



Экологическая безопасность

О праве малых островных государств на получение компенсации за потери и ущерб, связанные с последствиями изменения климата On the liability of small island States to compensate for loss and damage associated with climate change impacts

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Аннотация. Малые островные государства могут подвергнуться серьезной угрозе при изменении климата из-за повышения уровня моря при таянии ледников.

В настоящее время международное сообщество достигло определенного консенсуса в оценке потерь и ущерба в результате изменения климата, но концепция и характер таких потерь и ущерба четко не определены.

Ученые придерживаются разных взглядов на определение ответственности за ущерб, причиненный в результате изменения климата. Анализ составляющих ущерба, причиненного в результате изменения климата, показывает, что его не следует путать с «трансграничным ущербом», а ответственность субъектов за результаты ущерба не должны быть карательной ответственностью. Скорее, следует установить «особую ответственность», отличную от традиционной ответственности и ответственности государства.

На практике трудности определения ответственности за ущерб, причиненный изменением климата, связаны с тем, что ряд договоров об изменении климата, в частности Рамочная

конвенция Организации Объединенных Наций об изменении климата, не содержат четкую правовую основу для установления компенсации, определения предмета ответственности, механизм деятельности климатического фонда. Международному сообществу следует уточнить правовую основу потерь и ущерба, вызванных изменением климата, используя при этом другие нормы международного права, обычного международного права и Конвенции по климату, дополняющих друг друга.

Кроме того, в этой сфере следует уточнить определение ответственных сторон, усилить обязательные механизмы реализации ответственности, расширить источники финансирования, в том числе для малых островных государств. Основные вклады и сумма взносов должны быть уточнены, а международное сотрудничество в области компенсации убытков и ущерба, причиненных изменением климата в малых островных государствах, должно осуществляться более согласованно.

Ключевые слова: малые островные государства, изменение климата, потери и ущерб, механизмы компенсации.

Abstract. Small island States are one of the main victims of climate change and, owing to their low sea level, are greatly threatened by sea-level rise and glacier melting as a result of climate change. At present, although the international community has reached a certain consensus on loss and damage due to climate change, the concept and nature of loss and damage due to climate change have not been clearly defined. Academics have different views on the determination of liability for damage caused by loss due to climate change.

The characteristics of damage caused by loss due to climate change and the proof of liability show that it should not be simply confused with «transboundary damage», and the responsibility and liability of the actors for the results of the damage should not be punitive liability, but should be defined as a liability that is different from traditional State responsibility and liability. Rather, it should be defined as a «special liability» distinct from traditional State responsibility and liability.

The practical dilemma in realizing liability for damages for losses caused by climate change lies in the fact that a series of climate change treaties, such as the United Nations Framework Convention on Climate Change, have not clarified the legal basis for compensation, the difficulty in identifying the subject of liability, the lack of a mandatory mechanism, and the insufficiency of the climate fund mechanism. The international community should clarify the legal basis for climate change-induced losses and damages, while utilizing other rules of international law, customary international law and the Climate Convention to complement each other.

In addition, the identification of the responsible parties should be clarified, mandatory mechanisms for the realization of liability should be increased, the sources of climate funds should be broadened, the distribution of climate funds in small island States should be improved, the main contributors and the amount of contributions should be clarified, and international cooperation in compensating for the losses and damages caused by climate change in small island States should be carried out in a concerted manner.

Keywords: small island states, climate change, loss and damage, compensation mechanisms.

As one of the most valued issues, in addition to natural factors, the historical activities of developed countries have an unshirkable responsibility for climate change.¹ Developed countries emit large amounts of greenhouse gases such as carbon dioxide in the process of industrialization, leading to a series of damage results such as rising global temperatures, melting glaciers and sea level growth. The loss and damage brought about by climate change has become one of the serious problems threatening the survival of human beings. It not only has a huge impact on natural resources and biodiversity, but also poses a great threat to national security and international

stability. Among them, climate change affects small island states (hereinafter referred to as small island states) seriously, as the least economically developed small island countries bear most of the losses and damage caused by climate change, and some small island countries even face the risk of flooding; in addition, small island countries are located in frequent natural disasters, climate change will also increase the frequency of natural disasters, affect the economic development of small island countries. Developed countries develop industrial economies but only resource-poor small island states, a result clearly not consistent with climate justice. However, based on

¹ He Zhipeng, Ma Wenfei. Practical exploration and future development of climate change damage relief [J] // Journal of Gansu University of Political Science and Law, 2019 (04): 86—100.

the damage results, whether the small island states can require developed countries to give compensation, whether there is a basis of international law, and how the current situation and predicament of the compensation, need for academic discussion and legal clarity.

1. Dispute over the nature of liability for damage caused by climate change

Damage caused by climate change is an important issue in the international climate negotiations. As early as 2007, the 13th session of the United Nations framework convention on climate change of the party conference reached the Bali action plan, appeared «loss and damage associated with climate change impacts», and currently involves the small island states loss and damage of international conventions or conference documents are for loss and damage measures, did not clear definition of loss damage caused by climate change. By clarifying the four characteristics of loss and damage caused by small island states caused by climate change, Zhang Chenyang believes that the nature of liability for loss and damage to small island states caused by climate change is not compensation liability but special compensation liability.²

Lin Canling believes that the liability for damage due to climate change is an independent form of responsibility, and in the absence of the United Nations Framework Convention on Climate Change, the Kyoto Protocol and the Paris Agreement, it is extremely difficult to prove a country for violating the obligations under the Convention; moreover, the major emissions of greenhouse gases represented by the United States refuse to ratify the Kyoto Protocol; the Convention is far from the realistic requirements for relief for damage caused by climate change.

Liability for damage caused by climate change must be resolved in other ways. The subject of greenhouse gas emission shall bear the responsibility of international law, in the form of compensation, intended to provide special loss for the public interest to reflect the fairness of law; in addition to the traditional state responsibility and cross-boundary liability, called «liability for damage caused by climate change».³

Gong Yu believes that climate change damage essentially belongs to the «cross-boundary damage» in the sense of international law, but it is also

a special damage that is different from the general cross-boundary damage. From harmful behavior and damage consequences should exist a physical link (excluding economic, trade, financial activities caused by unphysical damage), damage must be caused by human activities (excluding pure «disaster» damage), damage must be enough to trigger the severity of legal liability (excluding minor damage) and damage consequences must transcend national boundaries (excluding non-cross-border damage) the four elements, climate change damage can be incorporated into the category of cross-border damage. In addition to the commonality of general transboundary damage, climate change damage also has its own particularity. The damage caused by climate change should be defined as a «special transboundary damage», and the state compensation liability should be applied.⁴

It can be seen that there is no unified standard for the definition of the nature of the damage caused by climate change in small island countries. There is also a great dispute over the compensation liability for the damage caused by climate change, and different views and positions also have some rationality and limitations.⁵ For the national compensation liability, the developed countries generally implement the resistance, there are great difficulties in practice. Developed countries recognize the historical responsibility for excessive emission of greenhouse gases during industrial times, but do not regard such responsibility as liability for compensation. Meanwhile, the Paris Agreement is stated in the Decision 1 / CP. The loss damage section in 21 (paragraphs 48—52) clearly states that the loss damage clause (article 9 of the Paris Agreement) does not involve any liability or compensation, nor does it provide a basis for any liability or compensation.⁶

Therefore, it is difficult to establish the liability for damage caused by climate change, and it is of great difficulty to claim compensation in both law and practice. Compensation liability is more applicable to the liability attribute of loss and damage caused by climate change in small island countries.

2. The standard basis for establishing the compensation liability

The establishment of compensation liability also needs the normative basis, and the small island states need

² Zhang Chenyang. The International Study on the Loss and Damage of Small Island States due to climate change [J] // The Pacific Journal. 2017. 25(09):11—23. DOI:10.14015/j.cnki.1004-8049.2017.9.002.

³ Lin Canling. Liability for damage caused by climate change [J] // Journal of China University of Political Science and Law. 2016. (06):74—82+161.

⁴ Gong Yu. State responsibility for climate change damage: Unreal or realistic [J] // Modern Law. 2012. 34 (04):151—162.

⁵ Cheng Yu. Rules of International Law on climate change [J] // The Pacific Journal. 2016. 24 (11):12—22. DOI:10.14015/j.cnki.1004—8049.2016.11.002.

⁶ Chen Minpeng, Zhang Yucheng, Li Bo, etc. Interpretation and countermeasures to the adaptation and loss of damage content of the Paris Agreement [J] // Progress in Climate Change. 2016. 12 (03):251—257.

legal and moral support to recover for the damage caused by climate change; that is, the normative basis of compensation liability can be based on both the legal basis and the moral basis of corrective justice.

2.1. The legal basis for the compensation for the small island state

2.1.1. The United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change ("UNFCCC") is an important international treaty signed by nearly 200 countries around the world to coordinate the international actions on climate change. UNFCCC There is no specific provision on the loss and damage caused by climate change, but it establishes the core principle of «common but differentiated principle» (CBDR). CBDR principle reflects the developed countries and developing countries in industrial development, emissions of greenhouse gases, environmental protection and maintenance of sustainable development of unbalanced, unequal status, is for developing countries and small island countries in environmental issues of a kind of compensation, but also to the balance of historical responsibility and superior position of developed countries.

The realization of CBDR principle is mainly reflected in two aspects: first, developed countries should assume greater responsibility, including emission reduction and financial and technical support; second, developing countries should take different measures to deal with the loss and damage of climate change losses according to their national conditions and economic development conditions. Compensation liability may arise from the main breach of the developed countries; however, the small island states need to prove that the developed countries fail to meet their emission reduction obligations. However, the UNFCCC does not specify clear reduction obligations in developed countries; as a fulfillment agreement of the Convention, the Kyoto Protocol establishes mandatory quantitative reduction obligations in developed countries.

2.1.2. The Kyoto Protocol

The Kyoto Protocol, which came into force in 2005, specifies the types, schedules and quotas to reduce greenhouse gas emissions in major developed countries. The agreement follows the «principle of common but differentiated responsibilities» formulated by the United Nations Framework Convention on Climate Change, and requires developed countries, historically a major greenhouse gas emitter, to take specific measures to limit greenhouse gas emissions, while developing countries do not assume legally binding greenhouse gas restrictions. The Bali Climate Conference in December 2007 established the Bali Roadmap, which set a clear agenda for key issues in

international negotiations on climate change. The Bali Roadmap establishes a dual-track negotiation mechanism.

On the one hand, developed countries signing the Kyoto Protocol should commit to substantial quantitative emission reduction targets after 2012; on the other hand, developing countries and developed countries that have not signed the Kyoto Protocol should take further measures against climate change under the United Nations Framework Convention on Climate Change. In November 2013, the Warsaw Climate Conference once again recognized that they should contribute to support developing countries in their response to climate change, reached a preliminary agreement on the compensation mechanism for damage, and established the Warsaw mechanism for damage. Although the Kyoto Protocol specifies the quantitative emission reduction obligations of developed countries; the small islands still need to consider the rules of the Paris Agreement.

2.1.3. The Paris Agreement

Article 8 of the Paris Agreement provides that Parties recognize the importance of avoiding, minimizing and addressing losses and damage related to climate change (including extreme climate events and delayed adverse effects, as well as the role of sustainable development in reducing damage and damage. The Paris Agreement clearly states that all parties should, through international cooperation, strengthen capacity building and coordination of the inevitable and existing losses and damage caused by climate change to developing countries. In addition, the Paris Agreement addresses the establishment of a «mechanism for loss, damage and damage to climate change», under which parties can coordinate cooperation, share information and knowledge, and provide specific support and assistance to regions with the largest impact of climate change, including finance, technology and capacity building.

2.1.4. The polluter-pay principle

The principle of polluter payment, known as the principle of polluter payment, user compensation, developer protection and recovery of destroyer, is the basic principle to determining the responsibility for the harmful consequences and adverse effects of environmental pollution and damage. The polluter pays principle, first proposed by the Organization for Economic Cooperation and Development (OECD) in 1972, has been evolving for more than 40 years and has been endorsed by most sovereign state and international legislation, such as the Kyoto Protocol and the Rio Declaration on Environment and Development. Article 13 of the Rio Declaration on Environment and Development recognizes and emphasizes the principle of polluter payment. Although the Declaration stipulates «compensation for environmental damage», the principle itself provides compensation

for users, and the provisions in fact indicate that the State should be liable for the environmental damage caused by it. The principle of polluter payment has become a basic principle in the field of international environmental governance and should belong to the category of legally binding international customary law.

2.2. The moral basis for the small island state: the principle of corrective justice

"Corrective justice" is substantial equality, and equality requires the victim to get the same compensation. The main reason of climate change is that greenhouse gas emissions is too large, developed countries in the past in the process of industrialization of greenhouse gas emissions far more than developing countries and small island countries, and atmospheric resources are public resources, is not the appendage of developed countries, developed countries in the process of industrialization, small island countries in the climate change, is obviously unfair. The small island states receives respect for the natural environment and human rights. Small island states depend on the survival and development of the surrounding oceans and ecosystems. Climate change destroys the natural system, leading to sea level rise and ocean acidification, and inevitably affects the livelihood and health of residents of small island countries. The rising sea level will even lead to the inundation of island countries, endangering the life safety of residents. Developed countries should bear the historical responsibility, in addition to the legal rigid provisions, but also the moral direction.

However, the domestic academic circle has not yet defined the time of «history», and the «history» in historical responsibility is not completely the «history» referred to by the historical principle. It is unfair to the subject of historical emission to classify the time of contemporary people.⁷ The period when developed countries take historical responsibility should be that when developed countries overexcessive greenhouse gases and developing countries' greenhouse gas emissions do not exceed their emissions. In posner, westbach, Li Zhi, zhang of climate change justice, in 2005 developing countries emissions than developed countries is not much less, so at least before 2005 developed countries for excessive emissions of greenhouse gases should bear historical responsibility, after 2005 due to greenhouse gas emissions of climate change, according to the fair principle of climate justice.⁸

3. The reality of the realization of compensation responsibility dilemma

Although the compensation liability for losses and damages caused by climate change is supported by the legal and moral basis, it is also an important part of international negotiations. Developed countries should provide financial and technical support to developing countries according to the convention and historical responsibility. However, the realization of the compensation liability still has a practical dilemma in practice.

3.1. The ambiguity of the rights and responsibilities in the climate Convention

Treaties such as the United Nations Framework Convention on Climate Change, the Kyoto Protocol and the Paris Agreement have played a positive role in addressing climate change governance. However, none of the treaty makes a clear statement of the responsibility for the loss and damage caused by climate change.

The United Nations framework convention on climate change according to the principle of «common but differentiated responsibility», the developed countries and developing countries the obligations and obligations procedures, require developed countries as large greenhouse gas emissions, take concrete measures to limit greenhouse gas emissions, and provide funds to the developing countries to pay the cost of their obligations under the convention. Developing countries, on the other hand, only undertake the obligation to provide national lists of greenhouse gas sources and sinks, formulate and implement plans containing measures on greenhouse gas sources and sinks, and do not undertake legally binding control obligations. U NFCCC Although established a mechanism to developing countries to provide funds and technology to fulfill the convention obligations, but the ultimate goal of the mechanism is to reduce greenhouse gas emissions, reduce the harm of human activities to the climate system, reduce climate change, enhance the ecosystem adaptability to climate change, to ensure food production and sustainable economic development, is not to the countries damaged by climate change.⁹ Moreover, the Convention does not stipulate specific obligations for individual parties or provide for an implementation mechanism. In this sense, the Convention lacks the legal binding force.

⁷ Yao Xiaona, Tang Tian. Discuss the historical responsibility in climate justice — the definition, rationality and limit of historical responsibility [J] // Yuejiang Academic Journal. 2018. 10 (04):46—55+144. DOI:10.13878/j.cnki.yjxk.20180820.014.

⁸ Posner Westbach. Justice of Climate Change, translated by Li Zhi, Zhang Jian. Beijing : Social Sciences Academic Press, 2011. P. 127.

⁹ The provisions of the United Nations framework convention on climate change in article 2: «This convention and the conference of the parties may pass any relevant legal documents of the ultimate goal is to reduce greenhouse gas

For the first time, the Kyoto Protocol imposes restrictions on greenhouse gas emissions in the form of regulations, but the treaty does not provide for a clear liability for the damage caused by climate change. So small island states should not be liable for violations by developed countries of mandatory greenhouse gas emissions under the Kyoto Protocol. In addition, as the United States, climate change is cumulative, climate change damage most should be historical responsibility, they do not deny emissions, also admit historical responsibility, but claims to the understanding of greenhouse gas emissions does not foresee the damage, and the Kyoto protocol is the regulation of the international gas emissions, rather than retroactive, therefore can not claim the developed countries damage compensation liability.

The Paris agreement is the second legally binding climate agreement after the Kyoto protocol, for 2020 global action on climate change, which illustrates the importance of climate change loss damage, and stressed that the parties should, on the basis of cooperation and provide convenience, including as appropriate through the Warsaw international mechanism, in the loss and damage involved in understanding, action and support.¹⁰ However, throughout the full text of the Paris Agreement, there is no regulation on the liability for damage caused by climate change, which cannot be the basis for small island states to seek compensation.

The formation of the climate change treaty on the basis of the negotiations between countries, greenhouse gas emissions often more can grasp the negotiations, power for their own national interests, on the responsibility for climate change, therefore, can be seen from the climate change treaty legal basis is still very weak, it is difficult to small island climate change damage compensation provide the legal basis.

3.2. Difficulties in identifying the subject of responsibility

When small island states seek relief under the Climate Change Convention, one of the ways they can take is to request States parties to fulfill their treaty obligations. If the state violates its obligations under international law, corresponding state responsibilities will arise. However, not only does the climate convention fail to provide a clear legal basis as men-

tioned above, but it is also very difficult to identify the subject of responsibility.¹¹

And for the identification of the subject of responsibility, which countries should bear this kind of compensation responsibility, whether to bear the obligation to prevent the consequences of such damage? If anything, which countries have such obligations, there is a gap in the international regulations on losses and damage caused by climate change. Similarly, how to define the victim country is also one of the difficulties. The negative impacts of climate change are also uneven to different small island countries, while those with little impact on climate change and the least able to cope with climate change have the biggest negative impacts. Can these countries claim compensation for their land, property, health damage and their potential casualties? If possible, to what extent can compensation be requested? It's hard to determine.

3.3. The lack of the mandatory mechanism for realizing the responsibility

Although the Kyoto Protocol and the Paris Agreement stipulate the responsibilities and obligations of all parties, the provisions are mainly based on the principle of voluntariness and there is no clear mandatory mechanism to ensure the fulfillment of responsibilities. At present, the climate mechanism of the United Nations is mostly «bottom-up» mode, coupled with the negative resistance of the United States and other major greenhouse gas emissions, which makes the «top-down» coercive mechanism suffer from multiple obstacles at the practical level. Undoubtedly, the «bottom-up» model has strong flexibility and more diverse political power, which can promote the signing and implementation of climate conventions to some extent. At the same time, this model adapts to the national conditions, political conditions and development prospects of all countries in the world, and attracts more countries to sign climate conventions, because this model can maintain the differences in the negotiations, recognize the favorable clauses for its own country, and retain the unfavorable clauses. However, in practice, the actual effect of the implementation of the Convention is not ideal. There is no mandatory mechanism restriction, and many major countries do not abide

emissions, reduce the harm of human activities to the climate system, reduce climate change, enhance the ecosystem adaptability to climate change, to ensure that food production and economic sustainable development.»

¹⁰ Article 8 of the Paris Agreement: «1. The Parties recognize the importance of avoiding, mitigating and addressing losses and damage related to climate change (including extreme climate events and delayed adverse effects, as well as the role of sustainable development in reducing loss and damage. 2. The leadership and guidance of the Conference of the Parties as the party to the Paris Agreement and strengthened by the decision of the Conference of the Parties as the Conference of the Parties to the Paris Agreement. 3. The Parties should, on the basis of cooperation and facilitation, including through the Warsaw International Mechanism, enhance understanding, action and support for the losses and damage involved.»

¹¹ Lin Canling. Liability for damage caused by climate change [J] // Journal of China University of Political Science and Law. 2016. No. 56 (06):74—82+161.

by the responsibilities and obligations stipulated in the Convention.

3.4. The inadequacy of the climate Fund and the mechanism

There is no doubt about the importance of funding to combat climate change. For small island states, financial support is equivalent to resisting and eliminating the adverse effects of climate change, and climate funds can improve their ability to prevent climate change. For now, the climate fund has more difficulties.

First, there is an insufficient funding source. Although COP 27 first proposed the establishment of the «climate change loss and damage fund», how to establish the contributing countries and how to define the amount of contribution are one of the difficulties that affect the operation of the climate fund. If developed countries are required to contribute capital, is it regulated by international law, or is it out of international morality?

Second, the adverse effects of climate change on countries increasingly serious, small island countries due of its own vulnerability, the demand for climate fund is also more and more high, climate change loss damage has made the small island state economy, in the Indian Ocean small islands developing countries suffered more than 50 climate disasters, causing more than \$17 billion losses, huge economic amount makes small island nation embarrassed, increasingly dependent on the climate fund.¹²

Finally, the allocation of funds is not flexible enough. The funding allocation process of the Climate Fund is inflexible to adapt to the needs and characteristics of different developing countries. In addition, there are restrictions and conditions on the allocation of the climate funds to really play their due role.

4. The perfect path of the compensation responsibility realization mechanism

4.1. Clarify the legal basis for losses and damage caused by climate change

4.1.1. Supplement to the contents of the Convention to the extent feasible

As mentioned above, although the United Nations Framework Convention on Climate Change and the Kyoto Protocol have played a positive role in climate change prevention and control, the Paris Agreement explains the importance of climate change damage,

but they do not clearly state how to pursue accountability and how small island states claim compensation. The Warsaw International Mechanism proposes to help particularly vulnerable developing countries meet their obligations under the United Nations Convention on Climate Change, but has not formulated specific measures to deal with the losses and damage caused by climate change. The negotiation process of the above Convention, both the appeal of the International Union of Small States and the report of the Conference of the Parties, make separate recommendations, such as a risk-sharing mechanism and compensation for losses and damage, none of which is covered in the Convention.¹³ In the course of future negotiations, States parties or international organizations may, in accordance with the rules of international law, supplement the contents of the Convention to clarify the legal basis for compensation for damage caused by climate change in small island states.

4.1.2. Use other rules of international law and customary international law and climate conventions

For example, the United Nations Convention on the Law of the Sea stipulates the principles of the maritime rights and interests of small island states and the protection of the Marine environment, including the rights of small island states to enjoy exclusive economic zones, continental shelf and other maritime rights and interests, and the right to protect and manage the Marine environment in these regions.¹⁴ In addition to the intangible economic and political losses, the most important damage to the small island countries caused by climate change is the damage to the territory, biodiversity and the Marine environment. Therefore, other rules of international law can be used to complement the shortcomings of climate conventions.

4.2. Increase the compulsory mechanism to realize the compensation liability

International climate governance is a typical collective action problem, and the current climate action is not enough to deal with the huge climate crisis facing mankind. The «bottom-up» model lacks insufficient political leadership, the parties have no binding regulation, and no substantial progress in solving climate issues, including climate damage. At the same time, «loss and damage» and «compensation liability» must be closely linked with the compulsory obligation. For the first time, the Kyoto Protocol forcibly restricts greenhouse gas emissions in the form

¹² Nella Canales, Aaron Atteridge, Annie Sturesson. Climate Finance for the Indian Ocean and African Small Island. Developing States [R]. Stockholm : Stockholm Environment Institute, 2017.

¹³ Zhang Chenyang. Definition of loss and damage to small island states caused by climate change [D]. China University of Political Science and Law, 2017.

¹⁴ Parts IV, V and VI of the United Nations Convention on the Law of the Sea clearly specify the state of islands, the exclusive economic zone and the continental shelf.

of regulations. The Paris Agreement stipulates the issue of the loss and damage caused by climate change, but the treaty does not provide mandatory liability for the loss and damage caused by climate change. The climate convention could add a «monitoring and assessment mechanism», impose procedural sanctions on countries that emit greenhouse gases in excess of their share, and require countries that emit excessive emissions to be liable for compensation to ensure the strict fulfillment of compensation liability for damage caused by climate change.

4.3. Clarifying the identification of the responsibility subject

At present, the international community has not reached an agreement on the liability for compensation for damage caused by climate change. According to the characteristics of the loss and damage caused by climate change, the compensation liability should be jointly borne by multiple subjects.

4.3.1. Developed countries

Developed countries, as the main parties responsible for climate change, should assume more responsibilities and obligations, including providing compensation for losses and damage caused by climate change. First, economic activity and generated greenhouse gas emissions in developed countries are one of the leading causes of climate change. These countries dominate the global economy, and over the past few decades, their economic development model has largely relied on high-carbon emissions of industries and energy sources, leading to far more greenhouse gas emissions than developing countries. Second, developed countries with rich economic resources and technologies can more easily cope with the impact of climate change. In contrast, climate change victims such as small island countries have made it difficult to effectively cope with the impact of climate change due to their own economic constraints and insufficient technical conditions. Finally, the principle of «common but differentiated responsibilities» in the UN Framework Convention on Climate Change indicates that both developed and developing countries have different responsibilities and obligations to address climate change. In addition, the Paris Agreement stresses that climate change has a special impact on small island countries and needs special attention, and that developed countries should provide financial and technical support for losses and damage caused by climate change. Although some scholars believe that the more responsibilities and obligations of developed countries are due to moral considerations, it is also based on the provisions and principles of international law and the United Nations Framework Convention on Climate Change.

4.3.2. Developing countries

While developing countries have relatively little responsibility for climate change, they also need to contribute to tackling climate change. There are some developing countries in relatively developed countries, their economic activities and the greenhouse gas emissions are relatively high, and the international community on the climate change loss damage responsibility main body did not agree, simply to the developed countries is not feasible, developing countries also need to bear certain responsibility and obligations. For example, some developing countries can help climate change victims such as small island countries cope with losses and damage by providing financial and technical support. At the same time, developing countries can reduce the impact of climate change by reducing greenhouse gas emissions and strengthening environmental protection. Developing countries have lighter responsibilities and obligations than developed countries, but they are equally critical for global cooperation and coordination on climate change.

4.3.3. Private enterprises

The reason for discussing the subject of state responsibility alone is that private enterprises also play an important role in climate change. As the economic activities of some private enterprises may lead to a series of environmental problems such as greenhouse gas emissions, the responsibility of the private sector cannot be mixed with the national responsibility, and the private sector should also bear some responsibility for the losses and damage caused by climate change.

4.3.4. Victims of climate change

The damage and damage caused by climate change mainly affect climate change victims such as small island countries, coastal cities and mountainous areas. Therefore, they should be the main beneficiaries of compensation for damage caused by climate change.

4.4. Improve the climate fund mechanism

4.4.1. Expand climate funding sources

The Global Climate Fund is facing the danger of insufficient funds. Relying solely on traditional funding sources such as donations from developed countries and private entities cannot meet the current needs of tackling climate change, and cannot meet the financial needs of small island countries to achieve compensation for losses and damage caused by climate change. It is therefore necessary to consider adding new sources of funding to supplement the climate fund, and the international carbon tax is one possible approach.¹⁵ The EU, the first economy to impose «carbon tariffs»,

¹⁵ Wang Hongpeng, Mo Jianjian. Research on the countermeasures of climate change damage compensation dilemma in small island countries [J] // Journal of China Cadre Academy of Environmental Management. 2016. 26 (05): 7—10.

claims the EU carbon Border Regulation Mechanism (CBAM) as another milestone in driving carbon reduction. The international community can learn from the positive role of the EU's carbon tariffs and set up special international institutions around the world to levy carbon taxes according to a unified tax rate. Climate benefits brought by this kind of behavior will be considerable, through economic means to tax the use of fossil fuels embodies the principle of «polluter pay», environmental polluter will no longer will damage the environment cost externalization, the cost of environmental pollution will reduce the use of fossil fuels, to slow climate change. Moreover, the income from the international carbon tax is huge, and it is essential for the international carbon tax to apply the global income to address changes. Therefore, it is likely to become a new source of fund funds and will further meet the financial needs of small island states to address the loss and damage caused by climate change.¹⁶

4.4.2. Improve the allocation of climate funds in small island countries

Given that the current Climate Fund does not dictate how to allocate small island states, multiple measures are necessary to improve the distribution model of the fund in small island states. First, more attention should be paid to the particularities of small island states. Small island countries usually face the special effects of climate change, such as sea level rise, storms and floods, so more attention and support are needed for these special situations. The Climate Fund should provide more special funds to the small island states to deal with these special situations. Secondly, it is necessary to strengthen the voice of small island states in the operation of the climate fund, and propose the compensation of the climate change on the loss and damage caused by climate change.

4.4.3. Clarify the subject and amount of investment of the Climate Fund

The Climate Fund should be funded by countries and regions around the world, including developed and developing countries. Developed countries should contribute more money to help developing countries cope with climate change. At the same time, developing countries should also assume certain responsibilities

and obligations to contribute appropriate funds to jointly cope with the challenges brought about by climate change. In addition, the international community can invite other investors such as enterprises and citizens to participate in the climate Fund contribution. The amount of contribution of the Climate Fund should be determined according to the actual situation of different countries and regions. In addition, the international community can also provide more financial and technical support to countries and regions with relatively less investment by means of capital allocation and international cooperation, so as to achieve fairness and rationality on a global scale.

Conclusion

Small island states suffer from the damage caused by climate change due to their own vulnerability. How to effectively remedy and compensate for the damage caused by climate change is also the focus of discussion in previous climate conferences. The problems facing small island states are not only environmental, but also economic, social and cultural issues. Therefore, the compensation for the damage caused by climate change in small island countries requires the joint efforts of countries and regions around the world. The international community should recognize the seriousness and urgency of the problems faced by small island states, which require a joint response of countries and regions around the world. Establish a compensation mechanism for losses and damage caused by climate change to help small island countries cope with the impact of climate change, and strengthen cooperation and coordination with small island states, so as to provide strong support and guarantee for small island states to cope with the challenges brought about by climate change. The small island country civilization originated on the ocean and is an important part of the world civilization. If the small island country civilization sinks under the sea, it will certainly become the regret of the world civilization. Finally, it is believed that climate justice will be realized, and the damage caused by climate change in small island countries will be effectively relieved and compensated.

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¹⁶ *Jiang Jiashuo*. Study on the relief of loss and damage caused by climate change in small Island countries [D]. Fuzhou University, 2020. DOI:10.27022/d.cnki.gfzhu.2020.000608.

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