

# Climate Resilience & Strategic Preparedness **Safeguarding Pakistan's Security Interests**

**Post Seminar Report**

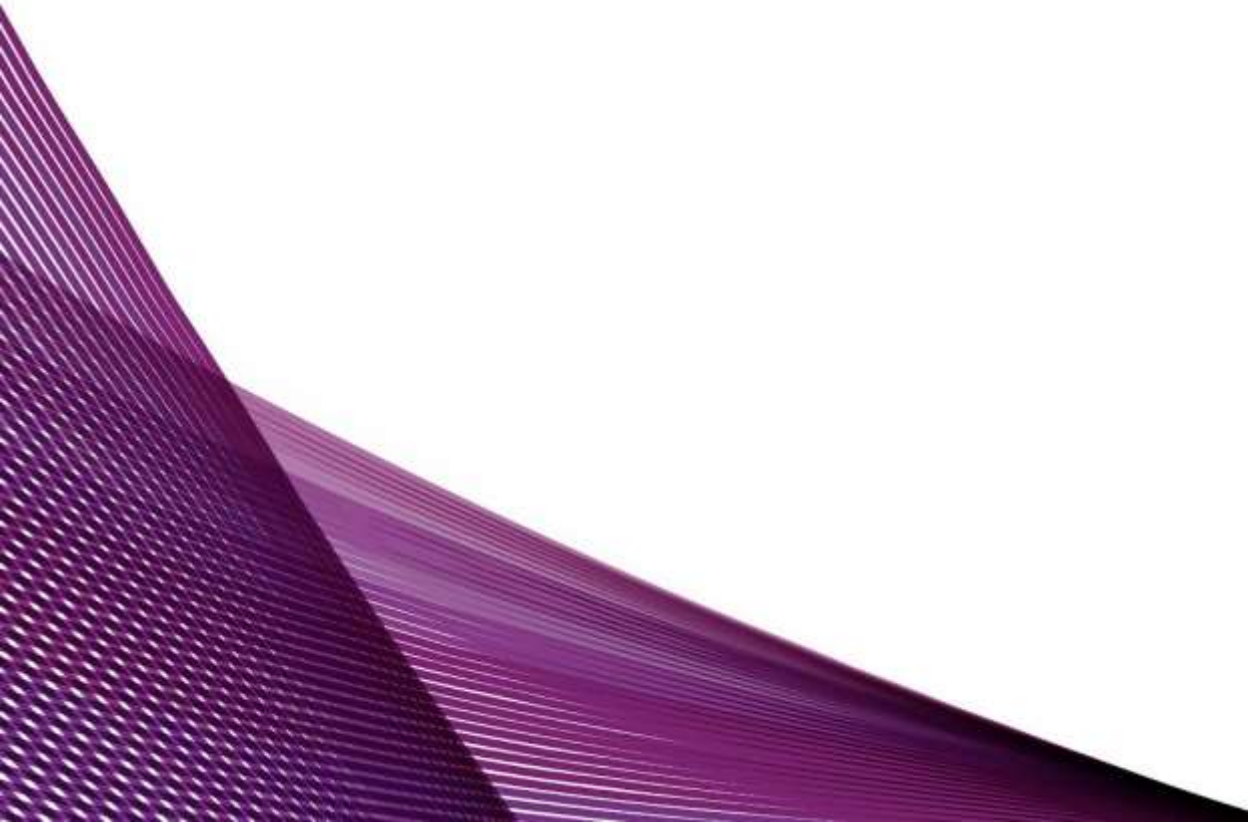




# **Climate Resilience and Strategic Preparedness:**

**Safeguarding Pakistan's Security Interests**

**Post-Seminar Report**





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## **ABBREVIATIONS & ACRONYMS**

CASS	Centre for Aerospace & Security Studies
CCDR	Country Climate Disaster Report
CEWE	Compound Extreme Weather Events
COP	Conference of Parties
DDMAs	District Disaster Management Authorities
EU	European Union
EWEs	Extreme Weather Events
FWO	Frontier Works Organisation
GDP	Gross Domestic Product
GLOFs	Glacial Lake Outburst Floods
HKH	Karakoram-Himalaya-Hindu Kush
IPCC	Inter-Governmental Panel on Climate Change
IQ	Intelligent Quotient
KP	Khyber Pakhtunkhwa
NDCs	Nationally Determined Contributions
NDMA	National Disaster Management Authority
NFC	National Finance Commission
PAF	Pakistan Air Force
PDMA's	Provincial Disaster Management Authorities
PDNA	Post-Disaster Needs Assessment
SDGs	Sustainable Development Goals
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
US	United States







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## INTRODUCTION

Climate change is wreaking havoc across the globe. Riverine and flash floods, rising sea levels, extreme temperatures, unpredictable weather patterns, alterations in precipitation, persistent droughts, forest fires, glacial retreats, and biodiversity loss are among the most common manifestations of this phenomenon. These natural disasters contribute to increased displacements, migrations, and heightened competition for decreasing ecological resources. They are also exacerbating the vulnerabilities of states with weak economic foundations, political instability, ethno-religious divisions, and limited adaptive capacities. While it was initially considered a matter of low politics, climate change has now transitioned into a serious security concern, given that it can disrupt human civilisation, instigate conflicts, and escalate intra-state violence.

Anthropogenic factors have been attributed as the root cause of these natural disasters. However, what makes the matter more concerning is the fact that states with little historical contribution to greenhouse gas emissions face the risk of being the most affected. Pakistan, with its extensive geographical expanse featuring high-altitude mountain peaks and fertile plains, faces serious consequences of climate change. It has been identified as among the states most vulnerable to climate change impacts by various global organisations like the United Nations Office for the Coordination of Humanitarian Affairs and the German Watch. The Toronto School, led by Thomas Homer Dixon, also includes



it in six cases where climate-induced resource scarcity may lead to violent intrastate conflicts. Furthermore, the country's agrarian foundation, dependence on a single shared river basin with India, and the presence of nuclear weapons also add to the complexity of the situation.

Recognising the importance of the matter, the Centre for Aerospace & Security Studies (CASS) in Lahore held a seminar titled "Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests". The seminar brought together experts from policy, governance, and legal domains for a comprehensive analysis and provided viable recommendations for policymakers.



## SPEAKERS OF THE SEMINAR

**Introductory Remarks**

**Mr Ameer Abdullah Khan**  
Senior Researcher, CASS Lahore

**Strategic preparedness in the  
Face of Ecological Uncertainty:  
Policies & Priorities from Global  
to Domestic Levels**

**Mr Ali Tauqeer Sheikh**  
Member, Pakistan Climate Change  
Council

**Climate-Governance Node: A  
Prelude to Comprehensive  
Security**

**Mr Ahmad Rafay Alam**  
Environmental Lawyer & Activists

**Climate Adaptation & Mitigation:  
Way Forward to a Sustainable  
Future**

**Ms Sarah Hayat**  
Climate Change Expert

**Closing Remarks**

**Air Marshal Asim Suleiman  
(Retd)**  
President CASS Lahore





## **EXECUTIVE SUMMARY**

The seminar titled, “Climate Resilience and Strategic Preparedness, Safeguarding Pakistan's Security Interests” was aimed at providing a platform for experts to delve into the intricate relationship between climate change and national security. The event aimed to shed light on the challenges faced by Pakistan in the wake of global climate change and also explore how these challenges could potentially threaten state security and social cohesion.

The seminar commenced with opening remarks by Mr Ameer Abdullah Khan, a Senior Researcher at CASS, Lahore. Mr Khan set the stage by highlighting the various ways in which climate change intertwines with the national security of Pakistan. He emphasised the urgency of the situation, pointing out that climate change is not just an environmental concern but a critical determinant of global and national security in the 21<sup>st</sup> Century requiring a non-traditional response.

Mr Ali Tauqeer Sheikh, a member of the Loss & Damage Fund Board, and Pakistan Climate Change Council delivered the keynote address on "Strategic Preparedness in the Face of Ecological Uncertainty: Policies & Priorities from Global to Domestic Levels." Mr Sheikh's address focused on the importance of proactive measures and structural transformations to address climate challenges and enhance national well-being in Pakistan.



Mr Sheikh highlighted the dual nature of climate change as both a security threat and a development opportunity. He stressed the significance of climate readiness for climate-smart development, with vulnerability, adaptation, and resilience at the core of the Sustainable Development Goals (SDGs) agenda. Mr Sheikh also underscored the economic opportunities that responses to climate change can catalyse, citing examples from countries like India and China where investments in renewable energy have driven economic growth and technological advancements.

He emphasised the urgency of addressing climate change promptly to avoid significant economic losses and risks to Pakistan's Gross Domestic Product (GDP). He called for a thorough analysis and immediate action to combat climate change effectively, pointing out that delays in taking action could have severe consequences for the country's economy and well-being. Mr Sheikh also touched upon the importance of rethinking urban planning and housing equity to prevent land grabbing and ensure housing for all segments of the population. He criticised the lack of prioritisation of urban planning and governance failures in providing essential amenities to underserved areas, highlighting the need for strategic urban development to build climate-resilient cities.

Mr Ahmad Rafay Alam, an environmental lawyer and activist, in his thought-provoking address during the seminar, focusing on governance-related challenges that augment climate-induced threats to Pakistan's security. Alam highlighted the critical role of





governance structures in shaping climate policies, ensuring accountability, and fostering sustainable development. Drawing on his expertise in environmental law and policy, Alam emphasised the need for inclusive and participatory governance mechanisms that engage diverse stakeholders in climate resilience initiatives. He also underscored the importance of strategic sustainability insights in guiding policy decisions and promoting environmental stewardship at the national and sub-national levels.

Ms Sara Hayat, an environmental lawyer, climate change specialist, and sustainability consultant, shared valuable insights on climate adaptation and mitigation strategies as a pathway to a sustainable future for Pakistan. Hayat's address focused on the imperative of integrating climate considerations into development planning, infrastructure projects, and policy frameworks to enhance resilience and reduce vulnerability to climate risks. She emphasised the role of legal frameworks, regulatory mechanisms, and institutional capacities in advancing climate resilience and fostering sustainable development outcomes. Hayat's expertise in climate change law and policy underscored the interconnectedness between environmental sustainability, social equity, and economic prosperity, highlighting the need for holistic approaches to address climate challenges in Pakistan.

Alam and Hayat's addresses complemented each other by offering nuanced perspectives on governance, policy, and legal



dimensions of climate resilience. Their insights underscored the importance of multi-stakeholder collaboration, innovative solutions, and adaptive strategies in navigating the complex challenges posed by climate change and safeguarding Pakistan's security interests in a rapidly changing climate landscape.

The Q&A session provided an interactive platform for attendees to engage with the speakers and delve deeper into the complexities of climate resilience and strategic preparedness in safeguarding Pakistan's security interests. Attendees raised a diverse range of questions, reflecting the multifaceted nature of the challenges posed by climate change and the need for comprehensive strategies to address them effectively.

Firstly, they explored the challenges of policy implementation and governance structures in driving effective climate action at both national and sub-national levels. Secondly, attention was drawn to the availability and allocation of climate finance in Pakistan, with concerns raised about its adequacy for supporting climate-resilient initiatives and the necessity for bolstered international cooperation in this realm. Additionally, discussions highlighted the crucial role of community engagement and stakeholder participation in shaping climate policies, stressing the importance of inclusive approaches involving local communities and civil society organisations. Furthermore, attendees expressed interest in the potential of technology and innovation to bolster climate resilience and sustainable



development, particularly through green technologies and data-driven solutions. Lastly, there was a consensus on the significance of international collaboration and knowledge sharing in addressing transboundary climate impacts and fostering global solidarity against climate change.

In his concluding remarks, Air Marshal Asim Suleiman (Retd), President, CASS Lahore, said that despite contributing minimally to global greenhouse gas emissions, Pakistan has endured the harsh realities of climate change. He highlighted that the crisis does not stop at natural disasters, rather it extends to straining the economy, political stability, and social fabric of Pakistan, besides intensifying regional tensions. The President acknowledged Pakistan's initiatives to combat climate change, however, he stressed the need for international cooperation, considering this to be a shared endeavour.





## KEY TAKEAWAYS

### 1 Climate Change and National Security

Climate change is a national security concern and a threat multiplier which can contribute to civil unrest, political instability, economic productivity loss, displacement, and migration threatening the security of Pakistan, so limiting the global temperature rise below 1 degree Celsius is our critical national security interest.

### 2 Trans-boundary Climate Disasters

Floods, droughts, heat waves, sea water incursion and cyclones are major climate induced challenges of trans-boundary nature which can trigger the drivers of conflicts in Pakistan thus necessitating international cooperation and climate diplomacy mainly with Afghanistan and India.

### 3 International Agreements

The United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Climate Agreement are crucial instruments for addressing climate challenge but need significant restructuring to ensure climate justice for the developing nations that have minimum contribution in greenhouse gases emissions.



## **4 Climate Change and Governance**

Effects of climate induced disasters are amplified due to the lack of climate-resilient governance structures pertaining to urban planning, budgetary allocations, investment strategies, construction codes, centralised planning mechanisms, etc.

## **5 Gender and Climate Change**

Climate change poses a different and disproportional threat to both genders but women are particularly more vulnerable to adverse effects of climate change due to economic and cultural aspects.

## **6 Adaptation and Mitigation**

Making Pakistan climate resilient through greenhouse gases emissions mitigation and implementing adaptation measures tailored to its unique socio-political and ecological needs is the only way forward to a secure and sustainable future.



## INTRODUCTORY REMARKS

### Ameer Abdullah Khan


Mr Ameer Abdullah Khan welcomed seminar attendees for their enthusiasm to explore the nexus between climate change and national security of Pakistan amid the climate crisis. He commenced the seminar by highlighting the seriousness of the issue by referring to the gradually rising global average temperature which has crossed the 1.5 degrees Celsius threshold. He iterated that climate change is not just an ecological concern but a security threat.

***“Climate change is not only as an environmental concern but as a critical determinant of global and national security.”***

Mr Khan highlighted the major climate-induced disasters which Pakistan is currently facing. The issues he mentioned included the retreating glacial mass in the Karakoram-Himalaya-Hindu Kush (HKH) region, wildfires in Balochistan triggered by heat wave, glacial lake outburst floods (GLOFs), and intense and persistent droughts in different parts of the country.

### **Need for Expanding the Notions of Security**

The speaker suggested that the gravity of issues require a transformed approach towards security as traditional security focuses on military strength and geopolitical alliances, but is not



equipped to effectively address non-traditional security threats driven by climate change.

***“Traditional notions of security centred on military capabilities & geopolitical alignments provide insufficient response to climate-induced threats.”***

### **Dimensions of Climate Security Nexus**

In the end, the speaker explained six dimensions of the nexus between climate change and national security. Firstly, he mentioned climate change as a direct threat to conditions of human survival because of its ability to destroy the ecosystem. Secondly, he underscored climate change as a “threat multiplier” which can exacerbate ethnic and socio-political divisions in a society thus intensifying existing and creating new conflicts. Thirdly, he pointed towards climate change as a direct determinant of military security because of its potential to undermine the conditions of predictability and control and to destroy military infrastructure. Fourthly, he referred to the shifting alignments at geopolitical level due to climate change having implications for the industrial and economic capabilities of the developing world. Fifthly, they underscored the importance of environmental security as a cornerstone of human security. Lastly, he referred to the novel aspect of climate security where a new category of threat may emanate from the militant environmentalists who might be triggered by a sense of urgency and frustration thus resorting to vandalism and use of violence leading to anarchy and chaos.





## KEYNOTE ADDRESS

### **Strategic Preparedness in the Face of Ecological Uncertainty: Policies & Priorities from Global to Domestic Levels**

**Mr Ali Tauqeer Sheikh**

Mr Ali Tauqeer Sheikh, a seasoned climate change and development expert, delivered an engaging and thought-provoking keynote address titled, “Strategic Preparedness in the Face of Ecological Uncertainty: Policies & Priorities from Global to Domestic Levels”. Mr Sheikh started his discussion with the recognition of climate change as both a security threat and a development opportunity. He also emphasised the urgency of addressing climate change, warning of potential economic losses and risks to Pakistan's GDP if climate action is delayed. He called for thorough analysis and immediate action to effectively combat climate change. Furthermore, he highlighted the need to rethink urban planning and housing equity, stressing the strategic placement of human settlements to ensure housing for all segments of the population. His address also included advocacy for integrating climate considerations across all sectors, making them climate-smart and resilient.

***“Climate resilience and development are two sides of the same coin. Climate readiness is about climate-smart development.”***



## **Ecological Challenge as Economic Opportunity**

Mr Sheikh started with a note of optimism indicating that though climate change is a serious security threat yet it offers a major development opportunity. He emphasised that climate readiness is about climate-smart development as vulnerability, adaptation and resilience are at the heart of the SDGs agenda. This creates new avenues for innovations and economic activity. He suggested that we must adopt a forward-looking perspective, recognising the substantial opportunities climate change presents to societies and countries alike. He then highlighted how, over the past decade, several countries experienced accelerated economic growth, technological advancements, and the emergence of new sectors of investments, all catalysed by responses to climate change. For example, India's attainment of a trillion-dollar economy is greatly propelled by investments in renewable energy and innovative practices. Similar transformations have been witnessed in China.

***“Climate change is the biggest security threat and the biggest development opportunity.***

## **Climate-Induced Threats to Economy and Society**

While highlighting the potential for opportunities, Mr Ali Tauqeer Sheikh also asserted that while we ramp up our responses to climate change, we must acknowledge its many adverse impacts, which span over every aspect of our economy and social fabric. Each impact warrants dedicated attention and requires a separate conference, a separate book, and probably



an institution to focus on it. Even existing institutions need restructuring to address these challenges adequately. The speaker emphasised one crucial point: the alarming prevalence of undernutrition and stunting among a significant portion of the Pakistani population. With our population steadily increasing, especially among younger generations, this issue becomes more pressing. It affects not only physical health but also Intelligence Quotient (IQ) and mental alertness. The nutritional value of the crops we grow, including seedlings, directly influences these outcomes.

### **Extreme Weather Events and their Interconnectedness**

Mr Sheikh introduced two terms: EWEs and CEWEs. The former stands for extreme weather events, and the later refers to compound extreme weather events. He noted that while people are familiar with extreme weather events such as heat waves, floods, droughts, and GLOFs, the occurrence of compound events is increasingly concerning. The CEWEs, where one EWE triggers another in a sequence, are becoming more frequent and intense as no extreme weather event is isolated, and often, they come in combinations. He illustrated this point with an example of heat wave in the upper Indus basin which can lead not only to the melting of glaciers creating the risk of GLOFs but also downstream floods. Similarly, reduced snowfall in the upper Indus basin would mean less water available downstream increasing the risk of drought. Similarly, a heat wave in Karachi could result in torrential rains or a drought in Tharparkar, and so on. The speaker stressed the importance of recognising the



interconnectedness of these events rather than focusing on individual extreme weather events. He urged the younger audience to consider the subsequent events associated with any EWE they witness. Mr Sheikh underscored that Pakistan's ecosystem is diverse, and extreme weather events occur frequently throughout the country. At any given time in this country, there are at least two extreme weather events happening. The frequency of these events is high, whether they are officially registered and responded to or not.

### **The Slow Onset of Climate Change**

The speaker reiterated that extreme weather events are not synonymous with climate change. Therefore, it is important not to confuse or be misled by them. They are rather the result of climate change. The speaker underscored that the real climate change we are experiencing manifests as a slow onset process, measured by scientists in blocks of approximately 20 years. He pointed out that since 1900, there have been six such blocks—five in the last century and one in this century. Therefore, a single hot day or unusual rainfall does not directly mean climate change. Rather, it is the cumulative effect over time that leads us in that direction. Mr Sheikh elucidated that from 2000 to 2020, one such block has been observed, stressing that only by comparing recent data with that of previous months or years we can see whether or not climate change is happening.


In his exposition, the speaker delineated the slow onset of climate change, attributing it to two key factors: rising



temperatures and increasing precipitation. He expounded on how this combination, often influenced by shifts in monsoon patterns, can result in various scenarios - early, late, too soon, or too small. The Existence of these variations and combinations has led to unprecedented events, such as more frequent torrential rains in Balochistan, which wash away topsoil and lead to destruction of property, and loss of human life and livestock. In the past few years, there have been instances where Balochistan was cut off from the mainland for multiple weeks due to such events, causing significant disruptions and losses. He, therefore, argued that no amount of our preparedness was enough to justify that kind of isolation. The sheer size of Balochistan, larger than 11 American states, underscores the magnitude of the challenge.

### **Shifting Patterns of Monsoon**

Mr Sheikh emphasised that the monsoon, which is the lifeline for human existence and survival in our region is changing its patterns. It is reaching to areas where it did not reach before while becoming scarce in areas where it was very frequent and intense. The speaker asserted that these climatic shifts present us with various challenges. He gave the example of the last year's devastating floods in Sindh, a departure from the familiar riverine floods of the past 70 years. The change in monsoon patterns diverted the rains, causing floods in unexpected regions. Instead of coming to Pakistan via Kashmir and Punjab and going to Sindh, it came via Afghanistan just went to the middle of Sindh. Similarly, torrential rains in Balochistan led to




flooding in southern Punjab and lower Sindh, which is usually not the case. This exemplifies the slow onset of climate change and its real impacts.

### **Transboundary and Regional Nature of Climate Change**

Mr Sheikh stressed that climate change is hardly a domestic issue; it is transboundary and regional by its nature and essence. Whether it is air pollution, flooding, tropical storms, droughts, or clouds, every climate change problem in Pakistan transcends international borders. Therefore, he underscored that efforts to address these issues must involve collaborative discussions with neighbouring countries Afghanistan, Iran, China, and India, as isolated actions will only offer incomplete solutions. Mr Sheikh pointed out the interconnectedness of regional problems and the necessity for regional solutions, citing the examples of Sialkot and Nowshera. In these instances, cloud bursts in the Kabul River basin led to flooding in Nowshera, while similar incidents in Jammu caused flooding in Sialkot City.

### **Climate Change and its implications for National Security**

The speaker delved deeper into the issue, arguing that many of the climate challenges we face are increasingly becoming matters of national security. While speeches at the United Nations (UN) General Assembly held limited weight in the past, resolutions passed by the UN Security Council carry legal obligations, potentially leading to collaborative or punitive



actions by dominant world powers, as evidenced in various instances such as Iraq.

***“Scientific evidences and international community’s action present a compelling security case for climate action.”***

Mr Sheikh asserted that fairness and morality are not in question here; rather, the legal implications are paramount. Today, many resolutions from climatic or ecosystem-related challenges worldwide are emerging from the UN Security Council. For instance, the waves of migrants from Afghanistan could be attributed to arid climates and historical drug issues spanning decades. Although we lack comprehensive data on similar situations in Kashmir or Balochistan, it is clear that civil wars and domestic conflicts increasingly stem from climatic changes. The speaker cited the example of the Syrian migration to Europe, which has been linked to climate-induced factors. Similarly, he pointed out that internal displacement is a growing phenomenon in Pakistan, distinct from refugee status or migration. Approximately 20% of our population has relocated within the country over the past three decades, with another 20% projected to do so in the next two decades. Urbanisation plays a significant role in this trend.

### **Rethinking Pakistan’s International Engagements**

Furthermore, the speaker addressed Pakistan's perception of itself as a nuclear power, arguing that it often leads to arrogance. He observed that we tend to neglect interactions with poorer



nations like Nepal, Afghanistan, Fiji, Malawi, and Mali, while feeling incapable of engaging with powerful entities like China, India, the United States (US), the European Union (EU), or Australia. According to the speaker, this attitude quickly descends into self-pity, labelling Pakistan as the most vulnerable country, which is misleading and detrimental. The speaker emphasised the importance for young scientists to understand that Pakistan is not the most vulnerable nation; rather, it ranks among the least prepared due to misallocated investments. By branding itself as the most vulnerable, Pakistan resigns itself to this fate, indicating weak governance and a lack of responsibility.

### **Call for Climate Justice**

Moreover, the speaker said that arguing Pakistan's emissions are less than 1%, and therefore, the world is unjust to us is a flawed argument. According to Mr Sheikh, more than a hundred countries have lesser emissions than Pakistan, yet they are equally threatened by climate disasters. Pakistan's emissions, at approximately 1% of the global total, are comparable to those of many Northern countries, including Australia. However, when considering the efficiency of energy consumption in these nations, it becomes evident that Pakistan's energy utilisation is less responsible. This inefficiency contributes to the high cost of doing business and production in, rendering the state less competitive internationally. He urged Pakistan to debunk these myths, revisit them, and reassess its policies, advocating for the country to realign itself with poorer nations, leveraging the advantages it possesses.






### **Leveraging Climate Diplomacy and Soft Power**

The speaker underscored the imperative to break isolation through systematic efforts in impressionable climate diplomacy, emphasising its potential significant contribution to soft power. Mr Sheikh drew attention to Turkey's government, which invests over a hundred million dollars in producing dramas aired in Eastern Europe, Pakistan, and elsewhere to enhance its soft power. He stressed that soft power demands investment and does not come free. Moreover, he advocated for debunking certain myths that prevent our policymakers from making tough decisions. The speaker accentuated the importance of understanding the nexus of human security, human development, food security, energy security, and climate change, asserting that climate change lies at the core of economic, human, and vision security. He argued that mere initiatives like planting billions of trees or reducing emissions in Lahore are not enough. It is the tip of the iceberg; the iceberg runs much deeper.

### **Restructuring Climate Governance**


Additionally, the speaker pointed out that climate change is not solely a federal government issue. Presently, federal authorities wield significant power, limiting the autonomy of provinces. Furthermore, the speaker brought attention to the fact that provinces often fail to delegate sufficient authority to district-level governments and institutions to effectively respond to climate change. He stated that climate vulnerability is inherently local, demanding local solutions, and asserted that no amount of



national-level preparedness can alleviate flood storms in Bihari or Kila Saifulah. The speaker proposed empowering those affected by vulnerability through a redesign of the National Finance Commission (NFC) award, suggesting that the share allocated to provinces needs to be further sliced and allocated to the district level. Districts equipped with District Disaster Management Authorities (DDMAs) possess constitutional and political legitimacy, supported by national commitments, despite initial inefficiencies.

### **Empowering Local Responses**

Mr Sheikh elaborated on his advocacy for local government, presenting a compilation of last year's disasters in Pakistan, categorised by losses incurred by non-governmental individuals and the private sector. Individual losses, which include personal properties such as houses, lands, and livestock, outweigh government losses. Mr Sheikh highlighted the differences in housing situations, noting that while living in Islamabad ensures the safety of one's house, residing in Balochistan or Sindh could result in house demolition. He elaborated that houses in Islamabad fall within residential zones, constructed with resilient materials and well-defined structural strength to prevent water intrusion. However, in the case of Balochistan or Sindh, there is a lack of proper land use planning. He emphasised the absence of designated housing areas, particularly for the poor, equipped with resilient designs and infrastructure. Furthermore, he pointed out the lack of technical, scientific, and financial support to empower individuals to construct buildings capable of



withstanding climate-related challenges like floods. This absence of support, Mr Sheikh stressed, leaves communities vulnerable to environmental hazards.

### **Reassessing Pakistan's Investment Strategies**

The speaker discussed that our investment strategies have been fundamentally flawed, highlighting that simply pouring money into projects, even with the best intentions, does not guarantee success. Whenever floods occur, Pakistan finds itself facing similar challenges. The construction standards approved during the colonial Raj period were criticised for seeing nominal improvements, with entities like the Engineering Council and Frontier Works Organisation (FWO) failing to revise specifications and construction guidelines, ultimately failing the nation. Instead of addressing these systemic issues, we often blame the poor for not constructing adequate housing. Oftentimes, we have the simpler answer of corruption.

***“During 2023-2030 Pakistan will need \$152 billion for adaptation, and \$196 billion for decarbonisation.”***

While he acknowledged that this may be the case, Mr Sheikh urged for a deeper understanding of the issue. He questioned why the government had not taken steps to ensure its infrastructure, proposing that a third party should bear the financial burden in the event of damage or loss rather than relying solely on government funds or seeking international loans. The staggering losses of \$30 billion last year alone were cited as a direct result of the outlined issues.



In his presentation, Mr Ali Tauqeer Sheikh referenced critical data from the provincial disaster management authorities (PDMAs), Post-Disaster Needs Assessment (PDNA) conducted by the Planning Commission of Pakistan, and the Country Climate Disaster Report (CCDR) by the World Bank. The figures he presented were stark: \$152 billion are required for adaptation and \$196 billion for decarbonisation. Mr Sheikh characterised this as an existential threat, considering the losses and the high percentage of Pakistan's GDP at risk. He brought attention to the fact that Pakistan would need \$348 billion, an amount 800% more than the current annual budget. As Mr Ali Tauqeer Sheikh looked toward the future, he warned that in the coming years, Pakistan faced the risk of losing approximately 7% to 9% of its GDP if corrective measures were not implemented and if the whereabouts of the \$30 billion were not scrutinised. He painted a vivid picture of the potential consequences: a substantial decline in per capita income and a scarcity of basic amenities such as lighting, clothing, and nutrition for a significant portion of the population. Looking ahead, Mr Sheikh projected that Pakistan would have less than \$50 billion available. He stressed that the key lessons from this assessment emphasised the urgent need for thorough analysis and immediate action to combat climate change.

***“Climate disasters, environmental degradation & air pollution will cost 7-9% fall in GDP overall shrinking it by 20% by 2050.”***




### **Rethinking Urban Planning for Housing Equity in Pakistan**

Additionally, the speaker focused on the critical importance of locating human settlements as a primary step. He stressed the need to prevent land grabbers from seizing control, highlighting that the focus should not solely be on luxury developments but on providing housing for all segments of the population. With nearly 50% of Sindh's villages consisting of fewer than 50 households, Mr Sheikh questioned the responsibility for providing essential amenities such as schools, electricity, roads, and infrastructure in these areas. He attributed the issue to a failure of governance rather than solely civil law or corruption. He underscored the lack of prioritisation of urban planning as the root cause, noting the absence of efforts to address building materials. Moreover, insufficient attention is given to local government. Mr Sheikh criticised the prevailing notion that solutions originate solely upstream, neglecting the crucial role of local governance in addressing these challenges. He also criticised outdated responses, emphasising that simply distributing funds without addressing underlying issues would not effectively resolve the problem.

### **Collaborative Actions for Climate Resilience and Adaptation**

Mr. Sheikh advocated for four priority collaborations in climate adaptation and resilience, underlining the urgency of taking action and transitioning towards preparedness and response measures. Firstly, he suggested the establishment of a national disaster and resilience management authority, rather than relying solely on the National Disaster Management Authority



(NDMA). Secondly, he proposed the integration of climate risks into sectoral development, encompassing agriculture, water management, and urban planning. Thirdly, he stressed the importance of localising resilience efforts and addressing risks at the district level. Finally, he recommended climate-proofing low onset cropping patterns as part of the adaptation and resilience strategy.

### **Strategies to Deal with Extreme Weather Events**

Additionally, the speaker proposed five resilient strategies for extreme weather events and compound extreme weather events. Firstly, proactive measures during heatwaves and tropical storms were emphasised. The importance of immediate action during heatwaves in northern regions was stressed, advocating for proactive measures rather than waiting for downstream flooding, which is often an inevitable consequence. Similarly, when a tropical storm approaches Pakistan and the Arabian Sea, it is predictable that coastal areas like Thatta and Badin will be flooded, affecting agriculture with saline water intrusion. Therefore, evacuation plans and operational strategic infrastructure must be put in place.

Institutional readiness and critical infrastructure audits were underscored as vital. There was a call to audit critical infrastructure such as airports, railways, government buildings, and dams for their resilience levels to prevent disruptions in transportation and mitigate food shortages, particularly in regions like Khyber Pakhtunkhwa (KP).



Proactive steps for resilience enhancement were emphasised by Mr Sheikh. He stressed the urgency of taking proactive steps to enhance resilience in the face of extreme weather events, emphasising the need to act regardless of specific temperature thresholds like 1.5 degrees or 2 degrees.

Addressing human activities affecting natural water flow was highlighted as another crucial aspect. Attention was drawn to the impact of human activities such as sand mining, encroachments, and waterfront housing societies on obstructing natural water flow, particularly evident in Lahore and Punjab. Addressing these issues, though straightforward, was highlighted as politically challenging due to influential interest groups capable of manipulating transfers and influencing decisions at various levels of government.

Urban flooding management was a key focus, with a spotlight on Karachi's significant costs due to infrastructure inadequacies, especially in areas like Thatta and Badin. While some non-governmental organisations have made commendable efforts in supply management, vulnerabilities in civil administration were highlighted, resulting in resource redirection and other administrative inefficiencies. These challenges were identified as harsh realities requiring urgent attention.

## **Conclusion**

Mr Sheikh reiterated the gravity of the challenges facing Pakistan and stressed the need for substantial structural transformations to overcome them. He emphasised that fulfilling these



transformations would not be a favour to anyone but a fundamental commitment to the people of Pakistan. Mr Sheikh highlighted the essential need to understand that people defend their lifestyles, not just their countries. He stressed that by providing for citizens, the state and society can enlist their support in protecting the nation. This, he argued, was a crucial reality that needed to be embraced swiftly to explore economic opportunities and enhance national well-being.





## **Climate-Governance Node: A Prelude to the Comprehensive Security**


### **Mr Ahmed Rafay Alam**

Mr Alam began by expressing his honour to speak at CASS and his appreciation for the technical, comprehensive, and intellectually rigorous, presentation delivered by Mr Shiekh. He outlined his discussion to be more oriented towards understanding the social and moral contexts of climate change. At the outset, he raised the alarm that the climate crisis is threatening our future.

### **Climate Change: Threatening the Stability of Human Civilisation**

Mr Alam emphasised that climate change is essentially global warming caused by greenhouse gases, which are emitted when fossil fuels like gas, coal, or oil are burned for energy or transportation. These gases trap the sun's heat in the atmosphere, leading to increased temperatures and destabilising the Earth's ecosystem. He stressed how it is the stability of the Earth's ecosystem until now that has allowed us humans to be able to cultivate agriculture at a scale large enough to support our current civilisation. However, the instability arising from global warming threatens the agricultural foundations of our civilisation, which have been stable for over a hundred thousand years.

Mr Alam underlined that the climate catastrophe does not simply imply the extinction of Earth or human beings but rather the



replacement of our current civilisation with a less stable one. This is due to the fundamental changes in our relationship with the Earth, as average global temperatures have already risen by about 1.2 to 1.3 degrees Celsius since the Industrial Revolution. He remarked that this was already the hottest month on record and that this was the coolest summer of the rest of our lives.

### **Consequences of Rising Carbon Concentrations**

Mr Alam presented data showing that current carbon concentration levels in the atmosphere are around 425 parts per million, a level not seen for 2.5 to 5 million years. He said that the levels of intensity of carbon concentrations indicate that our civilisation is experiencing something entirely new, leading to various climate-related disasters. He gave several examples such as California which experiences a forest fire annually, akin to how Pakistan has a smog season every year.

***"Climate change threatens not just survival but the replacement of our current way of life with a less stable future."***

He recalled how in 2020, there was a national emergency declared because of a plague of locusts that swept over the region. The locust population were increased by the unseasonably cool winters that the Horn of Africa had experienced over the past years, allowing for these swarms to, breed in such large populations. And so just as much as the forest fires are part of the climate sort of events, Mr Alam stated that this locust event was also a climate event.



He went on to describe the hardships of death and destruction endured by Australia, Greece and Libya because of extreme weather events, whether it be raging forest fires or torrential downpours. In this regard, he highlighted the recurring erratic rainfall in Karachi which paralyses the commercial capital of the country and how the 400-800% average monthly rainfalls that fell over these parts of Sindh and Balochistan in 2022, which do not normally receive monsoon rain, created a 100-kilometre lake that was visible from space.

### **Urban Heat Islands and Air Pollution: A Looming Health Crisis in Pakistani Cities**

He also expressed concern over the urban heat island effect, where built-up areas in cities can lead to temperatures exceeding human body tolerance and threatening the lives of tens of thousands of people who could be at risk for prolonged exposure to unprecedented heat levels. Recalling how a decade ago in Karachi, there was a month-long heat wave that cost 1,400 lives. Additionally, he addressed that air pollution is a year-long phenomenon from Kabul to Calcutta and has become a problem in all Pakistani cities, especially in Lahore because of its population, commercial activity, and automobile use. For instance, he cited that greenhouse gases in the form of air pollution on average cost 2 years of life expectancy of Pakistanis living in urban areas whereas in Lahore, it is as high as 7 or 8 years of life expectancy being lost.




## **Climate Injustice: The Interplay of Global Emissions and Local Governance Failures**

Mr Alam then discussed the concept of climate injustice, pointing out that the greenhouse gases produced primarily by the Global North have contributed significantly to climate change. He cited a study that attributed 50% of the intensity of recent extreme rainfall in Pakistan which caused historic flooding to global warming. However, he pointed out that it was not entirely a man-made disaster. Given that settlements have been constructed in flood plains lacking proper flood protection, so there was governance issues, which exacerbated the problem. Mr Alam aptly put it that we live on this fault line between international climate injustice and our governance issues.

## **Role of International Agreements in Addressing Climate Change and Supporting Vulnerable Nations**

He stressed the significance of key international agreements such as the UNFCCC, the Kyoto Protocol, and the Paris Agreement in combatting climate change. Mr Alam emphasised the need for developed nations to assist developing ones in both adapting to and mitigating climate change, adhering to the principle of common but differentiated responsibilities. He highlighted that climate funding is not just an obligation but a debt owed by wealthy nations to poorer ones, enabling necessary technology transfer for safeguarding lives and assets.

Furthermore, Mr Alam discussed the consensus reached at the Kyoto Conference of Parties (COP) in the 1990s to limit global



warming to 2 degrees Celsius above pre-industrial levels. He painted a dire scenario, indicating that a 2-degree rise could result in the complete submergence of small island states like the Maldives and Seychelles due to sea-level rise. Consequently, under pressure from these vulnerable nations, the target was revised to limit warming to 1.5 degrees Celsius.

### **Harsh Realities of Climate Change: No Safe Threshold**

Mr Alam emphasised that no level of climate change is safe. Both 1.5 and 2 degrees Celsius are not harmless thresholds. The devastation at 2 degrees warming prompted political leaders to elevate the ambitions of the UNFCCC by ensuring global temperatures wouldn't exceed 1.5 degrees. However, despite these efforts, greenhouse gas emissions since 1992 have surpassed all historical levels.

***“There's no safe amount of climate change. 1.5 and 2 degrees are not harmless thresholds.”***

Additionally, he warned of the absence of stabilisation on the horizon. While there was a slight decrease during the COVID-19 pandemic, emissions swiftly rebounded, indicating no slowdown. Scientists now doubt the feasibility of limiting warming to 1.5 degrees Celsius. The UN Secretary-General cautioned that without unprecedented global changes, we could surpass 2 degrees, even reaching 2.5 degrees Celsius by the century's end. Mr Alam expressed deep concern that at 2 degrees Celsius, international food shortages due to crop failures would be



significant, and at 3 degrees Celsius, no existing trees could withstand such conditions.

He thus reiterated how death and destruction that come from the instability of the Earth's ecosystem and extreme climate events perhaps can't be put into words or numbers in terms of lives. But certainly, millions of people are at risk of losing their lives because of climate change internationally. And most of those people would be in the global south because this is where the world's population lives.

### **Neoliberalism, Consumerism, and Patriarchy: The Interconnected Drivers of the Climate Crisis**

Mr Alam then deliberated on a thought-provoking question that greenhouse gases have been part of human practice for decades and millennia. But what have been the drivers of the climate crisis that pushed us to this precipice of civilisational collapse? In this regard, he was of the view that neoliberalism or the present global economic order is a prime driver of climate change. He stated that this capitalism is deeply entwined with colonialism, something our region has experienced, which has historically been the unaccountable extraction of natural resources from one part of the world. And, of course, the subjugation of the people in the developing countries so that populations in other parts of the world can make and amass vast amounts of money. Something that we see today in the form of neo-capitalism and multinational corporations.




Mr Alam cited a decade-old Guardian article which shed light on how just 90 companies that still exist today are responsible for two-thirds of all global warming. He also pointed out that affluent people in poor countries drive the climate crisis. He displayed a chart showing how about 10% of the world's richest people consume about 50% of the world's resources, demanding a behavioural shift. Mr Alam further stressed that there can be no effective adaptation or mitigation anywhere in the world unless women are part of decision-making. He urged that the most important thing we need going forward is the powerful emotion of empathy.

***"Neoliberalism, consumerism, and patriarchy are interconnected drivers of the climate crisis, requiring shifts in elite behaviours."***

### **The Gap between Climate Governance Ideals and Realities**

The concluding segment of his presentation focused on the disparity between Pakistan's climate governance aspirations and the harsh realities. Mr Alam highlighted the revision of the National Climate Change Policy in 2021 and the submission of Nationally Determined Contributions (NDCs) in 2016, later updated in 2021. He mentioned the significance of funding the Living Indus document to potentially save the Indus from degradation. Additionally, he pointed out the National Adaptation Plan as a crucial governance framework.

Mr Alam remarked that when it comes to policy, considering the aforementioned initiatives, on paper we are well aligned.



However, the core provisions in these policies related to adaptation, urban planning, land use management, waste management, etc. are all issues which have historically been, even before the 18<sup>th</sup> Amendment, subjects of provincial governance control. He pointed out that many of the initiatives and promises that the federal government is making, require political uptake and ownership from the federating entities. Because we have an international obligation, but it's governed through the province. Mr Alam underscored the need to establish a mechanism in our climate governance, a sort of firmament that coordinates the promises that the federation makes to the commitments that the provinces have to undertake.

### **Conclusion**

While concluding his speech, Mr Alam highlighted the necessity of such a mechanism by stating how flood protection, for instance, is a rather expensive endeavour and the money can only be released if a finance bill in a provincial assembly approves that funding. He highlighted this dichotomy that in Pakistan, the federation is making promises and saying that we are compliant on paper when the check writing, the actual cashing of the check has to be done by some other entity whom they have not interfaced with. He was of the view that this is one of the weaknesses in the implementation of our federal policies with most of the subject matters at the provincial level.






## **Climate Adaptation and Mitigation: Way Forward to a Sustainable Future**

### **Ms Sara Hayat**

Ms Sara Hayat, in her address highlighted the interconnectedness between environmental shifts, gender disparities, economic stability, and national security. She explored the challenges faced by women in accessing essential resources, the economic repercussions of climate-induced disruptions, and the gendered aspects of disaster response. Moreover, she examined Pakistan's vulnerability to climate change, geopolitical dynamics, and the imperative for adaptation and mitigation strategies. Ms Hayat underscored the importance of data-driven policy formulation and collective action to navigate the challenges posed by climate change while fostering resilience and sustainable development.

### **Gender Disparities in Environmental Impact**

Ms Sara Hayat began by highlighting the disproportionate impact of environmental changes on women compared to men. She stressed the crucial role that women play in households and broader society, noting that their well-being directly affects the functionality and security of a state. Ms Hayat drew attention to cultural norms where women are often responsible for household tasks, sharing personal stories that underscored the challenges they face in accessing basic resources. For example, obtaining firewood for cooking has become increasingly difficult, as has accessing clean water, especially in remote areas. These



difficulties result in physical health issues such as headaches and back pain for women who must carry heavy loads of water over long distances. Additionally, women are more susceptible to wildlife attacks and sexual harassment while performing these tasks.

### **Economic Repercussions of Climate Change**

Ms Sara Hayat also explored the economic ramifications of climate change, particularly regarding employment opportunities and household income. Given the traditional role of men as primary earners, disruptions caused by climate change further strain household finances, leading to a rise in domestic abuse cases. Additionally, highlighting the demographic significance of women, who make up around 49% of the population as per the 2017 census, Ms Hayat emphasised that women's well-being should be considered fundamental to national security. These comments underscored the necessity for policies and interventions aimed at addressing gender disparities that are exacerbated by climate change, ultimately ensuring the resilience and security of societies.

### **Agriculture Sector Challenges and Migration Patterns**

During her address, Ms Sara Hayat shed light on the profound impacts of climate change on the agriculture sector, accentuating the resulting migration patterns and their gender-specific challenges. She underscored how climate change has severely disrupted agricultural activities, leading to the displacement of millions who depend on farming for their




livelihoods. This has forced many to migrate, particularly from rural to urban areas, in search of alternative employment. However, Ms Hayat highlighted the unique challenges faced by women in this migration process, often left in vulnerable situations or confronting harsh living conditions when accompanying their families. She noted that approximately 30 million climate migrants have contributed to the burgeoning populations of densely populated cities like Karachi and Lahore, exacerbating issues such as urban overcrowding, slum emergence, resource scarcity, intensified job market competition, and elevated crime rates.

Furthermore, the discussion delved into the adverse effects of climate change on agriculture, particularly regarding crop quality and yield. Ms Hayat pointed out that traditional seeds ill-suited to climate change, combined with increased atmospheric carbon levels, have significantly reduced crop productivity and quality, aggravating food insecurity and potentially sparking civil unrest. Of significant concern is the limited economic opportunities available to women, who are heavily involved in the agriculture sector. As agricultural productivity declines, women lose their primary income source, heightening their vulnerability. Cultural barriers further impede their transition to alternative professions, compounding their economic challenges.

### **Gendered Aspects of Disaster Response**

During the seminar, Ms Hayat highlighted the gendered aspects of disaster response, focusing particularly on flood-prone



regions like Bangladesh, India, and Pakistan. She pointed out that cultural and religious norms, such as the lack of swimming education for women, contribute significantly to their increased vulnerability during floods. Women, who are 16 times more likely to die in floods, often hesitate to accept aid from male rescuers due to cultural constraints.

***"Empowering women with disaster response education is crucial to mitigate gendered vulnerabilities during natural disasters."***

Ms Hayat stressed the importance of raising awareness and educating women on disaster preparedness and response to effectively address this issue. Empowering women with knowledge and skills, such as swimming, and fostering awareness about the significance of accepting aid during emergencies, can help communities better mitigate the risks associated with natural disasters.

### **Link between Climate Change and Security Threats**

Ms Hayat also explored the connection between floods and terrorism in Pakistan, highlighting a concerning security implication. Insufficient data and limited civilian access to information hinder a comprehensive analysis of this link. However, it was noted that during natural disasters, religious organisations often provide assistance, leading some individuals to join extremist groups in exchange for aid.

This phenomenon underscores the urgent need for better access to data and resources for civilians to understand the



complex interplay between disasters and security threats. Additionally, efforts to provide alternative avenues for assistance during emergencies can help mitigate the risk of vulnerable individuals, particularly women, being exploited by extremist organisations.

### **Pakistan's Vulnerability to Climate Change**

Ms Hayat highlighted Pakistan's vulnerability to climate change, emphasising its profound security implications often overlooked. Pakistan has emerged as one of the most vulnerable countries to climate change, attributed to several interconnected factors.

Firstly, the large population exacerbates Pakistan's susceptibility, as higher population density correlates with increased vulnerability. Adaptation and mitigation measures tend to have a higher success rate in countries with manageable populations, underscoring the urgency of addressing Pakistan's demographic challenges. Secondly she highlighted the geophysical features of the country which make the country more vulnerable to climate change. Glacial melting, particularly in the northern regions, poses a significant concern, exacerbated by the encroachment of the Arabian Sea on coastal agricultural lands in the south. This geographical vulnerability underscores the imperative to develop adaptive strategies tailored to Pakistan's unique topography.

Lastly, Pakistan's geopolitical dynamics, characterised by tensions with neighbouring India and Afghanistan, exacerbate its vulnerability, particularly in the context of water scarcity disputes.




Additionally, low literacy rates further compound Pakistan's vulnerability, hindering effective climate resilience and adaptation efforts.

### **Adaptation and Mitigation Strategies**

Ms Hayat spearheaded an in-depth discussion on the critical subject of adaptation and mitigation strategies aimed at mitigating the adverse impacts of climate change. She articulated that mitigation efforts are primarily geared towards reducing greenhouse gas emissions, a pivotal step in combatting climate change. This entails a concerted push towards promoting renewable energy sources such as solar, hydropower, and wind energy. Despite commendable progress in this arena, Pakistan confronts a spectrum of challenges, including the daunting hurdles of high costs associated with transitioning to renewable energy, infrastructural limitations, and persistent gaps in public awareness regarding the urgency of climate action.

Moreover, Ms Hayat shed light on Pakistan's ambitious endeavour to transition towards electric vehicles (EVs), setting a commendable target of achieving a 30% adoption rate by 2030. However, this laudable goal is not without its own set of impediments, as the nation grapples with infrastructural constraints and formidable cost barriers hindering the widespread adoption of EVs.



In addition to these initiatives, Ms Hayat underscored the ongoing efforts to bolster mitigation measures within industrial sectors. This encompasses a multifaceted approach, including initiatives aimed at improving waste management practices and implementing effective smoke treatment protocols. Such endeavours reflect a proactive stance towards mitigating the environmental footprint of industrial activities, thereby contributing to broader climate resilience efforts within Pakistan.

***"Mitigation efforts in Pakistan should focus on renewable energy and electric vehicles."***

While global efforts towards achieving net-zero emissions are commendable, Pakistan's resource constraints necessitate pragmatic approaches to climate mitigation. Pledging zero carbon emissions would be impractical given these limitations. Instead, a comprehensive approach addressing various socioeconomic and environmental factors is crucial for effective climate resilience and adaptation.

Ms Hayat highlighted the crucial role of adaptation in managing climate change impacts, emphasising strategies like empowering women through diversified livelihood sources and avoiding flood-prone areas. The "billion tree tsunami" initiative was also praised for its cost-effective afforestation efforts, contributing to global warming mitigation and creating employment opportunities.



Furthermore, proactive measures like investing in saline-resistant agricultural seeds were discussed to tackle environmental challenges. Security implications of glacial melting and smog were addressed, emphasising the need for collective action, cross-border collaboration, and technological interventions to mitigate climate-induced risks.

***"Adaptation strategies should include afforestation, saline-resistant seeds, and addressing glacial melt."***

## **Conclusion**

In her conclusion, Ms Hayat underscored the urgency of addressing the gendered dimensions of climate change and the critical role of adaptation and mitigation strategies in building resilience. She emphasised the need for collective responsibility, data-driven policy formulation, and cross-sectoral collaboration to effectively address the interconnected challenges posed by environmental shifts. By empowering women, embracing adaptive measures, and fostering cooperation, Pakistan can navigate the complexities of climate change while promoting sustainable development and safeguarding national security.





## CONCLUDING REMARKS

### Air Marshal Asim Suleiman (Retd) President CASS Lahore

Air Marshal Asim Suleiman (Retd), President CASS, Lahore, in his concluding remarks, pointed out that Pakistan is right in the middle of the fight against climate change, even though it did very little to cause the problem. He remarked that the United Nations Secretary-General has rightly called Pakistan a “double victim”. On one hand, we face the brunt of climate change’s severe impacts; on the other, we are constrained by an outdated global financial system. This limits our access to crucial resources needed for adaptation and resilience.

#### **Pakistan and Climate-induced Disasters**

The President said that despite contributing minimally to global greenhouse gas emissions, Pakistan has endured the harsh realities of climate change. The summer of 2022 brought monsoon rains nearly double the 30-year average, leading to devastating floods. These floods displaced 33 million people, took 1,400 lives, and resulted in economic losses amounting to \$30 billion. Such extreme weather events have become alarmingly common, signifying the urgent need to enhance our resilience.

***“Despite contributing minimally to global greenhouse gas emissions, Pakistan has endured the harsh realities of climate change.”***



## **Climate-Security Nexus**

He said that the crisis does not stop at natural disasters. It extends to straining our economy, political stability, and social fabric, deepened by ethno-religious divisions. With limited adaptive capacity, climate change has escalated from a secondary issue to a pressing security concern. It threatens to disrupt our society, ignite conflicts, and increase intra-state violence.

***“The crisis does not stop at natural disasters. It extends to straining our economy, political stability, and social fabric, deepened by ethno-religious divisions.”***

## **Food Security & Climate Change**

Air Marshal Asim Suleiman (Retd) said that this is exemplified in the way agriculture, the backbone of our economy, has been hit hard, with reduced crop yields and increased vulnerability to weather extremes. This not only affects our rural communities, which form the heart of Pakistan's agrarian society, but also leads to displacement and rising poverty. Moreover, the health of our people is at risk from climate-related diseases, such as heatstroke, respiratory issues, and water-borne diseases following floods.

## **Trans-boundary Water Conflicts**

The President said that on the external front, the stakes are elevated significantly in the context of Pakistan and India. The two nuclear-armed neighbours share the vital and vulnerable Indus Basin. This shared water resource, crucial for the



livelihoods and economies of both nations, is under increasing stress due to changing climate patterns. This not only increases existing tensions but also introduces a complex layer of transboundary water management challenges. Recognising this shared challenge as a priority can pave the way for collaborative efforts towards mitigating climate impacts, fostering peace, and ensuring the security and prosperity of both nations in the face of adversity.

### **Call for International Cooperation**

He said that on its end, Pakistan has embarked on significant initiatives to combat these challenges. We are committed to the Paris Agreement, focusing on building a sustainable future. Yet, the journey is riddled with obstacles, including financial constraints and the need for technology transfer. Here, the importance of international cooperation shines through. Global financial assistance, technology transfer, and capacity-building are essential for us to meet our climate goals.

### **Adaptation and Resilience**

The President said that looking forward, we must prioritise strengthening our infrastructure to combat climate impacts. This includes constructing advanced flood defences and developing heat-resistant crops. Harnessing renewable energy offers a beacon of hope for reducing emissions, with solar, wind, and hydroelectric power leading the way towards a greener economy.



***“We must prioritise strengthening our infrastructure to combat climate impacts. This includes constructing advanced flood defences and developing heat-resistant crops.”***

Moreover, our reforestation and conservation efforts are vital for controlling carbon dioxide in the environment and protecting biodiversity. In this regard, public awareness and education are crucial for developing a culture of sustainability within Pakistan. Engaging the public in climate issues fosters a collective drive towards environmental management.

He said that as we navigate these turbulent times, it is important to remember that this journey towards a sustainable future is a shared endeavour. The materialisation of the ‘Loss and Damage Fund’ at COP28 is a welcome step, besides the ‘Fossil Fuel Non-Proliferation Treaty’, ‘Food and Agriculture Declaration’, and the ‘Climate, Relief, Recovery, and Peace Declaration’. However, concrete measures are needed to protect vulnerable states from the effects of climate change.



## QUESTION AND ANSWER SESSION

**Question 1: Who among us, whether from the forces, government agencies, law enforcement bodies, or academia, will step forward to assume responsibility for ensuring the effective implementation of our meticulously devised initiatives?**

Ms Sara Hayat responded the insightful question and agreed that implementation often stands as the most significant obstacle in policy execution. Ms Hayat highlighted that it is imperative for the government departments to assume responsibility and ownership of their role instead of deflecting it elsewhere. She stressed the crucial importance of engaging academia in raising awareness and providing valuable data and suggestions. Ms Hayat called for involving student bodies, noting that youth engagement can significantly contribute to progress. Additionally, she underscored the essential role of civil society organisations and think tanks as vital intermediaries between government entities and effective action. While acknowledging the government's legal authority to sanction, Ms Hayat suggested that financing for implementation could be sourced from the private sector through innovative mechanisms such as public-private partnerships, which have gained global traction. In summary, she reiterated that while government departments bear primary responsibility, collaboration among academia, civil society, and the private sector is indispensable for achieving meaningful progress in policy implementation.



Mr Ali Tauqeer Sheikh, also contributed to the discussion, highlighting the need to reassess the current mind set, particularly concerning climate change. He emphasised the longstanding urgency of addressing climate change, which may have been evident two or three decades ago. He mentioned his authorship of the first Punjab climate change policy approximately a decade ago which remained in draft form for about eight or nine years due to a lack of prioritisation. Additionally, Mr Sheikh emphasised the critical need to reconceptualise the approach to finance. He highlighted that all international finance should now be regarded as climate finance. It is no longer sufficient to compartmentalise funding into separate categories such as education, health, or urban planning. Instead, each sector must incorporate a climate component, making them climate-smart and resilient. The speaker recalling his experience in Ahmedabad, India, approximately 10 years ago, Mr Sheikh referenced his involvement in developing their heat management policy, which later served as a model for Karachi's heatwave management plan. Furthermore, the speaker stressed the importance of integrating climate considerations into curriculum development and teacher training to ensure awareness and preparedness for climate challenges.

The speaker drew attention to a critical scenario in India where newborn babies and their mothers faced significant vulnerability due to the location of the maternity ward on the second floor, directly exposed to the sun. He emphasised the considerable



challenge of relocating entire wards or wings to cooler areas downstairs. This illustration underscored the urgent necessity to consider climate finance in all sectors, including healthcare. Mr Sheikh cautioned against deluding ourselves into thinking otherwise, asserting that climate finance is integral to all aspects of funding.

Mr Sheikh highlighted that combating climate change within our systems demands a fundamental shift. He pointed out a promising initiative at the federal level, where the precursor PC2 must undergo climate-proofing alongside PC1 to climate-proof it. This involves integrating climate-smart elements into concept notes and templates at various stages of project development. Mr Sheikh emphasised that the entire project approval process, including PC1, PC2, and subsequent phases (PC3, PC4, PC5, etc.), should incorporate climate-smart strategies and monitoring mechanisms for climate adaptation and resilience throughout the project lifecycle. After project implementation, he stressed the importance of systematic data collection processes to track climate adaptation outcomes and performance, informing future decision-making and enhancing climate resilience strategies. Furthermore, the speaker urged that even projects at the provisional level must adhere to climate-proofing standards established by the government of Pakistan. He highlighted that this transformative process necessitates significant policy reforms, including the introduction of new formats, templates, and budget allocations. Overall, he reiterated that this journey



toward transformation requires comprehensive policy overhauls, data analysis, and refined investment strategies.

Elaborating the point further, Mr Sheikh stated that it is crucial to understand that no amount of international finance can substitute for national funding in addressing the climate crisis. He drew attention to staggering figures, indicating an 800% increase in resources needed to adequately tackle climate change. Therefore, he stressed the importance of younger generations comprehending the necessity of integrating climate considerations into every aspect of governance and decision-making. Addressing the audience, Mr Sheikh advocated for reforming the entire budgetary system, which is a long-term endeavour. He argued that this would require embedding climate data generation and analysis into our processes to refine investment strategies. He asserted that there is no substitute for national finance in addressing this crisis, arguing that no amount of international funding can sufficiently resolve our challenges.





**Question 2: There is considerable discussion about mitigating the effects of smog. What are your thoughts on using artificial rain as a viable solution for this challenge?**

Mr Sheikh initiated his response with a light-hearted remark, joking that cancer cannot be cured with aspirin. Recounting his experience, he narrated a journey in Lahore as he ventured towards the Data Sahib shrine in an open-top bus, he noticed the pollution taking its toll, causing difficulty in breathing and darkening his face. Mr Sheikh observed from the upper deck a scene of bustling with activity. Shops spilled their merchandise onto the sidewalks, while street food vendors lined the edges. Further ahead, shopkeepers had spread out clothes for sale on the road, and rickshaw drivers awaited passengers. Therefore, a large portion of the road was occupied by encroachments, leaving only a narrow passage for traffic to navigate through, resulting in congestion. The speaker argued that the administrative solution seemed simplistic: remove the encroachments. However, he could not help but consider the livelihoods of the shopkeepers at stake, recognising that those individuals have families to support. Consequently, he proposed an alternative approach i.e., establish designated areas where such a dense population can conduct their livelihood activities without resorting to encroachments.

Another concern that emerged was the quality of fuel. The speaker stated that while the Punjab government does not directly import fuel as it is handled by the federal government, there remains an issue with the quality of the fuel being imported.



Despite the desire to improve, Mr Sheikh acknowledged that the Punjab government's hands are tied due to the fuel grading system. The fuel imported is of C-grade quality, yet consumers are charged A-grade prices for it. This disparity contributes to the gap that sustains the country's operations. Improving fuel quality is crucial to reducing harmful emissions. However, Mr Sheikh emphasised that Punjab alone cannot address this issue, despite being the largest province.

The one thing that the speaker asserted categorically was that the smog was not originating from India. He highlighted that there was no system in place to confirm or refute that claim. He argued that people often resort to blaming India when they are hesitant to attribute something to a specific cause. Mr Sheikh emphasised that it was implausible for the air to travel from there to here and not the other way around. In fact, he noted that the air should have dispersed significantly by the time it arrived. Contrary to this, the dense smog faced locally was a clear indicator of local generation. Mr Sheikh deemed it a highly complex provincial issue, which is frequently discussed in various meetings as Pakistan had become a global case study.

Mr Sheikh called for the examination of the issue in three contexts. Firstly, he emphasised considering the livelihoods of people and ensuring they have designated spaces for earning and sustenance. He urged to avoid forcing them into encroaching on public areas and violating laws. Secondly, he stressed the importance of significant investment in public



transportation, advocating for accessible routes connecting all parts of the city, not just specific areas. Thirdly, he proposed transitioning to more affordable modes of transportation and fuels. Mr Sheikh highlighted that long-life batteries and electric vehicles (EVs) are the future, with many companies worldwide investing in these technologies. He also noted that several countries are committing to selling only high-quality fuels.

While recognising Mr Sheikh's insight as informative, Ms Sara Hayat added a few points to the discussion. She shared views regarding the implementation of cloud seeding or artificial rain, noting that the data showed very little difference in air quality on days when these methods were utilised. Ms Hayat observed that the improvement was minimal even the next day, suggesting that rain alone does not make a significant difference, particularly if it is limited. She emphasised that only substantial rain and wind to carry away air pollution can have a real effect on cloud seeding. In contrast, a public holiday a few days later resulted in much-improved air quality in Lahore than what was achieved after cloud seeding. She asserted this noticeable difference in air quality was due to the reduction in vehicular emissions due to the public holiday. Furthermore, she referenced the Punjab government's smog report, according to which, vehicle emissions, including trucks and motorcycles, were identified as the primary source of smog. Additionally, industrial emissions and power generation were highlighted as significant contributors, particularly concerning Lahore's poor urban planning. Ms Hayat emphasised the presence of various small



industries within the city and a considerable number on the outskirts, such as textile and power generation plants. Lastly, she noted that crop burning stood as the third reason for smog in Punjab.

Ms Hayat proposed that solutions need to be local and focused on addressing the sources of emissions, which she considers manageable. She emphasised public transportation as the primary solution, advocating for green transportation such as electric or biomass-powered options, as opposed to relying on petrol and diesel for buses and metro lines, which she believes minimises the benefits. Additionally, she suggested creating pedestrian-friendly cities despite acknowledging that Pakistan's weather may not always be conducive to this. Drawing from observations of European countries, she noted their practice of planting numerous trees to encourage pedestrian activity and provide shade. Ms Hayat stressed the importance of industries implementing filtration mechanisms in their chimneys to remove filtered gases, asserting this as a more effective solution than cloud seeding. Ms Hayat pointed out that cloud seeding is costly and meddling with nature can have unintended consequences. She gave example of cloud seeding in Dubai and Abu Dhabi, which resulted in drought in Yemen. Towards the end, Ms Hayat asserted that nature operates on its own terms, and it is best not to interfere with it.

Here again, Mr Sheikh added a few points, elaborating on the historical context of an old Russian technology frequently used



in Central Asia for the past three or four decades. He emphasised the extensive operations during the Soviet era, where rockets were launched into clouds alongside substances like salt or ammonium gas to induce raindrops, sometimes leading to hailstorms and significant damage to crops such as cotton. Mr Sheikh underscored that while this technology has been available in the public domain for some time, there's little necessity to resort to shooting from below. He cautioned against the use of aircraft, missiles, and similar methods due to their inherent dangers, suggesting that such elaborate methods should only be entertained in dire emergencies or specific events like VIP landings or the Olympics. Instead, he advocated focusing efforts on addressing the real issues at hand.



**Question 3: One of the effects and repercussions of, global warming is the rapid melting of, icebergs and glaciers. Considering that Pakistan has a huge number of glaciers all around, and they are melting, apparently, rapidly. So how serious is, this problem for our country, in terms of flooding and other adverse effects it would have? Also, what kind of steps can we take to mitigate this problem?**

Mr Sheikh emphasised that Pakistan relies on 70 to 80 percent of its surface water from the melting glaciers in its northern regions, highlighting the critical role of glaciers in the country's water resources. He noted that all of Pakistan's water is transboundary as it shares borders with China, India, and Afghanistan as lower riparian states. Expressing concern, Mr Sheikh mentioned the alarming projections by the Intergovernmental Panel on Climate Change (IPCC) that indicate the possible disappearance of glaciers by the 2040s. He pointed out that glaciers are melting worldwide, citing examples such as the recent disappearance of the last glacier in Venezuela in 2023 and significant reductions in glaciers in the European Alps and other regions. However, he mentioned one exception in a western Himalayan area where glaciers appear to be still expanding, although this represents less than 1 percent of Pakistan's total glaciers. This underscores the urgent need to address climate change impacts on glaciers, which are crucial water sources for Pakistan's sustainability.

He mentioned that Pakistan's glaciers are melting, and scientists are closely monitoring them. What is concerning is the increasing



occurrence of heat waves, which leads to more water flow downstream during off times. This situation has both advantages and disadvantages. Mr Sheikh emphasised Pakistan's reliance on glacial melt from Afghanistan, especially during the driest period when water is most needed. He stressed that this is a critical time for Pakistan's national integrity and cohesion to address political grievances related to water distribution. However, he also lamented the management and governance issues, particularly the excessive use of water in the four districts bordering Punjab. These districts are predominantly used by farmers, including those from influential political families, who grow water-intensive rice crops.

Mr Sheikh pointed out that this approach goes against common sense. He acknowledged that addressing these issues is not easy, but it is essential. While it is beyond Pakistan's or any scientist's capacity to stop the process entirely, efforts to reduce accelerated global warming are crucial. Therefore, Pakistan should fully support initiatives aiming to limit global warming to 1.5 degrees under the Paris Agreement. Mr Sheikh highlighted the potential role of Pakistan's foreign office and diplomatic efforts in this regard. He also suggested that Pakistan's scientific community and others should commit to achieving net-zero emissions to contribute positively to climate action.

Ms Hayat expressed deep concern regarding the serious issue of glacial melt, particularly in the Himalayan region. She referred to a notable study projecting that by 2080, we could lose up to



60% of our glaciers. While acknowledging the alarming nature of such studies, she stressed the importance of considering these trajectories when formulating policies.

Transitioning to the topic of GLOFs, Ms Hayat warned about the significant risk they pose downstream. When glacial lakes form, especially in unprepared areas, they can lead to sudden and devastating flooding. In Pakistan alone, there are around 44 GLOFs that pose a severe threat downstream. She mentioned ongoing efforts by the Ministry of Climate Change, in collaboration with the United Nations Development Programme (UNDP), to address this issue. Ms Hayat also discussed the adverse effects of GLOFs, including forced migration due to melting glaciers and subsequent property and livelihood losses. She emphasised the urgent need to control gaseous emissions at their source to mitigate global warming and reduce glacier melt. While she mentioned innovative ideas like covering ice with reflective sheets, she acknowledged the impracticality of such measures for large glaciers.

On the mitigation front, she stressed the importance of investing in feasible technologies to save glaciers. For adaptation, she recommended conducting studies to identify high-risk glaciers and ensuring that no human settlements or agriculture activities occur in these vulnerable areas. Additionally, Ms Hayat highlighted the crucial role of early warning systems, especially for communities in northern regions heavily reliant on glaciers for their livelihoods and safety.





**Question 4: We talk about issues and solutions ranging from technological advancement to unequal repercussions on one gender when it comes to climate change, why we are not discussing climate justice since Pakistan is among the worst impacted countries Pakistan?**

Ms Hayat, while addressing the question, highlighted the crucial nature of the climate justice debate and appreciated its significance. She stressed that this conversation should not be taken lightly and consistently emphasised the importance of taking action against climate change for anyone who can do so. Ms Hayat pointed out the unfair burden placed on countries like Pakistan, Bangladesh, and low-lying island nations, which suffer the most from climate impacts despite contributing minimally to global greenhouse gas emissions. For example, Pakistan's contribution is less than 0.8%. Yet, it consistently ranks among the most impacted nations, often in the top 10, as seen in 2023.

However, Ms Hayat argued against refraining from action simply because these nations are not significant contributors to global warming. Such a stance, she noted, would only undermine collective efforts. Instead, she advocated for asserting that addressing climate change is essential for the well-being of all nations, regardless of their contributions. Additionally, Ms Hayat emphasised the need to recognise that the most vulnerable segments of society, particularly in rural areas, are disproportionately affected by climate change despite their lower emissions. Achieving a balance and ensuring appropriate compensation for those most affected is crucial.



Mr Sheikh, while adding to the debate, highlighted the importance of domestic climate justice as a foundational step towards achieving international climate justice. He emphasised the concept of a "Just Transition", which aims to ensure that vulnerable populations are not negatively impacted by global transitions. Using an example from Lahore, he illustrated how efforts to control emissions by removing rickshaws from roads could disproportionately harm marginalised rickshaw owners and their families. Mr Sheikh argued that such actions would be unjust, as they would undermine livelihoods and core values. Instead, he advocated for transitioning society in a manner that prioritises and addresses the interests of those already disadvantaged.

Furthermore, Mr Sheikh highlighted disparities in policies, citing the presence of a BMW charging station in Kohsar market, Islamabad, as an example of inequitable approaches. He urged for a reassessment of subsidies, concessions, and import policies to align with principles of justice. Additionally, he emphasised the need for solutions that accommodate street vendors rather than displacing them.



**Question 5: There has been talk about managing the onslaught of climate change locally. So should local wisdom, which is very entrenched, not be part of this climate resilience? So, what is your opinion on the fact that policies are being made on higher government levels without the involvement of local stakeholders?**

Ms Hayat, in response to the question, highlighted the challenge of effectively engaging all stakeholders. She noted ongoing efforts to involve policymakers and other relevant parties, emphasising the importance of clearly defining stakeholders for climate change initiatives. Ms Hayat stressed that stakeholders encompass not only the government but also civil society organisations, think tanks, academia, and the private sector. She further pointed out that every individual, including concerned mothers, becomes a stakeholder when their children's health is threatened by climate change.

Ms Hayat identified a key challenge in getting people to take climate change seriously, particularly the crucial role of raising awareness. She noted that policymakers often overlook this stage as it may not seem glamorous but highlighted its fundamental importance in ensuring the effectiveness of policies and legislative measures. Insufficient investment in awareness-building can diminish the impact of otherwise good policies. Ms Hayat emphasised the need to raise ample awareness to help people understand the direct impacts of climate change and motivate them to take action.



Moreover, she underscored the importance of proactive measures, cautioning against a reactive approach that waits for disasters like floods to prompt action. Ms Hayat stressed the value of having sufficient data and ongoing discussions to ensure that people recognise the seriousness of climate change and take necessary actions promptly.

Regarding local wisdom, Ms Hayat highlighted the significance of introspection within homes and society's core structure. She encouraged individuals to reflect on their roles in contributing to climate change and actively engage in efforts to mitigate or adapt to its effects. Ms Hayat praised civil society's potential to drive change, citing the example of organising climate strikes nationwide in 2019 through an organisation called Climate Action. She stressed that every individual holds the power to make a difference through actions such as raising awareness, participating in discussions about climate change, minimising vehicle emissions, or reducing food waste. These seemingly small actions, when done collectively, can yield substantial results in combating climate change.

Mr Sheikh shed light on the evolving dynamics surrounding local wisdom and its impact on agriculture in Pakistan. He reflected on a time when farmers could predict weather patterns based on centuries-old inherited knowledge. However, with climate change disrupting traditional farming practices, this invaluable wisdom is now at risk. Mr Sheikh highlighted findings from surveys indicating significant shifts in farming timelines,



emphasising the growing uncertainty faced by farmers. This uncertainty not only affects individual farmers but also has broader implications for Pakistan's food security.

Addressing the skeptics who might dismiss the issue as solely the concern of farmers, Mr Sheikh stressed the need for a holistic approach. He argued that safeguarding the interests of farmers is crucial for the welfare of all Pakistani citizens and for ensuring food security. Expressing skepticism towards traditional approaches like capacity building and awareness campaigns, Mr Sheikh advocated for a more proactive stance from the government. He believed that resources should be directed towards directly assisting farmers and providing necessary services instead of investing in conventional methods. This, he asserted, is a more effective way of leveraging existing capacities to address the challenges faced by farmers and safeguard Pakistan's agricultural sector.





## **POLICY CONSIDERATIONS**

### **1 Establish Dedicate Institute**

The federal government through the Ministry of Climate Change and Environmental Coordination should create a dedicated authority to oversee disaster preparedness and resilience efforts, enhancing coordination and response mechanisms.

### **2 Climate Diplomacy**

The Ministry of Climate Change and the Ministry of Foreign Affairs should take a coordinated approach to increase international climate financing and green technology transfers through a robust climate diplomacy campaign, based on the principle of common but differentiated responsibilities.

### **3 Climate Smart Agriculture**

The department of agriculture and other stakeholder institutions should develop adaptive strategies for climate smart cropping patterns and other agriculture practices to ensure food security and agricultural sustainability amid changing weather patterns, shrinking water availability and climate-induced disasters.



**4**

## **Mainstream Climate in Development**

The government needs to devise strategies for integrating climate risk assessments into development planning for various sectors such as agriculture, water management, urban planning, and construction. There is a need to incorporate climate-smart strategies and monitoring mechanisms into all stages of project development.

**5**

## **Collaborate for Climate Resilience**

A well-coordinated, whole-of-the-government approach is required for developing efficient climate resilience by taking on board all levels and agencies of government as well as private sector and civil society with fully funded local governments at the forefront.

**6**

## **Women Inclusive Decision Making**

Effective adaptation and mitigation strategies and sustainable development require the inclusion of women in decision-making processes at all levels for which disaster management authorities and other relevant departments should devise framework for gender-inclusive policies and mechanisms





## 7

## Climate Awareness

Climate action and social change must hinge upon awareness and data-driven scientific knowledge for which education departments and other stakeholders should take appropriate measure to incorporate knowledge about climate change into curriculum supplemented by awareness campaigns initiated with the help of civil society.



## SPEAKERS' PROFILES



### **Mr Ali Tauqeer Sheikh**

**Member, Pakistan Climate Change Council**

Mr Ali Tauqeer Sheikh is a climate change specialist, focusing on low-carbon and resilient development, international climate finance, and just transition for an equitable world. Currently he is serving as the Member OF Climate Change Council and as Member from Pakistan to the Loss and Damage fund Board. He is also a consultant with the World Bank and advisor to Planning Commission of Pakistan and Ministry of Climate Change Pakistan. He has engaged in the design, development and delivery of several regional, national, and sub-national level projects, programs, and portfolios. Deeply committed to transformational change, he has managed diverse multidisciplinary and multi-sectoral teams comprised of climate scientists, policy planners, think-tanks, and activist groups.

Mr Sheikh has served on several national commissions and international committees including the Advisory Group on Learning and Evaluation and the Transformational Change and Learning Partnership (TCLP), both set-up by the Climate Investment Fund (CIF), on behalf of the World Bank and other multilateral development banks. He was the Founding Director & CEO of Leadership for Environment and Development (LEAD)



Pakistan and Asia director of Climate and Development Knowledge Network (CDKN). Currently serving as the Climate Change Senior Advisor at the World Bank. He serves on the boards of several non-profit and private sector organisations. He is member of Pakistan Climate Change Council, chaired by the Prime Minister of Pakistan. He is a frequent columnist on climate and water-related issues for Pakistan's national newspaper, Dawn and the News. He is a frequent electronic media commentator and has appeared on such channels as Al Jazeera, BBC, DW and all major national channels.



## **Mr Ahmad Rafay Alam**

**Environmental Lawyer & Activist**

Ahmad “Rafay” Alam is a Pakistani environmental lawyer and activist and co-founder of Saleem, Alam & Co., a firm that specialises in the energy, water, natural resources, and urban infrastructure sectors. As one of Pakistan's leading environment lawyers, Mr Alam regularly advises the federal and provincial governments, the World Bank, ADB, IFC and a number of INGOs on issues of policy and strategy in these sectors, and he provides corporate clients strategic sustainability insights.

Mr Alam has served as Chairman of the Board of two public sector utilities: the Lahore Electric Supply Company and the Lahore Waste Management Company. As founding Vice-President of the Urban Unit he over saw the growth of the Punjab's only public sector urban think-tank. He also serves as a Member of the Pakistan Climate Change Council, the Punjab Environment Protection Council, the Hisaar Foundation’s Think Tank on the Rational Use of Water, and as Advisor to Air Quality Asia.



## **Ms Sara Hayat**

### **Climate Change Expert**

Ms Sara Hayat is an environmental lawyer, climate change specialist, and climate change, sustainability, and resilience consultant. She specialises in climate change law and policy and has worked on multiple aspects of climate change in Pakistan, including advising the Government on preparing Pakistan's updated Nationally Determined Contributions (NDCs) in 2021. She is an internationally renowned climate advocate. Her major consultancy endeavours include working with The World Bank as a climate change adaptation specialist for the Sindh Climate Resilience Project, the United States Institute of Peace suggesting potential collaboration strategies between the US and Pakistan in combating climate change, UNDP advising the Government of Pakistan on revising Pakistan's Nationally Determined Contributions (NDCs) for submission to the UNFCCC under the Paris Agreement, Amnesty International focusing on communicating Climate Change & Smog in Pakistan and exploring the nexus between Climate Change & Human Rights in Pakistan, and Oxfam International, studying Climate Change-induced migration in Sindh, Pakistan.



## **Air Marshal Asim Suleiman (Retd)**

**President, CASS Lahore**

Air Marshal Asim Suleiman (Retd) graduated from the Pakistan Air Force (PAF) Academy in 1978 and has flown a wide assortment of fighter aircraft from the PAF's inventory during his flying career. Air Marshal Asim Suleiman (Retd) is a graduate of the National Defence University, Islamabad and Defence Services and Staff College, Dhaka. He holds a master's degree in Defence and Strategic Studies from Quaid-i Azam University, Islamabad.

He has been a part of several Operational and Training Squadrons, including the Combat Commanders' School as an instructor. His command assignments include command of a Combat Squadron and an Operational Base. He served as an Air Adviser at the Pakistan High Commission in India. His numerous staff appointments include serving as Staff Officer in different capacities to three Chiefs of the Air Staff, Director-General Air Intelligence, Deputy Chief of Air Staff (Support) and Deputy Chief of the Air Staff (Administration). After retirement, he served as Director General of the Pakistan Civil Aviation Authority. He was also nominated as Chairman PIA. Air Marshal Asim Suleiman (Retd) is a recipient of the Hilal-i-Imtiaz (M) and Sitara-i-Imtiaz (M). He was also awarded the Sitara-i-Basalat and Imtiaz Sanad.



## **Ameer Abdullah Khan**

**Senior Researcher, CASS Lahore**

Mr Ameer Abdullah Khan is a Senior Researcher at CASS, Lahore and a doctoral fellow in International Relations at the National Defence University of Pakistan. Previously Mr Khan has served as a Lecturer and Researcher at prestigious institutions such as the National Defence University and MY University. In strategic domains he remained associated as Research Fellow with the South Asian Strategic Stability Institute in Islamabad and as the Team Lead Research & Analysis Centre at TAMBRO EXOP GmbH.

Mr Khan worked as consultant with the National Disaster Management Authority and the Pakistan Atomic Energy Commission. His international consultancy experience encompasses projects with the Foreign Commonwealth Development Office UK, GIZ Germany, and the Accountability Lab International, reflecting his global outlook and engagement in diverse spheres of environment, policy and development. A prolific writer, Mr Khan has authored numerous research papers, op-eds, book chapters and conference & seminar papers on various facets of International Relations.





## **PRESS RELEASE**

The Centre for Aerospace & Security Studies (CASS), Lahore, hosted a seminar titled 'Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests' on 7 March 2024. The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion.

The seminar commenced with opening remarks by Mr Ameer Abdullah Khan, Senior Researcher at CASS, Lahore, who spoke about the different aspects in which climate change is interrelated with the national security of Pakistan. This was followed by a keynote address by Mr Ali Tauqeer Sheikh, member Loss & Damage Fund Board and World Bank Consultant, who spoke about strategic preparedness in the face of ecological uncertainty while outlining policies and priorities from global to domestic levels. Mr Ahmed Rafay Alam, an environmental lawyer, shed light on governance-related challenges, which augment climate-induced threats to Pakistan's security. The last speaker, Ms Sarah Hayat, Climate Law and Policy Expert, discussed the need for climate adaptation and mitigation as a way forward to a secure future for Pakistan.

In his concluding remarks, Air Marshal Asim Suleiman (Retd), President, CASS Lahore, said that despite contributing minimally to global greenhouse gas emissions, Pakistan has endured the harsh realities of climate change. He highlighted that the crisis



does not stop at natural disasters, rather it extends to straining the economy, political stability, and social fabric of Pakistan, besides intensifying regional tensions. The President acknowledged Pakistan's initiatives to combat climate change, however, he stressed the need for international cooperation, considering this to be a shared endeavour.

The seminar highlighted various key points. The speakers pointed out how certain lapses in management in the past have contributed to the escalating severity of climate change threats. They also emphasised the need for inclusive climate-resilient strategies at the federal, provincial and local levels. They further suggested to bridge the knowledge-policy gap pertaining to climate change. They also stressed the urgency of boosting efforts to enhance international climate finance inflows. The seminar concluded with a unanimous call for proactive decisions to safeguard Pakistan's national security interests.



## SUMMARY OF THE HEADLINES

Sr No.	Newspaper	Title
1	Timeline News	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
2	The World Ambassador	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
3	The Europe Today	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
4	The Gulf Observer	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
5	News Lark	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
6	Daily Times	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
7	Daily Asian Sun	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
8	Daily Rule	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests
9	Islamabad Post Metrolite	CASS hosts seminar on 'climate resilience'
10	Daily Asia Today	Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests



سیریل	اخبار	خبر
1	روزنامہ قائد	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی، قومی سلامتی کا تحفظ سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد کیا گیا
2	روزنامہ جیو ہزارہ	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں سیمینار کا انعقاد
3	خبردار	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: پاکستان کی قومی سلامتی کا تحفظ
4	سیاوش	موسمیاتی تبدیلیوں اور قومی سلامتی کے تحفظ کے عنوان پر سیمینار
5	کرک ٹائمز	موسمیاتی تبدیلیوں اور قومی سلامتی کے تحفظ کے عنوان پر سیمینار
6	خبر نیوز	موسمیاتی تبدیلیوں اور قومی سلامتی کے تحفظ کے عنوان پر سیمینار
7	روزنامہ مہم	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد
8	سماء	پاکستان کو بدلتے ہوئے موسمیاتی نظام کے مطابق خود کو ڈھالنا ہو گا، وکیل محمد رافع
9	قوی اخبار	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد
10	چولستان ٹائمز	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: پاکستان کی قومی سلامتی کا تحفظ



سیریل	اخبار	خبر
11	امروز	پاکستان کو بدلتے ہوئے موسمیاتی نظام کے مطابق خود کو ڈھالنا ہو گا، سارا حیات
12	ملن	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: پاکستان کی قومی سلامتی کا تحفظ
13	عکسِ سندھ	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں موسمیاتی تبدیلیں بابت سیمینار منعقد
14	صحافت	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: پاکستان کی قومی سلامتی کا تحفظ
15	Daily K2	موسمیاتی تبدیلیاں، ہنگامی انتظامات کئے جائیں
16	الفجر	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد کیا گیا
17	شہید	موسمیاتی تبدیلیاں، قومی سلامتی کا تحفظ کے عنوان پر سیمینار
18	چناب ٹائمز	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: پاکستان کی قومی سلامتی کا تحفظ
19	صدائے اولس	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: پاکستان کی قومی سلامتی کا تحفظ
20	صدائے وقت	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: پاکستان کی قومی سلامتی کا تحفظ



سیریل	اخبار	خبر
21	ندائے خلق	پاکستان کو بدلتے ہوئے موسمیاتی نظام کے مطابق خود کو ڈھالنا ہو گا
22	پاکستان ٹوڈے	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد
23	رپورٹ	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد
24	پس پردہ	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد
25	کشمیر ٹائمز	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی، قومی سلامتی کا تحفظ سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد کیا گیا
26	الاخبار	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی: قومی سلامتی کا تحفظ
27	آئین	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز میں موسمیاتی تبدیلیوں کے بارے میں سیمینار
28	غزنوی	سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز کے زیرِ اہتمام سیمینار کا انعقاد
29	مسلمان	موسمیاتی تبدیلیوں سے بچاؤ کی حکمتِ عملی، قومی سلامتی کا تحفظ سینٹر فار ایرو سپیس اینڈ سیکیورٹی اسٹڈیز لاہور میں ایک سیمینار کا انعقاد کیا گیا

## MEDIA COVERAGE



### Climate Resilience & Strategic Preparedness, Safeguarding Pakistan's Security Interests

LAHORE: The Centre for Aerospace & Security Studies (CAASS), Lahore, hosted a seminar titled "Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests". The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion. The seminar commenced with opening remarks by Mr. Amoor Abdulh Khan, Senior Researcher at CAASS, Lahore, who spoke about the different aspects in which climate change is interrelated with the national security of Pakistan. This was followed by a keynote address by Mr. Ali Tauqeer Sheikh, member Loss & Damage Fund Board and World Bank Consultant, who spoke about strategic preparedness in the face of ecological uncertainty while outlining policies and priorities from global to domestic levels. Mr. Akmal Haid Ali, an environmental lawyer, shed light on governance-related challenges, which require state to local level, thereby to

Pakistan's security. The last speaker, Mr. Saad Hayat, Climate Law and Policy Expert, discussed the need for climate adaptation and mitigation as a way forward to secure future for Pakistan's economic and social well-being. The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion. The seminar commenced with opening remarks by Mr. Amoor Abdulh Khan, Senior Researcher at CAASS, Lahore, who spoke about the different aspects in which climate change is interrelated with the national security of Pakistan. This was followed by a keynote address by Mr. Ali Tauqeer Sheikh, member Loss & Damage Fund Board and World Bank Consultant, who spoke about strategic preparedness in the face of ecological uncertainty while outlining policies and priorities from global to domestic levels. Mr. Akmal Haid Ali, an environmental lawyer, shed light on governance-related challenges, which require state to local level, thereby to



Lahore: Speakers, Mr. Amoor Abdulh Khan, Mr. Ali Tauqeer Sheikh, Mr. Akmal Haid Ali, Mr. Saad Hayat, Mr. Harisul Aziz Siddiqui (CASS President) CAASS Lahore in a group photo after the seminar hosted by CAASS

### Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests

**Report:** Lahore: The Centre for Aerospace & Security Studies (CAASS), Lahore, hosted a seminar titled "Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests". The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion. The seminar commenced with opening remarks by Mr. Amoor Abdulh Khan, Senior Researcher at CAASS, Lahore, who spoke about the different aspects in which climate change is interrelated with the national security of Pakistan. This was followed by a keynote address by Mr. Ali Tauqeer Sheikh, member Loss & Damage Fund Board and World Bank Consultant, who spoke about strategic preparedness in the face of ecological uncertainty while outlining policies and priorities from global to domestic levels. Mr. Akmal Haid Ali, an environmental lawyer, shed light on governance-related challenges, which require state to local level, thereby to



### Climate Resilience and Strategic Preparedness: Safeguarding Pakistan's Security Interests

Lahore, March 09, 2024. The Centre for Aerospace & Security Studies (CAASS), Lahore, hosted a seminar titled "Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests". The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion. The seminar commenced with opening remarks by Mr. Amoor Abdulh Khan, Senior Researcher at CAASS, Lahore, who spoke about the different aspects in which climate change is interrelated with the national security of Pakistan. This was followed by a keynote address by Mr. Ali Tauqeer Sheikh, member Loss & Damage Fund Board and World Bank Consultant, who spoke about strategic preparedness in the face of ecological uncertainty while outlining policies and priorities from global to domestic levels. Mr. Akmal Haid Ali, an environmental lawyer, shed light on governance-related challenges, which require state to local level, thereby to



### Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests

Posted On: 2024-03-09 | [Home](#) | [Today's Most Not Local](#)

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### The Daily NEWS PAK An Independent Voice Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests



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PAKISTAN

## Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests

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The Centre for Aerospace & Security Studies (CASS), Lahore, hosted a seminar titled 'Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests' on 7 March 2024. The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion.



TWA MEDIA

## Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests

March 8, 2024



By ABID CHAUDHRY  
TWA

## The Gulf Observer

Environment



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TGO News Service March 8, 2024



Islamabad, The Gulf Observer: Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests. The Centre for Aerospace & Security Studies (CASS), Lahore, hosted a seminar titled 'Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests'. The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion.



## Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests

The Centre for Aerospace & Security Studies (CASS), Lahore, hosted a seminar titled 'Climate Resilience & Strategic Preparedness: Safeguarding Pakistan's Security Interests'. The event discussed the challenges that Pakistan faces in the wake of global climate change, which can potentially threaten state security and social cohesion.

The seminar commenced with opening remarks by Mr Ameer Abdullah Khan, Senior Researcher at CASS, Lahore, who spoke about the different aspects in which climate change is inter-related with the national security of Pakistan. This was followed by a keynote address by Mr Ali Tauqeer Sheikh, member Loss & Damage Fund Board and World Bank Consultant, who spoke about strategic preparedness in the face of ecological uncertainty while outlining policies and priorities from global to domestic levels. Mr Ahmed Rafay Alam, an environmental lawyer, shed light on governance-related challenges, which augment climate-induced threats to Pakistan's security. The last speaker, Ms Sarah Hayat, Climate Law and Policy Expert, discussed the need for climate adaptation and



mitigation as a way forward to a secure future for Pakistan.

In his concluding remarks, Air Marshal Asim Suleiman (Retd), President, CASS Lahore, said that despite contributing minimally to global greenhouse gas emissions, Pakistan has endured the harsh realities of climate change. He highlighted that the crisis does not stop at natural disasters, rather it extends to straining the economy, political stability, and social fabric of Pakistan, besides intensifying regional tensions. The President acknowledged Pakistan's initiatives to combat climate change, however, he stressed the need for international cooperation, considering this to be a shared endeavor.

our.

The seminar highlighted various key points. The speakers pointed out how certain lapses in management in the past have contributed to the escalating severity of climate change threats. They also emphasised the need for inclusive climate-resilient strategies at the federal, provincial and local levels. They further suggested to bridge the knowledge-policy gap pertaining to climate change. They also stressed the urgency of boosting efforts to enhance international climate finance inflows. The seminar concluded with a unanimous call for proactive decisions to safeguard Pakistan's national security interests. PR

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جینٹل ممبر

جلد نمبر 8  
بتہ 27 شعبان المعظم 1445ھ 2024ء  
شمارہ 307

# کرک ٹائمز

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جلد 16  
بتہ 9 ربیع الثانی 1445ھ 2024ء  
شمارہ 358

# سما

اس سلسلے سے وابستہ خطرات پر قابو پا کر شہر پاکستان کا مستقبل محفوظ بنایا جا سکتا ہے، سیکرٹری سے خطاب

پرنسپل سے جادو تک باعلاقہ آؤں کی تھکات کا سامنا کرنے والے ملک میں خدایاں ہے، عالم سید

اسلام آباد (پبلک سروس) وزیر اعلیٰ پاکستان کی زیر صدارت منعقد ہونے والے اجلاس میں، سیکرٹری صحت نے صحت کے شعبہ کی کارکردگی پر جائزہ لیا۔ اجلاس میں صحت کے شعبہ کے سربراہان، افسران و عملے نے شرکت کی۔

وزیر اعلیٰ نے صحت کے شعبہ کی کارکردگی پر مثبت جائزہ دیا اور عملے کی محنت کو سراہا۔ انہوں نے کہا کہ صحت کے شعبہ کی کارکردگی کو مزید بہتر بنانے کی ضرورت ہے اور اس کے لیے نئی ٹیکنالوجی اور طریقے اپنانے کی ضرورت ہے۔

انہوں نے کہا کہ صحت کے شعبہ کی کارکردگی کو مزید بہتر بنانے کی ضرورت ہے اور اس کے لیے نئی ٹیکنالوجی اور طریقے اپنانے کی ضرورت ہے۔

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Daily **IMROZ** Karachi

روزنامہ

کراچی

احمر

بیت

جلد نمبر 27

تقریباً 27 شعبان 1445ھ 09 مارچ 2024ء

جلد نمبر 35

پاکستان کو ماحولیاتی نظام کے مطابق خود کو ڈھالنا ہوگا، سارا حیات

ماہنامہ اعلیٰ تعلیم سے متعلق علی گڑھ میں موجود خطہ کا ختم کرنے کی ضرورت ہے۔  
موسمیاتی تبدیلیوں کے پاکستان کی قومی سلامتی پر اثرات کے حوالے سے، راجی وائی گلی  
سفر قاریماہ واپس ایڈیٹوریلز کے ساتھ ملازمین میں سیدنا کے انعقاد کے موقع پر شرکاء کا خطاب

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پاکستان کو ماحولیاتی نظام کے مطابق خود کو ڈھالنا ہوگا، سارا حیات

ماحولیاتی تبدیلی سے متعلق علیٰ میدان میں موجود خطا کو ختم کرنے کی ضرورت ہے۔ موسمیاتی تبدیلیوں کے پاکستان کی قومی سلامتی پر اثرات کے حوالے سے روشنی ڈالیں گی۔

[illegible]

الخطبہ کی انہوں نے اپنے خطاب میں انگریزوں میں  
 دھمکانی کے لئے غلط فہم کیا جو کہ پاکستان  
 میں اعلیٰ تعلیم کے پڑھانے کے لئے کارخانہ  
 ہوتے ہیں۔ اس سیمینار کی آخری تقریر کو سہ ماہی  
 میاں نے کیا۔ جو کہ اعلیٰ تعلیم کے قارئین اور اس سے  
 متعلقہ ایسی ایگریٹ ہیں۔ انہوں نے کہا کہ  
 پاکستان کو بدلنے کے لئے اعلیٰ تعلیم کے مطابق  
 نوڈول و ایڈوانسڈ سائنس کے واسطے تعلیمات  
 کے پاس کی ہیں پاکستان کی سائنس کے مطابق  
 سائنس کے مطابق تعلیمات کے مطابق تعلیمات کے مطابق  
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### سینئر ڈائریکٹرز اے این ایس کے لیے موسمیاتی تبدیلیاں بات سینئر معتمد

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لاہور: موسمیاتی تبدیلیاں بات سینئر معتمد  
موسمیاتی تبدیلیاں بات سینئر معتمد  
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### موسمیاتی تبدیلیوں سے بچاؤ کی حکمت عملی پاکستان کی قومی سلامتی کا تحفظ



پاکستان کی قومی سلامتی کا تحفظ  
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### APNS Daily MILLAN Karachi



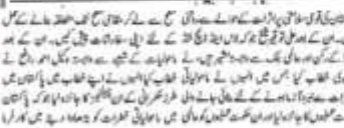
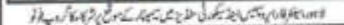
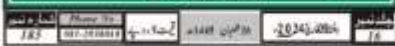
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## پاکستانی قومی سلامتی کا تحفظ

تقریب کے دوران عالمی ماحولیاتی تبدیلیوں کے پاکستان پر مبنی اثرات کا جائزہ لیا گیا جو مستقبل میں خطرے کا باعث بن سکتے ہیں  
اس سیمینار کا آغاز ادارے سے وابستہ سینئر ڈائریکٹر امیر عبداللہ خان کی ہنگامہ سے ہوا جنہوں نے تقصیل روشنی ڈالی  
اسلام آباد (انٹائمڈ) خصوصی سطر فار ایئر  
پاکستان کی قومی سلامتی کا تحفظ  
پاکستان کی قومی سلامتی کا تحفظ











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خوبیاتی نظام مطابق خودیها بنا ہوگا۔ وکیل احمد رفیع

ہاں یہ سچ ہے کہ ہمارے ملک کی آمدنی میں کھیتی باڑی کا حصہ کم ہے۔ لیکن اس کی وجہ سے ہمیں اپنا توجہ دینا چاہیے۔

[illegible]

موسمیاتی تبدیلیوں سے بچاؤ کی حکمت عملی کے حوالے سے سیمینار کا انعقاد

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عوامي حق جي ترجمان ڪمپيوٽر تي پهرين مڪمل اخبار

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ڪراچي، حيدرآباد ۽ سکر مان هڪ ئي وقت شايع ٿيندڙ

Daily AWAMI AWAZ

روزاني

**عوامي آواز**

سالي 12 - شمارو 67 | چنبر 09 مارچ 2024 | 27 شعبان 1445 | صفحا 08 - قيمت 40 روپيا

سينئر فار ايرو اسپيس ۽ موسمياتي تبديلي ۽ قومي سلامتي بابت سيمينار جو افتتاح

تقريب دوران ۽ عالمي ماحولياتي تبديلين جي خراب اثرن جو جائزو ورتو ويو

پاڪستان کي بدلجندڙ ماحولياتي نظام جي مطابق اپڊيٽڙ پونڊ: سارا حيات ۽ ٻين جو خطاب



موسمياتي تبديلين کي منهن ڏيڻ لاءِ جوڙيل حڪمت عملي جو جائزو ورتو ۽ انهن حڪمت عملي لاءِ سفارشون پيش ڪيون عالمي سطح کان مقامي سطح تائين لاڳاپيل عملن کي ڏانهن ان کان پوءِ ماحوليات جي شعبي سان لاڳاپيل وڪيل اڪاڊرمي تقرير ڪئي. هن پنهنجي تقرير ۾ پاڪستان ۾ گورننس جي چيلينجز جو جائزو ورتو جيڪي پاڪستان ۾ ماحولياتي خطرن کي وڌائڻ لاءِ ڪم ڪري رهيا آهن هن سيمينار جي آخري اسپيڪر ه ساره حيات هئي جيڪي ماحولياتي قانونن ۽ لاڳاپيل پاليسين جا ماهر آهن هن چيو ته پاڪستان کي بدلجندڙ ماحولياتي نظام جي مطابق پلان کي اپنائڻو پوندو ۽ پاڪستان جو مستقبل ان مسئلي سان لاڳاپيل تي ضابطو آڻڻ سان ئي محفوظ ٿي سگهي ٿو.

لاهور (پ ر) سينئر فار ايرو اسپيس اينڊ سيڪيورٽي اسٽڊيز لاهور ۾ موسمياتي تبديلين جي خاتمي جي حڪمت عملي: پاڪستان جي قومي سلامتي کي تحفظ ڏيڻ جي عنوان سان هڪ سيمينار منعقد ڪيو ويو ان تقريب دوران پاڪستان تي عالمي ماحولياتي تبديلين جي خراب اثرن جو جائزو ورتو ويو جيڪي مستقبل ۾ رياستي سلامتي ۽ سماجي هر انگري لاءِ خطرو بڻجي سگهن ٿا سيمينار جي شروعات انسٽيٽيوٽ سان لاڳاپيل سينيئر محقق امير عبدالله خان جي ڳالهه بولڻ سان ٿي. جنهن پاڪستان جي قومي سلامتي تي موسمياتي تبديلي جي اثرن تي روشني وجهي. ان کان پوءِ نقصان ۽ نقصان فٽم پورڊ جي ميمبر ۽ ورلڊ بئنڪ سان لاڳاپيل صلاحڪار علي توقير شيخ اهر خطاب ڪيو جنهن ۾ هن

Daily SARMAYA Hyderabad

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احسان الحق راڻو

Regd No: NS-134

جلد 14 | رٽو 9 مارچ 2024 | 27 شعبان المعظم 1445 | 10 صفحا | شمارو نمبر 32

موسمياتي تبديليون سڄاڻو ڪرڻ لاءِ موضوع پر سيمينار منعقد

رياستي تحفظ اور سلامتي ۾ آڻي ڪيل مستقبل ۾ خطرن کي ڪاٽڻ بن ڪرڻ ۾ بهترين

اسلام آباد (پ ر) لاهور ۾ پهرين اسٽڊيز ۽ اسپيس اينڊ سيڪيورٽي اسٽڊيز لاهور ۾ موسمياتي تبديلين جي خراب اثرن جو جائزو ورتو ويو جيڪي پاڪستان کي بدلجندڙ ماحولياتي نظام جي مطابق پلان کي اپنائڻو پوندو ۽ پاڪستان جو مستقبل ان مسئلي سان لاڳاپيل تي ضابطو آڻڻ سان ئي محفوظ ٿي سگهي ٿو.



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جلد 14 | رٽو 9 مارچ 2024 | 27 شعبان المعظم 1445 | 10 صفحا | شمارو نمبر 32

تعليمي چيلينجز سڄاڻي ۾ بنيادون پر مشتمل هوندا ۽ سيمينار

تساب کي ترجيح ڪاري ۾ انهن ۾ ختم ڪرڻ کي ضرورت آهي ۽ بهترين

اسلام آباد (پ ر) لاهور ۾ پهرين اسٽڊيز ۽ اسپيس اينڊ سيڪيورٽي اسٽڊيز لاهور ۾ موسمياتي تبديلين جي خراب اثرن جو جائزو ورتو ويو جيڪي پاڪستان کي بدلجندڙ ماحولياتي نظام جي مطابق پلان کي اپنائڻو پوندو ۽ پاڪستان جو مستقبل ان مسئلي سان لاڳاپيل تي ضابطو آڻڻ سان ئي محفوظ ٿي سگهي ٿو.





## GALLERY

















# CLIMATE RESILIENCE & STRATEGIC PREPAREDNESS

## SAFEGUARDING PAKISTAN'S SECURITY INTERESTS

*"While we ramp up our responses to climate change, we must acknowledge its many adverse impacts, which span over every aspect of our economy and social fabric. Each impact warrants dedicated attention and requires a separate conference, a separate book, and probably an institution to focus on it."*

– Mr Ali Tauqeer Sheikh

*"There's no safe amount of climate change. 1.5 and 2 degrees are not harmless thresholds. It is that the death and destruction at 2 degrees warming were such that political leaders, fearing their constituencies, thought it necessary to make the ambitions of the UNFCCC even higher"*

– Mr Ahmed Rafay Alam

*"Approximately 30 million climate migrants have contributed to the burgeoning populations of densely populated cities like Karachi and Lahore, exacerbating issues such as urban overcrowding, slum emergence, resource scarcity, intensified job market competition, and elevated crime rates."*

– Ms Sara Hayat

*"The (climate) crisis does not stop at natural disasters. It extends to straining our economy, political stability, and social fabric, deepened by ethno-religious divisions. With limited adaptive capacity, climate change has escalated from a secondary issue to a pressing security concern. It threatens to disrupt our society, ignite conflicts, and increase intra-state violence."*

– Air Marshal Asim Suleiman (Retd), President CASS, Lahore

*"The gravity of issues require a transformed approach towards security as the traditional notions of security centred on military capabilities and geopolitical alignments are incapable of providing potent response to climate-induced security threats of non-traditional nature. "*

– Mr Ameer Abdullah Khan

