

Messages from Departments and Centers of NILIM

Perspective to advance the comprehensive technology policy research

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(Keyword) Land Management, Stock management, Construction Management, Measurement

1. Introduction

A severe natural characteristic of Japan brings a pure beautiful appearance and rich happiness. Population decline and declining birthrate and aging population are progressing rapidly, and energy problem has become socially apparent. Under such circumstances, the social capital is the most basic skeleton of the land to develop and manage as comfortable and safe and vibrant with looking down upon for the entire country while facing the disaster, which is the foundation that supports the life of the people, about the research in a large field of view and for smooth and efficient implementation of a concrete means, from the viewpoint of management of high-quality stock and securing and improving the quality of public works in the view of fine arrangements, it is important to promote comprehensive research and technology policy and research to think over the whole construction production system. In this paper, I want to discuss the specific point of view for advancing the following issues.

2. The first viewpoint – Land Management

In addition to weakening society due to the population decline, super-aging, and economic stagnation, and due to the frequent occurrence of large-scale natural disasters, environment surrounding our country is facing a change that we have never experienced before. Especially, for disasters devastating Tohoku Pacific Ocean Earthquake, we must hurry to reconstruction. In addition, including that Tokai, Tonankai and Nankai Earthquake are expected in the future, and the response to the direct Earthquake in capital city, therefore, construction of the strong land has become tenacious urgent issue.

On the other hand, as understanding the social capital stock is not necessarily sufficient, there have been a variety of problems. Among these problems, if we are not able to develop and manage appropriate social capital in the future, it is considered that we may not be able to image specifically how future life would change for the

people. Regarding these situations, we have two major approaches we can consider. On the one hand, we have macroeconomic perspective to know exactly the economic effects of public works to give the society as a whole. Moreover, it is necessary to transmit information for easy understanding including comparison with Western countries, to assess the social capital as stock. On the other hand, in the micro perspective, as people will continue to live as a sustainable national land, it is necessary for you to continue to actively implement initiatives such as the "measurement and transparency" for easy understanding in order for potential role and effects of social capital development and management have been brought to the various situations (Society, Economy and Life) for people.

In order to more effectively promote such efforts, it is expected to develop to collect various kinds of data. In particular, as the proportion of people among the national consciousness that they want to place the emphasis on the "richness of the heart" rather than "the richness of the object" as a border around the late 1970s (1), which celebrated period of stable growth is strong. Therefore I feel we need to show more concrete image of design and land management.

3. The second viewpoint – Stock management

In order to form a national land whose safety, the environment, and energy have a comprehensive harmony, it is necessary to promote to focus on the efficient high-quality social infrastructure that takes into account the characteristics of the region. In addition, support for update maintenance due to the aging of the social capital stock was concentrated investment in the period of rapid economic growth, which has become an urgent issue. While in harmony with the natural environment, particularly to prevent social and economic blow to the fatal injury in order to achieve the reduction of life cycle cost by a long life of social capital, inspection that takes into account the characteristics of each facility, planned

maintenance and repair based on deterioration prediction are essential. For this purpose, the following issues become more important in the future. First, it is necessary to strengthen and expand efforts for preventive maintenance of the national land management. With the development of technology tools, such as a simple technique and new inspection and monitoring technology, is sharing and dissemination of technology in various fields. Then, there is a need for greater efficiency and sophistication of maintenance. We need the development of a platform for cross-sectoral to utilize the information and maintenance of infrastructure facilities, and the development of information storage and utilization techniques for managing and updating information more efficiently planning, design, and maintenance. Additionally, the efforts also need optimizing the maintenance of existing facilities. It is the development from planned maintenance of the stock, which is deployed to the efficient operation (Asset management of social capital). NILIM will continue to enrich the research and information exchange center in each Study Group "stock management" that is implemented. And the results obtained in the "Development of inspection and monitoring technology for proactively managing of social capital," the Ministry of Land, Infrastructure, Transport and Tourism Technology Development Projects were carried out in cooperation with each study unit. Because of the above reasons, I feel that it is also necessary to continue to disseminate such information more widely.

4. The third viewpoint – Construction management

In the field of construction management, it is expected that it will be more effective in some of these perspective. For example, it is required to optimize the public procurement system to contribute to the maintenance of the social infrastructure stock infrastructure quality focus, and promote efficient.

As public procurement system for the social infrastructure of quality focused and efficient in response to the enforcement of Law of public works and goods (2005), procurement and construction management system (CM), such as an integrated system of comprehensive evaluation bid system construction and design has been underway for a variety of initiatives in order to improve and ensure the quality of public works. However, analysis of the challenges in business and reports directly to the Ministry of Land, Infrastructure, Transport and Tourism, through the necessary review based on it, improved adaptation is required toward a

bidding contract system to function as a mechanism to encourage such efforts for improving technical capabilities of bidders.

Also, learning actively which the best of rules contract order to include the method public infrastructure utilizing public-private partnerships such as PFI / PPP, has been brushing up sequentially through the application of the world until now, construction production in Japan. So it is also necessary that we change to a better system. In addition, it is necessary to respond to changes in the quality assurance method according to innovation construction stage. And we have to deal with the thing, such as the introduction of full-scale construction of CIM and the introduction of information technology to construction projects, but also to the advancement of construction management technology. And criteria for accurate and efficient supervision of public works, inspection and evaluation work performance, such as the review procedure, the reliably obtain high-quality results at the level of individual work. And it has become an important issue on which we will establish a system for corporate performance and efforts are appropriately reflected in the contractor selection process.

5. Conclusion

For some perspectives that are considered important in order to advance the comprehensive technology policy research, I mentioned the issue with a mix of relevant research. It is closely related problem with these problems in other areas, and also closely related to each. Therefore it is necessary to continue the research comprehensively noted one solution not to bring the new problems. With the deep care and extremely fine enough about this perspective, I like to research further investigation.

【References】

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