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Advances in Climate Change Research xx (2016) 1-9

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## Global low-carbon transition and China's response strategies

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Received 7 April 2016; accepted 28 June 2016

#### Abstract

The Paris Agreement establishes a new mechanism for post-2020 global climate governance, and sets long-term goals for global response to climate change, which will accelerate worldwide low-carbon transformation of economic development pattern, promote the revolutionary reform of energy system, boost a fundamental change in the mode of social production and consumption, and further the civilization of human society from industrial civilization to eco-civilization. The urgency of global low-carbon transition will reshape the competition situation of world's economy, trade and technology. Taking the construction of eco-civilization as a guide, China explores green and low-carbon development paths, establishes ambitious intended nationally determined contribution (INDC) targets and action plans, advances energy production and consumption revolution, and speeds up the transformation of economic development pattern. These strategies and actions not only confirm to the trend of the world low-carbon transition, but also meet the intrinsic requirements for easing the domestic resources and environment constraints and realizing sustainable development. They are multi-win-win strategies for promotion of economic development and environmental protection and mitigation of carbon emissions. China should take the global long-term emission reduction targets as a guide, and formulate medium and long-term low-carbon development strategy, build the core competitiveness of low-carbon advanced technology and development pattern, and take an in-depth part in global governance so as to reflect the responsibility of China as a great power in constructing a community of common destiny for all mankind and addressing global ecological crisis.

Keywords: Climate change; Low-carbon transformation; Energy revolution; CO2 emission reduction

### 1. Introduction

Global climate change threatens the earth's ecological safety as well as human survival and development. It is one of the biggest threats facing humanity. Since the United Nations Framework Convention on Climate Change (hereinafter referred to as the Convention) was adopted in 1992, the world has cooperated in global response to climate change. Paris climate conference in December 2015 successfully reached an

Peer review under responsibility of National Climate Center (China Meteorological Administration).

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Agreement, establishing the long-term goals and a new mechanism for post-2020 global response to climate change, which promotes the process of global cooperation. Low-carbon transition against the background of global response to climate change will surely have a significant impact on the pattern and pathway of China's future economic and social development.

# 2. New global governance model of Paris Agreement accelerates the global low-carbon transition

The Paris Agreement makes an arrangement for the system of post-2020 global response to climate change action. It is an Agreement that is of legal force and applies to all countries (UNFCCC, 2015). Following the Kyoto Protocol, it becomes a new start and a milestone for global response to climate change under the guidance of the Convention. The new

### http://dx.doi.org/10.1016/j.accre.2016.06.007

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Please cite this article in press as: HE, J.-K., Global low-carbon transition and China's response strategies, Advances in Climate Change Research (2016), http://dx.doi.org/10.1016/j.accre.2016.06.007

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mechanism of global climate governance adopted by the Paris Agreement reflects a new concept of global governance that all parties cooperate voluntarily in the common interest of the globe and all humans.

The Agreement establishes the long-term goals for the global response to climate change, that is, to hold the increase in the global average temperature to well below 2 °C above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels. The global cooperative action to reduce carbon emissions will be guided by the above goals and be based on the parties' bottom-up INDCs. Information is provided for the parties to help them continue to update and strengthen their INDC objectives and efforts by enhancing transparency of mitigation and support and global regular collective summary or inventory. Under the principle of common but differentiated responsibilities, the global longterm goals are to be achieved through all parties' voluntary cooperation, and continuous and conscious efforts to strengthen the mitigation and support actions. This new global governance mechanism aims to create a community of common destiny for all mankind, and work together to tackle the common crisis of the earth and human beings. Under the new regime, parties need to abandon the narrow thinking of traditional "zero-sum game", and shift to a win-win cooperation of total-sum game. The new mechanism is no longer a top-down allocation and sharing of responsibilities and obligations, but becomes the parties' voluntary acts after coordinating and balancing the common interests of the globe and all mankind, their own interests and sustainable development under the long-term global goals. This mechanism based on voluntary action also reflects all parties' consciousness of responsibility and political mutual trust in tackling the global ecological crisis. The Paris Agreement emphasizes on climate justice, and abides by common but differentiated responsibilities, fairness and respective capacity of the Convention. The key lies in that all countries can achieve sustainable development fairly in the cooperative action to deal with climate change. It urges all countries, especially developing countries to combine addressing climate change, eliminating poverty and their own sustainable development, taking a climate-friendly low-carbon development path, and achieving a win-win development and carbon reduction. The global governance which manages ecological crisis represented by climate change reflects the common interests of all mankind. The new pattern of the governance promotes the construction of a community of common destiny for all mankind—all countries cooperate voluntarily and work together to build a win-win, fair and reasonable mechanism. International cooperation on climate change will surely further the common development of all countries to realize mutual benefit and win-win situations.

The Agreement creates a new model of global governance to deal with environmental crisis, but its implementation is still facing many challenges and arduous tasks. The Agreement makes it clear that to control the global temperature rise no more than 2 °C, a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases (GHGs)—net zero emissions of GHGs—should be achieved in the second half of the 21st century, which means the end of the era of fossil fuels by that time. That helps to accelerate the pace of economic and energy low-carbon transformation, and will lead to revolutionary changes in economic development pattern, social governance model and the energy system, thereby reshaping the competition pattern of international economy and technology. All countries will face severe challenges and arduous tasks.

China has played a prominent role in reaching the Paris Agreement and advancing the construction of a new global governance mechanism. Sino-U.S. and Sino-French joint statements on climate change published before the Paris conference built consensus on the core and focus for the Agreement, acting as a base. In particular, General Secretary Xi Jin-Ping, in his opening speech, put forward a new global governance idea-to promote the construction of a community of common destiny for all mankind, by which he means to create a future of win-win cooperation, with each country making contribution to the best of its ability, of the rule of law, fairness and justice, and of inclusiveness, mutual learning and common development. China has actively promoted the success of the Paris climate conference, serving as a good example of the practice of General Secretary Xi's new concept and China's in-depth participation in global governance.

China actively promotes the construction of a new global governance mechanism of win-win cooperation, fairness and justice, and common development in the international community, which provides positive energy for and plays a constructive and leading role in dealing with global environmental change and human sustainable development. This reflects China's consciousness of responsibility, as a big country, for the common interests of mankind and common development of all countries. Besides, with the global trend of low-carbon transition, China will actively promote the transformation of economic development pattern, and energy production and consumption revolution domestically, so as to achieve green, recycling and low-carbon development, conform to the changes of economic and technological competition pattern in global low-carbon transformation, and build core competitiveness for its own low-carbon development. China will also make its contribution to addressing ecological crisis and achieving sustainable development globally.

# **3.** Global low-carbon transformation will promote fundamental changes in economic and social development pattern

Low-carbon development in response to global climate change is the only way to protect the earth's ecology and human survival and development, and the voluntary cooperative acts of all parties to protect the common interests of all mankind. The situation is urgent, and the task is arduous, therefore all countries should establish ambitious goals and constantly increase the ambition in their actions. Besides, low-carbon transformation involves all economic fields and all aspects of society, thus governments, businesses, and people of all countries should act together. The transformation will lead to fundamental changes in the pattern of economic development, the concepts

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