
The Study of Market Economy Country'S Information Service of Geological Data

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Abstract

After years of development and exploration, foreign market economy countries have accumulated a large number of mature experience of information service of geological data. According to the study of the overall trend of information service and informatization of geological data, the mode of information service and the service concept, we can provide effective reference for our country's information service of geological data and improve our country's information service system of geological data.

Keywords

Mmarket economy country, Geological data, Information service.

1. Introduction

Land and resources have playing an extremely important role in national sustainable development, and geological work is the basis of it. As the basic information of geological work, geological data information is not only the important basic resources of national development but also the cornerstone of geological prospecting, environmental protection, engineering construction and geological disaster protection. After years of development and exploration, foreign market economy countries have accumulated a large number of mature experience of information service of geological data. According to the study of their information service of geological data, we can improve our country's information service system of geological data.

2. The overall situation of the information service of geological data in foreign markrt economy country

At present, the informatization level of geological data in foreign market economy country is relatively high, especially in the aspect of social service oriented. In order to improve the image of public service, the government has already established a set of mature informatization, clustering and industrialization system of geological data.

Facing the various aspects of the problem such as resource, environment, climate change, human health, regional development, industrial layout and homeland security, the government departments are all very hard to provide a variety of information products for the society. Along with the economic development and economic structural adjustment, the foreign market economy country are all greatly improving the ability of collecting and integrating the geological data which is directly related to the interests of the state. Most of them have already established massive database of the geological data and have developed information system and social service system based on the network technique and the geological data management, thus they significantly improved the efficiency and level of the geological data

management and enhanced the public awareness of protection, reasonable exploitation and utilization of geological data.

According to the experience of the industrialization and informatization of geological data in foreign market economy country, the service object of geological data informatization is growing from only geological prospecting department to water exploration, geological disaster prevention and control and natural environmental protection department. And with the development of economy, people's attention to geological knowledge including tourism geology, urban geology and earthquake is also growing.

3. The overall trend of the information service of geological data in foreign market economy country

3.1 Coverage scope is gradually expanding

Along with the social development, the informatization of geological data change from professional service to social service and change from digitization of basic geological data to a combination of aerial remote sensing, magnetic anomalies, geochemistry survey, engineering geology, hydrogeology, environmental geology and hazardous geology. All kinds of the information technology also provide necessary technical support to this change.

3.2 The popularity is gradually enhancing

In order to embody its long vitality and service function, geological data must face the public. With the social development, people much more need the geological knowledge such as tourism geology and geological disasters, which is closely related to them. And the government need to provide the necessary geological data to them.

3.3 The intermediary agencies is gradually increasing

In foreign market economy country, the government usually only collect and publish the basic metadata. As for the deeper level of the information, it is usually excavated and processed by the professional technology company. The company reprocess the basic data based on the specific requirements and charge a fee for this reason. In this way, the government can save operating cost and provide the targeted professional services for the departments as well, which form a win-win situation of government, information demander and intermediary organ and lay a foundation of the benign development of the geological data's informatization and industrialization.

3.4 The government is changing from administrator to service provider

In foreign market economy country, the government usually establish professional organ to provide geological data and its main role is to provide service.

3.5 Pay attention to customer's feedback

In foreign market economy country, the geological agency all attach great importance to customer's feedback. For example, the USGS reinforced the geological information network services and customer satisfaction investigation in customer service plan in 2005. Through the geological information network services and customer satisfaction investigation as well as the public hearing, the USGS can fully understand customer's demand and adjust scientific development direction and new focus areas in the future based on customer's feedback.

3.6 Pay attention to more areas of cooperation

Most market economy country attach great importance to the cooperation with government, scientific research institutions and company. Research institutions play as the main body to operate the project and the university usually undertake the role of innovation research.

3.7 Pay attention to achievement propagandizing and public education

Most market economy country attach great importance to achievement propagandizing and public education such as providing geological data for students and related lovers so as to spread the knowledge.

3.8 Using the most advanced informatization technology

In the era of rapid development of information technology, the information service of geological data must use the most advanced informatization technology, for example, users can browse maps and search on the map through browser with the WebGIS technology adopted by the USGS. In this way we can not only through keyword query, but also can directly to find on the map. The USGS clearly mentioned that they will use advanced information technology to provide users better support. A continuously updated information service technology is still the key point of the development of public welfare geological work in the United States.

4. The mode of the information service of geological data in foreign market economy country

4.1 The expansion of service content

In foreign market economy country, the main part of the information service of geological data is still providing information related to geology. The radical change is the expansion of service content. It change from providing professional geological information to provide information related to management and popular science and from providing simple information of geology and mineral resources to integrated geological information including data processing, utility software, consulting, decision, training and so on. The service provided by the foreign country involve all aspects of geological information such as regional geological survey, geochemistry, geophysics, hydrogeology, geological disaster, mineral resources, water resource, energy, environment and geological scientific knowledge and so on. From the depth of the service content, it also provide the large scale maps and some map's scale even get to 1:10000.

4.2 The transformation of service object

The object of geological data service in foreign market economy country mainly include governmental geological department, related company, research Institution, educational institution and the public. And with the social development, it gradually shows the following trends: the service content is gradually increasing such as the engineering geology and geological disaster information which is closely related to the public life; enhanced the quality of the geological information, make sure that the major geological information user can gain the latest information and provide a reliable basis for decision making, research, etc; to strengthen the information service provided for social vulnerable groups, British and Australia both have enacted and performed related laws and network instruction manual which ask for helping social vulnerable groups.

4.3 The form of service

Apart from the traditional form, it also includes: a. online information retrieval system; b. the network map query system; c. one-stop service system; d. e-commerce service etc. Some geological information can be downloaded through the Internet, bought in the specific store and ordered by telephone, E-mail and fax and some information can be provided through journal and annual report etc.

4.4 The carrier of the service

The foreign geological information service have various digital formats and carriers. The digital formats of the results include: ASCII, PDF, ARC/INFO, Arc/View (.SHP), MapInfo(.MIF/.MID), MapInfo (.TAB), ECW, TIFF etc. The carriers of results include paper medium, plastic medium, compact disc, magnetic disk etc.

4.5 The provider of the service

Generally speaking, the traditional provider of the geological information include the the Geological Survey and its professional institutions. Foreign market economy country also through the cooperation mechanism to invite the geological institution and university to play a role as the provider of the geological data.

4.6 The support system of the service

The foreign market economy country have made a set of rules to ensure that the information services of geological data can be better implemented. For example, in Australia , the ownership of the public data belong to the government, government usually through licensing agreement with users to protect the interests of the data; in UK, the British Geological Survey control the safety and quality of information service of geological data through the form of royalty.

5. Enlightenment and reference for information service of geological data in China

The information service of geological data is part of information service of land and resources. The ultimate goal of the clustering and industrialization of the information service of geological data is to promote the clustering and industrialization of information of land and resources of our country. The summary of foreign market economy country's successful experience of information service of geological data will no doubt provide effective reference to our country's information services of geological data.

5.1 Welcome commercial institution, promote social service of geological data

The United States, Canada, Australia and other developed countries have developed more mature in the socialization service of geological data. Most of them insist on the tenet of public welfare service, but combine with the commercial mechanism. On the one hand, improve the quality of the service, on the other hand, also promote the redevelopment of information resources. Information services of geological data in China is of pure nature of public welfare services, we also want to find an effective way to find out how to introduce commercial institution, and commercial agencies have never find a profitable investment direction as well. How to achieve the business operations of information service? Second development of the results is probably a more realistic path. We need to purposefully develop some specialized products according to different requirements from different industry such as agriculture, transportation, urban construction etc. so as to promote the development of business.

5.2 Establish intermediary of information service of geological data

We can adopt a gradual way in the process of introducing business institution into socialized services of geological data, beginning from establishing intermediary by the way of establishing geological data business cooperation and governmental procurement of public products, etc. The intermediary engaged in services of geological data processing, sorting and analyzing in order to promote the socialized services of geological data.

5.3 Accelerate the informationization process

The degree of the socialized services of geological data abroad is high while our country's is more lower. We need to fully use the modern network technology to provide different types of information of geological survey. We should accelerate the digital process of the historical results and promote the ability of data sharing; to carry out the information services mainly about the national metadata and directory database to make users easily understand the existing results and find what they need; to speed up the construction of data center and information system to make users query, browse and download the information resources conveniently and make the process of information service simple and efficient.

5.4 Take the information consulting services as the breakthrough

Even the information service industry in our country have developed for more than ten years, its scale is still small and is still the weak link of information service industry. So as for the geological information service industry, in order to develop the information service and to promote socialization and marketization of information service, we need to take the information consulting services as the breakthrough so as to drive the comprehensive development of the geological data service. Compared with other sectors of industry, information service industry is one of the fastest growing and most productive sectors with the characteristics of flexible, less investment and quick effect. So we can take the information consulting services as the breakthrough and be market oriented and take industrialization and socialization as direction and take the information services as the tertiary industry that directly create value to be directly involved in the marketing services, market regulation and market competition. By doing this, we can gradually form a dynamic mechanism of self-development of geological information consulting industry and promote the development of geological information consulting services industry.

5.5 Rich the content and form of information service

Information is playing a more and more important role in the social development, the formation and development of information technology provide technical support for the information industry and the increasing demand and value of information will promote the socialization of information service. Expand the scope of service content and form is the basis of the socialization of geologic data service. Firstly, expand the content of the service. Under the premise of not divulging national secrets and protecting the owner's equity to public release the achievements as much as possible. Secondly, diversify the forms of service. We can get the information by downloading from the internet, mailing or at the specific location. Thirdly, diversify the format and carrier of the results. It can be electronic format and paper medium, plastic medium, Compact disc, magnetic disk as well.

5.6 Improve the policy environment of the socialized service of geological data

The mode of the development of information service industry of the USA is a combination of national macro management and free market regulation, thus provide a loose and free environment for the development of the socialized services if information. The policy environment of the information service of our country remains to be improved in many aspects such as data security, information sharing, public information freedom, investment, etc. Especially in the aspect of how to lead the business institution into the information service industry. It need policy support such as setting up risk investment mechanism of information service to make the enterprise can not only see profit opportunities but also reduce the investment risk.

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