ASSESSMENT OF WATER GOVERNANCE CAPACITY AND PRIORITY ACTIONS FOR SESAN-SREPOK RIVER BASIN, VIET NAM

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Abstract*: Improved water governance supports important social, economic, and environmental objectives. The existence of organizational and legal frameworks, the level of coherence between various actors, the knowledge by stakeholders of the texts in force and their attributions, roles, duty and right, and others are essential perspectives to be considered in water governance assessment. This paper offers a general assessment of water governance capacity in the Sesan - Srepok River basin. It gives an overview of the main water governance issues and a description of the assessment of water governance capacity which provide a basis to further development of related policies and reformations for the Sesan - Srepok River basin. The mobilization of experts from different disciplines and their interests for this study on water governance were the key factor determining the outcome of the research. The tool used for the synthesis (scorecard) enables a synthetic grasp on these complicated issues.*

Keywords*: water governance effectiveness, scorecard, IWRM.*

1. Introduction

Water scarcity is a globally prominent problem. It, thus, has gained more and more attention to the severity of its consequences. On one hand, water demand is increasing due to population growth, economic development and technological advance. On the other hand, water supply is depleting and becoming unstable due to natural and anthropogenic reasons. This situation challenges globally the Water Governance to compromise the common conflicting water demands of different sectors, which considers the interrelationship between various stakeholders in order to avoid potential conflicts and realize mutual gains. It is agreed upon that an improvement to water governance is an indispensable part of the solution to the water scarcity challenges in the context of climate change.

Over the past few years, water governance is gaining great attraction and attention from international and national agencies and organizations. Water governance refers to the political, social, economic and administrative systems that influence water use and management. An effective water governance will help manage and secure water access for everyone. A question immediately comes to mind: When water governance can be considered effective? At any level, governance systems must encourage all stakeholders to engage actively in order to solve the growing water problems; while at the local levels, financial resources and human capacity development are much needed. Therefore, a clear division of roles and responsibilities at different governance levels should be agreed upon and understood by all stakeholders. Furthermore, each nation must develop its own Integrated Water Resource Management (IWRM) plans and strategies mapping out the sequence of actions needed to take place for specific water-related problems. Overall, to achieve effective water governance,

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it is necessary to fairly and impartially enforce a coherent legal framework with a strong and autonomous regulatory regime to facilitate open and transparent transactions between stakeholders (Rogers and Hall, 2003).

With that in mind, water institutions around the world are looking for the best methods to effectively assess water governance. Ghana, for example, used existing data, surveys, questionnaire, and interviews to identify major water users and their corresponding roles and responsibility in managing water resources. The responses were supposed to be an input for SWOT analysis to help them assess their operation. However, no clear roles or operations have been identified for the major water users in several sectors of the economy, which resulted in slow development in sustainable national water governance (GWP/WA, 2009). The Awash river basin, Central Ethiopia, on the other hand, chose to apply the Water Governance Assessment Method developed by the Water Governance Centre (WGC). This approach composes of a self-assessment report by local actors, an assessment report prepared by water experts, and comments from experts in the different disciplines. The information is gathered in workshops and in-depth interviews that provided information on the current gaps in water governance, which were then assessed using water governance scorecard (Hemel and Loijenga, 2013). This approach provides a more detailed assessment with SWOT analysis, which gives a better overview of water governance performance in the Awash river basin compared to Ghana.

According to the User's Guide on Assessing Water governance (UNDP, 2013), there are a range of assessment tools that aim to measure water governance effectiveness directly and indirectly.

Direct measurement of effectiveness focus on the degree to which results have actually been achieved. For example, at the time a national policy on water governance is evaluated, one may find that over a four-year period, access to clean drinking water in rural areas has increased from 50 percent to 60 percent of the rural population. Thus, in this situation, the effect is a 20 percent increase. However, to know whether the policy has been effective, one has to compare the results with the stated goals of the policy as evaluation of effectiveness is always relative to the desired goal. Simply put, if the goal was to increase water access by 20 percent, the policy can be considered effective. However, if the goal was to achieve 100 percent access to clean drinking water, then the policy was not effective. On the other hand, when a 30 percent increase is desired, a result of 20 percent increase may require qualitative and subjective judgement to evaluate whether it was considered effective or not. It is also important to note that direct measurement of effectiveness will only inform us about the degree to which a plan was effective, but not necessarily the reasons why. Without additional information, it may be hard to judge if the effect can be attributed to the initiatives that were put in place or if it was due to other factors.

Indirect measurement of effectiveness include tools that focus on the range of factors that need to be in place to ensure that institutions, policies and programs can operate as effectively as possible. These tools pick up the various constraints and opportunities that may hinder or further governance systems in achieving their initial intentions. A plan, institution, program or policy may look good on paper, but many factors may frustrate its implementation in reality. Such factors may include a variety of different governance elements, such as the low capacity of institutions, poor legislative frameworks, overlapping mandates, corrupted incentives, conflicts of interest and so on. Thus, evaluations of effectiveness will often need to consider governance elements when discussing why a policy, program or institution was effective or ineffective in achieving intended results. Typically, from the perspective of effectiveness, governance weaknesses can be construed as "governance bottlenecks". The label "bottlenecks" highlights processes in which the conditions for being effective are not in place and that typically delay and divert resources from the intention of the

initiative. Many assessment tools therefore aim to identify such governance bottlenecks. The Water Governance Scorecard developed by the Overseas Development Institute (ODI) offers a checklist of important governance functions and regulations where bottlenecks can occur.

2. Study area

The Sesan-Srepok are trans-boundary basins in the Mekong River, which is shared by Cambodia and Viet Nam. The 18,800 square kilometers (km^2) Sesan Basin lies between the Sekong Basin, to the North, and the Srepok basin to the South. The 30,900 km^2 Srepok basin is the largest of the three basins (IUCN, 2015). As Sesan-Srepok basins is trans-boundary. There are attempts to apply IWRM to water governance from both the governments and international organizations in this basin. Nonetheless, as IWRM is recently introduced and recognized in Viet Nam, it has limited application and effectiveness in national water governance. Therefore, it is necessary to assess the effectiveness of water governance in Sesan-Srepok River basin.

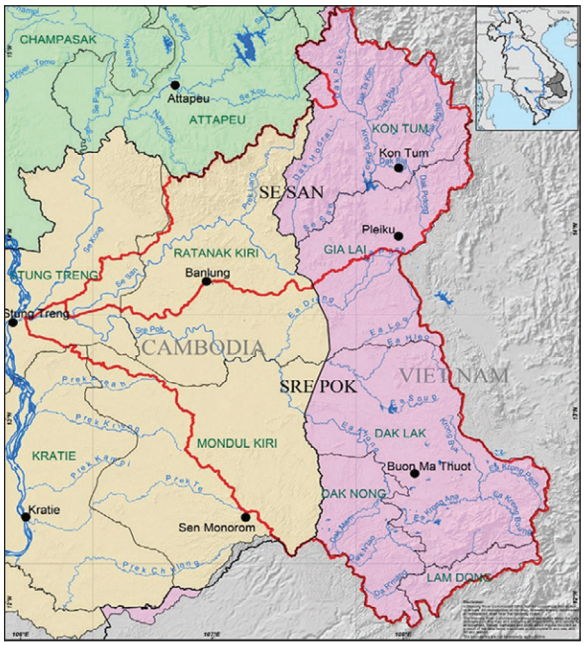

Figure 1. Sesan-Srepok River basin (MRC, 2017)

Governance in the Sesan-Srepok is complicated by the trans-boundary nature of the basins. The rivers are subject to the laws of both Viet Nam and Cambodia as they pass through these territories. Although existing mechanisms addressing some trans-boundary issues through dialogue (for example through the Mekong River Commission or MRC) and national laws under take precedence and Viet Nam and Cambodia have no comprehensive, enforceable treaties governing shared development and use of their shared waters. There have been long-running attempts to address this through the MRC's dialogue process. However, the Sesan-Srepok effectively remain managed under the legislation of Viet Nam in their upper reaches and Cambodian law in their lower reaches (IUCN, 2015).

In Cambodia, environmental protection falls under the auspices of the Ministry of Environment (MOE), which was also established in 1993. In practice, multiple ministries and government agencies have overlapping responsibilities which complicates development and conservation activities. Most of the legislation underlying environmental regulation in Cambodia was also written into law in the 1990s, including the Law on Environment Protection and Natural Resource Resources Management (1996), which is the primary

environmental law in Cambodia.

In term of water resources institution in Viet Nam, the Ministry of Natural Resources and Environment (MONRE) is the most powerful government body that oversees environmental issues. Similar to its Cambodian counterpart, MONRE has significant overlaps with other ministries and agencies, including those that oversee development. For example, water resources are overseen by both MONRE and the Ministry of Agriculture and Rural Development (MARD). The provincial level equivalent to MONRE - the Department of Natural Resources and Environment (DONRE) - also has power to make decisions related to the environment, and is accountable to provincial People's Party Committees (PPCs). Below DONRE, sub-DONRE district-level offices help implement decisions from above.

Viet Nam has a wide variety of laws and decisions which address and are related to development and environmental impacts. At the highest level, there are laws such as the Water Resources Law, Construction Law, Land Law, and the Law on Environmental Protection. The National Water Resources Council, which was established by the 1998 Water Resources Law, is chaired by the Deputy Prime Minister and attempts to better coordinate the actions of various institutions, in relation to water resources. Land and water resources in Viet Nam are defined as being owned by all citizens, but "entrusted" to the central government.

Viet Nam has identified several priority projects focusing on integrated planning for sustainable development of water resources, climate change adaptation, flood forecasting, fisheries conservation, and watershed forest protection across the Basins. However, there are no plans that effectively integrate the development of industry, water resources, and socio-economic development. Although certainly not unique to Viet Nam, this lack of effective integration in legislation, governance, and development planning makes for a more complicated management situation.

3. Methodology

The approach used in the study included a review of existing literature on the water resources and water governance of Sesan-Srepok River basin. Besides, an indirect measure delivers The Water Governance Scorecard through a survey to assess effective water governance for the basin. Due to resource constraints, the survey was limited to collect expert judgements in which experts from different disciplines contribute their expertise and reflection on the outcomes of the assessment.

Most countries have taken several steps to improve/change water governance. Several new institutions, laws, policies and programs may have been put in place but have yet to become fully operational. What the Scorecard does is to take an overview of the governance arrangements that have been put in place and to assess how effective they are.

The Scorecard includes a small stakeholder assessment for each governance field, that will give depth to assess the effectiveness of water governance in the concerned area: In essence water governance concerns how the interests and stakes are balanced and how the different stakeholders effectively relate to each other.

With the Scorecard one can identify a number of priority actions to help getting effective water governance going on the ground. This is the main purpose - and not to give positive and negative 'marks', but to assess the areas of improvement.

The identified water governance capacity was assessed using a water governance scorecard, in which two parameters were evaluated (Effectiveness and Barriers).

Effectiveness: Are the governance tools working good to meet the initial targets?

Barrier: What are the bottlenecks preventing the tools from meeting the initial targets?

How effective is the governance tool?

- It is very effective (4)

- Many things happening but there are questions on quality and fairness (3)

- Only a few things happen - but not the really important actions (2)

- Nothing happens (1)

The main barriers to effectiveness are mentioned. These are:

- The law or new organization is not operational and has no authority (A)

- No one knows the laws or recognizes that the organization exists (B)

- No one makes an effort to enforce laws and/or there is no capacity to make the organizations function (C)

- There is no integration of different interests (D).

4. Results

The scorecard was completed on the basis of insights from interviews. The information was triangulated, to not based on the opinion of a single individual. The overview of the water governance capacity in Sesan-Srepok River basin is shown on the Table 1. In the overview a short description of the governance tool and gap is given and scores are given.

Table 1. Overview assessment of water governance capacity in Sesan-Srepok River Basin

Effectiveness	Governance tools	Barriers
Legislative Framework		
2	Allocation of water rights between different uses	B
2	Conflict resolution mechanisms	C
3	Legislation for water quality	B
2	Other important laws on water	C
Regulatory Instruments		
1	Regulation on groundwater	B
1	Regulation for water services	C
2	Land use planning	B
2	Nature protection (water related)	C
IWRM Institutions		
3	Apex water bodies	C
3	Basin councils	D
3	Regulatory bodies	D
3	Enforcement agencies	D
3	Laws on community resource management organizations	C
3	Awareness raising	B
Water Service Providers in IWRM		
3	Urban water supply services	D
3	Rural water supply services	D
2	Irrigation/ flood control services	C
2	Water treatment services	C
Coordination		
3	Coordination with agriculture	B
3	Coordination with energy sector	B

Effectiveness	Governance tools	Barriers
Local Authorities		
3	In Providing Water Services	C
2	In Regulating Water Services	C
3	In Water Resource Planning	C
3	Other functions in IWRM	C

Legislative Framework

Sesan and Srepok basins located in Viet Nam and Cambodia, and thus, different parts of the basins are under different jurisdictions of the corresponding governments. This overlapping in legislation and jurisdiction complicates the already problematic water allocation issues. Notably, the water allocation priority order has not yet been determined by each region, as well as by each water use purpose for the whole region. As a result, in Sesan and Srepok basin in particular and Mekong basin in general, hydropower and industrial plants have been developed without comprehensive precaution and consideration for the impact on water allocation and water quality in the immediate downstream areas. Indeed, the lack of effective integration in legislation creates a more complicated management situation. Besides, transboundary management cooperation can only be effective with adequate and transparent data and information, which will support decision makers. However, the current monitoring network cannot provide sufficient data and information of water flow in/out between two countries or two provinces, which provides the basis for resolving conflicts

Regulatory Instruments

In general, regulatory instruments are plenty on paper. Nonetheless, there are no effective links between the water users with the official regulations nor with the power supply arrangements. For example, for groundwater, 50% of farmers depend on groundwater for irrigation, effectively contribute to groundwater level decline of 1.2m/year, jeopardizing drinking water and irrigation supply from shallow aquifers. In a few areas, water users have made rules on groundwater use, prioritising drinking water. In most areas, there is no groundwater management in place at all. At the same time, water quality in the river basin is deteriorating due to pollution mainly from agriculture sectors and industrial sectors. However, pollution from domestic wastewater as well as waste is increasing with elevating risks in cities such as Buon Ma Thuot, Pleiku, Kon Tum and other towns.

IWRM Institutions

There have been attempts from both countries on applying IWRM. At the national river basin level, a river basin organization - the Sesan-Srepok River Basin Council - was established in Viet Nam in 2008, which undertook some activities related to data collection and awareness raising but consequently failed to continue working due to legal implications. Meanwhile, currently in Cambodia, the Ministry of Water Resources and Meteorology is planning to establish a River Basin Management Committee for all River Basins in Cambodia. A Sub-decree on River Basin Management was approved in July 2015 and a decision of the Prime Minister on the composition of the National Committee for River Basin Management and its Secretariat was established in October 2015 (Lim, 2016). Following the establishment of the Water Resources Council, integrated plans will be prepared based on IWRM for better water management in each river basin.

Ultimately, applying IWRM to Sesan-Srepok River basin is essential to both countries. However, there are several obstacles that Viet Nam and Cambodia have to manage before successfully applying IWRM:

- Inappropriate and incompatible institutional setup.

- Poor communication/cooperation with stakeholders.

- Inadequate attention to create public awareness on the policy and strategy.

- No clear responsibilities for the private investors for sustainability of development of the basin.

- Lack of experience sharing IWRM.

- Weak participation of stakeholders/users for the management of the river basin.

Water Service Providers in IWRM

Urban and rural water supply for the whole region is sourced from surface water. Water is mainly acquired from reservoirs, small rivers and streams by self-flowing system or pumping. However, water service providers have not met 100% of the water demand for different purposes.

Coordination

In Sesan-Srepok River basin, coordination between different water use sectors is crucial to achieve the economic efficiency and social security. Currently, the two major water use sectors in Sesan-Srepok basins are agriculture sector and energy sector. Agriculture sector grows rapidly. However, this sector is heavily dependent on nature, which is unsustainable, especially when natural disaster occurs (i.e. flood, drought…). Meanwhile, the development of hydropower dams upstream is directly affecting the water allocation downstream, especially for irrigation, making agriculture sector more vulnerable. Therefore, coordination between different sectors need to be developed to share benefit among water use in the context of rapid socio-economic development, especially in energy sector where hydropower advancement has created many problems that need to be addressed.

Local Authorities

The Sesan-Srepok River basins are extensively influenced by local institutions and interests. Local governments have been given significant leeway in implementing development projects and overseeing environmental protection. This affords local authorities some autonomy to raise funds and carry out development projects at the district and provincial level. This autonomy level may increase in the future as both governments are experimenting with decentralization process. However, regulatory power and funding still rests with the respective central governments (IUCN, 2015). Therefore, despite the flexibility and autonomy given to local authority, budget constraint and administrative complication may prevent local government to effectiv ly tackle the issues in Sesan-Srepok basin.

It can be seen that the current water governance capacity in Sesan-Srepok River basin ranges from fair to very low. This means that in general the governance tools exist but is not properly working. The only negative score is the Regulatory instruments, all other tools are under management but their quality and fairness is ambiguous or only a small part of the mandate is implemented.

5. Proposed priority actions

In order to better approach IWRM in Sesan-Srepok basins, many actions have to take place. Based on the overview of the water governance capacity in Sesan-Srepok River basin above, several priority actions are proposed below.

Legislative Framework

- The priority order for water allocation by water use purposes have to meet 100% of the demand of domestic use, drinking water and essential needs for agricultural production.

- Harmonious allocation of water in dry season for domestic use, socio-economic demand and environment protection.

- The monitoring network in the basin must provide comprehensive monitoring of water users as well as water quality.

- Settle disputes among water users, local authorities and departments in river basins.

Regulatory Instruments

- Initiate program facilitating groundwater management dialogue in selected areas such as Legal awareness campaign (i.e. making administrators, farmers and legal specialists aware of the law).

- Land development and land-used planning in the river basins shall integrate agriculture development with regular survey.

- Natural disaster risk management shall be implemented.

- Provide guidelines on water users' financial responsibility.

- Develop regulations on responsibilities and solutions to restore surface water and groundwater pollution and degradation

- Develop regulations on protecting aquatic ecosystem and biodiversity of major rivers in the Sesan-Srepok basin.

IWRM Institutions

- Urgent need to found an organization, such as River Basin Commission (RBC), which plays a central role in coordinating different aspects of water management in the basin, varying from develop measures for monitoring, water use planning and resources protection.

- Strengthen cooperation between MONRE, MARD, local government and facilitate an organization similar to RBC.

- Protect aquatic ecosystems for inter-provincial water resources and ensure water security for international rivers.

- Build and manage monitoring system of water resource extraction as well as the discharge of wastewater into water sources in intra-provincial river basin.

- Elaborate and organize the implementation of plans based on survey, current regulation and distribution of water resources.

- Take measures to protect water resources in compliance with the current law.

- Develop response and remedy measures for water pollution incidents.

- Upgrade law/legal framework on community resources management organizations to adopt sustainable development.

Water Service Providers in IWRM

- The priority for water allocation by water use purposes have to meet 100% of the demand for domestic purposes, drinking water and essential needs for agricultural production.

- Impact assessment of aquaculture should be implemented.

Coordination

- Make prior policies available for scientists and experts working in agriculture sector.

- Provide regular training for staff of the RBC to update and apply advanced and modern technologies in their works and missions.

Local Authorities

- Allocation of water resources for agriculture shall be reduced to reserve for other purposes.

- Ensure efficient use of water, harmonize the benefits and promote equality among water users for each inter-provincial water resources.

6. Conclusion

From the assessment of water governance capacity, it can be concluded that IWRM is not properly applied in Sesan-Srepok River basin. Of all identified governance issues, the capacity in the basin ranges from fair to very low and thus, improvement is needed to achieve the goals and to meet the mandates. Therefore, in the discussions with experts from different disciplines, several priority actions were proposed for the follow-up of the assessment. Overall, the legislative frameworks and institutional arrangements for water sector development and management in Sesan-Srepok river basin remain uncoordinated and in need of improvement. Clarification of the roles and responsibilities of government agencies, and greater collaboration within different levels of administration and across sectors are key requirements to improve water planning and management. Increased involvement of the private sector in hydropower and other water-use sectors presents a greater need for transparent and accountable decision making, as well as thorough consideration of different stakeholders' perspectives. Therefore, an enabling environment needs to be created, in terms of legislative and institutional arrangements, human and technical resource capacities, to accurately assess the opportunities and risks of water development planning.

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