

Research on Benefit Attribution of Forestry Carbon Sink under REDD+

Ziying Fang

*School of Humanities and Law, Zhejiang A&F University, Hangzhou, China
fzy@stu.zafu.edu.cn*

Keywords: REDD+; Forestry carbon sink; Benefit attribution

Abstract: REDD+ is an incentivized legal mechanism to maintain ecosystems and reap economic benefits. In view of the global pressure to reduce carbon emissions, the benefit attribution of forestry carbon sink under REDD+ is a necessary condition for the steady development of forestry carbon sink trading. It is also a key foundation for a sustainable management system for forest resources. Currently, problems in benefit attribution under REDD+ include the limited scope, the inconsistent criteria, and the inequitable benefit attribution; An analysis of REDD+ benefit attribution from three aspects: the theory justification, the limitations of REDD+ institutional function, and inadequate legal provisions for aboriginal environmental rights; it is suggested that the scope of REDD+ gain attribution should be clarified, the assessment promoted, and the shared system constructed.

1. Introduction

The issue of global climate change is now at the focus of widespread concern, and REDD+ has a key role to play in mitigating global climate change. REDD+ is an incentivized mechanism to reduce deforestation and associated greenhouse gas emissions in developing countries [1], and it has provided new opportunities for the international legal position to evolve. In different countries, the attribution of gains through REDD+ is different, and biodiversity conservation and indigenous peoples' interests are not fully reflected. This not only affects the subject's rights to fully enjoy the economic benefits of forestry carbon sinks, but also prevents prompt compensation in the event of infringement. In order to balance the relationship between climate change and biodiversity conservation, and to fully safeguard the interests of carbon sink suppliers, this paper takes REDD+ as a starting point to analyze the reasonable path for the attribution of carbon sink gains in REDD+.

In environmental law, "gain" means the addition and maintenance of ecological benefits, which are shared by others, and which result from a variety of positive externalities such as environmental conservation and ecological restoration. The "gains under REDD+" studied in this paper refers to the increase in forest ecological benefits under the REDD+ mechanism resulting from the actions of forestry carbon sink suppliers as a result of their operation, investment, management and protection. These benefits are recognized, assessed and traded in the market so that the owners of forestry carbon sink can legally enjoy the corresponding economic returns or other economic benefits.

2. Problems of Benefit Attribution of Forestry Carbon Sink under REDD+

2.1. Limited Scope of Forestry Carbon Sink Benefit under REDD+

The United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD) operate under parallel frameworks. However, at the level of actual biodiversity conservation, they have different effects: on the one hand, since the abatement cost of forestry carbon sinks is much lower than the abatement cost of industrial abatement in developed countries, forestry carbon sink projects would become a key carbon abatement strategy. In the face of enormous economic potential, some developing countries with abundant land and forestry resources but with underdeveloped economies may sacrifice their ecosystems and biodiversity by irrationally promoting forestry carbon sink projects, which may cause irreparable damage to biodiversity. On the other hand, although CBD clearly establishes the legal framework for the conservation of biodiversity, it is not binding on its signatories. For example, CBD does not contain mandatory terms such as “must”. Moreover, it lacks specific biodiversity conservation assessment criteria, enforcement mechanisms and incentives and penalties, making it less feasible in practice.

Different types and modalities in the implementation area under REDD+ will have different impacts on the biodiversity there. Reducing deforestation improves the quality of forests and protects biological habitats; reducing forest degradation also increases forest biomass and enhances the structure of forests, which in turn increases carbon stocks as well as biome habitats and biodiversity cover. REDD+, on the other hand, focuses on the emission reduction and absorption capacity of forestry carbon sinks, and thus the economic benefits generated are mainly concentrated in carbon trading. This also means that the main source of economic benefits is the income received through the sale of carbon emission reduction units, and that the attribution of gains covers a relatively homogenous scope that does not fully reflect the biodiversity of forest ecosystems. Simultaneously, this is lagging behind the convergence with the objectives of CBD.

2.2. Inconsistent Criteria for Attribution Benefits of Forestry Carbon Sink under REDD+

As more countries become involved, the institutional development associated with REDD+ projects have evolved and is in a process of gradual accumulation of experience and continuous improvement. However, the status and content of institutional development varies considerably from country to country. Notable differences are evident in the unevenness in the hierarchy of MRV systems and related institutional development for REDD+, which is essential for ensuring the carbon impact of REDD+ in reducing deforestation and forest degradation.

Agreeing on MRV for REDD+ under UNFCCC has been difficult. At the start of the REDD+ negotiations under UNFCCC, Brazil had a very positive experience in reducing deforestation. Brazilian governmental experts were respected by their peers in the United Nations Framework Convention on Climate Change negotiations for their experience in monitoring deforestation in the Amazon and implementing national policies to reduce deforestation. At the time, the monitoring methods used in other large emerging countries, such as Brazil and India, were considered to be potentially easily adaptable to small-scale countries, as other developing countries did not have such well-developed MRV systems. As the REDD+ mechanism is implemented in different countries and regions and involves a variety of stakeholders, attribution of gains varies according to region, national policy and project design.

2.3. Inequitable Benefit Attribution of Forestry Carbon Sink under REDD+

REDD+ projects are implemented mainly in developing countries in Latin America. While this

provided employment opportunities and additional income for local residents, it also deprived some land resource owners of their rights due to the limitations on the growth of carbon sinks. In this gain-sharing process, even if some REDD+ development regulators are introduced as the basis for allocation, the gain-sharing principles for resolving conflicts of interest are also diversified, as not all forest countries are able to benefit directly from emissions-based REDD+ projects, and the interests of developing countries are driven differently by the REDD+ economic incentives and compensatory mechanisms.

Although the distribution of benefits takes into account the sustainable operation of REDD+ projects and the interests of different countries, it may also give rise to many problems, such as discouraging countries with high deforestation rates, and inconsistencies in the implementation standards of the projects of various parties. Carbon sinks, such as forests, play a crucial role in absorbing and storing carbon dioxide, which contributes to the mitigation of climate change. However, the growth of carbon sinks can be limited by a variety of factors, including land-use restrictions imposed by REDD+ projects. Indigenous peoples, local communities and individuals may have customary or legal rights to land that need to be recognized. Therefore, we should anticipate the problems that may be faced in protecting the environmental rights and interests of indigenous peoples in the practice of REDD+ projects. Addressing these issues requires a careful review of project planning, implementation and results.

3. Causes of the Existing Barriers on Benefit Attribution of Forestry Carbon Sink under REDD+

3.1. Theoretical Evidence for Benefit Attribution of Forestry Carbon Sink under REDD+

The theory of entitlement lays a theoretical foundation for the forestry carbon sink supply subject to obtain property benefits. In the context of the supply of forestry carbon sinks, the theory of rights helps to lay the groundwork for the proper acquisition of property interests by the subjects supplying forestry carbon sinks. More simply, the theory of rights addresses the question of who has the right to claim ownership or benefits associated with a particular resource. When applied to forestry carbon sinks, it helps to define the rights and claims of those involved in the supply of carbon sinks, such as forest owners, communities or entities engaged in carbon sink projects. Overall, the theory of rights is the theoretical framework for understanding how forestry carbon sink supply agents receive property benefits. This linkage highlights the importance of establishing clear property rights and entitlements to ensure a fair and efficient distribution of benefits in forestry carbon sink projects. By applying the theory of rights, policymakers and legal experts can develop systems that promote fairness, transparency and rights protection in the forestry carbon sink sector. This can contribute to the development of sustainable carbon sink projects.

The act of supplying carbon sinks from forestry and its result of increasing ecological profits reflects the fact that the supplier should receive a corresponding property right. Those involved in providing carbon sinks from forestry, thereby increasing ecological profits, should have a legal claim or right (property rights) to the benefits generated. This highlights the importance of establishing clear and fair property rights in forestry carbon sink projects. Meanwhile, the distribution of benefits based on the supply of carbon sinks reflects equality of opportunity. In theory, any subject can obtain property by participating in the supply, and should equally enjoy the corresponding rights. Therefore, obtaining property benefits based on the supply of forestry carbon sinks is also a manifestation of equal opportunity. This means that in the context of carbon sink projects, participants should have equal and fair opportunities to receive financial or property benefits based on their contribution to environmental sustainability.

3.2. Limitations of the Institutional Functioning of REDD+

Fairness and justice are the eternal values of the law, and the legal system plays an important role in curbing unethical behavior and ensuring that the interests of all parties are equally realized within a certain framework. At present, new types of forest rights have not yet been clearly defined, forestry resources, especially concerning carbon sinks, are still uncertain, new types of forest rights have complex conflicts of interest, the subject's interests are diverse, and there is a difference in the status of the subject that is relatively strong and weak. Addressing this uncertainty in evolving forestry practices is critical for effective governance, sustainable management and equitable distribution of benefits.

Concerning that balancing carbon sink targets with the rights and needs of local communities is a complex task, sustainable practices should be adopted to ensure environmental benefits and the well-being of affected people. However, the judicial credibility and authority of the law can ensure that the litigation status of the subjects of interest in new types of forest rights disputes is equal. REDD+ involves a wide range of countries with different cultural and social backgrounds. Each of the wide range of countries involved in REDD+ has its own cultural and social background. This diversity may lead to different perceptions, priorities and approaches to forests. In the meantime, there are significant differences in values among parties, and different project designs have led to overall inefficiencies in the implementation of procedures. These differences lead directly or indirectly to issues of intergenerational and intragenerational equity in terms of fairness and justice, as well as procedural and outcome aspects. This means that differences in values and program design affect the way REDD+ activities are carried out and the results achieved, while encompassing concerns about fairness and justice in the process and in the distribution of benefits. Addressing these challenges requires a comprehensive approach, including legal frameworks, stakeholder participation and transparent governance structures.

3.3. Inadequate Legal Provisions for Aboriginal Environmental Interests

In 2007, the United Nations adopted the United Nations Declaration on the Rights of Indigenous Peoples, and it is of great significance, as a comprehensive framework for the rights of indigenous peoples. It is worth noting that the status and recognition of UNDRIP may vary from country to country. Some countries have ratified it, while others have not, and the level of implementation varies. The implementation of UNDRIP and the fostering of the defense of indigenous peoples' environmental rights depend on the commitment of individual States to incorporate its principles into national laws and policies. Many States, international organizations and indigenous communities consider it an important reference point for policy development and advocacy. While some States have taken steps to harmonize their legal frameworks with the principles of the UNDRIP, others may have been slower to amend relevant laws or may not have fully embraced the Declaration. This is a continuous development process that can effectively protect indigenous rights, especially those related to the environment, through cooperation at the national and international levels. Therefore, rephrasing rights as "shared" "interests" may lead to a higher degree of correlation between human rights aspirations and global political and corporate agendas, as well as national interests.[2]

4. Countermeasures to Improve the Benefit Attribution of Forestry Carbon Sink under REDD+

4.1. Reasonable Extension of the Scope of Forestry Carbon Sink Benefit under REDD+

REDD+ presents both opportunities and risks for the conservation of forest biodiversity and the biodiversity enhancement approach of REDD+ is therefore essential to reduce the risk of forest

ecosystems under climate change. Although both the UNFCCC and the CBD are important international agreements, they have different objectives, focus areas and mechanisms. Since UNFCCC focuses on climate change issues, especially the control of greenhouse gas emissions and mitigation of climate change, while CBD concentrates on the conservation and sustainable management of biodiversity and ecosystems. Therefore, there is a lack of effective coordination between the two conventions when dealing with the relationship between forestry carbon sinks and biodiversity conservation. However, the interlinkages between climate change and biodiversity have been recognized and efforts have been made to enhance the coherence between the two conventions. The intersection of climate change and biodiversity conservation is increasingly recognized in global environmental discussions. Achieving biodiversity conservation in REDD+ projects require comprehensive conservation mechanisms and a flexible approach to assessing, monitoring and recognizing the effectiveness of conservation measures. Prior to the initiation of REDD+, economic and technical instruments should be applied to predict and assess the likely impacts of the proposed project on biodiversity to effectively mitigate the adverse impacts of forestry carbon sink projects on the environment in order to avoid damage to biodiversity based on the results of the assessment. Therefore, the benefit attribution under the REDD+ mechanism should cover biodiversity conservation and promote the harmonization of attribution with international biodiversity conservation treaties.

4.2. Supporting Ecological Assessment of Forestry Carbon Sink under REDD+

Establishing an ecological assessment mechanism for forestry carbon sink resources in order to accurately assess these resources and objectively measure their contribution to the economy and society. This not only helps to protect forestry resources and improve forestry eco-efficiency, but is also an instrumental adjunct to the fulfilment of the legal interests of suppliers of forestry carbon sinks under REDD+. Effective integration of biodiversity considerations involves not only monitoring carbon stocks, but also monitoring the impacts of REDD+ activities on biodiversity. Collaboration between countries, international organizations and the scientific community in the course of practice across different countries can facilitate the sharing of expertise and good practices. This collaborative approach can help overcome challenges related to capacity and costs.

Furthermore, determining who should be responsible for designing and implementing a diversity monitoring program for changes in carbon sink resources and changes in biodiversity depends as much on the level of detail required as on the people and institutions that the data are intended to benefit. In many places, an integrated monitoring approach that combines guidance and management by scientific and technical experts with close involvement of indigenous people may be optimal. Local communities often possess valuable traditional knowledge about the biodiversity of their surroundings. Their knowledge of ecosystems, plant and animal species and ecological patterns is essential for effective monitoring. And local people are more likely to notice subtle changes in biodiversity and ecosystem health that may go unnoticed by external observers. What is not negligible is that involving local communities and indigenous people in monitoring contributes to biodiversity conservation and the success of REDD+ initiatives. Local community and indigenous peoples' participation in monitoring may be interpreted as a synergistic approach that facilitates biodiversity conservation and enhances the sustainability of REDD+ initiatives.

4.3. Establishing the Shared System of Forestry Carbon Sink under REDD+

REDD+ has long been a pioneer in collaborative methods to address climate change.[3] The choice of how to share REDD+ gains is critical to the success of the REDD+ mechanism. Therefore, there is a need to ensure equitable distribution of project gains, whereby the gains generated by the project

are shared among relevant parties, such as the project developer, the project owner and the indigenous people, in order to incentivize the active participation of the different actors. The distribution of carbon sink gains from REDD+ forestry involves the economic interests of all participating actors, and a reasonable distribution is a key element in ensuring a balance of interests. Firstly, individuals, families, communities and other private subjects should receive more allocations from the transfer of benefits. This is because forestry carbon sink projects usually require long-term operation, and the sustainability of the projects depends to a large extent on foresters carrying out long-term work such as planting, maintenance and guardianship. Secondly, in order to encourage the participation of more professional organizations, the gains from the transfer of forestry carbon sinks should be reasonably allocated to the project implementing agencies. This distribution will help to ensure professionalism and efficiency in project implementation, thereby maximizing the quality and effectiveness of forestry carbon sink projects. Allocating benefits to project implementing agencies contributes to the achievement of broader environmental protection and sustainable development objectives.

5. Conclusions

While the REDD+ mechanism is complex, involves many new legal concepts and requires the development of appropriate and successful national legal frameworks, a rational pathway for the attribution of REDD+ gains ensures that the effects of biodiversity conservation are justly recognized and encourages the implementation of forest conservation and sustainable management. Therefore, the establishment of a reasonable REDD+ benefit attribution pathway is of great significance in stabilizing the development of forestry carbon trading as well as promoting the orderly advancement of the sustainable management system of forest resources.

References

- [1] Recio, M. E. (2018). *Transnational redd+ rule making: the regulatory landscape for redd+ implementation in latin america*. *Transnational environmental law*, 7(2), 277-299.
- [2] Birrell, K., & Godden, L. (2018). *Benefits and sharing: realizing rights in redd+*. *Journal of Human Rights and the Environment*, 9(1), 6-31.
- [3] Streck, & Charlotte. (2016). *Mobilizing finance for redd+ after paris*. *Journal for European Environmental and Planning Law*, 13(2), 146-166.