these group exercises? What would you change or do differently to improve this session in the future?

Day 2: Afternoon Session

Developing a shared vision (goals) of the desired future biosecurity (Step 5)

Group Exercise 4

- Assign a different stakeholder role to everyone in your group (i.e. have a different person to represent food safety, animal health, plant health, consumer interests, private industry interests, environmental interests, etc.)
- Each person takes about 10 minutes to think about and write down their personal vision of biosecurity based on their assigned stakeholder role.
- Discuss the individual visions prepared by members of the group and use them to develop one unified vision that all members of your group accept and agree with.
- See the example vision from New Zealand (Step 5, Box 2.3. in the Guide to Assess Biosecurity Capacity) for assistance

Key questions for plenary discussion

- Did any disagreements or contradictions arise during the development of the unified vision of the desired future biosecurity?
- What were they? How could such conflicts be overcome in a real-world situation?
- What other approaches could be used to develop a vision of biosecurity?
- How would you try to develop a vision of biosecurity in your country?

Day 3: Long Morning Session

Identifying biosecurity capacity needs to reach the desired future situation (Step 6)

Generating options to address identified biosecurity capacity needs (Step 7)

Group Exercise 5

- Based on the existing situation and performance of biosecurity and the desired future vision, discuss what are the main capacity needs.

- Discuss whether there are capacity needs in the following areas and, if so, what they are:
 - policy framework
 - legal and regulatory framework
 - organizational arrangements
 - information and communications
 - biosecurity functions based on risk analysis (e.g. scientific research and advice, standard setting and implementation, inspection, verification and enforcement, quarantine and certification, emergency preparedness and response, monitoring and surveillance, risk analysis, etc.)
- Try to prioritize the capacity building needs identified.
- Select two or three of the capacity needs identified by your group during the previous exercise.
- For each of these selected needs, brainstorm about and list the possible options to address these needs.
- Discuss what are the likely benefits and challenges of pursuing these options?
- For one or two of the options identified, list what activities would be needed in follow-up, which stakeholders would be responsible, the timeframe and likely resources required.

Key questions for plenary discussion

- What challenges (e.g. different stakeholder views, difficulty to reach consensus) did encounter in identifying and prioritizing needs?
- How could these challenges be addressed in a real-world context?
- Why is a participatory and inclusive approach useful for identifying needs? How would you try to involve non-government stakeholders in your country?
- How else could you go about identifying capacity needs (e.g. suggest any other tools / models / approaches)?
- How useful did you find this group exercises for training purposes? How could it be improved?
- What challenges did you encounter in identifying and discussing options to address the identified capacity needs (e.g. lack of consensus among stakeholders, over-ambitious goals, biosecurity sectors have very different levels of capacity, etc.)?
- How could these challenges be addressed in a real-world context?
- Many different options to strengthen biosecurity capacity exist – what criteria (e.g. expected impact, feasibility, affordability, legitimacy, efficiency, timeliness) would you use to weigh up the costs and benefits of the various options?

Annex 4: List of Working Groups

Group 1: Botswana, Namibia, South Africa, Ghana

Mr. Molatlhegi Modise, Botswana
Mr. Keraptse Sehularo, Botswana
Mr. François Joubert, Namibia
Ms. Marianna Theyse, South Africa
Mr. Siyabongo Mbambo, South Africa
Mr. Vesper Suglo, Ghana

Group 2: Nigeria, Gambia, Ghana

Ms. Mama Mariama Saho, The Gambia
Mrs. Oulaye Njie Taal, The Gambia
Mr. Adesominu Jerome Adejimi, Nigeria
Mrs. Hauwa J. Keri, Nigeria
Mr. Frederick Owusu Gyamera, Ghana

Group 3: Zambia, Tanzania, Mozambique, Ghana

Mr. Fernando Rodrigues, Mozambique
Mrs. Ana Paula Cardoss, Mozambique
Dr. Cletus A. Karigo, Tanzania
Mr. Albert Chalabesa, Zambia
Mr. Delphin M. Kinkese, Zambia
Dr. Mohamed Alfa, Ghana

Group 4: Zimbabwe, Malawi, Ethiopia

Dr. Taye Ephrem, Ethiopia
Mr. Elias Saheledengel, Ethiopia
Dr. Unesu Ushewokunze Obatolu, Zimbabwe
Mr. Chinyavanhu Fredy, Zimbabwe
Dr. Edwin Nkhulungo, Malawi
Mr. Lloyd C.S Liwimbi, Malawi

Group 5: Cameroon, Kenya, Uganda

Mr. Okala Georges, Cameroon
Maurice Tchoumtchoua, Cameroon
Mr. Washington Otieno, Kenya
Dr. Bernard M. Mugenyi, Kenya

Dr. Agaba Edson Friday, Uganda
Dr. Kyokwijuka Benon, Uganda

Annex 5: Some of the Outputs of the Working Group Sessions

1. High profile biosecurity issues of concern at the country level

During the plenary discussions, participants were asked to identify the most high profile biosecurity issues of current concern in their countries.

The following issues were raised:

- Food and mouth disease (Botswana, Namibia, Zimbabwe)
- BSE (Namibia)
- Exotic fruit fly (Ghana, South Africa)
- Avian flu (Nigeria, Gambia, Ghana, Zambia, Mozambique)
- Importance of ensuring the participation of line departments in the newly-established food safety risk analysis centre (Nigeria)
- Implementation of the Food Act (the Gambia)
- Border controls (Zambia)
- Backyard poultry (Tanzania)
- Animal disease (Mozambique)
- Inadequate cross-sector coordination (Mozambique)
- Transboundary disease in maize imports (Zimbabwe)
- Limited risk analysis capacity (Zimbabwe)
- Pest infestations of maize imports and grain stores (Malawi)
- Food and livestock production and food security (Ethiopia)
- GMOs (Cameroon)
- Need to develop national standards for food safety, veterinary residues (Kenya)
- Veterinary drug residues (Kenya)
- Lack of awareness of biosecurity at all levels (Uganda)

2. Stakeholders involved in biosecurity at the country level

All the working groups identified a number of diverse stakeholders that are relevant for biosecurity in their countries. The most important stakeholders cited by working groups were the government ministries and departments responsible for food safety, agriculture (livestock and plants), and health. However, a number of other stakeholders (listed below) were also identified as important:

- government agencies and departments responsible for forestry, fisheries, environment, trade, industry, customs, science and technology
- local government agencies
- government agencies responsible for border controls
- law enforcement agencies

- food processors and their associations
- agriculture and food traders
- consumer associations
- municipalities
- universities and research institutes
- standards organizations
- laboratories
- SPS committees
- NGOs, community based organizations
- farmers organizations
- international organizations (e.g. FAO, OIE, WHO)
- media

3. Challenges of moving towards an integrated approach to biosecurity

- Need to obtain high level support
- Inadequate and inefficient use of resources
- Large number of stakeholders involved and sometimes overlapping mandates between them
- Securing the commitment of other stakeholders (such as traders, industry) for an integrated approach to biosecurity. In this context it will be important to justify and demonstrate evidence of why new measures are necessary to reduce their tendency to see changes in terms of increased costs
- Difficulties to get different stakeholders to work together
- Information silos and the need to share information related to biosecurity across sectors and sector agencies
- Absence of a biosecurity policy at the country level to clarify responsibilities and provide an enabling framework for biosecurity activities

4. SWOT analysis scenarios prepared by working groups

Group 1: South Africa, Botswana, Namibia, Ghana

<p>Strengths related to policies and legislation</p> <ul style="list-style-type: none"> • Some policies already exist • Political will is there (senior managers already sit in biosecurity structures) <p>Strengths related to capacity to deliver core biosecurity functions</p> <ul style="list-style-type: none"> • Good diagnostic services – well maintained equipment / labs – private sector involvement and financing alongside public sector labs • Have specific units looking at disaster management • Strong R&D • Have SPS / Codex Committees etc., Food control board <p>Strengths related to communications</p> <ul style="list-style-type: none"> • Existence of SAADC • Sound IT infrastructure • Enquiry points in all countries and web portals • Annual cross-border meetings among countries in region 	<p>Weaknesses related to policies and legislation</p> <ul style="list-style-type: none"> • Policies are very sectoral – don't think about linkages across sectors • Policy is not intended to address biosecurity holistically • Policies usually reactive to problems • Cumbersome legislative processes – takes years, people change • Out-dated, fragmented legislation, difficult to repeal <p>Weaknesses related to capacity to deliver core biosecurity functions</p> <ul style="list-style-type: none"> • Sectors do not systematically exchange information / coordinate (usually in response to crisis) • Some overlap in roles, responsibilities, processes – have duplication in processes • Inadequate inspection and border control – too many people doing inspections at borders <p>Weaknesses related to communications</p> <ul style="list-style-type: none"> • Plant health has good rapid health alert system but animal alert is poor • High staff turnover and movement in government – challenge for communication, breakdown in continuity • Regulators do not talk to research institutes enough • Slow information exchange between countries – takes time to get info on disease outbreaks from country to another – need regional info management system • Do not quickly fill vacant posts • Notification authorities not fully functional – lack staff • Lack of transparency between countries regarding info sharing
<p>Opportunities related to policies and legislation</p> <ul style="list-style-type: none"> • Use of int't guidelines / benchmarks to facilitate policy development • Regional interests / regional harmonization of policies • Communication and info exchange <p>Opportunities related to capacity to deliver core biosecurity functions</p> <ul style="list-style-type: none"> • Potential to collaborate with private sector / obtain resources from them in order to do certain things 	<p>Threats related to policies and legislation</p> <ul style="list-style-type: none"> • Mis-information from interest groups <p>Threats related to capacity to deliver core biosecurity functions</p> <ul style="list-style-type: none"> • Limited capacity in neighbouring countries – increases administrative burdens • Ever-changing and stringent standards • Inadequate capacity for negotiation • Transboundary movement of wildlife – creation of transboundary park

<ul style="list-style-type: none"> • Regional integration • Integrate resources at ports of entry within region <p>Opportunities related to communications</p> <ul style="list-style-type: none"> • Could make better use of SPS committees to share info • Dispute settlement processes • Take advantage of regional awareness campaigns 	
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Group 2: Nigeria, The Gambia, Ghana

<p>Strengths</p> <ul style="list-style-type: none"> • Some infrastructure in place • Legal framework exists to some extent • Basic skills and technology for biosecurity controls • Financial resources • Emergency response teams in place • Some commitment from government and private sector • Vibrant media 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Inadequate institutional coordination among key players • Timely allocation of funds to address biosecurity issues on a day-to-day basis • Staff skills in particular sectors of biosecurity • Obsolete and non-functional equipment in labs • Inadequate technical skills in risk assessment, etc. • Misinformation by the media – regulators don't explain well to the media, media transmit incorrect messages • Lack of awareness among general population • Insufficient monitoring and evaluation systems and mechanisms • Lack of budgetary support for implementation of legislation
<p>Opportunities</p> <ul style="list-style-type: none"> • Membership of int'l organizations - FAO, WHO, OIE, Codex, WTO, etc. can tap into their experiences / knowledge / resources, etc. and raise level of capacity • Use of ITC to increase awareness within the country – transmit information on disease outbreaks etc. through internet / web – and to share information with neighbouring countries in order to adjust / increase controls as needed • National/regional/international trading blocs (Ecowas) 	<p>Threats</p> <ul style="list-style-type: none"> • Porous borders – smuggling, uncontrolled movements of cattle, etc. using unapproved routes • Corruption of border control officials – let animals across for payment • Political instability – control measures break down • Economic crises – extreme poverty – people cannot afford not to consume contaminated foods • Climate change – lack of water, use of contaminated water following drought • Transboundary diseases – trading cattle through unapproved routes leads to diseases and pests moving in and out • Rural to urban migration – bring animal / food products but no checks on their safety • Unregulated food vendors – lack of awareness / knowledge about food safety • Absence of critical diagnostic capabilities

Group 3: Ghana, Mozambique, Tanzania, Zambia

<p>Strengths</p> <ul style="list-style-type: none"> • Vaccines • Collaboration with health • Legislation • Centralized labs 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Inadequate labs in districts • Insufficient staff • Weak border control – porous borders • Lack of communication and information • Weak enforcement • Inadequate risk analysis capacity • No access to internet • Inability to compensate farmers for losses following disease outbreaks
<p>Opportunities</p> <ul style="list-style-type: none"> • Members of standard-setting bodies • Aware of transboundary diseases • Donor interest • Info available on the Internet 	<p>Threats</p> <ul style="list-style-type: none"> • Migratory birds • Other issues competing for national attention • Weak capacity of neighbouring countries in biosecurity • Dumping of inferior food products

Group 4: Ethiopia, Malawi, Zimbabwe

<p>Strengths</p> <ul style="list-style-type: none"> • Policy and regulation in place • Detection system for pests / diseases • Infrastructure available (labs, inspectorates) • Bilateral agreements among neighbouring countries 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Inadequate risk analysis • Management of endemic pests / diseases • Outdated policy and regulations with unclear accountability – different regulations issued by different agencies • Infrastructure / labs etc. lacking equipment • Limited public awareness • Lack of skills in human resources • Inadequate coordination
<p>Opportunities</p> <ul style="list-style-type: none"> • Good access to int'l markets • Abundant natural resources (crops, fisheries, livestock) • Cooperation agreements among neighbouring countries • Support from int'l agencies / donors • Eco-tourism 	<p>Threats</p> <ul style="list-style-type: none"> • Economic well-being • Bioterrorism - anthrax • Difficulty in meeting stringent int'l rules and regulations • Emerging and re-emerging livestock diseases and pests • Rapid movement of people in country/region • Political instability • Natural disasters (floods, droughts – lead to disease outbreaks) • Brain drain taking skilled people out of government sector • High cost of technology

Group 5: Kenya, Uganda, Cameroon

Component	Strength	Weakness	Opportunity	Threats
Policy & legal framework	<p>Food safety policy in pace</p> <p>Biosafety policy under development</p> <p>Food safety legislation in place</p>	<p>Old legislations</p> <p>Poor enforcement mechanism</p> <p>Disharmony with international standards</p> <p>Limited awareness</p> <p>Lack of political will</p>	<p>Pressure from stakeholders</p> <p>Globalization</p> <p>Increasing demand for safe food for local and external trade</p>	<p>Emerging food safety related demands (diseases, pests, etc)</p> <p>Structural adjustment programs</p>
Institutional arrangements	<p>Structures existing</p> <p>Systems for multi - sectoral taskforce/fora in place</p>	<p>Poor coordination</p> <p>Conflict of mandates and interests</p>	<p>Pressure from stakeholders</p> <p>Global demands</p>	<p>Structural adjustment programs</p>
Capacity (human, logistics, financial)	<p>Adequate human resource exists</p> <p>Laboratories infrastructure exists</p>	<p>Underutilization/misuse of human resource</p> <p>Inadequate infrastructure, logistical support, finance</p> <p>Laboratories non functional</p> <p>Old/obsolete laboratory equipment</p> <p>Inadequate financial resource allocation</p> <p>Inadequate budgetary support</p>	<p>Increased interest of donors</p>	<p>Loss of donor interest</p> <p>Low priority rating of biosecurity</p> <p>Structural adjustment reforms</p> <p>Pressure for adoption from technology developers</p>
Risk assessment	<p>Trained personnel & laboratory infrastructure exist</p>	<p>Not oriented to modern techniques of risk analysis</p> <p>Poor equipment maintenance</p> <p>Inadequate staffing levels</p>	<p>International trade requirement</p>	<p>dumping of inferior products</p> <p>High rate of change/stringent market requirements</p>
Information management system				
Monitoring & evaluation				
Addressing cross cutting issues				

4. Working group exercise on the development of a common cross-sectoral biosecurity vision

Participants in each working group were assigned different stakeholder roles (e.g. food safety official, animal health official, plant health official, consumer representative, environmental official, trade official). Each stakeholder developed their own vision statement from the point of view of their sector / interests. Then the group discussed the individual visions to produce and reach consensus on a joint cross-sectoral vision of biosecurity. These are presented below.

Group 1: South Africa, Botswana, Namibia, Ghana

In 2020 in Ghabonasa will have an integrated biosecurity system that will protect environment, human, animal and plant health through:

- Access to safe portable water and food
- Prevention of the introduction and spread of animal and plant pests and diseases
- Ensure natural resources and biological diversity is protected
- An emergency response system

Group 2: Nigeria, The Gambia, Ghana

By 2017, nations will have a workable biosecurity policy framework for the prevention and management of foodborne, plant and animal diseases and ensure a sustainable environment.

Group 3 Ghana, Mozambique, Tanzania, Zambia

By 2015, a biosecurity system which will ensure that there is effective risk management of food safety, animal and plant life and health and associated environmental hazards

Group 4: Zimbabwe, Ethiopia, Malawi

To have by 2010, a vibrant agriculture based economy that guarantees environmental conservation, consumer protection, value for money with international competitiveness

Group 5: Kenya, Uganda, Cameroon

A community that is producing and consuming safe food in a healthy and sustainable environment

5. Working group exercise on identifying biosecurity capacity needs *and* generating options to address the identified needs

Notable gaps in the biosecurity capacity required to pursue the visions developed in the previous exercise were identified by the working groups. Subsequently various options were discussed to address the identified needs/gaps. Some of the options to strengthen various aspects of biosecurity capacity that were proposed by the working groups are listed below.

Options to strengthen the policy framework	<ul style="list-style-type: none"> • Develop integrated biosecurity policy in consultation with stakeholders – • Develop policy that allows compensation payments to producers affected by biosecurity crises • Review streamlining of biosecurity roles and mandates • Develop a vision through stakeholder consultations • Solicit more political support for biosecurity
Options to strengthen the legal and regulatory framework	<ul style="list-style-type: none"> • Review and update legislation (involving competent authorities, technical/scientific and legal advisors, etc.) • Harmonize legislation with international requirements, recommendations, standards, etc.
Options to improve organisational arrangements for biosecurity	<ul style="list-style-type: none"> • Use the ‘new’ policy to inform decisions about necessary organizational/structural changes • Develop emergency contingency plans • Increase budgetary allocations for human resources and equipment to boost field activities/capacity • Increase the number of staff at the border (to improve border control) and motivate (to reduce corruption) • Restructure (and review organizations’ mandates) • Strengthen coordination between organizations (to address conflicting mandates)
Options to streamline biosecurity information management and communications	<ul style="list-style-type: none"> • Develop a rapid alert system • Use the ‘new’ policy to elucidate communication/information management requirements to provide a transparent biosecurity system • Create awareness of biosecurity in the general public • Identify specifics for collection of biosecurity information • Improve data management • Enhance information exchange
Options to improve biosecurity functions	<ul style="list-style-type: none"> • Build/strengthen capacity to undertake risk analysis (human resources, facilities) • Network data management systems • Improve capacity of diagnostic laboratories (scientific skills, equipment, maintenance, etc.) • Improve capacity of inspectorates

Annex 6: Workshop evaluation

FAO Regional Training Workshop in Africa
An Integrated Approach to Food Safety and Animal and Plant Health
(Biosecurity) and the Assessment of Capacity Needs
Accra, Ghana, 30 May to 1 June 2007

THANK YOU for your participation and for helping us to improve similar workshops in the future.

1. How well did the TOPIC of the workshop meet your needs?

(CIRCLE RESPONSE 1 = not at all 5 = very well) 1 2 3 4 5

1	2	3	4	5
		<i>2 responses (7%)</i>	<i>17 responses (63%)</i>	<i>8 responses (30%)</i>

Average score: 4.2

2. How well did the CONTENT and DELIVERY of the workshop meet your needs?

(CIRCLE RESPONSE 1 = not at all 5 = very well) 1 2 3 4 5

1	2	3	4	5
	<i>1 response (4%)</i>	<i>5 responses (18%)</i>	<i>13 responses (48%)</i>	<i>8 responses (30%)</i>

Average score: 4

3. What part of the workshop did you learn the most from?

- Group work, group presentations and plenary discussion (*13 responses*)
- Biosecurity needs assessment and Guide to assess biosecurity capacity (*8 responses*)
- Developing the biosecurity vision (*3 responses*)
- Biosecurity principles and components – Part 1 of the Biosecurity Toolkit (*2 responses*)
- The use of SWOT for identification of weaknesses
- Group work, especially on developing a shared vision of biosecurity and development of a biosecurity strategy
- Information in annexes of Toolkit
- Reviewing and analyzing existing biosecurity capacity and performance. In general all parts of the workshop were okay.

- Defining the terms biosecurity and biosafety which was confusing before. The need to work as a team in spite of expected conflicts. It got both participants from my country thinking through the issues
- Importance of proper consultation throughout the process
- Interaction with other professionals
- Reviewing and analyzing existing biosecurity capacity. General thinking of the concept of biosecurity
- Issues and methods for integrated biosecurity approaches
- It was great that few lectures were given, bravo

4. What could be improved if this workshop was carried out again (e.g. different case study scenarios, different group exercises, different structure of workshop, etc.)? Please provide examples.

- Have more/different case studies from countries in the region and use case scenarios at a similar level to developing countries (e.g. address standard setting and implementation based on the capacity of each country, examples of success stories in countries vis-à-vis the challenges) (*7 responses*)
- Have a longer workshop / five days (*3 responses*)
- Different structure of the workshop (e.g. inclusion of important biosecurity standards from different organizations e.g. OIE, FAO, regional approach considering neighbouring countries, consumer interests) (*3 responses*)
- More examples of integrated biosecurity approaches from different countries (*2 responses*)
- Allow time at the start of the workshop for presentations on the status of biosecurity in the participants' countries (*2 responses*)
- Workshop was well structured and delivered. Wish more colleagues from my home country could have attended.
- Send a questionnaire to participants asking questions about biosecurity in their country. Form groups based on common weaknesses, strengths and experiences indicated in questionnaire.
- Have a FAO coordinator for each group to better guide the group work
- There were too many people from agriculture. Increase participation of officials from ministries of health and departments of environment to make the group exercises more interesting.
- Focus on country specifics
- Look at existing structures in place in countries with established biosecurity structures
- Given the time constraints, I don't see how changes could be made. My understanding is that this workshop deals with the concepts rather than the details.
- Develop an integrated model for different institutions engaged in biosecurity work
- Provide computer templates for the different exercises where possible to save time
- Working groups should be based on commonalities of biosecurity status
- Provide choice of accommodation for participants

5. What things will you change in the way you do your job based on what you learned in this workshop?

- Low level of awareness among professionals and higher senior officials
- Old legislation, spirit of working together among different stakeholders
- Make efforts for an integrated biosecurity approach
- I will consult and involve stakeholders and identify together challenges related to biosecurity. I will sue a collaborative and integrated approach in analyzing existing biosecurity capacity and performance, and will jointly develop a vision, goals for desired future biosecurity
- I will be very conscious of the food chain from production to processing to retailing and consumption
- Setting priorities and developing options for implementation of decisions
- Certain steps taken in the way we manage the National Food Risk Analysis Centre will be reviewed. Strongly encourage line ministries to take up ownership of their roles
- Improve communication with counterparts and facilitate information sharing
- Increase stakeholder involvement
- Always consider biosecurity in a broader context
- More effective consultation
- Strengthen import / export controls, update acts and regulations, interact more regularly with colleagues in other ministries, set up a forum to integrate different biosecurity issues
- Appreciation of other components making up biosecurity. I will attempt to understand and appreciate their activities
- Training on an integrated approach to biosecurity
- Group / collaborative approach. Accommodation of different stakeholders and respect of views, ideas and values
- Integrated biosecurity mandates across different stakeholders
- Help in implementation of national food safety strategic plan in an integrated manner
- Intensify stakeholder consultations for in-depth needs assessment
- Advocate for change in approach to biosecurity implementation
- Avoid handling issues in a single-handed way and try to involve other stakeholders affected
- Collaboration with stakeholders
- Initiate the process to develop a biosecurity strategy and encourage collaboration and cooperation among regulatory authorities
- Improve level of collaboration and cooperation with other stakeholders
- Mode of communication and collaboration. Information sharing. Collective responsibilities and tasks
- Improve information sharing with other stakeholders specifically on biosecurity issues
- Workshop will enhance whatever steps we have taken to achieving an integrated and functional biosecurity approach

6. Any other comments/suggestions?

- The training was very important. Contact between participants and workshop presenters to be maintained and progress in countries to be followed

- The Guide to assess biosecurity capacity is a very useful document for training of trainers
- The FAO Biosecurity Toolkit is a good learning material that participants can utilize to disseminate knowledge to other stakeholders at the country level
- Good programme. This group of participants should be maintained and trained further to facilitate the harmonization of biosafety systems in Africa
- Overall the workshop went very well
- Very useful workshop. It broadens the thinking.
- Please continue good work to enable more scientists in Africa to appreciate the importance of biosecurity and how to implement it in their home countries
- The concept should be passed on to other senior stakeholders
- There is need to assist capacity to developing countries to establish fully equipped control systems with a well trained human resources (e.g. well equipped referral laboratories and communication centres)
- Repeat this workshop at the country level
- Make Part 3 of the Toolkit available to participants
- The lecturers tackled the topics in an interactive way with a live and participatory approach
- Gender balance in resource persons
- Time for the workshop is short. At least five days would be better.
- Extreme temperatures are a major distraction and reduced the level of participation
- Emphasis on modes of delivery for trainers
- We should have more time to discuss and do group work
- Develop case studies that are relevant to developing countries. Engage resource persons who are knowledgeable about situations in developing countries
- I will take the point of view of other stakeholders
- Will be necessary to have a follow-up session (e.g. after 12-18 months) to review impact of workshop in countries in their way of approaching and managing biosecurity
- Would have been lovely to have the secretariat on the ground in the hotel to guide and greet the participants on arrival
- Consider convenience of participants in travel arrangements as well as cost of tickets
- Provide different accommodation options for participants and transportation to the workshop venue for those staying elsewhere (*2 responses*)