



ICPDR IKSD

International Commission
for the Protection
of the Danube River

Internationale Kommission
zum Schutz der Donau



Shared Basin – Shared Destiny

Principles of Effective River Basin Management

Contents

River Basins by their very nature, impart a deep sense of common heritage, shared destiny and solidarity between citizens and nations along shared waters. This permeates not only through social and traditional practices, but also shapes, to a large degree, the level of economic integration and a sense of “togetherness”; a sense of “shared destiny”. RBOs are a key example of this kind of transboundary governance, which creates the necessity for a political and scientific collaboration that exceed nation borders and man-made boundaries.

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1. Foreword

Rivers are a natural resource that has been a focal point of transboundary governance for centuries. In a modern era characterized by accelerated change in international governance, they represent an area ripe for re-examination. The overuse of often-scarce water, the environmental and social impacts of water resource development projects, and the increasing variability of water availability due to global climate change are all preventable challenges resulting from shortcomings in water resource governance. The transboundary nature and ecological sensitivity of many of the world's basins only adds an additional layer of complexity to this multifaceted mix of challenges. In order to ensure the sustainable management and development of these basins for the benefit of ecosystems, people, and countries, action is sorely required.

River Basin Organizations (RBOs) have been established in many of the world's basins in order to better coordinate different stakeholders' actions and ensure cooperation among them instead of conflict between them. Evidence from around the world shows that such RBOs indeed fulfill important functions such as the initiation and preparation of joint decisions, the monitoring of a basin's resources, the development of basin management plans, and the prevention of disagreements and conflicts.

However, as many of the aforementioned challenges in basins persist, the question arises as to what role RBOs themselves play amid the complex set of factors that determine if a shared basin and its resources are being governed effectively. In addition to exogenous factors related to the nature of a basin itself, the legal and institutional features of RBOs should not be underestimated when assessing how effective a basin's governance is.

This publication therefore makes an important contribution to help us better understand which legal and institutional factors matter. And it

provides policy-makers from different basins with a short and concise overview of these features, illustrated through examples from the Danube River Basin and the International Commission for the Protection of the Danube River Basin (ICPDR), one of the most successful RBOs around the world, as well as several other major RBOs. In light of the ICPDR's recent 25 year anniversary, I'm proud to have it included alongside our international sister organizations in this publication aiming to raise awareness of the importance of RBOs in effective basin governance, and to provide food for thought on how to strengthen RBOs; to address current and future challenges for the benefits of the people, countries and ecosystems in the world's river and lake basins.

This publication is the result of collaboration between Dr. Susanne Schmeier and the ICPDR. It is based on a background policy paper originally presented to the "Good Practices in International Freshwater Governance" Workshop (9th GEF International Waters Conference) in Marrakech, Morocco in November of 2018.



Ivan Zavadsky
ICPDR Executive Secretary

2.

Introduction: The International Role of River Basin Organisations

The management of water resources for the benefit of riparian communities, economies and countries (i.e. those situated on the banks of rivers) is a challenging endeavor. It requires the development of water infrastructure to harvest socioeconomic benefits from, for instance, irrigated agriculture, energy generation or water-borne transport, as well as the protection of water resources in order to ensure ecosystem health and ecosystem services for present and future generations. The transboundary nature of many of the world's watercourses adds another level of complexity, as interests in the use, development and/or protection of water resources do not only have to be balanced between communities and sectors, but also between countries.

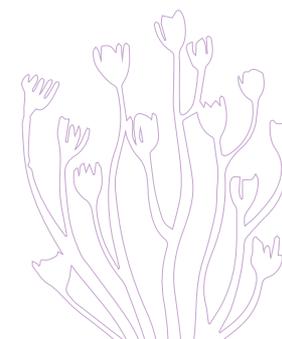
In a number of the world's many transboundary watercourses, riparian states have therefore agreed to establish river basin organizations (RBOs). These RBOs fulfill a variety of functions – ranging from water allocation to the management of fisheries and from the coordination of efforts for reducing water pollution to the promotion of inland navigation, all with the aim of ensuring that cooperation prevails over competition or even conflict over shared resources. Based on agreements committing riparian states to cooperation, they provide institutionalized platforms for cooperation that ensure that these commitments are being met and that they indeed address the issues that require cooperation – and thus that the expected benefits of cooperation are yielded.

However, RBOs have not always been successful in addressing the challenges

of transboundary water resources management for which they were created. In some cases, conflicts between riparian states over shared water resources persist, in others ecosystem deterioration continues and water resources are being used in an unsustainable manner. The potential for water resources development also often remains not fully harvested, depriving riparian populations of potential socioeconomic development. While these persistent challenges in transboundary basins can be due to a number of different reasons (such as particularly difficult water resources management challenges or protracted conflicts among riparian states beyond the water sector), the effectiveness of RBOs themselves in governing their basins is often a crucial part of it – often determined by their design and the ways in which they were originally set up. It is therefore important to better understand

which characteristics and features of RBOs influence their effectiveness. This can guide water managers and decision-makers in establishing new or reforming existing RBOs.

The aim of this publication therefore, is to provide an overview of the key characteristics of RBOs, and their potential influence on the effectiveness with which RBOs can govern shared basins.





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Lake in Zimbabwe from above.

3.

How to effectively organise River Basin Organisations

RBOs are complex institutions that are characterized by a number of legal, institutional and political design features. These are influenced by and often reflect the specific circumstances in a shared basin or riparian states' interest; in whether or not, to what extent, and how to cooperate. Yet knowledge about these individual features, the reasons that led to specific features, and their influence on an RBOs effectiveness remain limited. We aim here to provide an introduction into those features that have proven to be particularly relevant for ensuring the effectiveness of RBOs in governing shared water resources. It also provides some insights into how the various design features of RBOs are interlinked and influence each other (for a comparative perspective, refer to Annex I).

Firstly, the **legal framework** in which an RBO operates is decisive for its ability to manage a basin in a long-term and cooperative manner. The riparian states of a shared basin typically negotiate an international agreement on certain principles as well as substantive and procedural rules, when they decide to cooperate on the management of these shared resources. Often, these rely on more general international water law principles or are triggered by broader legal frameworks towards the establishment of cooperation mechanisms. Historical examples have included the 1992 Helsinki Convention, the 1997 UN Watercourses Convention, and the 2000 Southern African Development Community (SADC) Revised Protocol on Shared Watercourses. It is important to ensure that these legal frameworks – and the RBOs that derive therefrom – are adapted to the specific needs of their respective basin and bring into operation new general international norms for application in that basin.

Secondly, the **mandate of an RBO** determines the parameters an RBO covers, e.g. water quantity, water quality, fisheries, environmental protection, hydropower development or navigation, and which ones it does not. Some RBOs only cover a narrow scope, focusing on core or a few key water management issues in the basin, while other RBOs focus on a large number of issues of varying importance to the basin. While smaller-scale RBOs tend to be able to address functional issues with a heightened efficiency and in a timelier manner, broader-scale RBOs can better address challenges in a comprehensive manner – vitally as required by the principles of Integrated Water Resources Management (IWRM). It is therefore important to regularly reassess the balance between the key issues at stake for the basin, its population and its riparian states - including the expectations member states have regarding cooperation - on the one hand and the capacity of an RBO to address them efficiently and effectively

on the other hand. One can thereby differentiate between RBOs that function by providing a platform through which member states can coordinate their efforts, and RBOs that implement specific activities such as river basin monitoring or infrastructure project development themselves.

Thirdly, the **organizational set-up of an RBO** is a key attribute when working towards effective RBOs. This mostly refers to: the number of organizational bodies, the type of organizational bodies and the distribution of their respective roles and responsibilities. While this set-up varies across different basins, there are commonalities around the world. Typically, an RBO has a governance or decision-making body – typically referred to as a Council or a Commission. Through this body, member states' representatives convene on a regular basis to jointly decide on the usage, the development, and the protection of the basin's resources. In many cases, RBOs also have lower level



Kariba Dam



Prespa Lake

technical bodies that translate more general political guidance into actionable tasks. They are often referred to as Joint Committees/Technical Committees or – with a different setup – Expert or Working Groups (that typically cover specific subject matter). These bodies are often – though not always – supported by secretariats that provide administrative and/or technical tasks. Such secretariats can also have regulatory, implementation or management functions. Secretariats can be important facilitators for effective governance of shared watercourses as they ensure permanence and continuity in the cooperation process.

Fourthly, also vital are the **links between the basin-level, the RBO-level, and the national level** in the organization's member states. Some RBOs have specific bodies that link the basin-level and the Secretariat with the relevant national level organizations (e.g.: ministries and other state agencies or services) responsible for water resources management. Other RBOs are linked to their member states via technically specialized

expert or working groups who meet regularly to take technical decisions for the basin. Such groups comprise representatives nominated by the member states. The design and set-up of such mechanisms isn't only determined by the mandate and scope of an RBO, but also by its overall organizational set-up, reflecting specific legal and political contexts. Independently of the links and their set-up, it is important to ensure that national interests are reflected in basin-level decisions, while decisions taken at the basin level are implemented at the national level.

Another important – yet often neglected – feature is, fifthly, the **financing of an RBO**. The lack of necessary financial means – even if only in the form of short-term funding gaps – can significantly impede an RBOs effectiveness as experiences from various RBOs around the world has shown. Thus, it is important to understand both the financial needs of an organization and the potentially available financing sources, including more 'innovative' financing sources than those traditional – and crucial – public financing

stemming from government budgets. Additionally, the way in which member states share costs is important. Both equal **cost-sharing** between all members and situational agreements on variable cost-sharing need to be carefully assessed in each basin's specific context.

Within the structural set-up of an RBO, an important determinant for whether and to what extent it will be effective are the **decision-making processes** put in place. These include: the underlying principles of decision-making (majority, consensus or unanimity), the time-frames in which member states come to decisions, and the weight of such decisions. Defective decision-making processes that leave member states without decisions taken, can put the benefits that arise from cooperative basin management at stake and lead to unilateral national considerations gaining strength.

Decision-making processes also include **dispute-resolution mechanisms** that help to address disagreement among riparian states should they arise. The mere existence of RBOs does

not prevent disputes from (re-)emerging among RBO member states. Therefore, it is important to set clearly defined mechanisms and processes on how to address disputes – vitally before a disagreement emerges. This allows member states to address such disagreements through and with the assistance of the RBO, avoiding poorly formulated decisions based on heated debates.

In order to come to joint decisions and to address disagreements, gathering data and information about the state of the basin and its resources, the pressures they face and the effects of implemented measures is crucial. Therefore, RBOs also often fulfill important functions in **data and information management**. In this regard, it is important to define which data and information is shared and how exactly this is done. Often, protocols or other formal documents are developed in the framework of an RBO, precisely clarifying data and information sharing processes. In some cases, the gathering and analysis of data and information is done entirely at the national level through national agencies (such as hydrometeorological services) and only shared between countries through the RBO (sometimes with quality assurance functions being fulfilled by the RBOs Secretariat or other bodies). In other cases, the RBO itself maintains activities or entire programs to gather, process, and analyze data, and to share it with member states. The latter is particularly common and beneficial when capacities and resources in member states are limited.

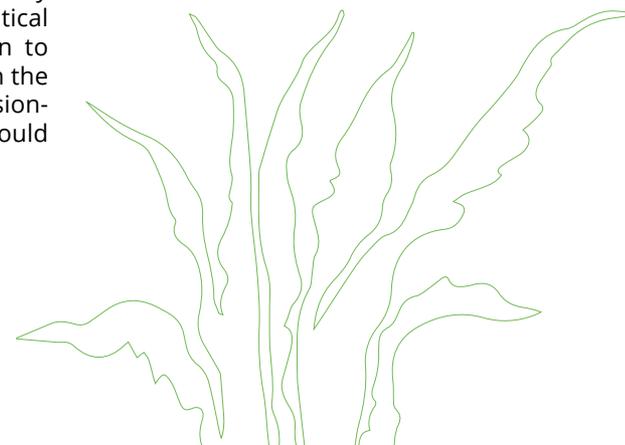
One specific dimension of data and information concerns projects planned by riparian states that could potentially influence the basin, its resources, and/or the use of the resources by other riparian states.

In order to avoid disagreements about such processes from an early developmental stage, and to operationalize the principle of no significant harm, a number of RBOs ensure the implementation of **notification and consultation requirements** resulting from the respective treaties. This builds on more general international water law principles and the substantive and procedural norms of the 1997 UN Watercourses Convention. Notification and consultation mechanisms typically require information on a planned project (including, for instance, project design information, environmental impact assessments or environmental and social management plans) to be shared with other riparian states via the RBO, and for its secretariat to analyze these documents and share an assessment of its likely impacts with all other riparian states.

Regarding the management and exchange of data and information, we come to the **links between science and policy**. Scientific information and analyses are an important basis for understanding the state of the basin and the challenges its resources are facing, for taking informed decisions on the management of the basin, and for monitoring changes in its status and of the effectiveness of implemented measures. And yet, the link between science and policy often faces a number of challenges. Scientific data and analyses alone are often insufficient for a comprehensive understanding of the state of the basin and the (potential) impacts of certain measures, because riparian states can disagree on data or the results of certain analyses in support of their respective national positions. Policy processes can also rely solely on political considerations rather than being open to expert advice. The methodology of both the science being produced, and the decision-making process (which the science should

be informing) are both key measures of a sound understanding of a basin and its needs. RBOs play a key role in this context, as they coordinate and structure processes of scientific data and information gathering and analyses, ensuring both their successful implementation, and member states' involvement in and commitment to these processes, ultimately increasing the acceptance of results. They provide platforms via which different stakeholders can feed data and information into decision-making processes. They also help stakeholders to present their analyses in an audience-specific manner, thus ensuring that decision-makers can be reached. Vitally, they also demonstrate the importance of science to the entire basin management cycle.

It is important to note that the different features of RBOs are interdependent and often influence each other. For instance, there is a strong link between the mandate of an RBO and its organizational set-up and design, but also with its governance mechanisms. In comparison to RBOs mandated to implement activities on behalf of member states, those RBOs with a rather narrow functional mandate – and focus on the coordination of member state activities – generally have fewer organizational bodies, smaller secretariats, and less complex governance processes, as well as different links to their member states.



4.

CASE STUDY:

The International Commission for the Protection of the Danube River (ICPDR)



International Commission
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*The International Commission for the Protection of the Danube River (ICPDR) was established in 1998 on the basis of the **1994 Danube River Protection Convention (DRPC)**, which today has 15 contracting parties making it the international water treaty at basin level with the most parties. Danube cooperation itself, however, dates back to the early 19th century, when riparian states already acknowledged the importance of early cooperation to facilitate effective navigation along this important transport route. The ICPDR is often presented as a particularly effective RBO and has gained considerable experience in managing a highly complex basin, making it a key role model to inform other basins and RBOs around the world as well.*

The ICPDR's **mandate** is narrow, focusing in on the key water management issues in the Danube River Basin. These relate mainly to the status of water bodies (chemical, environmental, hydromorphological) as well as to flood protection and management. The scope of this mandate can also be extended, as new water management issues occur, as illustrated by the integration of climate change as a key issue into the ICPDR's agenda. The ICPDR was in fact the first RBO in the world to develop a basin-wide climate change adaptation strategy. It is also strongly influenced by European Union (EU) legislation, in particular the EU Water Framework Directive (EU WFD), EU Floods Directive (EU FD) and other relevant EU Directives. The ICPDR is clearly a coordination-oriented RBO, and coordinates member states' activities to

suit the issues covered by its mandate. An important tool is the Danube River Basin Management Plan (DRBMP), which acts as a roof document to national management plans, harmonizing measures taken in the basin by different actors aiming to achieve the desired status of the water bodies and the entire basin. Similarly important is the Danube Flood Risk Management Plan (DFRMP) for flood risk management.

The ICPDR is a small and lean organization. Its **organizational set-up** consists of the Commission, bringing together member state representatives as a conference of parties (in charge of decision making); Expert Groups and Task Groups, consisting of national technical experts developing recommendations on specific issue matters; and the Secretariat of the Commission. In

addition, a Ministerial Meeting has been set up for representative and political purposes in a non-regular manner. The ICPDR Secretariat is relatively small compared to other RBOs, consisting of 9 regular staff. In addition to the Executive Secretary and a number of support staff, the technical experts in the Secretariat play a crucial role in steering cooperation in the basin. Technical experts coordinate the ICPDR's Expert and Task Groups and thus ensure that member countries regularly exchange their views on specific matters of importance to basin management and reach joint positions thereon, thus contributing to their implementation at national level and thus overall basin management effectiveness.

It is important to note that the ICPDR also brings together non-governmental actors

(civil society, the scientific community as well as the private sector), acknowledging their influence on and roles in basin management. Organizations can apply for observer status with the ICPDR, allowing them to participate in all governance meetings, raise their opinions and contribute expertise and studies. Moreover, the ICPDR holds formal public consultations on its management plans (the DRBMP and the DFRMP).

The ICPDR's **financing** relies on its member states. Overall financing needs for the organization are relatively low (with the Secretariat having an annual budget of around 1 million EUR). This is because member states bear their respective costs for participating in the cooperation process, while activities agreed upon within the context of the ICPDR are thereafter implemented entirely by member states given the strong coordination-focus of the RBO. For common costs, an equal cost-sharing roster has been agreed upon by all member states. It is, however, important to note that the ICPDR has managed to

successfully account for the considerable variation in the financial capacity between its member states. In 1999, temporary exceptions from equal cost-sharing were established, grouping member states according to their economic capacity and thus their ability to financially contribute to the RBO. This allowed weaker member states a temporary reduction in contributions, and committed economically more advanced states to temporarily cover these shares. In the early years after the ICPDR's establishment, it has also considerably benefitted from external financial support, namely from the Global Environment Facility (GEF) and European Union (EU). As member countries have economically developed, this support has been subsequently reduced. Now, only a few projects – especially in the downstream part of the basin – remain externally funded.

While **decision-making** in the ICPDR is based on the consensus principle, majority decisions by 4/5 of the delegations are de jure possible. De facto, majority-based

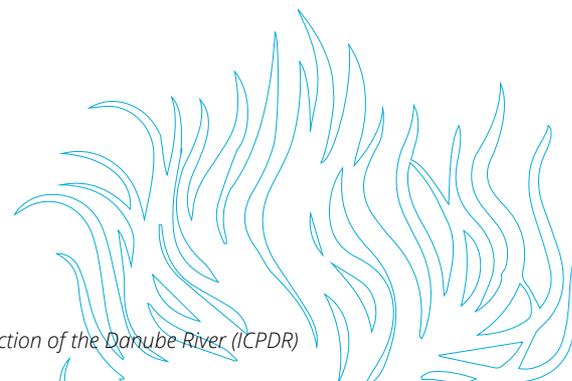
decision-making is not applied. Instead, the Expert Groups function as fora in which issues are being discussed and proposals for solutions established that all member countries find acceptable before the decision is ultimately transferred to the formal decision-making level.

The ICPDR's formal role in **dispute-resolution** was established in the convention, leaving it able to facilitate negotiations among disputing parties as a first instance of dispute-resolution. In case they cannot be settled within the ICPDR, disputes can be referred to external third-party resolution (including the International Court of Justice (ICJ) or an arbitration tribunal). Historical disagreements have been resolved with diplomatic means and the ICPDR playing a background role focusing on the avoidance and mitigation of disagreements in the first place. The high level of regional integration among the countries helps to keep such disagreements at bay, ensuring they rarely escalate.



© ICPDR

ICPDR Ordinary Meeting in Vienna, Austria





Morning on Serbian side of Danube in Backa Palanka

The ICPDR plays an important role in **data and information management**, ensuring the exchange of data and information between member states (and other actors). For example, the ICPDR coordinates the Trans-National Monitoring Network (TNMN), providing information on the Danube River Basin's waters based on a large number of parameters. The data is provided by the member states through their national monitoring systems (based on jointly agreed upon standards) and processes and shared by the ICPDR Secretariat. Additional information is gathered at regular six-year intervals during the Joint Danube Survey (JDS), a data-gathering project comprising the entire length of the river. It also presents an opportunity to strengthen cooperation in the basin. Information is made available publicly through the Secretariat.

Expert Groups are a backbone of the operation and the success of the ICPDR. They are formed by national experts from the Contracting Parties and representatives of ICPDR observer organisations. Eight Expert Groups and four Task Groups deal with a variety of issues and make recommendations to the ICPDR.

The work of the ICPDR's Expert Groups and Task Groups has also significantly strengthened the capacity of the Danube countries to continuously meet the EU's accession and Acquis Communautaire challenges. As the ICPDR continues to develop, the Danube becomes cleaner, healthier and safer because the countries' expertise is growing and more lessons are being learned.

5. Comparative Case Studies: RBOs around the World

This chapter provides comparative overviews of a selection of RBOs, aiming to cover a broad range of varying basin contexts with differing features. It is vital to understand that the design and features of RBOs must meet respective needs in basins, and will always be influenced by basin-specific circumstances and developments. It is therefore important to regularly review and reconsider specific RBO design facets and features to ensure they remain suited to basin-specific challenges and can effectively respond to changes in the basin.



- 1 The Mekong River Commission – MRC
- 2 The Niger Basin Authority – ABN/NBA
- 3 The Organization for the Development of the Senegal River – OMVS
- 4 The Orange-Senqu River Commission – ORASECOM



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Fisherman on the Mekong Delta



Confluence of the Nam Ou and the Mekong River and Luang Prabang

The Mekong is one of the great rivers of the world, supporting the livelihoods of 70 million people as well as the economic and environmental resources of 6 countries. With over sixty years of cooperation history, the Mekong River Commission has played a critical role in sustainable development of the Mekong River through its extensive knowledge base, comprehensive management plans, technical guidelines, and a water diplomacy platform that brings together countries with different interests to address transboundary opportunities and challenges. The MRC was not, however, established as a supra-national body with regulatory powers of the shared watercourse in each member country. Its powers and functions are conferred on it by these members, it therefore must act within these conferred powers to succeed.

5.1 The Mekong River Commission – MRC

The Mekong River Commission (MRC) was established through the **1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin**. The cooperation in this region however, is built on a much longer history dating back to the 1950s when riparian countries – supported by the US and UN institutions – explored the potential of collaborating to exploit the seemingly vast natural resources of the basin. For this purpose, they established the Mekong Committee (MC) in 1957. Cambodia, Laos, Thailand and Vietnam are parties to the agreement, while China and Myanmar – the two upstream countries in the basin – only hold observer status in the MRC and are thus not bound to the legal basis of cooperation. The agreement has been further re-interpreted and operationalized through the five different procedures covering specific aspects of basin management: water quality; data and information exchange; maintenance of flows on the mainstream; water use monitoring; and prior notification.

The MRC's **functional scope** includes “all fields of

sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin, including, but not limited to, irrigation, hydropower, navigation, flood control, fisheries, timber floating, recreation and tourism” (Article 1, 1995 Mekong Agreement). Over the years of its existence, the MRC has indeed addressed most of these issues, recently also adding climate change to its program of work, making the MRC an RBO with a relatively broad scope. The broader mandate allows the MRC to address all relevant issues in the basin but it may have also created less focus leading to inefficiencies and not always effective in tackling urgent problems. In response, reform efforts were initiated in the 2010s that led to a significant re-consideration of the RBOs work as well as its set-up, financing, and links to its member states. In this context, the MRC is also increasingly moving from a more implementation-oriented RBO towards a stronger focus on coordination.

The **organizational structure** of the MRC consists of a Council (at the ministerial level) representing the main governance body, and a Joint Committee

(JC) that operationalizes governance decisions. These two are in turn supported by a Secretariat, fulfilling a number of both administrative and content-specific functions. Prior to the instigation of reforms, the Secretariat was oversized, but tasks have since been reduced and devolved to member states' responsibilities. The Secretariat itself was reduced in size by 50% to now comprise 64 staff. Expert groups have also been established to coordinate specific activities. In addition to the basin-wide bodies, National Mekong Committees (NMCs) – with their own National Mekong Committee Secretariats (NMCSs) – established in each country are the sole entry point of the MRC at the national level, and are in charge of ensuring the link between basin level management of the Mekong River Basin and national efforts. The set-up of these NMCs and NMCSs varies considerably across the four member countries and has changed over time.

The MRC's **financing** relies – de jure – on member contributions. De facto, however, it is similar to other RBOs in the developing world, and

dependent on external financing from development partners, although this has improved recently. The section of funding covered by member countries has increased to \$4 million/year and this not only covers Secretariat costs but technical work as well.

As reliance on external development funds increasingly caused challenges for the MRC and, at the same time, some member countries lost their official development assistance (ODA) eligibility, MRC member states decided to move towards financial self-sustainability in 2010. Potential efficiency gains have since been identified, synergies explored and national implementation responsibilities strengthened – aiming at making the organization independent from donor funding by 2030. From previous complex formula based on catchment area, flow contribution of the river, irrigated area in each country, population size and GDP per capita of each country, the member countries agreed in 2018 to eventual equal contribution by 2030, and for the next Strategic Plan period of 2021-2025 will contribute 40% of the total MRC budget.

Decision-making in the MRC is based on the principle of unanimity (Art 20 and 27 1995 MA). While the mechanisms for decision-making are similarly defined as in other RBOs, reaching joint decisions has been seen to be hampered by disagreement on particular issues – a problem exacerbated by a lack of guidance on ways to deal with lack of unanimity in the MA and relevant documents. This has led to a number of such impasses and delays in decision-making processes in the past – e.g. on the permanent location of the MRC Secretariat, the selection of a Secretariat CEO from the riparian countries or the conclusion of the consultation process for notified mainstream hydropower projects – all of which however, have now been resolved.

The 1995 MA also equips the MRC with some **dispute-resolution mechanisms**. Generally, members are committed to resolving issues in an “amicable, timely and good neighborly

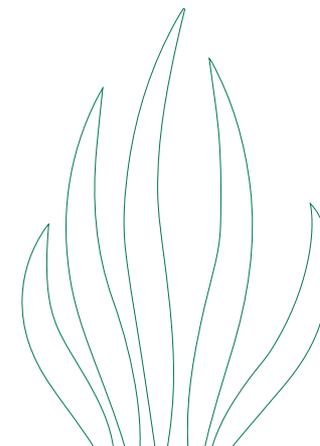
manner”. Also included are dispute-resolution mechanisms, firstly through the Council, and secondly by external means such as bilateral diplomatic negotiations between concerned governments (Art. 18, 34 and 35 1995 MA). Practice however, has shown these mechanisms hindered by a lack of willingness to address disagreements in the context of the RBO.

The MRC also plays an important role in **data and information management**, and is mandated to maintain databases for information exchange with the Secretariat largely establishing and maintaining such databases. The sharing of data and information is also specified in the “Procedures for Data and Information Exchange”, and is also to be shared with upstream non-member states – namely China – with whom data sharing agreements have been signed that ensure the transfer of flow data from China to the MRC. This is particularly important for flood management in the wet season throughout the region.

Mechanisms for **notification** and prior consultation of measures before they impact the MRC have been spelled out in considerable detail since 1995, and refined even further through the later Procedures for Notification, Prior Consultation and Agreement (PNPCA). As mentioned above, inter-member disagreements have occurred over infrastructure expected to have a significant transboundary impacts – these projects largely followed the notification and consultation requirements, but also demonstrated the limits of these processes. Recent improvements though include the agreement on the joint statement after a prior consultation process over proposed mainstream dams and joint action and joint monitoring of impacts. The significant additional investment into studies and changes at the lower Mekong’s mainstream dam – the Xaiyaburi dam, designed to mitigate potential adverse impacts – came following MRC recommendations, and shows the valuable outcomes of the MRC prior consultation process.

The **links between science and policy** play an important role in understanding the impacts of developments in the Mekong River Basin. The region however, is struggling to ensure sufficient availability of scientific data and information to understand the complexity of the basin during the decision-making processes. The MRC thus provides an important forum for presenting scientific information to policy-makers, and coordinates the work of scientific expert groups. Typically this could be setting up a specific issue in the context of a specific planning process, such as the establishment of expert groups on, e.g. fisheries or sediment. The MRC involves different stakeholders via consultation processes, and presents relevant information to policy-makers. The extent to which this is taken up and indeed informs basin management and development decisions however, remains a challenge.

One key insight to be learned from the MRC is that the effectiveness of cooperation to a large extent depends on riparian countries’ willingness to cooperate and work through their RBO. It also demonstrates the importance of an RBOs ability to adapt to changes in the basin or within the member states to continuously manage the basin effectively. While these reform processes can be challenging, it is important that RBOs regularly assess whether their mandate, the organizational structure, the financing or their different governance mechanisms still meet the key water management issues in the basin and the needs of riparian states in order to ensure long-term effectiveness.





Sunset on the Niger River



Niger River

Management of a regional basin necessarily involves strong political will from Member States, active solidarity in cooperation, total transparency in the sharing data and information – and the establishment of a framework for dialogue and consultation involving users in decision-making. While implementing technical and legal tools facilitates management, cooperation around major integrating infrastructures promotes the socio-economic development of States and the sharing of benefits.

5.2 The Niger Basin Authority – ABN/NBA

The ABN (Autorité du Bassin du Niger) or ABN (Niger Basin Authority) was established through the **1980 Convention creating the Niger Basin Authority** (Niger Basin Convention), which was revised in 1987, to extend mandate of the organization. The Niger Basin Water Charter, adopted in 2008, anchored new developments (e.g. principle such as equitable and reasonable utilization, polluter-pays, and the precautionary principle) along with new various recently new forms of cooperation in the basin. This also extended the ABN's scope from a previously economic-centric focus on water resources, to a more comprehensive view to basin development.

The ABN's **mandate** is very broad. It has been tasked through the Convention and subsequent relevant documents to harmonize and coordinate

national policies for developing the water resources of the Niger River Basin, manage floods and droughts, and conserve the basin's ecosystem.

The ABN consists of a variety of **organizational bodies**, the highest level being constituted by a Summit of Heads of State and Government – a governance level rarely found with RBOs – that meets on a yearly basis. At the ministerial level, the Council of Ministers has the key supervisory role for the ABN, and provides guidance and takes decisions on the management of the basin. This council is in turn supported by a Technical Committee of Experts, comprising member state representatives. The links to member states are ensured through National Focal Structures and National Coordinators of the Water Users at the administrative region level. The Executive

Secretariat, headed by the **Executive Secretary**, is the executive body of the ABN with a strong focus on the implementation projects, going beyond a mere administrative scope. The Secretariat has undergone a number of changes in the past few years as a consequence of financing shortages and as a reaction to the pressure of development partners. It currently has about 55 staff, making it a medium-size secretariat given its comprehensive functions.

The **financing** of the ABN is addressed not only in its establishing legal framework, but also in the 1980 Protocol relating to the Development Fund of the Niger Basin. Financing of the ABN and its work is de jure based on equal member state contributions plus external contributions from development partners. Member contributions

only cover the core operational costs, just below \$4 million/year. The costlier program and project activities however, depend largely on external contributions; e.g. the program budget for 2018-2020 amounts to \$800 million for ABN investments. It is also important to note that the 1980s and 1990s saw the ABN face significant financial concerns due to member states not paying their contributions, leading to significantly reduced performance of the organization - in turn leading development partners to withdraw from financing. As a consequence, a new financing formula was established in the late 1990s in the context of larger organizational reforms aiming at taking into account the varying benefits member states gain from cooperation through the ABN and thus increasing Mali's, Niger's and Nigeria's shares while reducing those of other members to levels still experienced today.

Decision-making in the ABN is based on the consensus principle – apart from the Summit of Heads of State and Government, in which de jure simple majority decisions are possible, though de facto not made due to political reasons. On occasion, decision-making in the ABN has been hampered by significant disagreements between countries over important matters, largely relating to infrastructural development in the basin. Even when decisions are made, it is not unheard of for ABN member countries to contest them or proceed unilaterally in a different direction. An example is Guinea's unilateral decision to move ahead with the Fomi Dam while the project was supposed to be developed within the framework of the ABN, and related ABN initiated studies on the dam's environmental and social impacts were already underway.

The 1980 Convention foresees negotiation as the main mechanism for **dispute-settlement**. Hard-to-resolve matters however, can be referred to the Summit of Heads of State and Government for resolution as a next step, which is mandated to take a final and binding decision. Other potential forms of dispute-settlement for more specific circumstances include bodies such as the Permanent Technical Committee (internally), or the International Court of Justice (ICJ).

The ABN Secretariat plays an important role in **data and information management** – although data and information itself is still lacking when it comes to specific parameters and/or parts of the basin. Based on the Water Charter (Art 26), there is also an obligation to make such information publicly available – an important step towards stakeholder participation.

Member states are also required (Art 20-25 Water Charter) to **notify** and share information with the ABN Secretariat and other relevant parties on planned measures and projects with a foreseeable transboundary impact. The Secretariat notably plays a rather strong role in this, formally having the ability to grant final approval for environmental and social impact assessments. Furthermore, while projects identified under the joint basin planning process are supposed to be developed with ABN involvement, recent years have shown that some countries tend to prefer unilateral (or bilateral) development of projects, as in the case of the Fomi or Kandaji Dams by Guinea/Mali and Niger respectively. The comprehensive notification mechanisms of the ABN thus remain to be successfully applied.

Links between science and policy in the basin remain frayed, and data infrastructure lagging behind. The ABN is strengthening its analytical capacity and its ability to reach policy-makers across the basin with sound advice, but is not able to fully ensure that decisions are based on a comprehensive understanding of the state of the basin and the potential impacts of such projects.

While the example of the ABN illustrates the overall long-term commitment to cooperation of riparian states in a basin if they perceive it as beneficial, it also highlights a tendency to favour unilateral actions when seen to provide more immediate or greater benefits. Despite the ABN's central role in basin cooperation remaining upheld, certain legal and institutional shortcomings have yielded weaknesses in cooperation and commitment from member states. Countries perceiving fewer benefits than they had originally hoped for has also contributed to a mitigation of the ABN's legal mechanisms. This has been acknowledged by the ABN and its external partners, leading to a number of reforms in the past decades. A further strengthening of the ABN is needed to ensure it does indeed perform its functions in a way that ensures the long-term cooperative and sustainable management of the Niger River Basin for riparian populations and states.





“Boat on Senegal River” – Jacques Taberlet

5.3 The Organization for the Development of the Senegal River – OMVS

The OMVS (Organisation pour la Mise en Valeur du Fleuve Sénégal) was established on the basis of the **1972 Convention on the Status of the Senegal River**, which defines the status of the river and its resources for signatory states of the Convention (in 1972 only Mali, Mauritania and Senegal - Guinea would join in 2006) and the **1972 Convention creating the Organization for the Development of the Senegal River**, which formally established the RBO. Both conventions – together with a number of other legal documents later developed, including the 2002 Water Charter - form a comprehensive legal regime for cooperatively managing and developing the basin’s resources. It strongly relies on the commitment of the riparian states to favor cooperative over unilateral development.

The **mandate** of the OMVS is very broad in comparison to many other RBOs and has a strong focus on using water resources for socioeconomic development. Member states to the OMVS have agreed to the coordinated development of the Senegal River in order to exploit its natural resources in light of economic development opportunities,

especially in the fields of energy, irrigation and navigation. The OMVS’ broad mandate thus centers on a variety of fields relating to economic development and resources exploitation (water allocation, irrigation, hydropower, navigation, mining, industries, transport, regional economic integration), but also includes flood management and environmental management. In addition to regulatory and coordinating functions in these issue-areas, the OMVS also has executive powers in relation to infrastructure projects jointly developed, implemented and managed by riparian states through the OMVS such as the Diama and Manantali Dams (established in the 1980s). This clearly makes the OMVS an RBO with a strong implementation focus.

The OMVS is also a very large RBO, comprising no less than 10 **organizational bodies**. The highest governance body is the annual and notably high-level Conference of Heads of State and Government. Below the Conference of Heads of State and Government, the Council of Ministers acts as the main supervisory body of the OMVS and takes decisions on the management and

development of the Senegal River Basin. Other consultative and advisory bodies that form part of the OMVS’ structure are the Permanent Water Commission (in charge of water allocation and related matters), the Advisory Committee, the Regional Planning Committee (linking national development plans to basin level water availability), the Environment Observatory, and the public companies that have been created to manage the three jointly owned infrastructure projects of the OMVS (SOGED for the Diama Dam, SOGEM for the Manantali Dam, SOGENAV for navigation infrastructure and SOGEOH for new developments in the upstream parts of the basin). The High Commission of the OMVS acts as the RBOs **Secretariat**, admittedly with a much larger mandate and much further reaching powers than the secretariats of other RBOs. Accordingly, the High Commission also employs a large number of staff – currently around 180. National Cells and Coordination Committees – with different set-ups in the different member countries – assist in linking project implementation at both basin-wide and national level. Typically, it is employees of the ministry in charge of water resources that fulfill

these roles as parts of their job description, receiving additional financing from the OMVS.

The **financing** of the OMVS is based on a very sophisticated and complex system of financial arrangements: The ordinary budget of the OMVS is equally covered by member state contributions. The costs and development of joint water resources projects are also shared by member states, based on the expected benefits derived from these projects for each member state. Costs are also offset by revenue generated through such projects (e.g. the sale of electricity generated at the Manantali Dam). For the first projects of the OMVS, the Diama and Manantali Dams, the calculated benefits led to a cost-sharing between Mali, Mauritania and Senegal of 35.30%, 22.60% and 42.10% respectively. With the inclusion of Guinea as the fourth member state in 2006, this formula had to be renegotiated.

Decision-making in the OMVS is based on unanimity between the Conference of Heads of State and Government or the Council. Decisions are typically prepared at lower governance levels and then submitted for official adoption to the Council and the Conference of Heads of State and Government. Agreeing to certain projects or activities at these lower levels

has sometimes been time-consuming and required numerous rounds of negotiations. Once countries have agreed on a certain matter, compliance is relatively high given the highest-level commitment.

Dispute-settlement in the Senegal River Basin is based on conciliation and mediation. If, however, member states cannot achieve agreement in this way, disputes are to be settled externally by the ICJ. De facto, disagreements that have emerged (such as the disagreement between Senegal and Mauritania in the early 2000s over a Senegalese plan to divert water to restore dried areas on its territory) did not always find resolution within the context of the OMVS, and continued to loom for a significant time.

The OMVS also plays an important role in **data and information management**, with the High Commission in charge of gathering relevant data, developing databases, and sharing data across the basin. This data mainly relates to hydrology and infrastructure projects and – more recently – on water resources use. Other areas, such as some purely environmental aspects, remain poorly covered when it comes to data. The establishment of an Environmental Observatory has however, significantly improved the OMVS' capacity to also monitor the environmental state of

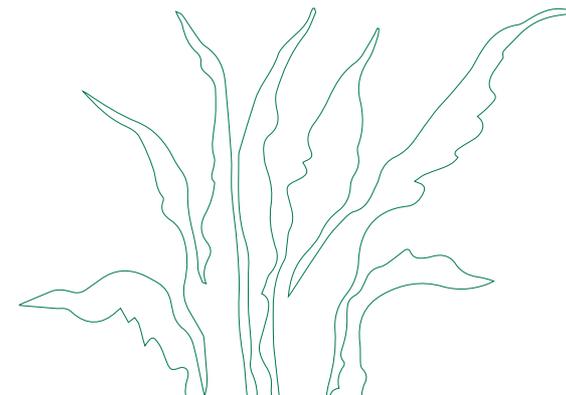
the basin. Member states are also expected to share water resources development plans early on in the planning stage, thus no state shall be able to develop a project that would modify the characteristics of the river (including navigability, agricultural and industrial uses, water quality, flora and fauna or water levels) without prior approval from other contracting parties after discussion. This amounts to a very strong **notification** requirement.

Due to limitations on understanding regarding the basin itself – which has led to some poor infrastructural planning decisions in the past within the basin, the OMVS has also undertaken important efforts to strengthen its knowledge base generally. The establishment of the Environmental Observatory for instance, presents an important step in strengthening the **links between science and policy**.

Overall, the case of the OMVS shows an RBO strongly focused on implementing joint water resources development projects on behalf of their member states. This necessarily comes with strong legal foundations (which ensure strongly binding decisions, and joint ownership of projects amongst much else) plus a rather large and complex organizational set-up with considerable financing needs. Such complexity can, however, only be sustained if the RBO indeed produces and shares the benefits of cooperation that member states expect when establishing the organization and committing themselves to sustaining it.



Félou Hydroelectric Plant on the Senegal River in Mali





Katse Dam, a 185m high concrete arch dam on the Malibamat'so River in Lesotho

5.4 The Orange-Senqu River Commission – ORASECOM

The Orange-Senqu River Commission (ORASECOM) was established in 2000 on the basis of the **2000 ORASECOM Agreement**, itself largely influenced by the Southern African Development Community's (SADC) Revised Protocol on Shared Watercourses from the same year. The latter requires all SADC member states sharing water resources to establish RBOs, and the former thus committed signatory parties to the sustainable development of the Orange River Basin. It also established ORASECOM itself as the organization to advise said parties on these matters.

ORASECOM's **mandate** when it comes to specific cooperation objectives, is not as clearly specified in the 2000 ORASECOM Agreement as it is with other RBOs. Only in the agreement's preamble is some general guidance on riparian states' commitments provided. However, in the form of its Council

and supporting bodies, ORASECOM is mandated to develop, make recommendations, or advise members on a variety of aspects – from long-term safe yield of the river, equitable and sustainable utilization of the river system, harmonization of development policies, harmonization of data and information collection, and on the handling of emergency situations. ORASECOM thus clearly is a coordination-oriented RBO, focused on providing a forum for coordination, consultation and exchange between member states and supporting them through advisory services on the usage, development, and conservation of water resources.

Based on its mandate, ORASECOM also has a rather lean **organizational structure**. The main governance body is the Council, comprising twelve commissioners (three per country), and meeting twice annually on a rotational basis. The

Council is supported by Task Teams consisting of technical representatives from member states, and providing expertise on specific topical matters. The **Secretariat** provides administrative and management support, including serving as an information repository for the basin, developing and managing activities, and engaging in resources mobilization. The Secretariat is very small – only 7 staff (5 technical and 2 support staff) – and is based in Pretoria, South Africa, on the basis of a seat agreement signed with the Republic of South Africa. While there are no specific bodies that link the basin level of ORASECOM to its member countries, the fact that all Council members are employees of respective national ministries for water resources ensures a close link between the regional and the national level, similarly to the way this works in the Danube River Basin with the ICPDR.

Financing of ORASECOM is based on member state contributions (each member state bearing the costs for their participation in the cooperation process and its respective share of joint costs) and significant contributions from development partners. Costs for joint projects and activities are shared by member countries on an equal basis. This includes the core costs for the Secretariat, which amount to less than \$300,000 / year. There are ongoing discussions on whether to reconsider ORASECOM's financing and cost-sharing among member states.

Decision-making in ORASECOM is based on the consensus principle (Art 3 2000 ORASECOM Agreement). If a certain matter cannot be solved by consensus during a Council meeting it is postponed to the subsequent meeting. Should the next Council fails to reach a consensus, the matter is referred to member country governments for diplomatic resolution through negotiation, triggering ORASECOM's dispute-resolution mechanisms. This underlines ORASECOM's advisory and coordinating role, its **dispute-resolution** role limited compared to other RBOs with the Council having some limited

role in advising states on measures to settle disputes, referral to the SADC Tribunal might also be sought. However, the recent example of Botswana's request for shares of the river's water for its national use shows that disagreements have been typically solved by the ORASECOM Council, latest after postponement to a subsequent meeting.

ORASECOM plays a particularly important role in the basin in the field of **data and information management** and sharing. In the ORASECOM Agreement, parties have committed to sharing hydrological, hydrogeological, meteorological, environmental and water quality data. Moreover, agreement to share information on planned projects, programs or other activities that could have a significant adverse transboundary effect, amounts to a **notification** commitment. Member states though have not had to live up to this commitment since they've generally preferred to involve neighboring states very early in the planning process for infrastructure projects (e.g. feasibility studies). This way, actual notification has a procedural rather than political connotation,

effectively circumventing conflicts in a basin that is suffering from severe water stress.

The initiation, coordination and dissemination of scientific research (typically in the form of topical studies, e.g. on water quality or on environmental flow requirements) is another key area that ORASECOM - supported by donors - takes a lead in. Such research directly informs decision-making in the basin. This is of particular relevance for establishing a sound understanding of the state of the basin and a basis for the monitoring of the basin's resources, especially in light of the water scarcity the basin is facing and the many competing water uses. While scientific capacities remain a challenge within the basin, ORASECOM has made significant contributions to informed policy-making by strengthening the **link between science and policy**. The Lesotho-Botswana Water Transfer Project (joint Botswana, Lesotho, South Africa water infrastructure project), and the Vooilsdrift-Noordower Dam (Namibia and South Africa) are key examples of projects putting this link into practice.

ORASECOM illustrates that small coordination-oriented RBOs can provide effective support to member states in the management of a shared basin. RASECOM's legal and institutional characteristics meet member states' interests and needs, while also providing a basis for policy decision-making to significantly improve. Its foundational structure has also proven effective at resolving disputes without the need of additional international governing bodies.

"A cardinal function of an RBO is to build a common understanding of the particular water resources challenges faced in that river basin and forms the foundation for unravelling the desired shared destiny.

An RBO structure can harness the sense of solidarity within a region to inspire mobilisation (or identification) of a basket of durable and joint solutions towards more equitable sharing of water resources.

The overall long term financial sustainability of an RBO depends on consistent and reliable member contributions. This alleviates the necessity for outside assistance, and fosters credibility and relevance of the organisation, including its perceived effectiveness."

Mr. Lenka Thamae,
Executive Secretary, ORASECOM

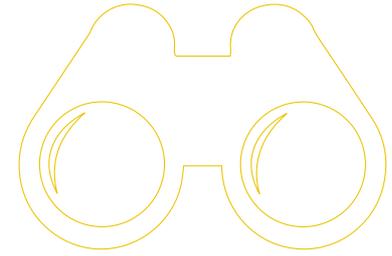


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Orange river and mountains, South Africa

6.

Lessons learned and the way forward



There are many lessons to be learned from the differing legal and institutional design features of RBOs. While it is key to acknowledge that each basin is different and to adapt every RBO to its specific basin context, some universally-relevant principles for RBO management can be discerned, based on the five exemplary RBOs contained in this publication:

The **legal framework** of a basin on which an RBO is built needs to:

- provide clear guidance on the principles and rules for cooperation that member states commit to
- incorporate key principles of international water law
- operationalize key principles for the specific basin context
- ensure that these key principles are expressed in a clear manner to avoid disputes over interpretation
- seek apparatus to ensure compliance.

The **mandate and the scope** of an RBO should:

- reflect the significant water management issues in a basin
- allow for said issues to be readily reviewed if the situation in a basin changes
- take into consideration the potential trade-offs between an all-encompassing implementation-based RBO and a coordination-based RBO.

The **financing** of RBOs needs to:

- clearly account for the funding needs of the cooperation process (both for the RBO itself and for its programs and activities)

- ensure the availability of funding sources for these needs
- make assurances to member states regarding the benefits cooperation provides to them.

Cost-sharing mechanisms need to be:

- contextually sensitive to the specific circumstances in a basin
- accepted by all member states
- flexible for if and when the situation in a basin changes.

Decision-making mechanisms need to be:

- understood as key component of effectively governing shared water resources
- conducive to having member countries of an RBO come to decisions over the use, the management, the development and/or the protection of shared water resources in a timely manner
- sensitive to the specific relationship between member states (therefore actual voting mechanisms do not matter most as much as actual results or decisions being reached).

Dispute-resolution mechanisms remain vital as disputes can always emerge and should:

- be clearly defined and accepted by all member states
- ensure the availability of mechanisms to address disagreements within an RBO provide contingencies for when matters cannot be resolved within an RBO (e.g. referring to external parties has proven useful).

Data and information are a prerequisite for effectively managing shared water resources by providing insights into the state of the basin. Therefore, mechanisms must be provided:

- for gathering, analyzing and sharing data and information by RBOs
- taking into account member states' differing pre-existing capacities, infrastructure, and systems.

Providing **notification and consultation** mechanisms will:

- be an important means for ensuring harmonized and cooperative basin planning
- help to avoid and minimize

- disagreements among riparian states early on in developments with basin-wide implications
- benefit from being managed by RBOs, who can play a key central role in managing notification and consultation processes, gathering and analyzing related documents and guiding member states in subsequent joint decision-making
- thus need clear legal and political principles and processes, both established and adhered to by member states.

Building and maintaining links between science and policy are important for ensuring that decisions on the management, the development and/or the protection of a basin are based on sound understanding. It's therefore important to:

- not only gather the required information, but to share it with those taking decisions on the basin's future in a targeted and audience-specific manner
- keep policy-makers open to scientific advice when informing their decisions
- frame RBOs as the link between both sides and bridge between them.

Annex I: Overview of key RBO features for selected examples

Design Feature	ICPDR	MRC	NBA	OMVS	ORASECOM
Member states	Austria, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Montenegro, Romania, Serbia, Slovakia, Slovenia, Ukraine (plus European Commission)	Cambodia, Laos, Thailand, Vietnam	Benin, Burkina Faso, Cameroon, Chad, Guinea, Ivory Coast, Mali, Niger, Nigeria	Guinea, Mali, Mauritania, Senegal	Botswana, Lesotho, Namibia, South Africa
Goal/objective (as per treaty)	cooperate on sustainable and equitable water management, including the preservation, improvement and rational use of surface waters and groundwater in the catchment area (Art 2 DRPC) and ensure that surface waters and groundwater within the Danube River Basin are managed and used sustainably and equitably	to cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin [...] in a manner to optimize the multiple-use and mutual benefits of all riparian states and to minimize the harmful effects (Art 2 Mekong Agreement)	promote the co-operation among member States and to ensure an integrated development of the Niger Basin (Art 3 1980 Niger Basin Treaty)	cooperation for development of resources of river Senegal and to guarantee freedom of navigation and equal development of water users, including promotion and coordination of studies and work for development of resources (Art 2 Convention on the Status of the Senegal River and Art 1 1972 Convention creating the Senegal Organization)	extend and consolidate existing tradition of good neighborliness and friendly relations between Parties by promoting close and coordinated co-operation in development of all resources of River System (Preamble 2000 ORASECOM Agreement)
Functional mandate	implementation of the EU WFD, with focus on water quality (including nutrient inflows, wastewater management, high-risk substances discharge, prevention of industrial accidents), environmental protection (including physical degradation of ecosystems, protection and conservation of biodiversity), flood protection	all fields of sustainable development, utilization, management and conservation of water and related resources, including irrigation, hydropower, navigation, flood, fisheries, timber floating, tourism	various fields of sustainable development, utilization, management and conservation of water and related resources, including hydro-power, navigation, irrigation, flood management, fisheries	various fields relating to economic development and resources exploitation (water allocation, irrigation, hydropower, navigation, mining, industries, transport), flood management, environmental management, regional cooperation and economic integration	issues relating to equitable and reasonable utilization and management of basin, including water quantity, water quality, infrastructure development, environmental aspects, emergency situations
Focus of mandate	coordination	moving from implementation to coordination	implementation	implementation	coordination
Organizational bodies	Commission, Secretariat, Expert and Working Groups (including Standing Working Group); irregular ministerial meetings	Council (ministerial level), Joint Committee, Secretariat, National Mekong Committees (NMCs) (one per member country)	Summit of Heads of State and Government, Council of Ministers (ministerial level), Committee of Experts, Executive Secretariat, National Focal Structures, National and Regional Coordinators of Basin Resources' Users	Conference of Heads of State and Government, Council of Ministers, High Commission (Secretariat), Permanent Water Commission, Regional Planning Committee, Consultative Committee, SOGED, SOGEM, SOGENAV, SOGEOH, National Coordination Committees (one per member country)	Council, Secretariat, Task Teams
Functions of the secretariat	management functions (meeting preparation, drafting annual work programs, budget planning), special functions related to the work of the Expert Groups, data and information management and exchange	administrative, technical and financial services, preparation of meetings and work programs, coordination platform for different actors, knowledge management, data and information management	administrative, technical and financial services, works and studies with a view to achieving the objectives of the Authority, formulate proposals to assist in harmonious development of the Authority, coordination of activities, strategic and project planning, relations to external actors/negotiate loans, partial implementation of infrastructure projects, preparation of meetings and work programs, data and information management	coordination of activities at different governance levels, strategic planning and project planning, relations to external actors, implementation of infrastructure projects, management and oversight of sub-bodies, including SOGED, SOGEM, SOGENAV and SOGEOH, human resources management, data and information management	coordinate activities and implement ORASECOM decisions; serve as repository of information related to the basin; act as focal point for ORASECOM with external parties; perform administrative functions; conduct communication and promotion; develop and manage programs and projects; resources mobilization
Links to national level authorities	Expert and Working Groups consisting of member state representatives	National Mekong Committees and National Mekong Committee Secretariats in each country	National Focal Structures (coordinator in responsible ministries and representatives from each relevant ministry in respective country)	National Cells /Cellules Nationales and National Coordination Committees/Comités Nationaux de Coordination	Task Groups consisting of member state representatives
Financing mechanism	financed by member states, contributions by EU, external project funds for specific activities	financed by member states and development partners (with recent plans to move to financial self-sustainability by 2030)	financed by member states, development partners (assistance and loans), with high dependence on external funding	financed by member states, development partners (assistance and loans), income from jointly owned and operated infrastructure	financed by member states (contributions and bearing of own costs of participation) as development partner contributions

Design Feature	ICPDR	MRC	NBA	OMVS	ORASECOM
Cost-sharing mechanism	de jure equal cost sharing, but temporary relief for poorer downstream countries in earlier years of cooperation on basis of country grouping system, eventually increasing downstream countries' contribution up to equal shares	equal cost sharing for the RBOs budget, but budget increases shared on key basis (indicators share of basin, contribution to flow, irrigated area, population in basin and GDP)	since 1998 key-based (Benin 5%, Burkina Faso 4%, Cameroon 7%, Ivory Coast 5%, Guinea 10%, Mali 20%, Niger 18%, Nigeria 30%, Chad 1%)	cost-sharing on equal basis for operation of OMVS, cost-sharing based on benefits for joint projects (with Mali 35.3%, Mauritania 22.6% and Senegal 42.1%; re-negotiated since accession of Guinea)	equal cost-sharing
Decision-making mechanisms	consensus-based, in case no decisions can be reached majority-based decisions possible	Council and Joint Committee must take decisions unanimously	decisions taken by consensus, in Summit of Heads of State possibility to take decisions based on simple majority (de facto not applied)	decisions in Conference of Heads of State and Government and Council of Ministers based on unanimity principle; de facto strong preparation at lower levels	consensus-based, in case no consensus can be reached referral to next Council meeting for new decision
Dispute-resolution mechanisms	within ICPDR through negotiations, if fails referral to external body (ICJ or arbitration tribunal); de facto strong focus on dispute mitigation	first within the MRC, if no resolution referral to diplomatic means directly between member states (with option to involved 3rd party mediation)	negotiation between states, if fails referral to Summit of Heads of State and Government, then to external arbitration	conciliation and mediation between respective member countries, if fails possibility to refer to ICJ	dispute between the Parties shall be settled amicably through consultation and/or negotiation; if not settled, referral to SADC Tribunal for final and binding decision
Information sharing mechanisms	coordination of data and information (including monitoring network and specific basin-wide surveys) and dissemination through various tools; strong reliance of data from member states	coordination of data and information management by MRC Secretariat through information system (MRC-IS); relying on data from member countries, but de facto acquisition of data through own projects	coordination of data and information management by ABN Secretariat through various tools and systems, based on data from member countries and satellite data	High Commission in charge of gathering and managing hydrological data, data relating to the management of the infrastructure projects and data on water resources use	parties exchange information on hydrological, hydro-geological, water quality, meteorological and environmental condition; coordinated by Secretariat
Mechanism for notification of planned measures	parties have to share information and, upon request of one party, enter into consultations on planned activities which are likely to cause transboundary impacts (Art 11 DRPC)	obligation to notify, consult or agree on water use in Mekong Basin depending on type of use (inter-/intra-basin, dry/wet season) (Art 5 MA)	obligation to notify, consult or agree on water use and extraction for all projects with foreseeable transboundary impact (Water Charter); ABN Secretariat to have final say on validation of environmental and social impact assessments for such projects	commitment that no state shall be able to develop project that would modify characteristics of river without prior approval by other contracting parties after discussion	commitment to share information on planned activities, projects and programs with potential significant adverse transboundary effect to ORASECOM Council, process of 6 months for co-riparian replies
Condition; coordinated by Secretariat	within ICPDR through negotiations, if fails referral to external body (ICJ or arbitration tribunal); de facto strong focus on dispute mitigation	first within the MRC, if no resolution referral to diplomatic means directly between member states (with option to involved 3rd party mediation)	negotiation between states, if fails referral to Summit of Heads of State and Government, then to external arbitration	conciliation and mediation between respective member countries, if fails possibility to refer to ICJ	dispute between the Parties shall be settled amicably through consultation and/or

Annex II: List of Abbreviations

DRBMP	Danube River Basin Management Plan	NMC	National Mekong Committee
DRPC	Danube River Protection Convention	NMCS	National Mekong Committee Secretariat
EU	European Union	OMVS	Organisation pour la Mise en Valeur du Fleuve Sénégal
EU WFD	European Union Water Framework Directive	ORASECOM	Orange-Senqu River Commission
GEF	Global Environment Facility	PNPCA	Procedures for Notification, Prior Consultation and Agreement
ICJ	International Court of Justice	RBO	River Basin Organization
ICPDR	International Commission for the Protection of the Danube River	SADC	Southern African Development Community
IWRM	Integrated Water Resources Management	SOGED	Société de Gestion et d'Exploitation du Barrage de Diama
JC	Joint Committee	SOGEM	Société de Gestion et d'Exploitation du Barrage de Manantali
MC	Mekong Committee	SOGENAV	Société de Gestion et d'Exploitation de la Navigation
MRC	Mekong River Commission	SOGEOH	Société de Gestion des Ouvrages du Haut-bassin du Fleuve Sénégal
NBA	Niger Basin Authority		

