Round-Table Conference Proceedings

CPEC & Climate Change - Pakistan Towards A Climate-Compatible Paradigm

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PUBLICATION OF
Centre of Excellence for CPEC
ISLAMABAD

Ministry of Planning, Development & Reform Government of Pakistan

CENTRE OF EXCELLENCE
China-Pakistan Economic Corridor

Pakistan Institute of Development Economics Islamabad

Introduction

A roundtable conference (RTC) was hosted by Urban Development Division at Centre of Excellence-China Pakistan Economic Corridor (CoE-CPEC) with the title of **"CPEC & Climate Change-Pakistan Towards a Climate Compatible Paradigm"**, organized by Dr. Saleem Janjua, Head of Policy and his team members on Dec 20th, 2017. The roundtable conference was a side event of the International Science-Policy Conference on Climate Change in Pakistan, which was arranged in collaboration with the Global Change Impact Studies Center (GCISC), Ministry of Climate Change, Islamabad.

The pristine objective of this roundtable was to assess the current state of knowledge on the subject, identify data and research gaps, and provide guidance for future policy research on climate related threats to the ongoing and planned CPEC developments.

Inaugural Session

Chaired By:

Dr. Shahid Rashid, Executive Director, CoE-CPEC and **Dr. Tariq Banuri,** Executive Director, GCISC

The session started at 11:00am with the formal recitation of Holy Quran. **Dr. Shahid Rashid,** Executive Director, CoE-CPEC formally inaugurated the session with welcome remarks. He elaborated the China Pakistan Economic Corridor by mentioning that the CPEC is a framework of regional connectivity, and is considered as a game changer both for Pakistan and China. The economic corridor is envisaged to carry out massive development/ infrastructure work especially in the areas of energy, infrastructure and communications followed by the establishment of special economic zones (SEZs).

The Executive Director, CoE-CPEC further mentioned that this revival of economic growth through CPEC can be hampered by climate change. Moreover, the climate vulnerability of Pakistan can also impact the development and economic activity under CPEC. Conversely, in the absence of ancillary policies or measures, CPEC projects could also contribute to the exacerbation of Pakistan's vulnerability to and impact upon climate change. As such, it is important to undertake a systematic and comprehensive review of the potential effects of climate change on planned investments and vice versa.

This roundtable conference was very crucial in allowing the participating delegates to comprehend the dynamics of the corridor and climate change. Therefore, participants were requested in the beginning of the session by Dr. Shahid Rashid to create dialogue, and offer their recommendations, so that the same could be forwarded to the relevant ministries for action.

Dr. Tariq Banuri, Executive Director, Global Change Impact Studies Centre (GCISC) also gave the opening remarks. He conveyed that the importance of this roudtable conference lies with the special focus of Prime Minister of Pakistan on climate change. The climate change policy of a country should focus on 3 prime objectives.

1. Saving livelihood and property/ financial resources.
2. Promote growth and sustainable development
3. Ensure fulfilment of national and international commitments made by Pakistan.

CPEC is the current largest investment plan for Pakistan, and can act as base for growth, however we are concerned with two things. The future of the world is not like the past. Climate change is here and it is likely to stay. The investment programs prepared under the CPEC should incorporate climate change. Future CPEC projects that are vulnerable to climate change would put livelihood and huge financial investment at risk. The need of the hour is to focus on climate resilient development. The objectives of this roundtable conference by CoE-CPEC and GCISC are to Identify the gaps i.e. the need is to find that what do we know about climate change and what do we don't know? This is critical to ensure that CPEC development is climate resilient and through this RTC, GCISC and COE-CPEC intend to brainstorm that how can development under CPEC be climate resilient and thus to reduce climate vulnerability.

Dr. Mozhar-ul-Alam, Climate change expert and representative from UNEP also addressed the session. He remarked that to achieve low carbon development, it is imperative that the technology that is used in coal fired power plants is efficient and latest. These coal fired power plants are important for power generation, however the socio-economic, health, and environmental considerations of the areas in which these plants are installed should also be well considered. The efficient use of this energy especially for industry is important. For CPEC projects it is utmost to go for climate screening.

When it comes to climate change, it is normally the mean change in the indicators that is considered. However with respect to CPEC projects it is important to consider the mean changes as well as the extreme events. ***The caution of keeping extreme climate events in planning process will ensure development under CPEC that is climate***

resilient and will result in sustainability.

CPEC projects are bound to bring changes in the land use and forestry. Focus of planning and policy should be on reducing fragmentation and increasing ecological resilience. ***Government of Pakistan is in the process of developing the national adaptation plan.*** The plan has four dimensions. It firstly includes the institutional coordination mechanism. The mechanism is bound to provide linkages to both the horizontal as well as the vertical tier of the government. Secondly the national adaptation plan should have a ***mechanism for climate financing. Inclusion of climate science into the development planning and budgeting should also be the part of plan and lastly mechanism for monitoring and reporting is required.*** Thus synergies should exist in the national action plan.

Session-I: CPEC A New Era of Development for Pakistan

By

Dr. Saleem Janjua, Head of Policy, COE-CPEC

The session was addressed by Dr. Saleem Janjua, Head of Policy, COE-CPEC. He welcomed all the guests and proceeded with a brief overview of CPEC which is 1+ 4 portfolio. The project's nucleus is centered on energy, infrastructure, Gawadar, and industrial corporation. Holistically, the entire corridor includes 21 CPEC energy projects, 8 infrastructure projects, and 12 projects for Gawadar. Industrial cooperation, which is a relatively pristine concept that has been recently included in CPEC portfolio, and nine special economic zones are being established to strengthen industrial development. Several infrastructure projects are in progress and would be instrumental in elevating economic stability. Similarly, Gawadar East Bay Expressway, development of free zone, port city master plan, an airport, and a hospital are also in progress at Gawadar. The completion of CPEC projects are expected to create economic growth and ensure welfare of the masses.

Dr. Janjua gave a detailed insight of CoE-CPEC. He informed the participants that the centre is a joint initiative of PIDE and Ministry of Planning Development and Reform. It is the first official think tank working on CPEC portfolio. Centre of Excellence for CPEC aims to become an evidence-based research and policy guiding think tank on CPEC and thus guide policy makers, implementer's business community and society.

The Mandate of the Centre of Excellence for CPEC is to

- Conduct policy research on six thematic areas of CPEC
- Promote positive narrative on CPEC
- Guide implementers of CPEC on policy matters

- Establish Pak-China Study Centre
- Train business community on CPEC related business opportunities

The six policy research themes of the Centre of Excellence for CPEC are

- Socio Economic Impact of CPEC
- Regional Connectivity under CPEC
- CPEC Trade and Industry Cooperation
- Urban Development in Pakistan under CPEC
- Job Growth and Human Resource Development
- Financing and Financial Sector Integration under CPEC

Accordingly, CoE-CPEC is engaged in policy oriented research. The six thematic areas are working on diverse research topics related to CPEC. Urban Development Division at COE-CPEC has the current focus on three key areas.

- Sustainability of SEZs through Urbanization
- Mass Transit Projects under CPEC
- CPEC Environment/Climate Change-related Challenges and Solutions

Session-II: Potential Impacts of CPEC on Climate Change and the Concept of Low Carbon Development

By

Prof. Ahmed Ali Shah, Director CESTAC, Fatima Jinnah Women University

The presentation started with a brief introduction of climate changes. As per the Pakistan Climate Change Act 2017 "Climate Change" means *a change in the climate system, which is caused by significant changes in the concentration of greenhouse gases as a direct or indirect consequence of human activities and which is in addition to natural climate change that has been observed during a considerable period.*

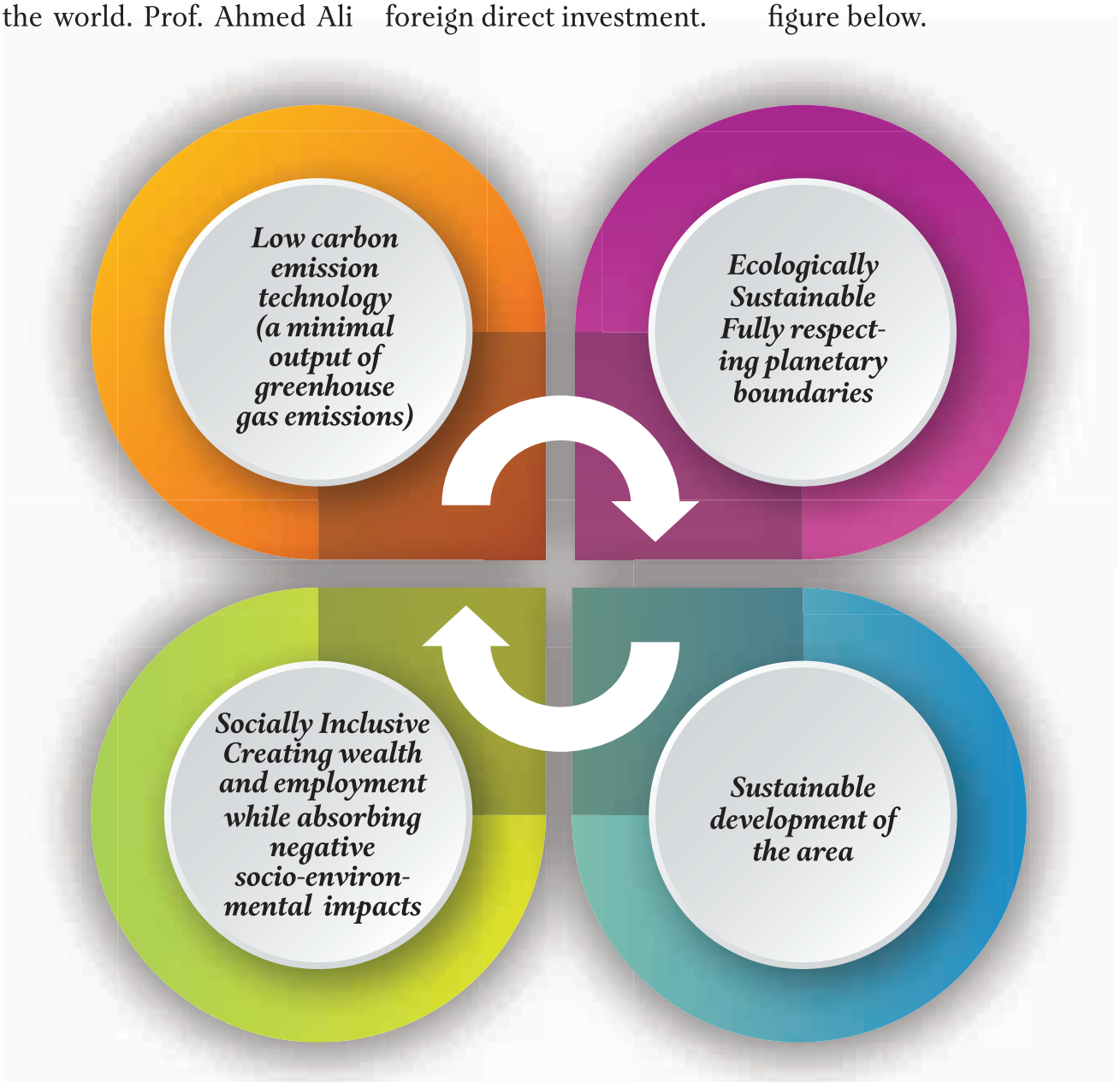
Or simply Climate Change is *"changes in the Earth's weather patterns"*

Though ***Pakistan has a small contribution in the global GHG emissions but it is highly vulnerable to Climate changes.*** Development projects under CPEC are prone to suffer from the climate vulnerability of Pakistan and vice versa. Similarly CPEC projects, if not implemented with caution, can act as a threat to environment and increase the climate vulnerability. Many of the energy projects are utilizing coal, which is considered as dirty fuel. Building of new roads and other infrastructure development can also add to deforestation and pollution. The passage of traffic through the Karakoram Highway will spew an estimated annual 36.5m tones of CO2 into the atmosphere, Many experts think that unless managed, these emissions will melt the GB glaciers and make the area a high altitude desert

While many environmental concerns have been mainstreamed in national development planning in the last decades, climate change (CC) has not been considered a development priority on the political agenda, and has only been recently included in the national Climate Change Policy in 2012 and enactment of Pakistan Climate Change Act 2017. This is the right time to include the causation between CPEC & Climate Change in the national development policies and acts. A long term strategic determination of options for addressing Climate Change and CPEC portfolio in the context of national development objectives is expected to enhance the effectiveness of actions by linking them to a holistic nation-wide assessment of opportunities of low carbon development. Adopting suitable strategies to minimize climate vulnerability

under the CPEC portfolio can turn the economic corridor into an environmental corridor. CPEC portfolio has the potential to spearhead the development of regional renewable energy trade, and provide Pakistan access to China carbon market, which is already one of the largest markets of the world. Prof. Ahmed Ali Shah informed the participants that China's share of global green bond market is over 40pc. Benefiting from the Chinese experience, Pakistan can also launch green bonds under CPEC. This strategic move alone can help Pakistan address about 50 SDG indicators and, hopefully, attract foreign direct investment.

Moving towards low carbon technology is one of the options that can make CPEC portfolio sustainable. Low carbon technology, is the technology that reduces emissions of carbon dioxide as compared with conventional technology. The framework for low carbon technology is explained in figure below.



LOW CARBON TECHNOLOGY FRAMEWORK

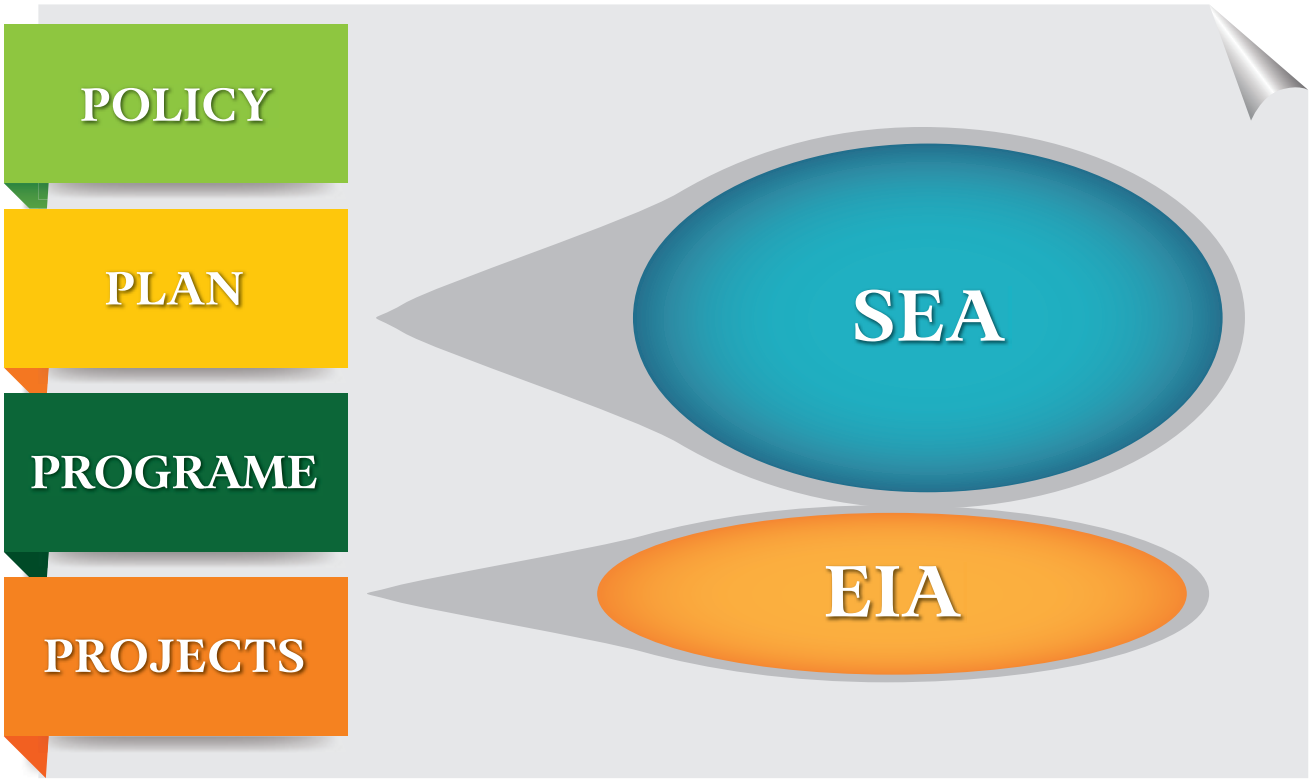
How to attain Environmentally Sustainable Development under CPEC?

Lastly, Prof. Ahmed Ali Shah was of the view that sustainable development under the CPEC portfolio that is climate resilient and environmentally sustainable can be achieved by adopting following strategies and policies

1. Strategic Environmental Assessment (SEA)

It is a systematic decision support process and a family of approaches that aims to integrate environmental considerations into policies, plans and programs and evaluate their interlinkages with economic and social considerations.

2. Mainstreaming & Upstreaming Environmental Sustainability in the Decision-making Hierarc



Application of systematic decision-making tools such as SEA in Ddevelopment Ccooperation to determine the ecological footprint of the CPEC initiative should be carried out.

3. Addressing Climate Change

The development of a low carbon strategy requires a balanced focus on the process of government coordination, stakeholder involvement and the result in the form of a strategy document that is not separate from the general national development strategy, The formulation of a sustainable pathway for CPEC is required to achieve the established development goals, national options and prioritized actions for low carbon development in the mid- and long term sector-specific options and prioritized actions for reductions of GHGs. Also a roadmap should be made on how to implement the priority options nationally and sector specifically.

Appropriate low-carbon interventions/policy measures can help to ensure that Pakistan remains a low emitter as the country develops, without hampering growth; there currently exists no comprehensive official up to date emission inventory available for Pakistan; to determine what this future could look like, there is an urgent need to improve the evidence based surrounding GHG emissions and mitigation options in Pakistan.

Session-III: Potential Impacts of CPEC on Climate Change, and the Concept of Climate Resilient Development

By

Ms. Fauzia Biliqis Malik, Regional Head, International Union for Conversation of Nature (IUCN),

Potential Environmental Impacts of CPEC

CPEC portfolio can have the following potential impacts on the environment.

- Increase in greenhouse gas emissions from burning fossil fuels for energy generation; may lead to a failure in compliance with the Paris Agreement on climate change.
- Increase in air pollution (worsening air quality, acid rain and smog) from the burning of coal containing high sulphur content and particulate matter. This can also have huge public health costs.
- Increased risk of oil spills in deep sea Gwadar Port and consequent harm to marine life.
- Destruction of wetlands can occur that are located along the coastline. Wetlands are a vast

resource in terms of livelihoods, biodiversity and migratory birds.

- Changes in climate and infrastructure development may cause possible loss of endangered biodiversity along the CPEC corridor.
- Habitat fragmentation, deforestation, loss of natural vegetation diversion of rivers due to dam construction, ground water and soil pollution etc can occur.
- The establishment and functioning of HUBCO jetty, Port Qasim power plant, Gwadar deep sea Port etc. can result in marine and thermal pollution.
- Displacement of communities would exacerbate environmental problems, putting pressure on the dwindling natural resource base
- Sensitive mountainous ecosystems, especially in high altitude regions with higher climatic stress may be subject to avalanches, glacial melt, soil erosion and landslides, aggravating climate changes.
- Industrial development may contribute towards air emissions, waste water, land pollution, coastal & marine pollution, solid waste, hazardous material etc.

Climate Resilient Development

Pakistan is being significantly impacted by climate change. In the scenario of SDGs and the Paris Agreement, the need to plan for future is utmost. Climate Resilient development can build environmental safeguards. It is important to identify climate stressors and utilize appropriate climate information to reduce vulnerability to climate stressors. Climate resilient development is a continuous and evolving process. CPEC power projects are expected to have environmental implications. This arises the need for environmental safeguards and moving towards a carbonized economy model.

Recommendations

The conference concluded with an insightful discussion among speakers and delegates aimed at designing policies and recommendations to address climate change with respect to CPEC portfolio so that the development under CPEC is made climate-compatible and climate-resilient. A number of recommendations were made. Some of them are as follows.

- The usage of coal as a source of power generation is the need of time, however the usage of latest technologies such as super critical technology can significantly reduce emissions from the power plants being constructed under CPEC.
- Energy generation under CPEC is based on the usage of coal; however, a number of renewable energy projects also need to be planned and executed. The policy focus in near future should be on the planning, management and operation of renewable energy projects, so that the energy mix of Pakistan includes significant portion of clean energy.
- China has applied stringent environmental quality standards, and is also implementing practical measures to protect environment and ensure climate resilient development. The need of the hour is that Pakistan may also follow the footprint of China and adopt guidelines from the international experience, so that the climate resilient development is ensured under CPEC.
- Under the Pakistan Environmental Protection Act, 1997 / provincial environmental protection acts, it is mandatory to conduct EIAs of development projects. The same legislative requirement should also be followed for all CPEC projects with diligence both at federal and the provincial levels.
- Biodiversity assessments along CPEC alignments need to be initiated in coordination with the relevant Pakistani institutions.
- Consultative sessions with key stakeholders from research, academia, policy makers, civil society, private sector and media and awareness raising through dialogues and seminars about the climate change issues along CPEC alignments should be conducted. It is imperative to support and intensify networks between civil society and other actors in the respective regions.
- National and local action plans may be developed to address CPEC specific issues related to pollution, environmental degradation, climate change and biodiversity loss.
- SEAs (Strategic Environmental Assessments) should be carried out for analytical, participatory and integrated approach to environmental considerations into CPEC projects. This will help evaluate the inter linkages of environment, economic and social considerations.
- There is a need for designating a central body to oversee the implementation of mitigative measures outlined in the EIAs / SEAs of CPEC projects.
- Identification of economic, environmental and social benefits of low carbon development should be carried out. Pakistan may avail carbon credits and setup a region-

al market for trading carbon credits.

- Baseline assessments of cross-border environmental pollution should be made on priority basis by the Ministry of Climate Change and cases of compensation in terms of carbon credits may be taken up to the relevant international forums.
- financial mechanisms such as Green Climate Fund (GCF) may be explored for CPEC projects. In order to tap GCF opportunities for CPEC projects there is a need for understanding of GCF modalities that include GCF basic concept orientation, project identification, development and project implementation.
- Clean Development Mechanism (CDM) can allow Pakistan with emission-reduction / emission-limitation commitment under the Kyoto Protocol. CDM is a global environmental investment and credit scheme of its kind that provides a standardized emissions offset instrument - CERs. In the context of CPEC, CDM can also be explored for industrial cooperation so that the eco industrial development is promoted in the country.
- CPEC energy projects may lead to an increase in Greenhouse Gas (GHG) emissions. Expected change in "GHG Inventory" over time needs to be carefully calculated, so that Pakistan may successfully comply with its international commitments.

Photo: Gallery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