

Book Review

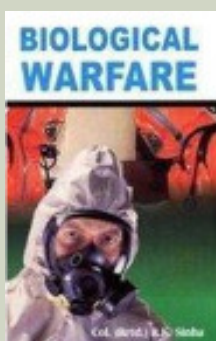
“Biological Warfare”: Col (Retd) B.K. Sinha, Surendra Publications, Delhi, 2010.

Mr. Parveen Bharadwaj

The author is a Research Intern at the IDSA, New Delhi.

Summary

The book attempts to stress emphasis on establishing effective public health infrastructure. It also argues with respect to having more public debates and awareness on these issues to influence state policies. However the book also beautifully highlights the major hurdles in the implementation of Biological Weapons Convention (BWC) and it also expressed the concern that imminent advancements in biotechnology will further complicate biological warfare in the future.



Biological Warfare, written by Col (Retd) B.K. Sinha, is an important publication linking biological warfare and public health. It argues that the phenomenon of bioterrorism is significant as the bio-weapons could be covert, economical and also silent killers. This book also focuses on chemical warfare in a substantial manner. In general, it is based on thorough research and is also very timely.

In the introduction section, the author discusses the nature of biological agents; their signs and symptoms, diagnosis, treatments and preventions. Relating to the history of biological and chemical weapons, the author emphasizes that biological weapons are not new; from the battle of Eurymedon in 190 BC, Solon of Athens poisoning Pleistrus River around 590 B.C to sophisticated use in WWI by Germany, examples of biological warfare can be found everywhere. Discussing the history of chemical warfare, based on historical accounts, the author infers that Chinese were the original masters of chemical warfare, and that the documents suggests that these weapons were used as early as 7th century BC. The book comprehensively discusses various multilateral mechanisms including the Geneva Protocol, Chemical Weapon Convention (CWC), and the Biological and Toxin Weapon Convention (BTWC) and adequately highlights the importance of these.

In subsequent chapters the author discusses in due detail a wide range of topics from biological warfare, bioterrorism, bio-defence to toxic weapons. Discussing characteristics of biological and chemical weapon individually, the author tries to articulate their close association in terms of acquisition and delivery methods. The contentious issue that medical and biological technology can be misused as tools of bioterrorism has been emphasised well by the author. He suggests

that the BTWC should emphasize on verification protocols that deter and discourage violation of the convention. Also, timely detection of diseases by the authorities can act as a safeguard against bioterrorism. In addition, this book discusses biological warfare and prevention framework and conventions in the context of developed countries, especially the United States. However, this discussion could have been well juxtaposed by formulating a framework on what is done by developing countries in this respect since they lack financial as well as technical resources and infrastructure.

Referring to the threat of deliberate disease in 21st century, the author elucidates on how the processes of globalisation accentuate the spread of different virus, bacteria and other biological agents to create epidemics around the globe. The book subsequently focuses on production and military significance and closely studies the cases involving biological agent. From the point of view of understanding their popularity, the author recounts the advantage of bio-weapons vis-à-vis the more sophisticated nuclear weapons or conventional warheads. He also says that using toxic material significantly elevates the effectiveness by creating more chaos. He also looks at the delivery system and defence against bio-weapons, giving a glimpse into the challenges of biological agents that are affected by atmospheric conditions, the method in which bio-agents are deployed and ways in which it is delivered. Emphasising the ease of use of these weapons, the author says that terrorists can use a vehicle, small aircraft or simply upwind location to disperse biological agent over designated area. While the world has evolved towards much sophisticated technology such as ballistic and cruise missiles, cluster munitions and the likes, challenges posed by many upcoming weapons systems such as dual-use cyber-insects and bio-robots which could be used

for the potential weaponisation of biological agents are also significant. Following up discussion on different countries and their proliferation record, the author has effectively portrayed the hurdles in the implementation of BWC and expressed the concern that imminent advancements in biotechnology will further complicate biological warfare in the future.

The chapter focusing on the protocol to BWC focuses on different protocol regimes, export control regimes and their mechanisms. Reflecting on the possible hurdles, the author states, "If negotiations are not completed within the coming year, there is a real danger that protocol's provisions will become so corrupted that resultant regime will be inefficient and will fail to meet the objective of strengthening convention" (p. 114). Critically examining the issue area, he reflects concerns which can complicate any transparent, credible and verifiable systems of prevention and countermeasures for these weapons.

The author emphasises on establishing effective public health infrastructure and prescribes more public debates and awareness on these issues to influence state policies. He has framed critical issues for certain areas where effective response is vital; this covers laboratory diagnostic capacity, research capacity, security, knowledge assets and education and training, where he accentuate on education as the vital link. He rues lack of implementation of this framework so far. He also talks about building capacity to prevent and respond to bioterrorism with highly focused approach involving trained personnel, well-equipped laboratories and better communication. Even though frameworks are well conceptualised and synthesised, these seem to be more inclined toward developed countries where such investments and infrastructures are feasible. The author concludes the book by

explicating the role of antiviral in responding to biological threat indicating research directions in science in near future.

Overall, the book stands worth of being a useful addition to the literature on the subject. However, incorporation of areas such as critical economic issues including the costs of vaccine development, costs associated with potential product liability, social and additional political aspects such as achieving solutions that require cooperation between nations, industry, academia, and others, could have made this book even more comprehensive from the policy point of view.