

Research on Influence Factors of Grassland Carbon Sequestration Cooperative Management Based on the PEST Analysis Method

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Abstract—There are many problems of grassland carbon sequestration of collaborative management, in the initial development stage. Therefore, this paper based on PEST analysis method research grassland carbon sequestration's collaboration management in four aspects, include: Political, Economic, Social and Technology. And the paper find the impact factors of grassland carbon sequestration cooperative management. Such as: the lack of grassland carbon sequestration of collaboration management laws, low public awareness, less professionals and agencies. The paper puts forward different improvement views respectively to government, for-profit organizations, non-profit organizations, herdsman. Government needs to provide better legal protection, establish and improve the cooperation mechanism, enhance public awareness. For-profit organizations focus on making recommendations for business to increase cooperation in the management of co-collaborators. Meanwhile, the non-profit organization needs to increasing set up the professional and specialized agencies to guide collaborative management of grassland carbon sequestration, enables the collaborative management of grassland carbon sequestration successful implementation.

Keywords—grassland carbon sequestration; collaborative management; PEST Analysis

I. INTRODUCTION

With the grassland carbon sequestration of collaboration management becoming more and more complex and the stakeholders much more diverse, which determines the nature of the government alone can not effectively address and resolve this issue. We need to integrate a number of departments, jurisdictions resources for effective coordinate, including: government, for-profit organizations, non-profit organizations, herdsman and the whole society.it's not match between the diverse cooperation body and the traditional management. And it puts forward the higher ability requirements to the grassland carbon sequestration of collaboration management, between the government and the non-profit organizations, between the government and the non-profit organizations, as well as between the non-profit organizations and non-profit organizations. At present, our country's grassland carbon sequestration of collaboration management is being in the initial stage of the development's coordinated. There are political, economic, social, technological and other aspects' impact of the implementation

of grassland carbon of sequestration collaborative management. The advantages of grassland carbon sequestration of cooperative management can't be a better role in a cooperative subject even can't improve the social efficiency. In this paper, through the PEST method to analyze the surroundings of grassland carbon sequestration of cooperation management, finds out the influencing factors of the management of carbon sink cooperation, and puts forward the corresponding suggestions. The purpose is to improve the efficiency of the grassland carbon sequestration of cooperation management, integration of various resources related to the grassland carbon sequestration of collaboration management, enhance the executive power of the government. To achieve effective communication of information resources among the participants, improve the efficiency of all grassland carbon sequestration of collaboration management participants. Implementation of cross time, space to set up a flexible open and intelligent grassland carbon sequestration of cooperation management.

II. THE CURRENT SITUATION OF GRASSLAND CARBON SEQUESTRATION OF COOPERATIVE MANAGEMENT

A. Government

In Legal aspect, our country promulgated the "Grassland Law" in 1985 to protect grassland. But you can't find the relevant provisions of the grassland carbon sequestration of cooperative management in the "Grassland Law". Except the "Grassland Law", there are many laws related to the grassland. For example, "the Supreme People's Court on Several Issues concerning the application of laws in the trial of criminal cases of damaging grassland resources explanation" and "The people's Republic of China nature reserves Ordinance" etc. All in order to protect the ecological environment of the grassland, there is no mention of grassland carbon sequestration, the laws about collaborative management of carbon sequestration aren't be regulated and guaranteed.

In institutional setting aspect, the development of grassland carbon sequestration behind the forest carbon sequestration. The Ministry of forestry sets "China Green Carbon Fund" to advance for the purpose of afforestation, forest management, reduce deforestation and other related increase sequestration activities, popularize relevant knowledge, improve the consciousness and ability of the

public to deal with climate change, support and improve the forest ecological benefit compensation mechanism of climate change. Government, as the executive organ of the organ of state power, sets the "Grassland supervision center of the Ministry of Agriculture" for grassland management. It has the study of grassland carbon sequestration project, the main purpose is protect the grassland construction and management, and in other series of duties haven't any contents about grassland carbon sequestration or the collaborative management.

B. For-profit organizations

The enterprise is the representative of the profit organization, it is the subject which takes the interest as the goal. In the region of backward economic development which mainly grazing and farming dominated grassland, the development of enterprises will increase the use quantity of natural resources, then increase the pollution emissions. In the final, it will make a serious impact on the grassland carbon sequestration. On the other hand, because of the restriction of professional technology and enterprise resource, the related business of grassland carbon sequestration can't be carried out. The collaborative management of grassland carbon sequestration in profit organizations is restricted, the collaborative management.

C. Non-profit organizations

In order to realize the Grassland Research and conservation, community volunteers establish some organizations for grassland protection. The Inner Mongolia Autonomous Region grassland Institute in 1983, is an independent legal personality and social public industry, academic and scientific community. In 2002, and a number of Mongolia's native scholar who is committed to sustainable economic, ecological and cultural development, established the "Inner Mongolia grassland ecological economic and cultural research center" referred to as the "Friends of the grassland". The non-governmental non-profit organization established in order to do their best to provide professional guidance to the herdsman, help provide their own scientific research achievements for the country at the same time in the practice and scientific research.

D. Herdsmen

The grassland is basic for herdsman's life which the animal husbandry for a living, Since the current government regulation and herdsman's own understanding of the grassland related knowledge, they began to realize the importance of grassland ecosystem, but the emergence another bad kind of situation of "Herdsmen only protection under the jurisdiction of their own pasture". Herdsmen as a "Broker" from their own interests, causing a serious impact on the implementation of grassland carbon sequestration of collaborative management. It's not conducive to the implementation of grassland carbon sequestration.

The government, for-profit organizations, non-profit organizations, herdsman are stakeholders of grassland carbon sequestration collaborative management, should be get

together to achieve carbon sequestration of grassland grassland carbon efficient use of resources and improve efficiency. But from the cooperation situation point of view, all participants have their own objectives and tasks, and no mutual exchanges or cooperation, result to grassland carbon sequestration at present in our country without coordination management.

III. ANALYSIS OF COLLABORATIVE MANAGEMENT OF GRASSLAND CARBON SEQUESTRATION'S INFLUENCING FACTORS

A. P: politics

- Institutional factors: The smooth implementation of the grassland carbon sequestration management collaboration needs corresponding institutional to strengthen the government, for-profit organizations, non-profit organizations and herdsman cooperative consciousness, to ensure that the collaboration between the participants could smooth operation, convenient collaboration. At present, cooperation of all parties involved in the management of grassland carbon sequestration is independent. From the analysis of status quot of collaborative management of grassland carbon sequestration, there is no cooperation between all relevant grassland carbon sequestration stakeholders. So our country's grassland carbon sequestration cooperation management without institutional security. There haven't hierarchical relationship of traditional organizations in cooperation organization. It's impossible to carry out analysis of the powers and responsibilities of each body involved in collaborative management of grassland carbon sequestration, and it can't form an appropriate division of responsibilities. It may be appear that there is no organization is responsible in a task of grassland sequestration collaborative management process.
- Legal factors: Our government has not yet realized the importance of collaborative management of grassland carbon sequestration, there is no appropriate institutional be developed, even there is no corresponding laws and regulations. In order to protect the grassland ecological, our country promulgated the "Grassland Law" and relevant regulations. But there is no laws and regulations about grassland carbon sequestration collaborative management. It's means that the laws of grassland carbon sequestration collaborative management being in a blank state.
- Our country's relevant cooperative grassland carbon sequestration collaborative management mechanism is not perfect, imperfect laws and regulations. This restrict the efficiency and effect of the grassland carbon sequestration management cooperation. On another hand, it's lock of legal protection laws for cooperative management of grassland carbon sequestration projects development and trading mechanism. Result to the management of grassland carbon sequestration project no basis, while restricting

the diversified development of collaborative management of grassland carbon sequestration.

B. E: economic

- The Herdsmen: China is a prairie country, grassland carbon sequestration of collaboration management has important practical significance in today's international background, and it's the only way which must be passed of the grass industry. Herdsmen as a direct interesting body of collaboration management of grassland carbon sequestration effect. In recently years the income of herdsman has been maintained at a stable level that the collaboration management started the implementation of grassland carbon sequestration, collaboration of grassland carbon sequestration management economic benefits have not been reflected in the body of herdsmen. Collaboration of grassland carbon sequestration management had no obvious effect on the income of herdsman, our country is still not aware of the grassland carbon sequestration management collaboration can bring economic advantage.
- The Enterprise: At present, the grassland carbon gathered to all the eyes of the world, the development of grassland carbon sequestration of collaboration management can not only bring benefits for the herdsmen can also bring the corresponding economic growth for the enterprise. General secretary Xi Jinping visited The Mongolian grass drought in 2014. And the company is "by the domestication of native plants, integrated application of ecological restoration technology on ecological restoration of governance environment, and through the cultivation of water-saving and drought resistant plants becoming characteristics of the enterprises. But due to the limited resources of enterprise, and the current domestic on the grassland carbon sequestration technology is relatively backward. The Mongolian grass drought business has no relevant content on the grassland carbon.
- Herdsmen, enterprises haven't realized the economic value of grassland carbon sequestration cooperation management, the main reason is that the government is not a better management. The government is not convert completely from the traditional transformation to the collaboration of grassland carbon sequestration grassland carbon sequestration management, and not to the development of enterprise management, not to guide herdsman's grassland carbon sequestration of cooperation management. As a result, the collaborative management isn't completely implementation, the economic benefit has not been demonstrated.

C. S: society

- Public awareness: At present, the development of collaborative China grassland carbon sequestration management still stay a only a small number of experts, scholars and government agencies involves level. It's lack household or volunteers for support, it means that

the collaborative grassland carbon sequestration management mass base is very weak. The propaganda of grassland carbon sequestration collaborative management knowledge is not enough, and the participants are not enthusiastic. Because of the grassland carbon sequestration propaganda is not enough and the information block, the herdsmen and the public can't understand the grassland carbon and grassland ecological knowledge very well. And they don't understand the "carbon sink" or "grassland carbon" concept. So they don't know the grassland carbon functions and ecological benefits., The public is the main part of the collaborative management in the collaborative management of grassland carbon sequestration, but its carbon sink cooperative behavior is passive.

- Public participation: Due to, the public don't understand the grassland soil could carbon sequestration and improve the grassland ecological environment function. The public haven't high enthusiasm to participating grassland carbon sequestration collaboration management. It's hind the grassland carbon sequestration collaborative project management progress's effective in a certain extent. Cooperative management represents a positive process and it needs all participants involve, the public is not only involved in, they could make feedback for collaboration. To the public, the topic of management grassland carbon sink is very strange. Because of government propaganda is not enough, the public does not understand the grassland carbon sink. So the cooperation with other participators subjects can not be well achieved.

D. T: technology

- Sequestration technologies: Carbon sequestration in grassland is grassland plants use photosynthesis of carbon dioxide in the air absorption and fixed in vegetation and soil, and sealing of carbon in the soil will be transformed into organic which conducive to the conservation of soil organic matter. It's not only can promote plant growth, still can reduce the production of greenhouse gases. In our country, on the grassland ecosystem solid carbon research to contrasting forests started late, but most of the research is about on the economic impact of the grassland sequestration of carbon potential or grassland management's potential, so research on grassland ecosystem function is not deep and thorough.
- Professional institution: The smooth implementation of collaborative management of grassland carbon sequestration cannot do without scientific research and education, we must strengthen the grassland carbon sequestration's scientific research and education. Collaborative management of grassland carbon sequestration requires specialized technical personnel to carry out cooperative guidance. Our country set up the Grassland Research Institute of Chinese Academy of Agricultural Sciences, engaged in the research of the

grassland, and train of professional grassland professionals. However, China's grassland research institutions haven't special grassland carbon sequestration study. So it can't satisfy the research on carbon sequestration of grassland.

IV. SUGGESTIONS ON IMPROVING THE COOPERATION MANAGEMENT OF GRASSLAND CARBON SEQUESTRATION

A. *The level of Government*

First, provide perfect legal protection. The governments need establish relevant laws or regulations, and build a complete and orderly management policy system of grassland carbon sink. The government should improve the relevant supporting policies and take measures to speed up the development of grassland carbon sink management methods and other relevant regulations. The government should bring the grassland carbon sink projects into the scope of legal management, modify the "Grassland Law". Using laws and administrative measures to ensure the orderly operation of grassland carbon sink. Our country should be based on the existing law and planning on the grassland in 13th Five-Year, given certain provisions on the grassland carbon sequestration management cooperation. In order to prepare for the future development of the economic development of grassland carbon sink, and then make a contribution to the development of China's economy.

Second, establish a sound cooperation mechanism. The government should develop special laws and regulations of grassland carbon sequestration collaborative management, and pay attention to the convergence with international law, strict access, fair law enforcement, improve the system. Government should measures the development of grassland carbon sink into the legal, standardized and rational track, to ensure the implementation of the management of grassland carbon sink cooperation. It's necessary to strengthen the establishment of various departments and regulations, laws and regulations of the region as well as the constraints of the country's strong legislation. Only according to the law, the grassland carbon collaboration management can be acknowledge from the source of social. The following development of grassland carbon sink projects, the establishment of grassland carbon sink related cooperation mechanism could have the legitimacy of security. It will protect the grassland carbon sink collaboration management.

Third, raise public awareness. Government need increase publicity propaganda, establish the information dissemination mechanism, popularize knowledge of grassland carbon sink. It's needs to actively carry out the transmission and development of grassland carbon sink ideas, popularize the relevant knowledge and technology of grassland carbon sink, and it's should attach great importance to the work of grassland carbon sink cooperation management. Through radio, television, newspapers, Internet and other media in the form of a variety of media to popularize the knowledge of grassland carbon sink, make community as a unit to carry out carbon sequestration activities. It's should Establish grassland carbon sink information dissemination mechanism and the official website in a timely to update the relevant content of

the dynamic. Concerned about the grassland carbon sequestration policies, collect and collate the latest scientific research. The establishment of updated grassland carbon dynamic information database, make a whole system.

B. *The level of For-profit organizations*

Enterprises as a representative of the profit organization, in the aspect of promoting the management of carbon sink cooperation should pay attention to: first, they should adjust the energy consumption structure and development conceive, focus on the development of wind energy and solar energy and other clean energy. Secondly, they need optimize the industrial structure, inhibit the excessive growth of high energy consuming and high emission industries, reduce carbon emissions. Each area prohibited high polluting industries and backward production capacity transferred. And they should undertake the transfer of industries must adhere to a high standard, accelerate the elimination of backward production capacity; improve the high pollution standards enterprise to exit a mechanism; guide and urge the elimination of backward production capacity of enterprises; transform the level of traditional industries; vigorously develop the service industry and strategic emerging industries. Finally, they should establish the carbon tax incentive policy, set corporate carbon emissions targets, and actively develop clean energy.

C. *The level of Non-profit organization*

First, professional talents. Grassland carbon sink is a new project after forest carbon sink, which has the same point and different point with forest carbon sink. The collaborative management is a new mode of management, which is different from the traditional management mode. It is difficult for the implementation of cooperative management of grassland carbon sequestration. And it's a big challenge for the government, so it need specialized people to conduct mediation and guidance on the various aspects. Achieving the goal of grassland carbon sink is helpful to alleviate the global climate problem, so the cooperative management of grassland carbon sink becomes more important. Then it needs to set up special institutions to guide it. The special guidance will help the co-authors to achieve a better goal, less waste of resources, and create a good environment for cooperation. In order to make some achievements in the field of grassland carbon sequestration, in Inner Mongolia, our country has established a special carbon sinks in Inner Mongolia Grassland Research Institute, collection of all aspects of the experts to conduct a joint study of grassland carbon sequestration.

Second, the specialized agencies. Grassland carbon carbon sequestration need to set up special management institutions, with relevant legal responsibilities and powers to the staff. the organization relevant departments in strict accordance with the provisions of the laws and regulations of the grassland carbon sequestration and impartial law enforcement, and the organization should make effective management of the grassland carbon development work. Set up special policy implementation supervision departments, form integrated decision mechanism of grassland carbon sequestration, carbon sequestration policy dynamic monitoring mechanism and policy implementation monitoring mechanism, carry out

policy monitoring on the grassland carbon dynamics. In the comprehensive decision-making mechanism of grassland carbon sequestration and carbon sequestration policy dynamic monitoring mechanism, supervision of all aspects of policies to protect grassland carbon sequestration related policy formulation and policy implementation, to achieve unified coordination.

D. The level of Herdsmen

Herdsmen lacks of understanding of the carbon sink in the grassland, the main reason is the lack of publicity and the cultural level of citizens is not equal. In order to achieve collaboration between herders and other grassland carbon sequestration cooperative agent pastures, herdsmen should actively participate in government held various forms of lectures and enhance understanding of grassland carbon sequestration, so as to realize and government, profit organization and non good coordination between profit organizations to achieve national collaboration carbon sequestration.

This paper uses the PEST method analysis the grassland carbon collaboration and management from politics and economy, society and technology environment four aspects, to find out the influencing factors of collaborative management of grassland carbon sequestration. According to the government, non-profit organizations, herdsmen and non profit organization in four aspects put forward different complete opinions. The government needs to provide perfect legal protection, establish a sound cooperation mechanism, and raise public awareness. Nonprofit organization focuses on enterprise collaborative management recommendations, in order to increase the cooperation association. At the same time, the increase of non profit organizations of professional talent and specialized agencies set up grassland carbon sink cooperation management guidance, so that the grassland carbon sink cooperation management to break through the successful implementation of its impact factors. Improving the

understanding of the herdsmen to the grassland carbon sink, realizing the cooperation management of the national grassland carbon sink.

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References

- [1] Chen Jiao, Tang Haiping, Fang Fei. The management system of grassland resources in the world and Its Enlightenment to China [J]. natural resource management, 2014, (10): 9-17
- [2] Lian Yiting, Ma Jun. Countermeasures to increase the supply of carbon sink in Inner Mongolia grassland [J]. theory and practice, 2015, (1): 20-22. S. Jacobs and C.P. Bean, "Fine particles, thin films and exchange anisotropy," in Magnetism, vol. III. G.T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271-350.
- [3] Zhao Na, Zhao Ji, Zhuang Yang. Inner Mongolia grassland carbon sequestration potential estimation and Development Countermeasures of [J]. pratacultural science, 2013, (9): 1469-1474. Nicole, "Title of paper with only first word capitalized," J. Name Stand. Abbrev., in press.
- [4] YFang Fang . Legislation grassland protection research in China [D]. Jilin University, 2015.
- [5] Feng Yufeng. The sustainable development of grassland economy based on multi function [J]. Journal of China Academy of environmental management, 2011, (21): 43-46
- [6] Jing Ying. Study on the system of sustainable management of grassland [J]. Journal of Inner Mongolia University of Finance & Economics, 2015, (4): 20-23
- [7] Ni Jian, Ma Jun. Inner Mongolia grassland carbon sequestration management in the enterprise and the government game analysis [J]. Inner Mongolia Agricultural University Journal (SOCIAL SCIENCE EDITION) 2015, (2): 35-39.
- [8] Wei Ying, Ma Jun. Public Policy Research on the development of China's grassland carbon sink [J]. Journal of Inner Mongolia Agricultural University, 2013, (6): 13-17