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COMPREHENSIVE SECURITY 2.0: TOWARDS A HOLISTIC APPROACH FOR A DYNAMIC FUTURE

Analysis Report

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INTRODUCTION

In an increasingly interconnected and complex world, national security faces multifaceted challenges ranging from geopolitical tensions to cybersecurity threats and domestic issues such as terrorism and social unrest. In view of such challenges, there is an imperative to revisit the concept of *'Comprehensive National Security'* and explore strategies and policies implemented by various countries to enhance their national security. There is also a need to promote awareness and public understanding of national security issues and the role of citizens in supporting security initiatives.

In order to address this need, CASS organised a Catalyst Conversation on *'Comprehensive Security 2.0: Towards a Holistic Approach for a Dynamic Future'* aimed at refreshing our understanding of national security and exploring contemporary models of national security. The conversation re-examined the concept of comprehensive national security, explored various countries' strategies to enhance their security, and promoted public awareness of national security issues and the role of citizens in supporting security initiatives. The keynote speaker was Major General Muhammad Khalil Dar (Retd), Vice Chancellor of Lahore Garrison University, Pakistan. The session was moderated by CASS Director Air Marshal Zahid Mehmood (Retd) and the concluding remarks were delivered by President CASS Air Marshal Javaid Ahmed (Retd).

EXECUTIVE SUMMARY

In his *Opening Remarks*, **Air Marshal Zahid Mehmood (Retd)**, briefly discussed national security as a multifaceted concept encompassing sovereignty, territorial integrity, and citizen well-being. Traditionally centred on defence, national security now incorporates non-traditional threats such as cyber warfare, economic instability, terrorism, and social cohesion. Air Marshal Mehmood emphasised the need for a comprehensive, multi-sectoral approach, highlighting cyber and economic security as critical areas requiring cross-sector collaboration.

In his *Keynote Address*, **Major General Muhammad Khalil Dar (Retd)** traced the evolution of national security from the Treaty of Westphalia to the modern cyber era. He emphasised the complexity of transnational terrorism and cybersecurity threats, advocating for a coordinated national and global response. He highlighted cybersecurity as a vital domain interlinked with economic stability, citing examples like the Stuxnet attack and China's strategic investment in semiconductor technology. His focus on offensive and defensive cybersecurity strategies underscored the need for proactive resilience, with lessons drawn from Japan, Scandinavia, the United Kingdom, and the United States.

In his *Concluding Remarks* and *Vote of Thanks* **President CASS, Air Marshal Javaid Ahmed (Retd)** stressed the importance of deriving actionable insights for Pakistan's national security. He expressed concern about global polarisation and the risks of a broader conflict stemming from alliances in the Ukraine War. He urged for practical implementation of policy recommendations to bridge the digital divide and enhance national resilience.

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KEY TAKEAWAYS

- The concept of national security has evolved over time, from protecting state sovereignty in the 17th Century to responding to modern, complex threats. Historical turning points, such as the Treaty of Westphalia, French Revolution, and two World Wars, have shaped today's security priorities.

- National security is no longer limited to military defence but now includes a broader spectrum of threats that affect a nation's sovereignty, territorial integrity, and the well-being of its citizens. These encompass both traditional and non-traditional challenges such as terrorism, climate change, pandemics, and economic instability.

- Unlike traditional state-based threats, terrorism operates across borders, making it a transnational challenge. Combatting terrorism requires cohesive national strategies and coordinated international efforts to effectively counter this evolving threat.

- Addressing modern security threats requires a holistic approach involving collaboration across various government sectors. Military power alone is inadequate, and integrated efforts between defence, economic, social, and technological sectors are

- Economic factors such as supply chain security, critical industries, and favourable trade relations have become crucial components of national security. Adversaries can exploit economic vulnerabilities to destabilise a nation, making economic resilience a key strategic focus.

- Strong social cohesion is fundamental for national stability. Inclusive and resilient societies are better equipped to withstand internal conflicts, misinformation, and external shocks. Addressing social inequalities, promoting justice, and ensuring citizen representation strengthen societal resilience.

- Scandinavian countries are best case examples of how fostering high social trust, citizen education, and community engagement can reduce vulnerability to misinformation and strengthen societal resilience, making them less susceptible to external manipulation.

- Public awareness initiatives, like the UK and US's 'Stop. Think. Connect' campaign, reflect the importance of basic cybersecurity practices. Educating citizens on issues such as strong passwords, software updates, and phishing scams enhances overall national cyber resilience.

- Increasing reliance on digital infrastructure has made cybersecurity a central aspect of national security. Cyber threats, including cyber warfare, data breaches, and hacking, can undermine a nation's critical systems and expose it to both internal and external risks.

- Nations are interconnected through global digital networks, making it impossible to fully isolate their cyber domains without compromising connectivity and information flow. This interdependence necessitates balancing security with openness to maintain national and global cyber resilience.

- Developing indigenous cybersecurity expertise is critical for national security. Institutions like Lahore Garrison University, which trains specialists in offensive cybersecurity, exemplify how fostering local talent enhances a nation's cyber defence capabilities.

- The financial sector is particularly vulnerable to cyber-attacks due to its hyper-connectivity. Disruptions in financial markets can lead to broader economic instability, affecting national security and societal order.

- Nations are increasingly adopting offensive cybersecurity measures to preempt and neutralise threats before they materialise. This proactive approach is evident in various global events, including responses to cyber incidents in the Middle East.

- Preparing for potential cyber disruptions across multiple sectors is essential. Japan's extensive cybersecurity preparations for the Tokyo 2020 Olympics illustrate how cross-domain readiness can fortify national infrastructure against cyber threats.

- Technological self-reliance is increasingly viewed as a strategic priority. China's significant investments in semiconductor technology highlight the importance of reducing dependence on external sources to maintain technological sovereignty and national security.

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PROPOSED WAY FORWARD

- Pakistan should implement integrated security strategies involving military, economic, technological, and social sectors to effectively address the complexity of modern threats.

- National security must be a collective effort involving various sectors of government, private industry, and civil society to ensure a unified response to diverse security challenges.

- Nations, including Pakistan, must bolster their cybersecurity infrastructure to safeguard critical systems from cyberattacks. This includes investing in education and training programmes, like those at Lahore Garrison University, to develop local expertise.

- Collaborative efforts are essential to address transnational cyber threats. Pakistan can actively participate in global initiatives to share intelligence, best practices, and resources.

- Raising public awareness about cybersecurity is crucial. Campaigns like 'Stop. Think. Connect.' should be adapted to the Pakistani context to empower citizens to protect themselves online.

- Nations must prioritise swift recovery from cyber incidents. Pakistan can develop robust recovery plans to minimise disruption and ensure the continuity of essential services.

- Investing in key technologies, such as semiconductors, can reduce reliance on foreign suppliers and enhance national security. Pakistan can explore opportunities to develop its own domestic technological capabilities.

- Pakistan must confront internal challenges like terrorism to prevent exploitation by external actors.

- Addressing social inequalities and promoting inclusive governance can foster societal resilience and reduce the risk of internal strife.

- Protecting critical infrastructure, such as power grids and telecommunications networks, is essential to national security. Pakistan should invest in robust security measures to safeguard these assets.

- Combating the spread of misinformation and disinformation is crucial to maintaining social stability. Pakistan can implement measures to identify and counter false information.

- Effective border security is essential to prevent the infiltration of extremist groups and illicit goods. Pakistan should invest in advanced surveillance technologies and intelligence sharing to enhance border control.

SUMMARY OF PROCEEDINGS

Air Marshal Zahid Mehmood
Director, Centre for Aerospace & Security Studies, Islamabad

Moderator's Remarks

Air Marshal Zahid Mehmood (Retd) initiated the discussion by defining national security as a multifaceted concept encompassing a nation's sovereignty, territorial integrity, and the well-being of its citizens. The moderator noted that historically, national security was primarily concerned with external threats, focusing on military defense and intelligence. However, in the post-Cold War era, the concept has expanded to encompass non-traditional threats like terrorism, climate change, cyberattacks, pandemics, and economic instability, necessitating a more integrated approach to security.

Air Marshal Mehmood highlighted the importance of comprehensive security, emphasising the need for collaboration among various government sectors. He argued that military power alone is insufficient to address the complexities of modern threats, citing cyber security as a critical example. The increasing interconnectedness of the digital world exposes nations to cyber warfare and data breaches, necessitating robust cybersecurity measures. Furthermore, he stressed the significance of economic security, noting that adversaries may exploit vulnerabilities in supply chains, critical industries, and trade relations.

The moderator further stressed the role of social cohesion in national security. 'Inclusive and resilient societies are better equipped to withstand internal strife and external shocks.' Air Marshal Mehmood echoed this sentiment, calling for addressing inequalities, promoting social justice, and ensuring representation for all citizens to foster global stability and cooperation.

Major General Muhammad Khalil Dar (Retd.)
Vice Chancellor, Lahore Garrison University, Pakistan

Keynote Address

Major General Muhammad Khalil Dar began his address by examining the historical evolution of national security, citing the 1648 Treaty of Westphalia as a foundational moment that established the concept of state sovereignty. He argued that security priorities have continually evolved, from protecting state sovereignty to responding to external threats shaped by political and technological changes while reflecting on landmark events like and the French Revolution and World Wars.

He highlighted that national security is far more than military power alone; it encompasses a comprehensive approach that spans historical turning points and

global alliances. While the Cold War ended in 1990, it was replaced by an era of terrorism, a transnational threat that had, in his view, destabilised many nations.

Major General Dar emphasised that terrorism differed from previous security threats due to its non-state, transnational nature. He argued that combating terrorism requires not only the cohesion and will of individual nations but also a coordinated global effort. He suggested that national resilience, economic capacity, and a multidimensional response framework are necessary to tackle this threat.

Transitioning to modern security concerns, the keynote speaker highlighted the complexities introduced by cyberspace. He described cyberspace as a domain where each country's digital space is inherently linked to the larger international network. He pointed out the dilemma states face: while they need to secure their own digital domains, they cannot completely isolate themselves from the international cyberspace without compromising connectivity and the flow of valuable information. This interdependence, he argued, makes cybersecurity a critical aspect of national security that cannot be overlooked.

In illustrating national cybersecurity preparedness, Major General Dar shared Lahore Garrison University's focus on offensive cybersecurity, citing a recent competition where three of its students achieved international recognition. His example underscored the importance of developing local cybersecurity expertise as a component of national security. He warned of the potential for cyber-attacks to disrupt critical infrastructure, particularly financial systems. He noted that hyper-connected financial markets were increasingly vulnerable to cyber disruptions, which could have cascading effects on the broader economy, financial systems and, ultimately, governmental authority, social order, and national stability.

According to the speaker, while defensive cybersecurity involves minimising harm post-attack, offensive cybersecurity seeks to take preemptive action against threats, therefore, governments and military agencies were increasingly on the offensive as evident by recent events in the Middle East. In this context, he cited Japan's preparations for the Tokyo 2020 Olympics as a leading example of cyber resilience. The Major General explained that the event underscored the necessity for cross-domain readiness, as Japan fortified its cybersecurity framework to handle potential cyber disruptions.

Major General Dar also discussed the importance of social resilience and trust as integral components of national security, as exemplified by the Scandinavian model. He highlighted that Scandinavian countries minimise their vulnerability to misinformation by cultivating high levels of social trust, educating citizens, and fostering community engagement. He emphasised the need to consider such 'soft' security measures, aimed at building social resilience, as essential for national security.

Major General Khalil Dar further elaborated on cybersecurity practices from the UK and US, citing cyber resilience programs designed for rapid recovery post-cyber incidents and public initiatives like 'Stop. Think. Connect.' He explained that such programmes encourage public engagement and promote cyber hygiene practices, such as creating strong passwords, updating software, and being cautious of phishing scams, contributing to a more resilient and secure society.

Referencing the 2010 Stuxnet attack on Iran, Major General Dar highlighted the significant geopolitical impact of cyber weapons. He argued that Stuxnet demonstrated how a single cyberattack could cause substantial disruption and alter the balance of power. To illustrate the shifting balance of power in technology, he discussed China's significant investments in semiconductor technology. He noted that China's import expenditures on semiconductor chips now exceed its spending on Gulf oil, signaling a strategic pivot towards technological independence.

In the end, the speaker stressed the imperative of adaptive, multi-layered security frameworks in the digital age with focus on proactive cybersecurity, social resilience, and international collaboration. As digital and physical threats converge, nations must remain vigilant, resilient, and prepared to protect their interests in an increasingly complex global landscape. General Dar urged states to bolster their defences, enhance public engagement, and pursue cybersecurity strategies that safeguard sovereignty and promote national stability.

Air Marshal Javaid Ahmed (Retd),
President, Centre for Aerospace & Security Studies, Islamabad

Vote of Thanks and Concluding Remarks

President CASS Air Marshal Javaid Ahmed (Retd) thanked the speaker and praised his approach of using historical perspectives to understand contemporary security challenges. He emphasised the importance of critically studying history to draw lessons that can inform solutions to current security issues.

Air Marshal Ahmed highlighted the growing global digital divide and increasing polarisation between the East and West. He noted that many countries feel compelled to align with one side or the other to navigate the technological landscape. Furthermore, he expressed concern about escalating global conflicts like the ones in the Middle East and Europe.

President CASS stressed the need to learn from different national security models and development strategies. He emphasised that the ultimate goal of studying history and contemporary models was to apply these lessons to Pakistan's specific context. He lamented the gap between policy recommendations and implementation, often attributed to a lack of political will. He expressed hope that such constructive dialogues would contribute to the realisation of comprehensive national security and economic growth for Pakistan.
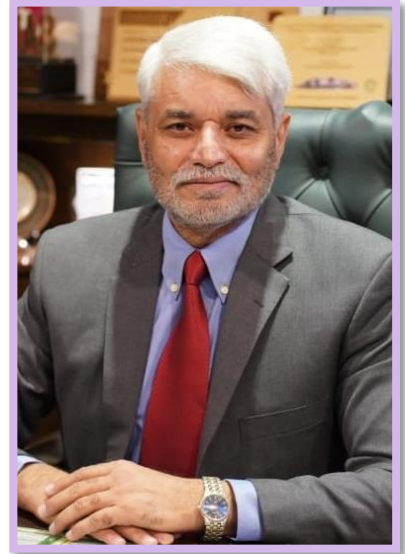
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ANNEXURES

Profile of Speakers

Major General Muhammad Khalil Dar (Retd)
Vice Chancellor, Lahore Garrison University

Major General Muhammad Khalil Dar retired from the Pakistan Army, where he served in the Army Aviation Corps. Throughout his distinguished military career, he held several key appointments, including General Staff Officer-2 and 1 in the Military Operations Directorate, Commander of the 101 Army Aviation Group, General Officer Commander in Army Aviation, and Director General Aviation at General Headquarters. He has hands on experience in War on Terror as Commanding Officer of Flying unit in Peshawar and later as Group Comd and GOC. He is passionate about military history and evolution of military technology. He is a recipient of Hilal-i-Imtiaz (Military).

Air Marshal Zahid Mehmood (Retd)
Director (National Security), Centre for Aerospace & Security Studies, Islamabad

Air Marshal Zahid Mehmood (Retd) joined the Centre for Aerospace & Security Studies, Islamabad as Director in November 2023. A graduate of National Defence University and Air War College, he has 36 years' experience of military aviation as a fighter pilot in the Pakistan Air Force. During his service with the PAF, he has held various Command and Staff appointments including Assistant Chief of Air Staff (Plans), Director General C4I, Deputy Chief of Air Staff Personnel and Vice Chief of Air Staff. He holds Master's Degrees in Strategic Studies and Defence & Strategic Studies. An alumnus of the Harvard Kennedy School for National and International Security (USA), his areas of expertise include National Security with emphasis on traditional security threats and response options; Doctrine and Policy. He lectures regularly at Pakistan's National Defence University and Air War College on related subjects. He is a recipient of Hilal-i-Imtiaz (Military) for his services to the PAF.

Air Marshal Javaid Ahmed (Retd)
President, Centre for Aerospace & Security Studies, Islamabad

Air Marshal Javaid Ahmed (Retd) was appointed President of the Centre for Aerospace & Security Studies, Islamabad on 29 April 2024. Previously, he served as Vice Chancellor of Air University. With a distinguished career spanning approximately 40 years in the Pakistan Air Force (PAF), he has held several critical positions. His roles have included Chairman of the Pakistan Aeronautical Complex (PAC) Kamra, Officer Commanding of the Combat Commanders School, and Chief Project Director of the JF-17 Fighter Aircraft Production Program. He is recognised for his expertise in aerospace development policies, as well as doctrine formulation and implementation strategies. Air Marshal Ahmed is an alumnus of the Air War College, where he graduated in Defence & Strategic Studies. He also holds Master's degree in War Studies from the National Defence University. His skills in command and management are complemented by his advanced knowledge in emerging academic fields. Previously, he also served as Director of Policy and Doctrine at CASS, Islamabad. In recognition of his significant contributions to the Pakistan Air Force, he awarded Tamgha-i-Imtiaz, Sitara-i-Imtiaz, and Hilal-i-Imtiaz (Military).

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Press Release

For Comprehensive National Security, One Needs a Whole-of-Nation Approach.'

Press Release

31 October 2024

The Centre for Aerospace & Security Studies (CASS), Islamabad, conducted a special session under its *Catalyst Conversation Series* on **'Comprehensive Security 2.0: Towards a Holistic Approach for a Dynamic Future'** with Major General Muhammad Khalil Dar (Retd), Vice Chancellor of Lahore Garrison University, for a critical examination of evolving national security challenges.

Air Marshal Zahid Hussain (Retd), Director (National Security) at CASS and moderator of the Catalyst Conversation, initiated the discussion by underscoring the complex, interconnected nature of modern national security challenges. He outlined how geopolitical tensions, cybersecurity threats, and domestic issues like terrorism and social unrest had diversified the national security landscape. Introducing the session's key aims, he hoped it would not only clarify how the concept of 'national security' had evolved historically and globally, but also promote public awareness of contemporary security issues, particularly the crucial role citizens play in supporting security initiatives.

In his *Keynote Address*, the Distinguished Speaker, **Major General Muhammad Khalil Dar (Retd)**, highlighted that national security is far more than military power alone; it encompasses a comprehensive approach that spans historical turning points, global alliances, and modern cyber threats. Reflecting on landmark events like the French Revolution and World Wars, he discussed how these pivotal moments redefined sovereignty, power-sharing, and the foundations of comprehensive national security. His insights underscored a need for adaptable security strategies to address today's multidimensional challenges.

Major General Dar further explored how countries are developing cyber resilience through both defensive and offensive strategies, emphasising the role of citizen engagement in enhancing digital security. He shared practical advice on cyber hygiene, advocating for strong password management, regular software updates, and caution against phishing tactics. Furthermore, he recommended adopting international security strategies to create flexible frameworks that address evolving threats. By advocating a comprehensive security model, he stressed the importance of cooperation among government, institutions, and the public to build a resilient and secure future.

In his *Concluding Remarks* and *Vote of Thanks*, **Air Marshal Javaid Ahmed (Retd)**, President CASS-Islamabad, highlighted the shifting dynamics of modern warfare, sharing how mini-alliances now engage in a range of strategies beyond traditional combat. He noted the increasing role of economic sanctions and trade wars as powerful tools, alongside kinetic warfare, which has evolved since World Wars I and II. According to him, today's adversaries utilise advanced satellite surveillance to gain full visibility of target areas, transforming warfare into a high-tech arena where intelligence and precision play critical roles. This shift, he concluded, reflects the changing landscape of global security, where technology and alliances are redefining national security and conflict management.
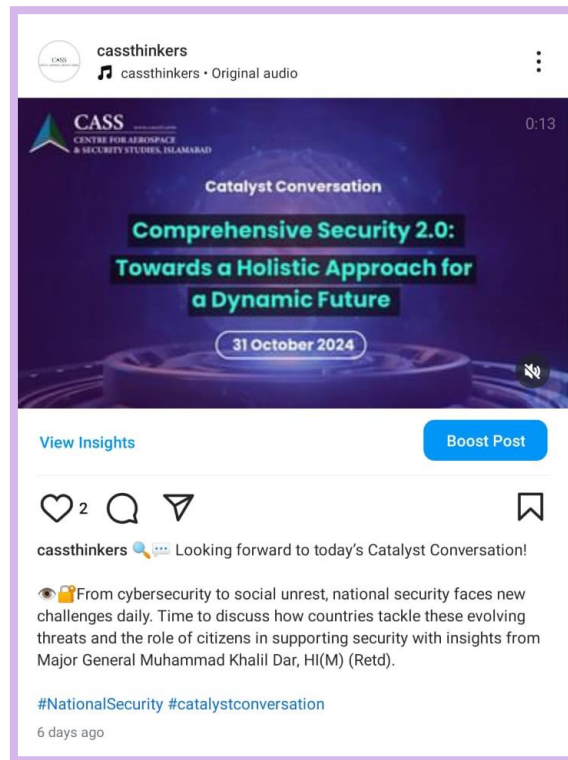
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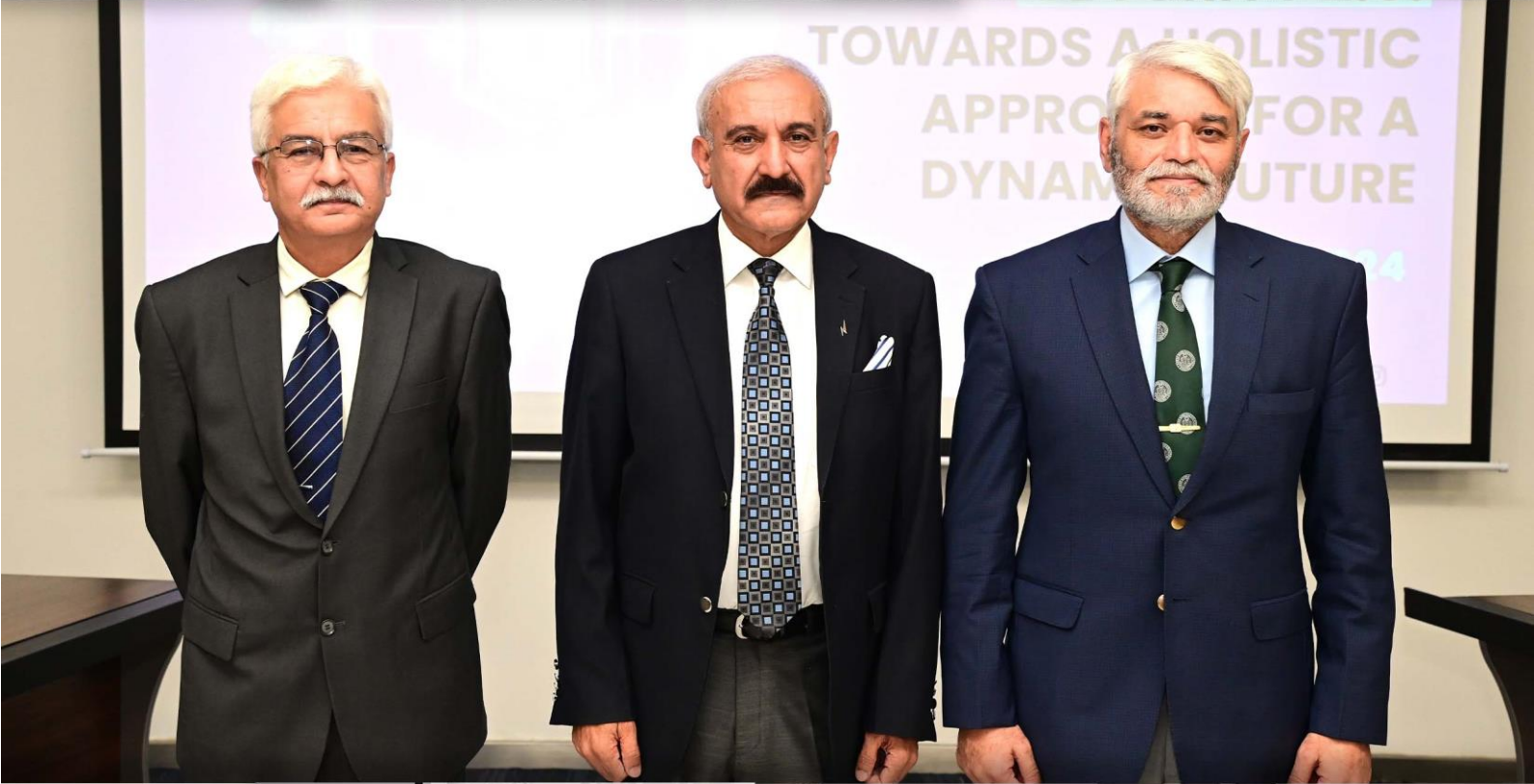STUDIES, ISLAMABAD

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TOWARDS A HOLISTIC
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ABOUT CASS

Established in 2018, the Centre for Aerospace & Security Studies (CASS) in Islamabad is a non-partisan think tank offering future-centric analysis on aerospace and security issues. CASS engages with thought leaders and informs the public through evidence-based research, aiming to influence discussions and policies at the national, regional, and global level, especially concerning airpower, emerging technologies, traditional and non-traditional security.

VISION

To serve as a thought leader in the aerospace and security domains globally, providing thinkers and policymakers with independent, comprehensive and multifaceted insight on aerospace and security issues.

MISSION

To provide independent insight and analysis on aerospace and international security issues, of both an immediate and long-term concern; and to inform the discourse of policymakers, academics, and practitioners through a diverse range of detailed research outputs disseminated through both direct and indirect engagement on a regular basis.

CORE AREAS OF RESEARCH

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Emerging Technologies

Security

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