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Protection of Geographical Indication Intellectual Property of Tea in Zhejiang Province

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Abstract As to tea resources in Zhejiang Province at present, there are 8 kinds of national geographical indication products, 23 national geographical indication trademarks, and 7 kinds of national geographical indication of agricultural products. From the geographical indication protection, geographical indication trademark registration, geographical indication registration of agricultural products, we conduct a analysis on the current protection of geographical indication intellectual property of tea in Zhejiang Province, and put forth the following countermeasures:
(i) Based on the relevant tangible cultural heritage and natural heritage, conducting in-depth study on the characteristics of natural factors and human factors concerning geographical indication of famous tea; (ii) Based on the protection pattern of national geographical indication products, registering the national geographical indication; (iii) Taking full advantage of special mark of geographical indication products and agricultural brand heritage, and integrating the tea brands within the scope of protection of geographical indication; (iv) Exploiting and arranging the intangible cultural heritage related to tea, strengthening the intangible cultural heritage protection of tea in the province, and endeavoring to include Longjing tea in the world's intangible cultural heritage list on traditional craftsmanship of green tea.

Key words Tea, Geographical indication, Geographical indication intellectual property, Zhejiang Province

1 Introduction

In the today's world, the intellectual property protection is a hot topic drawing widespread attention [1-3]. Geographical indication and origin naming system have had more than 100 years of history [1]. France is one of the birthplaces of the system. From the beginning, France mainly used the system to protect champagne and other types of liquor produced at home. This system was introduced to the World Trade Organization's *Trade-Related Intellectual Property Rights Agreement (TRIPS Agreement)* and many other international conventions [1-3]. In the seven major types of intellectual property rights covered by the TRIPS Agreement, geographical indication, as an independent type of intellectual property, is provided in special sections [3].

However, China's geographical indication protection system was implemented in 1995, with serious conflicts and high degree of repeat. There were mainly five geographical indication protection systems successively. Currently, there are still three of them as follows:

- The geographical indication product protection of the General Administration of Quality Supervision, Inspection and Quarantine;
 - (2) The geographical indication trademark registration of the

State Administration for Industry and Commerce:

(3) The agricultural product geographical indication registration of the Ministry of Agriculture.

Geographical indication rights are an important part of agricultural intellectual property [4], mainly for the intellectual property protection of traditional famous and high-quality specialty [5-11]. Zhejiang Province is an important production base of tea and a major export base of green tea in China. The tea has become a new bright spot of economy for the current rural areas and agriculture in mountainous areas of Zhejiang Province, which is an important channel for increasing agricultural efficiency and farmers' income, and a competitive superior industry.

How to use the geographical indication intellectual property provided in the special section under the WTO's TRIPS Agreement, in order to cultivate the tea brand in Zhejiang Province and enhance the international competitiveness of tea, is an important issue for the further development of the tea industry in the province. Therefore, this article will focus on the analysis of the current situation and development countermeasures concerning the geographical indication intellectual property protection of tea resources in Zhejiang Province.

2 The protection of geographical indication products of tea in Zhejiang Province

The national quality inspection system's national geographical indication product protection began from 1999 (known as the national origin product in the period 1999 – 2005). On October 26, 2001, the origin product protection of tea in Zhejiang Province realized "zero" breakthrough, and Longjing tea was the first to get treatment of origin product (geographical indication product) pro-

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tection. Therefore, Longjing tea became the fourth national geographical indication product (origin product) in China, also the first in China's tea products.

By August 25, 2012, the former State Bureau of Quality and Technical Supervision, the State General Administration of Quality

Supervision, Inspection and Quarantine, had implemented geographical indication product protection on 8 kinds of tea products in Zhejiang Province in succession, in accordance with *Provisions on Origin Product Protection* and *Provisions on Geographical Indication Product Protection* (Table 1).

Table 1 The national geographical indication products of tea in Zhejiang Province and the use of special mark (By August 25, 2012)

Ranking approved	Approval time	Geographical indication products	The scope of protection of geographical indication products	The use of special mark	
				The number of enterprises	The number of trademarks
4	2001.10.26	Longjing tea	In Zhejiang Province, east from Hupao and Maojiabu, west to Yangfumiao, Longmenkan and Hejiacun, south from Shejing and Fushan, North to Laodongyue and Jinyujing, with a total area of 168 square kilometres	172	160
70	2004.04.06	Anji white tea	The current administrative regions under the jurisdiction of Anji County	6	4
117	2004. 12. 13	Wuniu Zao tea	The current administrative regions under the jurisdiction of Yongjia County	8	8
325	2007.03.20	Kaihua Duzhong tea	The current administrative regions under the jurisdiction of Kaihua County	0	0
422	2008.03.14	Songyang tea	The current administrative regions under the jurisdiction of Songyang County	6	6
435	2008.05.08	Jiande Bao tea	The current administrative regions under the jurisdiction of 9 towns and subdistrict offices in Jiande City (Xin'anjiang Street, Yangxi Street, Genglou Street, Xiaya Town, Yangcunqiao Town, Qiantan Town, Meicheng Town, Sandu Town and Dayang Town)	2	2
665	2010.05.24	Huiming tea	The current administrative regions under the jurisdiction of Jingning She Autonomous County	0	0
816	2010. 12. 31	San Bei Xiang tea	The current administrative regions under the jurisdiction of Taishun County	0	0

3 Registration of geographical indication trademarks of tea in Zhejiang Province

The geographical indication trademark registration work of the State Administration for Industry and Commerce started from 1995. By August 15, 2012, the State Administration for Industry and Commerce had registered 23 geographical indication trademarks of tea in Zhejiang Province (Table 2).

Table 2 National geographical indication trademarks of tea in Zhejiang Province (By August 15, 2012)

Name of trademark	Registrant	Registration number
Anji white tea	Tea Station of Anji County Bureau of Agriculture	1511897
Linhai Panhao tea	Linhai Specialty Technology Extension Station	1739891
Jiangshan Lumudan tea	Jiangshan Specialty Technology Extension Station	1739896
Yuyao Pubu Xianming tea	Yuyao Pubu Xianming Tea Association	1794582
Jingshan tea	Jingshan Tea Industry Management Association of Yuhang District in Hangzhou City	2016451
Dafo tea	Xinchang Famous Tea Association	3293273
Putuofo tea	Tea Industry Association of Putuo District in Zhoushan City	4828148
Cangnan Cuilong tea	Agricultural Society of Cangnan County	5528372
Pan'an Yunfeng tea	Pan'an Tea Industry Association in Zhejiang Province	5592502
Shengzhou Zhu tea	Shengzhou Tea Industry Association	5604658
Longjing tea	Cash Crop Administration, Zhejiang Provincial Department of Agriculture	5612284
Tonglu Xueshui Yunlu tea	Tonglu Xueshui Yunlu Tea Industry Association	6193691
Jiande Bao tea	Jiande Quality and Qquantity Measurement Monitoring Center	6545284
Kaihua Longding tea	Kaihua Bureau of Specialty (Bureau of Tea)	6626390
Mogan Huangya tea	Comprehensive Agricultural Service Center in Moganshan Town of Deqing County	6740365
Tianmu Qingding tea	Lin'an Tea Industry Association	7254181
Qiandao Yuye tea	Chun'an Tea Industry Association	7503765
Tiantaishan Yunwu tea	Tiantai Specialty Technology Extension Station	8428535
Qiandao Yuye tea	Chun'an Tea Industry Association	9527432
Qiandao Yuye tea	Chun'an Tea Industry Association	9527433
West Lake Longjing tea	Longjing Tea Industry Association of West Lake District in Hangzhou City	9129815
Xiandu Sunfeng tea	Jinyun Tea Industry Association	9178091
Songyang Yinhou tea	Songyang Tea Industry Association	9154796

4 Geographical indication registration of tea products in Zhejiang Province

The geographical indication agricultural product trademark registration work of the Ministry of Agriculture started from 2008. By August 15, 2012, the Ministry of Agriculture had registered 7 kinds of geographical indication of agricultural products of tea in Zhejiang Province (Table 3).

Table 3 National agricultural product geographical indication of tea in Zhejiang Province (By August 15, 2012)

Name of product	Designated protection scope of the place of origin	Applicant
Changxing Zisun tea	Shuikou Township, Jiapu Town, Xiaopu Town, Meishan Town, Baijian Township, Longshan Street, Zhicheng Town, Lincheng Town, Si'an Town, Erjieling Township, Wushan Township, Heping Town, Lijiagang Town, Hongqiao Town and state – run farms and stations in Changxing County, 15 towns and 92 villages in total.	Changxing Tea Industry Association
Taishun San Bei Xiang tea	36 townships and towns (Luoyang Town, Baizhang Town, Liufeng Township, Songyang Township, Pengxi Town, Shiyang Town, Wanpai Township, Xianren Township, Xiaocun Town, Sixi Town, Fengyang Township, Hengkeng Township, Jiufeng Township, Yuehu Township, Fengwen Township, Yayang Town, Guihu Town, Xuexi Township, Dongxi Township, Wengshan Township, Lianyun Township, Xinpu Township, Baoyang Township, Siqian Town, Zhuli Township, Fengmen Township, Huangqiao Township, Beipai Township, Nanyuan Township, Lingbei Township, Sankui Township, Xiyang Township, Xiahong Township, Da'an Township, Zhouling Township and Yangxi Township) and 205 villages in Taishun County	Taishun Tea Industry Association
Qiandao Yinzhen tea	16 townships, towns and streets (Lijia Town, Datong Town, Hangtou Town, Shouchang Town, Genglou Street, Xin'anjiang Street, Yangxi Street, Xiaya Town, Lianhua Town, Yangcunqiao Town, Dayang Town, Meicheng Town, Sandu Town, Qiantan Town and Qintang Township) and 84 villages in Jiande City	Qiandao Yinzhen Tea Cooperative in Jiande City
Yuyao Pubu Xianming tea	All administrative villages in Yuyao City	Yuyao Pubu Xianming Tea Association
Tianmu Qingding tea	15 townships and towns (Taihuyuan Town, Xitianmu Township, Gaohong Town, Yuqian Town, Zaoxi Town, Taiyang Town, Qianchuan Town, Leping Township, Changhua Town, Heqiao Town, Tuankou Town, Longgang Town, Qingliangfeng Town, Daxiagu Town and Daoshi Town) and 78 administrative villages in Tianmu District of Lin'an City	Lin'an Tea Industry Association
Tonglu Xueshui Yunlu tea	9 townships and towns (Xinhe Township, Zhongshan Township, Baijiang Town, Hecun Township, Fenshui Town, Yaolin Town, Hengcun Town, Fuchunjiang Town, Fengchuan Town) and 59 villages in Tonglu County	Xueshui Yunlu Tea Industry Association in Tonglu County
Putuofo tea	Putuo Mountain, Shenjiamen Street, Donggang Street, Goushan Street, Zhanmao Street, Zhujiajian Street, Taohua Town, Liuheng Town and Dengbu Township in Putuo District of Zhoushan City; Chengdong Street, Huannan Street, Jiefang Street, Changguo Street, Yancang Street, Lincheng Street, Baiquan Town, Ganlan Town, Maqiao Town, Xiaosha Town, Cen'gang Town, Shuangqiao Town, Jintang Town and Beichan Township in Dinghai District; Gaoting Town, Dongsha Town, Daidong Town, Daixi Town, Qushan Town, Changtu Town and Xiushan Township in Daishan County	Agricultural Society of Zhoushan City

5 Conclusions and recommendations for the protection of geographical indication intellectual property of tea in Zhejiang Province

5.1 Conclusions There are 8 kinds of national geographical indication products in the tea resources in Zhejiang Province: Longjing tea, Anji white tea, Wuniu Zao tea, Kaihua Duzhong tea, Songyang tea, Jiande Bao tea, Huiming tea, San Bei Xiang tea. There are 23 national geographical indication trademarks: Anji white tea, Linhai Panhao tea, Jiangshan Lumudan tea, Yuyao Pubu Xianming tea, Jingshan tea, Dafo tea, Putuofo tea, Cangnan Cuilong tea, Pan'an Yunfeng tea, Shengzhou Zhu tea, Longjing tea, Tonglu Xueshui Yunlu tea, Jiande Bao tea, Kaihua Longding tea, Mogan Huangya tea, Tianmu Qingding tea, Qiandao Yuye tea, Tiantaishan Yunwu tea, Qiandao Yuye tea(Registration No. 9527432), Qiandao Yuye tea (Registration No. 9527433), West Lake Longjing tea, Xiandu Sunfeng tea, Songyang Yinhou tea. There are 7 kinds of national geographical indication of agricultural products: Changxing Zisun tea, Taishun San Bei Xiang tea, Qiandao Yinzhen tea, Yuyao Pubu Xianming tea,

Tianmu Qingding tea, Tonglu Xueshui Yunlu tea, Putuofo tea.

5.2 Recommendations for the protection of geographical indication intellectual property of tea in Zhejiang Province

5.2.1 Based on the relevant tangible cultural heritage and natural heritage, conducting in-depth study on the characteristics of natural factors and human factors concerning geographical indication of famous tea.

It is necessary to research the relations between famous tea in Zhejiang Province, and the world cultural heritage Hangzhou West Lake cultural landscape, the national key cultural relics protection unit, famous China's historical and cultural cities, towns, villages and streets, the world biosphere reserve, national scenic area, national geological parks, national nature reserve, national forest park, etc.

From the natural factors (tea varieties, soil type, weather conditions and other natural environmental factors) and human factors (history of cultivation, tea making history, legend, etc.), we should reveal the geographical indication characteristics of famous tea in the province, to provide a scientific basis for the management and protection of geographical indication intellectual

property.

5.2.2 Strengthening the protection of geographical indication intellectual property of tea. The protection of geographical indication intellectual property can give play to the effect of market guidance and business organization, promote and enhance the industrialization of famous and special products; use the function of technical specifications and quality monitoring, to strengthen and improve the quality standardization of the famous and special products; take advantage of market awareness and product reputation background, to support and promote the brand strategy of agricultural products; enhance the value-added of agricultural products, increase farmers' income, thereby contributing to resolving issues concerning agriculture, countryside and farmers.

At present, China's geographical indication protection system only include three main systems. As for the protection of geographical indication products of the General Administration of Quality Supervision, Inspection and Quarantine, its former name is the origin product protection of the former State Bureau of Quality and Technical Supervision. The establishment of this pattern is the fruit of Sino – French cooperation in the field of intellectual property. This protection pattern of geographical indication products is fairly close to the geographic intellectual property protection pattern in France, which applies to the countries with rich geographical indication resources. This pattern has strict quality and technique requirements and needs the participation of quality control system, connected to the World Trade Organization's *Trade-Related Intellectual Property Rights Agreement* (*TRIPS Agreement*).

The geographical indication trademark registration of the State Administration for Industry and Commerce is the earliest protection system of geographical indication intellectual property established in China. Different from the protection of geographical indication products of the General Administration of Quality Supervision, Inspection and Quarantine, and agricultural product geographical indication registration of the Ministry of Agriculture, this pattern is the protection pattern of geographical indication intellectual property based on *Merchandise Marks Act*, quite close to the geographical intellectual property protection pattern in the United States, Germany and other countries.

The registration of agricultural product geographical indication in the Ministry of Agriculture began in 2008. Different from the registration of geographical indication trademarks in the State Administration for Industry and Commerce, this geographical indication intellectual property pattern based on *Trademark Law*, is similar to the protection pattern of geographical indication products in the General Administration of Quality Supervision, Inspection and Quarantine, but there are less types of products to be protected, mainly limited to agricultural products, only involving 12 types (fruit, vegetables, cereals and oil, tea, livestock, aquatic products, herbal medicines, poultry, handicrafts, flowers, beverage, condiments), but not involving wine, vinegar, food, ceramics, fireworks, lacquerware, jade, the four treasures of the study, willow knitting, silk, brocade and other types.

By comparing the above protection pattern of geographical indication products, we know that the protection pattern of geographical indication products is much better.

Given that currently there are mainly three protection patterns of geographical indication in the State Administration of Quality Supervision, Inspection and Quarantine, the State Administration for Industry and Commerce and the Ministry of Agriculture, respectively, the geographical indication product protection of tea in Zhejiang Province should be mainly based on the protection pattern of geographical indication products in the General Administration of Quality Supervision, Inspection and Quarantine. At the same time, it should register the national geographical indication trademark, and register the national geographical indication of agricultural products.

5.2.3 Taking full advantage of special mark of geographical indication products and agricultural brand heritage and integrating the tea brands within the scope of protection of geographical indication.

Except Longjing tea, the "special mark for geographical indication products" of national geographical indication tea products in Zhejiang Province is not used well (Table 1). In order to better cultivate brand and make full use of the geographical indication brand effect, it is necessary to encourage and support more enterprises within the scope of geographical indication tea protection in Zhejiang Province, to use their respective special mark of geographical indication.

5.2.4 Exploiting and arranging the intangible cultural heritage related to tea and endeavoring to include Longjing tea in the world's intangible cultural heritage list on traditional craftsmanship of green tea UNESCO passed *Convention for the Protection of Intangible Cultural Heritage* on October 17, 2003, which was the prelude to the protection of the world's intangible heritage [12-14].

Since the State Council issued *Views on the Strengthening China's Intangible Cultural Heritage Protection Work and Notice on Strengthening Cultural Heritage Protection* in 2005, the rescue and protection of intangible cultural heritage has formed the climax in contemporary China, and yielded fruitful results [12-14]; the registration system of four-level (national, provincial, municipal and county) intangible cultural heritage list system has been gradually established.

Therefore, we should exploit and arrange the traditional craftsmanship related to tea in Zhejiang Province (especially the traditional tea making craftsmanship, and traditional production technique of food containing tea, etc.), traditional music, traditional theater, traditional Chinese medicine, folk custom, and other forms of intangible cultural heritage. Moreover, we should strive to include these forms of intangible cultural heritage in the four-level (national, provincial, municipal and county) intangible cultural heritage list; strengthen the protection of intangible cultural heritage of tea in the province; enrich the cultural connotation of tea products.

mal review. Should the formal review fails, documents will be directly returned to the applicant enterprises. And upon the receipt of returned documents, users can revise the application documents and submit to competent superior authority for approval. If the formal review is passed, the superior authority will start accepting the project applied. Then it enters the expert review stage. After the scores are given by experts, it will determine whether the project can be established or not. The specific status process is shown in Fig. 3.

3 Conclusions and prospects

Relying on the management system for agricultural sci-tech achievement transformation funding project in Zhejiang Province, in combination with mainstream J2EE open-source architecture technologies such as Spring, Struts2, ExtJs, TopLink and FreeMarker, we integrate the application and management of agricultural sci-tech achievement transformation funding project, and complete the whole process management system, including application management, review management, expert review management, project establishment management and acceptance management.

The system features ExtJs architecture based system interface, friendly operation interface and high portability. Besides, the system is based on J2EE technology and has nothing to do with the development platform. At the persistence layer, it realizes Object/Relation Mapping with the aid of TopLink architecture, so the system is irrelevant to database [2] and the extensibility is high.

(From page 54)

Kunqu opera became the first batch of world intangible cultural heritage in 2001. So far, China has become the world's superpower of intangible cultural heritage, and 36 items have been included in the intangible cultural heritage list of UNESCO. However, such world intangible cultural heritage has nothing to do with the tea culture. China is the origin of tea, with long history of tea planting and tea drinking, which is now the world's largest tea-producing country. Longjing tea ranks first in the list of China's ten kinds of famous tea. Therefore, we should endeavor to include Longjing tea in the world's intangible cultural heritage list on traditional craftsmanship of green tea.

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Through analysis and abstract design, we obtain an original model for management of sci-tech project application, and various projects can be expanded on this model.

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Certainly, this system also has defects, such as no sophisticated working engine in the project review and recommendation process, and connection between each module to be further optimized. All these defects should be further improved in the future work.

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