

# Research and climate change adaptation issues related to intellectual property system

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[Subject] **International Intellectual Property Law**

[Source] "intellectual property" in 2010 the first five

## Abstract

In response to climate change adaptation and background about the question of the intellectual property system frequently appears, for climate-friendly technology development, transfer and explore the application of intellectual property systems have emerged, the global intellectual property system is bound to make appropriate climate change response, China also needs to seek intellectual property issues related to climate change regime from domestic, regional and global institutional system of three levels coping strategies.

Key words climate change; climate-friendly technologies; intellectual property system

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### *Questioned under an intellectual property regime, adapt and respond to climate change background*

Academics from the intellectual property system never stop questioning, [1] and in recent years, when climate change has become a hot issue of global concern, questioned about the intellectual property system is more frequent and focused in the following three aspects:

(A) the intellectual property system could become an obstacle to the promotion of technological progress and

**Establishment and development of the global intellectual property system, to a certain extent in order to continue to promote scientific and technological innovation, promotion and application of science and technology and to ensure that the growing investment in the technical field. [2] but there is no clear evidence to prove that the intellectual property system to better achieve this goal. [3]** In contrast, in the process of adaptation and response to climate change, and climate-friendly technology, innovation, promotion and application of it to some extent hampered by the intellectual property system. First, the global climate-friendly technologies are unevenly distributed, a few developed countries to grasp the greater number of climate-friendly technologies. According to statistics, 1999-2002 2009, patent applications from the United States, Japan, the European Union and a few other countries or regions accounted for climate-friendly technologies to apply 55% of the global amount, [4] This means that most of the countries in this Before class technology, you need to get through commercial negotiation of technology transfer or obtain permission, and complex commercial negotiations may make or permit the transfer of technology to achieve a more experienced long wait, which slowed the promotion of climate-friendly technologies to some extent and application speed; secondly, to obtain patent protection in addition to the form, the climate-friendly technologies can also be obtained in the form of intellectual property protection technology secret, which means that part of the message of climate-friendly technologies adopted by its owners security measures, no

other person is almost impossible to obtain such information freely, climate-friendly technologies and innovative insufficient information may encounter difficulties with difficult to obtain; **once again, the main owner of climate-friendly technologies in the private sector, and intellectual property rights the private sector is increasingly becoming the main tool for competing and achieved market dominance, so the competition for the private sector may need to deliberately limit or deny others access to or use of related technologies, [5] and the intellectual property system provides for such behavior legality basis.**

*(B) the intellectual property system will prevent the widening North-South gap and the principle of common but differentiated responsibilities to achieve*

Global intellectual property system for intellectual property owners to get high returns in the global market provided the conditions, but also to be transferred by means of intellectual property rights or licenses need to pay a higher cost. **Originally on the level of economic development is relatively backward developing countries are under access to climate-friendly technologies cost pressures. [6] already exist for a long North-South gap in the transfer and application of climate-friendly technologies, it may be because of the intellectual property system and be intensified.** The international intellectual property system to climate-friendly technologies to provide the high prices of the "legitimacy" and a high level of legal protection.

**In addition to the economic level could widen the gap between North and South, the intellectual property system will potentially hinder realization of common but differentiated responsibility principle.** Accordance with their common but differentiated responsibility principle, in the process of adaptation and response to climate change, the developed countries should take more responsibility and an obligation, should assist as much as possible, to promote access by developing countries and application of climate-friendly technologies, but potential intellectual property system is developed to provide a non-performance-related liability is difficult to refute the reasons and excuses. **First, more climate-friendly technologies being mastered the private sector, while the TRIPS Agreement recognizes the proprietary intellectual property, so the country cannot be free to decide not only the transfer or licensing issues most climate-friendly technologies, the opposite should be protection technology Owner lawfully obtained the right to self-govern.** Under normal circumstances, if the owner refuses to technology transfer technology to developing countries or require transfer to a higher price, the state does not intervene. Secondly, as the core of the TRIPS Agreement establishes the international intellectual property system and the MFN principle of national treatment principle of intellectual property protection, requires members from the technical side of any other country to reach the minimum standards of protection should be given equal protection, or they will may be subject to trade sanctions, [7] Therefore, when the owner of climate-friendly technologies from developed countries to refuse or request the transfer of high technology transfer, developing countries tend to do anything, the developed countries should bear in addressing climate change issues in the corresponding responsibility also difficult to be implemented.

*(C) intellectual property system must accept the rank restrictions of human rights obligations*

In practice, "to continue to strengthen the protection of intellectual property protection is a basic requirement of human rights" is to refute "the intellectual property system could hinder climate-friendly technologies and innovation, promotion and application", "climate change-related intellectual property issues should place international rules of procedure as an official One of the reasons one of the topics to be discussed, "the. [8] However, human rights attributes of intellectual property rights, human rights obligations, rank, etc. but just proof of climate-friendly technologies and innovation, promotion and application needs special attention and exceptional treatment of the intellectual property system. Some climate-friendly technology holders of intellectual property rights as human rights attributes to control or restrict the use of technology, the requirements get more revenue reasons, [9] not only directly impede technological innovation, promotion and application, but also on human rights obligations bit order of disregard. "UDHR" human rights into "civil and political rights" and "economic, social and cultural rights" categories. In general, basic human rights in the former occupies an important position in the system highlighted with respect to the latter, it should have a certain "priority." [10] **The demand for climate-friendly**

**technology is based on the need for the right to life, and intellectual property rights protection is one of the elements, when the two conflict, the right to life should take precedence over property rights. It can be said that the intellectual property system requirements rank human rights obligations cannot be climate-friendly technologies and innovation, barriers to the promotion and application of climate-friendly technologies and innovation, promotion and application-related intellectual property issues should be re-examined.**

Second, to explore and address climate change adaptation-related intellectual property system

With the question of the intellectual property system, in theory and practice designed to promote the emergence of a number of climate-friendly technologies and innovation, promotion and application of the intellectual property system to explore:

*(A) compulsory licensing*

**TRIPS agreement on public health issues at the core, a more detailed application of the provisions of the compulsory license. In adapting to discuss intellectual property issues associated with addressing climate change, the compulsory licensing system borrowed or extended to the field of the promotion and application of climate-friendly technologies has been more widely supported.** Such as "United Nations Framework Convention on Climate Change" (hereinafter referred to as UNFCCC) Conference of the Parties, China, India and other countries, believes that the scope of the compulsory license can be extended to the field of climate-friendly technologies; [11] United Nations Economic and Social Commission for Asia Pacific (ESCAP ) also believes that the interpretation of TRIPS flexibilities to allow equipment and goods production and related processes related to climate change compulsory patent transfer; [12] **World Intellectual Property Organization (WIPO) also believes that compulsory licensing regime Under certain circumstances applicable to the need to address climate change technologies. [13]**

**However, unless the existing compulsory licensing system be reformed and improved, otherwise it is difficult to successfully apply to the transfer of climate-friendly technologies and application issues being.** First, climate-friendly technologies alone does not fully meet the TRIPS agreement and other applicable provisions on compulsory licensing conditions. Compared with public health issues, climate-friendly technologies often do not have the drugs possess irreplaceable features. Secondly, compulsory licensing required to pay the necessary fees, and climate-friendly technologies is difficult to get the cost faced by the developing countries. Compulsory licensing system cannot solve the problem of access to the high cost of climate-friendly technologies. **Third, the compulsory licensing of trade secrets cannot be solved in the form of technology transfer and application problems, and there may be a certain degree of stimulation techniques and the choice of everyone abandon patent protection in the form of trade secrets to protect technology, but will increase access to information on climate-friendly technologies difficulty of society. [14]** Fourth, some oppose national and international organizations also make compulsory licensing is hard to borrow or extend the field of climate-friendly technologies. Such as: the United States strongly opposes the compulsory license apply to climate-friendly technologies; [15] International Chamber of Commerce (ICC) has also declared: trying to change the existing provisions on compulsory licensing of intellectual property rights system, which may not only not solve the climate-friendly technology transfer and application problems, but also may be due to damage to the existing intellectual property system and achieved the opposite effect. [16]

*(B) a special fund of intellectual property rights*

Addressing climate-friendly technology development and application of intellectual property issues faced, to a certain extent, the need to provide adequate financial support for technology development, transfer and application. UNFCCC stipulates that Annex II countries shall provide new and additional financial resources for mitigation and adaptation in developing countries bear the agreed full incremental costs of action, and to take appropriate measures

to promote the transfer of relevant technologies. [17] at the Copenhagen climate conference, China and other countries stressed the need to establish a special "Adaptation Fund", and will promote the development of climate-friendly technologies, the promotion and application set as one of the main purposes of the Fund. Eventually, some provisions of the Copenhagen agreement mentioned "increased new or additional supplementary predictable and adequate funding in order to promote technology development and transfer." [18] However, intellectual property UNFCCC seek special fund is still not functioning properly and adequately. First, the agreement formed the climate conference exactly is a political agreement still hard to clearly define the legal agreement, [19] which allows countries to establish commitments in the fund, whether other aspects of running a corresponding legal obligations into question, but also a direct result of the Fund The practice cannot be carried out smoothly. Second, the fund is subsidized costs in developing countries to access and use of climate-friendly technologies, or by countries to buy the corresponding intellectual property rights, and then facilitate the transfer and its application to other countries, but the difficulty is great, because such countries should be how to apply What technology fund to purchase and post-purchase or transfer of technology should be free to be exchanged between the countries and other issues were not clear. Therefore, the need to develop more international experience with reference to other funds already mature operating mechanism, more systematic and clear design. [20]

In addition, a special fund of intellectual property also includes an internal fund system established in some countries, such as Brazil's National Climate Change Fund established [21] , carbon investment fund set up by the British government . [22] , etc. are to promote the development of climate-friendly technologies and applications content. Financial support is an important guarantee for technology development, transfer and application, whether international or national level or continue to pay attention and improve the IPR system is one of the important tasks fund adaptation and response to climate change issues.

### *(C) independent IPR regime*

The so-called independence of the special regime, including two forms: green patent system and patent reward system.

**Green patent system is to realize the intellectual property system to climate change concern, climate-friendly technologies as a separate item be necessary institutional reforms and design, such as the rapid implementation of an independent review mechanism, the new classification system design patents to reconsider non-obviousness and novelty of the requirements.** [23] but to seek an independent green patent system on an ongoing basis on the intellectual property system is not easy. Currently, the practice of States are just starting from the part of the contents of the subtle, such as the review of speed optimization, such as issues related to the reform of the patent system to shorten the substance of protection, etc. yet still in the academic research being discussed. According to reports, the United States, Britain, Australia and other countries are building climate-friendly technologies for rapid review of the channel, the European Patent Office (EPO) is about to launch a new clean energy patent classification system. [24] These new attempt to help further explore green patent system, but the ultimate green patent system has not yet occurred and may occur when asserted, because even in theory, the green of the patent system, there still exist Some problems, such as: lack of climate-friendly technologies agreed definition, its scope cannot be clearly defined and so on. [25]

Patent reward system mainly refers to the inventor between government granted exclusive rights to their inventions enjoys patent system and the reward system of direct government funding of various research and development regimes. General practice is to make the invention inventor access to government reward rewarded after the inventor, his invention is placed in the public domain and freedom for all, free of charge. The patent reward system in the field of climate-friendly technologies is one of the more popular recently explored concerns. But with the compulsory licensing system similar to the patent reward system is still mainly used in public health from the perspective of the development of drugs to reward, how it extends to climate-friendly technologies is also no specific practice areas to explore. Such as how to set up climate-friendly technologies in the field of the award

criteria, how to raise reward money, how to be implemented and how to make the patent system to maintain its role in order to compete at the international level such issues are yet to be further studied. [26]

#### ***(D) intellectual property sharing system***

**Climate-friendly technologies and related intellectual property sharing system mainly refers to initiate the establishment of a number of owners of intellectual property and technological exchanges and exchange system on their own, often manifested in the form of patent pools or similar.** [27] Currently, a certain degree of recognition in the international arena is a practice called "Green Xchange" plan [28]. Under the scheme, members can use the free registration form each other climate-friendly technology patents. Of course, the plan shall also be authorized to select some users for commercial gain. Such sharing model with different practice has also seen some open to allow others to freely and free use of climate-friendly technology patents related to shared form. These shared systems, compared with these other systems, its substantive change is the patentee claiming that they will not perform its patent or charge a small fee in some cases. Climate-friendly technologies related to intellectual property sharing system, to a certain extent, can be considered to be an ideal alternative solutions related to the legal system. As compared with the changes in the law, these systems easier to build a successful and can be faster and more flexible to achieve technology transfer. However, although such sharing system adaptation and response to climate change is needed, but it still is voluntary, so many important technologies may also not be able to get through such a system, it is also not sufficient to adapt and cope with climate evolution changes in the core, generally applicable intellectual property system. [29]

In addition to the above, a number of other climate-friendly technologies to explore the intellectual property system are also emerging, such as: climate-friendly technology patent information tracking system, climate-friendly technologies patent early warning mechanism. Adapt and respond to global climate change, the urgency of the needs to improve the social climate-friendly technologies, which explore intellectual property system is beneficial, even if they might discover there are still some immature place. For exploration and practice reveals deficiencies and problems, to seek improvement and policy solutions to promote and further the development and effective operation of climate-friendly technologies related to the intellectual property system is a common task of continuing the whole society.

Third, the future development of the global intellectual property system and China's response to

Future development of (a) the global IP system

Although adaptation and coping with climate change-related issues in the intellectual property system there a lot of controversy, but the increasingly serious problem of climate change, would ultimately force the intellectual property system to make consistent responses at the global level. [30] Under the influence of adaptation and response to climate change issues, the future development of the global intellectual property system needs first to clarify the following issues:

#### ***1. And international agencies involved in the division of labor: the WIPO, WTO core***

Currently, UNFCCC, ICC, United Nations Environment Programme (UNEP), the World Bank Group (WBG), the Global Environment Facility (GEF), WTO, WIPO and other international institutions are under the influence of climate change issues in the future development of the global intellectual property system response and resolution efforts. However, broad participation in research and provides a wealth of specific recommendations, but also factors in the future may lead to the development of the global intellectual property system tends to be complex, and some international agencies already demonstrated the weakness of problem solving, such as the UNFCCC is widely considered expensive and of little practical results, triggered by political bickering than constructive solutions to more; UNEP, WBG, GEF, etc. are considered excessive presence of inclusiveness and inefficiency, to some extent, it will inhibit the production of substantial agreement . [31] adaptation and response to climate change,

the need for a comprehensive management of technological innovation, transfer and application of the legal framework for intellectual property rights, and to successfully build this legal framework, will have to fully consider and deal with existing intellectual property laws relations system, it has the ability of international institutions such institution is the best choice objects. WIPO and the WTO has a comprehensive and enforceable intellectual property agreements, ability and experience in dealing with the global intellectual property matters are far better than other international institutions, it should become contribute to the future development of climate change-related intellectual property system core Procedure places. Of course this is not to exclude participation in other international bodies, UNFCCC, UNEP, WBG, GEF and other climate issues can be more professional analysis and understanding involved in institutional development, funding, and to provide the necessary experience and valuable suggestions, the core of WIPO and the WTO is mainly reflected in its commitment to build the final summary should be required for system-related agreements, as well as aspects of the work to develop management oversight responsibility for system operation and so on.

## ***2. Path Selection: improve the existing system and strive to reach a new agreement in parallel***

Both the existing international intellectual property system formed by the UNFCCC Conference of the Parties "Marrakesh Accords", "Bali Action Plan" and the "Copenhagen Accord", or TRIPS agreements, in fact, there are a wide range of issues relating to technology transfer intentions But in practice, the transfer of climate-friendly technologies occurrence is not ideal. The reason is related to the intention to form through the legal system failed to perform the necessary force is one of them, so in order to adapt and respond to climate change-related intellectual property issues to resolve future development as the goal of global intellectual property system should be based on the transfer of technology intention to provide relevant actions enforceable legal system support. Improve the existing international intellectual property system, and strive to reach new intellectual property agreement should be parallel paths for future development of the global intellectual property system.

Improve the existing international intellectual property system, mainly the TRIPS Agreement should be revised and improved, care will incorporate climate change. TRIPS Agreement, to some extent, a clear objective of promoting technology transfer, but also for the realization of the relevant provisions of climate-friendly technology transfer are used, such as the seventh, eight, thirty, thirty-one involved in the promotion of sixty-six etc. Technology Transfer content. Unfortunately, however, these provisions have not been enough attention and the necessary respect, [32] At the same time, these terms are not clear, there are still many, to be interpreted, to be refined place. Such as Article 31, what is "adequate compensation", "authorized intention" how to define "national emergency or other circumstances of extreme emergency or public non-commercial purposes," such as how to judge not clear, direct impact on the execution of the agreement. [33]

Except for the amendment and improvement of the TRIPS Agreement, there is need to depart from the practice of seeking to enter into and execute a new international agreement. As mentioned above, there are a variety of climate-friendly technologies to address the access and application of systems aimed to explore, discover the accumulated experience of these will be a valuable resource for the development of the global intellectual property system, WIPO should make full use of these resources, negotiations on a new climate change organization related to the TRIPS Agreement, to explore build richer, effective, applicable intellectual property regime. As to promote climate-friendly technology innovation as the goal of information access and benefit-sharing agreement; compete agreement to prevent global climate-friendly technology patents, rights holders anticompetitive interventions; transfer of climate-friendly technologies to solve the financial problems of Promotion Fund and other mechanisms for the application of intellectual property rights. [34]

## ***3. Institutional system: the integration allowed to exist on the basis of diversity***

IP obligations arising from the integration of the intellectual property system to protect all members of the party with the absolute social and economic development imbalances, will resolve issues related to climate change has played a negative impact on a variety of intellectual property rights will lead to the original continued loss of

legal resources. [35] and climate change-related intellectual property system construction and operation, should properly handle the relationship between system integration and system diversity. As in the process of improving the TRIPS Agreement should be fully taken into account the uneven distribution of climate-friendly technologies and other issues, to give developing countries more discretion applicable intellectual property laws. Another example is the development of the global intellectual property system may also allow regional multilateral or bilateral agreements with the appropriate breakthrough innovation. After the TRIPS Agreement, the growing emergence of regional trade agreements TRIPS-plus agreement does not essentially made from the development of the TRIPS Agreement, which is simply to provide a higher standard than the TRIPS agreement, broader, stronger effect intellectual property protection system only. [36] This does not meet the needs of climate-friendly technology innovation, transfer and application, because the climate change issue though is a global issue, but there are certain areas, namely climate change a particular region facing a similar nature, the demand for climate-friendly technology will have the same sex. When the issue of climate change very seriously in a region, the countries in the region in order to obtain more freely, using their own have each other climate-friendly technologies and to give up the intellectual property system, reducing demand for intellectual property protection standards is not without possible. Under the influence of adaptation and response to climate change, the development of the intellectual property system in the pursuit of global system integration process, but also from the rich legal resources, and enhance the effectiveness of the system and other aspects of starting, allow the existence of appropriate institutional diversity.

## *(2) China's coping strategies*

### **1. Promote the improvement and development of domestic intellectual property system as soon as possible**

While the existing international intellectual property system to a certain extent may hinder climate-friendly technology innovation, transfer and applications, but its protection of intellectual property is still to be current legal obligations of States. The considerations involved in global economic development, international cooperation, etc., in some developed countries to strengthen the status of climate-friendly technologies under the protection of intellectual property rights, we should also make full use of the intellectual property system to encourage the development of domestic intellectual property rights. At present, China is vigorously promoting the development of low-carbon economy, promote innovation and application of climate-friendly technologies, it should actively study the characteristics of such technology, the combination of these intellectual property system has emerged to explore practical experience, change and improve the country as soon as possible The intellectual property system. As the implementation of climate-friendly technologies patented quick censorship, [37] the establishment of national mechanisms have a significant impact on the purchase of climate-friendly technologies, and improve patent reward system climate-friendly technologies and so on.

### ***2. Strengthen exchanges and cooperation on climate-friendly technologies, and emphasis on the development of regional intellectual property system***

First, although the adaptation and response to climate change is a common affairs of mankind, but in practice, the process for handling such international affairs can play a key role is often only part of the country. **From the economic development capacity and influence in international affairs, such as, the United States, European Union, Russia, India, Japan, Canada, South Africa, Australia, Brazil, etc. are the intellectual property system for development related to climate change is extremely important implications for future national or area, [38]** Meanwhile, they are also currently the main distribution area of climate-friendly technologies, and they carry out long-term, in-depth technical exchanges and cooperation will help to reach a consensus on climate change-related intellectual property system in the future development, but also will help domestic climate-friendly technologies to obtain information to help innovation and application of domestic climate-friendly technologies.

Second, **the pace of China's participation in regional trade cooperation is accelerating regional cooperation in trade, climate change-related intellectual property issues in which attention should be paid also optional strategies.** In this regard, efforts can be made from three aspects: First, the "Mainland and Hong Kong and Macao Closer Economic Partnership Arrangement" (CEPA), "Cross-Strait Economic Cooperation Framework Agreement" (ECFA) [39] under other agreements explore the field of climate-friendly technologies between the mainland and Hong Kong, Macao and Taiwan IPR regime without boundaries, that in order to adapt and respond to climate change as the goal, the establishment of climate-friendly technologies share a common system of intellectual property related. The second is to explore cooperation on intellectual property system in the field of climate-friendly technologies in other free trade agreements have been signed. **For example, in China-ASEAN free trade area, you can try to build a regional climate change-related technology development, transfer and application system.** [40] Third, it could seek to establish bilateral free trade agreements with countries of the existence of complementary relations in the field of climate-friendly technologies, such as with an advantage in advanced transport technologies and in the construction, industrial energy-saving technology in the field of development is relatively less national negotiations to establish a free trade agreement and seek technical exchanges and cooperation under the Agreement. [41]

3. Continue to be reasonably related to climate change in development of the international intellectual property system

First, as a member of the party UNFCCC, WIPO, WTO and other international organizations in its handling intellectual property issues related to climate change, China should actively exercise the right to make proposals, statutory right to participate in the discussion, voting rights, etc., in order to promote Chinese intellectual property system model [ 42] an active role in the development of the impact of the global intellectual property system.

Second, **China should contribute to WIPO and the WTO together to address climate change adaptation and become intellectual property issues related to the core of procedure places. Because if developed countries by section is intended to discuss intellectual property issues related to climate change only in the TRIPS agreement, necessarily involves whether high standards of intellectual property protection should be to re-examine the issue, and the high standards of intellectual property protection is developed protection of national interests, any possible attempt to reduce standards of protection are bound to suffer from strong resistance.** With respect to the WTO is concerned, WIPO is a specialized agency of the United Nations deal with intellectual property issues, which of course does not lead to the problem of intellectual property protection based on trade sanctions, which have the ability to adapt and contribute to tackling climate change.

Third, China should focus on the development of the international intellectual property system choose to participate in the way. For a long time, the developed countries are accustomed to using some plausible theory to support its claims of intellectual property issues, while most developing countries would prefer to dissatisfaction of the intellectual property system to resort to emotional release, only emphasizes behind, for concessions in order to achieve "extrajudicial mercy", [43] while ignoring the legitimacy from the intellectual property system, such as the theoretical level of moral rationality to safeguard their legitimate interests. China should explore more theoretical basis for the existence and protection of intellectual property rights from the perspective of intellectual property law and then applied to participate in the international intellectual property system being developed. **As classical, human rights intellectual property infringement of the right to life cannot be the reason that requires specialized treatment implications of climate change, protection of intellectual property issues important theoretical basis.** In recent years, the development of the judicial practice of the international intellectual property system can often play an important role in promoting, such as the U.S. eBay case [44] and a series of cases involving patent infringement case after the occurrence of injunctive relief, the judges use discretion improve and refine the ban on publishing standards, and this has given rise to judicial practice to discuss how to further the use of TRIPS flexibility provisions in the field of patent law, [45] in favor of clear and relevant provisions of the TRIPS refinement. **Our participation in the development of the international intellectual property system also should pay attention to the important role of judicial practice, in appropriate circumstances, you can directly use**



**the WTO dispute settlement mechanism to promote and improve the interpretation of the TRIPS Agreement** related content through consultations, litigation and other means.

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- [39] 2010年6 29, the two sides have signed the ECFA and the "cross-strait cooperation in IPR protection agreement."
- [40] China and ASEAN countries have common strategic and economic interests in environmental issues, environmental cooperation has become an inevitable trend, and together the two sides had signed the "Climate Change, Energy and the Environment Singapore Declaration" and jointly published "10 +3 food security and bioenergy development cooperation Hua Hin Declaration "and the Joint Declaration, which provides the basis for the two sides to further cooperation on climate change-related technology development, transfer and application of the free trade zone. Huang Haiyan: "Environmental protection in China - ASEAN cooperation melody crescendo", "Guangxi Daily" December 25, 2009, 13th Edition.

[41] Lie: "the development of low-carbon technology patents in good shape", "China Intellectual Property News" May 26, 2010, 5th edition.

[42] In discussing intellectual property issues related to climate change, the Chinese IP system model has been some scholars attention and recognition. Ian Harvey: IPR and low-carbon technologies, chinadialogue.net (website), December 5, 2008.

[43] Li Chen: "On the system of Intellectual Property Law", Peking University Press, 2005, pp. 107.

[44] EBay Inc. V MercExchange, LLC, 547 U.S. 388 (2006)..

[45] James Ralph: "Drug Patent Compulsory License national law practice in the new development", "China Intellectual Property News" 2007 6 On 20 April, 9th edition.