Required Report: Required - Public Distribution **Date:** December 01, 2023

Report Number: TZ2023-0004

Report Name: Biotechnology and Other New Production Technologies Annual

Country: Tanzania

Post: Dar Es Salaam

Report Category: Biotechnology and Other New Production Technologies

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Report Highlights:

There are currently no genetically engineered (GE) products traded or commercialized in Tanzania due to the strict liability clause in the Biosafety Regulations of 2009. In September 2022, Tanzania's Ministry of Agriculture reversed a 2021 ban on all GE research trials, directing the Tanzania Agriculture Research Institute to identify stations for GE research. At time of publication, no new research trials have been launched.

EXECUTIVE SUMMARY

Production and trade of GE and GE-derived products are curtailed in Tanzania due to a strict liability clause in the Biosafety Regulations of 2009. Under these regulations, any entity that produces, commercializes, imports, or conducts any commercial activity relating to biotechnology products is strictly liable for a wide-ranging scope of possible direct and indirect harm. This liability requirement has functioned as a *de facto* ban on agricultural biotechnology products in Tanzania.

The Government of Tanzania (GoT) has alternatively relaxed and tightened restrictions on domestic GE research. In September 2022, the Ministry of Agriculture instructed the Tanzania Agricultural Research Institute (TARI) to dedicate stations for GE crop research. This decision lifted a blanket ban on all domestic research trials which was introduced in January 2021. Currently, the GoT is looking for a willing development partner to renovate available biotechnology research laboratories available at the TARI Mikocheni and Makutopora stations. As of time of publication, no biotech research trials are underway in Tanzania.

Public debate regarding GE technologies is contentious and subject to significant misinformation concerning health and environmental risks. Many non-GE organizations spread negative messages targeting policymakers, consumers, and farmers, highlighting perceived risks, often without sufficient scientific evidence. On the other hand, Tanzania scientists and some policymakers continue to advocate for a scientific approach to GE products. These advocates include the Biotech Society of Tanzania, the Open Forum on Agricultural Biotechnology in Africa (OFAB), the Tanzania Commission for Science and Technology (COSTEC), the Sokoine University of Agriculture (SUA), and the Vice President's Office (VPO).

The Environment Division under the Vice President's Office is the National Biosafety Focal Point (NBF) and the National Competent Authority (NCA). It provides the Biosafety Clearing House (BCH) with required data for the Cartagena Protocol. The NBF manages national policies related to biosafety and the regulatory regime; administrative, decision-making, and monitoring responsibilities; and mechanisms for public awareness, education, and participation.

Tanzania's 2021 National Environment Policy approves modern biotechnology as an important tool for research and improved productivity in various sectors including agriculture and medicine. Commercialization of biotech products, however, remains blocked due to Tanzania's strict liability clause and the lack of specific policy guidance for safe use and handling of modern biotechnology.

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CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT

While Tanzania recently identified TARI research stations at Makutopora, and Mikocheni as centers for GE research, there are no GE crops currently under development. In September 2022, the Ministry of Agriculture lifted a 2021 research ban by directing TARI to identify stations that could be used for GE research. This decision has yet to result in new research projects or the resumption of old projects.

Before the 2021 ban, domestic researchers made progress on several GE products, including drought-tolerant maize and brown streak-resistant cassava:

- In 2013, TARI launched research trials at Mikocheni to develop cassava varieties with resistance to cassava mosaic disease and cassava brown streak disease. This research was funded by the Bill and Melinda Gates Foundation (BMGF), the GoT, the Association for Strengthening Agricultural Research in Eastern and Central Africa, and the Rockefeller Foundation. Trials were done under contained laboratory conditions and ended in 2018.

- From 2008 to 2018, the Tanzania Commission for Science and Technology (COSTECH) and TARI conducted trials under the Water Efficient Maize for Africa (WEMA) project, in collaboration with national agricultural research institutions from Kenya, Uganda, Mozambique, and South Africa. The WEMA project sought to develop drought-tolerant and insect-resistant maize varieties and provide them royalty-free to small-scale farmers. The project was supported by the African Agricultural Technology Foundation (AATF) through a grant from the BMGF, USAID, and Howard G. Buffett Foundation. The WEMA project was the first and only confined field trial (CFT) at the Makutupora research station. Beginning in 2019, the Makutopora station supported research for TELA maize (a continuation of the WEMA project) however Tanzania participation in TELA maize development was suspended due to the strict liability clause of Tanzania's biosafety regulations.

1. Tissue Culture and Micro Propagation

Several institutions routinely use tissue culture techniques to develop disease-free planting materials and to speed up crop production. These institutions include the Agricultural Research Institute (MARI) in Dar es Salaam; the Agricultural Research Institute (ARI) Mlingano in Tanga; ARI Uyole, Mbeya; the Horticulture Research Institute-Tengeru in Arusha; the Kizimbani Agriculture Research Station in Zanzibar; the Tropical Pesticides Research Institute (TPRI), Arusha; Sokoine University of Agriculture (SUA); and the Tanzania Coffee Research Institute (TACRI) through Crop Bioscience Solutions Ltd (CBS).

2. DNA Markers and Marker-Assisted Technologies

The following institutions utilize DNA marker technology: MARI, SUA, the Central Veterinary Laboratory (CVL), the Molecular Biology and Biotechnology Department (DMBB), the University of Dar es Salaam (UDSM), and the Ifakara Health Research Development Centre.

3. Genomics and Bioinformatics

Tanzania's genomics capacity is developing. The Sokoine University of Agriculture has established a state-of-the-art genome science center that provides training on functional genomics to postgraduate students. The center has facilities for cDNA work, printing microarrays using a high throughput GENETIX microarray, and four-color scanning arrays.

b) COMMERCIAL PRODUCTION

The strict liability clause of the 2009 Tanzania Biosafety Regulations hinders the commercialization of GE crops. There is no commercial production of GE crops or seeds in Tanzania.

c) EXPORTS

Tanzania does not export GE crops to the United States or any other country.

d) IMPORTS

The GoT has a *de facto* ban on imports of plant biotechnology products. Imports are subject to an arduous approval process and the liability requirements of the Biosafety Regulations of 2009, which have together deterred GE imports.

e) FOOD AID

Tanzania is not a significant food aid recipient country. GE food and feed assistance introduced into Tanzania must comply with the prior informed consent principle and a notification requirement per Article 8 of the Cartagena Protocol on Biosafety, 2000. Food and feed consignments involving grain that contain "GMOs" must be milled before distribution to beneficiaries. A person or company transporting "GMOs" through Tanzania to other countries must inform the National Biosafety Focal Point in advance and comply with relevant national requirements relating to containment and transport. Tanzania's strict liability clause also applies to shipments transiting Tanzania, deterring the transshipment of GE products.

f) TRADE BARRIERS

The strict liability clause in the Biosafety Regulations of 2009 is a *de facto* barrier to the commercialization of GE products for cultivation or import. This regulation states "any person or his agent who imports, transits, makes contained or confined use of, releases, carries out any activity concerning 'GMO's or products thereof or places on the market a 'GMO' shall be strictly liable for any harm, injury or loss caused directly or indirectly by such 'GMO's or their products or any activity concerning 'GMO's." It further states that "the harm, injury, or loss includes personal injury, damage to property, financial loss, and damage to the environment or biological diversity and takes into account socio-economic, cultural, and ethical concerns." The broad scope and open-ended penalties of the regulation reflect a "precautionary principle" approach to risk management, which puts a priority on anticipating and guarding against hypothetical risks—even if there is no evidence of said risk. The potential penalties under the liability clause of the Biosafety Regulations of 2009 effectively stifle research, trade, and production as it exposes GE-related activity to open-ended legal risks.

PART B: POLICY

a) REGULATORY FRAMEWORK

Below is a table of common terms used in Tanzania's biotechnology laws and regulations. These terms are used in the following:

1. The Environmental Management (Biosafety) Regulations, 2009.
2. The National Biotechnology Policy of 2010.
3. The Tanzania National Biosafety Framework, 2004.
4. The National Environmental Policy, 2021.
5. The Environmental Management Act (Cap. 191).

Legal Term in English / Official Language	**Legal Definition in English**
Advance Informed Agreement (AIA)	A consensual agreement based upon full disclosure of all relevant information and the full responsibility by the supplier for its accuracy and completeness before any activity is undertaken.
Adventitious presence of "GMOs"	The threshold levels set by the Vice President's office as mandated by Regulation 45 of the 2009 Biosafety Regulations.
Applicant	A person or country applying for approval to make, import, export, use under containment, use under confinement, release, or place on the market any "GMO" or any product of any "GMO."

Biosafety	The avoidance of risk to the environment and human and animal health, resulting from use for research or commerce of "GMOs".
Biotechnology	Any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.
Confined use/Contained use	Any operation in which "GMOs" or their products are produced, grown, stored, destroyed, or used in some other way in a closed system in which physical barriers are employed, either alone or together with chemical and/or biological barriers, to effectively limit their contact with and their impact on the general population, biological diversity, and the external environment.
Competent Authority	The ministerial competent authority designated as such under Regulation 11 of the 2009 Biosafety Regulations.
Deliberate Release or Release	Any intentional introduction into the environment of a "GMO" or a product thereof. This includes releases for commercial purposes; food aid; import; export; transport; research purposes in field experiments; and use of "GMOs" in greenhouses and livestock and aquaculture facilities, unless the facility is approved for contained use as part of an approved laboratory or other installation.
Genetically Modified Organism ("GMO")	Any biological entity capable of replication or transfer of genetic information created and propagated using cell or gene technology in which the genetic material has been altered in a way that does not occur naturally. This includes plants, animals, bacteria, cell cultures, viruses, plasmids, and all other kinds of vectors and microorganisms.
Gene Technology	Techniques that involve the isolation, characterization, modification, and introduction of DNA into living cells or viruses.
Cell Technology	Techniques for the production of living cells with new combinations of genetic material by the fusion of two or more cells.
Import	Intentional transboundary movement of "GMOs" and "GMO" products into Tanzania from another country.
Importer	Any person who imports or arranges for the importation of a genetically modified organism replicating genetic material including sterile biological entities, viruses, viroids, and plasmids.
Inspector	An environmental inspector appointed or designated as such under the provisions of the Biosafety Regulations of 2009.
Modern Biotechnology	The application of: a) In vitro nucleic acid techniques including recombinant deoxyribonucleic acid (rDNA) and direct injection of nucleic acid into cells or organelles, or b) The fusion of cells beyond the taxonomic family.
National Biosafety Focal Point	The Office of the Vice President.

National Biosafety Framework (NBF)	A combination of policy, legal, administrative, and technical instruments that are set in place to address safety for the environment and human and animal health in the context of modern biotechnology.
Notification	The provision of information to, and where appropriate, the lodging of samples, with the NBFP or competent authority.
Person	Legal entities and local communities.
Placing on the Market	Supplying or making available to third parties a "GMO" or a product thereof, whether there has been a monetary exchange or not, including food aid.
Product thereof / product of "GMO"	Any material derived by processing, or howsoever otherwise, from any 'GMO" or a product of a "GMO."
Public Awareness	The process of imparting relevant information to stakeholders about biotech issues.
Public Participation	A process of encouraging all interested and affected parties to contribute to solving social problems and taking on responsibilities for action. Public participation in the context of the NBF, aims to encourage the public and interested stakeholders to be aware of, and contribute to, the research, development, implementation, and monitoring of the policy framework.
Risk	A function of the probability of harm and the severity of that harm, consequential to the transport, handling, use, or disposal of a "GMO."
Risk Assessment	The evaluation of the direct and indirect risks to human and animal health, the environment, biological diversity, and the socio-economic conditions and ethical values of the country or its populace which may be posed by the import, contained use, deliberate release or placing on the market of "GMOs" or products thereof. This includes the evaluation of secondary and long-term effects.
Socio-economic Impact	The direct or indirect effects on the economy, social or cultural practices, livelihoods, indigenous knowledge systems, or indigenous technologies as a result of the import, release, contained use, handling, or placing on the market of "GMOs" or their products.
Transboundary Movement	The movement of a "GMO" to or from a territorial jurisdiction of Tanzania.
Transit	The transportation, by whatever means, of a "GMO" into Tanzania from any other jurisdiction to convey such a "GMO" to any third jurisdiction.
Unintentional Release	A release that takes place without authorization under the Biosafety Regulations of 2009 and takes place as a result of the adventitious presence of "GMOs" with non-"GMO' shipments imported for direct use as food, feed, or for processing, excluding accidents.

Tanzania developed its Environmental Management (Biosafety) Regulations in 2009. These regulations apply to the import, export, deliberate release, confined use, contained use, transit, and commercialization of "GMO's and their products.

The Environment Division under the Vice President's Office is the National Biosafety Focal Point (NBF) and the National Competent Authority (NCA). It provides the Biosafety Clearing House (BCH) with required data for the Cartagena Protocol. The NBF manages national policies related to biosafety and the regulatory regime; administrative, decision-making, and monitoring responsibilities; and mechanisms for public awareness, education, and participation.

The following principles guide the 2009 Biosafety Regulations:

i. *Precautionary principle*: The possibility of damage associated with GE products should be the primary consideration in approving new products and caution should be maintained even in the absence of any evidence of risk.

ii. *Principle of prevention:* Approval shall not be given for the deliberate release or placing on the market of "GMOs" or their products for agricultural purposes until the National Biosafety Focal Point has received research results regarding the effects of "GMOs" or their products. All approvals shall be made subject to risk assessments and environmental impact assessments of potential effects of the planned activity.

iii. *Strict liability:* All approvals for the introduction of "GMOs" or their products shall be subject to a condition that the applicant is strictly liable for any damage caused to any person or entity.

1) Tanzania's Approval Process for GE Products

To import, commercialize, environmentally release, or cultivate a GE product under contained use, the below steps must be followed to obtain approval from the National Biosafety Focal Point and the Minister of State for the Environment:

i. Any person who intends to import, export, transport, release, or use in contained condition, confined condition, or place on the market "GMOs" or products thereof shall submit an application in writing to the National Biosafety Focal Point. The application should contain:

- General information;
- Information relating to the "GMOs" or products thereof;
- Information relating to the conditions of release, contained use, or commercialization and, where appropriate, the receiving environment;
- Information on the interaction between the "GMOs" or products thereof and the environment;
- In case of an application for contained use, an impact assessment setting out the consequences of unintentional release of "GMOs" or their products;
- A report on the impacts and risks posed by the "GMOs" or products thereof to human and animal health, biological diversity, and the environment;

- Information on results from deliberate release in the country and internationally of the "GMOs" or products thereof previously or currently carried out by the applicant;

- Information on previous approvals or rejections of the "GMOs" or products thereof by any other country, where approval is sought;

- Information on where and for what purposes the "GMOs" or products thereof will be marketed, together with detailed instructions for use and proposed labeling and packaging, and

- Other information as may be required by the NBF.

ii. Public feedback must be solicited and considered:

- The National Biosafety Focal Point shall, upon receipt of the application, make the application available to the public.

- Any person may, within three months or such other period as may be specified, make comments on the application to the National Biosafety Focal Point.

- The National Biosafety Focal Point shall also provide public consultation through the national media or the Biosafety Clearinghouse before the decision is made.

- The National Biosafety Focal Point shall also undertake consultations with expert bodies that are concerned with the preservation of the natural environment, human and animal health, and representatives of the farming industry.

- Any comment made by the public according to the preceding provisions of this regulation shall be considered by the National Biosafety Focal Point before making its decision.

- The National Biosafety Focal Point shall promote and facilitate public awareness, education, and participation concerning the safe transfer, handling, and use of "GMOs" and products thereof.

iii. The GoT must disclose the following information to the public:

- Information on all "GMOs" or their products that have received or been denied authorization for import, deliberate release (including the location of the release), placing on the market, or contained use, and the risk assessment for "GMOs" or products thereof.

2) Risk Assessment

Applicants who wish to introduce "GMOs" into Tanzania must assess the impacts and risks posed by "GMOs" or their products to human and animal health, the environment, and biological diversity. The applicant must prepare and submit this assessment to the National Biosafety Focal Point. Before any deliberate release of "GMOs" into the environment, a thorough study on the impacts of the following will be conducted:

- Ethical and social-economic impact on the local population;
- Traditional market and export earnings;
- Health;
- Production systems;
- Ethical, moral, and social considerations; and
- The economic value of traditional species likely to be affected by the introduction of "GMOs" must be estimated by the competent authority.

3) Decision Making Procedure

According to the Biosafety Regulations of 2009:

- The National Biosafety Focal Point shall appoint a competent authority (currently the Tanzania Bureau of Standards) to test "GMOs" and their products thereof. The National Biosafety Focal Point shall inform the applicant in writing of its decision that the import, export, transit, release, commercialization, or contained or confined use of the product is:
    - approved;
    - approved with such conditions as it may specify; or
    - refused.
- Approval shall be given where there is firm and sufficient evidence that the "GMOs" or their products pose no risk to human and animal health, the environment, and biological diversity.
- The National Biosafety Focal Point may direct that the activity approved shall be carried out step-by-step so that an assessment of risks may be conducted at each step.
- The National Biosafety Focal Point may, in appropriate cases, where it is satisfied that no risk is posed to human and animal health, biological diversity, and the environment dispense with the step-by-step introduction of "GMOs" or their products.
- Any approval for release or contained use shall require the applicant to carry out monitoring and evaluation of risks after the "GMOs" or products thereof have been imported, released, or placed on the market.
- The National Biosafety Focal Point shall, as a condition for approval, require the applicant to take out an insurance policy against liability to pay compensation for damages.

- The applicant shall not carry out any activity with "GMOs" or products thereof until approval for doing so has been obtained under these regulations.

- Any approval given shall either be revoked or subjected to conditions in addition to those originally imposed if, in the opinion of the National Biosafety Focal Point, new information or a review of existing information about the "GMOs" or products thereof establishes risks to human or animal health, biological diversity or the environment, based on the precautionary principle stated by the Biosafety Regulations of 2009.

- If any approval is revoked, the National Biosafety Focal Point may also, where applicable, order the destruction of any growing organisms and the sterilization of the soil in which they are being grown, in whatever way it deems appropriate.

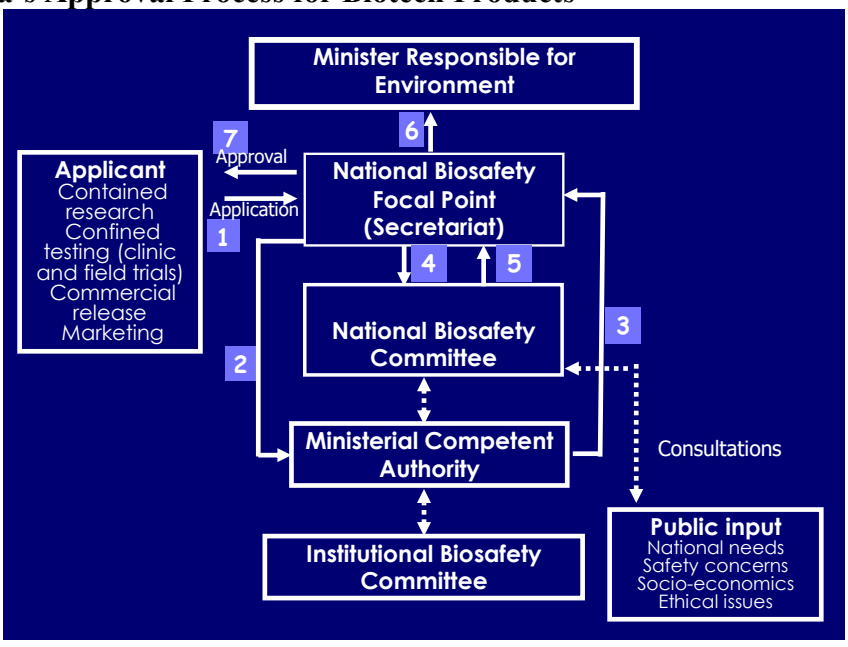
- No compensation shall be payable as a consequence of the order for sterilization.

- The applicant shall immediately notify the National Biosafety Focal Point when new information becomes available on the possible risks to human or animal health, biological diversity, or the environment, as well as taking into account socio-economic, cultural, and ethical concerns after the approval has been granted.

- Any person who is aggrieved by any decision of the National Biosafety Focal Point under this part may at any time within thirty days beginning from the date of communication of notification of the decision appeal to the Minister of the Environment.

- A person who is aggrieved by the decision of the Minister may within thirty days following that decision, appeal to the Environmental Appeals Tribunal in such manner as may be prescribed by the Tribunal.

Figure 2: Tanzania's Approval Process for Biotech Products



b) APPROVALS

No plants are approved for cultivation, import, or export in Tanzania.

c) STACKED EVENT APPROVALS

No stacked events are approved for cultivation, import, or export in Tanzania. Stacked events are subject to case-by-case reviews. Depending on the character of the trait, the National Biosafety Committee may require extra information for approval. Tanzania does not have specific regulations for stacked events.

d) FIELD TESTING

Currently, there are no field trials in Tanzania. Before the 2021 ban, the GoT allowed CFTs for GE corn. The trial was on a two-hectare plot at Makutopora research station near Dodoma.

Plant	**Trait**	**Developer**	**Stage**	**Number of trials**
White maize/corn	Drought tolerant	TARI	CFT	4
White maize/corn	Stack (Drought-tolerant and insect-resistant)	TARI	CFT	3
Cassava	CBD/CMD resistant	TARI	Lab	0

e) INNOVATIVE BIOTECHNOLOGIES

Tanzania does not have any regulations or policies specific to innovative biotechnologies.

f) COEXISTENCE

The GoT has issued GE handling guidelines regarding the coexistence between GE and conventional crops. If GE crops are commercialized, smallholder farmers will likely require assistance to comply with these guidelines.

g) LABELING AND TRACEABILITY

Labeling is required for bulk shipments, raw materials, packaged food or feeds, or other products derived from and/or containing ingredients from GE plants. Currently, there are no legal GE products on the market.

h) MONITORING AND TESTING

Monitoring for GE products is required in supermarkets and at points of entry. The Tanzania Bureau of Standards (TBS) monitors and tests agricultural commodities and food product imports at ports of entry. The Tanzanian government has limited personnel and testing facilities for evaluating agricultural products for GE content.

i) LOW-LEVEL PRESENCE POLICY

Tanzania has no low-level presence policy.

j) ADDITIONAL REGULATORY REQUIREMENTS

GE crops and products are subject to national laws that apply to conventional products such as the Tanzania Food and Drug Act, regulations covering the release of new crop varieties, and other relevant regulations.

k) INTELLECTUAL PROPERTY RIGHTS

Tanzania is a member of the WTO Agreement on Trade-Related Intellectual Property Rights (TRIPS). Tanzania does not have a National Intellectual Property Policy (NIP). However, several institutions play a role in IP issues including:

a) The Business Registrations and Licensing Agency (BRELA).
b) The Commission for Science and Technology (COSTECH).
c) The Copyright Society of Tanzania (COSOTA).
d) The Fair Competition Commission (FCC).
e) The Fair Competition Tribunal (FCT).
f) The Ministry of Agriculture through the Plant Breeders Rights Regulation (PBR).
g) The Tanzania Bureau of Standards (TBS).
h) The Tanzania Food and Drugs Authority (TFDA).
i) The Tanzania Revenue Authority (TRA).
j) The **Error! Hyperlink reference not valid.**Commercial Court (under the High Court of Tanzania).
k) The University of Dar es Salaam (UDSM).
l) The Sokoine University of Agriculture, (SUA), and The Nelson Mandela African Institution of Science and Technology (NM-AIST).
m) The National Institute of Medical Research (NIMR).
n) The Tropical Pests Research Institute (TPRI).

l) CARTAGENA PROTOCOL RATIFICATION

Tanzania ratified the Cartagena Protocol on Biosafety (CBP) on March 16, 2003. Tanzania adopted the CBP on January 29, 2000, as a protocol of the Convention on Biological Diversity and it entered into force on September 11, 2003. The NBFP is Tanzania's focal point of the CBP and shares data with the Biosafety Clearing House, a mechanism set by the CPB to facilitate information exchange on GE product development and to assist member countries in complying with their obligations under the protocol.

m) INTERNATIONAL TREATIES AND FORUMS

Tanzania is a member of several international organizations that deal with plant protection and plant health, including the International Plant Protection Convention (IPPC), the International Treaty on Plant Genetic Resources for Food and Agriculture, Codex Alimentarius, the World Trade Organization (WTO), the World Intellectual Property Organization (WIPO), and the African Regional Intellectual

Property Organization (ARIPO). Tanzania has ratified the International Convention on Biological Diversity (CBD), the International Treaty on Plant Genetic Resources for Food and Agriculture (IT-PGRFA), and the aforementioned CPB.

n) RELATED ISSUES

Tanzania adopted the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the CBP on January 19, 2018. It gives Tanzania flexibility to implement legislative, administrative, or judicial rules and procedures relevant to liability and redress issues.

PART C: MARKETING

a) PUBLIC/PRIVATE OPINIONS

The debate on biotech crops and bioengineered food remains contentious and political. There are both regulatory and societal impediments to biotechnology acceptance in Tanzania. Use of modern biotechnology is still a challenge due to a lack of specific policy guidance for handling and safe use of modern biotechnology; inadequate national capacity for scientific research and development; and low public awareness regarding safe use of modern biotechnology.

Anti-GE and "anti-GMO" movements target Tanzanian policymakers, farmers, and consumers with negative messaging on the impacts of biotechnology. At the same time, the Commission for Science and Technology (COSTECH), the Vice President's Office (VPO), the Open Forum for Agricultural Biotechnology (OFAB), the Program for Biosafety Systems (PBS), and the Biotech Society of Tanzania continue to provide balanced, science-based messaging.

b) MARKET ACCEPTANCE/STUDIES

The GE debate is ongoing in Tanzania with some adamantly for the technology and others demanding the government cease all GE research and activities.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

PART D: PRODUCTION AND TRADE

a) PRODUCT DEVELOPMENT

No animal biotechnology products are currently in development.

b) COMMERCIAL PRODUCTION

No animal biotechnology products are approved for commercial production in Tanzania.

c) EXPORTS

Tanzania does not export genetically modified animals as there is no commercial production.

d) IMPORTS

Post is unaware of any import activity. The strict liability clause of the Biosafety Regulations of 2009 effectively blocks imports.

e) TRADE BARRIERS

The same trade barriers that apply to plant biotechnology products (including liability requirements) apply to animal biotechnology products.

PART E: POLICY

a) REGULATORY FRAMEWORK

The National Biosafety Act covers both plants and livestock, but no regulations have been developed specifically for animal biotechnology.

b) INNOVATIVE BIOTECHNOLOGIES

Tanzania does not have any regulations or policies specific to innovative biotechnologies.

c) LABELING and TRACEABILITY

The same labeling and traceability requirements for plant biotechnology products apply to animal biotechnology products.

d) INTELLECTUAL PROPERTY RIGHTS

Animal biotechnology products are subject to the same intellectual property rights protections as plant biotechnology products.

e) INTERNATIONAL TREATIES and FORUMS

Tanzania has been a member of the World Organization for Animal Health (OIE) since December 14, 1961.

f) RELATED ISSUES

Not applicable

PART F: MARKETING

a) PUBLIC/PRIVATE OPINIONS

The same opinions that apply to plant biotechnology largely apply to animal biotechnology.

b) MARKET ACCEPTANCE/ STUDIES

Information on animal biotechnology market acceptance is not available.

CHAPTER 3: MICROBIAL BIOTECHNOLOGY

PART G: PRODUCTION AND TRADE

a) COMMERCIAL PRODUCTION:

There is no commercial production of microbial GE products in Tanzania.

b) EXPORTS:

Tanzania does not export microbial GE products to the United States or any other country as there is no commercial production.

c) IMPORTS:

Tanzania does not import microbial GE products from the United States or any other country as there is no authorization for trade in microbial biotechnology products.

d) TRADE BARRIERS:

The same trade barriers that apply to plant biotechnology products (including liability requirements) apply to microbial biotechnology products.

PART H: POLICY

a) REGULATORY FRAMEWORK:

The National Biosafety Act covers microbial biotechnology. No regulations specific to microbial biotechnology have been developed.

b) APPROVALS:

The same approval process for plant biotechnology products applies to microbial biotechnology products.

c) LABELING and TRACEABILITY:

The same labeling and traceability requirements for plant biotechnology products apply to microbial biotechnology products.

d) ADDITIONAL REGULATORY REQUIREMENTS:

N/A.

e) INTELLECTUAL PROPERTY RIGHTS (IPR):

The same intellectual property rights protections and structure for plant biotechnology products apply to microbial biotechnology products.

f) RELATED ISSUES:

N/A.

PART I: MARKETING

a) PUBLIC/PRIVATE OPINIONS

No studies of opinions regarding microbial biotechnology are available. The same opinions regarding plant biotechnology likely apply to microbial biotechnology.

b) MARKET ACCEPTANCE/STUDIES:

Information on market acceptance of microbial biotechnology is not available

Attachments:

No Attachments