INFORMATION SERVICE SYSTEM FOR SMALL FOREST OWNERS

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Abstract: Individual owned forests have boomed in the last decade in China. Hundreds of millions of private forest owners have emerged since years of afforestation practice and collective forest ownership reform. Most of those private forest owners are former peasants living in afforestation areas. They thirst for forestry information, such as technique knowledge, forestry policies, finance, marketing, etc. Unfortunately the ways they could get certain information are very limit. Before internet time, Local governments are the main channel they search helps for useful information and technique supports. State and local governments have paid much attention to provide necessary forestry technique supports to those small forest owners and provided varies training projects, issued official forestry information through their websites. While, as state government expands household contract system in the management of collective forestry land, the number of individual forest owners is bumping up in future 5 years. There is still a gap between supplying ability and requirement of forestry information. To construct an effective forestry information service system in next 3-5 year can bridge the gap. This paper discusses the framework of such an information service system.

Key words: small forest owners, information service system, forestry information

1. INTRODUCTION

The total area of plantation forests in china has exceeded 53.6 million hectares. It ranks the first in the world (SFA, 2008a). Most of these

plantations own by collectives and individuals. Since year 2003, China has implemented a household contract system in the management of collective forests in Fujian, Jiangxi, Liaoning and Zhejiang provinces. Millions of forestry lands have contracted to farmers. This system will be expanded nationwide from this year. It was recognized as another milestone in the country's transformation of rural relationship of production after it adopted the system for collective farmland thirty years ago. Through 70-years contracts, farmers would be put more effort into planting and growing trees. They expect to get more income from the forest land they leased.

China has a mature forestry service system for state and collective ownerships of the forestry that provides investments, forest plans, technique expansions and trainings etc. Local governmental forestry agencies response to technique supports for seedling, tree plant, forest pests and diseases prevention. Local forestry bureaus made forest management plans. Individuals needn't consider much to forestry information. Now, the situation is different. Forest lands have been divided into small pieces. Their owners must think about how to manage the land and timbers to get more productivity and earn more money. They need varies forestry information which support them to achieve their objectives. Where they can seek help and where they can find useful information? Government, industry, research institute and university are places they could ask for help. While, only few of those private forest owners know where the right direction is they could find the proper information. Even they know where the source of information they looked for is, they might not know to whom they could contact and get the information. A former research (Chen Yongfu et al., 1997) showed that the extensive management, poor commercial awareness and lack of science and technology of forest owners significantly hinder the forest production and management.

As the development of information technology, using internet, mobile, together with tradition channels, establishing the information service system for small forest owners can help them get enough forestry information.

2.   THE CURRENT INFORMATION SERVICE FOR SMALL FOREST OWNERS

At present, government plays a main role in providing information service system for small forest owners in China. Local forestry bureaus public newsletters, give seminars and training courses to small forest owners periodically. Many expansion projects put forward every year. Technicians and specialists give on the spot instructions aperiodically.   They are welcomed by private forest owners, while the number of technicians and specialists are far from enough. Most individual forest owners have no

chance to meet a specialist who could answer all the questions about their tree planting and timber management. The first place they seek help is local government. We once run into a farmer when we did survey in Wenan County, Hebei province in last November. He went to local forest bureau to ask where he could find an agency that could help him analyze his soil and the water he irrigated his timbers. He hoped the forest bureau had such a department which did test and gave him a report. He said he suspected the water quality because his trees were dying. Wenan forestry bureau has no such a department. The officer who received him suggested him to try his fortune in Hebei Agriculture University. When that farmer left, the officer told us forest owners came to forestry bureau asked any kind questions about their trees every day, while only partly of them could get satisfied answers. Because many questions were out of forestry categories and officers could not always give them suggestion.

Another example was a farmer who planted 4 mu (0.27 hectare) poplar 3 years ago. His trees grew much slower than his neighbor. We met him in his field when we went on a tour of selecting trail spots last spring. Fortunately, he met us, a deputy direct general of local forestry bureau and a specialist from Hebei Forestry Science Institute accompanied with us. After talking with him, they suggested him to do heave thinning in the fall and promised to help him sell timbers he thinned. The deputy direct general told us since those farmers lacked of necessary knowledge and got no effective information, their plantations were hardly managed. Local forestry bureau had no enough force to deal with so many questions.

Besides tree cultivating knowledge and technologies, those small forest owners also need finance, market and insurance information. No forest owner's associations in China at present. Some individuals cooperate with paper mills or panel mills. Their timbers are parts of raw material forests for certain mills. The timbers owners need to know when the right time they cut woods and get satisfied revenues is. For the insurance issue, few private forest owners considered about buying insurance for their woods before the snow disaster in south China in early 2008. It destroyed 20.86 million hectares of forests and direct cost 57.3 billion yuan (about 8 billion U.S. dollars) according to SFA deputy director Zhu Lieke (Xinhua, 2008) said in a news conference. Over 2.6 million forestry population has been affected by the disaster. Now they know the important of insurance. While, what kind of insurance should they buy and where and how much to buy are still questions they need solve. Is there a portal they could find proper information timely? An information service system could meet the demand.

3.   THE IDEA AND PLAN OF CONSTRUCTION AN INFORMATION SERVICE SYSTEM FOR SMALL FOREST OWNERS

The construction of the information service system for small forest owners should be planned from an overall perspective and carried out gradually. Government gets the leadership of providing services for small forest owners from the very beginning. A technology service action for forest ownership reform has put forward from this year. Small forest owners should establish their associations and provide services for individual members. China forestry industry association had come into existence since August 2007. Its website provides information surrounding to the industry. At present few small forest owners joined into this association. Perhaps most of them have not known about such an organization. Forestry education institutes, public libraries, media and other information services providers are all having opportunities to involve in this system and providing varies kind of forestry information resources and services. Building such a system will spend 3-5 years and need lots of investment. It also need participants focus on information demands and integrate varies relevant resources. Specifically speaking it contains two stages as follows:

3.1   Stage one—the government plays the leading role in the course of the construction of the information service system and provides public welfare services

In the first stage, the government plays the leading role and constructs the information service system frame from three aspects, the organization system, the infrastructure and the resources and the service mode. In this stage public welfare services are provided.

(1) The construction of organization network

The organization network is the service system's support. Service stations can be set up at the forestry bureaus, such as the forestry administration and the forestry station to form a third-level organization system——"district service center, township service station and village information point". The district service center as the district-wide information gathering and exchanging center is responsible for collecting, reorganizing and processing the information and also issuing the information to the forest owners through the township service station and the village information point. As a middle level, the township service station takes charge of information classification and releases it to the village information point according to the different demands of villages. It is also responsible for giving information from the village information point in to the district service center. The village

information point is responsible for collecting information and demands from forest owners directly and gives that in to the township service station.

(2) The construction of the infrastructure and the resources

The construction of the infrastructure and the resources is the service system's foundation. Rural area informationization gives many successful experiences to cite. Such as village service points and agriculture websites, call centers, local training TV programs are all good information service forms. SFA has already made plans to provide service for newly emerged small forest owners. Government, forestry research and education institutes, technology expansion groups are all welcome joining in this action. Many projects, such as research results demonstration, technical training, special websites construction, education textbooks, special manuals, brochures and CDs publishing, etc. will start up in next 3 years (SFA, 2008b).

Human resources are very important in building information service system. A human resource development plan has made by SFA. An action plans to train ten thousand householders to master one specialized forestry technique respectively (SFA, 2008c). Specialists going to mountain areas to give instructions and seminars to forest owners, evening school and training courses are included in this plan.

(3) Service mode

Forest owners' characteristics must be taken fully consideration when the service mode is selected. Three kind of service mode is feasible.

(a) Setting up the network service platform

Set up a comprehensive service platform based on a forestry website which provides information for the forest owners to meet their daily life needs, such as the forestry policy, the forestry science and technology, market information, loan and insurance, the recruiting of workers information, the weather and the transportation and so on. Furthermore, voice mode is also supported. Forest owners can contact the Technicians through the 24 hours hot line. Daytime the forestry bureau technicians are responsible for the hot line, at night the hot line answers the call automatically and records the request. The second day the technicians will answer the request according the record. SMS and mobile application software are promise service resources, as mobile is popular in mountain area. It might be a better solution of 'last one kilometer' problem.

(b) Establishing floating technical service team

The floating technical service team mainly has two responsibilities: first, it is in charge of giving the unsolved questions through the hot line a face-to-face solution. Second, transform the passive consultation into active service. It can give on the spot instructions and exchange information with the forest owners regularly in persons and get feedback directly.

(c) Establishing forestry science and technology center

Establish the multifunction forestry science and technology center in the district service level and provide "one-stop" service. This center supposes to be five areas as follows.

■ Information inquiry and release area. This area provides free internet surf service for forest owners. Furthermore, both desktop and touch-screen computers are equipped.

■ Expert consulting area. Forest owners can come here for free consultation from experts. Telephone consultation is also supported.

■ Product demonstrating area. This area exhibits materials and tools for forest owners, such as good quality seeds, tree measurement tools etc.

■ Reading area. Forest owners can read and order books and periodicals in this area.

■ Immediate news releasing area. Release the market quotation information, supply and demand information and science and technology news.

3.2   Stage two—various service providers participate under the government's guidance to form ASP operation mode

During the first stage, the government is the main service provider who can not only provide the powerful policy safeguard but also create a favorable environment in all respects for building the information service system. However, that the government is the main service provider exists several pitfalls. First, the services provided are non-profit. As a consequence, the related service group's initiative could not be fully aroused. Second, the government is responsible for both the administration and affairs which is supposed to be duty of the public institutions. This leads to the information services initiated to a great extent by the government's arrangement not by the forest owners' needs (Yu Liangzhi et al, 2007). Therefore, in the second stage, the operation mode should be changed and let more service providers participate under the government's guidance.

In the second stage, ASP mode is a good choice. ASP (Application Service Provider) is a new outsourcing mode which appears along with development in technology and trends in the business environment. ASP offers individuals or enterprises access over the Internet to ASP software and related services that would otherwise have to be located in their own personal or enterprise computers and ASP is also responsible for the maintaining and updating (Zhou Nande, 2004). All the individuals and enterprises have to do is to pay for the software and services. In this stage, the government can rent the software and related services from the ASP, hand over the responsibility of providing information service to ASP and concentrate on administration.

ASP possesses several benefits. First, service providers such as software providers, equipment manufacturers and information providers, can take advantage of their professional skills to provide professional services in all aspects, while the government can concentrate on the administration and provide fund and powerful policy safeguard. Second, ASP can provide the forest owners the ability to access a broader range of applications and professional technical support. Along with the development, the ASP alliance can be formed. More service providers such as the physical distribution dealers and the forest dealers can join the ASP alliance to form an industrial chain and provide a better service for the forest owners.

4. CONCLUSION

With the implementation of forest ownership reform, thousands of millions individual small forest owners come forth. They need varies kind of information service to help them manage their woodlands and increase land productivity and get rich. Government has acted to provide essential services for them, while, it could not meet all demands. To build an information service system and involve non-government service providers can solve the problem. This paper analyses the present situation of the information service for forest owners, and gives the specific ideas for the construction of an information service system. Much further work should be focus on. For example, forest owners' objectives and information demands, their information behaviors are issues should be considered of.

REFERENCES

Chen Yongfu et al. Problems and Countermeasures in Development of Rural Forest Farms[J]. Journal of Zhejiang Forestry College, 1997, 14(2): 199-203. (In Chinese)

SFA . 'Hundred Counties, thousand villages and ten thousand householders' Science and technology demonstration action implement plan [D], State Forestry Administration, 2008c, 7pp. (In Chinese)

SFA. National forest resource 2006 report[OL], State Forestry Administration, 2008a, http://www.forestry.gov.cn/data/lytj/2006q/tj_01.htm.(In Chinese)

SFA. Science and technology service action for forest ownership reform[D], State Forestry Administration, 2008b, 4pp. (In Chinese)

Xinhua. Winter storms cost China's forestry sector $8 bln[OL],2008.2.19, http://english.people.com.cn/90001/90776/90884/6356519.html

Yu Liangzhi et al. Establishing a Rural Information Service System for New Farmers: a Case Study in Tianjin[J]. The Journal of the Library Science in China, 2007, 33(6): 33-35. (In Chinese)

Zhou Nande. Study on ASP-based Information Technology with Multiple Tier[J]. Application Research of Computers, 2004, 21(4): 55-57. (In Chinese)