

BIOSECURITY

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WHAT IS DUAL-USE RESEARCH
OF CONCERN (DURC)?

DURC describes research that is intended to provide a clear benefit, but which could easily be misapplied to do harm. It usually refers to work in the life sciences, but the principles are also applicable to other fields including engineering and information technology.


WHY DOES DURC MATTER?

The potential for research to be misused, whether deliberately or unintentionally, has been a persistent concern in science. This issue extends beyond research communities and public health to encompass ethical considerations, broader societal impacts, and the roles of donors, scientific publishing, and public communication.


WHY IS THIS A CONCERN IN SOUTHEAST ASIA?




Growing Biotech Industry
Rapid advancement in CRISPR, gene editing, and synthetic biology



Weak Regulations
Most Southeast Asian countries lack clear DURC policies



Cross-border Collaboration
Scientific collaboration without standardized risk assessments



Terrorism Hotspots
Non-state actors could exploit biotech for malicious purposes

Source: Compiled from Mely Caballero-Anthony, Jose Ma. Luis Montesclaros, Jeselyn, Julius C. Trajano, 28 February 2025. "Dual-Use Research of Concern Landscape in Southeast Asia: Prioritization, Gaps, and Challenges." Applied Biosafety, <https://doi.org/10.1089/apb.2024.0055>.

HOW DO SOUTHEAST ASIAN NATIONS COMPARE
ON DURC POLICIES AND OVERSIGHT?



STRENGTHENING BIOSECURITY IN SOUTHEAST ASIA



Establish National/ Regional Supply Chain Security Network



Develop National Control Lists and Inventories of Pathogens, Toxins, and Security-sensitive Biological Agents



Encourage the Development of Guidelines on Responsible DURC and Managed Cyberbiosecurity



Establish Regional Monitoring and Reporting Mechanism

Source: Compiled from Mely Caballero-Anthony, Julius C. Trajano, Jose Ma. Luis Montesclaros, and Jeselyn. 16 September 2024. "Emerging Biosecurity Landscape in Southeast Asia." RSIS, https://www.rsis.edu.sg/wp-content/uploads/2024/09/FINAL-REVIEW_EMERGING-BIOSECURITY-LANDSCAPE-IN-SOUTHEAST-ASIA.pdf.