



# **TOWARDS BIOSECURITY CURRICULUM AND FACILITIES FOR BIOTERRORISM AND BIOCRIME MANAGEMENT IN AFRICA**

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# Introduction

## Conflicts in Africa

- The African continent has been suffering many conflicts.
- Tactics and technologies of war have been changing.
- Terrorism and Crime are the new wars!
- But who is the *Terrorist* and who is the *Criminal*?

# Perceived Perpetrators



# Main Victims in Conflicts





In memory of victims of the Garissa University massacre (*with apologies*)

## Current Trends

- Deadly Diseases of Crops



- Deadly Diseases of Livestock



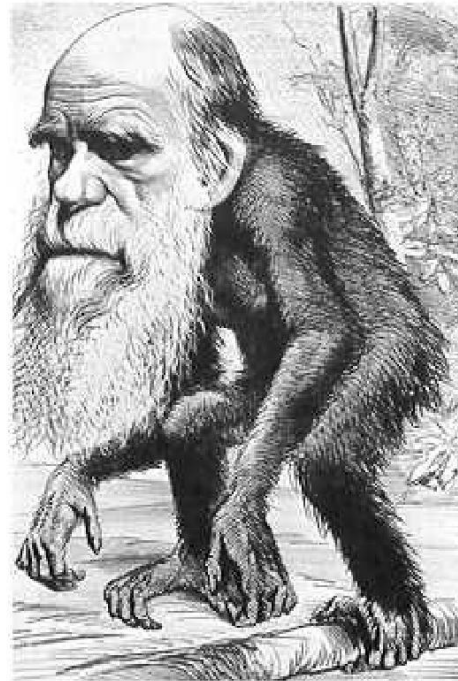


# Deadly Human Diseases



# Sources of Deadly Diseases

IF EVOLUTION  
IS OUTLAWED



ONLY OUTLAWS  
WILL EVOLVE

# Divine



Revelation 6:8



# First Hand Experiences



*Fusarium oxysporum* V5w2 a Misidentified Pathogen (Ochieno, 2010)



*Fusarium oxysporum* f.sp. *strigae*  
a Misidentified Pathogen (Avedi  
et al., 2014; Zarafi et al., 2015)

# The Big Question

*Could it be that humans are enemies of their own species, and have accumulated vast knowledge about natural enemies of their own species, animals and plants, utilizing them as secret weapons, while misrepresenting well known natural processes as decoys for their unsuspecting victims?*

*Bio Terrorism*



# Finding the Answers

Divine intervention?





## Political interventions?



*“We are strong, we shall crash them, in fact ALL terrorists have been KILLED”*

# Violence and Riots?



# EDUCATION IS THE KEY !!



# But what Curriculum?

- All-round academic products are required.
- We propose the development of a Biosecurity Curriculum.
- The curriculum needs to be interdisciplinary.
- Requires the integration of Education, Social Sciences and Pure and Applied.

# Key Areas

- Biology, Chemistry, Physics
- Biotechnology
- Human and Veterinary Medicine
- Plant Pest and Disease Management
- Bioterrorist and Biocriminal Psychology and Sociology
- Bioweapons and their targets
- Politics and religion
- Law and Forensics
- Information systems
- Management of Bioterrorism and Biocrimes
- Languages

# Conclusion

- What can you conclude without adequate knowledge of what has been happening?
- Let us create a basis for collecting reliable information i.e. Scientific Research Guided Education.

# Recommendation

Let us come together, from various fields of study, and develop a curriculum that would produce Biosecurity Professionals to deal with Bioterrorism, Biocrimes and Agroterrorism.



Centre for African Medicinal and  
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