

PROSPECTS OF CHINESE GREEN DEVELOPMENT FOR CREATING RESILIENCE AGAINST CLIMATE CHANGE

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Abstract

China being the most significant contributor to carbon emissions makes it crucial for it to take countermeasures to create resilience against climate change. To understand this, we must examine the multiple dimensions and dynamics of China's path toward a greener future. This paper will study China's actions in multiple sectors to achieve carbon neutrality by 2060. The paper determines the positive environmental impacts of China's green development initiatives and their benefits for the Chinese economy. It also explores how these actions can catalyse green development in other developing nations. While this paper covers sectors like energy, agriculture, development, and transport, it may not encompass all aspects of China's green initiatives, leaving room for further research. The research would help in leveraging China's experiences as a blueprint for environmental protection and economic growth in developing nations. Additionally, it may foster greater public awareness and engagement in addressing climate change and green initiatives worldwide. The paper concludes that China's green transformation is crucial for global climate goals, though there is room for improvement.

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Introduction

Climate change is one of the biggest concerns for the global community. The changes in climatic conditions can be due to natural causes like variations in the solar cycles. However, human actions have been the main reason for climate change since the 1800s. The leading cause of this deviation is the enormous use of fossil fuels which has caused a global temperature rise of 1.1°C since the 1800s, making the last decade (2011-20) the warmest decade on record.¹

Governments across the world have neglected the issue for years, but now things are getting out of hand. The rise in global temperature and extreme natural disasters have forced countries to take necessary steps to build resilience against climate change. Countries are facing losses of billions of dollars every year due to natural disasters, causing instability in their economic growth. Everyone is affected by the global emissions contributing to climate change, but some countries produce significantly more than others. Only 3 per cent of global emissions are produced by the 100 least emitting countries. On the other hand, 68 per cent of the contribution comes from the top 10 emitting countries.² Provided the far-reaching impacts of climate change, while individual actions can make a difference, the larger part of the responsibility lies on the countries contributing most to the issue.

China is the world's most populous country and, with one of the largest economies, it is also the biggest contributor to climate change. About 27 per cent of global carbon emissions and about one-third of the world's greenhouse gases are emitted by China.³ With such big numbers, it has become necessary to make efforts against climate change or else it would become impossible to achieve the global climate goals. China itself has faced a lot of damage due to climate change. In the year 2022, China has seen

extreme climatic disasters. The historic floods in the country caused thousands of people to relocate and destroyed thousands of acres of crops.⁴ In the same year, the country was hit by an extreme drought causing some parts of the Yangtze River to dry up, which disrupted the shipping and industrial sector along with hydropower shortages leading to national alerts. According to the Chinese government, the country has also seen the hottest summer in recorded history.⁵ All these events happened in a single year, causing more than \$20 billion in damages.⁶

However, China is also making its contributions to the battle against climate change. The issue has been one of the top concerns of President Xi Jinping's administration. Beijing has committed to addressing the matter in several ways. China is now promoting its green development initiatives and transferring towards more sustainable and green expansion. China aims to reach its peak carbon emission by 2030 and achieve carbon neutrality by 2060. It aims to shift 25 per cent of its energy generation to renewable sources by 2030.⁷ China's green development has the potential to significantly contribute at national and international levels against climate change.

It is essential to understand the Chinese position in multiple sectors under its green development initiatives and to analyse the extent to which it would help against climate change on a regional and global level. This paper focuses on how China uses its green development initiatives to create resilience against climate change. The paper will help readers understand green development initiatives and policy structure. Policy changes are a critical aspect of Chinese green development. China has established a detailed policy structure by establishing a solid system to support its climate-friendly projects and other initiatives. Therefore, the paper focuses on major policy developments and changes initiated by the Chinese government to bring systematic changes in industrial, energy, and other sectors. China is investing billions in the development of environment-friendly technology. It

has integrated technology in almost every primary sector to increase efficiency and reduce the environmental impact. To understand the impact and process of transformation, it is vital to acknowledge the technological advancements and transformation in energy, industrial, agriculture, transport, and development sectors to make them climate-friendly. Furthermore, these transformations will play a significant role in the Chinese and global economy in future, which makes it vital to recognise the multiple dimensions of these green initiatives and their impacts on the economy. The grand transformation would also impact other states and provide an opportunity to enable themselves to create resilience against climate change. The role of the Belt and Road Initiative (BRI) is also important in creating a global impact of this transformation. Aligning the mega projects with the climate policies of the country and accurately implementing multilateral efforts against climate change is highly important.

The Role of China's Green Development in Addressing Climate Change

Due to the country's recent rapid economic growth, Chinese people's quality of life and general well-being have significantly improved. China has urbanised and industrialised at an extraordinary rate, making for an impressive case study of successful development. However, the success came at a high environmental cost creating substantial environmental challenges, including soil, water, and air pollution. China is now responding to the aforesaid set of challenges with its green development initiatives after realising the impacts. The government is working towards an integrated strategy that actively adapts to and mitigates the impacts of climate change while preserving the environment, transforming rural economies, and re-greening urban areas.

China is keenly working towards achieving global targets for addressing climate change. According to the Paris Agreement,

the goal is to limit global warming by stopping the temperature rise, preferably at 1.5°C. Countries have to reach the global greenhouse gas emissions peak as soon as possible to achieve a climate-neutral world by the middle of the century to meet this long-term temperature goal.⁸ The carbon peak or the gas emission peak is a point where the highest level of emissions is reached, and then the emissions are decreased from that point. Achieving global carbon peak and other targets can only be made possible with the contribution of China itself, as it is one of the leading carbon emitters in the world. The Paris temperature target cannot be met unless China meets its commitment to achieving carbon neutrality by 2060 and peaks its carbon emissions as soon as possible.⁹

Chinese strategy against climate change has significantly evolved during the past decade. Climate policies have been included in its energy and development plans. The government has prioritised green development, with a focus on lowering the nation's carbon footprint and moving towards a low-carbon and environmentally sustainable economy. It includes a broad range of projects designed to lower greenhouse gas emissions, increase energy efficiency, protect natural resources, and encourage the use of renewable energy.

China has primary global economic interests and its influence is also increasing in the global political structure. It is investing billions of dollars around the globe under projects like the Belt and Road Initiative (BRI) which makes its role more significant to promote sustainable global development. China aims to balance environmental protection and economic growth for a safer and more sustainable future.

The concept of China's green diplomacy also refers to the country's efforts to promote and implement sustainable development and environmental protection policies globally, particularly through its diplomatic efforts. China has recently participated in international environmental agreements and

initiatives, increasing its involvement in global environmental governance. To advance sustainable development and environmental protection, China has also established several bilateral and multilateral partnerships. China is promoting environmental protection and sustainable development on a global scale in several ways through its green diplomacy. Green diplomacy is a crucial component of China's efforts to advance sustainable development and increase its global influence. Promoting green diplomacy can help China gain more respect abroad, become more competitive economically, and develop its soft power.

Policy Development

14th Five-Year Plan

China's 14th Five-Year Plan was proposed in 2021 and plays an important role in its efforts against climate change. The plan is primarily focused on promoting high-quality sustainable development. The plan provides a framework for achieving a balanced, comprehensive, and long-term economic expansion across China, focusing on innovation, technology, and improving people's livelihoods. The Chinese government is addressing key measures like promoting renewable and clean energy sources, reducing carbon emissions, increasing low-carbon transport, improving energy efficiency, encouraging green industries, restoring forests and wetlands, and strengthening the ecological environment.¹⁰

Green development has been a prominent part of this five-year plan, as five of the eight binding targets are set in the said field. China aims to decline the energy intensity by 13.5 per cent and carbon intensity by 18 per cent during the period of the 14th Five-Year Plan (2021-2025).¹¹ The plans are also targeting the following areas:

- increasing the days of good quality air to 87.5 per cent in cities;

- enhancing the share of the Grade-III or better surface water to 85 per cent;
- expanding forest coverage to 24.1 per cent.

The share of non-fossil fuels in primary energy consumption will also increase by 20 per cent.¹² The plan seeks to create new opportunities for growth and employment in related industries as well as mitigate the effects of climate change. China is demonstrating its commitment to playing a leading role in global efforts to combat climate change and promote sustainable development.

China can achieve early carbon peaking by increasing the pace of multiple initiatives and making investments to carry out the transition towards sustainable growth. It can enjoy the economic and environmental benefits of these investments earlier if this acceleration of projects happens during the period of this five-year plan. Many industrial organisations in major Chinese regions like Shanghai, Beijing, Jiangsu, and Guangdong have already aligned their objectives with the five-year plan to reach a carbon emission peak by 2025.¹³

The plan holds great importance for China to reach its carbon neutrality by 2060. By achieving a carbon peak by the end of the 14th Five-Year Plan and then quickly bending the emissions curve downward after the shortest possible emissions peak, China will significantly increase the likelihood that the world will meet the Paris Agreement's climate goals and that it will achieve its goal of neutrality by 2060.¹⁴

1+N Plan

Many scholars and experts have raised concerns over the timelines and roadmaps of the strategies provided by the 14th Five-Year Plan. To address these concerns, the 1+N Plan provides a clear roadmap for China's policy structure to reach peak carbon emissions by 2030 and achieve carbon neutrality by 2060. The concept of 1+N was given in March 2021, wherein '1'

refers to the long-term approach against climate change and 'N' refers to pathways to attain peak carbon emissions by 2030. It contains policies that will help in the implementation of carbon peaking in the sectors of energy, transportation, industries, and rural and urban construction. It also manages supporting measures like science and technology, assessment and inspection, statistical accounting, carbon sinks, and safeguard policies for financing and fiscal approaches.¹⁵

The plan expands through China's 14th and 15th Five-Year Plans. It aims to increase the capacity of the Chinese government to mobilise the whole country and include the private sector in the nation's de-carbonisation initiatives. The plan is expected to reinforce China's commitment to developing a sustainable power system and strictly limiting the use of coal until 2025. In addition, 36 per cent of China's total CO₂ emissions come from industries. The new plan will emphasise the need for some emission-intensive areas to reach their peak emissions before 2030.¹⁶ The industrial associations have already announced targets for steel, aluminium, and cement industries to reach peak carbon emissions by 2025.¹⁷

The 1+N plan also aims to expand policy support by creating a unified and standardised system for measuring and counting carbon emissions, as well as by improving laws, regulations, and standards, maximising economic policies and establishing new market mechanisms.

For proper implementation of these policies, the Chinese leadership established multiple bodies. The creation of a leading small group on carbon is one example. The group is made to ensure the completion of targets on time. The leading small group is the defining feature of Xi Jinping's rule and plays a crucial role in China's political structure and governance. There are multiple heads of different agencies and ministries as members of a group administered by the central government. The group will encourage Chinese provinces and cities to set more demanding goals and

incentivise the cities to increase their pace of transition to a greener urbanisation model.¹⁸

Transforming Major Sectors

Green Energy

Since the 11th Five-Year Plan (2006-2010), reducing the consumption of coal and replacing it by integrating more renewable and cleaner energy sources has been a crucial part of successive plans. President Xi Jinping has stated the significance of green development and the need to have this transition as soon as possible.¹⁹ China's energy mix is still mainly dominated by non-renewable energy resources. A large chunk of energy consumption is based on coal. However, the government has recently invested heavily in sustainable and clean energy sources. China is leading with almost 35 per cent of global investments in the energy transition towards renewable sources.²⁰ It is, however, still producing nearly 63 per cent of its electricity from coal. While it has come down from 77 per cent in 2010, it is still very high compared to international numbers.²¹ Nevertheless, China has significantly increased its share of renewable sources. The hydro, solar, and wind shares in the energy mix have significantly risen in the past few years. With a global share of 39 per cent for installed solar capacity and 36 per cent for cumulative wind capacity, China is currently leading the world in developing renewable energy. Additionally, its current approach calls for increasing the proportion of non-fossil fuels in total energy consumption to over 25 per cent in the year 2030 and further increasing it to 80 per cent by 2060.²² China's shift towards green energy will significantly reduce global carbon emissions and help limit the global temperature rise to 1.5°C. The transformation will also increase investments in renewable sources, making production more manageable, and help developing states acquire sustainable technology.

The integration of technology and the energy sector is critical to the transformation towards green energy. China is implementing new concepts like smart grids. By installing intelligent grid systems, renewable energy sources' efficiency and dependability will be increased. This will not only help to use energy efficiently but also help consumers reduce electricity costs.

23

As in other fields of life, Artificial Intelligence (AI) can play a major role in revolutionising the energy sector, and China is already working on implementing AI in its energy sector. It will help increase efficiency and minimise waste by using AI to optimise energy production from renewable sources like wind and solar power. Also, improving energy planning and reducing the need for excess energy generation capacity by implementing AI-powered energy demand forecasting systems.²⁴

James Kelloway, Energy Intelligence Manager at National Grid, says:

Now, with AI, we can predict more accurately what renewables are likely to do, so we can control other power plants more accurately, like coal plants that take many hours to ramp up,²⁵

Chinese energy sector and industries are already using AI to increase their energy intensity. Numerous power plants are already using the technology, helping them save on maintenance costs and efficient production. They are also utilising AI to track and monitor carbon emissions to help businesses and governments reduce their carbon emissions.²⁶

Chinese transport sector holds a major share in energy consumption. In the year 2014, China's transport sector produced about 828 million tonnes of greenhouse gases. This makes it the second largest transport emission country with a global share of 11 per cent, having the USA at the top with 21 per cent.²⁷ This has significantly affected the air quality of many major cities of the country. By implementing multiple carbon emission reduction

policies, China is targeting to reduce its transport emissions by 50-95 per cent by the year 2060. Experts believe that if China can achieve the shifts in travel patterns and advanced vehicle technologies, it can reduce emissions by 93-95 per cent by the year 2060 compared to 2020.²⁸ Beijing aims to include more electric and hydrogen fuel vehicles and improve fuel efficiency to reduce oil consumption. The emission reduction from vehicle electrification could rise to 60 per cent if the related sectors follow the roadmaps outlined by the national government and industrial associations.²⁹

Transforming Agriculture and Reviving Forests

The agriculture sector has been one of the key parts of the Chinese economy throughout history and continues to play an important role. With only 9 per cent of the global farmable land of the world, China is remarkably feeding 22 per cent of the world's population.³⁰ However, the excessive usage of resources and increasingly intensive agricultural practices have simultaneously been causing serious environmental pollution and ecological issues like soil and water pollution from excessive agrochemical use, soil erosion from land conversion, and deforestation. The droughts and extreme heatwaves caused by changing climatic conditions have also severely damaged the country's agriculture sector.³¹ These issues can seriously impact the global food structure as China is a big shareholder.

To tackle these issues, China is promoting the use of eco-friendly technologies to boost productivity and cut waste, such as precision irrigation and conservation tillage. The government has given multiple plans to modernise the agriculture sector. Many prominent technology firms are also introducing projects to promote trade in the agriculture industry. A few of these initiatives include Taobao's e-commerce villages, Tencent's environmental commitments, and Pinduoduo's AI-supported agriculture competition.³² The government is investing in genetic engineering

and biotechnology research and development to increase crop quality and yield. The state is also assisting small-scale farmers in adopting sustainable practices by offering them resources and support, encouraging the expansion of organic farming and expanding market access to organic goods. However, organic food production and sustainable agricultural methods are increasing in China. According to a 2019 government report, certified organic agriculture's total area under cultivation increased more than five times between 2005 and 2018. After Australia and Argentina, China ranked third in 2017 for the certified organic area.³³ China's overall objective is to develop a sustainable agriculture industry that ensures food security, protects the environment, and facilitates rural economic development.

Large-scale reforestation initiatives have begun in China to increase the area covered by forests including the restoration of old forests. Furthermore, China's 14th Five-Year Plan also emphasised the expansion of forest land coverage by 2025. The country aims to increase its forest stock volume to 19 billion cubic meters. The inter-ministerial collaboration and scientific efforts of greening also provide crucial tools for restoring the forest ecosystem.³⁴ New trees will be planted in degraded areas, and degraded forests will be restored. In addition, China has also announced the planting of 70 billion more trees by the year 2030 with the World Economic Forum's 1t.org initiative.³⁵ More than 70 million hectares of forest cover have grown back in China over the last ten years. Solutions in biodiversity preservation, sustainable use, and climate governance have greatly benefited the country.³⁶ Also, China supports sustainable forestry practices to maintain its forests' health and productivity for future generations.³⁷ It has also set up a protected area system to preserve its wildlife and biodiversity. These areas support the habitat of threatened species and the ecosystem's stability. By the end of 2020, China had 11,800 protected areas which covered almost 18 per cent of its land.³⁸ It further plans to have 36,000 square kilometres of new

forests every year till 2025.³⁹ These initiatives will play a major role in achieving carbon neutrality by the year 2060 for China and will improve the ecological and air index of the country.

Development of Urban and Rural Areas

The Chinese government has launched several projects to ensure the low-carbon and green development of rural and urban areas. The government is ensuring that sustainable green requirements are implemented in the planning, management, and development of rural and urban areas. The creation of urban clusters, the construction of ecologically sound urban corridors and ventilation systems, and the promotion of urban greening are part of the plans, alongside setting construction zones for urban structures in a reasonable manner and placing strict restrictions on public buildings with high energy use. The authorities will also raise the standards for large buildings to conserve more energy and accelerate the process of constructing low-carbon, ultra-low-carbon, and near-zero-carbon buildings. The government has also planned to place energy caps and assessments for energy efficiency for the buildings. In addition, the state is trying to implement green building initiatives to have more climate-friendly structures.⁴⁰

China is also planning central heating systems for towns and cities in the northern part of the country to reduce household energy consumption. For this purpose, they will use advanced low-carbon heating sources like geothermal heat pumps, biomass, and natural gas.⁴¹ A sustainable transportation structure will be placed in big cities. Public awareness and encouragement will also be provided for public transport to reduce the number of vehicles on the roads to reduce energy use and carbon emissions.

The green development goals are focused on increasing energy efficiency requirements in buildings. The central government will review the quality requirements in building codes to extend the life span of buildings. Educating the public on the

issue will also help them understand the importance of increasing efficiency and its requirements. By doing this, the waste produced by building their energy consumption will be significantly reduced.⁴²

Economic Impacts of Green Transformation

Economic growth has been the central mission of the Chinese government. Every step that China takes has an economic factor attached to it. Almost every sector and initiative is connected to its economic growth and green development is no exception. China's transformation towards green and sustainable development will have significant economic benefits for the country. The transition will create millions of new jobs and billions of dollars in revenue. A recent study suggests that the job creation rate in renewable and sustainable industries is about 1.5 to 3 times more than the traditional industries. Research conducted by the International Renewable Energy Agency (IRENA) shows that in 2019, 11.5 million people were working in the renewable energy sector, and this number has been increasing since then. Nearly 40 per cent of all these jobs in the renewable sector are located in China.⁴³ These jobs will also provide better working conditions and more benefits for the workers. However, it will be a challenge for China to relocate human resources like coal workers from traditional setups to new and advanced ones. The new and highly advanced systems will need a more technically-skilled workforce.

Green energy sources can be more cost-competitive as compared to traditional sources. Furthermore, as technology improves with time, it will become more and more cost-effective. This will help China save a large amount of revenue over a long period in the future. According to IRENA, China could save up to \$1.6 trillion worth of energy costs by transitioning to green sources.⁴⁴ Another report by the Energy Transition Commission estimated that by shifting to renewable energy and low-carbon emission sources, China could save about \$1.8 trillion.⁴⁵ The

transition could help China achieve multiple economic and environmental benefits and have strong energy security.

The transformation will also help China to improve its healthcare sector. China has to spend a major amount of funds on healthcare due to the impacts of severe climatic conditions, air quality, water pollution, and lately, Covid-19. In China, air pollution causes the death of nearly 2 million people every year and millions more face different health issues.⁴⁶ The transformation towards the green and clean energy sector will improve air and water quality which will eventually help in improving public health and save the government's costs in the healthcare sector.

One of the key economic benefits of green development would be increased export opportunities. China is already a leader in the production of sustainable energy sources. It is dominating the global solar panel supply chain. With a share of 80 per cent in the necessary stages of manufacturing solar panels, China is set to rise to 95 per cent for components like wafers and polysilicon. By utilising their capacity and ability in this field, China exported 23.8 GW of solar cells and 36.3 GW of solar wafers in 2022.⁴⁷ In the first ten months of 2022 alone it exported solar panels worth \$40 billion, i.e., 24 per cent more than the previous year.⁴⁸

Green Trade

In realisation of the future requirements and dynamics, China is already promoting the concept of green trade under which it intends to focus on exporting green and sustainable energy products. As a result, China has come out as a major player in the global green trade market. As the Chinese domestic green industries are expanding, the share of green exports is also increasing. A growing number of Chinese companies produce large amounts of renewable energy technologies such as solar panels, electric vehicle batteries, electric vehicles, wind turbines, etc., and export them globally. This will enable China to generate a large amount of revenue in future by exporting technologies

related to climate change. The Chinese green trade represents an integral part of China's economic development strategy. The country seeks to transition to a sustainable, low-carbon economy while tapping into the global demand for green products and services.

Aligning the BRI with Green Development

China looks forward to integrating its green development programmes into the BRI. Through investments and cooperation, the use of clean and sustainable energy will be promoted among member countries.

China will step up its interactions and cooperation with other countries to create environment-friendly tools, services, infrastructure, and technologies. Additionally, it will actively encourage the export of new Chinese energy and other low-carbon, environment-friendly products and technologies, making green development a crucial part of the overall BRI.⁴⁹ The BRI contributes to the development of green energy projects like wind, solar, and hydro in multiple countries. Moreover, it is supporting developing countries in establishing sustainable public transport and infrastructure. Most importantly, it will boost international cooperation and bring together partner countries to implement the established goals to address climate change.

One way to enhance the environmental sustainability of the initiative is through the Belt and Road Initiative International Green Development Coalition (BRIGC). The alliance was established at the second Belt and Road Forum for International Cooperation held in Beijing from 25 to 27 April 2019. The alliance is an open, inclusive, and voluntary international network that aims to ensure that the BRI supports the 2030 Agenda for Sustainable Development and brings long-term green and sustainable development to all participating countries. The alliance currently has 134 partners, including 26 environmental ministries from the UN member states.⁵⁰

Over a hundred countries are a part of the BRI. Being a trans-continental project, it can implement actions against climate change at the global level. Integrating sustainable and green initiatives in the BRI is necessary to implement Agenda 2030. If the BRI is not made sustainable and environment-friendly, it will damage the climate even more as the project has trillions of dollars of investment in energy and infrastructure. With economic development, the BRI must promote sustainable development and ensure environmental protection. The projects should be designed with a keen focus on their economic as well as environmental sustainability.

Impact of Green Development on Developing Countries

As noted earlier, large economies like the United States and China are the biggest contributors to global carbon emissions. However, they are not the ones most affected by the effects of climate change. The biggest threats are faced by developing countries with minimal contribution to carbon emissions. Countries like Bangladesh, Maldives, Myanmar, the Philippines, and Pakistan, are among the most affected countries by climate while having extremely low carbon emissions compared to developed states. The recent flood in Pakistan is one of the most prominent examples of how climatic changes are further damaging the already weak economies. In addition, due to weak economic structure, it is extremely difficult for these countries to implement initiatives to build resilience against climate change as the technology has a high cost.

China's green development initiatives can help developing countries shift towards sustainable development. It can provide financing to developing states in terms of investments, loans, and green bonds for their projects. China is investing heavily in sustainable initiatives in multiple parts of the world. This provides an opportunity for developing states to partner with China to gain

access to Chinese investments and their expertise to expand their sustainable infrastructure and reduce their carbon footprint.

China is a leader in sustainable energy technologies and can help in developing solar, wind, and hydroenergy plants under the umbrella of its green development. Many countries under the BRI are already getting assistance from China to shift their energy sector to sustainable energy sources. For example, China is assisting Pakistan in building multiple solar parks and dams to reduce the country's dependence on fossil fuels. A few public transport projects, like the Orange Line Train, have also been developed with the help of China.

China is already leading in manufacturing clean energy products like solar panels, wind turbines, electric vehicles, etc. As technology improves and industries become stronger, the cost of these technologies will eventually lower even further. This will make it much easier for developing countries to acquire new technologies and equipment at cheaper rates. This will also make the transfer of knowledge and technology easier and help these countries adopt new practices and implement sustainable development properly.

Where is China Lacking?

China is considered a leader in the efforts against climate change. However, despite its significant efforts, there are multiple areas where experts believe that China is lacking or not doing enough to meet the targets.

Reliance on Coal

China is still the world's largest consumer and producer of coal. Coal is the fossil fuel with the highest carbon emissions. Although China has made efforts to lower its reliance on coal, it still has the largest share in the country's energy mix. China currently has 1,118 working coal-based power plants and has built 14 new overseas coal plants since promising 'no new one'.⁵¹ In addition, in the first quarter of 2022, different provincial

governments across China collectively approved 8.36 GW of new coal power projects.⁵² Critics argue that China needs to pace up its efforts for transition to renewable energy sources such as wind and solar.

Disconnect with the Public

The Western world also criticises the projects under green development for lack of transparency. China is blamed for giving limited public access to information about its green development projects and policies. This is making it difficult for people to fully understand government plans and participation in environmental protection projects resulting in little to no public participation in the processes related to green development. The Chinese government tends to rely heavily on top-down approaches and state-led initiatives, with limited input from local communities or civil society organisations.

Weak Implementation of Laws

Many experts believe that despite having strong environmental laws and regulations, there is a lack of effectiveness in the enforcement mechanisms. Furthermore, environmental regulators often face significant pressure from local officials to prioritise economic development over environmental protection, which leads to weak enforcement of environmental regulations.

Data Accuracy Issues

China is also blamed for fabricating or presenting misleading data on many projects. There are some incidents where officials and companies have falsified data on environmental projects to achieve targets to avoid penalties.

Backlash against Mega Projects

Mega projects like the BRI are facing backlash, especially from Western countries, for their environmental impacts. China's global expansion through investments in other countries through

the BRI could lead to environmental degradation and resource depletion in these countries. The project can affect climate at the global level to achieve the economic goals of China. In addition, critics argue that the government's emphasis on economic stability and economic growth could lead to prioritising short-term gains over long-term environmental sustainability.

Conclusion

China's green development is central to its global fight against climate change. It clearly shows that without considerable efforts by China, the world would not be able to meet its goals to create resilience against climate change. China understands the importance of sustainable and clean development as it is also highly affected by the changing environmental circumstances. The Chinese economy has already started to see the effects of environmental changes considering the severe damage to its agriculture sector, water system, and ecology. Also, these impacts can further increase if current plans are not implemented properly.

Even though China is leading in clean energy technology and has improved the share of sustainable and clean energy sources in its energy mix, it remains the largest contributor to global carbon emissions and its energy sector has the biggest share in these emissions. China has made significant progress in establishing clean energy sources, but a major part of its energy share is still dependent on fossil fuels. It is also criticised for building more coal plants, which if it continues, will make it difficult for it to achieve carbon neutrality by 2060.

China must align its overseas and multilateral projects with its climate-friendly policies to ensure a sustainable global environment. Mega projects like the BRI play a key role in this transformation. There are trillions of dollars in investments all over the world in infrastructure, industrial, and energy sectors, that could lead to severe consequences if they are not made climate-friendly. China has also invested in some fossil fuel energy

projects in other countries that are harming the Chinese narrative of transformation towards green development. It can damage international arrangements like the Paris Agreement to limit global warming to 1.5°C. Integrating climate change policies and agreements with foreign investments and inter-continental projects like the BRI is crucial.

The economy has always been a core subject for the Chinese leadership. It will not be wrong to say that everything that China does has an economic element in it and green development initiatives are no exception. The country understands the importance of environment-friendly technology and products in the coming years. Green technologies have a huge economic potential that can generate a large amount of finance for China. The Chinese leadership has already placed the country in the front to lead the global transformation towards green development. Chinese companies are leading the race to develop green technology and are quickly expanding. Countries are investing more and more every year to diversify their energy, industrial, and development sectors to reduce their dependence on fossil fuels. As time passes, this spending will only increase further and China would be in an ideal position to export a large amount of its climate-friendly technology to other parts of the world.

An expansion in China's green industries will make these products more affordable in terms of price and provide a key opportunity for developing countries to import these technologies at cheaper rates. Furthermore, the transfer of technology will make it easier for developing states to transfer their energy and industrial sectors from fossil fuels to clean energy sources. China is already helping other countries to establish a sustainable development structure that would save them from climatic disasters.

China has made significant progress in transitioning to renewable energy and reducing emissions from its industrial sector. In addition, it has also implemented policies to promote

energy efficiency and conservation, such as improving building codes and investing in public transportation. Overall, while China has taken significant steps to address climate change, there is still room for improvement. The effectiveness of its efforts will depend on continued progress and implementation of policies and initiatives aimed at reducing emissions.

China's efforts are necessary to meet the global goals to mitigate challenges emerging from climate change. Without collective efforts at the global level, the targets for addressing climate change cannot be achieved. The international community, especially the major carbon-emitting countries, must work together to address this global challenge.

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