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TEGEMEO INSTITUTE OF AGRICULTURAL
POLICY AND DEVELOPMENT

Advances in Kenya's Policy on GMOs and its Effects on Food Security

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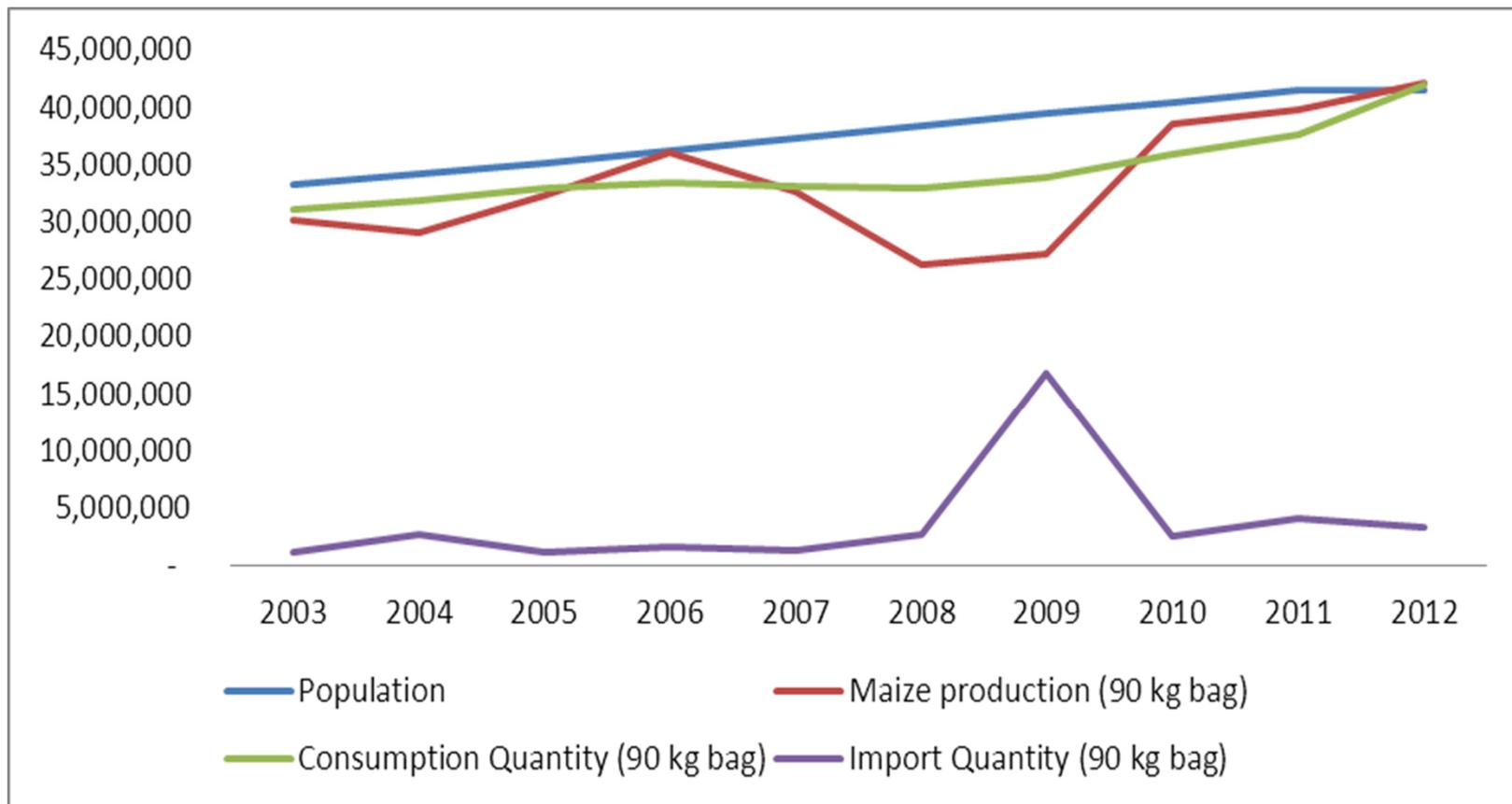
24th October 2013



Outline

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5. Effects
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Trends in Maize Production, Consumption and Importation



Often, domestic production falls below domestic consumption, while in other times production is just enough

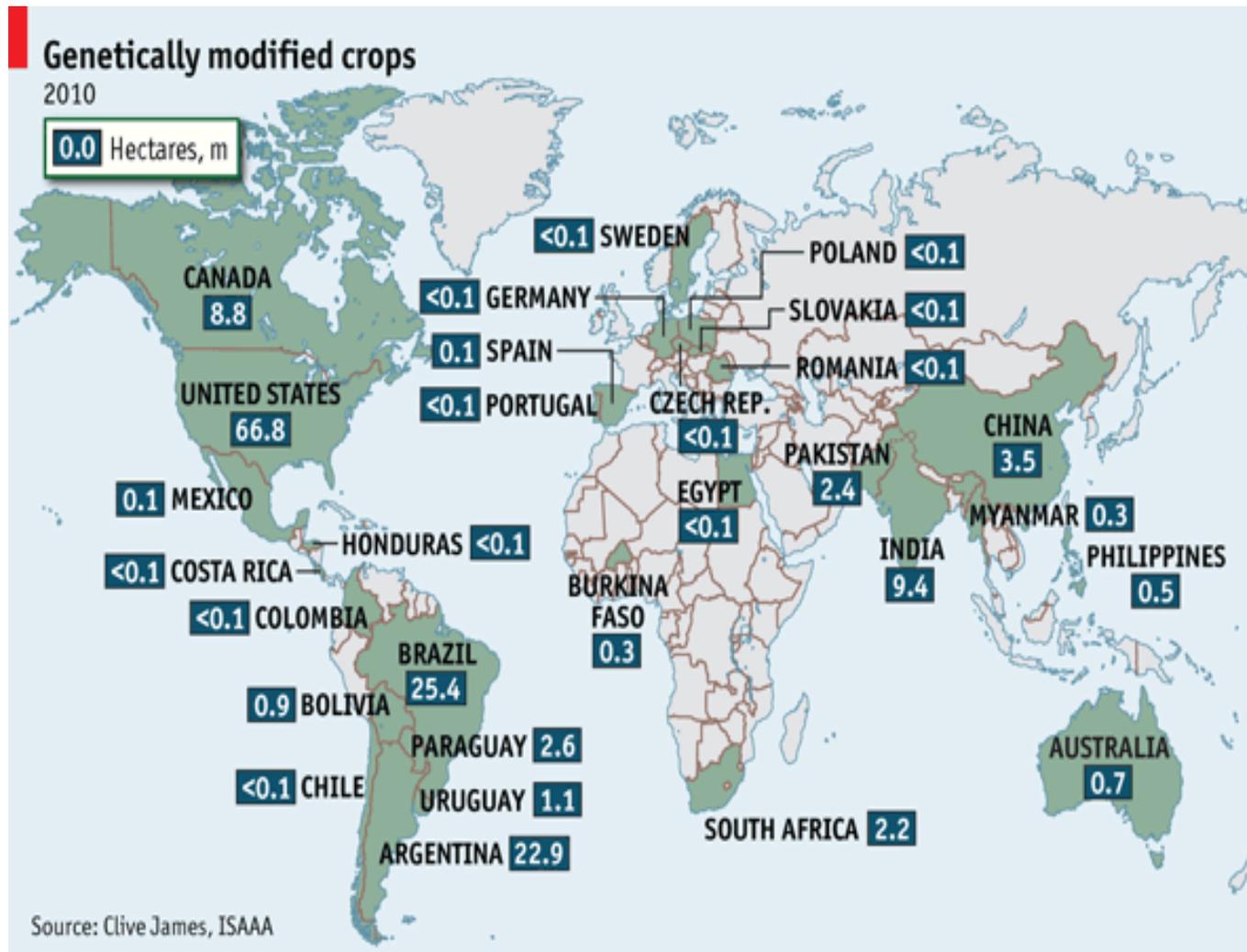
Introduction contd.

- The country supplements its domestic production with imports either from the region or from international markets.
- Climate change (variable rainfall, droughts and floods), pests and diseases as well as degraded soils raise concerns on ability of the farmers and country to ensure there's food security for all.

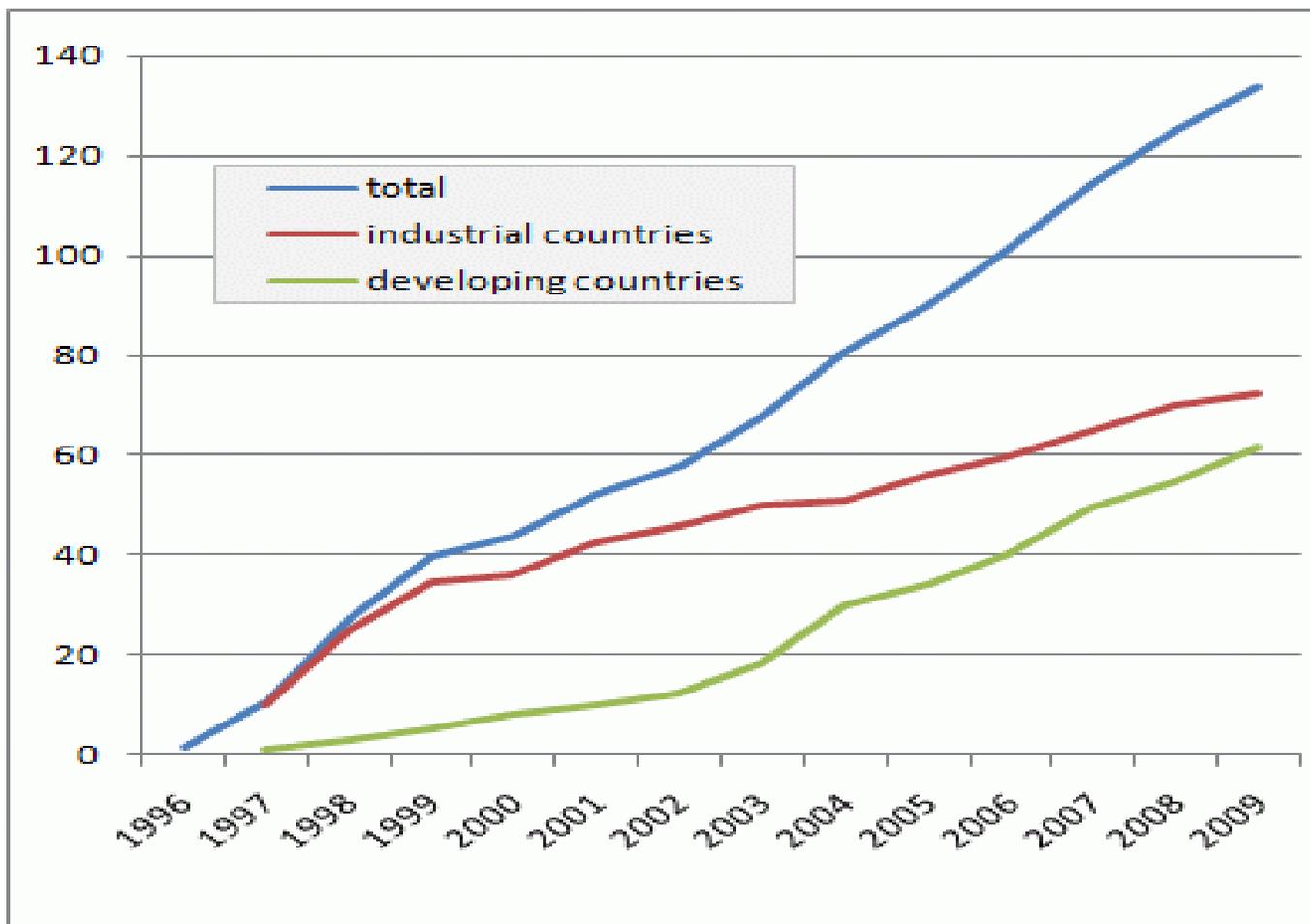
Introduction contd.

- Biotechnology offers potential solutions to some of the challenges facing the food and agriculture sectors in SSA including food insecurity, malnutrition, climate change, frequent droughts and floods, destruction of crop and food by pests, poor and declining soil fertility.
- Advocates of GM foods show that through genetic modification food supply may be increased by breaking through these constraints, and food made cheaper than that produced using conventional means
 - expected to ease the upward pressure on food prices

Countries who have embraced GM crops



Cultivation areas with genetically modified plants, 1996 - 2009, (Millions of hectares)



Source: *GMO Compass*

Countries that have a ban on GM crops

Continent	Country/States/Countries	Comments
The Americas	USA (California), Brazil and Paraguay	While the United States still largely allows for the growth and import of GMO foods and does not demand food labeling, South American countries such as Brazil and Paraguay have restrictions on GMO foods.
Australia	Several Australian states	Some states had bans on GM crops but most of them have since lifted them. Only South Australia still has a ban on GM crops, though Tasmania has a moratorium on them until November of 2014.
Africa	Algeria and Egypt	Both have laws restricting GMO foods. In Algeria, both the planting and distribution of GMO foods is illegal, while in Egypt, GMO foods must be approved before they can be distributed
Asia	Sri Lanka, Thailand, China, Japan and the Philippines	All have laws limiting GMO foods. Both Sri Lanka and Thailand had bans on imported GMOs as early as 2001, while the rest of the countries have had more recent bans
Europe	Norway, Austria, Germany, UK, Spain, Italy, Greece, France, Luxembourg and Portugal	All have put in place GMO restrictions. France made an important step in the no-GMO movement by specifically defining exactly what "GMO-free" means when it comes to food labeling. Ireland has banned all growing and cultivating of GMO foods and the European Union -- a governing coalition of European countries -- has considered a Europe-wide banning of GMO foods.
Middle East	Saudi Arabia	It has banned the growing of GMO foods and the importing of GMO wheat.
New Zealand		No GM foods are grown in the country

Research objectives

- Overview of policies and legislation governing GMO in food/agric
- Discuss the potential effects of GMO policies and legislation

Method

- Rapid assessment of the situation
 - review of secondary documents, discussions (opinions, perceptions) with key informants, media postings on GMO.

Kenya Policy on GM - Food and Agriculture

Government committed to ensuring there is adequate food for all in sufficient quantity and quality at all times (*The Bill of Rights in New Constitution; FSN Policy, 2012*).

“ Vision2030 on the role of Science, Technology and Innovation (STI)new knowledge plays a central role in boosting wealth creation, social welfare and international competitiveness”

Policy on GMO

- *The Bill of Rights in New Constitution; Vision2030:*
- Implementation in food and agriculture sectors:
 - Ensure food security thru: i) ensuring sufficient domestic food production, ii) importation during shortfalls in food production and iii) cushioning the consumers against high food prices.
 - The agriculture sector development plan (ASDS) *recognizes the important role that biotechnology* could play in securing Kenya's food security, by increasing food availability through increased productivity, even in marginal, flood prone or degraded areas.
 - The Food and Nutrition Security Policy (FNSP): *silent on role of biotechnology*, yet biotechnology offers new ways of increasing food availability through increased productivity even in marginal areas and also providing cheaper, more nutritious foods through bio-fortification and trade.

Evolution of GMO policy in Kenya

See Narrative...

- Preparations for entry of GMOs began in the early eighties (1980) when the National Council for Science and Technology was declared as the designated authority on biosafety
- However, the National Biosafety Authority and regulations for contained use; import, export and transit; and environmental release were established 30 years later (in 2010 and 2011 respectively). The regulations on labelling were last to be established (2012).
- The chronology of events in policy making show a country determined to promote the production, commercialization and use of GM foods and products.
 - However, it has failed to introduce in the market, GM seed of any kind or planting material to boost agricultural production.
- The policy contradictions and reversals have not boosted Kenya's efforts to be food secure.

Regulatory Framework

A biosafety regulatory system to ensure that genetically modified (GM) organisms are safe for humans and the environment

The Kenyan regulatory system comprises international treatise, national institutions and stakeholder for a

International Treatise

International treaties and agreements on biosafety oblige countries to only effect biosafety regulatory systems that are compliant

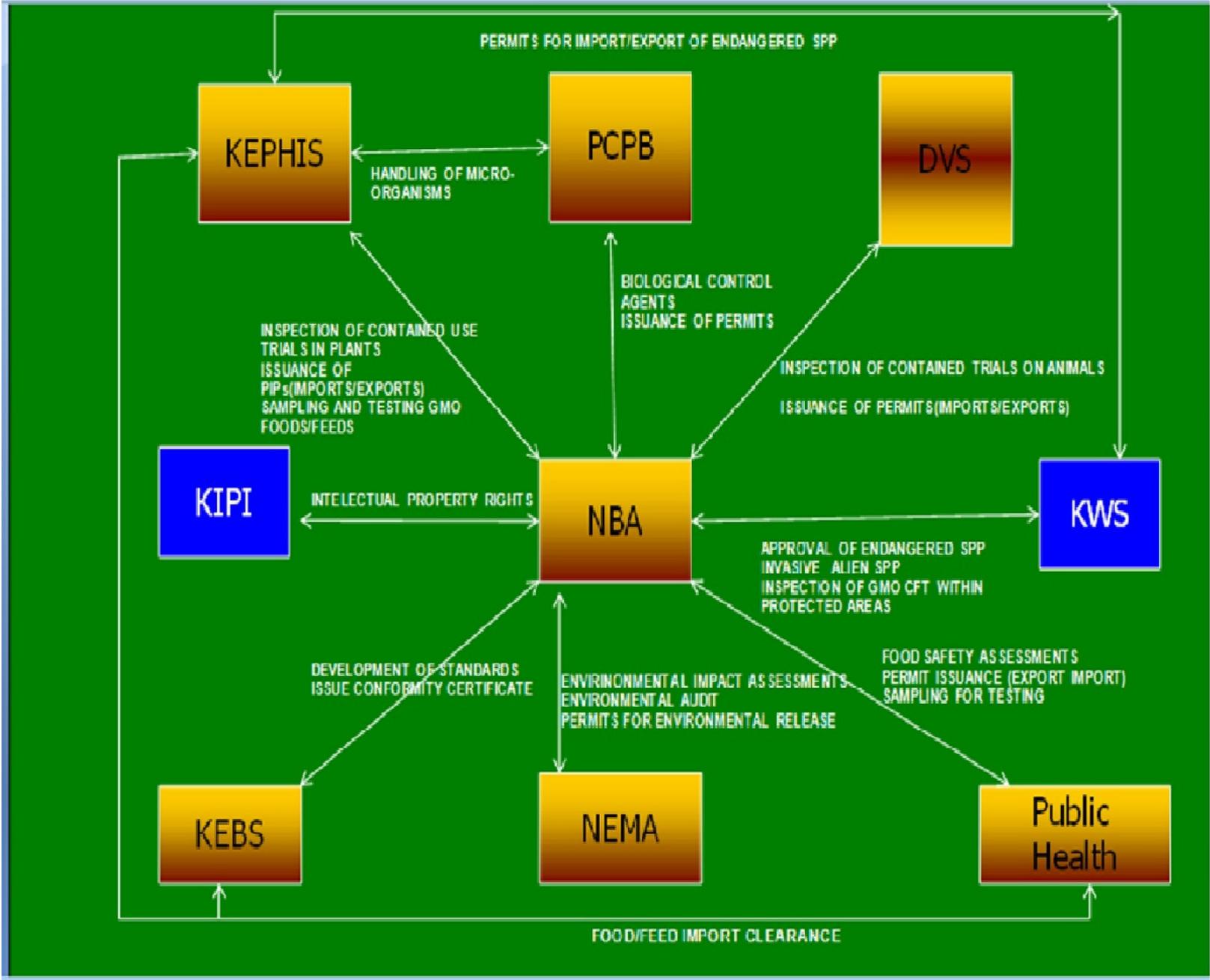
- The Cartagena Biosafety Protocol
- World Trade Organization Agreements
 - Sanitary and phytosanitary (SPS) Agreement; The General Agreement on Tariffs and Trade (“GATT”); The Technical Barriers to Trade Agreement (“TBT”)
- The Codex Alimentarius Commission
 - standards for use in the areas of food quality and food safety
- International Plant Protection Convention (IPPC)
 - establishes authority to regulate the entry of plants, plant products, and other regulated articles

National Institutions and Coordination Structure

The **National Biosafety Authority (NBA)**, established by the Biosafety Act No. 2 of 2009 to exercise general supervision and oversee the transfer, handling and use of genetically modified organisms (GMOs).

Entrusted with the **approval** or otherwise, (in consultation with out regulatory agencies), of all GMO products entering the country either for commercial use, transit or research

Regulates research and commercial activities involving GMOs, to **ensuring safety** of human and animal health and provision of an adequate level of protection of the environment



- The National Biosafety Authority (NBA) Board
 - broad based multi-stakeholder entity
 - scientists, secretaries from key Kenyan ministries, directors of biosafety regulatory agencies, and representatives of farmers, consumers and the private sector

Issues Arising from the Regulatory Framework

- conflicting interests and the capacity of Kenya's bio-safety institutions including NBA - The authority is charged with both the roles of **promoting** and **regulating** use of GMOs.
- some of the members of the NBA are drawn from bodies that carry out GMO research such as the Kenya Agricultural Research Institute (KARI)
- A core functions of NBA is “to promote awareness and education among the general public in matters relating to bio-safety”. NBA hosted by the Ministry of Education, Science and Technology
 - the role of promoting use of biotechnology well placed
 - But the regulatory role conflicts with its role as promoter

Issues Arising from the Regulatory Framework Contd.

- The Food, Drugs and Chemical Substances Act gives MOH sweeping powers to ban any foods which it considers hazardous
 - *The ban on GM commodities – was effected outside the regulatory framework developed for biotechnology development and biosafety*

Issues Arising Contd.: the case of the recent ban on GMOs

Institution	Role in the Ban on GMO foods and Products
National Biosafety Authority (NBA)	<p>The Ban caught NBA by surprise, just like many other institutions who may have needed to know in advance about the ban.</p> <p>The Authority has no clue on the reasons behind the ban since they were not consulted. Being a Cabinet decision, the ban is binding to all its agencies, NBA included.</p>
African Biotechnology Stakeholders Forum (ABSF)	<p>ABSF does not take the ban kindly. It expressed dissatisfaction in two protest letters to the (1) Minister of Higher Education, Science and Technology and (2) the Cabinet Secretary and Head of Civil Service.</p> <p>Letters questioning (i) the procedure taken by Cabinet in arriving at the decision to ban the GM food products. (ii) legality of the ban, the signals being sent on biotechnology investment and its implication on food security amongst others.</p>
Kenya Plant Health Inspectorate Services (KEPHIS)	<p>Heard of the ban from the media and played no role in the decision/consultations.</p> <p>They have heard of a task force and are not aware of either its mandate or membership.</p>
Kenya Bureau of Standards (KEBS)	<p>Learnt about the Cabinet ban through the media. Says it is handicapped on how to go about its business as there was no legal notice that would guide its action on GMO food and products.</p>
Ministry of Public Health and Sanitation (MOHPS)	<p>The division invoked the <i>Food, Drugs and Chemical Substances Act</i> which gives the division wide-ranging powers in the control and management of foods for human consumption. It did not rely on the biosafety Act.</p> <p>Policy allows the ministry to take precautionary measures to avoid being crucified by the public should any health calamity break-out due to the consumption of GMO foods and products.</p> <p>The ministry's decision to take action is based on the doubts raised on the safety of GMO - reference to the French study!</p> <p>MOHPS announced the formation of a Task Force (TF) to make recommendations on the future use of GMOs and their products in the country.</p>
Kenya Medical Research Institute (KEMRI)	<p>Recommended banning of GMO food products until the country gets enough capacity to assess such products for safety. Claims that Kenya has only three biosafety officers who cannot be relied on to provide adequate supervision over the safety of GMOs.</p>

Policy Challenges

Challenges

- Tension between biotechnology development policy and biosafety/food safety regulations
 - biotechnology development policies of the East African countries recognize the potential contribution of modern biotechnology for meeting socio-economic and development goals
 - biosafety regulations have provisions that may potentially undermine efforts to meet the regions food security and development goals

challenges contd.

- Although the Biosafety Act 2009 and import regulations allows the importation of GMOs
- BUT:
 - According to the Biosafety (Labelling) Regulations,2012, products containing more than one (1) per cent GM content are expected to be labelled
 - Conflict with the Food, Drugs and Chemical Substances Act gives MOH sweeping powers to ban any foods which it considers hazardous

Challenges contd.

- GMO policies/legislation in EC&S Africa not harmonised: South Africa is ahead, followed closely by Kenya and Zambia. Other countries in the region do not have in place, the prerequisite policies/legislation.
 - Because of the trade and of its position as a transit country for agricultural products, the GMO policy and legislation in Kenya and her trading partners is bound to affect/impact on trade and other related activities in EAC and beyond

Other challenges

- Other challenges incl. motivation for policy positions adopted, Policy makers 'fear that embracing GMO will:
 - lead to erosion of our traditional export markets – EU
 - be unsafe to humans and animals
 - lead to environmental degradation
 - Is not for small scale farming where isolation (GMO) is not guaranteed
- *Inconsistencies*: The ban on GM food trade is likely to be waived when there is a shortfall in the domestically produced food (read maize).
 - A similar waiver effected in 2011 to allow imports of

Effects of policies and legislation

Effects

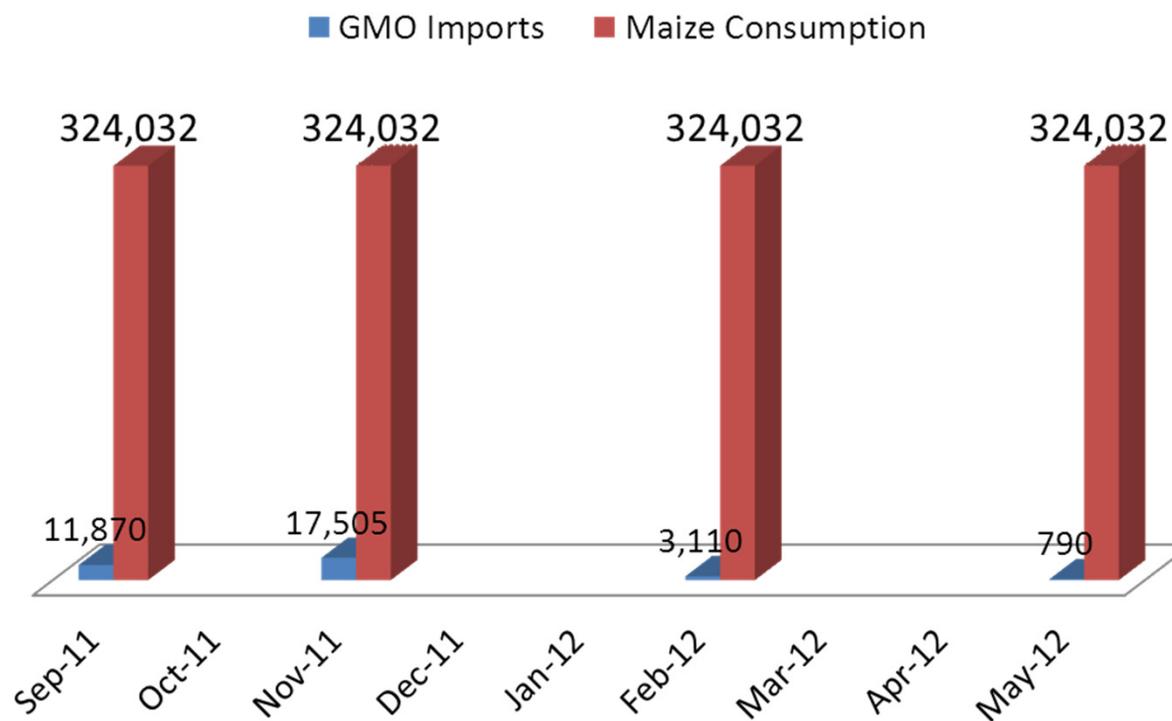
GM food & products ban may have negative impact on food security and the provision of emergency food aid

lead to:

- low food supplies/food shortages
- higher prices/price hikes for imported cereals and

Approved GMO Imports in the Recent Past

Month	Importer/Consignee	GMO Imports (MT)	Maize Consumption per Month (MT)
Sep-11	World Food Program	11,870	324,032
Nov-11	World Food Program	17,505	324,032
Feb-12	World Food Program	3,110	324,032
May-12	World Food Program/USAID EA	790	324,032



Comparison with maize consumption

Effects contd.

The difference in policy and legislation is likely to complicate research and trade in seed and agricultural products.

- Kenya is a transit country for relief food (to DRC, Somalia, S. Sudan, Uganda), most of which is GM food
- Kenya exports seed (especially maize) and seedlings to most of the countries in the region; also horticultural crops and flowers
- Kenya meets her food needs through imports from the region

Effects contd.

Mandatory labelling requirement:

- Consumers to have a choice in consuming or avoiding products made with GM ingredients
- Will result to higher costs;
 - *Certification*: GM commodities would have to be transported, stored and processed separately
 - Lengthy process for importers of GMO products (e.g. millers)
 - apply to NBA
 - NBA to assesses all risks, a process of 90 and 150 days (Biosafety Act)
 - Once approved, millers proceed to comply with the labeling regulations before placing the product in the market.
- likely to increase production costs by 11-12 per cent

Effects contd.

- Mandatory labelling to complicate the process of importation/trade.
 - *Extra Costs to Trade*: Due to varying labelling regulations among countries, for two countries with different regimes to trade without extra costs, unlabelled GM products can only flow from countries with more stringent labelling to those with more liberal labelling
 - *Trade Barriers*: to prohibit importation from countries that do not have labelling requirements and traceability that only targets GMOs

Concluding remarks

Concl. remarks

- Like many other countries, Kenya has treaded cautiously in the area of genetically modified GM food
 - protracted policy making process
 - Ban on imports and exports on GM food and products
- Chronology of events in policy making show a country determined to promote the production, commercialization and use of GM foods and products
 - Yet, has failed to introduce in the market, GM seed of

Concl. remarks contd.

- The policy advancements, contradictions and reversals point to a country in a dilemma concerning the weight to give food security vis vis food safety
 - both are components within the food system
- the policy contradictions and reversals have not boosted Kenya's efforts to be food secure
- government's position on GMO foods is highly dependent on the person at the helm of government ministries charged with promoting

Concl. remarks contd.

- Some regulations have potentially negative impacts :
 - the import ban on GM commodities - may lead to higher prices/price hikes for imported cereals (produced using conventional methods) and have negative impact on food security (food shortages) and the provision of emergency food aid
 - the labeling regulation - empowers the consumer but complicates trade: higher costs, NT barriers
 - disharmony in GMO policy and biosafety regulations will: defer/deter benefits expected from biotechnology; complicate trade in the region

Concl. remarks contd.

- There are loopholes in the governance of GMOs and biotechnology development
 - E.g. The ban on GM commodities was outside the regulatory framework developed for biotechnology development and biosafety
- We note/appreciate that a task force has been appointed to review matters related to GMO foods and food safety

Policy Recommendation

- Inconsistencies: Should not wait for shortfalls in the domestically produced food (read maize) to lift the ban on GM food and products!
- The assurance on safety of GM foods will be through investment in adequate testing and the regulatory infrastructure and human capacity
 - Address the real problem - capacity to generate technology; cost/benefit analysis; capacity to test, regulate, surveillance at entry points

Recommendations contd.

- Separate biosafety promotion and biosafety regulation roles to boost confidence in the GMO regulatory system
- Harmonise the institutions and application of laws governing GM food safety
- Harmonise GMO policies/legislation in ECA for ease of trade

Recommendations contd.

- Commission independent studies on costs, benefits and trade-offs:
 - conventional vis vis GM food
 - imported or domestically produced food
 - of various GMO regulations
- Make submissions to the taskforce mandated to review matters related to GMO foods and food safety



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Acknowledgement

This study is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of Tegemeo Institute and do not necessarily reflect the views of USAID or the United States Government.