

THE INSTITUTIONAL DEFICIT IN WATER GOVERNANCE OF THE MEKONG RIVER AND ITS IMPLICATIONS FOR VIETNAM

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Abstract. This paper examines the institutional deficiencies in water governance across the Mekong River Basin and their profound impacts on Vietnam, the lowest downstream country and one of the most vulnerable to hydrological changes. By synthesizing secondary sources and comparing four key regional cooperation mechanisms (MRC, GMS, LMC, and LMI), the study reveals that the existing institutional network in the Mekong Basin remains fragmented, legally non-binding, and lacks effective coordination. These weaknesses have resulted in asymmetrical power relations, uneven benefit-sharing, and increased ecological and social vulnerability in downstream areas, particularly the Mekong Delta in Vietnam. By interdisciplinary research methods, historical methods, policy analysis methods, etc, the paper explores Vietnam's multi-level responses, including regional water diplomacy, bilateral and multilateral cooperation, and domestic adaptation policies. It argues that the root cause of the current crisis lies not only in the upstream states' exploitation but also in the structural insufficiency of basin-wide governance mechanisms. Strengthening institutional capacity and establishing a transparent, equitable, and sustainable framework for transboundary water management are therefore essential to ensure the long-term resilience of the Mekong Basin.

Keywords: Water governance, Mekong River, Institutional capacity, Transboundary water management, Vietnam.

1. Introduction

The Mekong River, stretching over 4,800 kilometers across six countries – China, Myanmar, Laos, Thailand, Cambodia, and Vietnam – is one of the most significant transboundary river systems in the world. The river not only sustains hundreds of millions of people living downstream but also serves as the foundation for economic growth, agriculture, and livelihoods throughout mainland Southeast Asia.

Over the past three decades, the Mekong has become the focal point of increasingly complex challenges related to water resource management and exploitation. The proliferation of upstream hydropower dams, particularly in China and Laos, has dramatically altered the river's natural flow regime, producing severe ecological, agricultural, and livelihood impacts downstream. In this context, the issue at stake is not merely about water scarcity or abundance but, more profoundly, the lack of an effective and comprehensive water governance mechanism across the entire basin.

For Vietnam – the lowermost riparian state whose ecological and economic well-being depends heavily on the upstream flow – the absence of a robust water governance framework poses an existential challenge.

The politics of water, or “*water politics*,” has been explored in studies such as *Waterpower: Politics and the Geography of Water Provision* (John Agnew, 2011) [1], which conceptualizes how water supply – as a shared, transnational resource – shapes development policies and enables upstream states to leverage hydrological power as a form of political bargaining with downstream countries. Regarding Mekong subregional cooperation mechanisms, numerous studies both in Vietnam and abroad have analyzed this issue, including *Vietnam in the Mekong Subregion: Toward a Sustainable River* (Vu DL & Ninh XT, 2021) and *The Mekong Sub-region: Dynamic Cooperation for Prosperity, Security and Sustainability* (To MT, 2022) [2], [3].

Focusing on the imbalance in water governance within the Mekong’s institutional frameworks, notable international works such as *Rethinking Transboundary Waters: A Critical Hydropolitics of the Mekong Basin* (Cris Sneddon & Coleen Fox, 2006) explain why existing cooperation mechanisms in the subregion lack legal enforceability and how power asymmetries shape upstream behaviors [4]. Similarly, *Contested Waterscapes in the Mekong Region: Hydropower, Livelihoods and Governance* (Francois Molle, 2012) analyzes how competing discourses influence the distribution of power, political authority, and the eventual configuration of hydro-social landscapes [5]. David J. Devlaeminck's *Perspectives and Prospects for International Water Law in the ASEAN Region: Is There an ASEAN Way to Transboundary Water Cooperation Under International Law* (2025) analyzed the gaps in legal mechanisms for water governance in the Mekong subregion [6]. Regarding Vietnam’s participation, *Vietnam’s Water Diplomacy in the Mekong Subregion from 2016 to Present* (Le Hong Hoa & Tran Thi Khanh Chi, 2025) highlights the role of water diplomacy in addressing environmental challenges while enhancing Vietnam’s regional influence [7].

Although these studies have illuminated power asymmetries in decision-making affecting the Mekong’s flow, most have concentrated on the behavior of upstream actors rather than examining the internal deficiencies of the existing water governance mechanisms themselves – the core factor underlying the ineffectiveness of regional cooperation. Accordingly, this paper focuses on analyzing the lack of water governance mechanisms across the Mekong Basin. It identifies institutional and procedural gaps within each cooperation framework, assesses their consequences for downstream countries, and examines Vietnam’s responses through both bilateral and multilateral approaches. The paper concludes by proposing policy implications to strengthen institutional capacity, improve regional coordination, and contribute to the establishment of a fair, transparent, and sustainable model of water governance for the Mekong subregion.

This paper is conducted using interdisciplinary research methods, historical methods, policy analysis methods, etc. In which the multidisciplinary research method establishes a reference framework with a variety of data from different scientific fields, from hydrometeorology with reports on climate change, environment, to the social security field with reports on people's livelihoods along the Mekong River basin, technical data on dams, reports on climate change models, and their impact on human life. The historical method places the research content in the chain of policy changes of countries related to the Mekong River issue. Policy analysis method analyzes current policies, specifically cooperation mechanisms and their practical application in addressing challenges, to examine how current mechanisms can respond to future water resources management issues, and to propose solutions to overcome shortcomings in management mechanisms.

2. Contents

2.1. Current Situation of the Institutional Deficiency in Water Governance in the Mekong River Basin

Among the various cooperation frameworks currently operating in the Mekong subregion, most focus primarily on economic development, trade, and regional infrastructure connectivity. Only a few mechanisms are specifically oriented toward the management, exploitation, and sustainable use of the Mekong River's water resources. Within the scope of this study, the paper focuses on those mechanisms directly related to water governance and cooperation in the Mekong Basin, analyzing their contributions as well as their institutional and operational limitations.

2.1.1. Greater Mekong Subregion Cooperation (GMS)

The Greater Mekong Subregion (GMS) cooperation initiative was launched by the Asian Development Bank (ADB) in 1992 to promote economic integration, infrastructure development, trade, and investment among six Mekong Basin countries: Cambodia, Laos, Myanmar, Thailand, Vietnam, and China (represented by Yunnan and Guangxi). As the first post–Cold War Mekong cooperation mechanism, GMS was designed as a cross-border economic development program leveraging the immense development potential of the Mekong Basin. The framework sought to promote mutually beneficial development cooperation among member states, where water resources were viewed as a supporting factor for growth rather than the primary object of governance. However, due to the Mekong Basin's natural characteristics, most GMS development activities – particularly in the fields of energy, agriculture, and transportation – directly or indirectly affect the river's water resources and ecosystems. Consequently, GMS continues to play a certain role in the region's institutional network of water governance.

GMS operates under the principles of national ownership, equal consultation, mutual benefit, fast implementation, and shared prosperity. The mechanism is structured around several institutional bodies, including the GMS Ministerial Conference, held annually on a rotating basis among member states; the GMS Leaders' Summit; national GMS Coordinators, who link ministries and local agencies; and a Secretariat managed by the ADB [2].

In pursuit of sustainable development, GMS identifies environmental protection and the sustainable use of natural resources as one of its five strategic drivers [3; 119–120]. A prominent example is the Core Environment Program (CEP), launched in 2006, which has consistently served as the region's flagship environmental initiative. Between 2018 and 2022, CEP prioritized riverbank land management, waste management, pollution control, infrastructure protection, and green investment across member countries.

Additionally, the Working Group on Environment (WGE), composed of senior government officials from environmental ministries, has played a vital role in promoting intersectoral cooperation on environmental issues among the six Mekong countries. During its most recent annual meeting in 2024, the WGE noted progress in waste and water pollution management and agreed to continue prioritizing integrated waste management, sustainable alternatives, and knowledge-sharing to ensure water quality in the Mekong's main and tributary streams [9, p. 2]. For Vietnam, GMS provides opportunities to attract infrastructure investment and strengthen regional trade, while also supporting transboundary environmental impact assessments and climate change adaptation efforts.

Despite these achievements, GMS exhibits fundamental shortcomings in water governance and sustainable development. Although environmental protection and resource sustainability are identified as strategic drivers, GMS remains primarily an economic cooperation mechanism emphasizing infrastructure and trade integration. Environmental goals, including water resource protection, remain secondary. Moreover, GMS lacks a binding legal framework or technical protocol for cross-border water coordination.

While its working groups and environmental programs are relatively active, issues such as hydrological data sharing, flow monitoring, and integrated basin planning remain outside GMS's main scope. Furthermore, the mechanism's heavy dependence on the ADB and international donors for project design and supervision means that GMS policies often reflect donor interests rather than the long-term needs of the region, leaving poorer downstream communities in a reactive position within development processes.

In sum, while GMS has contributed significantly to shaping the economic and infrastructural landscape of the Mekong subregion and modestly improved environmental management capacities, it does not function as a water governance mechanism in the strict sense. Instead, it remains an economic cooperation framework whose impacts on water resources are largely indirect.

2.1.2. Mekong River Commission (MRC)

The Mekong River Commission (MRC) was established in 1995 under the *Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin* and the *Protocol on the Establishment of the Mekong River Commission*, signed by four lower-basin countries: Cambodia, Laos, Thailand, and Vietnam. It is the most institutionalized cooperative mechanism in the lower Mekong Basin, evolving from the *Mekong Committee* founded in 1957 under the auspices of the United Nations. The MRC's establishment marked a major milestone in regional cooperation on water governance, transitioning from a technical coordination model to a quasi-legal institutional framework [10].

The MRC's organizational structure comprises three main bodies: the Council, the Joint Committee, and the Secretariat. Each member country also has a National Mekong Committee serving as the domestic focal point, coordinating with the Secretariat and relevant ministries. The Commission's funding comes from member contributions and international donors. Operating under principles of consensus, equality, and respect for territorial sovereignty, the MRC promotes cooperation across all aspects of sustainable development, use, management, and protection of the Mekong Basin's water and related resources for the common benefit of all riparian nations [11].

Over nearly three decades, the MRC has achieved several notable accomplishments in water management and coordination. First, it has established five procedural frameworks: PDIES (Procedures for Data and Information Exchange and Sharing), PWUM (Procedures for Water Use Monitoring), PNPCA (Procedures for Notification, Prior Consultation and Agreement), PMFM (Procedures for Maintenance of Flows on the Mainstream), PWQ (Procedures for Water Quality). Through these, the MRC has developed a relatively comprehensive hydrological database and a modern monitoring network that helps member countries track flow variations, issue early flood and drought warnings, and support national water resource planning. Additionally, the MRC has undertaken several major cooperative programs with national and international partners, such as the Basin Development Program (BDP) supported by the Netherlands and Sweden, the Mekong Integrated Water Resources Management Project (MIWRM) funded by the World Bank, and the Navigation Program (NAP) supported by Belgium and Australia. These initiatives have enhanced technical capacity, fostered intergovernmental dialogue, and mobilized international expertise for comprehensive water governance. Through four summits and multiple council meetings, the MRC has also articulated long-term strategies for the region. The most recent Basin Development Strategy 2021–2030 (BDS 2021–2030) prioritizes equitable access and sustainable utilization of water resources for community welfare. For Vietnam, the MRC is particularly important as a provider of data and technical support for salinity intrusion management, water resource planning, and hydrological forecasting in the Mekong Delta [11]–[13].

However, despite its achievements, the MRC continues to face significant challenges that limit its effectiveness as a basin-wide coordinator. China and Myanmar – two crucial upstream

states - participate only as “dialogue partners,” not full members. Since most of the Mekong’s flow and sediment originate in China, the absence of this state from decision-making severely constrains the MRC’s authority and coordination capacity. Next, the 1995 Mekong Agreement is essentially “soft law,” lacking binding obligations. This allows member states to avoid responsibilities and pursue unilateral projects that undermine downstream interests. For example, despite the PNPCA’s consultation requirements, hydropower projects such as Xayaburi and Don Sahong proceeded without full regional consensus. Although PDIES specifies data exchange mechanisms, real-time hydrological data remain incomplete and infrequently updated, particularly regarding reservoir operations. Data from China’s 11 Lancang hydropower dams are only partially shared, without independent verification, undermining flood forecasting and risk management in downstream countries, including Vietnam. The MRC’s heavy reliance on external funding from donors such as Australia, Japan, the EU, and the World Bank also reduces its autonomy and subjects its priorities to donor influence [3;103–104]; [14; 64–66].

In conclusion, while the MRC remains the most legitimate and institutionally robust mechanism in the lower Mekong Basin – central to data sharing, flow governance, and policy dialogue, it has yet to become a truly comprehensive and effective basin-wide governance framework due to structural and political constraints.

2.1.3. The Lower Mekong Initiative (LMI)

The Lower Mekong Initiative (LMI) was launched by the United States in 2009, within the context of Washington’s strategic re-engagement in the Asia–Pacific region. The initiative was conceived as a platform to address complex, transnational development and policy challenges in the Lower Mekong Basin, while promoting sustainable development cooperation between the United States and five lower Mekong countries: Cambodia, Laos, Myanmar, Thailand, and Vietnam. Member countries collaborate under six pillars of cooperation: agriculture and food security, connectivity, education, energy security, environment and water, and health, while integrating cross-cutting issues such as gender equality. Since 2011, the LMI has been gradually incorporated into the Mekong – U.S. Partnership (MUSP), a broader cooperation framework that includes additional partners such as Japan, South Korea, Australia, and India. Nevertheless, the LMI continues to serve as the foundational pillar of U.S.–Mekong cooperation.

In the field of water governance, the LMI has implemented a range of capacity-building programs that promote institutional strengthening, data transparency, and improved basin management. Among these, the Mekong Water Data Initiative (MWDI) launched in 2018 and led by the U.S. Geological Survey (USGS), stands out as a landmark project. The MWDI aims to build capacity and improve transboundary river management for Mekong riparian countries and the MRC by supporting the development of shared data platforms on hydrology, rainfall, and water quality. Through this initiative, the United States has cooperated closely with the MRC, the Friends of the Lower Mekong, and more than sixty stakeholders across the private, academic, and non-profit sectors to develop MekongWater.org, an open-access data hub designed to empower Mekong countries to manage their shared natural resources sustainably. Furthermore, the LMI has facilitated access to complementary information tools such as the Mekong Infrastructure Tracker developed by the Stimson Center, and SERVIR-Mekong, a geospatial data platform supporting regional environmental management. By connecting Mekong countries with these technological and analytical resources, the LMI has enhanced regional knowledge of water-related issues and encouraged evidence-based decision-making. As of 2019, the initiative had contributed to measurable improvements in regional water quality and provided access to safe drinking water for approximately 340,000 people [15].

Despite its positive contributions, the LMI still faces structural and institutional limitations. Most of its projects depend heavily on funding from USAID and other U.S. agencies, making their continuity vulnerable to shifts in Washington’s foreign policy priorities. Changes in strategic

focus often result in fluctuating budgets and programmatic adjustments. Furthermore, because the LMI does not include China, the key upstream actor with decisive control over the river's hydrology, it lacks the capacity to influence basin-wide decisions affecting water flow and dam management. Overall, the LMI functions primarily as a bridge between development cooperation and water governance, contributing to institutional capacity-building and data transparency among lower-basin states, rather than serving as an effective mechanism for transboundary water coordination across the entire Mekong Basin.

2.1.4. The Lancang–Mekong Cooperation (LMC)

The Lancang–Mekong Cooperation (LMC) framework was officially launched at the first LMC Leaders' Summit in Sanya, Hainan, in March 2016, with the participation of representatives from China, Myanmar, Thailand, Laos, Vietnam, and Cambodia. The Sanya Declaration, adopted at this summit, formally inaugurated the LMC mechanism, marking the establishment of a new multilateral platform aimed at promoting joint development among countries along the Lancang–Mekong River.

The LMC was founded with the goals of promoting economic and social development in riparian countries, delivering tangible benefits to local populations, narrowing development gaps, supporting the building of an ASEAN Community, and contributing to the implementation of the United Nations 2030 Agenda for Sustainable Development, particularly through South–South cooperation [16]. The mechanism operates under a “3+5” framework, encompassing three pillars: political and security cooperation, economic and sustainable development, and social, cultural, and people-to-people exchanges; and five priority areas: connectivity, production capacity, cross-border economy, water resources, and poverty reduction. Cooperation activities are organized through a tiered system including the Leaders' Summit, the Foreign Ministers' Meeting (FMM), ministerial-level sectoral meetings, Senior Officials' Meetings (SOM), and joint working groups on diplomacy and sectoral cooperation.

Guided by the development principle of “Shared River, Shared Future,” the LMC explicitly identifies joint water management as a key area of cooperation. Since its inception, the mechanism has evolved rapidly, becoming one of the most dynamic frameworks for water governance in the Mekong subregion [17, p. 4]. Notable achievements include, first, the enhancement of hydrological data sharing among member countries. Beginning in 2020, through the Lancang–Mekong Water Resources Cooperation Information Sharing Platform, China and downstream countries have exchanged real-time dam operation and flow data, including water levels, rainfall, and early warnings of floods and storms. This marked significant progress in transparency, particularly given longstanding concerns over the opacity of China's upstream dam operations. Second, the LMC has initiated and financed numerous projects to improve water quality and irrigation management, mitigate salinity intrusion, and strengthen water infrastructure across the region. The “Lancang–Mekong Sweet Spring Project,” for instance, has implemented over seventy water infrastructure projects providing safe drinking water for more than 10,000 rural residents [18]. Third, through forums such as the Lancang–Mekong Water Resources Cooperation Forum, the LMC has created a space for knowledge exchange and joint action toward achieving the UN Sustainable Development Goal 6 on clean water and sanitation. In addition, the LMC actively promotes investment cooperation in hydropower development and river navigation, linking water resource management with regional economic integration [19].

Despite these advances, the LMC still faces notable limitations. Established amid intensifying strategic competition in the Mekong region between cooperation frameworks led by Western countries, India, and ASEAN; the LMC is widely perceived as China's attempt to institutionalize a politically and development-oriented multilateral mechanism under its leadership, thereby consolidating its influence in the subregion. As the principal upstream country and the main financier, China wields significant influence over key decisions regarding flow

regulation, hydropower planning, and dam operation, while downstream countries have limited leverage. Moreover, the LMC lacks a legally binding framework for water governance. Unlike the 1995 Mekong Agreement, which provides the legal foundation for the MRC's operations, the LMC has no binding instrument governing water sharing or resource exploitation. The absence of legal obligations renders member commitments largely voluntary, with no clear mechanisms for monitoring, enforcement, or dispute resolution—weakening the mechanism's overall effectiveness.

Furthermore, although the LMC has expanded hydrological data sharing, the volume and transparency of particularly information from upstream China remain limited. Reports and datasets are often not publicly released or only available in summary form, restricting access and independent scrutiny. Lastly, the LMC's deep alignment with China's Belt and Road Initiative (BRI) reflects its strong developmental diplomacy character. This association risks subordinating regional water cooperation to Beijing's strategic priorities, especially in hydropower and navigation development [20; 10–12].

The Five-Year Plan of Action on Lancang–Mekong Cooperation (2023–2027) reaffirms the objective of strengthening the water resources cooperation framework by “enhancing basin-level water management coordination, ensuring transparent and consistent hydrological data sharing, and improving collaboration in cross-border flood response and the operation of the Lancang–Mekong Water Resources Cooperation Information Sharing Platform” [21]. However, the practical impact of these commitments remains to be tested through implementation outcomes, which will determine whether they translate into concrete action or remain primarily diplomatic declarations.

In general, the four key mechanisms: MRC, GMS, LMC, and LMI, collectively form a multilayered institutional network of governance in the Mekong subregion. Yet, in the most crucial domain of regional cooperation – water governance – these mechanisms continue to suffer from overlapping mandates, fragmented legal authority, and weak coordination. The coexistence of multiple frameworks with divergent objectives and operational logics has resulted in a disjointed governance landscape lacking a unified voice. Within this fragmented context, Vietnam, the lowermost downstream country and the most vulnerable to hydrological disruptions, faces an urgent challenge of enhancing its adaptive capacity and safeguarding its water security amid the institutional vacuum that characterizes the Mekong Basin's governance system.

2.2. Vietnam and the Governance Deficiency in the Mekong River Basin

2.2.1. Impacts of the institutional deficit in water governance on Vietnam

Vietnam occupies a unique position within the Mekong River Basin as the lowest downstream country, whose ecological benefits and livelihoods depend heavily on upstream flows, sediment supply, and the annual flood pulse. Consequently, any form of “vulnerability” originating upstream inevitably results in severe consequences for Vietnam. One of the most pressing challenges is sea-level rise and saltwater intrusion. According to projections by the Center for International Environmental Management, sea levels may rise by 28–53 cm by 2050 and 65–100 cm by 2100, potentially causing the delta to lose up to 40% of its area due to reduced sediment deposition, while further exacerbating land subsidence and salinization. To illustrate this more clearly, one can examine the map of average salinity levels in the Mekong Delta using the Practical Salinity Scale (PSS) [22, 23; 39 – 41] (Figure 1).

Based on this map, the coastal areas of the delta display extensive red zones corresponding to high salinity levels of 15–20 PSS, stretching continuously along the estuaries; these highly saline wedges penetrate 50 to 70 km inland. Freshwater pockets, represented by small patches of light blue, appear only sporadically and are too limited in scale to form an effective buffer against saline intrusion.

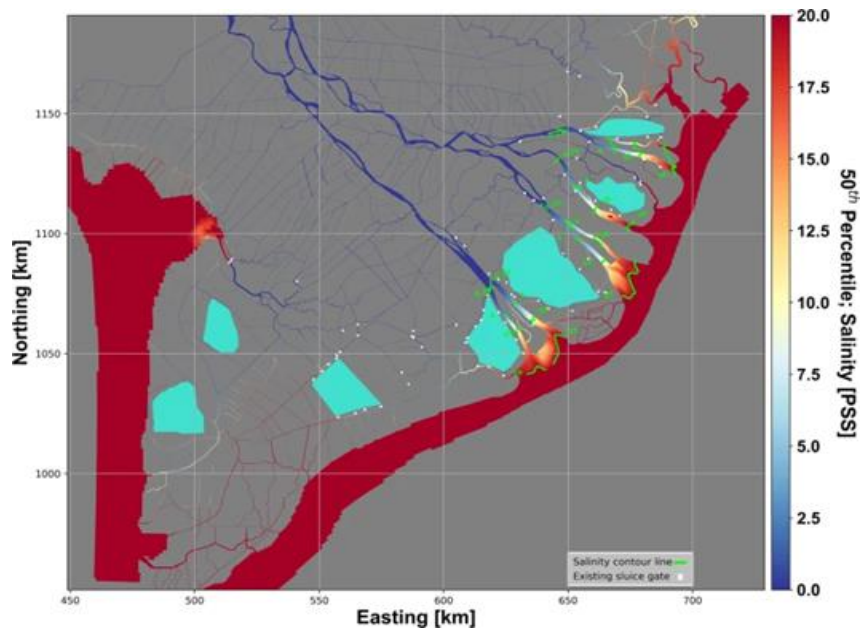


Figure 1. The map of average salinity in the contemporary Mekong Delta

Source: <https://www.nature.com/articles/s43247-021-00208-5/figures/5>

Despite the dense system of existing sluice gates shown as white dots, surrounding areas still record salinity levels of 5 – 10 PSS, indicating that infrastructural measures can only partially mitigate but cannot fully prevent saline encroachment. Overall, the map demonstrates that saltwater intrusion in the Mekong Delta has reached a critical threshold in both intensity and spatial extent: salinity spreads widely, infiltrating the inland canal network and significantly shrinking the region's freshwater space. Current projections indicate that by 2050, the Mekong Delta could be almost entirely salinized due to seawater encroachment. These vulnerabilities directly reflect the consequences of inadequate coordination mechanisms and legal instruments in basin-wide water governance: Vietnam has no authority to influence the design or operation of upstream hydropower and irrigation structures, and suffers from limited access to real-time hydrological data needed to plan disaster response, regulate freshwater supplies, or adjust cropping calendars.

As a result of ineffective water governance mechanisms, Vietnam becomes the most heavily affected country, particularly the communities of the Mekong Delta, where farmers are ill-prepared for the rapid environmental transformations that shape their livelihoods. According to research based on salinity-intrusion mapping, losses in just four key sectors, including rice, aquaculture, fruit crops, and vegetables, amount to more than 70 trillion VND annually [24]. Although the Delta accounts for only 12% of the country's land area, it contributes 47% of the cultivated rice area and 56% of national rice output. Yet agricultural land degradation caused by salinization has sharply reduced yields: during the historic salinity event of 2020, Trà Vinh lost 14,300 hectares of rice, Tiền Giang 4,500 hectares, and Sóc Trăng 4,100 hectares. For fruit crops, Long An and Tiền Giang recorded the most severe damage, with 2,397 hectares and 2,297 hectares affected, respectively [25].

Basin's households also face declining water quality in ponds, forcing them to invest in water treatment systems or shift to alternative species or production methods. Domestic water supply is similarly compromised: around 3 million people, equivalent to more than 750,000 households, are affected by salinity each year. It is estimated that households in the Mekong Delta may need to spend approximately 36 USD annually to avoid disruptions to freshwater access caused by saline intrusion [26].

The institutional gap also manifests in the imbalance between the distribution of economic benefits and environmental costs. In the absence of a binding and equitable governance framework, economic gains accrue primarily to upstream countries and hydropower investors, while ecological and social burdens fall disproportionately on downstream communities. During the 2020 drought and salinity crisis alone, the Ministry of Agriculture and Rural Development received requests from 25 provinces (excluding the eight Mekong Delta provinces already approved for emergency support from the national contingency fund) and from one irrigation management unit, amounting to over 2.499 trillion VND in proposed relief funding [27]. The construction of salinity-prevention infrastructure also requires substantial financial resources: the two largest salinity-control sluice projects in the region, Nguyen Tan Thanh sluice and the Cai Lon – Cai Be sluice, have total investments of 518 billion VND and over 3.3 trillion VND, respectively [28]. Conversely, if the region opts for a “strategic retreat” approach, allowing land to be abandoned naturally in response to salinity, annual losses under a 22 cm sea-level rise scenario are still estimated at 100.03 – 176.67 million USD. In other words, whether interventionist or non-interventionist strategies are pursued, Vietnam faces substantial cost – underscoring the fundamental mismatch between the financial capacity of a downstream country and the scale of risks it must shoulder.

The gap in basin-wide water governance thus places Vietnam in the most vulnerable position within the chain of transboundary impacts in the Mekong River system. This provides the basis for reexamining how Vietnam engages with and leverages regional water governance mechanisms.

2.2.2. Vietnam’s Policy Responses

The lack of coordination and the overlap among existing basin mechanisms have rendered Mekong governance increasingly fragmented. Each mechanism pursues its own objectives, procedures, and interests, thereby weakening the collective voice needed to manage water resources at the basin-wide level. As a result, decisions related to water extraction, flow regulation, and infrastructure development in the upstream are often made without coordination, creating a domino chain of impacts on the downstream, where Vietnam is struggling to safeguard a delta that is gradually “sinking” both literally and figuratively. Vietnam therefore, requires more integrated strategies to narrow this institutional gap. This involves not only strengthening forecasting capacity, modeling, and hydrometeorological data-sharing, but also advancing its water diplomacy and proactive engagement with subregional countries to enhance transparency in hydropower operations, adjust flow regulation, and jointly manage transboundary risks. Vietnam also needs to foster trusted dialogue platforms that align development interests between upstream and downstream states, thereby shaping shared norms for the sustainable use of Mekong water resources. Only by bridging this institutional divide can Vietnam mitigate uncertainties and better protect the long-term water security of the Mekong Delta. [29, 30, 31]

At the national level, adaptation efforts in the delta must be embedded within a long-term strategic framework that harmonizes engineered solutions with ecosystem-based approaches. Stronger and more decisive investment policies are needed to advance integrated water resource management, improve the quality of salinity-control infrastructure, and restructure local livelihoods toward greater sustainability. Above all, Vietnam must continue to advocate for the establishment of a “common rulebook” at the basin level, a mechanism strong enough to ensure accountability, benefit-sharing, and equitable risk distribution so that upstream decisions do not continue to shift the full burden onto the most vulnerable downstream regions.

3. Conclusion

According to David Feldman’s definition in *Water Resources and Sustainability*, “sustainability” refers to the capacity to manage natural resources while maintaining the well-

being of humans and other living organisms. From this perspective, Vietnam's experience in the Mekong Basin reveals a striking paradox: despite being one of the most active and responsible participants in regional cooperation mechanisms for "sustainable resource governance," the country continues to suffer severe ecological and social losses. As long as upstream countries continue to use water as an instrument of political and developmental bargaining, and institutional weaknesses within basin governance remain unresolved, Vietnam, together with millions of downstream inhabitants, will continue to pay the price for a fundamental inequity in access to, and sharing of, a common and vital resource: water.

The overlapping and poorly coordinated nature of the Mekong's institutional frameworks has rendered basin governance increasingly fragmented. Each mechanism pursues its own agenda, processes, and interests, diluting the collective voice necessary for coherent management of the river's shared resources. As a result, decisions on hydropower development, flow regulation, and infrastructure planning in the upper basin often proceed without coordination, triggering a domino chain of impacts downstream, where Vietnam struggles to preserve a delta that is literally and figuratively "sinking".

What is most concerning, however, is that in the regional race for hydropower and infrastructure development, an essential principle has been forgotten: the Mekong River must be allowed to flow – to carry sediment, vitality, and life to all the nations along its course before it can be subject to any scheme of control or exploitation. A river that ceases to flow is not merely a loss of water; it represents the erosion of the ecological, cultural, and livelihood foundations that have sustained millions of people for millennia.

Therefore, the sustainability of the Mekong Basin cannot be secured through diplomatic declarations or the current patchwork of institutional arrangements alone. It requires a fundamental shift in perception: recognizing that water is not merely a resource to be exploited, but a shared lifeline that must be governed equitably, transparently, and responsibly. Until this becomes a collective principle guiding the entire basin, Vietnam – regardless of its continued efforts, will remain the most disadvantaged nation in the face of the ongoing imbalance that defines the Mekong's hydropolitical landscape.

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