BIOTERRORISM AND BIOLOGICAL WARFARE: AN EMERGING CHALLENGE

Abstract

The intentional use of pathogens and biological toxins, typically of microbial, plant, or animal origin to cause socio, medico, and economic harm to a nation is known as bioterrorism or biological warfare. Bioterrorist attack on a nation can be imparted by a terrorist organization or state sponsor organization of enemy country. This biological agent is easy to use and difficult to trace. Furthermore, new and widely available technologies encourage the development of such bioweapons which, have potential of mass destruction that's why it included in the category of weapon of mass destruction. Although, there is Biological and Toxin Weapons Convention which is for development of international consultation and cooperation to combat the threat of bioterrorism but developing preventative and protective methods are of utmost importance for any nation. Besides that, it is necessary to take confidence-building measures at international level which is inclusive of all the nations. This chapter is going to highlight the various aspects of bioterrorism and means through which it can be negotiated.

Keywords : Bioterrorist, Anthrax, Covid, Bioterrorism, Biological agents, Bioweapons

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WILDLIFE CRIME AND ITS SOCIO-ECOLOGICAL IMPACT

Abstract

Wildlife crime poses a significant hazard to endangered species. Due to these offenses, several species have become extinct. Wildlife crime is destroying biodiversity and causing the extinction of species. This illegal activity includes the illegal taking, trafficking, obtaining, and consumption of wildlife. It is frequently conducted by transnational criminal organizations. Now, however, individuals worldwide are attempting to preserve these endangered species and restore them to their natural habitats. Everyone should be aware of the events, crimes, incidents, and conservation techniques that have occurred in the region to take such measures. Keeping this in view, this chapter aims to discuss the various aspects of wildlife crimes and their impact on society.

Keywords: Wildlife Crime, Biodiversity, Habitat, Endangered Species, Conservation Techniques

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THE DIVERGENT IMPACT OF DRUG ABUSE ON SOCIETY

Abstract

The consumption of substances of abuse among youngsters is increasing at an alarming rate day by day. Drug abuse is a victimless crime still, it creates a rough terrain for the general public. These youngsters are not only harming themselves but also creating a social threat. The consumption of drugs produces physiological and psychological changes in the body. The impact created by an abuser on its nearby environment plays a crucial role in the development of the mental and social patterns of an individual. This chapter explores the complex relationship between drug abuse and its impact on society. It delves into the various factors that contribute to drug abuse, including social, economic, and psychological influences. The chapter also discusses the consequences of drug abuse on individuals, families, communities, and the larger societal framework. Through a comprehensive analysis of this pressing issue, the chapter aims to shed light on the interlinkage between drug abuse and society while offering insights into potential solutions for prevention and management.

Keywords: Drug of Abuse, Narcotics, Steroids, Drug Abuse Management, Scheduled Drugs, Socio-economic impact.

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BIOMETRICS –AN EMERGING TOOL FOR PERSONAL IDENTIFICATION IN FORENSIC

Abstract

Accurate and reliable identification is a vital concern in crime identification. A biometric system is an automated recognition system which utilises various physiological and behavioural traits for personal identification. In the context of the criminal justice system, the Biometric technique became an important form of evidence. The biometric technique became more popular due to its liability and efficient nature. Due to the various recent advancements in the Biometric system, the technique is replacing the manual recognition methods used in the criminal identification process. The Forensic Biometric system uses various characteristics such as Fingerprint, Iris, Retina, facial Markers, gait patterns, voice recognition, hand geometry, etc. The chapter explains the workings of biometric systems and their uses in forensic science. It will explore various biometric system and their uses and emerging trends in biometric identifiers.

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NANOPARTICLES AS AN EMERGING TOOL FOR FORENSIC INVESTIGATION

Abstract

Forensic science is the branch of science which uses the application of various branches of science such as Biology, Chemistry, Physics, Biotechnology, Anthropology, Genetics, Nanotechnology, etc. to assist in the examination of various types of evidence to prove or disprove something in front of the court of law. There are varieties of evidence which are found in the crime scene such as biological evidence, toxicological evidence, trace evidence, arson evidence, etc. which has to be examined by a forensic expert. The evidence found in the crime scene is present in very limited or trace amounts hence the forensic expert should ensure to produce accurate results without damaging or destroying the evidences. There are various types of presumptive and confirmatory tests done to find out the identity of the evidence. Some of these tests may damages and destroy the crucial evidence without producing an accurate result. Hence there is a need of such methods from which the analysis of evidence becomes easy in the trace amounts and these tests should produce 100% accurate result. One of these modern methods is the use of nanotechnology in forensic science. Nanotechnology is the technology which uses various types of nanoparticles in the field of science. Nanotechnology includes the use of various types of Nanoparticles for the analysis of various types of evidence found in the crime scene. The Nanoparticles due to their various fascinating properties such as very small size, high stability, large surface-area-to-volume-ratio, interfacial layers, solvent affinity, various mechanical properties, etc. are now-a-days widely in use. Various researchers are continuously researching to find out the more beneficial uses of nanoparticles. This book chapter aims

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