How to design “Three Lines and One List” system in local regulations —— Taking Regulations of Jilin Province on ecological and environmental protection as an example

Yuanshi Li1, *, Haiyan Duan2
1Ecological environment engineering evaluation center, Jilin, China
2College of new energy and environment, Jilin University, Jilin, China

*Corresponding author e-mail: Andrew@acee.org.cn

Abstract. Scientifically frame the red line of ecological protection, the bottom line of environmental quality, the upper limit of resource utilization, compile the list of environmental access (“Three lines and One List”), and establish a differentiated environmental management and control system covering the whole land space, which has a Great significance for promoting the harmonious coexistence between man and nature. On the basis of analyzing the contents and orientation of “Three lines and One List”, this study takes relevant system design in Regulations of Jilin Province on ecological and environmental protection as an example to analyze the orientation and challenges of formulating “Three lines and One List” in Jilin Province. Through the study of relevant system design in China and other China’s provinces and cities, this paper presents the design of “Three lines and One List” system in Jilin Province, which provides reference for the design of “Three lines and One List” system in local regulations. The research shows that it is necessary to strengthen the constraint of “Three lines” and the delicacy management of “One List”. Differ from most other provinces and cities who has formulated only one legal provision in relevant regulations, Jilin Province formulated four relevant legal provisions in Regulations of Jilin Province on ecological and environmental protection to prominence the importance of “Three lines and One List”.

1. Introduction
In July 2015, General Secretary Xi Jinping convened the 14th meeting of the Central Leading Group for Deepening Reform, and put forward the requirements of the upper limit of resource utilization, the bottom line of environmental quality and the red line of ecological protection. Guidelines of the CPC Central Committee and the State Council on comprehensively strengthening ecological and environmental protection and resolutely fighting the battle against pollution released in June 2018 clearly required that “provincial Party committees and governments should speed up the establishment of the red line for ecological protection, the bottom line for environmental quality, the line for resource utilization, and the formulation of the ecological and environmental access list”. On August 13, 2018, Ministry of Ecology and Environment of the People’s Republic of China issued the Implementation plan of regional space ecological environment evaluation, which requires that regional space ecological environment assessment based on “Three Lines and One List” should be carried out in 19
other provinces, municipalities and autonomous regions, so as to provide a bases for formulating differentiated policies on resource development, utilization and environmental management.

At present, the research on “Three Lines and One List” mainly focuses on the regional compilation of “Three Lines and One List”, the relationship between the “Three Lines and One List” and environmental impact assessment, and the existing ecological environmental risk prevention of “Three Lines and One List”. Firstly, most of the researches are about the regional compilation of “Three Lines and One List”, which mainly study how to establish “Three Lines and One List” in a region and divide the priority protection area, key control area and general control area of the region. For example, Wang [1] (2020) argues that “Three Lines and One List” has the characteristics of early involvement and regional basic data sharing, for which it can be incorporated into the environmental access system, then environmental access system could play a systematic preventive role, improve the government decision-making ability, enhance environmental impact assessment work efficiency. Yang et al. [2] (2020) studied the compilation idea and practical application prospect of “Three Lines and One List” in Qinghai Province and to provide strong support for the implementation of the strategy of “giving priority to ecological protection, promoting high-quality development and creating high-quality life (One Priority and Two High Quality)”. Secondly, researches on the relationship and connection between “Three Lines and One List” and environmental impact assessment. Wang et al [3] (2020) studied the current policy system of the connection between plan environmental impact assessment of development zones and “Three Lines and One List” governance, analyzed and summarized the connection between the plan environmental impact assessment and “Three Lines and One List”, which contained the ecological conservation red line, the environmental quality bottom line, the resource utilization upper limit and the list of environmental access, based on practice. Finally, researcher on existing ecological environmental risk prevention of “Three Lines and One List”. As a new management method, it is necessary to carry out risk assessment on “Three Lines and One List”. Base on ecological environment space management system, Rong [4] (2020) analyzed the current status of ecological environment risk prevention and the current status of ecological environment risk prevention, then proposed a new era of space management and control methods, discussed the connection between “Three Lines and One List” and the environmental impact assessment system, industrial structure adjustment and land and space planning, and finally established an ecological environment risk prevention system based on “Three Lines and One List”. To sum up, the existing researches mainly focus on the compilation and related technical issues of “Three Lines and One List”, but there have not been any researches on the system design of “Three Lines and One List”, especially the system setting in local regulations.

To fill the research gap, on the basis of analyzing the contents and orientation of “Three Lines and One List”, this study takes relevant system design in Regulations of Jilin Province on ecological and environmental protection as an example to analyze the orientation and challenges of formulating “Three Lines and One List” in Jilin Province. Through the study of relevant system design in China and other China's provinces (cities), this paper presents the design of “Three Lines and One List” system in Jilin Province, which provides reference for the design of “Three Lines and One List” system in local regulations.

2. Strategic orientation and Challenges of “Three Lines and One List” in Jilin Province

2.1. The position of the development strategy
General Secretary Xi Jinping took an examination of the three provinces in northeast China during September 25 to 28, 2018, when he emphasized that the northeast region is an important industrial and agricultural base of China, and it is very important to maintain the country's strategic position of “national defense security, food security, ecological security, energy security, and industrial security”, which is related to the overall situation of national development.
2.1.1. An important growth pole for the revitalization and development of the northeast old industrial base. Major cities such as Changchun, Jilin, Siping, Liaoyuan, Songyuan, Yanbian Korean Autonomous Prefecture in Jilin Province are located in the Harbin-Changchun metropolitan area which has a good economic foundation, is an important old industrial base in the country and an important growth pole for the revitalization and development of the northeast old industrial base, while is an important gateway to the opening of the north, and a pioneering area for institutional innovation in the old industrial base.

2.1.2. An important commodity grain base of China. As a major grain-producing province, Jilin Province is an important commodity grain base of China. Agriculture, especially the grain industry, is the leading industry with comparative advantages and development potential. Jilin Province, which has been in the forefront of China for many years in terms of total grain output, per capita grain possession, commodity volume, and transfer volume, is an important province that has continuously transferred grain for more than 30 years. Jilin Province has made outstanding contributions to ensure national food security and occupied a pivotal strategic position in the overall situation of national reform and development as well as agricultural modernization.

2.2. The position of the development strategy

2.2.1. Ecological security barriers in Northeast Plain and the “Three-North area”. The National main functional area plan puts forward the ecological security strategy of “Two Screens and Three Belts”, in which the “Northeast Forest Belt” is located in the northern part of Jilin Province and is the ecological security barrier of the Northeast Plain and Part of the Northern Sand Prevention Belt is located in the southwest of Jilin Province and is an ecological security barrier for the Three-Norths area. In Jilin province, there are two national key ecological function areas, namely, Changbai Mountain Forest Ecological Function Area and Horqin Grassland Ecological Function Area.

2.2.2. China Biodiversity conservation priority area. The Changbai Mountain Biodiversity Conservation Priority Area and Songnen Plain Biodiversity Conservation Priority Area in the province are included in China biodiversity conservation priority area scope.

2.2.3. Black land protection and utilization area. Black land is an extremely precious natural resource, and there are only four large black land areas in the world. In recent years, the problem of black land degradation in northeast China has become increasingly prominent, and strengthening protection is urgent. Jilin Province promulgated the country’s first local regulation on the protection of black land in 2018, Regulations on the protection of black soil in Jilin Province, which was implemented on July 1, 2018 to protect black land resource, consolidate the national food security foundation, promote green agricultural development, and achieve the sustainable use of the black land resource.

3. Environmental challenge

3.1. Industrial structure and energy consumption structure need to be optimized and adjusted
The industrial structure is dominated by heavy industry, the ability of industrial technology innovation is not strong and the development of the service industry is relatively lagging, thus the energy consumption structure is unbalanced and the pollution caused by coal consumption is heavy.

3.2. The continuous improvement of environmental quality in some areas is under great pressure
The water pollution of some tributaries of Liaohe river and Songhua River is serious. The air in the central area is showing the tendency of compound pollution, and the atmospheric environment is under great pressure of continuous improvement.
3.3. Ecosystem services need to be protected
The ecological function of forest is weakening, and the task of protecting species diversity is arduous. The farmland ecosystem degradation of black land, thus the black land cannot be sustainable use. The desertification, salinization and swamping of the grassland ecosystem has not yet been fundamentally checked.

Figure 1. Trend chart of coal consumption proportion in Jilin Province from 2016 to 2018.

Figure 2. The water quality of Liaohe River Basin in Jilin Province reached the standard in 2018.

Figure 3. The change of PM2.5 average annual concentration in Jilin Province from 2015 to 2018.
4. “Three Lines and One List” system designed in local regulations

The system design of “Three Lines and One List” not only has the basis of higher-level laws, but also stipulates the relevant provisions of “Three Lines and One List” in the management and control in Regulations on ecological environment protection and regional development action plans proposed by various provinces (cities).

Jilin Province is in an important position of the old industrial base in the Northeast, and is adjacent to many countries. At the same time, Songhua River Basin, one of the seven major river basins in China, has a large area flowing through Jilin Province. Therefore, Jilin province attaches great importance to the development strategy of “Three Lines and One List”. Different from one clause in the regulations on ecological and environmental protection issued by other provinces and cities, Jilin Province has planned four legal provisions related to “Three Lines and One List” in Regulations of Jilin Province on ecological environment protection (draft) to highlight the importance of “Three Lines” restriction and access list, specifically:

4.1. Control clauses for red line of ecological protection.
Governments at all levels shall strictly abide by the red line of ecological protection and the main function positioning of the ecological space, prohibit various development activities that do not conform to the main function positioning, prohibit arbitrary changes to the use of land and space, and ensure that the ecological function, area and nature of ecological space will not be reduced. Scientifically delimit the red line of ecological protection of forest, grassland and wetland, and strictly manage the requisition (occupation) of natural ecological spaces to curb the trend of ecosystem degradation.

4.2. Control clauses for the bottom line of environmental quality.
Governments at all levels should strictly abide by the bottom line of environmental quality.

4.3. Control clauses for the upper limit of resource utilization.
Governments at all levels should strictly abide by Governments at all levels should strictly abide by the bottom line of environmental quality.

4.3.1. Environmental access. The provincial government shall implement the differentiated market access policies for industrial projects in different main functional areas, clarify the access matters of prohibited and restricted development areas, clarify the industries prohibited and restricted in the optimized development areas and key development areas, and formulate a negative list of environmental access in accordance with relevant technical specifications.

5. Conclusion
“Three Lines and One List” is to improve the environmental quality as the core, based on the red line of ecological protection, the bottom line of environmental quality, the upper limit of resource utilization. The administrative region is divided into three types of environmental control units: “the priority protection area, key control area and general control area”. Jilin Province has an important strategic and ecological environment protection position, and the design of “Three Lines and One List” system in Jilin Province needs to highlight “Three Lines” constraints and the refined management of “One List”. Different from “Three Lines and One List” system in other provinces and cities (most provinces and cities only have one clause), Jilin Province has determined four legal
provisions related to “Three Lines and One List” in the “Ecological environment protection regulations of Jilin Province (draft)” to highlight the importance and restriction of “Three Lines and One List”.

References
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