



African Union



NEPAD Planning and
Coordinating Agency (NPCA)

West Africa Region Perspective on Agricultural GM Policy

**Genetically Modified Organisms (GMOs) for African
Agriculture: Challenges and Opportunities**

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Outline of Presentation

- West African Agricultural Challenge
- Thematic Biotech Policy Goals
- Regional Biotechnology Initiatives
- Regional Harmonization Efforts
- Considerations for a Workable System

West African Agric Challenge

- Region is a net importer of food
- High agric potential yet low productivity
 - Low product diversity
 - Existence of biotic and abiotic stresses
- Hunger and food insecurity
- Biotech identified as a tool for agric. productivity and food security
- Could be used to address challenges that have been difficult to resolve using conventional approaches

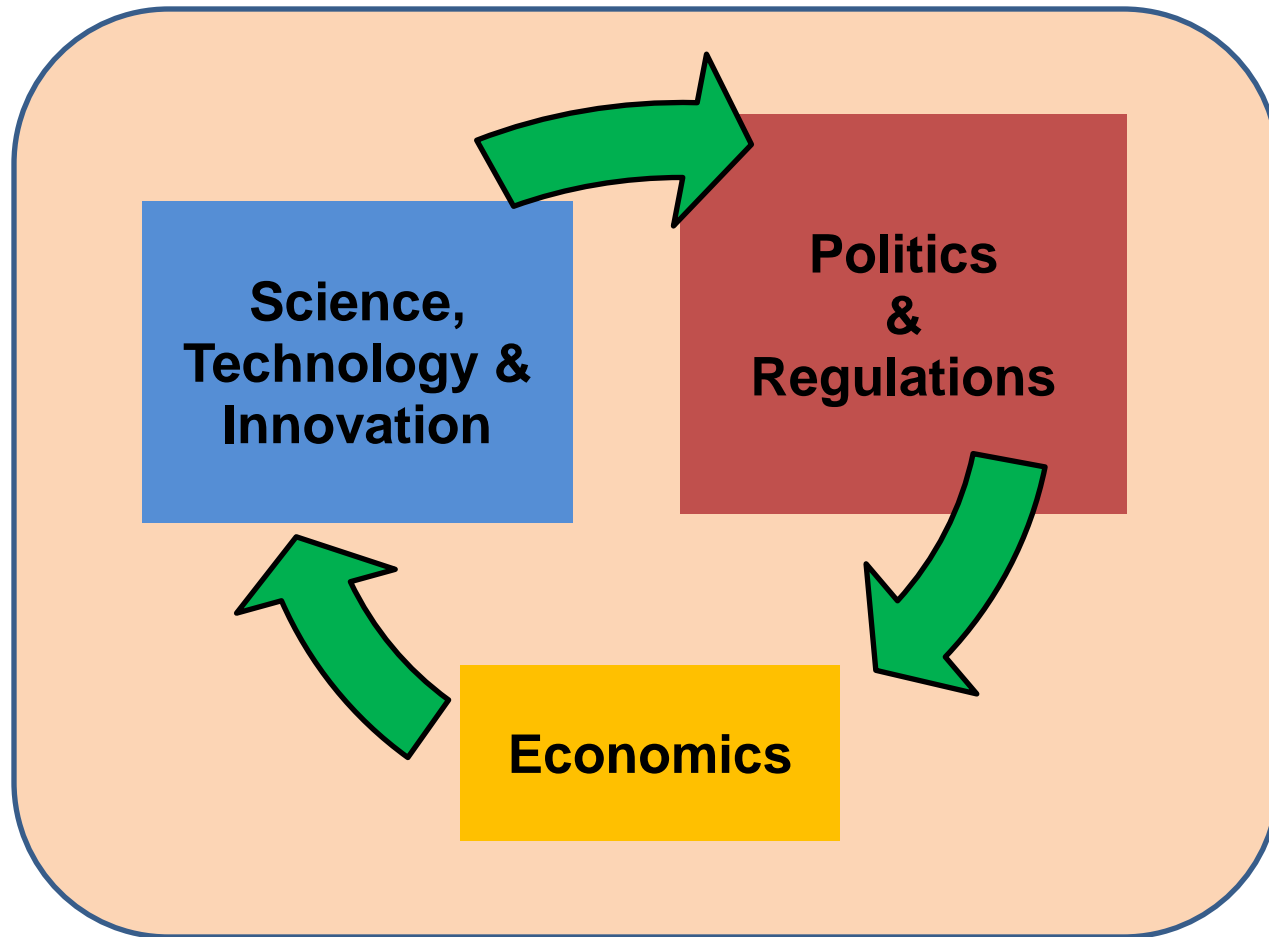


West African Agric Challenge

- Positive pronouncements on modern biotechnology development by political leadership
- Political will and support for biotechnology by AMCOST
- Position strengthened by the endorsement of the development of a 20-year African Biotechnology Strategy (8th AU summit in Addis Ababa in Jan. 2007)
- Strategy details specific regional technology goals as well as developing and harmonizing national and regional regulations for the safe use of modern biotechnology



Drivers of Agric. Biotechnology

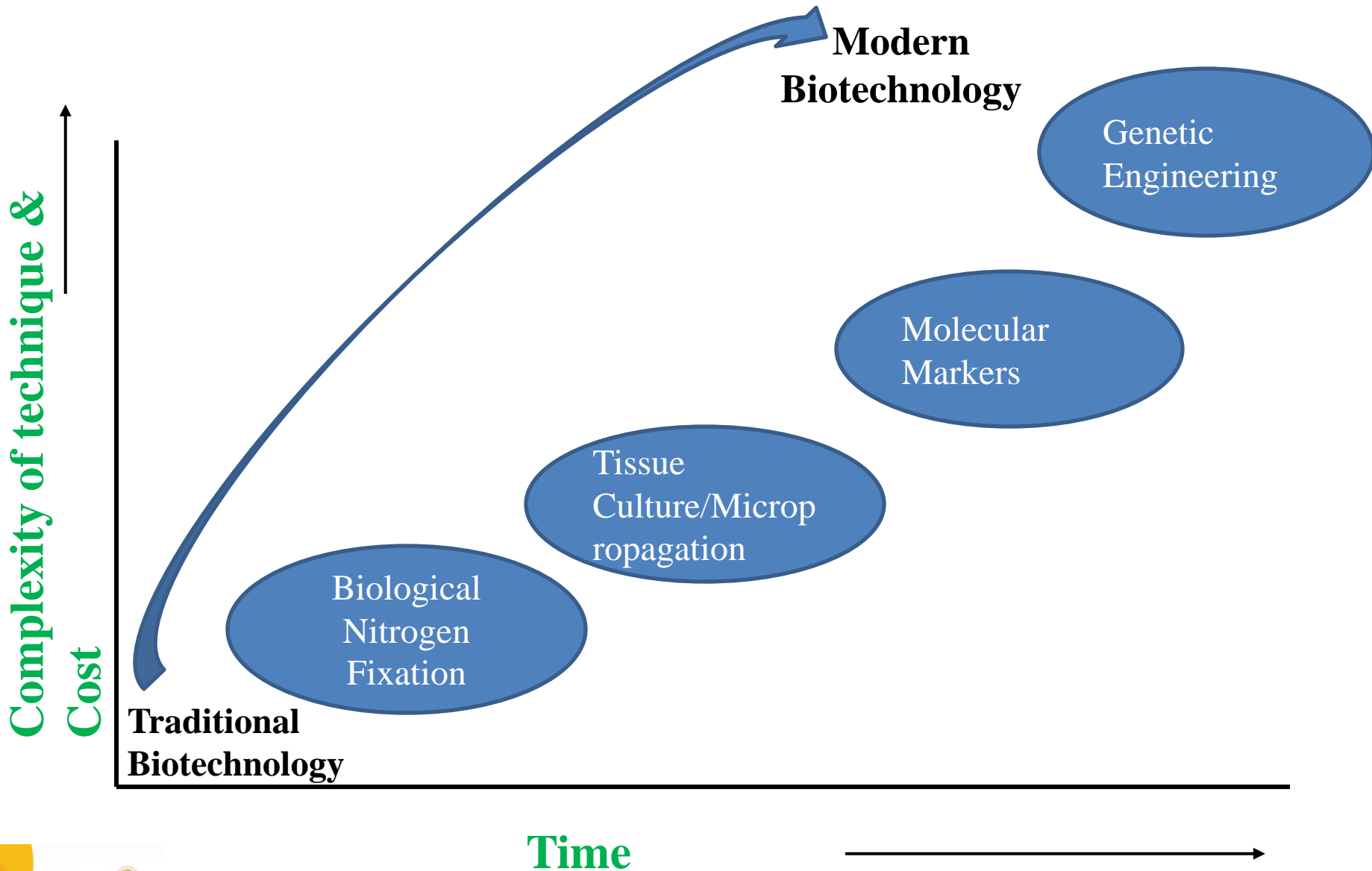


Biotech R&D Capacity Building Efforts in West Africa

- R&D activities ongoing at the at laboratory, greenhouse and CFT stages in a number of African countries
- Greater application of biotech tools for non-GE techniques



Agric. Biotech Applications in West Africa



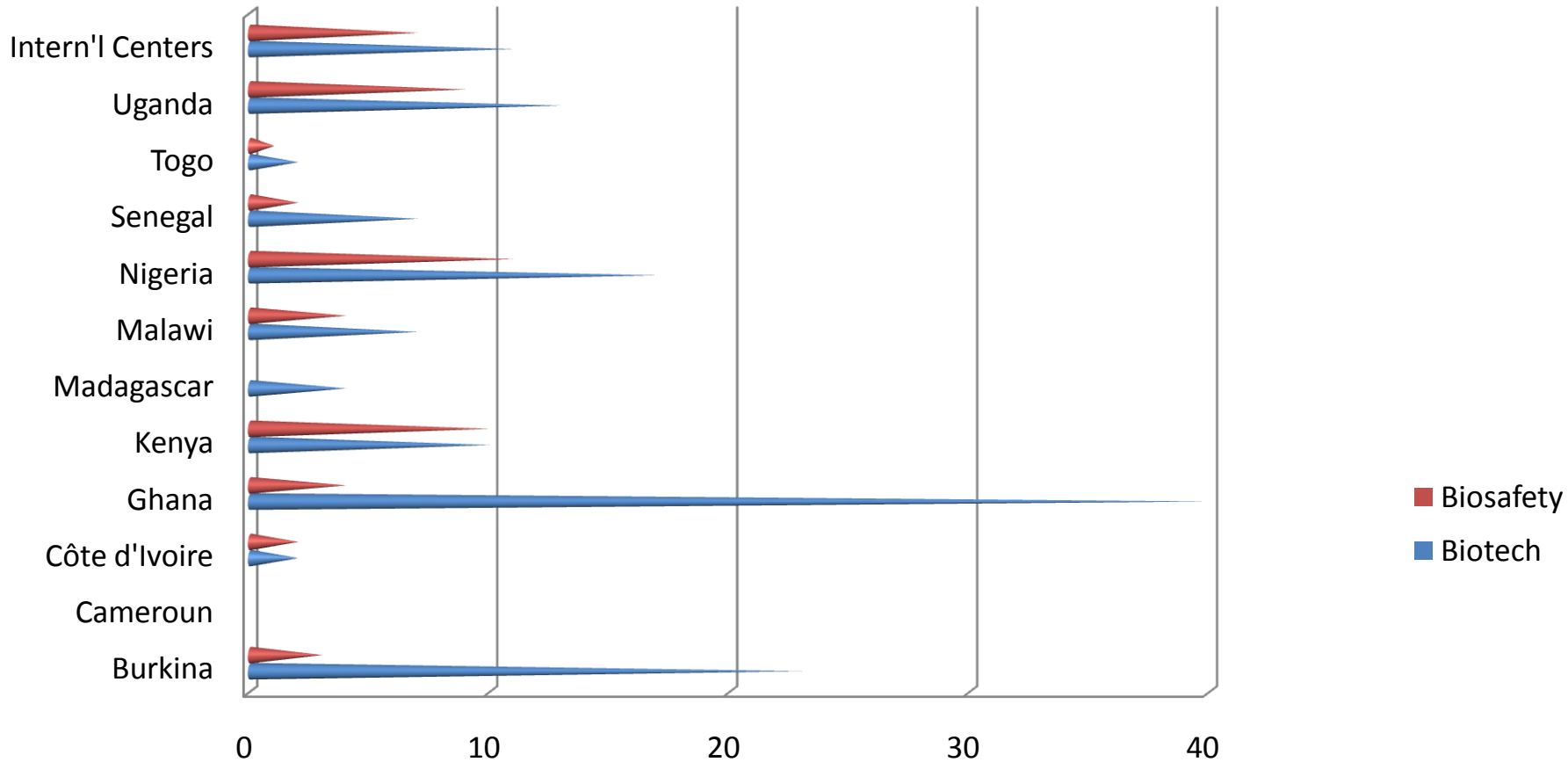
Some Ongoing/Planned Biotech R&D Activities at CFT Level in West Africa

Country	Crop	Trait	Status
Nigeria	Cowpea	Insect resistance	CFT ongoing
Burkina Faso	Cowpea	Insect resistance	CFT approved
Ghana	Cowpea	Insect resistance	CFT application submitted
Nigeria	Cassava	Nutrient enhancement	CFT ongoing

Only Burkina Faso has commercialized a GM crop (Bt cotton). Area under biotech cotton rose from 115,000 ha in 2009 to 260,000 ha in 2010 representing 65% of the country's total cotton area (ISAAA, 2010)



Staff in Biotech Research



Number of biotechnology research staff in each sampled by country (FARA, 2011)

Existence of National Biotech Policy

- Some have stand-alone biotech policies
- Some others have sectoral policies that are relevant to biotechnology and biosafety e.g.
 - National Science & Technology policy
 - Agriculture and natural resources sector policy
 - Health sector policy
 - Environment policy
- Only Nigeria has published its biotechnology policy document

Thematic Biotech Policy Goals



- Capacity building in biotech R&D, access and application (HR & infrastructure development)
- Priority/agenda setting and institutional arrangements for R&D
- Capacity building in biosafety
- Protection of bioresources, ethical and IPR issues
- Funding mechanisms/resource mobilization and allocative efficiency
- Awareness creation, public education and participation, and information sharing
- Creation of an enabling environment for biotech development

Commonalities in Biotech Policy in West Africa



- National capacity building
- Protection of indigenous knowledge and resources
- Protection of community or individual IP rights
- Public/private sector partnerships & linkages
- Regional and international collaboration/international trade
- Funding mechanisms
- Risk analysis
- Public awareness and participation in decision-making
- Integration into sectoral policies
- Institutional and legal framework to co-ordinate biotechnology
- Resource mobilization and management
- M&E and inspectorate roles
- Linkages to other relevant national policies

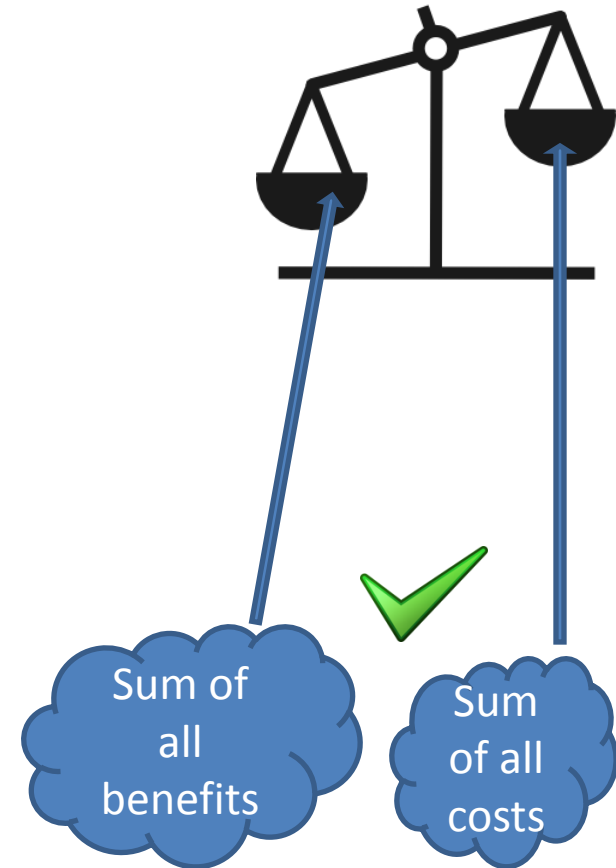
Key Elements of Biotech Policy

- Guiding principles
- Areas of strategic thrust
- General policy goals
- Sector-specific goals
- Thematic areas
- Biosafety regime
- R & D priority areas:
 - Food and agriculture
 - Health
 - Industry
 - Environment
 - Bio-resources development

Philosophical Underpinnings



- Precautionary principle
- Socioeconomic considerations including ethics and cost-benefit analysis
- Alignment with national development goals/vision
- Access to information
- Regional and international cooperation
- Cross-sectoral approach encompassing agriculture, environment, health, industry & trade



National Biosafety Framework

- A system of legal, technical, administrative and information management systems set in place to address safety in modern biotechnology
- The key elements of an NBF:
 - a government policy on Biotechnology/biosafety
 - a regulatory system (biosafety law, implementing regulations, guidelines)
 - an administrative system
 - a decision-making system
 - mechanisms for public participation & information sharing



Limitations to Biotech Growth

- Lack of/inadequate political commitment to implement biotech policies
- Absence of biosafety regulations in most countries
- Limited human resources with expertise in biotechnology/biosafety (compounded by brain drain)
- Lack of access to accurate information
- Inadequate infrastructure
- Lack of viable seed industries
- Nascent public-private sector partnerships
- Weak linkages between industry and R&D institutions



Biotech/Biosafety Capacity Building in West Africa

Some sub-regional initiatives West Africa

- CORAF/WECARD
- CILSS/INSAH
- ECOWAS
- WABNET
- WACCI
- WAEMU/UEMOA

Some Continent-wide Initiatives

- AATF
- AU-NEPAD ABNE
- FARA-SABIMA/FARA ABBPP
- ICGEB
- UNEP-GEF
- USAID PBS

Partnership is key - aim is to identify and develop joint programs to leverage financial and human resources for synergy and to avoid duplication

ECOWAS Member States

Country Name	Signed	Party	
Benin	1992-06-13	1994-06-30	rft
Burkina Faso	1992-06-12	1993-09-02	rft
Cape Verde	1992-06-12	1995-03-29	rft
Côte d'Ivoire	1992-06-10	1994-11-29	rft
Gabon	1992-06-12	1997-03-14	rft
Gambia	1992-06-12	1994-06-10	rft
Ghana	1992-06-12	1994-08-29	rft
Guinea	1992-06-12	1993-03-07	rft
Guinea-Bissau	1996-06-12	1995-10-27	rft
Liberia	1992-06-12	2000-11-08	rft
Mali	1992-09-30	1995-03-29	rft
Nigeria	1992-06-13	1994-08-29	rft
Senegal	1992-06-13	1994-10-17	rft
Sierra Leone		1994-12-12	acs
Togo	1992-06-12	1995-10-04	acp

Biotech/Biosafety Capacity in West Africa

- Some progress made
 - Ongoing manpower training to produce critical mass of highly skilled scientists in various aspects of biotechnology (up to PhD)
 - Increased capacity in tissue culture techniques and molecular characterization of plants
 - Improved human resource and laboratory infrastructure in some countries
 - Virtually every country has a National Biosafety Framework
 - Burkina Faso, Ghana, Mali, Nigeria, Senegal and Togo have biosafety legislation

Regulating Agric.Biotechnology

Goal of biosafety

To ensure the safe application of modern biotech and not to impede its application

Regulations – Coverage

- **Safety Considerations**
 - Environment
 - Human health
- **Non-safety Considerations**
 - Socio-economics etc



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Regulatory Pitfalls



Creating regulatory systems with the ff features

- Expensive, time consuming, & inefficient
- Unpredictable, not evidence- and science-based
- Liability clauses that serve as a disincentive
- Unenforceable laws/guidelines
- Wrong terminologies
- Needless data requirement
- Lack of consistency of biosafety laws with existing national laws/international agreements
- Inter-ministerial confusion
- Mandate overlaps of regulatory agencies
- Limited operational budgets

Harmonization of Regulations - ECOWAS

- A harmonised regulatory approach expected to help address the core issue of inadequate regulatory capacity by pooling resources
- It will confer benefits of economies of scale
 - creation of a common, bigger, and more competitive market
 - facilitation of cross-border trade and movement of commodities
 - promotion of regulatory efficiency, and
 - creation of standardised and more transparent processes that will assure predictability in international trade

Harmonization of Regulations

- Key issues that can lead to disagreements and stymie progress towards harmonized regulatory frameworks include
 - choice of terminologies
 - consistency with international obligations
 - inclusion or otherwise of socio-economics
 - labelling
 - choice of liability and redress regime

Harmonization of Regulations

3 possible models for biosafety:

1. a centralized regional regulatory system that makes all decisions at the regional level on behalf of national systems;
2. a regional regulatory system that makes some decisions while deferring other decisions to national systems;
3. a regional regulatory system that conducts risk assessment and makes recommendations but has all decisions made at the national level.

Harmonization of Regulations – Some Issues with ECOWAS Draft

National/stakeholder consultations ongoing

- Use of terminologies and Scope
- Risk Assessment must be science-based
- Inclusion of socio-economic considerations in risk assessment
- Inappropriate risk management provisions
- Creation of “monitoring stations” at regional level
- Excessive civil and criminal liability and Redress provisions
- Absence of confidentiality and IP Protection

Improving the Process

- Stakeholders must be flexible and willing to move beyond premeditated positions in favour of workable and efficient alternative solutions
- A participatory approach through consensus-building meetings and consultations involving relevant stakeholders at national and regional levels would ensure ownership of both the process and outcome

Emerging consensus is to develop a harmonised regulatory framework that is guided in principle by having a regional mechanism for risk assessment while authorizations or decision-making is done at the national level

Importance of a Biosafety Law

- Demonstrates government leadership in the technology
- Assures the public of safety
- Facilitates public research and corporate collaboration
- Promotes investment by industry

Nothing is more destructive of respect for the government and the law of the land than passing laws which cannot be enforced - *Albert Einstein*

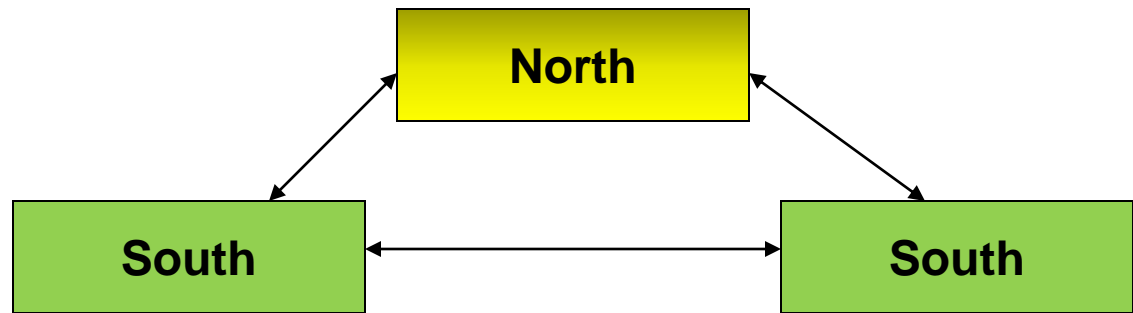
Concluding Remarks

- Government must ensure an enabling regulatory, legal, and business-friendly environment
- Government policies must be supportive of technology acquisition and commercialization
- Need for a critical mass of highly competent personnel
- African governments must provide adequate funding for national biosafety functions
- Need to develop a culture of information sharing



Concluding Remarks

- Regional harmonization efforts for regulations and resource use should be encouraged
- Need to build and strengthen strategic business partnerships
- Need for increased collaboration in STI for exchange of biotech/biosafety information, knowledge, and expertise



About Us

AU-NPCA ABNE

- **Africa-owned, continent-wide biosafety resource for African regulators**
- **Range of services include:**
 - **science-based biosafety information through a web portal**

AU-NPCA ABNE

- **training programs**
 - **workshops**
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