Scientific Forest Management in Chongyi County of Jiangxi Province to Promote Ecological Protection and Restoration

1. Title

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2. Background

Chongyi County of Jiangxi Province is located in the old revolutionary area of southern Anhui. It is the key forestry county in the southern collective forest area of China. The total land area of the county is 3.01 million mu, including 2.69 million mu of forest land, accounting for 89.3% of the total. It is known as "90% mountain, 5% farm land and 5% of road, water and farm house". The hydro-thermal condition is good, the types of forests are diverse, however, the afforestation space is limited. Thus, the potential for forest ecological restoration and quality improvement is large, and it is highly representative in the southern China. In recent years, Chongyi County of Jiangxi Province has strictly practiced President Xi Jinping's spirit on ecological civilization in the new era, firmly established the concept of respecting nature, adapting to nature, and protecting nature, and actively explored the way to achieve "lucid waters and lush mountains are invaluable assets". Guided by the theory of multi-function, near nature and full-cycle forest management, forest ecological protection and restoration has been vigorously promoted, to build a healthy, stable and efficient forest ecosystem and improve forest quality. A road of forestry sustainable development with the purpose of production development, enriching life and good ecology has been developed.

3.Implementation period

From 1993 to 2018.

4. Implementation stages

In 1993, Chongyi County introduced and adhered to the international advanced concepts in forest ecological protection and scientific management in light of local realities, to explore the promotion of scientific forest management. Since 2013, the construction of national demonstration base of forest management has been fully carried out.

5. Relevant implementing parties

National Forestry and Grassland Administration, Forestry Bureau of Jiangxi Province, Chongyi County Government and Forestry Bureau, Forest farmers in the county.

6. Beneficiaries

Various units and forest farmers in Chongyi County.

7. Total investment costs and composition

Funds from national and local government, self-raised by the forest farm and village, investment from enterprises, forest farmers self-raised funds and labor input. The total investment cost is unknown.

8. Matching funds and composition

In 2017, direct investment of non-public enterprises, forestry professional cooperative economic organizations, and individuals in forestry production (such as afforestation and tending) accounted for about 80% of the total annual forestry investment.

9. Project level

County level.

10. Impacts of mitigating and adapting climate change

The forest resources in the county has increased significantly, and the quality has increased remarkably. The forest coverage rate has increased from 87.3% at the end of 2013 to 87.56% at the end of 2017; the stocking volume has increased from 13.86 million m³ to 16.09 million m³; and the standing moso bamboo increased from 98.86 million to 100 million; the stocking volume of arbor forest per unit area increased from 103.1 m³/ha to 124.5

m³/ha. The ability of forests to mitigate and adapt to climate change has increased significantly.

11. Social, economic and environmental impacts

Active policies and measures are taken, to clarify property rights on the basis of voluntary forest farmers, clarify the mechanism of benefits distribution, guide and promote the rational flow of forestry resources, capital, technology and other production factors through cooperation, joint stock, and shareholding. Forestry operation in a moderate scale has been achieved. Furthermore, a new mechanism for forest ecological protection and restoration has been formed, which is dominated by state-owned forest farms, driven by private forest farms, with demonstration of forestry professional cooperatives, and inputs from farmer households or family joint ventures, and individuals. In combination with the collective forest reform and the reform of state-owned forest farms, the property rights trading and financial service platform, the forest farmers mutual aid platform, and the "enterprise + base" demonstration platform were established to support the well-organized and professional development of forest ecological protection and restoration management system as well as the operational mechanism. Sample forests with a total of more than 30,000 ha have been established for demonstration of scientific forest management with the purpose of ecological protection and restoration. Therefore, a demonstration system with sample forests that can be visited, replicated and promoted has been formed for ecological protection and restoration as well as the improvement of forest quality. It plays an important demonstration role in the southern collective forests. The district played an important role in demonstrating the role. The county's total forestry output value increased from CNY 2.16 billion in 2013 to CNY 3.25 billion in 2017, with an annual growth rate of 10.8%. The per capita net income of farmers from key townships in mountainous areas from forestry reached CNY 5,820, accounting for 62% of the annual average net income.

12. Relevant photos, figures and charts



Figure 1. Beautiful forest ecological landscape around Chongyi County



Figure 2. Pure Pinus massoniana forest physiognomy before tending felling in Chongyi County



Figure 3. Renewal understory multi-age multi-layer forest physiognomy through Pinus massoniana forest tending felling in Chongyi County



Figure 4. Forest stand before tending felling of Cunninghamia lanceolate pure forest in Chongyi County



Figure 5. Large-diameter timber production forest cultivated after tending felling of Cunninghamia lanceolate pure forest in Chongyi County



Figure 6. Forest physiognomy before tending felling of pure broad-leaved forest in Chongyi County (forest stand density is too large, and the understory vegetation is scarce)



Figure 7. Replanting other tree species after tending felling of pure broad-leaved forest to promote understory regeneration in Chongyi County