

Synergizing the Climate Ambition

A Blueprint for Achieving NDCs through Private Sector Engagement in Pakistan





WHITE PAPER FROM THE PCC22

Synergizing the Climate Ambition:

A Blueprint for Achieving NDCs through Private Sector Engagement in Pakistan

The Overseas Investors Chamber of Commerce and Industry (OICCI) is the oldest and largest chamber of the country in terms of economic contributions. The Chamber represents over 200 foreign investors in Pakistan, including 40 Fortune 500 companies. OICCI members have invested more than \$21 billion since 2012, paid one-third of the total taxes collected in 2021 and contributed over Rs. 11 billion in CSR activities last year. The Chamber is also the first port of call for foreign investors interested in Pakistan as an investment destination.

Learn more at www.oicci.org

Disclaimer

This paper represents the opinions of the authors, and is the product of professional research and discussions in PCC' 22. It is not meant to represent the position or opinions of the OICCI or its Members.

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Glossary

ACGR Annual Compound Growth Rate

AMS Announced Measures Scenario

BAU Business As Usual

CO2 eq Carbon dioxide equivalent
COP26 26th Conference of Parties

Decarbonizing The process of moving away from energy systems that produce

carbon dioxide (CO₂) and other greenhouse gas emissions

GHG Green House Gas

GoP Government of Pakistan

IEA International Energy Agency
IPPs Independent Power Producers
LEAP Low Emission Analysis Platform

Mt Million tonnes

NDC Nationally Determined Contribution

NEECA National Energy Efficiency and Conservation Authority

Net ZeroA state in which the greenhouse gases going into the atmosphere

are balanced by removal out of the atmosphere.

NZS Net Zero Scenario

OECD Organization for Economic Cooperation and Development
OICCI Overseas Investors' Chamber of Commerce and Industry

PCC'22 Pakistan Climate Conference'22

PPA Proposed Plan of Action

RLNG Regassified Liquefied Natural Gas
SBTI Science Based Targets initiative

Scope 1 Emissions Direct emissions from company-owned and controlled resources

Scope 2 Emissions Indirect emissions from the generation of purchased energy, from a

utility provider.

Scope 3 All indirect emissions that occur in the value chain of a company,

including both upstream and downstream emissions.

SDPI Sustainable Development Policy Institute

SF6 Sulfur Hexafluoride

VRE Variable Renewable Energy Resources

VOC Volatile Organic Compounds
WWF World Wide Fund for Nature



Introduction

As the frequency of climate-related disasters increases, it is becoming evident that Pakistan is at the front line of climate impact. Since mid-June 2022, heatwaves and monsoon rains have adversely impacted human lives, infrastructure, and livestock across Pakistan, emphasizing the need for all stakeholders to step up our efforts to combat climate change.

Most countries around the world have made commitments towards keeping global warming below 1.5°C through the ambition of achieving Net Zero by 2050. Pakistan too is a signatory for this ambition under the Paris Agreement. While Pakistan's greenhouse gas (GHG) emissions make up less than 1% of the global total, the country was listed as the fifth most climate-vulnerable country by the Global Climate Risk Index, 2020.

Pakistan is at a crucial juncture and must develop an action plan to help the country meet its global climate commitments whilst simultaneously ensuring the sustainability of the economy. It is also imperative that corporate leaders come forward as a collective force to tackle climate change through coordinated actions, financial commitments, and compliance with regulatory frameworks.

The members of the Overseas Investors Chamber of Commerce and Industry (OICCI), the collective body of over 200 top foreign investors in Pakistan, have always been at the forefront of delivering positive socio-economic impact for the country. In 2021 alone, the total corporate social responsibility contribution by OICCI members was PKR 11 billion, which included PKR 1.5 billion for the protection of the environment. OICCI members are committed towards remaining ahead of the curve in reducing their climate impact and achieving Net Zero before the 2050 deadline. The OICCI is also committed to leading enhanced public-private engagement in combating the threat posed by climate change.

With this ambition in mind, the OICCI organized the first *Pakistan Climate Conference* in March 2022. This Conference brought together business leaders, sustainability activists & enthusiasts, as well as government partners from around the world. The Conference helped identify ways to reduce emissions at the industrial level, reduce waste at source, ensure fair usage of water and highlight the need for scientific tracking of environmental metrics to inform better decision making for climate action in Pakistan.

This white paper, titled 'Synergizing the **Climate Ambition: A Blueprint for Achieving NDCs through Private Sector Engagement** in Pakistan' highlights key insights from the Conference, including the private sector's commitments towards Nationally Determined Contributions (NDC) implementation, the barriers faced in implementation and finally presents an outline for action to boost public-private investment in climate change adaptation and resilience. Along with the private sector's contribution, it is extremely important that the government supports the achievement of Net Zero through the right policies and regulations that support private sector involvement and the mobilization of financial resources needed for this effort.

Additionally, the white paper showcases the best practices from the industry highlighting the commitment of our members to promote positive climate actions. The OICCI aims to streamline and harmonize these efforts, promote capacity building of our members, and the larger industry, by sharing opportunities and risks, and stimulate collaborative effort across Pakistan.

We are committed to working closely with the government, business leaders, climate activists, and the next generation of Pakistan to create pathways to achieve a sustainable future for Pakistan!

Executive Summary

Pakistan's commitment to reduce emissions to meet its Net Zero targets is an ambitious climate commitment. Hence, it will require collective action from all key stakeholders including government. private sector, academia, donors, and community members to tackle challenge through coordinated actions, behavioral change, financial commitments, and compliance with regulatory frameworks.

To combat the threat posed by climate change, Pakistan presented its updated Nationally Determined Contributions (NDCs) targets at the 26th Conference of Parties (COP26) held in November 2021. The Government of Pakistan (GoP) has set a target of an overall 50% emissions reduction by 2030 from a 2015 baseline, as compared to a 20% proposed reduction in the 2016 NDCs over the same period. This 50% target equates to an estimated reduction of about 800 million tonnes of carbon dioxide (CO2) by 2030.

Under Pakistan's NDCs, about 15% of the total proposed emissions reduction is unconditional, i.e., it is something that the Government of Pakistan (GoP) has committed to in the absence of foreign aid. The rest of the 35% target is to be achieved subject to conditional support from bilateral and multilateral sources. The main priorities have been segregated with respect to the Mitigation and Adaptation measures that the GoP has promised to undertake.

Agriculture and energy continue to be Pakistan's largest sectoral emissions sources, with industrial processes, land use change and waste following closely behind. The diagram on page 8 indicates the growth of sectoral share of total greenhouse gas (GHG) emissions by year 2030 under a business-as-usual (BAU) scenario.

Pakistan has the potential to reduce its carbon emissions up to 20% by decarbonizing its transport and agricultural sector, closely followed by its manufacturing industrial processes. Pakistan can achieve this by employing smart and environmentally compatible technologies in the agricultural sector.

Many sectors contributing significant GHG emissions must be fundamentally redesigned to achieve the global 1.5°C target. Hence, industries will require transforming business models that could open new revenue streams and drive innovation. However, the industry partners cannot work alone. They need support from the government, public agencies, business councils, Chambers of Commerce and civil society movements to effect real change.

Additionally, by focusing on the scope 1, 2, and 3 emissions (which includes indirect upstream and downstream emissions), the private sector can take the lead in driving the effort to combat climate change. By controlling these emissions, as well as by providing a mechanism to the suppliers for reducing emissions to suppliers across their value chain, the private sector can help Pakistan achieve its NDC targets. Therefore, the need for public-private partnerships and alliances becomes even more important.

Despite the renewed commitments made at COP26 towards delivery on the climate finance target, a major financing gap still exists with yearly adaptation costs in developing countries including Pakistan expected to amount between US\$155 to US\$330 billion by 2030 as per estimates of the UNEP 2021 Adaptation Gap Report. As the need for financing to enable countries to meet their climate commitments increases, simultaneously efforts to diversify financing instruments and sources must remain a priority.

With the revised NDC submissions, governments have an opportunity to work with, and strengthen, private sector contribution to NDC implementation. The private sector can play a crucial role in supporting response to climate change by mobilising investment and implementing mitigation and adaptation actions.

Climate policies must incentivize the private sector to invest more in nature-based solutions, climate friendly practices, and adopt a sustainable consumption and production pattern. Whereas, as a pre-requisite to foreign direct investment (FDI), investors will also have stringent environment-related reporting standard requirements from policy makers.

Overseas Investors Chamber The Commerce and Industry (OICCI) is the largest forum for overseas corporations in Pakistan with over 200 member companies, and therefore, it provides an important platform for coordinating the efforts of private companies enhanced public-private leading to engagement in combating the threat posed by climate change. In 2021 alone, the total corporate social responsibility contribution was PKR 11 billion, of which PKR 1.5 billion was focused on protecting the environment.

OICCI launched the inaugural Pakistan Climate Conference in March 2022, aimed at engaging the private sector, including foreign speakers with global climate impact expertise, in discussions relating to financing, supporting, and implementing mitigation and adaptation actions to achieve climate targets by 2030 and beyond. Much remains to be learned about how to unlock and enable private capital to help finance national and local adaptation priorities, and how to build the business case for adaptation.

For the private sector, there are several barriers, explained in detail on page 15, to investing in climate risk management, which explains the limited amount of private capital currently flowing towards outcomes that are deemed to support or promote resilience to climate change induced risks.

The OICCI is driving the climate ambition through its members. Additionally, the OICCI is aiming to engage the remaining industry to provide a mechanism that offers them the opportunity to work with each other. This roadmap aims at harmonizing the efforts, sharing learnings and risks among OICCI members, and leveraging on the existing opportunity of synergizing the effort to mobilize the sustainability work across all of Pakistan's industrial sector.

The monitoring and evaluation mechanism, presented on page 23, will help to consolidate data and efforts for promoting collaboration amongst OICCI members, as well as support the industry and government stakeholders to streamline the projection and demonstration of their work.

A key outcome proposed by OICCI through this white paper is the recommendation to the Government of Pakistan to adopt three primary resolutions to mobilize climate action amongst stakeholders across the country:

- Set up a Climate Change and Corporate Implementation Task Force
- Establish a **Steering Committee on**Climate Related Financial Disclosures
- Develop a Pakistan Climate Knowledge Sharing Initiative

Pakistan's Climate Commitments

Delivering Ambitious Climate Actions

The urgency of the climate crisis necessitates greater speed in climate action—to decarbonize economies and significantly step-up adaptation and resilience. Pakistan is already experiencing the devastating impacts of climate change, while greenhouse gas emissions continue to grow.

While Pakistan's greenhouse gas (GHG) emissions make up less than 1% of the global total, the country was listed at fifth amongst the most climate-vulnerable countries per the

Global Climate Risk Index, 2020¹. The report estimated economic losses of upwards of US\$ 3.79 billion and estimated the loss of nearly 10,000 lives to climate related disasters over a 20-year period from 1998 to 2018. However, according to early estimates by United Nations the monsoon floods of 2022 have caused an economic loss of \$30 billion. Clearly, the country faces a disproportionate impact from global warming, calling for urgent action, both in terms of ambitious adaptation as well as mitigation measures.

5th most climate vulnerable country \$3.79 Billion economic losses in 20 years 10,000 deaths due to climate disasters

To combat the threat posed by climate change, Pakistan presented its updated Nationally Determined Contributions (NDCs) targets at the 26th Conference of Parties (COP26) held in November 2021. NDCs are the operational mechanism at the heart of the Paris Agreement and are critical to its success. Through the NDCs, Pakistan has outlined its commitments towards greenhouse gas emissions reduction targets, setting priority policies and measures, and undertaking actions to build resilience and adapt to climate change.

Pakistan's commitment to reduce the emissions to curb the increase in global temperatures to a maximum of 1.5-2 degrees Celsius by 2050 from pre-industrial levels is an ambitious climate commitment. Hence, it will require collective action from all key stakeholders including government, private sector, academia, donors, and community members, etc. to tackle these wicked problems through coordinated actions, behavioral change, financial commitments, and compliance with regulatory frameworks.

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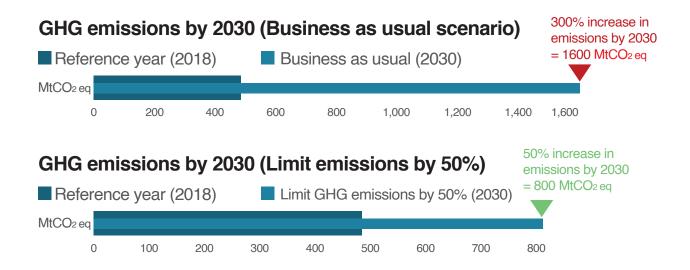
No single actor alone can be successful in preventing or managing them (global emergencies). We need renewed collaboration efforts and shared innovation between the public and private sector. Large businesses need to step up and deliver

Bill Winters, CEO, Standard Chartered at the Pakistan Climate Conference 2022

New Priorities and Challenges Arise Amid Success

In Pakistan's updated NDCs (2021)², the Government of Pakistan (GoP) has set a target of an overall 50% emissions reduction by 2030 from a 2015 baseline as compared to a 20% proposed reduction in the 2016 NDCs over the same period. This 50% target equates to an estimated reduction of about 800 million tonnes(Mt) of carbon dioxide (CO₂) eq. by 2030.

Under Pakistan's NDCs, the overall GHG emissions³ in the Business-as-usual scenarios are expected to increase beyond 1600 million tonnes of CO₂ eq. This represents a percentage increase of almost 300% as compared to its value in 2018 i.e., 485 million tonnes CO₂ eq.



Defined Pathways to Achieve NDCs by Pakistan

Under Pakistan's NDCs, about 15% of the total proposed emissions reduction is unconditional, i.e., it is something that the GoP has committed to in the absence of foreign aid. The rest of 35% is to be achieved subject to conditional support from bilateral and multilateral sources. The main priorities have been segregated with respect to mitigation and adaptation measures that the GoP has promised to undertake.

Mitigation Measures:

To reach the target, Pakistan aims to shift to 60% renewable energy, and 30% electric vehicles by 2030 and ban coal imports as well

as expand nature-based solutions. The updated NDC has also added new sectors and new gases for enhanced contributions detailed on page 11-12.

Adaptation Measures:

Addressing adaptation needs to focus on the loss and damage component in several sectors, including:

1. Agriculture

- 5. Health
- 2. Biodiversity and Ecosystem
- 6. Waste
- 3. Disaster Risk Management
- 7. Water

4. Forestry

^{2.} UNFCC. Nationally Determined Contributions Registry (2022)

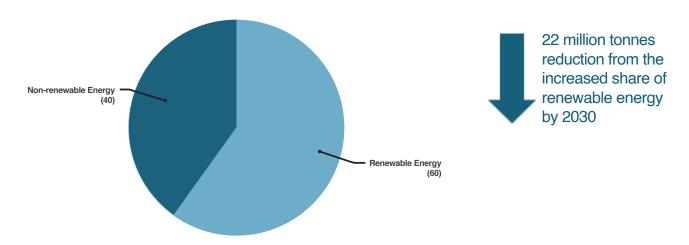
^{3.} Our World in Data. CO2 and Greenhouse Gas Emissions (2022)

Reducing Emissions by Investing in Energy Transition

The GoP aims to increase the share of renewable energy in the total energy mix to 60% by 2030⁴, while the aim is for electric cars to capture 30% of the car market in Pakistan by 2030. These two initiatives are estimated to lead

to a reduction of 46 million tonnes of CO₂ eq. by 2030 (22 million tonnes reduction from the increased share of renewable energy, and a further 24 million tonnes reduction from the increased share of electric cars).

Sources of Energy by 2030



In terms of conditional financing, Pakistan's energy transition is estimated to cost about \$101 billion by 2030, and \$166 billion in total by 2040. Due to the huge cost of external financing, there is a need for the GoP to take all relevant stakeholders on board to develop a clear pathway for meeting the targets. Resultantly, the private sector has a huge role to play in helping Pakistan meet its NDC commitments. The initial signs have been positive. To meet the electricity needs of people living without access to the grid, a 4-year campaign was recently initiated by the GoP to attract investment from the private sector, including investment to develop and install 1200 megawatts of wind turbines in underdeveloped areas. Such initiatives underscore the need for, and the potential of, engaging with the private sector.

Climate commitments must be backed by more action

To further the action on climate change in Pakistan, the Pakistan Climate Conference

organized by Overseas Investors Chamber of Commerce & Industry (OICCI) was built on learnings from COP26 to identify and implement efforts needed to reduce climate impact in Pakistan. As a result of the Conference, many stakeholders including corporate leaders, sustainability champions, enthusiasts, policy makers and activists collectively aimed to:

- Recognize that diversity in private sector engagement can be harnessed for progress
- 2. Undertake action to reduce sectoral emissions
- 3. Support entrepreneurs who are working for sustainable development

The conference also set the foundation for an action plan that will help Pakistan's private sector meet its global climate commitments and ensure the sustainability of Pakistan's economy.

Rebooting Sectoral Emissions by 2030

New Goals Require New Strategies

Agriculture and energy continue to be Pakistan's largest sectoral emissions sources, with industrial processes, land use change and waste following closely behind. The following diagram indicates the growth of sectoral share of total GHG emissions by year 2030 under business-as-usual (BAU) scenario.

Sectoral Share of Total GHG Emissions in Pakistan (BAU Scenario)⁵



Pakistan has the potential to reduce its carbon emissions up to 20% by decarbonizing its transport and agricultural sector, closely followed by its manufacturing industrial processes. By employing smart and environmentally compatible technologies in the agricultural sector, Pakistan can significantly reduce its carbon emissions profile.

Embedding Circular Practices at Sector Level

Many sectors contributing significantly in the GHG emissions must be fundamentally redesigned to achieve global 1.5°C target. Hence, industries will require transforming business models that could open up new revenue streams and drive innovation. However, the industry partners cannot work alone. They need support from the government, public agencies, business councils, Chambers of Commerce, and civil society movements to effect real change.

Additionally, by focusing on the scope 1, 2, and 3 emissions (which includes indirect upstream and downstream emissions), the private sector can take the lead in driving the effort to combat climate change. By controlling their emissions, as well as by providing a mechanism for reducing emissions to suppliers across their value chain, the private sector can help Pakistan achieve its NDC targets. Therefore, the need for public-private partnerships and alliances becomes even more important.

The urgent and rapid scaling-up of sustainable actions is essential if we are to achieve Pakistan's net-zero goals. It's important that we remain transparent about the emissions of our respective sectors and, where possible, take ownership of the climate crisis

Abdul Razak Dawood, Former Advisor to the PM on Commerce & Investment

^{5.} Calculations by SDPI based on Intended Nationally Determined Contributions (INDCs) (2016)

What can be done at an industry level to reduce sectoral emissions?

Sector Level GHG Emissions



Industry Level GHG Emissions
Contributing to industry Level GHG Emissions



Scope 1

Direct Emissions
Owned Assets

Facilities
Equipment
Vehicles
Onsite landfills

Scope 2 Indirect Emissions Energy Purchased

Purchased Electricity Purchased Heating Purchased Cooling Scope 3
All other Indirect
Emissions
3rd Party

Transportation Waste Energy & fuel



Reduce industry Level GHG Emissions

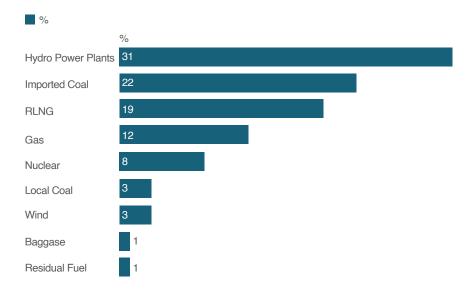
Actions⁶ to be taken by industry to contribute to reduction of GHG emissions

| | 1 Reduce your own emissions | 2 Reduce your value chain emissions | 3 Integrate climate in business strategy | 4 Influence climate action at sector level |
|-------------------------|---|---|---|---|
| Set target and strategy | Target net zero and a first halving of emissions in less than 10 years | Target net zero and a first halving of emissions in less than 10 years | Integrate positive climate impact in vision and mission, value proposition, products, services and R&D roadmaps | Champion sector's contribution to 1.5°C ambition |
| Implement | Prioritise, plan and reduce scope 1 and 2 emissions | Prioritise, plan and reduce scope 3 emissions | Shift to circular business models and drive protocols/ services which help customers avoid emissions | Accelerate climate action by working with other industry partners within your sector and beyond |
| Monitor | Assess and analyze scope 1 and 2 emissions & results of reduction and disclose those results publicly | Assess and analyze scope 3 emissions & results of reduction and disclose those results publicly | Measure positive and negative climate effects of your solutions portfolio, disclose the information | Evaluate the impact of your societal influence and disclose the results publicly |

Deep Dive: Future scenario with NDC commitments of the Energy Sector

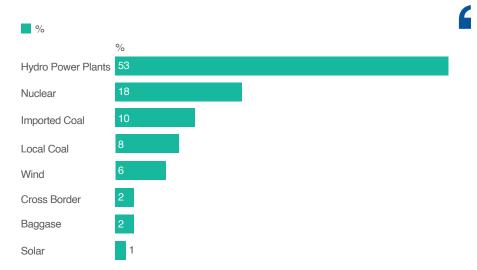
As of now,⁷ only the power sector has ambitious targets where the country aims to transition towards 60% of renewable energy by 2030. The current (2021) power generation mix of Pakistan is given below:

Power Generation Mix of Pakistan in 2021



The largest increase in the projected emissions is coming from the energy sector, whose share in total emissions are expected to increase from 45.9% in 2018 to 55.9% by 2030. Pakistan is expecting to transition from the current share (2021) of around 35% of clean energy to 62% by 2030. Even in a high demand scenario, this generation share from clean energy is expected to be around 54% by 2030. However, on one hand where the target is very ambitious, the expansion plan is dominated by hydro power⁸.

Power Generation Mix of Pakistan in 2030



Ultimately, for renewables as a future, and I think particularly for any country like Pakistan which is blessed with solar, a lot of wind, and the right climatic conditions, the benefits for

things like balance of payments are incredible.

Kazeem Khan, GM Asia Based Solutions Shell

^{7.} Indicative Generation Capacity Expansion Plan 2021.

^{8.} Indicative Generation Capacity Expansion Plan 2021

Given the historic landscape of hydro power development in Pakistan marked with time and cost over-runs, large scale hydro power development might not be the economic and environmental bargain one thinks it is for Pakistan. Variable Renewable Energy Resources (VRE) i.e., Solar and Wind are limited to only 7% in low-demand and 14% in a high-demand scenario. Still, given the current state of planning, the power sector has placed a complete moratorium on coal-based generation. Further, in a low-demand scenario, RLNG is also expected to sharply reduce from a current generation share of 19% to only 1% by 2025, and 0% by 2030. Residual Furnace Oil (RFO) has already been reduced to a low value of around 1-2% (2021) and there are no plans of further expansion.

Thinking beyond Power sector

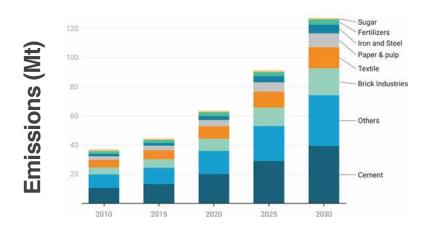
For deeper decarbonization and improvement in the energy sector⁹, Pakistan needs to think beyond the power sector. Multiple policy measures can be adopted in different demand side sectors to transition towards a green economy.

| | 1 | 2 | 3 | 4 |
|--------------------|--|---|--|--|
| Transport Sector | Fiscal policies such as tax relaxations and rebates can promote the deployment of Electric Vehicles (EV) in Pakistan as per the EV policy. Other advantages may range from priority access to waiver of different tolls and fees | To initiate the growth of EVs in Pakistan, the initial step is planning to build the infrastructure for EVs support and production industry | Before a market is built up, the government should provide relaxation for import tax of EVs as to change the public behavior | Reduction of battery prices will lower the market cost of EVs and hence research must be carried out within Pakistan to design the most optimal configuration for batteries and cars |
| Real Estate Sector | Energy demand consumption through both active and passive processes needs to be controlled | "Energy Conservation Building Codes" with a proper section of renewable integration in common households | Provide adequate green space for waste management systems | Solarization of different commercial buildings |
| Industrial Sector | Improving reliability and affordability of power to the industrial Consumer | Market liberalization reforms | Industries and SMEs can be subsidized to support the development of green products | Cheap power source will also improve financial viability of Pakistan's export sector since power is the basic commodity |

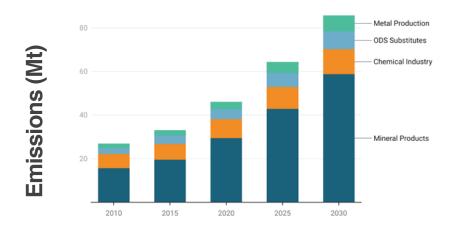
Deep Dive: Future scenario with NDC commitments of the Industrial Sector

The emissions from the industrial sector of Pakistan can be categorized into two divisions i.e. 1) Emissions per industrial sector and 2) Emissions per industrial process. The projected emissions (Mt) are shown below for both divisions until Year 2030.

Emissions per Industrial Sector (Mt)



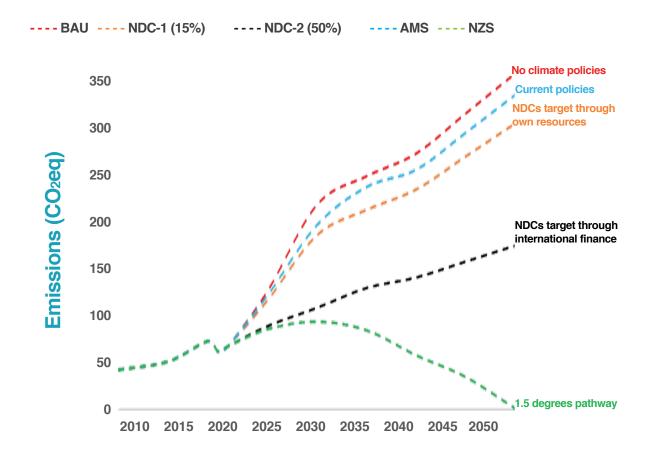
Emissions per Industrial Process (Mt)



A drop in emissions in 2020-21 depicts the impact of COVID-19. However, how this sector recovers in the post-COVID scenario would determine the future pathway of emissions. As apparent from the Announced Measures Scenario (AMS) the current interventions will barely reduce the emissions from their projected targets. As of now, only the power sector has ambitious targets where the country aims to transition towards 60% of renewable energy by 2030.

Based on a recent "Low Emission Analysis Platform (LEAP)" model designed by the Sustainable Development Policy Institute (SDPI), Islamabad, the growth of emissions under different scenarios is indicated including

BAU: Business-as-Usual; NDC-1: Nationally Determined Contributions through country's own resources; NDC-2: based on International Finance; AMS: Announced Measures Scenario; and NZS: Net Zero Scenario.



The growth/decline in total emissions of the industrial sector is not the same for all sub-sectors due to differences in their potential to curb those emissions. For instance, the cement sector has a larger potential to suppress those emissions due to a relatively larger number of available options.

By 2030, the larger share of suppressed emissions is due to an increase in energy efficiency. However, beyond 2030, innovative production and enabling infrastructure would be required. The public sector can accelerate this progress by reducing the risks associated with

the development of new technologies & adoption of mandatory emission reduction and energy efficiency policies. Significant work has been done by the National Energy Efficiency and Conservation Authority (NEECA) in this regard by building EE standards. Electrification of industrial processes and a shift from coal-based processes to natural gas has appeared to be an effective global practice. The net-zero figures of International Energy Agency (IEA) for a global transition indicate that a four-fold increase in renewable electricity is required from 2020-2030.

Engaging Business

Experience, Pitfalls & Successful Approaches

Despite the renewed commitments made at COP26 towards delivery on the climate finance target, a major financing gap still exists with yearly adaptation costs in developing countries, including Pakistan, expected to be between US\$155 to US\$330 billion by 2030, as per estimates of the UNEP 2021 Adaptation Gap Report. As the need for financing to enable countries to meet their climate commitments increases, simultaneously efforts to diversify financing instruments and sources must remain a priority.

With the revised NDC submissions, governments have an opportunity to work with and strengthen private sector contribution to NDC implementation. The private sector no doubt can play a crucial role in supporting

response to climate change by mobilising investment and implementing mitigation and adaptation actions.

Climate policies must incentivize the private sector to invest more in nature-based solutions, climate friendly practices. and adopt a sustainable consumption and production pattern. Whereas, as a pre-requisite to foreign direct investment (FDI), investors will also have environment-related standard requirements from the policy makers. Moreover, by focusing on the scope 1, 2, and 3 emissions (which includes indirect upstream and downstream emissions), the private sector can take the lead in driving the effort to combat climate change.

Enabling the Private Sector Potential in Meeting NDCs

The OICCI (Overseas Investors Chamber of Commerce and Industry) is the largest forum for overseas corporations in Pakistan with over 200 member companies, and therefore, it provides a very important platform for coordinating the efforts of private companies leading to enhanced public-private engagement in combating the threat posed by climate change. In 2021, the total corporate social responsibility contribution of OICCI member companies was PKR 11 billion, which benefited about 34 million direct beneficiaries across the country. Out of PKR 11 billion, PKR 1.5 billion was focused on protecting the environment.

OICCI organized the Pakistan Climate Conference 2022 that aimed to engage multiple stakeholders and initiate dialogue on how to achieve the 2030 climate targets. The outcome of the conference is summarized in this report, though much remains to be learned about how to unlock and enable private capital to help finance national and local adaptation priorities.



Companies and investors are faced with great uncertainty. The transition is underway, but its future speed and shape are deeply uncertain. The outcome will be determined by an intricate interplay of evolving societal preferences, company strategies, capital allocation, new technologies and government policies.

Alan Jope, CEO, Unilever

Challenges faced by the private sector in investing for climate risk management

For the private sector, there are several barriers to investing in climate risk management, which go some way in explaining the limited amount of private capital that is currently flowing towards outcomes that are deemed to support or

promote resilience to climate change. Some of the key constraints limiting the amount of private financing that is directed towards climate risk management practices are described below, both in general and how they affect specific actors. The following table shows barriers to investment in transitioning efforts for private sector¹⁰.

| Barrier | Private Firms |
|---|--|
| Insufficient Climate Data and Lack of Knowledge on Climate Change Risks | Lack of data and knowledge on climate risks limits investment in climate risk management due to uncertain risk/return assessments. |
| Perception of Resilience Building as Public Sector Responsibility | Prevailing ideology that climate risk management should be a publicly financed activity. |
| Weak Identification of Cost- Effective Adaptation Measures | Lack of technical tools available to identify cost- effective adaptation solutions to invest in. |
| Weak Financial Incentives to Fund Adaptation Measures | Difficulty in raising necessary collateral to offset uncertainties around climate change adaptation investments such as large upfront costs, lengthy payback periods and uncertain risk-reward profiles. Increased insurance costs or lack of insurance availability also leads to weak financial incentives for climate action. |
| Lack of Technical Capacity to Implement Adaptation Measures | Scarcity in available technical expertise for implementing climate risk management measures. |
| Lack of Effective Institutional Arrangements for Adaptation Planning | Obstacles to investing in adaptation include lack of public financial and policy de-risking. |
| Regulatory/political uncertainty | Political uncertainty can also impede the actions to be taken by private companies to further climate action work in Pakistan. |
| Operational Impact | Many SMEs or large organizations struggle with bandwidth challenges and cannot manage to operationalize sustainability related activities in the core business model. |

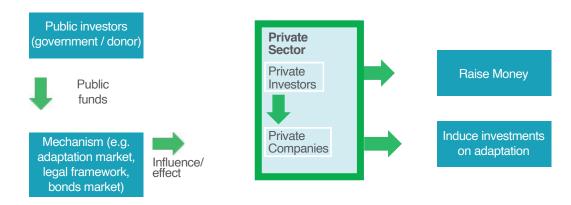
A blueprint for action to boost public-private investment in adaptation and resilience

The blueprint assesses private sectors potential to leverage finance to meet NDC targets as well as provide guidance to governments on ways to further encourage and facilitate the involvement of the sector in climate actions. Moreover, being able to effectively account for the financial flows

received from the private sector as well as general government spending on climate action is important both from a transparency standpoint and as an evidenced-based resource for mobilising additional finance.

Why engage in climate change adaptation?¹¹adapting to .. supporting climatecompliance climate change change adaptation Reducing climate Capitalizing on Regulations, change related Stakeholder's climate change business risks related business expectations opportunitiesthrough productsthrough finance and services Work, economy, livelihoods How can the public fund incentivize the private sector investments in adaptation?12

Use public funds to create mechanisms designed to either raise additional adaptation finance or increase private sector investments in adaptation. Some examples of indirect instruments include: enacting legislation that affects the behavior of private companies; or creating a bond market to raise finance for projects or governments in developing countries.



^{11.} Adapted from NDAGCF Indonesia

^{12.} Adapted from Climate change adaptation and the role of the private sector. CAN (2013)

How can OICCI support private sector actors in climate action?

Based on the blueprint mentioned earlier, OICCI has been steadily increasing private sector engagement to support a range of private sector actors, including Micro, Small & Medium Enterprises (MSMEs), value-chain stakeholders, and financial/capital providers. The different components of this approach involve technical assistance and partnership building to facilitate the implementation of policy and providing a platform for storytelling and sharing success and failures. Few such examples of member companies of OICCI's CSR initiatives for climate action can be seen below:



Over 20 companies from Pakistan have joined the United Nation's 'Race to Zero" campaign, committing to reach net zero by 2050 at the latest, and to short term targets to get there

Alok Sharma, President, COP26

Recognizing corporates as drivers for climate action in the sector¹³



Chevron Pakistan Lubricants (Pvt) Limited

Chevron believes the future of energy is lower carbon, and that energy is essential to achieving a more prosperous world. Chevron intends to leverage its strengths to deliver lower carbon energy to a growing world. They are focused on higher returns, lower carbon. Their differentiated energy transition strategy is to lower the carbon intensity of their operations and grow lower carbon businesses. Chevron Pakistan seeks to implement initiatives to support the company's climate change strategy, such as the reduction in the quantity of plastic used in the production of 0.7 litre lubricant bottles by approximately 20%. Their strategy is to combine their traditional oil and gas business with faster-growing, lower carbon businesses that leverage its capabilities, assets, and customer relationships.



Dawlance (Private) Limited

Dawlance has committed to approved science-based targets to reduce absolute Scope 1 and 2 GHG emissions by 30%, and the absolute Scope 3 emissions from the use of sold products by 15% by 2030, from a 2018 base year in line with the goals set by Arcelik. It is also the first Refrigerator Manufacturing Plant to shift to the use of R600a refrigerant. While successfully planting 5000 mangrove trees and 10,000 trees through partnership with WWF.



Engro Corporation Limited

Engro Corporation Limited, over the years, has invested in various initiatives to reduce emissions across its businesses. Most of these projects are related to use of renewable sources of energy, including solarization of 46% of telecom towers under Engro Enfrashare & 100% of warehouses at Engro Fertilizers and solar capacity installation at Engro Eximp Agriproducts, Engro Vopak & Elengy Terminals, & Engro Energy facilities.

Moreover, in October 2021, Engro Energy signed a Memorandum of Understanding with the Sindh Transmission and Dispatch Company and Directorate of Alternate Energy to establish a renewable energy park at Jhimpir that will provide electricity to industries within Port Qasim and Dhabeji. The initiative is expected to reduce electricity cost of industrial consumers and help the Government deliver on its commitment of increasing share of RE in the energy mix by 30% by 2030.

Another important effort to reduce carbon emissions is through improved process efficiency, which includes projects like feed gas enrichment at Engro Fertilizers, utilization of rice husk in boilers to generate steam at Engro Eximp Agriproducts, and projects such as High Temperature Direct Chlorination and Transfer Line Exchanger which, once completed, will bring further energy efficiencies and reduced carbon dioxide emissions at Engro Polymer & Chemicals. Alongside these, carbon offset through plantation is also being used to reduce our emissions – this includes the Thar Million Trees program, plantation of 500 hectares of mangroves and 1000 sq km of urban forest by Engro Vopak Terminal, and a 10-year commitment made between Engro and WWF Pakistan, Engro Foundation, and the Ministry of Climate Change (Pakistan) for a joint Forest Restoration Program to restore 50,000 acres of degraded forests and new plantations across Pakistan.

As a signatory to the WEF Stakeholder Capitalism Metrics, Engro continues to work towards reducing its carbon footprint by undertaking projects that help meet its sustainability objectives.



Indus Motor Company Limited

Indus Motor Company (IMC) is committed to managing the environmental footprint of its operations and value chain through the adoption of cleaner technologies, process efficiencies and sharing environmental management practices with the value chain partners. IMC is fully aligned with the "Toyota Environmental Challenge 2050", which strives to reduce the environmental burden attributed to automobiles to as close to zero as possible.

IMC believes there is good reason for global adoption of Hybrid powertrains and will be introducing the most efficient localized 4th Generation Hybrid Electric Vehicle to its customers in 2023, which will help reduce the carbon footprint of the vehicles. IMC has become Pakistan's first Company to install one of the largest 4.5 MW rating rooftop mounted Solar Photovoltaic (PV) plant and the largest Solar PV plant in Toyota Asia Pacific Region. In addition to this, a state-of-the-art waste-water treatment plant is installed at the plant. Water discharged from operations is treated to reduce the pollutant level to acceptable levels and stored in a 100,000 gallon capacity reservoir, which in turn is used for horticulture purposes.



Nestle Pakistan Limited

Nestlé Pakistan is using its scale and reach to help tackle climate change, transform its business and use its resources to inspire change. Its Sustainability Roadmap 2025, which builds on the work already undertaken by the company, will get to 20% carbon emissions reduction by 2025 against a 2018 baseline. Nestlé aims to reach 50% emission reduction by 2030 and achieve net zero by 2050 at the latest, even as business grows.

A member of United Nations-backed Race to Zero, Nestlé Pakistan is taking action across its agriculture value chain and also its operations. The major interventions will be to reduce emissions in the milk value chain, promote reforestation, switch to 100% renewable energy and work with farmers to shift to regenerative ways of growing food.



Pakistan Cables Limited

Pakistan Cables is a signatory to the Business Ambition of 1.5°C commitment. The company has established Pakistan's first and largest Miyawaki based Urban Forest on an industrial estate which is home to over 45,000 trees. It continues to promote environmental conservation and advocacy tree plantation activities and awareness sessions.

The company is certified for latest standard of Environmental Management System (EMS) 14001:2015. As part of its plastic reduction program, Pakistan Cables has successfully introduced Biodegradable Plastics for packaging in some of its product lines.

The company is investing in a 2MW solar plant at its upcoming world class manufacturing facility in Nooriabad, Sindh. Sustainable business practices are also being deployed for energy conservation that include water harvesting by conserving storm water, development of an effluent treatment plant and RO plant at the facility in Nooriabad.



Shell Pakistan Limited

Contributing to Shell's strategic ambition to provide more and cleaner energy, Shell Pakistan converted Lubricants carton box liners, making them 100% recyclable. The new liners are light weight, environmentally friendly and easily repurposed for household storage, waste disposal and shipping.

Shell Pakistan is the largest private investor in Pakistan's strategic White Oil Pipeline project which transports petrol and diesel; the pipeline contributes significantly to reducing carbon emissions through reduction of vehicles transporting fuel across the country.

Through their enterprise development program, Shell Tameer enables young people to start their own business and create employment, focus areas include circular economy, clean energy solutions, innovation technology and transportation and mobility; with a vision to support enterprises deliver sustainable positive environmental change for a cleaner greener future.

SIEMENS

Siemens Pakistan Engineering Company Limited

Siemens is proud to be able to meet the changing market demands to achieve our sustainability targets and shaping the market for intelligent, adaptive infrastructure for today and the future that addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings, and industries.

Siemens EV Charger SICHARGE D is an answer to revolutionize E-mobility in Pakistan. SICHARGE D is a compact charging station that can be seamlessly integrated into our environment. It is a perfect choice when you have short time and high power is required. The charger is User-friendly, having modular and scalable power, outdoor protection IP54 and industry leading cyber security.



Total Parco Pakistan Limited

PARCO is the first refinery in Pakistan to install a diesel hydro desulphurization plant, producing high speed diesel conforming to EURO II standards. This product is helping EURO II compliant automobiles to perform better by being fuel efficient with low emissions. All contractors' equipment is checked for compliance to NEQS. All effluents are checked and verified regularly before discharging by third party EPA (Environment Protection Agency) approved labs to comply with NEQS



Unilever Pakistan Limited

Unilever has been taking climate action across all its operations for decades and is now working to eliminate fossil fuels entirely and switch to renewable energy. Guided by the 'Unilever Compass' and Unilever's Climate Transition Action Plan, the company set out a clear pathway to zero emissions in their operations by 2030 and net zero emissions across their value chain by 2039. To this end, Unilever Pakistan has reduced its emission by 84% in 2022 from a baseline of 2018.

The company is transitioning to renewable energy across all operations, finding new low-carbon ingredients, expanding plant-based product range and developing fossil-fuel-free cleaning and laundry products. Across their portfolio, the brands are working hard to reduce the impact of their products when used by consumers. The company is also using its influence to accelerate progress in their value chain.



United Energy Pakistan Limited

United Energy Pakistan (UEP) is committed to producing energy for Pakistan's growth while combatting climate change. The company is constantly striving to reduce emissions, waste and discharges from its oil and gas operations. UEP is certified under the ISO-14001 Environmental Management Systems, reflecting its commitment to continual improvement.

The company is also leading the transition to renewable energy. UEP Wind operates a 99-megawatt wind energy project in the Jhimpir wind corridor.

Key Actions for Businesses in Adapting to Climate Action

| Insights from | the Pakistan Climate Conference 2022 |
|--|--|
| | There is a lack of a complete supply chain solution for recycling products aiming at reduction of plastic waste. |
| | 2. Capacity building of the Federal Ministry of Climate Change and Provincial Ministries is important to scrutinize projects that could be pitched to international institutions to secure climate financing and get benefit of positive initiatives. |
| A. Climate Centric | 3. Incentivization of the green private sector and providing them with tax or fiscal incentives will help in implementation of green practices in Pakistan. |
| Approach | 4. Digitalization of data could help to ensure transparency and integrity of sustainable initiatives of the companies. |
| | 5. Companies must brand the good work being done to attract investments and capital from global/international market. |
| | 6. Forging the industry-wise alliances will help collate the sustainable initiatives and mobilize sector-wise progress of the key player e.g., textile companies to collectively commit for net-zero. |
| | It is important to invest in infrastructure to make transmission stable. The grid is not secure enough to get connected with the renewable energy production sources and unstable transmission in the grid due to intermittency also needs to be looked at. |
| B. Reducing | 2. Long term policies and frameworks are needed to encourage investors and promote ease of doing business. There must be a long-term policy (15-20 years), short-term e.g., 5 years policies are not useful to reap fruits. |
| Emissions and Renewable | 3. It is important for Pakistan to have scrapping/phasing-out policy for old vehicles i.e., public transport. |
| Energy | 4. Government needs to find ways to utilize extra energy capacity by improving the demand side. Renewables, rather than sustainability narrative provide cheapest available energy source because of technological advancement. Moreover, since capital intensive hydro projects add to misery, Pakistan's focus should be more on solar and wind. |
| | 5. De-regulation of power sector, with respect to pricing, quality, investment in technological advancement, and improvement of grid is important to promote sustainability |
| C. Pakistan's Environmental Social | There is a need to develop a broader focus on regulatory frameworks, and for their effective implementations, environmental considerations with social responsibilities must be approached with equality in training and research. |
| Governance (ESG) Dimensions: | 2. To ensure an inclusive and sustainable growth for all chunks of the society, there is a need for targeted initiatives for improvement of technologies and provisions for ease of their implementation in all population groups. |

provisions for ease of their implementation in all population groups

Securing **Access to Long-Term** Capital

recycle plastics and be responsible and preemptive rather than waiting for regulations. 2. The recyclable resin is not available in Pakistan. Therefore, it comes at a higher cost, but there is a need to find cost-neutral solution rather than cost-on solution. 3. There are inherent weaknesses in plastic collection system that needs special attention of the policy makers and regulators. D. Reducina 4. Companies must establish good research and development (R&D) function to Waste build a compliant and sustainable operation. However, it is also important to through establish a baseline with identification of problem and the stakeholders. Circular **Economy** 5. Implement climate disclosure policies along with environmental, social, and governance (ESG) score cards and quantifiable targets for future, for companies to be applicable for responsible investments. 6. Plastic is not designed as per sustainability principle. Companies must ensure responsible production through design principle – no plastic > less plastic > better plastic i.e. post-consumer recycled plastic (PCR). 7. It is important for industrial sector to build an economic model from take, make, and discard to take, make, reuse, refurbish, and recycle. 1. Reliance of industry on fresh water needs to be reduced. Industrial sector must ensure water treatment and recycling especially in the most polluting sectors such as textiles. 2. Water should be conserved and sold in a manner to make it a sustainable commodity through valuation and accounting mechanisms to help manage the related risks and identify potential mitigation measures. 3. Businesses should integrate water footprint calculation as a business risk. Water-related risks in industrial sector should be calculated for compliance, and water management and conservation strategies must be adopted to secure such investments. E. Ensuring Fair Usage 4. Companies must set target of becoming water negative and eventually be water of Water positive (put more water back into the environment compared to the volume taken out). 5. Put a justice cap on to solve water issues of industries. Ground water usage by industries is not being regulated properly and other than that water being supplied externally is illegal. 6. Companies must break silos and follow an integrated approach to work for

water conservation.

into action.

consumer sensitization regarding need vs want

1. It is important for businesses to create end-to-end business ecosystem to

7. Sustainability initiatives must have an associated business case. It is important to attach value to water usage through water conservation campaigns and

8. Government must play its role to operationalize and put the work of Water Council

Collective Action

Mobilizing Climate Action and Defining Next Steps

To engage Pakistan's corporate and industrial stakeholders in driving the climate ambition, the OICCI proposes an engagement mechanism that offers opportunities to work with each other. Companies must be made aware to be globally competitive and be mindful of the sustainability initiatives. This roadmap aims at harmonizing the efforts, sharing learning and risks among Pakistan's business sector leveraging on the existing

opportunity of synergizing the effort to mobilize sustainability.

The overall monitoring and evaluation mechanism will help to consolidate the data and efforts for promoting collaboration among the members, as well as support the members to streamline the projection and demonstration of their work.

Positive reinforcement cycle for achieving corporate climate change mitigation/adaptation target Achievements of the mitigation/adaptation on targets Corporations to take active Tracking and disclosing steps with transparency emission and integrity Preliminary tracking and Implementing emission disclosing emissions reduction measures Setting specific and sustained targets

OICCI proposes that the Government of Pakistan adopts three primary resolutions to mobilize climate action amongst stakeholders across the country:

- Set up a Climate Change and Corporate Implementation Task Force
- Establish a Steering Committee on Climate-related Financial Disclosures
- Develop a Pakistan Climate Knowledge Sharing Initiative

1) Set up a Climate Change and Corporate Implementation Task Force (CCCIT)

Climate Change and Corporate Implementation Task Force (CCCIT) to be set up under the Government of Pakistan. It will serve as an advisory body to Pakistani businesses and will develop recommendations regarding development, implementation, and review of the sustainability agenda by Pakistan's business sector. It will help inform and shape the private sector contribution to Pakistan's NDCs with a broad focus on mobilizing the climate action and reflect industry's commitment to the climate agenda in the lead up to the 27th Conference of Parties (COP27).

The Task Force will focus on the "Key Domains of Action" as part of its engagement strategy, while aligning the overall sustainable business and investment practices. The key domains of action are enlisted below:

Technology & Corporate
Innovation Governance Education Capacity
Development Climate Action

This task force will reinforce the corporate social responsibility (CSR) practices of Pakistani businesses and further help collate the sustainability-related effort. Its tasks would particularly include:



How will the CCCIT function?

The companies would be required to identify the domains of their interest and submit green project plans, to the CCCIT, that could be executed through skills and resource sharing. Furthermore, all participating companies would independently decide on the terms and conditions for projects executed through joint ventures and partnerships. Company representatives would meet, share, and align their goals and sustainability targets at the start of every fiscal year. They would identify the SMART (specific, measurable, achievable,

realistic, and time-bound) goals with opportunities to collaborate, while identifying the broad targeted domains, in line with the NDCs key priority areas i.e. adaptation, mitigation, and nature-based solutions.

The companies would also share and submit a bi-annual progress report with the Government of Pakistan. The second annual report must be submitted before the commencement of the annual members' meeting, and the Government of Pakistan would conduct an evaluation of the programs and initiatives based on visibility and integrity criteria.

Task Force Members: The members of the CCCIT will include a group of experts from within the Pakistan business community, including:

- Environment and climate change expert (2x)
- Public sector engagement expert (2x)
- Sustainable business development expert (3x)
- Resource mobilization expert (3x)

It is important that the taskforce is representative of different gender groups and is set up on diversity, equality and inclusion values.

2) Establishing a Steering Committee on Climate-Related Financial Disclosures

The steering committee will be established as an independent body, which will work in collaboration with the CCCIT. The steering committee will be particularly responsible for:

- Reviewing the national level climate-related financial reporting practices of participating Pakistani business
- Developing sector specific guidelines under disclosure framework to help companies maintain effective climate-related capital disclosures.
- Guiding companies to disclose comparable and consistent information on the financial risks and opportunities presented by climate change.
- Ensuring and monitoring the integrity in spending on sustainability-related measures.
- Helping companies to improve the reporting of climate-related financial information.

We have to accept that it is the duty of our generation to be able to manage several different challenges in the world, and climate change, even though in the short run it might not look like it, is possibly the most important existential crisis that we have to resolve together.

Jesper Brodin, CEO, IKEA The disclosure framework involves the following:

SET SCOPE DEVELOP SUBMIT COMMIT DISCLOSE

- Setting the scope to identify the sector-specific sustainability targets
- Developing a plan with tangible targets in line with NDCs
- Identifying the near-term and long-term targets and submitting the plan with a provisional timeline for the review and validation by the CCCIT. The targets will be published publicly and on the "Knowledge Sharing Portal"
- Government of Pakistan officially announces the commitment to targets
- Reporting the progress against the targets in the annual sustainability report and on the company's website. The disclosure must also be made in the bi-annual report to be submitted to the CCCIT

3) Development of a Knowledge Sharing Portal

Companies need to brand the good work being attract investments done and from global/international market. OICCI would facilitate that setting up of a "Knowledge Sharing Portal" to act as an online e-library of curated resources. The portal will be a web-based platform to assist in capacity building and knowledge development of the private sector. It will act as a one-stop shop for an integrated data resource and provide free and open access to climate change and corporate sustainability-related data.

The portal will act as a central information channel for corporate climate education in Pakistan and connect Pakistani businesses to exchange information and disclose sustainable practices. It will contain the formal and informal learning repositories for sharing best practices, case studies, process guides, tools, practical examples as well as reports, research highlights, and formal and informal training collateral.



Overseas Investors Chamber of Commerce and Industry

Chamber of Commerce Building, Talpur Road,