Comparative Research on River Basin Management in Korea and Japan

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Abstract

This research aims to explore the mode of River Basin Management (RBM) in Korea and Japan with a comparative perspective. The efforts of implementation of RBM in Korea have included the several attempts to enact the Basic Water Bill, and river basin environmental offices and committees in the four major rivers. Japan has also endeavored to introduce policy efforts to accommodate the new approach including the establishment of river basin comprehensive water resources management committees. Despite such policy efforts, the comparative analyses indicate a series of challenges. The first challenge is to transfer the relevant power from center to river basins. Second, there is a lack of laws and regulations to support a set-up of RBM. Third, river basin organizations are not compatible with the current administrative systems in Korea and Japan. Fourth, river basin organizations require independent funding. Fifth, there are conflicts between ministries involved in water management. It is concluded that more emphasis should be placed on establishment of adequate institutions and legal settings in order to establish RBM in these countries alongside political commitment.

Keywords: River Basin Management, Korea, Japan, River Basin Organizations

I. Introduction

Water issues have previously been dealt with by diverse ministries or bureaus at different levels. Such a fragmented management system has caused the overlapping of tasks, over-investment, and inefficient water supply and quality control, to name a few of the difficulties. In order to overcome such challenges, innovative concepts have been introduced, and one of the most powerful ideas is River Basin Management (RBM). This approach emphasizes a transformation of administrative system in water management, and the boundaries for water management are not to be administrative regions, but river basins. RBM also accompanies institutional changes, including a power transfer from...
the center to river basin organizations, stakeholder participation, and water governance. Recently, a number of countries incrementally attempted to accommodate the new approach, including Korea and Japan.

This research aims to conduct a comparative study on river basin management in Korea and Japan. Since the introduction of RBM to water communities in Korea and Japan in the 1990s, these countries have increasingly attempted to incorporate RBM into their existing systems. The efforts of implementation of RBM in Korea have included the several attempts to enact the Korean Basic Water Bill, river basin environmental offices and committees administering the four major rivers. Japan has also been committed to introducing a myriad of policy efforts to accommodate the new approach within its existent water management systems. One of the most recent efforts related to RBM is the establishment of river basin comprehensive water resources management committees. These committees are authorized to set up the river basin comprehensive water resources management plans and will play a pivotal role in river basin management.

But there are several challenges facing implementation of RBM in both countries. A power transfer from the center to river basins is the most critical challenge, along with the additional challenges of establishing relevant laws and regulations, installation of the RBM system in the current administrative system, and securitization of independent funding for RBM organizations. In addition, conflicts between ministries and bureaus might retard a successful launch of RBM.

Special attention is paid to river basin management in the first section in order to provide an analytical framework. The second section explores the current situation of river basin management in Korea, coupled with a series of challenges. Detailed discussions are included in the examination of the Japanese case study in the third section. The fourth section deals with policy implications derived from the two case studies.

II. River Basin Management

1. Definition

It is necessary to define river basin or catchment before moving on to further discussions on river basin management. A river basin can be defined as the areas that include surface water, ground water, soil, flora and fauna and are affected by a variety of anthropogenic infrastructure, as well as institutions and behaviors. In the United States, river basins are classified depending on size, such as basin, sub-basin, watershed, sub-watershed, and catchment.1 Following this, the World Wildlife Fund provides a useful definition on the Integrated River Basin Management (IRBM) as a policy tool to implement river basin management into practice. IRBM indicates the process that coordinates conservation, management, development of water resources, and land and relevant sources across sectors within a river basin, so as to maximize socio-political

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and economic benefits in an equitable manner. It should be emphasized that the concept of river basin management here encompasses not only natural elements such as various kinds of water resources, but also anthropogenic hardware (infrastructure) and software (institutions and organizations). Therefore, programs and policies centered on RBM need to focus on application of conventional approaches such as building dams, canals, aqueducts and to take into account political, economic, social, and cultural aspects.

Newson (2004) stresses that river basin management reflects a transformation in water management from planning and implementation through science and engineering to decision-making and operation through the political process. This implies that RBM is the socio-political consensus building process in which various opinions and customers’ needs in society are reflected away from the trend where sciences and engineering aspects have been prioritized. Another virtue of RBM lies in the fact that RBM provides a framework wherein diverse stakeholders can gather and discuss various water issues within a river basin, which can help avoid possible conflicts between diverse users upstream, downstream and in diverse sectors.

2. Major Elements

There are a myriad of important elements in order to achieve implementation of river basin management. First, it is essential to establish a long term river basin management plan that is a product of consensus between diverse stakeholders in the basin. Second, relevant policies and programs in RBM should take into account various costs and decision-making that reflect a variety of demands from different sectors, such as industries, agriculture, urban development, inland navigation, and conservation. Third, it is imperative to set up strategic decision-making policies for the whole river basin in order to induce action plans for mid- and small river basins or watersheds. Fourth, RBM should accompany wise policies that utilize opportunities that would take place within the strategic decision-making policies for the whole river basin.

Fifth, the decision-making and planning process in RBM should be transparent and democratic, and relevant stakeholder participation should be guaranteed in the process. Sixth, adequate investment for planning and decision-making in RMB should be allocated and made available through the government, civil society, and the private sector. Last, thorough research and studies are necessary to achieve a solid understanding of natural and socio-economic conditions that have an impact on the river basins.

Together with the seven major elements, a list of prerequisites for establishment of RBM should be considered. According to the Presidential Commission on Sustainable Development in Korea (2004), there are five prerequisites. These are: 1) establishment of clear purposes in RBM; 2) river basin survey and assessment that reflects perspectives of managers as well as customers; 3) a set-up of models that systemize RBM; 4) means to provide finance for RBM; and 5) introduction of water management based on economic principles, such as appropriate water tariffs, taxes, and incentives (PCSD, 2004).

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3 Ibid.
3. Why RBM?

It is worth taking a close look at the reason RBM is welcome as a new policy framework for overcoming current water challenges. The primary reason is related to sectoral management in the water sector. In most of the countries, water issues have been tackled sector by sector. For instance, a vast amount of resources have been invested to augment more water supply in water-scarce countries, whereas the countries suffering from severe water pollution have concentrated on enhancement of water quality. Even within the same country, ‘departmentalism’ (Richards and Smith, 2003) between ministries and bureaus involved in water management has prevailed and triggered inefficiency in operation and management of water resources. For instance, the Ministry of Land, Transport, and Marine Affairs (MLTM) in Korea mainly deals with bulk water supply, whereas the Ministry of Environment is in charge of water quality control. Unfortunately, neither ministry communicates with the other, which has entailed inefficient water management.

In addition, other environmental elements in water planning and projects have been neglected. Such projects have sometimes resulted in negative impacts on surrounding land and ecosystems. It is important to point out that countries like Korea and Japan, where ministries at the center have been powerful in managing water issues, have produced a list of policies that have not necessarily reflected the needs of local people. This implies that important issues in local water management have not been heard or discussed thus far, and many water projects conducted in local areas have not necessarily benefited local people.

Faced with the challenges listed above, RBM offers a new and innovative policy tool. The integrated approach to water issues in RBM can provide cross-sectoral methods to tackle water scarcity, water quality control, flood prevention, and ecosystem conservation. Inter-governmental disputes and conflicts at the central level can be ameliorated through a power transfer from the center to river basins, and river basin organizations can set up various water plans and programs based on stakeholder participation between diverse stakeholders in river basins. When river basin plans and programs are considered, other natural environments should be taken into consideration, reflecting diverse voices from different bureaus, professions, and sectors. The institutionalization of stakeholder involvement can pave the way for local residents to contribute to decision-making in water management.

III. Case Study: Korea

1. River Basin Management in Korea

River basin management in Korea is the responsibility of the Ministry of Land, Transport, and Marine Affairs (MLTM) for bulk water supply and the Ministry of Environment (ME) for water quality control, and several ministries partly participate in decision-making and implementation of polices. The two ministries have different organizations in the four major river basins, namely the Han River, the Nakdong River,
the Keum River, and the Youngsan/Seomjin River Basins. The Youngsan and Seomjin River Basins are separated geographically but managed as one river basin. Figure 1 shows the location of the Four Major River Basins in Korea.

**Figure 1: Four Major River Basins in Korea**

![Four Major River Basins in Korea](source: Lee and Kim, 2009)

MLTM is the most powerful ministry in the water sector in Korea and oversees water resources management and development. The ministry has been involved in building and managing large structures such as dams, canals, aqueducts, and multi-regional water supply systems. The most recent large-scale water project is the Four Major River Rehabilitation Project (2009-2012) for the purpose of augmenting water supply, enhancing water quality, improving flood control capacity and providing amenities for local residents along the rivers.\(^4\) MLTM takes responsibility for river basin management through six local land management bureaus. These bureaus are in charge of river management, with four river management committees in each of the major rivers and conduct related administrative works. In addition to the bureaus, four river flood control offices undertake flood forecasting and warnings, flood control dam management, and the issue of water intake licenses (KICT et al., 2003). The tasks of local land management bureaus and

\(^4\) The Four Major River Rehabilitation Project (http://www.4rivers.go.kr).
flood control offices under MLTM indicate that the ministry has partly adopted approaches of river basin management, particularly in river management and flood control.

Although MLTM has led water management over the past decades, ME seems to play an important role as well, representing a competent agency in river basin management. The ministry has river basin environmental offices responsible for water quality control in the four major river basins. The major tasks of these offices are to: 1) regulate polluting activities; 2) levy and collect water use charges; 3) manage the River Basin Management Fund, and; 4) provide subsidies to local residents affected by the designation of water intake protection zones (Lee, 2005). In addition to the offices, ME has established the ‘River Basin Management Committee’ in each river basin (ME Website, 2010). The four river basin environmental offices only undertake water quality control because water supply issues are handled by local MLTM offices. The ministry often faces difficulties implementing regulatory works on certain projects because of the lack of cooperation and resistance from local governments. The local autonomy system, which was introduced in 1995, has pressured local governments to push forward local development projects that often prioritize growth at the expense of the environment (Korea Local Autonomy Association, 2008). This explains why the offices of ME have not been able to implement policies covering overall water management issues.

2. Challenges

There are several challenges in river basin management in Korea. First, water resources have been managed based not on river basins but on administrative boundaries over the past decades. That management style has caused several problems: 1) difficulty making an overall water management plan based on hydrological cycles; 2) difficulty drawing up a comprehensive river basin water management plan; and 3) conflicts in water use between different administrative regions. In addition, all authority and responsibility is concentrated within the hands of MLTM and ME at the central government level, which often fails to reflect local water conditions in water management plans (Hong, 2002).

The second challenge is related to the limited integration between water management and land use and planning. Currently, the ‘National Land Development Plan’ in Korea provides macro-scale planning on land development. This does not adequately reflect water issues in river basins. Local governments and developers do not prioritize or take into serious account water management plans in their projects (Hong, 2002). This situation has deteriorated since the mid-1990s due to the decentralization process. A growing number of local development projects have resulted in a rapid increase of built environments. Such expansion of the built environments has prevented urban runoff from being absorbed by soil and aquifers and has eventually exacerbated the peak of floods.

Fragmented management poses the third challenge. There are three additional ministries involved in water policy in addition to MLTM and ME—the Ministry for Food, Agriculture, Forestry, and Fisheries (MIFAFF-agricultural water use), the Ministry of Public Administration and Security (MOPAS-assessing the performance of public water companies) and the Ministry of Knowledge and Economy (MKE-supervising hydroelectricity power dams). Table 1 portrays the fragmented administration system in the water sector. Such a complex system has not only caused inefficient water management
but also conflicts between ministries due to departmentalism. The key to success in establishment of river basin management will be closely related to deconstruction of the current complex policy-making mechanism and reconstruction of a new governance system at the central and river basin levels (Hooper, 2005).

Table 1: Allocation of Competencies Categorized by the Roles of Ministries

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Detailed</th>
<th>Concerned Ministries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td></td>
<td>MLTM</td>
</tr>
<tr>
<td>Permission</td>
<td></td>
<td>MLTM</td>
</tr>
<tr>
<td>Price of water</td>
<td></td>
<td>MLTM (multi-regional), ME and local governments (piped water and sewage treatment)</td>
</tr>
<tr>
<td>Designation of water intake</td>
<td></td>
<td>MOPAS</td>
</tr>
<tr>
<td>protected areas</td>
<td></td>
<td>MLTM (water resources), MKE (power generation) and MIFAFF (irrigation)</td>
</tr>
<tr>
<td>Dam (water/power)</td>
<td></td>
<td>MIFAFF</td>
</tr>
<tr>
<td>Inland waterways</td>
<td></td>
<td>MLTM</td>
</tr>
<tr>
<td>Irrigation</td>
<td></td>
<td>MIFAFF</td>
</tr>
<tr>
<td>Embankment</td>
<td></td>
<td>MLTM (flood prevention), MIFAFF (agriculture/irrigation)</td>
</tr>
<tr>
<td>Rivers (small and medium/large)</td>
<td></td>
<td>MOPAS (small and medium-sized rivers), MLTM and ME (large rivers),</td>
</tr>
<tr>
<td>Water supply</td>
<td>Urban piped water supply</td>
<td>ME (general guideline, policy, funding), MOPAS (infrastructure and management monitoring)</td>
</tr>
<tr>
<td>Multi-regional piped water supply</td>
<td></td>
<td>MLTM (through K-Water)</td>
</tr>
<tr>
<td>Water quality</td>
<td>Water quality control and regulations</td>
<td>ME (general guideline, policy, funding)</td>
</tr>
<tr>
<td>Sewage treatment</td>
<td></td>
<td>MOPAS (infrastructure and management monitoring)</td>
</tr>
<tr>
<td>Environmental Impact Assessment</td>
<td></td>
<td>ME</td>
</tr>
<tr>
<td>Flood</td>
<td>River basin flood management</td>
<td>MLTM</td>
</tr>
<tr>
<td>Urban flood and designation</td>
<td></td>
<td>MOPAS</td>
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<tr>
<td>of national disaster areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and financial support for</td>
<td></td>
<td></td>
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<tr>
<td>affected residents</td>
<td></td>
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</tr>
</tbody>
</table>

Remarks: MLTM (Ministry of Land, Transport, and Marine Affairs), ME (Ministry of Environment), MIFAFF (Ministry for Food, Agriculture, Forest and Fisheries), MKE (Ministry of Knowledge and Economy), MOPAS (Ministry of Public Administration and Security), and K-Water (previously named as Korea Water Resources Corporation).

A lack of legal foundations that support river basin management is discussed as the next challenge (KICT et al., 2003). Many legal institutions dealing with water have been enacted and implemented, and this might lead to the conclusion that the country is well equipped with legal settings for water management. However, these laws have been enacted by disparate ministries and in some particular contexts. This has triggered a lack of coherent legal application and the repetition or contradiction of laws. For instance, the Civil Law defines “water rights” and the River Law includes “water abstract rights.” Although these two rights are similar, the two laws indicate the different range of rights regarding water abstraction and use. This contradiction has triggered confusion and conflicts between water users. More importantly, there is no basic water law that can systemize disjointed and incomprehensive laws in water management, clarify goals of the national water management based on basic principles, and serve as a reference to interpret relevant laws and regulations (PCSD, 2004). In addition, no law can be referred to as the definitive one advocating river basin management.

There is a lack of mechanism to finance river basin organizations immune from the interference of ministries at the central government. ME has administered the water fund in river basins, called ‘Four River Basin Management Fund’ through levying and collecting water use charges (PCSD, 2004), which was estimated at approximately KW 700 billion (US$ 600 million) in 2007 (ME, 2008). The fund has been exploited to provide financial support for water quality enhancement projects and regional development projects in river basins. One of the fundamental flaws in the fund is that it is managed by ME through river basin environment offices, which does not guarantee the administrative and financial independence for the river basin environment offices. In addition, the fund is meant to be utilized for enhancing water infrastructures and institutional settings based on a consensus between water related bureaus and local governments, though in reality the ME exclusively uses the fund without any consultation with other government bureaus, including MLTM.

Water communities in Korea have demanded the establishment of overarching authority to play a mediating role in resolving water conflicts between government bureaus, local governments, and different water users in Korea. The central government established mediating organizations such as the ‘Water Management Mediation Council’ and the ‘Water Quality Improvement Division’ in the late 1990s. These institutions were unsuccessful, since they worked on an ad hoc basis without adequate legal foundations and had no administrative or financial mandate to enforce policies (KICT et al., 2003; Lee, 2009).

IV. Case Study: Japan

1. River Basin Management in Japan

It is the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) that
takes full responsibility for water management in Japan, overseeing the 109 river basins through the seven local offices (MLT, 2009; World Bank, 2006; MLIT Webpage, 2011) (See Figure 2). In Japan, a strong local tradition of autonomy remains, but the central government-led administrative system has been dominant in the water sector since the end of the Second World War in 1945. Similar to the situation in Korea, a series of ministries are involved in water management in Japan. These are the Ministry of Environment, the Ministry of Health and Labor, the Ministry of Economy and Industries, the Ministry of Agriculture, Forest, and Fisheries, and the Forest Bureau. However, it should be stressed that compared with the degree of influence demonstrated by MLIT, that of other ministries is negligible, within the water industry (See Table 2).

**Figure 2: 109 River Basins in Japan**

*Source: Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan.*

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### Table 2: Allocation of Competencies by Each Ministry Involved in Water Management in Japan

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Detailed</th>
<th>Concerned Ministries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water management</td>
<td>Planning</td>
<td>MLT</td>
</tr>
<tr>
<td></td>
<td>Water resources development</td>
<td>MLT</td>
</tr>
<tr>
<td></td>
<td>Major river management</td>
<td>MLT</td>
</tr>
<tr>
<td></td>
<td>Water conservation policy and planning</td>
<td>ME</td>
</tr>
<tr>
<td></td>
<td>Forest management for water resources</td>
<td>MAFF</td>
</tr>
<tr>
<td></td>
<td>Agricultural water use and management</td>
<td>MAFF</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment facilities in rivers</td>
<td>MLT</td>
</tr>
<tr>
<td>Water supply</td>
<td>Tap water supply supervision</td>
<td>MHL</td>
</tr>
<tr>
<td></td>
<td>Agricultural water supply</td>
<td>MAFF</td>
</tr>
<tr>
<td></td>
<td>Industrial water supply</td>
<td>MEI</td>
</tr>
<tr>
<td>Water quality</td>
<td>Water quality control planning and policy (rivers)</td>
<td>ME</td>
</tr>
<tr>
<td></td>
<td>Water quality standards</td>
<td>ME</td>
</tr>
<tr>
<td></td>
<td>Water quality law enforcement</td>
<td>ME</td>
</tr>
<tr>
<td>Flood</td>
<td>Flood prevention planning and policy</td>
<td>MLT</td>
</tr>
<tr>
<td></td>
<td>Construction, operation and maintenance of flood protection facilities</td>
<td>MLT</td>
</tr>
</tbody>
</table>

**Remarks:** MLT (Ministry of Land and Transport), ME (Ministry of Environment), MAFF (Ministry of Agriculture, Forestry and Fisheries), MHL (Ministry of Health and Labor), and MEI (Ministry of Economy and Industries).

**Source:** World Bank, 2006; K-Water, 2008.

The recent trend in Japanese water management indicates a gradual transformation from the central government-led and sectoral management to an integrated management with special focus on river basins. This paradigm shift has been prompted by an array of challenges in the water sector. First, there is a consensus between government officials and water experts that the previous sectoral approaches to water issues might not be able to resolve new challenges in the water sector, which may be affected by various factors, including climate change, urbanization and industrialization, and competition between different users and downstream and upstream. In order to tackle such complicated issues, a more integrated approach to water issues is necessary, such as river basin management.

Second, water issues cannot be decoupled from climate change. It is undeniable that climate change has been affecting water regimes all over the world, and Japanese water experts feel the urgency to alter the current water management framework to meet the new challenge. Third, current water related challenges are ubiquitous, complex, and inter-related, leading to water conflicts, and complicating the relationship between water
supply and water quality, the link between surface water and ground water, and the impacts of the water cycle on human beings. Such a complexity of problems should be tackled with an innovative approach such as RBM (MLT, 2009).

With regard to this new trend, MLT published the Water Resources of Japan in August 2009 with the subtitle ‘Implementation of Integrated Water Resources Management’ (MLT, 2009). It is assumed from the subtitle that the Japanese government is taking into serious consideration the introduction of integrated methods to enhance water management issues. The report discusses the background and the need of Integrated Water Resources Management (IWRM) for Japan and pinpoints that the most crucial platform for IWRM should be RBM. In this context, the new river basin organizations such as the River Basin Comprehensive Water Resources Management Committee and the River Basin Management Committee are introduced in the report (MLT, 2009).

The River Basin Comprehensive Water Resources Committee is a permanent government body in which a variety of stakeholders in a river basin can communicate through discussions of various water issues. Those stakeholders include government, civil groups, ordinary citizens, companies, and experts. The committee is responsible for establishing a river basin master plan, called ‘the River Basin Comprehensive Water Resources Management Basic Plan,’ and this entity is to play a pivotal role in river basin management. It is worth mentioning that the committee will be established and run based on water governance, in which all kinds of stakeholders at different levels collaborate and reach a consensus in decision-making. A number of sub-committees can be created in order to examine and explore a cascade of water issues by different groups, and liaison offices between river basins and the central government are also considered integral to playing a bridging role (MLT, 2009).

2. Challenges

As discussed above, Japan has attempted to set up new institutions to implement RBM and has produced a variety of plans to improve the current water management system. However, there are a variety of hindrances that may complicate the ability of RBM to take off in the foreseeable future. According to the Interview with Mr. Akira Terakawa at the National Institute for Land and Infrastructure Management (NILIM) in October 2009, it is difficult to communicate with diverse bureaus in local governments and local offices from different ministries such as the Ministry of Land and Transport, Ministry of Health and Labor, and the Ministry of Environment within a river basin. The fragmented and complex administration system in a river basin directly entails the overlapping of similar water projects and inefficient management. A curious case exists in that many water intake points in urban rivers in Japan are located further downstream than sewage discharge points. This is due to the fact that there is no coordination between the Ministry of Health and Labor in charge of sewage treatment and the Ministry of Land and Transport in charge of river basin management within the same river basin (Interview with Mr. Junichi Yoshitani, NILIM in October 2009).

Second, in the same river basin, some local governments can afford to implement large scale water projects, whilst other local governments with little financial capacity cannot deal with urgent water supply or quality issues. Third, there is little understanding
about RBM in society, and related research and studies in Japan have not been conducted often, due to the lack of investment and incentives.

The fourth challenge is associated with the perception of government officials at the center. Mr. Terakawa worked in the field of water management at the Ministry of Land and Transport between the 1960s and the 1980s when a vast number of engineering projects in the water sector were conducted. He explicitly maintains that the main reason RBM is not implemented well in Japan stems from the fragmented administrative system derived from the participation of many ministries in water management. He also argued that this inefficiency of management can be remedied not by water governance at the local and river basin level, but through the central government.

His notion implies that although there have been some changes in Japanese water management, including an attempt to introduce RBM, such new policies will most probably be set up and controlled by the central government. This is also interpreted to mean that the network-based decision-making (water governance) through stakeholder participation will not be tolerated, and local offices in river basins from various ministries will keep control of water issues. Consequently, one of the most important outcomes, a power transfer from the center to river basins and local areas, might not be possible. The Japanese RBM system might then become, ironically, the distorted framework that can further consolidate the power of the central government in water management at the river basin and local levels.

V. Policy Implications

Despite such policy efforts, the comparative analyses in the cases of these two countries indicate a series of challenges that face the implementing of RBM in the countries. The most elusive challenge in implementation of RBM is how to smooth the power transfer from the center to river basins and local governments. The current water management system in Korea and Japan is heavily centralized, and it may be presumptuous to believe that government officials at the center would relinquish omnipotent power in water resources development, planning, water supply, sewage treatment, and ecosystem rehabilitation. It is political leadership that can bring about a genuine breakthrough in implementation of RBM in both countries. The political willingness based on governance through social consensus can allow RBM to advance, regardless of possible resistance from bureaucrats seeking to hold onto vested interests (Lee, 2009).

Second, there is a lack of laws and regulations to support a set-up of RBM. The Korean water community has attempted to enact the Korean Basic Water Bill twice (in 1997 and 2006), but those attempts were unsuccessful due to political disagreements between the ruling party and dissident parties at the National Assembly and inter-governmental disputes between MLTM and ME. The third newly revised version of the bill, which has been on the table at the National Assembly since July 2009, embraces the principle of stakeholder participation and proposes the establishment of the National Water Council at the center, together with the six River Basin Committees as the competent agencies to implement RBM. But whether or not this bill can be passed is unclear because vested interests among ministries, particularly MLTM and ME, might
Mr. Katsumi Wakigawa at the Japan Institute of Construction Engineering (JICE) in October 2009 mentioned the Japanese attempt to enact the Basic Water Law several years ago. A considerable number of officials, experts, civil groups and the public explored what should be included alongside RBM principles, however, it was impossible to reach a consensus on the contents of the law. Eventually, the Japanese government decided not to enact the Basic Water Law but, rather, keep the status quo with a series of laws applied to different sectors.

Third, river basin organizations under the RBM system should be created in order to implement RBM, but such organizations are not compatible with the current administrative systems in Korea and Japan. Both countries utilize the local autonomy system, and there is a comparatively clear demarcation in terms of tasks between the central and local governments. Such a current administrative system cannot successfully accommodate RBM and related new organizations. For instance, river basin committees neither belong to the central government nor local governments, and therefore, this vague position in the governing system might trigger policy failure and administrative chaos. A possible solution is to accelerate grouping of small and medium sized prefectures or cities and make them large-scale metropolitan areas. In doing so, river basin areas might be equivalent to metropolitan areas, and river basin organizations can belong to metropolitan governments and, therefore, deal with water issues within the jurisdiction of metropolitan governments (Korea Local Autonomy Association, 2008).

Fourth, it is instrumental to empower river basin organizations with adequate independent funding. An independent funding for River Basin Organizations (RBOs) is essential in efforts to establish and implement RBM without unnecessary interference from the central government and local governments. Committees or councils without their own funding sources are often interrupted by ministries and affected by political changes. The case of Tsurumi River in Japan illustrates that although the project had been successful, based on collaboration between the government and civil society since 2003, the absence of a long-term guarantee of independent funding might undermine the continuity of the project (Interview with Mr. Takashi Watanabe at the Keihin Office of the Ministry of Land and Transport in October 2009).

Fifth, there are conflicts between ministries involved in water management, and this problematic situation should be dealt with at the central level. This challenge remains problematic for both countries. In Korea, the central government has striven to set up a special council to mediate conflicts between ministries over the past decade, but without political, administrative and financial backing, such an institution has never played a significant role. An optimistic forecast is that if the Korean Basic Water Law were enacted, the National Water Council at the center would be able to play a leading role in mediating conflicts between ministries. In Japan, the Ministry of Land and Transport may continue to be dominant in water management (Lee, 2009).

VI. Conclusion

The research has explored River Basin Management (RBM) as a new policy tool
which seeks to improve water management, illustrating that with the two case studies examining management in Korea and Japan. RBM has been hailed as an innovative approach to manage water issues when confronted with unprecedented challenges that include climate change, water conflicts between different users, urbanization and industrialization. Korea has endeavored to introduce RBM in the current water management systems, such as the several attempts to enact the Korean Water Bill, and the establishment of river basin offices and committees by the Ministry of Environment. The introduction of river basin comprehensive water resources management committees and plans represents some of the policy efforts by the Japanese government with regard to RBM. Even though such policy efforts have been made, these countries have a number of obstacles to overcome in order to implement RBM.

The comparative analyses of the cases of Korea and Japan indicate a series of challenges in order to implement RBM in those countries. First, the most elusive challenge will be a power transfer from the center to river basins and local governments. Second, there is a lack of laws and regulations to support a set-up of RBM. Third, river basin organizations under the RBM system should be created in order to launch RBM, but such organizations do not, as yet, coordinate with the current administrative systems in Korea and Japan. Fourth, it is crucial to empower river basin organizations with adequate independent funding. Fifth, there are conflicts between ministries involved in water management, and such a problematic situation should be dealt with at the central level.

It is concluded that more emphasis should be placed on establishment of adequate institutions and legal settings in order to establish RBM in these countries, and this should take place in the spirit of political willingness. That political willingness should be legitimized through water governance in which a number of stakeholders will take an active part in decision-making. RBM can also help accelerate local development by providing tailor-made policies and programs for local governments in river basins. In doing so, local governments will be able to become more politically, administratively, and financially independent from the center in the countries discussed, and make a positive impact on improvement of water environments within river basins. Ultimately, these countries will then be able to achieve an optimal level of water supply, water quality, flood prevention and ecosystem conservation in the four river basins in Korea and the 109 river basins in Japan.

References


