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Green Industrialization in Pakistan: Integrated Policy Strategies for a Sustainable Future

Conference Proceedings Report

Jointly organized by United Nations Conference on Trade and Development [UNCTAD] and Social Protection Resource Centre [SPRC]

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Islamabad

Green Industrialization in Pakistan

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Preface

Under Green Industrialization Project, UNCTAD and its partner, Social Protection Resource Centre, Islamabad joined hands in 2022 to produce fresh knowledge on the binding constraints Pakistan has been facing in terms of Green Industrialization and carried out four sectoral studies on the challenges in greening being faced by Pakistan's manufacturing sector, Textiles, Agriculture and Transport in the lead up to the launching of Pakistan Project. As the financing has been one of the most challenging binding constraints, a new study has also been undertaken in addition to the sectoral studies on the past limitations faced by the country in availing quality climate finance with a view to prepare Pakistan better to benefit from the Loss & Damage Fund in the coming days.

The purpose of this event is to present the findings of the six studies to the scholarly community and policy practitioners in the presence of international experts to initiate a quality debate on the topic of Green Industrialization in Pakistan, which till date has not gained the kind of traction it should get, given its current and future role in green transformation of the Pakistan economy. This relative weakness is not only a result of the absence of holistic approaches to study different aspects of green industrialization at the macro, sectoral and sub-sectoral levels. A weak symbiosis between the climate change and environmental policies in itself is hampering the emergence of a robust nexus between the Climate Policy and the cluster of Trade, Industrial and Investment policies, which seek to make Pakistan's manufacturing sector more competitive. The launching event aims to bring together the representatives of relevant ministries, academia, business community and civil society to fill any gaps in our Studies jointly produced by UNCTAD and SPRC, on the way to develop an integrated Green Industrialization Strategy for Pakistan, giving due consideration to the regional and global approaches and practices.

Inaugural Address

Dr. Richard Kozul-Wright, Director, United Nations Conference on Trade and Development, Geneva, Switzerland

In his inaugural remarks, Dr. Richard expressed his optimism for the rigorous and challenging exchange of ideas through this well-timed two day conference. He briefly introduced the UNCTAD, as one of the few multilateral institutions created by the developing countries back in 1964. He emphasized the underlying motivation that informed the creation of UCNTAD as:

> *"The UNCTAD was created by developing countries essentially to try and rewrite the rules of the global economy in a way that was much friendlier towards the needs and aspirations of developing countries as the rules of the game of the global economy had been established in after the second world largely by advanced economies."*

The UNCTAD focuses on the overall Global context, in which developing countries need to forge their development paths and find ways of making this more effective, whilst also ensuring the International Community is supportive of their needs. Supportive in terms of finance, supportive in terms of access to technology, supportive in terms of access to markets. Therefore, the UNCTAD is primarily concerned with the rules and the constraints that developing countries face when it comes to designing policies in support of sustained and inclusive development.

Elaborating on the shared position at UNCTAD regarding the development paths of developing countries, Dr. Richard explained that of the role of industrial development is extremely significant,

> *"We believe that successful economies are diversified economies. Whereas, diversification critically depends upon a robust and diverse industrial sector, with strong forward and backward linages across the economy."*

Dr. Richard further expressed that the market plays a vital role in achieving diversification, but it does not guarantee it. He emphasized that UNCTAD's position has always been that a strong and effective state, along with various institutional mechanisms, is necessary to ensure sustained development through industrialization.

Enlightening the participants on the project that UNCTAD and SPRC are working on, he mentioned that it is part of a wider project, which is linked to the most recent success story coming from Asia, China.

> *"China has gone through this remarkable transformation over the last 40 years, taking 500 million people out of poverty. Moving from a relatively poor, largely agricultural economy, to being a sophisticated middle income economy with areas of technological excellence certain sectors is quite astounding."*

Dr. Richard pointed out that China had very unique set of circumstances that allowed it to develop. Although many developing countries don't have those advantages, there are many lessons from the Chinese experience that can inform strategic thinking for developing countries.

Dr. Richard shared that UNCTAD has been working with the Chinese government to understand the challenges and opportunities for the developing countries that are participating on the belt and road initiative.

Moving forward, he discussed the UNCTAD project on "Resilient, Green and Transformative Development in Asian Belt and Road Countries" put together with his colleagues Dr. Gul Unal. Ms. Maria and Ms. Cara. The project looks at four Asian countries that are participants on the Belt and Road Initiative including Turkey, Pakistan Malaysia and Kazakhstan. He explained that the long-standing industrialization challenges in these countries and the kind of constraints that they face in being able to effectively mobilize resources as part of their participation on the Belt and Road, is a challenge that cannot be ignore anymore. The question of sustainability in achieving all this alongside the environmental constraints and the climate change is very critical. Therefore, the purpose of this project is to work these challenges into an integrated policy strategy for developing countries. He further added that this conference is the launch of the Pakistan leg of this project on green transformation diversification in context of the Belt and Road.

Dr. Richard expressed the dissatisfaction with the Washington based institutions UNCTAD. He said that they had failed to provide the necessary international support and policy advice for developing countries. He argued that these countries needed better guidance to diversify and upgrade their economies.

In comparison to the Washington discourse, he explained that the UNCTAD offers an alternative that looks at development policy in a much more integrated fashion. He emphasized the importance of the links between trade, finance, technology and investment, as well as the social dimension, including social protection. He argued that focusing on an integrated strategy was extremely important.

In the context of the role of state, Dr. Richard mentioned that the multilateral system should operates in a way that is consistent with the needs and ambitions of policy makers in the developing countries but we lack such a system.

Dr. Richard highlight one of the overriding issues that is burden of debt, which is plaguing many developing countries at this moment. He argued that it is constraining their ability to mobilize resources for a more inclusive and diversified industrial industrialization strategy.

Dr. Richard ended his remarks by expressing his concern that the advanced economies did not seem to grasp the kinds of challenges that developing countries were facing, in terms of mobilizing finance for the kinds of strategies that were needed to achieve the SDGs, to comply with the Paris agreement and to create these inclusive sustainable development pathways. He conveyed his optimism about the ongoing dialogue, which he believed would enable finding solutions to the most pressing challenge for the developing nations in the 21st century.

Special Remarks

Dr. Muhammad Akbar Harifal, Secretary Industries, Government of Balochistan[1]

Ladies and Gentleman,

It is an immense pleasure to take this opportunity to participate in this event. Balochistan is a strategically located province. Balochistan possesses enormous industrial potential in key sectors like agriculture, livestock, fisheries and minerals. There are greater investment opportunities in all sectors of provincial economy for exploiting the industrial potential of the province. A large number of agro-based, livestock-based, fisheries-based and mineral-based industries can be set up in the province.

The Industries & Commerce Department's strategy is to improve and ensure ease of doing business by providing an infrastructure facility of international standards in the province. Numerous projects aimed at up-skilling youth, ease of doing business and encouraging growth of manufacturing by strategically locating industries in industrial estate and special economic zones have been initiated. The department's mandate is not only to create an

[1] The honorable secretary could not attend the conference in person. We are grateful to him for sharing his special remarks in written.

enabling environment for a sustainable industrialization, but also to consider industries that are less hazardous for environment (green energy).

In a bid to implement and meet the given mandate we were lacking a legislative/ regulatory framework, which has now been not only done but also compiled in a book form along with other laws (photograph of title page is enclosed), containing following pieces of legislation.

i. Allotment Cancellation, Transfer, Surrender Policy of Industrial & Commercial Plots, 2023 of Industries & Commerce Department Government of Balochistan
ii. Allotment Cancellation, Transfer, Surrender Rules of Industrial & Commercial Plots, 2022 of LIEDA and GIEDA.
iii. SME Competitiveness Strategy for Balochistan, 2022
iv. Balochistan Industrial Development & Regulation Act, 2023

In the province of Balochistan "The Balochistan Environment Protection Agency (BEPA)" plays an important role in improving the plight of common man and bringing about a perceptible change within the society by minimizing and eliminating adverse environmental effects of effluents being discharged from industrial activity, wastes of all kinds and pollution detrimental to public health, safety and welfare. The BEPA enforces qualitative and quantitative standards for discharge of effluents, waste, air pollutants.

A number of green initiatives have been under consideration in Balochistan and number of Un-Solicited Proposals also received. In this regard, the installation of Hydrogen Plant in Balochistan is under consideration at Gaddani and Hub District. The project capacity is likely to generate 400 MW from Wind & Solar Technologies to produce 140,000 kg of green Hydrogen daily for export and use. The Government of Balochistan is not only committed to promote renewable energy sector but also progressively monitoring and controlling emissions. Government of Balochistan is making all efforts to encourage industries to adopt nature-based solutions. Moreover, Government of Balochistan has been able to attract about 50 local and foreign companies who have shown interest and submitted their investment proposals in various sectors especially in renewable energy etc.

The Provincial Government of Balochistan is committed to the goal of Geneva Conference on 'Climate Resilient Pakistan'.

Government of Balochistan has taken several steps to support industrialization in the province, some of the key ones include:

1. Establishment of two Special Economic Zones i.e. Bostan and Hub and 07 Industrial Estates

2. Establishment of LIEDA (Lasbella Industrial Estate Development Authority) and GIEDA (Gwadar Industrial Estate Development Authority) to facilitate businesses in the Industrial Estates. There are 227 industrial units functional in Hub out of 343 units.
3. Provision of support services for mobilization of investments through Board of Investment and Trade and providing One Window Investment Facilitation arrangements.

Session - I

Presentation on Key Binding Constraints on Green Industrialization in Pakistan

Distinguished Panel

Chair: *Dr. Richard Kozul-Wright, Director, United Nations Conference on Trade and Development, Geneva, Switzerland*

Moderator: *Dr. Safdar Sohail, Executive Director, SPRC*

Speakers

1. Mr. Abbas Raza Shah, CEO, Engineering Development Board, Ministry of Industries and Production, Government of Pakistan

2. Dr. Aman Ullah, Joint Chief Economist, Planning and Development Board, Government of Punjab, Lahore

3. Mr. Muhammad Sajjad Moghal, CEO, Classical International Trading, Lahore

4. Dr. Noman Ahmed, Professor and Dean, Faculty of Architecture and Management Sciences, NED University, Karachi

Abstract of the study on "*Key Binding Constraints on Green Industrialization in Pakistan*"

By Dr. Safdar Sohai

Background discussions with experts and government representatives have led to the conclusion that the green industrialization in Pakistan could be considerably boosted through the symbiotic relationship between an improved Climate Policy and effective Industrial Policy. This symbiosis remains dysfunctional due to various constraints such as poor policy conceptualization of green industrialization, lack of peer pressure on the industry to adopt green practices, inadequate policy responses from the economic ministries to the exigencies of green industrialization, problems with data, lack of green innovation, limited awareness of the green practices, inadequate availability of green finance, structural inequities in agricultural sector, preponderance of informal economy, and the relatively more expensive green practices for local manufacturing.

Proceedings of the Session - I

Mr. Muhammad Sajjad Moghal, CEO, Classical International Trading, Lahore

Mr. Sajjad Moghal offered a comprehensive perspective on industrialization and policies from the standpoint of a private sector industrialist. He emphasized two key insights derived from his private sector experience.

Firstly, Mr. Moghal pointed out the significance of understanding the fundamental principles of industrialization from a business and government perspective. He highlighted that while the government was responsible for overseeing industrialization, many small and medium-sized enterprises (SMEs), constituting a significant portion of the industry, lacked basic knowledge about concepts like green industrialization. For instance, these SMEs did not comprehend the implications of pollution, recycling, or energy efficiency. To illustrate this, Mr. Moghal mentioned the absence of initiatives in industrial parks to educate businesses on environmentally responsible practices. This lack of awareness among SMEs was a considerable challenge when discussing industrialization policies.

One of the main points of concern raised by Mr. Moghal was the inadequate implementation of policies and regulations. He highlighted that many industries, particularly those operating informally, often bypassed regulatory compliance, leading to lower production costs. For instance, small businesses producing detergents might have operated informally, avoiding regulatory requirements, which placed them at a competitive advantage due to reduced costs. In contrast, more formal medium-sized manufacturers, like Mr. Moghal's own enterprise, faced higher costs due to their compliance with regulations. This resulted in an uneven playing field, where policy parameters and regulations appeared to favor informal businesses over their formal counterparts.

Furthermore, Mr. Moghal underlined the importance of trust in policy institutions and contract enforcement. He provided an example of a breach of contract in Sundar industrial state where industries were supposed to have a collective affluent plant, but due to regulatory enforcement, every industry was forced to have its own plant. This situation eroded trust in policy institutions as industries, even when given locations and resources by the government, felt that the government itself was breaching contracts.

Mr. Moghal's concerns extended to the broader picture of policy formulation. He noted that policy changes in Pakistan were often influenced by multilateral or bilateral institutions. While these external institutions may have provided support, their involvement could have disproportionately influenced policy direction, potentially overlooking crucial considerations. Mr. Moghal likened this to a "magnifying glass phenomenon," where external support magnified some aspects while diminishing the importance of others, resulting in skewed policy outcomes.

In conclusion, Mr. Sajjad Moghal's perspective provides valuable insights into the challenges of industrialization and policy implementation from a private sector viewpoint. His commentary reflects the need for a balanced approach that addresses the knowledge gap among SMEs, ensures fair regulatory compliance, fosters trust in policy institutions, and maintains a domestically driven policy direction. These considerations, if integrated into the policymaking process, could contribute to a more comprehensive and effective industrialization framework in Pakistan.

Abbas Raza Shah, CEO, Engineering Development Board, Ministry of Industries and Production, Government of Pakistan

Mr. Abbas Raza shared his valuable insights in response to the DOGSAB study. He began by commending the study for its incisive and pertinent analysis, acknowledging its potential to provoke thoughtful discussions among professionals like himself. Having spent 16 years in the government across different ministries, including Information Technology, Science and Technology, and Industries, and with 18 years of private sector experience, Mr. Raza brought a unique perspective to the discussion. Currently working in the Ministry of Industry and Production's Engineering Development Board, he specialized in policy and regulations for the engineering industry, a critical component of the broader industrial landscape.

Mr. Raza's analysis revolved around the lack of symbiosis in the relationship between policies and various sectors, particularly with regard to environmental concerns. He highlighted the effectiveness of the rules of business in distributing work but noted that this efficient division often resulted in policy silos, which hindered feedback mechanisms. One key point Mr. Raza addressed was the allocation of the green initiative solely to the Ministry of Climate. He argued that climate policies should be more integrated and cross-cutting, involving multiple ministries rather than being the sole responsibility of one.

Furthermore, Mr. Raza emphasized the importance of aligning policies with national development goals and regularly updating these goals to reflect changing circumstances. He reminisced about the now-critiqued five-year plans, which, despite their flaws, provided a long-term perspective and a roadmap for achieving specific objectives. Regarding specific examples, Mr. Raza delved into the challenge of transitioning to cleaner energy sources and electric vehicles. He questioned the feasibility of ambitious targets, such as achieving 60% renewable energy and 30% electric vehicles by 2030. He pointed out the necessity of involving all relevant stakeholders in achieving such goals, ensuring that they were fully aware of the targets and were prepared to participate effectively.

On the topic of banning coal, Mr. Raza brought up the practicality of this objective, given that coal remained one of the most affordable energy sources for Pakistan. He argued that a realistic approach would consider how to minimize coal's environmental impact and promote efficient utilization. In addition, Mr. Raza addressed the transportation sector's role in emissions and import dependency for fuel. He highlighted the challenges of shifting to electric vehicles, underscoring the importance of coordination between different ministries and provinces to overcome the silos that hindered policy implementation.

Finally, Mr. Raza emphasized the need to factor in aspects like innovation, research and development, and waste reduction in policy frameworks. He asserted that these elements should be integral components of policies aimed at incentivizing specific sectors. In closing, Mr. Raza advocated for integrating Pakistan into the global supply chain, highlighting the need to break free from silo-based approaches and align the country with international standards and best practices.

Dr. Aman Ullah, Joint Chief Economist, Planning and Development Board, Government of Punjab, Lahore

Dr. Aman Ullah in his role as a discussant during the inaugural session of the Launching Pakistan Green Industrialization Project offered comprehensive insights into the project and the related background paper, as well as the significant initiatives undertaken by the provincial government of Punjab.

He initiated his discussion by expressing gratitude and emphasizing the importance of the green industrialization project, jointly organized by the United Nations Conference on Creative Development and the Social Protection Resource Center. Dr. Aman outlined the dual focus of his discussion, beginning with an analysis of the background paper and then delving into the various green initiatives implemented by the Punjab government in recent years. Dr. Aman started by addressing key issues highlighted in the background paper, such as the slow progress in green industrialization, challenges related to policy formulation, insufficient industry pressure, limited green financing, and the presence of a significant informal economy in Pakistan. He stressed the importance of understanding and creatively addressing these challenges to strengthen the connection between climate and industrial policies on different levels, including macro, sectoral, and cross-cutting domains.

The core message in Dr. Aman's discussion is the essential need for transitioning Pakistan's industries toward sustainability to mitigate environmental and social impacts while fostering economic growth. He emphasized that despite industrial growth, it has not adequately contributed to overall development in Pakistan, leading to economic, environmental, and social burdens, particularly in cities like Lahore and Gujarat in Punjab, which host numerous small and medium enterprises. Dr. Aman underscored that the paper primarily focuses on CO_2 emissions but overlooks vital aspects like water and noise pollution, which are equally significant environmental challenges. He specifically mentioned the lack of a framework for dealing with water pollution, even though Pakistan exports thousands of liters of water with products like jeans, t-shirts, and towels. In addition, Dr. Aman referenced international best practices that demonstrate the substantial benefits of eco-industrial parks, suggesting that these practices should be recommended and integrated into the background paper.

Transitioning to the initiatives and projects of the Punjab government, Dr. Aman explained that the Punjab Growth Strategy 2023 emphasizes the need for a comprehensive green industry policy that aligns with national development goals and sets an example for the entire country. Dr. Aman then highlighted the Climate Budget Tagging process, which plays a pivotal role in guiding policy choices regarding climate-related investments in Punjab. He introduced the Punjab Green Development Program, a major project funded jointly by the World Bank and the Government of Punjab, aiming to establish an environmental and green investment fund. This fund will mobilize public and private capital for environmental governance and green investment in the province.

Furthermore, Dr. Aman mentioned the ongoing work on the green financing strategy, which will identify sources of funding for climate and green finance over the medium and long term. He elaborated on projects within the Punjab Green Development Program, including the collaborative efforts between the Environment Protection Department and the Environmental Protection Agency to update regulations and encourage cleaner technologies in priority sectors. Dr. Aman addressed initiatives aimed at reducing air pollution caused by traditional brick kilns, including the adoption of zigzag technology to modernize the brick sector and improve efficiency. He discussed the Sialkot Tannery Zone Project, a collaboration between the Government of Punjab and the Sialkot Chamber of Commerce and Industries, aimed at addressing environmental pollution arising from scattered tanneries around Sialkot. Dr. Aman stressed the importance of creating industrial states and special economic zones with common effluent treatment plants.

Dr. Aman emphasized the need for a two-pronged approach to drive green industrialization. This approach involves reinforcing environmental policies and developing a green industrial policy that focuses on investment, innovation, and trading incentives. He highlighted that policy goals should extend beyond pollution control and compliance to include preventive and circular approaches. Dr. Khan acknowledged the importance of incorporating these strategies into regulations and relevant government agencies.

Dr. Aman also recognized the deficiency in effective environmental governance and the need for comprehensive green growth strategies to reduce pollution emissions across all sectors. He expressed gratitude to the Social Protection Resource Center and UNCTAD for their support in these endeavors. In his closing remarks, Dr. Khan affirmed that the next five-year growth strategy for the Punjab government would place a strong emphasis on green industrialization and international best practices, particularly eco-industrial parks.

Dr. Noman Ahmed, Professor and Dean, Faculty of Architecture and Management Sciences, NED University, Karachi

Professor Noman Ahmed, presented a comprehensive overview of the sustainability efforts and initiatives in the province of Sindh, Pakistan. He began by conveying the gratitude of the people of Sindh to UNCTAD and the Social Protection Resource Center for the opportunity to participate in an event that focuses on well-being and prosperity.

Prof. Ahmed highlighted the unique position of Sindh in providing valuable sustainability lessons to not only the rest of Pakistan but also to similar regions in South Asia. This is attributed to Sindh's experience in coping with and mitigating climate change despite limited resources.

Sindh, according to Prof. Ahmed, is the most climate-vulnerable province in Pakistan, suffering from both dry weather and floods. A World Bank study in 2015 indicated that Sindh incurred significant economic losses due to climate-related problems, accounting for 70% of flood losses in the country. In response, Sindh formulated its first-ever climate change policy in July 2022.

The policy's highlights include climate-resilient housing for flood victims, using local construction materials and preventive elevations, serving as a model for similar regions. Sindh also experienced severe crop losses during the 2022 floods, prompting the provincial government to promote climate-resilient and climate-smart agriculture. The government of Sindh actively participated in the Geneva conference on climate-resilient Pakistan, reinforcing the importance of climate resilience and reconstruction. Commitments made at the conference align with the goals of the Social Protection Resource Center's Green Industry Conference. Prof. Ahmed elaborated on various green initiatives undertaken in Sindh, including the Green Economy Initiative, the development of Pakistan's first green hydrogen plant, and substantial wind and solar energy projects. Sindh aims to lead the decarbonization of the country's economy by reducing industrial emissions, promoting renewable energy, and encouraging nature-based solutions.

Sindh's industrial output currently contributes to 6% of carbon dioxide emissions, and the provincial government actively monitors and controls these emissions. Efforts are also underway to improve water treatment and solid-based recycling. The SIN Environmental Protection Act of 2014 has established a framework for cleaner production, leading to cleaner production policies, increased budgetary allocations, and collaborations with non-governmental organizations. Prof. Ahmed noted that cleaner production efforts in Sindh have received positive assessments from international organizations. Many industrial units are actively working to reduce their water consumption and environmental impact. While acknowledging the remaining challenges, Prof. Ahmed emphasized that the policies and frameworks enforced in Sindh are making a substantial impact on reducing waste and promoting nature-friendly solutions.

In addition to technological considerations related to waste management, Prof. Ahmed highlighted the importance of social perceptions and community engagement. He argued that waste should be viewed as a resource rather than a liability and discussed the need to change social perceptions and increase public awareness about waste management and responsibility. In conclusion, Prof. Ahmed underscored the importance of addressing both technological and social aspects of waste management, making the public more aware of their role in sustainable production, and urged for collective efforts in this endeavor.

Key Policy Recommendations

1. Ensure Fair Regulatory Compliance: Mr. Moghal highlights the problem of uneven playing fields due to inadequate implementation of policies and regulations. Policies should ensure fair regulatory compliance across all types of businesses, including informal and formal sectors. This might involve streamlining regulations, reducing compliance costs, and encouraging informal businesses to formalize their operations.
2. Integrate Climate Policies Across Ministries: Mr. Raza emphasizes the need for a more integrated and cross-cutting approach to climate policies. He suggests that climate policies should involve multiple ministries rather than being the sole responsibility of one. This integration would ensure a more holistic approach to addressing environmental concerns and would facilitate coordination among various sectors.
3. Align Policies with National Development Goals: It is crucial to ensure that policies align with national development goals and are regularly updated to reflect changing circumstances. Mr. Raza highlights the importance of having long-term perspectives and roadmaps, similar to the now-critiqued five-year plans, to achieve specific objectives. This approach provides clarity and consistency in policy implementation.
4. Stakeholder Involvement and Awareness: Mr. Raza points out the necessity of involving all relevant stakeholders in achieving ambitious targets, such as transitioning to cleaner energy sources and electric vehicles. Stakeholders need to be fully aware of the targets and be prepared to participate effectively. This involves consultation, collaboration, and creating awareness among key industry players and the public.
5. Coordination and Collaboration: To tackle challenges in sectors like transportation and the shift to electric vehicles, Mr. Raza emphasizes the importance of coordination

between different ministries and provinces. Overcoming policy silos is crucial for effective policy implementation, particularly in areas where multiple sectors are involved.

6. Broaden Environmental Focus: Dr. Aman suggests that environmental policies should not solely focus on CO_2 emissions but also address other significant environmental challenges like water and noise pollution. He highlights the need for frameworks to address issues such as water pollution, particularly in industries that export products associated with significant water use.
7. Leverage International Best Practices: Dr. Aman recommends integrating international best practices, such as eco-industrial parks, into the background paper and policy recommendations. These practices have demonstrated substantial benefits and can serve as models for Pakistan's green industrialization efforts.
8. Comprehensive Green Industry Policy: Dr. Aman highlights the importance of a comprehensive green industry policy that aligns with national development goals. Such a policy can set an example for the entire country, emphasizing the need for investment, innovation, and trading incentives to drive green industrialization.
9. Green Financing and Investment: Initiatives like the Punjab Green Development Program, Climate Budget Tagging, and the environmental and green investment fund are essential for mobilizing public and private capital for environmental governance and green investment. These mechanisms can support the transition to sustainable and environmentally friendly industrial practices.
10. Special Economic Zones with Effluent Treatment Plants: The creation of industrial states and special economic zones with common effluent treatment plants is crucial for addressing environmental pollution and ensuring that industries adhere to sustainable practices.
11. Climate Resilience and Mitigation: Sindh, being a climate-vulnerable region, emphasizes the importance of climate resilience and mitigation in its policies. This includes climate-resilient housing for flood victims and climate-smart agriculture. Policy recommendations include promoting similar initiatives in other vulnerable regions and sharing best practices to cope with climate change.
12. Waste Management and Public Awareness: Waste should be viewed as a resource, not a liability. Policy recommendations include changing social perceptions and increasing public awareness about waste management and environmental responsibility. Public education and engagement are crucial components of sustainable waste management.

These recommendations collectively advocate for comprehensive, inclusive, and forward-thinking policies to address environmental and industrial challenges and pave the way for a more sustainable and responsible future.

Session – II

Sectorial Studies: Challenges and opportunities for a green transition in Pakistan

Distinguished Panel

Chair/Moderator: *Chair/Moderator: Dr. Gul Unal, UNCTAD Geneva*

Speakers

Study: Decarbonizing Transport Sector in Pakistan-Identifying Issues and Listing Priorities

Author: Dr. Hasan Syed, Associate Professor in the Department of Economics, LUMS, Lahore
Discussant: Mr. Omar Masood, CEO, Urban Unit, Government of Punjab, Lahore

Study: Role of Agriculture in Green Industrialization in Pakistan

Author: Dr. Ajaz Ahmad, Director Research, SPRC, Islamabad
Discussant: Dr. Bashir Ahmad, Director CEWRI, Pakistan Agriculture Research Council

Study: Greening the Textile Industry: An Analysis of the Policy Landscape of Pakistan

Author: Mr. Abid Raza Khan, HoD Business and Economics,Punjab University, Lahore
Discussant: Mr. Khalid Mahmood, ED, Master Textiles, Lahore

Proceedings of the Session – Session II

Study: Decarbonizing Transport Sector in Pakistan-Identifying Issues and Listing Priorities

Author: Dr. Hasan Syed, Associate Professor in the Department of Economics, LUMS, Lahore

Dr. Hasan Syed expressed gratitude to SPRC for providing the opportunity to work on a study, sharing the findings from a recently concluded report. The focus of the report was a review of policies related to the transport sector, understanding constraints hindering policy implementation, and exploring solutions to mitigate emissions and decarbonize the transport sector. He began with a quick review of the transport sector's role in driving the economy, connecting workers with jobs, and strengthening market linkages. However, he highlighted the environmental impact, stating that the transport sector in Pakistan accounted for 10% of all greenhouse gas emissions and 25% of emissions from the energy sector. He emphasized the high growth in transport emissions on a per capita basis, indicating a 44% increase from 2013 to 2018.

Dr. Hasan Syed discussed the indirect coverage of transport emissions under various Sustainable Development Goals (SDGs) and expressed concern about Pakistan's performance in SDG 11 related to safe, affordable, and sustainable transportation. Moving on to the review of relevant policies, he discussed the 2018 transport policy, emphasizing the need to focus on affordability and ease of private vehicle use versus investment in public transportation. He pointed out the inefficiencies in using rail for passenger traffic instead of freight and protection given to state-owned enterprises contributing to inefficiencies.

Dr. Hasan Syed highlighted the weaknesses in policy implementation frameworks, especially in the areas of electric vehicles (EVs) and clean air. He emphasized the need for a robust framework to achieve policy targets. Addressing challenges, he identified macro-level challenges such as a high rural population, spatial spread, and urban sprawl. Sectoral challenges included administrative issues with multiple stakeholders and technical challenges in EV adoption, infrastructure investment, and compliance with emission standards.

In the recommendations, Dr. Hasan Syed proposed an "avoid, shift, and improve" approach. He suggested moving towards better land use policies, adopting transit-oriented development, promoting a conscious shift to rail, improving the freight network, and implementing cross-cutting interventions like the use of low-carbon fuels and transitioning to electric vehicles. Additionally, he encouraged tapping into green finance for sustainability initiatives.

Discussant: Mr. Omar Masood, CEO, Urban Unit, Government of Punjab, Lahore

Mr. Omar Masood underscored the challenges and opportunities associated with green industrialization in Punjab, with a specific emphasis on the pivotal role of cities. The concentration of industrial activities within city boundaries, constituting 68%, underscored Mr. Masood's assertion that cities must establish environmentally friendly ecosystems. He argued that the identified challenges in achieving green industrialization highlighted the necessity for cities to proactively take measures in support of sustainable development.

Examining the historical progression of climate change policies from 1974 to 2019, Mr. Masood noted a gradual shift from federal to provincial involvement. He observed an evolving awareness and concern for environmental issues, culminating in the judiciary's active engagement post-2019. This historical context formed the backdrop for Mr. Masood's argument that synchronization and coordination of climate change policies at various administrative levels are imperative.

Mr. Masood articulated concerns about transport planning in Pakistan, citing an overemphasis on road infrastructure as a primary challenge. He argued for the importance of broadening the scope of transport planning to include various modes, emphasizing the need to empower local governments with clear mandates for effective planning.

In discussing vehicle efficiency and emissions, Mr. Masood highlighted the need for coordination between improved engines, better fuel, and emission reduction strategies. He pointed out challenges in setting emission reduction targets, particularly at the federal level, and recommended fostering collaboration between federal and provincial levels to establish realistic and achievable targets.

Addressing the struggles of small and medium enterprises (SMEs), Mr. Masood argued that issues such as a lack of professionalism, standardization, and limited access to financing hinder their growth. He recommended developing programs to enhance SME professionalism and addressing regulatory challenges hindering their progress.

In conclusion, Mr. Masood contended that the challenges and opportunities presented in the context of green industrialization offer a platform for policy redesign. He proposed policy recommendations, including encouraging cities to develop environmentally friendly ecosystems, coordinating climate change policies, diversifying transport planning, implementing emission reduction strategies, and supporting SMEs through regulatory adjustments. According to Mr. Masood, these measures collectively contribute to the vision of sustainable development and environmental resilience.

Study: Role of Agriculture in Green Industrialization in Pakistan

Author: Dr. Ajaz Ahmad, Director Research, SPRC, Islamabad

Mr Ajaz Ahmad presented a comprehensive overview of the challenges and opportunities associated with the role of agriculture in green industrialization in Pakistan. Drawing on his expertise in environmental economics, Mr. Ahmed underscored agriculture's significance in the Pakistani economy, constituting approximately 23% of the GDP and employing about 37% of the population. However, he highlighted a decline in the sector's growth rate since the mid-2000s, emphasizing historical challenges that remain unaddressed.

Mr Ajaz delved into longstanding issues within the agriculture sector, encompassing problems like production shortfalls, unstable input-output markets, and structural deficiencies. These challenges contributed to food security concerns, unemployment, poverty, and adverse effects on various associated industries. Mr. Ahmed pinpointed issues such as inefficient resource utilization, traditional marketing system inefficiencies, and disparities in land ownership as key hindrances.

A critical facet of the discourse revolved around the impact of environmental degradation, pollution, and climate change on agriculture. Mr. Ahmed emphasized the sector's vulnerability to climatic shifts and the inadequacy of autonomous adaptation measures by farmers. Insufficient disaster preparation at the local level and a lack of consultation with primary stakeholders further compounded these challenges.

Mr Ajaz Ahmed advocated for the greening of agriculture through sustainable practices and climate-smart agriculture. He highlighted the willingness of both farmers and consumers to embrace cleaner food production. The need for effective agricultural extension services, transparent trading practices, and addressing land inequality emerged as vital components for achieving sustainable and greener agriculture.

Furrthermore attention turned to global policy initiatives, particularly the Carbon Border Adjustment Mechanism (CBAM) introduced by the EU. Mr. Ahmed underscored the potential ramifications of CBAM on Pakistan's exports, especially in agriculture. The mechanism, aimed at penalizing products with higher emissions, poses a significant challenge for countries lacking decarbonization infrastructure, technology, and policy frameworks.

Discussing structural transformation, Mr. Ahmed highlighted the interconnectedness of agriculture and industry, emphasizing the importance of urbanization and demographic transitions. The need for robust agricultural financing mechanisms, addressing collateral issues, and improving farmers' literacy were stressed as crucial steps toward sectoral development.

Discussant: Dr. Bashir Ahmad, Director CEWRI, Pakistan Agriculture Research Council

Dr. Bashir Ahmed stated that there were multiple sectors engaged. He noted that events related to climate change occurred on a daily or weekly basis. Typically, these events were singular sector occurrences, but Dr. Ahmed considered them multi-sector events, which provided valuable mutual learning opportunities. Dr. Ahmed further emphasized that climate change was impacting agriculture across all sub-sectors. Studies indicated that major and minor crops, as well as livestock, could face a 5 to 20% impact by the end of the century. He outlined two types of impacts on agriculture: direct effects on crops and the indirect impact through water irrigation. The rising temperatures due to climate change increased water requirements and introduced new disease infestations.

Regarding Pakistan's reliance on irrigation, Dr. Ahmed highlighted a significant gap in water availability. He mentioned the dependence on glacier melt and rainfall, with studies predicting a substantial loss of glaciers by mid-century. Dr. Ahmed stressed the importance of adapting water management and agriculture to changing precipitation patterns.

Dr. Ahmed discussed the vulnerability of Pakistan to climate-induced floods and droughts, leading to substantial economic losses. He criticized the insufficient focus on building flood-resilient infrastructure and advocated for increased attention to flood mitigation in vulnerable areas. Addressing technological solutions, Dr. Ahmed mentioned climate-smart agriculture and the need for a specific focus on this emerging field. He discussed the adoption of solar water pumping policies and emphasized the importance of integrating these solutions with efficient irrigation systems.

Dr. Ahmed pointed out challenges in knowledge dissemination, expressing concern about the lack of effective linkages between research institutions, academia, and the agriculture extension department. He discussed the need for area-specific solutions, such as zero tillage or reduced tillage, which could conserve resources and minimize environmental impact. In terms of disaster management, Dr. Ahmed stressed the importance of climate-resilient infrastructure and lamented the economic losses incurred due to inadequate infrastructure.

He concluded by outlining some ongoing initiatives, such as climate-smart agriculture, solar water pumping policies, and high-efficiency irrigation systems, as well as the government's focus on climate and green investments. Dr. Ahmed also highlighted the potential for carbon credits, citing the example of the blue carbon mangrove project.

Study: Greening the Textile Industry: An Analysis of the Policy Landscape of Pakistan

Author: Mr. Abid Raza Khan, HoD Business and Economics, Punjab University, Lahore

Mr. Abid Raza Khan discussed the textile sector, noting its global significance in terms of carbon emissions and output. He highlighted the sector's impact on greenhouse gas emissions, water pollution, and its substantial contribution to Pakistan's GDP and workforce. The complex global value chain in the textile sector, particularly in yarn and dying/finishing, was emphasized. Mr. Khan discussed the challenges arising from the sector's representation by different organizations and highlighted the growing role of the stitching industry in Pakistan.

He acknowledged the increasing greenhouse gas emissions in Pakistan, especially in the textile industry, which is expected to grow further due to fast fashion trends. The shift toward synthetic fibers in fashion was mentioned, posing environmental concerns with higher carbon emissions compared to cotton.

The seven main environmental impact areas of the textile industry were briefly outlined, with a focus on energy and water. Mr. Khan discussed the high carbon dependence of Pakistan's energy mix, particularly in the textile sector, and the challenges associated with transitioning to sustainable energy sources. He also addressed the significant water pollution caused by the industry, emphasizing the need for advocacy to drive sustainable choices among customers.

In conclusion, Mr. Khan underscored the importance of advocacy to encourage sustainable choices, citing studies that show customers' willingness to embrace more sustainable options. He stressed the need for forums like the one he was participating in to raise awareness and influence the textile industry toward more environmentally friendly practices.

Discussant: Mr. Khalid Mahmood, ED, Master Textiles, Lahore

Mr. Khalid Mahmood, delivered valuable insights into the textile industry's ongoing shift towards sustainable practices. Recognizing the sector's historical environmental challenges, He highlighted the positive strides made by major exporters in aligning with international sustainability standards. He argued that Major textile units are increasingly investing in sustainability, circularity, and compliance, driven by the demands of influential global brands. Mr. Mahmood shared examples, including his company's significant investments in wastewater treatment (ETP) and renewable energy projects such as wind and solar power.

Acknowledging the efforts of textile enterprises in Karachi, Sialkot, and Faisalabad, Mr. Mahmood identified them as industry role models actively contributing to sustainable practices, setting benchmarks for others in the sector.

Mr. Mahmood also shed light on the challenges faced by businesses, particularly the financial implications of compliance. He emphasized the complexities of adapting processes and the overarching issue of de-industrialization trends over the past two decades. Concerns were raised about the vulnerability of small and medium-sized enterprises (SMEs) grappling with inadequate infrastructure and volatile value chains.

Key Policy Recommendations from the Session:

- Explore opportunities for carbon credit projects. Encourage initiatives that contribute to carbon sequestration and reduction in greenhouse gas emissions, providing economic benefits while addressing environmental challenges.
- Promote zero tillage or reduced tillage practices to conserve resources and minimize environmental impact. Bridge the knowledge gap and enhance extension services to facilitate farmer adoption of these practices.
- Integrate technology solutions, such as solar water pumping, with existing agricultural practices. Ensure that policies are area-specific and consider the unique characteristics of each region to prevent unintended consequences.
- Develop and implement a comprehensive framework for electric vehicle (EV) adoption.
- Ensure compliance with international emission standards, such as Euro 5.
- Utilize green finance options to fund sustainable transport initiatives.
- Encourage the use of low-carbon fuels to reduce emissions.
- Foster collaboration between public and private sectors for effective policy implementation.
- Establish a robust monitoring and evaluation system for policy progress.
- Conduct public awareness campaigns to promote sustainable transportation.
- Learn from international experiences and collaborate with experts and organizations.
- Provide education and training programs for industry professionals, workers, and stakeholders on sustainable practices. Build awareness about the environmental impact of the textile sector and empower individuals to contribute to positive change.
- Recognize the challenges faced by small and medium-sized enterprises in the textile sector. Implement policies that support these businesses in adopting sustainable practices, considering their limitations and promoting their survival.
- policy measures that sensitize regulatory bodies to the challenges faced by businesses. Consider streamlining regulations and ensuring that compliance efforts are supported rather than punitive.
- Financial Support for SMEs: Develop financial mechanisms or support programs specifically tailored for SMEs in the textile sector. This could include low-interest loans, grants, or tax incentives to help them invest in sustainable practices
- Implement policies to enhance productivity, stabilize input-output markets, and address structural issues plaguing the agriculture sector.
- Broaden the scope of transport planning beyond road infrastructure, in line with Mr. Masood's recommendation. Include various modes of transportation in planning

efforts, and empower local governments with clear mandates to enhance the effectiveness of transport planning.

- Invest in agricultural extension services to facilitate climate-resilient farming practices and improve disaster preparation at the local level.
- Encourage sustainable agricultural practices and climate-smart agriculture, acknowledging the willingness of farmers and consumers to support cleaner food production.
- Formulate strategies to mitigate the impact of CBAM on Pakistani exports, considering the limitations in technology, policy, and financial resources.
- Encourage cities to establish and prioritize environmentally friendly ecosystems, as highlighted by Mr. Masood. Implement policies promoting sustainable practices within city boundaries, fostering a conducive environment for green industrialization

Benefitting Better From International Climate Finance

Distinguished Panel

Chair: *Mr. Syed Haider Shah, Additional Secretary UN, MOFA, GOP, Islamabad*

Moderator: *Dr. Safdar Sohail, ED, SPRC, Islamabad*

Speakers

1. *Dr. Richard Kozul-Wright, Director UNCTAD, Geneva*
2. *Mr. Mohsin Chandna, DG Debt, Ministry of Finance, Government of Pakistan*
3. *Dr. Nadeem Javaid, Professor of Economics & Strategy, KSBL, Karachi*
4. *Dr. Aman Ullah, Joint Chief Economist, Planning and Development Board, Government of Punjab, Lahore*
5. *Mr. Bilal Anwar, CEO, NDRMF, Government of Pakistan*
6. *Mr. Ahmad Ammar Yassar, Chief of Party PPSE, UNIDO, Islamabad*
7. *Mr. Muhammad Sajjad Moghal, CEO, Classical International Trading, Lahore*

As the moderator of the panel discussion Dr. Sohail expressed his appreciation to the chair for leading the session and greeted him warmly. The Panel Discussion was preceded by presentation of the Key Insights from the study authored by Dr. Safdar Sohail on *"Preparing Pakistan to Avail Loss and Damage Fund (L&DF) for Green Transformation".*

Key insights from the study

Preparing Pakistan to Avail Loss and Damage Fund (L&DF) for Green Transformation

Developing countries are projected to incur significant climate change costs, with annual estimates reaching USD 435 billion by 2030 and USD 1 trillion by 2050. COP27 resulted in the creation of the Loss and Damage Fund (L&DF), a significant turning point acknowledging the inequities of climate change.

Despite making minor contributions to global greenhouse gas emissions, Pakistan ranks among the top ten most climate-affected countries. The devastating 2022 floods underscored the urgency of establishing climate finance for the L&DF. Still Pakistan gets very little from international climate finance. Let us make a difference with L&DF.

To maximize climate-resilient development through the L&DF, Pakistan must enhance its understanding of global climate finance, eligibility criteria, and internal distribution priorities. Our technical knowledge and institutional capacity was an added issue as attracting international climate finance is challenging by nature itself. We did not do well to avail international funding under Clean Development Mechanism, Carbon Credits or for that matter from foreign aid in general

As L&DF would be different from climate funds focused on mitigation and adaptation as it would addresses losses and damages that cannot be mitigated or adapted, Pakistan would need to engage the relevant Transition Committee developing modalities to enhance the prospects of funding for Pakistan.

One of the key eligibility criteria would require the countries like us to establish effective mechanisms such as impact monitoring, need assessments, and criteria for progressive and sustainable initiatives. The fund management agencies in Pakistan therefore would play a critical role to ensure the compliance requirements, gauged through measurement, reporting, and verification systems (MRVs).

As the transitional committee takes time in accomplishing the challenging task of making practical decisions, we need to quickly learn from others and from our own experience and failings. While waiting for an additional fiscal space through L&DF, we would help ourselves greatly if we ourselves mobilize our own resources, particularly at the provincial level, for a low-carbon and climate-resilient transition, which could be scaled up when we get more funds from L&DF. With better mobilization of our domestic resources and attending to the expenditure side through effective governance, we can start making a significant difference in the lives of our people. This requires a serious revisit of our current debt dependent public finance management system.

Proceedings of the Session – Session III

Dr. Richard Kozul-Wright, Director UNCTAD, Geneva

Dr. Richard Kozul-Wright emphasized that the foremost binding constraint in transitioning to a low or zero carbon economy was finance. The complexity of this issue extended to both domestic and international financial arrangements, encompassing various challenges related to mitigation, adaptation, and loss and damage. The dilemma of debt versus grants further complicated this intricate field. From his perspective, there was currently no international financial system designed to deliver finance, particularly to developing countries, at the necessary scale, which was substantial.

The global estimate for addressing climate and development Sustainable Development Goals (SDGs) was in the order of three to four trillion dollars annually. Dr. Kozul-Wright stressed the importance of ensuring that climate finance did not come at the expense of development goals, expressing concern about ongoing efforts by advanced economies to redesign the international financial system. He pointed out the risk that such redesigns might better align with financing goals but fail to meet development objectives, a matter of significant concern for countries within the G77. He drew attention to recent developments at the World Bank, particularly in Marrakesh, where the institution was being restructured in a way that appeared to crowd out traditional development finance. The shift in focus towards climate-heavy projects was identified as a substantial concern.

The second major issue highlighted by Dr. Kozul-Wright was the combination of private and public finance, both of which he asserted needed significant scaling up to meet the required investment for mitigation and adaptation. He expressed discomfort with the discourse, originating from Washington and the private financial sector, suggesting that governments lacked the financial means for investments in climate initiatives. He criticized the misleading agenda that promoted dependence on the private sector, framing it as having ample resources. Dr. Kozul-Wright cited examples like Mark Carney's Glasgow Financial Alliance for Net-Zero (G-FANS), highlighting the claim of having $30 trillion worth of financial assets. He criticized the logic of de-risking and public-private partnerships, dismissing it as largely mythical. Dr. Richard Kozul-Wright pointed out that evidence on public-private partnerships, particularly from the World Bank, indicated a significant disparity between claimed and actual private sector contributions. He emphasized the need for a reassessment of the effectiveness of such partnerships, expressing skepticism about the private sector's ability to substantially contribute to climate-related investments.

Dr. Kozul-Wright argued that the prevailing discourse, especially in advanced economies, tended to undermine the significance of public investment and the role of public development banks at national, regional, and international levels. He stressed the importance of these institutions in ensuring sufficient financing for long-term and challenging climate investments. The speaker also highlighted the necessity for patient capital and strategic planning in climate investment. He suggested that the private sector often fell short in delivering on these fronts, emphasizing the critical role of public development as a tool to address these challenges effectively. Dr. Kozul-Wright expressed support for a substantial increase in the capital base of the World Bank but called for such increases without imposing stringent conditionality. He also underscored the responsibility of countries to ensure that their own development banks were fit for purpose.

Regarding loss and damage, Dr. Kozul-Wright pointed out the challenges associated with humanitarian perspectives and called for a properly funded mechanism or fund to respond to the immediate and long-term consequences of climate-related shocks. The speaker concluded by expressing concerns about the understanding of the scale of the climate problem in advanced economies, particularly in ongoing international negotiations. He anticipated potential challenges in achieving a satisfactory outcome for developing countries and emphasized the need for the international community to acknowledge the nature of the problem and provide adequate funding.

Q and A session:

Regarding the specifics of loss and damage, Dr. Kozul-Wright noted that developing countries had swiftly grasped the complexities of the issue. In contrast, advanced economies had not presented a meaningful blueprint for a loss and damage fund and were responding negatively to the proposals put forth by developing nations. Issues such as governance, funding, and the criteria triggering access to the fund were discussed, along with the question of responsibility, whether to blame governance or climate change.

He cited the example of the Libya floods, attributing them in part to the intensification of storms likely caused by climate change. The lack of investment in dams in the region exacerbated the problem, highlighting vulnerabilities resulting from a decade-long neglect of dam maintenance. Dr. Kozul-Wright disagreed with a colleague's characterization of Pakistan as a frontier market, pointing out that the country had entered the international capital market in the past decade to attract private investors from advanced economies seeking higher yields.

The speaker expressed concern about Pakistan's current financial crisis, describing it as a development crisis. With 50% of government revenues spent on servicing debt, there were limited resources available for essential development objectives and infrastructure. Dr. Kozul-Wright criticized the prevailing notion and mentioned that the interest rates would remain high for an extended period, particularly affecting countries like Pakistan, which received little relief.

Reflecting on investment trends in Pakistan, he observed a decline in capital formation since the 1990s, questioning the efficacy of advice from the IMF and World Bank to let the private sector drive investment. Dr. Kozul-Wright pointed out that, instead of investing in productive equipment, profits in capitalist economies often went towards paying dividends or buying back shares. He emphasized the insufficiency of such a model in addressing the challenges of climate finance.

Dr. Nadeem Javaid, Professor of Economics & Strategy, KSBL, Karachi

Reflecting on the floods that occurred in 2022 in Pakistan, Dr. Nadeem Javaid discussed the subsequent pledge conference in Geneva, where pledges amounting to 10.5 billion dollars were secured in response to Pakistan's 4RF strategy for flood recovery. During the formulation of the 4RF framework at the planning commission, challenges arose with supporting agencies opposing the inclusion of a chapter on long-term resilience. Being the Chief Economist at Planning Development & Special Initiatives, Dr. Javaid successfully advocated for this chapter, emphasizing the need for infrastructure resilience to address potential future catastrophes.

He underscored the challenges in adapting to and mitigating the impact of climate disasters, particularly the difficulty in predicting and preparing for such events despite advanced early warning systems. Dr. Javaid cited research from the McKenzie Institute, indicating a significant investment requirement of trillions of dollars annually to reduce carbon footprint and limit temperature rise. He emphasized the necessity for investments in technologies and diffusion mechanisms to secure the future against climate disasters. Dr. Javaid highlighted innovative solutions such as solar energy and the challenges associated with their implementation, citing the example of net metering arrangements for household electricity production. He pointed out the importance of proper regulations to avoid unintended consequences, such as the potential negative impact of unchecked water abstraction for solar tube wells.

Discussing mega-investments in projects like the Diamer Basha Dam, he acknowledged the financial constraints on public finance and emphasized the need for public-private partnerships. However, he criticized the lack of efficient project design by government departments, hindering the engagement of international and local investors. Dr. Javaid stressed that public-private partnerships should focus on effective risk management, a crucial aspect often overlooked by governments in Pakistan and other developing countries. He called for concerted efforts, including training officials and managing investor expectations, to unlock capital for climate action agendas.

Dr. Aman Ullah, Joint Chief Economist, Planning and Development Board, Government of Punjab, Lahore

Dr. Amanullah focused on domestic issues in climate financing. He emphasized the need for more efforts and preparation by revenue collection agencies to tap into resources from their own sources. The development budget for the Punjab government last year was 700 billion rupees, with numerous schemes to meet targets by 2030. Dr. Amanullah highlighted the importance of having a climate finance unit at the provincial level, similar to the one in the federal ministry of climate change.

The speaker discussed the challenges faced in applying for the Green Climate Fund, citing the need for accreditation for the Planning and Development Board. He stressed the necessity of climate finance units in key ministries for a deep understanding of climate financing, addressing the existing capacity issues. He touched upon the financing structure, including development programs, development partners like the World Bank, ADB, and Public Private Partnerships. Despite contributing significantly to the GDP, Punjab faced limitations and required capacity building for understanding climate finance issues.

Dr. Amanullah mentioned the formulation of an innovative financing strategy, aligning with opportunities mentioned in the loss and damage fund study. He highlighted various initiatives in renewable energy, reforestation, and energy efficiency programs. However, challenges in implementation, especially in climate-resilient agriculture, were acknowledged due to limited finances. Access to international climate funds was deemed crucial, and Dr. Amanullah emphasized the need to address capacity-building requirements for applying to these funds. He candidly expressed the challenges and stringent requirements associated with applying for climate financing.

Mr. Mohsin Chandna, DG Debt, Ministry of Finance, Government of Pakistan

Mr. Mohsin Chandna discussed the relationship between debt and the accumulation of past fiscal deficits. He highlighted that the region, with the exception of the 2008 financial crisis, had fiscal deficits below 4%. However, Pakistan consistently hovered around 6%, reaching its best at 4.5% in 2016. He emphasized that continuing to incur high fiscal deficits would lead to an increase in debt. During the last fiscal year and a half, global interest rates rose, impacting Pakistan. Teaching a course on contemporary issues in global economics in January 2022, Mr. Chandna noted the excitement around the end of tapering, the start of higher interest rates, and balance sheet normalization. He mentioned the rising yields on various US Treasury bonds, even reaching 4.5%

on the 30-year bond. Attributing the increase in interest rates in Pakistan to floods, Mr. Chandna compared the situation to the 2010 floods when global interest rates were subzero. In 2022, with global interest rates on the rise and floods contributing to food inflation, he observed that interest rates were subsiding. He anticipated a decline in interest rates, expecting fiscal space by October 30 or December, providing room for rates to go down.

Regarding private finance, Mr. Chandna cautioned against assuming that an increase in the nominal GDP would automatically lead to increased capacity. He explained that maintaining the same debt-to-GDP ratio wouldn't happen simply because of the growth in nominal values. Despite the challenges, he expressed confidence in the State Bank's effective injection of liquidity into the market and reassured that there was no reason to panic, as the market remained comfortable.

Mr. Muhammad Sajjad Moghal, CEO, Classical International Trading, Lahore

Mr. Sajjad Moghal reflected on the current state of the local capital market, particularly in terms of the dollar denomination. The market had witnessed higher returns compared to those offered by the US Treasury, signaling the resurgence of a significant dollar inflow. This influx of funds, however, came with a shift in dynamics, as the era of easily accessible money at minimal interest rates seemed to be a thing of the past.

As a private investor, He observed the investment behavior on a global scale, taking note of the attractive returns offered elsewhere. The allure of a minimum 4% return on dollars, and even higher percentages in the expansive US market, presented a compelling case for investment in more stable economies. This, combined with the devaluation of the local currency, geopolitical risks, and other uncertainties, added layers of complexity to the investment landscape.

Moghal highlighted the changing landscape of international climate financing. He emphasized the increasing challenges in securing funding due to rising risks and evolving economic conditions. The impact of COVID-19-induced overspending by major economies had further strained the availability of funds for climate initiatives.Acknowledging the underfunding of multilateral institutions like the World Bank, IMF, and UN, pointing out that even with adequate funding, there were structural issues in their approach to disbursing funds. He argued that the flow of money was inherently directed towards the top economies, such as the United States, which had already integrated climate financing into private sector operations.

Discussing the local scenario, Moghal commended the initiative of the largest commercial bank, HBL, which committed a substantial amount to green energy projects. He stressed the need for innovative financing approaches, citing the potential of the voluntary carbon market and the success stories of countries like China in mobilizing funds through compliance with environmental standards.

Additionally, addressing the myopic perspective on international financing, Moghal urged a shift in focus from seeking grants and concessional funds to embracing environmental compliance as a prerequisite for financial support. He emphasized the importance of nurturing the banking sector's understanding of climate finance and encouraged the exploration of local sources for investment.

In concluding remarks, Moghal expressed optimism about Pakistan's ability to navigate the challenges posed by climate change. He identified private sector investment, particularly in compliance-driven areas, the export sector, and the influence of energy pricing as key drivers for sustainable development. Despite the hurdles, he urged stakeholders not to lose hope, emphasizing the resilience of the country.

Mr. Ahmad Ammar Yassar, Chief of Party PPSE, UNIDO, Islamabad

In his reflections on the National Determined Contributions (NDC) and Pakistan's commitment to the global community, Mr. Ahmed Ammar Yasser initially noted the 30% renewable energy target in the country's portfolio. He highlighted that, even at that time, Pakistan was already producing more than 30% renewable energy, specifically through the private sector's import of 2.4 gigawatts of solar panels. This significant investment, mobilized from private equity, amounted to approximately 1 billion US dollars for the solarization of households and industries.

Yasser emphasized the need to acknowledge and account for the ongoing efforts within the country. Despite recognizing the necessity for improvement, he argued that substantial work had been undertaken in the right direction, which often went unnoticed.

Currently involved in a project focused on mobilizing finance for clean energy projects, Yasser delved into the topic of international climate finance. He expressed skepticism about the common perception that grant opportunities and concessional financing were readily available. According to his research, the total amount being mobilized for climate finance globally was around 630 to 640 billion US dollars annually. However, only 65% of this was concessional finance, with a mere 20 billion US dollars designated as grant money. The rest constituted commercial financing seeking market-based returns.

Yasser pointed out the necessity for Pakistan to develop projects that ensure market returns, particularly in the areas of mitigation, such as renewable energy, circularity, water resource management, and agriculture. He foresaw the need for blended finance to address opportunities that may not yield market-based returns. Yasser advocated for the creation of instruments for credit enhancement and risk abatement, citing a deficiency in such mechanisms in Pakistan.

Discussing the goal of having 30% electric vehicles (EVs) on the road, as outlined in the NDCs, Yasser emphasized the importance of leveraging existing expenditures. He noted that the investment cost for achieving this target was 4.5 billion US dollars but highlighted that Pakistan already spent 3.2 billion dollars annually on petrol for motorbikes alone. He urged the exploration of opportunities to redirect existing expenditures toward climate-friendly initiatives.

Yasser called for a more introspective approach by development agencies, including the World Bank, to identify opportunities within Pakistan for mobilizing domestic resources. He stressed the need for Pakistan to build "A" class organizations in the private sector, focusing on corporate governance culture that attracts global commercial investors. Additionally, he underscored the importance of an improved legal and institutional framework to ensure policy continuity and attract foreign investment.

In conclusion, Yasser urged a shift in perspective regarding international climate finance, viewing it as a leverage mechanism to mobilize domestic resources rather than solely relying on grants and equity. He emphasized the need for transparency in reporting federal-level expenditures related to climate activities and encouraged the development of domestic capacity to fulfill climate commitments through improved corporate governance. Finally, he questioned the current structure of the carbon credit markets, proposing the creation of a fund structured around loss and damage to address issues of carbon credit distribution.

Mr. Bilal Anwar, CEO, NDRMF, Government of Pakistan

Mr. Bilal Anwar addressed the issue of lack of coordination and effective implementation of climate-related actions in Pakistan. He pointed out the country's historical challenge in attracting climate finance, noting that significant funds tend to be mobilized only in the aftermath of major disasters like floods. He emphasized Pakistan's role in resilience building and disaster risk financing, acknowledging some progress in these areas.

Anwar delved into the critical question of what makes a project "bankable" in the context of international financing for climate and green initiatives. He expressed frustration over the lack of a clear answer to this question and raised concerns about estimating the actual financing needs. Highlighting the substantial requirement of around 2.5 trillion dollars until 2030, he identified deep-rooted institutional and structural issues in Pakistan that have yet to be addressed, Acknowledging the nation's unattractiveness for climate finance and stressed the importance of addressing internal challenges to become more appealing to international funding. He posed a specific question regarding the carbon intensity of industrial processes in Pakistan against productivity, hinting at potential discrepancies that may not be favorable in international forums.

Despite these challenges, Anwar pointed out significant potential for mitigation efforts, which could come in both concessional and investment formats. He advocated for a more focused approach to tapping into this potential. He mentioned ongoing efforts at the National Disaster Risk

Management Fund (NDRMF) to work with the industry, create awareness on carbon markets, and engage in similar initiatives.

In summary, Mr. Bilal Anwar highlighted the need for addressing internal challenges, improving the attractiveness of Pakistan for climate finance, and exploring the potential for mitigation efforts in both concessional and investment formats.

Mr. Syed Haider Shah, Additional Secretary UN, MOFA, GOP, Islamabad

Syed Haider Shah focused on the upcoming COP 28 and the establishment of the Loss and Damage fund, highlighting Pakistan's role as the chair of G77 along with China in shaping this initiative. He outlined key considerations for the fund, emphasizing its role for vulnerable countries, systemic response to climate loss and damage, and the debate between grants and loans.

Stressing the importance of aligning eligibility criteria with existing UNFCCC and Paris Agreement frameworks, He cautioned against creating sub-funds that could earmark funds for specific activities at the expense of broader climate-related projects. He insisted that the fund must be driven by the parties involved and cover various climate exigencies, not just immediate events but also slow-onset events.

Expanding on the broader discussion around COP 28 and climate change awareness, Mr. Shah expressed concern about lapsing into esoteric discussions that might not resonate with the general public. He identified three major issues for consideration: the source, need, and management of funding; the actions of individuals, industry, and governments; and the effectiveness of funding for the climate change discourse.

Mr. Shah acknowledged the need for practical actions by individuals and collectives, emphasizing that many policies labeled as "green" are driven more by profit motives and economic considerations than environmental concerns. He highlighted the challenge of ensuring genuine commitment to green initiatives rather than mere box-ticking exercises.

In a reflection, he noted the inherent challenges in addressing climate change within existing legal and moral frameworks. He critiqued the passing of responsibility between developed and developing countries and individuals, urging a more realistic and collective approach. He cautioned against compromising with nature and stressed the need for humanity to own up to the shared responsibility for the environment.

Recommendations:

The below policy recommendations aim to address the challenges discussed by the participants and pave the way for Pakistan to benefit more effectively from international climate finance. They emphasize a multi-faceted approach, including financial diversification, institutional improvements, and awareness-building, and targeted mitigation efforts.

Key Policy Recommendations from the Session

- Policymakers should work towards establishing a comprehensive framework for loss and damage that addresses the complexities of the issue. This should include clear governance structures, transparent funding mechanisms, and well-defined criteria for accessing the fund. Additionally, addressing the question of responsibility—whether attributed to governance or climate change—should be a focal point.
- Policymakers should prioritize infrastructure projects, particularly in regions vulnerable to extreme weather events, to enhance resilience and reduce vulnerabilities.
- Policymakers should challenge and correct misleading characterizations of countries, such as the notion of Pakistan as a frontier market. This is crucial for fostering a more accurate understanding of a country's economic situation and attracting appropriate investment.
- Policymakers in countries facing financial crises, like Pakistan, should focus on sustainable debt management strategies to free up resources for essential development objectives. This includes exploring options to reduce debt servicing burdens and identifying alternative sources of funding.
- In response to declining capital formation and skepticism about the private sector's role, policymakers should consider diversifying investment strategies. This may involve revisiting the advice from international financial institutions like the IMF and World Bank, exploring public investment options, and ensuring that profits contribute to productive activities rather than shareholder payouts.
- Develop strategies to ensure debt sustainability, considering historical fiscal deficits and their impact on debt accumulation. Implement measures to address high fiscal deficits and prevent excessive reliance on debt.
- Dr. Javaid's criticism of the lack of efficient project design highlights the importance of effective risk management in public-private partnerships. Policymakers should prioritize comprehensive risk assessment and management strategies to attract investors and ensure successful implementation of climate action projects.
- Policymakers should actively promote investments that contribute to climate resilience, emphasizing the importance of directing profits towards climate-related initiatives and productive equipment. This approach aligns with the imperative to address the challenges posed by climate finance effectively.
- Recognize the need for concerted efforts, including training officials, to overcome challenges in engaging international and local investors. Policymakers should invest in

capacity-building programs to enhance the skills of government officials involved in climate action agendas.

- Conduct regular assessments of the economic landscape, taking into account both domestic and global factors. Use these assessments to inform monetary and fiscal policies, ensuring a proactive response to changing economic conditions.
- Conduct comprehensive risk assessments for natural disasters, like floods, and their potential impact on interest rates and inflation. Develop contingency plans to address the economic consequences of such events.
- Develop a clear and effective communication strategy to convey economic policies, risks, and expectations to the public and investors. Transparency in communication helps in building trust and understanding in the market.
- Dr. Nadeem Javaid's advocacy for including a chapter on long-term resilience in the 4RF strategy highlights the importance of integrating resilience measures into disaster recovery frameworks. Policymakers should prioritize long-term infrastructure resilience to better address future catastrophes.
- Develop and implement strategies to enhance the preparedness of revenue collection agencies to tap into domestic resources for climate financing. This may involve capacity-building initiatives and the establishment of dedicated units for climate finance at the provincial level.
- Implement the establishment of climate finance units at the provincial level, mirroring the structure of the federal ministry of climate change. These units can enhance local understanding and capacity to address climate financing issues effectively.
- Streamline and expedite the accreditation process for entities like the Planning and Development Board to access the Green Climate Fund. Address bureaucratic challenges to ensure efficient utilization of available climate finance resources.
- Encourage diversification of financing sources beyond relying solely on international climate finance. Foster an environment that promotes private sector investment and mobilization of domestic resources for climate-related projects.
- Strengthen corporate governance practices within the private sector to attract global commercial investors. Improve legal and institutional frameworks to ensure policy continuity, legal clarity, and a conducive environment for foreign investment.
- Promote the use of blended finance mechanisms to address opportunities that may not yield market-based returns. Develop instruments for credit enhancement and risk abatement to encourage private sector participation in climate-related projects.
- Explore opportunities to redirect existing expenditures towards climate-friendly initiatives. Identify areas where current spending aligns with climate goals and leverage these resources for sustainable projects.

- Implement initiatives to raise awareness about climate change and the benefits of green projects among the public, private sector, and government officials. Foster a better understanding of the economic and environmental advantages of sustainable practices.
- Establish transparent reporting mechanisms for climate-related expenditures at the federal level. Implement climate public expenditure and institutional reviews to account for all expenditures related to climate activities, showcasing the commitment of Pakistan to climate goals.
- Emphasize resilience building and disaster risk financing in national climate policies. Align funding priorities with the needs of vulnerable countries, ensuring a systemic response to global climate loss and damage caused by climate change.
- Conduct a comprehensive assessment of the carbon intensity of industrial processes in Pakistan against productivity. Use the findings to inform national strategies for reducing carbon emissions and improving efficiency in industrial operations.
- Actively pursue mitigation opportunities, both in concessional and investment formats. Collaborate with industries to create awareness of carbon markets and incentivize environmentally friendly practices.
- Actively participate in global forums, such as COP, to advocate for fair climate financing. Collaborate with international partners to address issues of grants versus loans and ensure alignment of eligibility criteria with existing frameworks within the UNFCCC and Paris Agreement.