

INTERNATIONAL DEVELOPMENT OF THE
SENEGAL RIVER

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ABSTRACT

INTERNATIONAL DEVELOPMENT OF THE SENEGAL RIVER

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The thesis examines the political influences that have shaped what is ostensibly a functional programme for the international development of the Senegal River by the three participating states of Mali, Mauritania, and Senegal. Construction of the two major first phase projects began in late 1981 - a \$186 million salt barrier dam in the delta and a \$680 million hydro-electric storage dam upstream in Mali. The thesis finds that the functional rationale for making use of the valuable international resource is undermined by the political concessions, compromises, and accommodations the basin states and the donors who finance the projects need to make to sustain international cooperation.

1. Without providing a detailed economic evaluation the thesis argues that the present dam building programme is inappropriate - at best there is an over-investment in physical works and at worst the dam projects are unnecessary at this time and will be an economic and social disaster.
2. It points to the faults in the planning process that produced these results - lack of proper analysis, backward planning, and a resource-oriented bias.
3. The political explanation for these outcomes is found in the historical context in the pre and post independence period, the incentive of concessionary finance, and the political predisposition of the many donors.
4. The river programme is uneconomic and a number of the funding agencies were dissatisfied with parts or even all of it. None the less, the thesis finds the basin states succeeded in obtaining the necessary concessionary finance by playing one donor off against another, with limited effect by controlling the type of technical information produced, and more successfully by taking political initiatives to circumvent the technical funding process and exploiting the political sympathies of the donor country political leaders.
5. On another tack, the thesis looks at the innovative international river basin institution, the OMVS, and finds its role shaped by its functional need to expand into areas of national authority to make a success of the river projects, the support given to it by the donors, and the resistance by the basin governments to it taking on any independent role or supranational authority. Its innovations remain tentative and its long-term future uncertain.
6. The study concludes with suggestions on how institutions and funding might be better organized to reflect the real needs of the basin states.

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PREFACE

International river problems are a class of international relations issues that are of growing concern as pressure for development world-wide lead to incompatible demands on shared fresh waters. Yet most academic analysis of international river problems (conducted mostly by economists, international lawyers, engineers and geographers) takes little notice of the political dimension of the problems. Since the problems generally are not legal or even technical but economic and political, much of the analysis has been misdirected and fails to provide a realistic understanding of the problems inhibiting effective cooperative action. In spite of the need for political analysis to help establish an institutional setting that can facilitate effective and productive cooperation, international rivers are a largely uncharted issue area in political studies.

In an effort to improve our political understanding the Westwater Research Centre at the University of British Columbia has since 1973 been conducting a small research programme into the political and institutional problems associated with international river issues. As a researcher with Westwater I investigated the politics of cooperation for selected cases in North America and Europe. This study is intended to help extend understanding of these types of issues to include less developed countries for the river basin issues that most interest them - cooperative river basin development.

I gratefully acknowledge Westwater for sponsoring my research; the Rockefeller Foundation, the Ford Foundation, and Resources For The Future Inc. for funding for the Westwater sponsored study; and the Social Sciences and Humanities Research Council of Canada for the financial support they have given me in the form of a doctoral fellowship.

In the course of conducting research one is indebted to many people who provide encouragement, support, and share their time and ideas. I am

especially indebted to Irving K. Fox for introducing me to the study of international river issues and for his continuing and unfailing intellectual and practical support. I am grateful to the staff at Westwater for their efforts to sustain my research. In Oxford I would like to thank my supervisor Wilfred Knapp for his advice and criticisms of my work. My thanks go to all those people in France, Canada, the United States and West Africa who talked to me about the Senegal and to those people who opened their files and made available information not normally available for academic scrutiny. While acknowledging my intellectual debt in writing this thesis to many people, it goes without saying that I take full responsibility for the opinions expressed here.

Finally I would like to thank Mrs. M. Aldworth for typing the thesis. And in its preparation I wish to give my thanks to Lesley LeMarquand for her invaluable editorial and bibliographic assistance - not to mention the financial and professional sacrifices she made to support my work.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ADFAED	-	Abu Dhabi Fund for Arab Economic Development
BAD	-	Banque Africaine de Développement (ADB) African Development Bank
BADEA	-	Banque Arabe pour le Développement Economique de l'Afrique (ABEDA) Arab Bank for Economic Development in Africa
CCCE	-	Caisse Centrale de Coopération Economique (France)
CEAO	-	Communauté Economique de l'Afrique de l'Ouest
CIDA	-	Canadian International Development Agency
CIERDA	-	Comité Inter Etats de la Recherche et du Développement Agricole
CILSS	-	Comité Permanent Inter Etats de Lutte contre la Sécheresse dans le Sahel
cms	-	cubic metres per second
CSS	-	Compagnie Sucrière Sénégalaise
ECOWAS	-	Economic Community of West African States
EEC	-	European Economic Community
FAC	-	Fonds d'Aide et de Coopération (France)
FAD	-	Fonds Africaine de Développement (ADF) African Development Fund
FAO	-	Food and Agriculture Organization
FED	-	Fonds Européen de Développement (EDF) European Development Fund
IBRD	-	International Bank for Reconstruction and Development (World Bank)
IDA	-	International Development Association
IGN	-	Institut Géographique National (provides the reference for topographical elevations)
Is.DB	-	Islamic Development Bank
KFAED	-	Kuwait Fund for Arab Economic Development
KFW	-	Kreditanstalt für Wiederaufbau
MAS	-	Mission d'Aménagement du Sénégal
MEFS	-	Mission d'Etudes du Fleuve Sénégal
MISOES	-	Mission d'Aménagement du Sénégal

OAD	-	Organisation Autonome du Delta (Senegal)
OAU	-	Organization of African Unity
OAV	-	Organisation Autonome de la Vallée (Senegal)
OECD	-	Organization for Economic Cooperation and Development
OERS	-	Organisation des Etates Riverains du Sénégal
OMVG	-	Organisation pour la Mise en Valeur du Fleuve Gambie
OMVS	-	Organisation pour la Mise en Valeur du Fleuve Sénégal
OPEC	-	Organization of Petroleum Exporting Countries
OPI	-	Opération Périmètres Irrigués (Mali-Kayes)
ORSTOM	-	Office de Recherche Scientifique et Technique Outre-Mer
OVSTM	-	Opération Vallée du Sénégal-Térékollé-Magui (Mali)
SAED	-	Société d'Aménagement et d'Exploitation des Terres du Delta
SONADER	-	Société Nationale pour le Développement Rural (Mauritania)
TVA	-	Tennessee Valley Authority
UHEA	-	l'Union Hydroélectrique Africaine
UNDP	-	United Nations Development Programme
UNSO	-	United Nations Soudano-Sahelian Office
USAID	-	United States Agency for International Development
WMO	-	World Meteorological Organization
WHO	-	World Health Organization

Chapter One

INTRODUCTION

Mexico, Hungary, the Sudan, Bolivia, Sweden, Bangladesh, Canada, in fact most countries, are spectators to the power politics of the major powers. They have little impact on the international system of which they are a part. They only become actors of importance in times of domestic and regional instability when they threaten established alignments and strategic sources of supply. Some states, like South Vietnam until 1975, or regions, like the Middle East, are in a chronic state of instability. As a result they draw the attention of the great powers and are the centre of continuing international scrutiny and interference. Political leaders and foreign offices in all countries apply themselves to issues raised by the alignment of power in the international system and to political turmoil in various parts of the world. They adopt policies to strengthen existing alignments or work for a new international order in keeping with their ideological predilections and political objectives. Nevertheless, most states have little influence and their means to achieve objectives in the international system are limited. They must stand aside - though often reluctantly and indignantly - while their turbulent and unsettled neighbours and the major powers play out their strategies on the global stage.

This is international relations from the perspective of the system. These kind of relations are vital and important for they take in many of the major international issues of the day - the arms race, nuclear proliferation, the Middle East, foreign power involvement in Africa, OPEC etc. Furthermore, the onlookers can be profoundly affected by the outcomes of such international dramas whether it be war or higher oil prices. Yet less powerful countries not directly participating in a specific issue have little influence on the course of events.

While most countries may be only spectators of the international scene, they all have foreign policy objectives and have regular contact with other governments on a wide range of issues which, though of little consequence to the international system, are vital to securing and promoting their own countries' national welfare. Trade, tariffs, economic cooperation, foreign aid as a donor or recipient, immigration, environmental protection and resource sharing are areas of foreign policy in which a country can have a good deal of control and do much to improve the welfare of its citizens. Even major powers, like the United States, direct most of their diplomatic energies to activities that promote or protect the interests of different sectors within the country or the public at large - activities that are not immediately concerned with global political and economic strategies.

Diplomatic and technical efforts to use and develop shared fresh water resources is one such area of international activity. Water for drinking, growing crops and washing is, of course, one of man's most elemental needs and in modern societies its management is a prerequisite to agricultural and industrial prosperity and to ecological stability. Of the vast quantities of fresh water available in the world 'hydrological cycle' only one per cent is available for human use, in rivers, lakes, swamps and in the ground. The rest remains in ice-caps and glaciers. One per cent may be sufficient for human needs but as Gilbert White points out '...frustratingly it tends to be available in the wrong place at the wrong time, or with the wrong quality.'¹ Another problem is the fact that much of this water flows through and between different political jurisdictions. More than 200 rivers, such as the Rhine, Nile and Indus, are shared between two or more countries. If those rivers' international tributaries, such as the Moselle, Blue Nile, and Sutlej, are added, drainage basins shared between two or more countries touch almost all continental countries. As water is an important resource and as so many countries share part of an international

basin the diplomatic activity directed towards these rivers represents a significant, though not well known issue area in international politics.

Normally the exchange of diplomatic notes, the meetings of technical working groups, and occasional press reports in national papers mark the undramatic progress of international river issues. Still, in the course of some issues, crises do arise that generate greater excitement. For example, Chile, in April 1962, diverted the headwaters of the Rio Luca away from the La Plata Basin and downstream Bolivia to an irrigation project in the Azapa Valley. Bolivia protested and broke off diplomatic relations. In anti-Chilean riots in La Paz several people were killed.² The Palestine Liberation Organization was formed in 1964 as a direct response to Israel's projects to divert Jordan River water from north of the Sea of Galilee to the Negev Desert. With Egypt unprepared to lead an Arab military response against Israel, President Nasser, to placate militant demands and growing Palestinian frustration, instead sponsored the formation of the P.L.O. to unite Palestinian resistance to Israel.³ Argentina in Spring 1977 escalated its campaign against the Brazilian plans for the Itaipu Dam on the Parna River, the largest hydro-electric dam in the world. The dam jeopardized planned Argentinian projects downstream. Argentina revoked a 120 year old navigation treaty with Brazil and banned Brazilian lorries from the Las Cuevas-Caracoles tunnel in Argentina, the shortest route from Brazil to Chile. In return, Brazil threatened closure of its border to 80 per cent of Argentinian commercial traffic.⁴

Disputes over water by themselves are seldom sufficient to generate a dramatic crisis. More often tension between the countries builds up from a number of issues to the point where the river dispute triggers an outburst. Although most basin states show more equanimity in their relations, the significance of river basin issues need not be underestimated. Many countries depend on their rivers for water supply or look to them as a resource essential to maintaining or improving their

national welfare. River issues are important in those countries' regional international relations. The Netherlands depends on the Rhine for 65 per cent of its drinking, agricultural and industrial water supply. Not surprisingly the Dutch government is in the forefront of diplomatic initiatives to promote basin-wide and European water quality standards. Hungary receives 96 per cent of its surface water from its neighbours. The government works hard to promote and make workable international flood control schemes with its socialist neighbours. Egypt bases economic development on control of the Nile, but control of the Nile is dependent on accord with Sudan. Egypt did reach agreement and now shares with the Sudan complex legal, economic and technical arrangements for reservoir creation, apportionment, and flow augmentation. In dozens of other river basins governments must take international action when they seek to maintain the quality of the water or develop the economic potential of their part of an international basin.

Clearly proper use of shared waters is essential to develop and to secure economic and environmental well-being. Rapidly escalating oil prices add a new note of urgency for many rivers have substantial hydro-electric power potential. Despite the recognized need for basin states to work together they often have difficulty agreeing. As the UN Panel of Experts on water notes: 'Even in the best circumstances joint use of international waters can give rise to ill feeling and political tension.'⁵ As so many countries share rivers and these rivers will be more intensively exploited the potential for tension and dispute is great. This makes the study of international rivers as an area of international political and economic relations of interest in itself and as a basis for discovering the means to promote cooperation.

Interest in international river problems is a part of the more general interest in international cooperation and organization. Under what circumstances do states create new cooperative arrangements and international

institutions? What types of arrangements are established and what are the conditions for their success? What impact do they have on other areas of relations among the states? River issues offer a fruitful area of inquiry because the possible scope of informal and formal arrangements for cooperation in international river basins is great. The states may establish simple arrangements for passing on basic hydrologic data or information on projects within the basin that may affect the river. More formal commissions may be created to settle disputes or apportion waters. River organizations may take on planning and management responsibilities, possibly with supranational authority, to develop the economic potential of a basin. Such organizations can even serve as the institutional nucleus for eventual economic and political integration of the basin states.

This study is devoted to the problem of international river basin development among Third World countries. It examines the Senegal River development scheme to illuminate the types of problems that are being faced elsewhere in Africa and the Third World in the effort to realize the economic potential of shared fresh waters.

In general one is attracted to international river issues by either disputes threatening regional relations or an interest in seeing that the best use is made of a valuable resource. River development issues thus have two dimensions - welfare and international harmony. From these dimensions this study has two normative concerns. First it is concerned that basin states make the best use of the river to better the well being of the peoples within the basin and the basin states. Second, it seeks to promote regional stability and peaceful international relations. The welfare objectives cannot be achieved without some form of cooperation among the states. This instrumental need for cooperation contributes to inter-state harmony. The concern of the study is to promote effective cooperative arrangements that will work to remove irritants and potential sources of dispute among the basin states.

The Senegal Case

In colonial times, administrators, engineers and dreamers gave some thought to grandiose plans for exploiting Africa's waters. Aside from the Nile where developments began early (as early, in fact, as recorded history) and some rivers in southern Africa, the impetus for exploiting the rivers' economic potential has come since independence. With independence came jurisdictional complexity. Prior to 1960 the political map of Africa was less complicated. Rivers fell within the suzerainty of a single colonial power or at the most two. For example, though Britain exercised different degrees of authority over the Nile basin (aside from Ethiopia and the Belgian territories) the Egyptian Irrigation Service, largely composed of British engineers, was considered to have an 'informal protectorate' over the whole basin.⁶ With independence, African rivers lost their relative administrative simplicity and in some cases, like the Niger and the Nile, were divided among as many as nine different countries. Africa now has 57 international rivers which cover 60 per cent of the continent.⁷

As yet many of the environmental quality problems that plague rivers in Europe and North America have not been felt in Africa. Public health is a serious problem but the diseases are of the traditional kind - those from sewage-contaminated local water supplies and other water-borne diseases and parasites, such as those causing bilharzia, river blindness and sleeping sickness. Provision of clean water and the eradication, or at least control of these diseases, is a major challenge, as is the avoidance of water quality problems that face the more developed countries. Unlike Europe and North America where most transfrontier environmental and resource issues concern curbing the excesses of modern industrial society, in less developed areas the issues concern the development of shared rivers. Africa possesses in its rivers a resource that can be tapped to irrigate the drought-prone Sahel and other regions, to provide navigation outlets to the sea for land-locked states, and to produce inexpensive hydro-electric power to fuel industrialization and mineral exploitation. Many of these potentials cannot be realized

unless basin states cooperate.

Apart from the Nile, only in one river basin, the Senegal, has international river basin development come close to fruition. Since 1962 the basin states in cooperation with the United States and donor countries have been planning projects to control the river for irrigation, hydro-electricity and navigation. In 1972 through the newly established Organization Pour la Mise en Valeur du Fleuve Sénégal (OMVS), three of the basin states, Mauritania, Senegal and Mali - agreed on a plan to regulate the river. (Guinea, the fourth basin state, after a dispute with Senegal in the early 1970s has not participated further in planning and negotiations.) After ten years of detailed design studies, transnational regional planning, institution-building and fund raising, in late 1981 construction started on the first two major projects - an upstream hydro-electric storage dam and an anti-salt barrier dam in the estuary.

The Senegal basin states overcame a great many problems and political differences to reach the present stage. Since 1962 three different organizations succeeded each other. The basin governments designed them at one extreme to focus simply on the technical aspects of river basin development (Comité Inter-Etats pour l'Aménagement du Bassin du Fleuve Sénégal), and at the other extreme to serve as an instrument to promote total basin-state integration (Organisation des Etats Riverains du Sénégal, OERS). The present organization, the OMVS, lies between the two extremes. It is less politically ambitious than the OERS, but radical enough to be politically and institutionally innovative.

Political relations among the three participating states - Mali, Senegal and Mauritania - have often been difficult and the attitudes among the leaders towards each other suspicious. In this atmosphere the level of cooperation they have achieved is remarkable. They have agreed to own in common the works of their billion dollar development scheme. It is all the more remarkable because the \$584 million hydro-electric storage dam at Manantali will be

located entirely in Mali. Moreover the states guaranteed jointly all loan obligations incurred in constructing and operating the works. Nowhere else has international ownership gone so far. The OMVS has planning power to shape the transnational development schemes with responsibilities overlapping into areas that are normally of domestic jurisdiction, like agriculture. It has had significant fund raising authority with the power to commit the states to terms the OMVS negotiates with lenders and donors. International river analysts argue that it is still utopian to expect the emergence of supranational drainage basin authorities.⁸ On paper, at least, the Senegal basin states are well on their way to giving a sophisticated practical expression to the international legal 'community of waters' theory. Up until now lawyers have advanced the theory more as wishful thinking about how states should put aside their sovereignty preoccupations for the greater good of the river basin community than as a body of established precedent. Will the OMVS confound the expectations of the analysts?

In this study we are interested in discovering how the present programme and institutional arrangements evolved. If as functionalist theorists suggests 'form follows function' we need look no further than the technical factors that go into river basin development. But experience of other international rivers suggest that technical outcomes are very much shaped by the political environment.⁹ For international river issues the main components are the river basin organization and the basin states. In developing regions the environment is complicated because project implementation is dependent on outside financing on concessional terms. Thus the political and technical interests of the donors will also contribute to the technical outcome.

The Senegal experience has in many ways been a remarkable political success, but there is a case to be made that the political success is built upon weak economic foundations. The programme gives priority to physical development of the river, that is dams, when priority should be given to

national agricultural irrigation programmes in the valley. Even accepting the project priority the projects are over ambitious - the dams are too big and only one instead of the two need be constructed. The basin states do not have the capacity to absorb them. If the economic foundations give way will not the political superstructure collapse?

Is the evolution of the present programme simply technical? If it is then the issue can be left to the engineers and other water resource planners. But if, as we suggest, the political environment has much to do with the way the programme evolved what have been the influences, what scope is there for altering the political and institutional arrangements to assure more beneficial outcomes, and what positive lessons can be salvaged from the existing successful arrangements?

The study is presented in eight chapters. Chapter Two introduces the subject and offers some propositions to help explain the dynamics in the evolution of the Senegal case. Chapter Three provides information on the physical and social setting. Chapter Four presents the functional-technical dimensions of the issues and gives some reasons for doubting the wisdom of the present programme. Chapters Five to Seven trace the evolution of the present institutional arrangements and development programmes. They look at the history of the Senegal in the context of the regional politics of the basin states (Chapter Five), the institutional arrangements in operation, particularly the role of the OMVS (Chapter Six), and the impact the donors have on the planning process and on inter-state agreement (Chapter Seven). Chapter Eight sums up the Senegal experience and presents the conclusions.

Chapter Two

COOPERATION FOR WHAT?

The OMVS appears to us to be a model of international cooperation, a significant example of what river basin states can realize with tenacity and patience to establish an integrated policy of economic and social development.¹

A. Senghor

The OMVS projects will rank with the 'white elephant' projects of all time.

International Agency Official

Adrian Senghor, the former Senegalese Minister of Supply, is undoubtedly right. Mali, Mauritania and Senegal have persisted in their common effort to launch a programme for development of the Senegal River. Since 1960 they have overcome a great many obstacles that would have stymied less determined governments. The states are entering into the implementation phase with the construction of two major dams. The Manantali Dam upstream in Mali will regulate a major part of the flow of the river. The Diama Dam near the mouth of the river will block salt water from the ocean moving upstream during the low flow period and enable year-round irrigation in the delta region. But to what end? The anonymous observer may or may not have overstated the case against the projects, but he reflects a view, shared here, that the Senegal projects are not well-founded and are likely to fall short of the regional development objectives the basin states hold for them. All the political success may be to no good economic end. International river basin development may not lead to an improvement in welfare for the basin's population and the basin states. If the projects fail and become an economic drain on the states can the political harmony be maintained?

It must be said straightaway that most people involved with the Senegal projects are confident of their success. This is not an economic study and

does not attempt a detailed economic evaluation. Although the faults of the present programme are not detailed analytically there is sufficient evidence, presented in Chapter 4, to doubt the programme will be successful by accepted economic criteria. The conclusion reached, without qualification, is that physical development is running far ahead of the capacity of the basin states' ability to make productive use of the projects. Implementation of the river projects is no longer a means to reach welfare and sectorial objectives of the basin states; it has become an end in itself.

If the intense diplomatic, political and technical effort that created the present programme has been misguided, how has this situation come about and can it tell us anything about similar complex international schemes elsewhere? Even if economic doubt is unwarranted and the projects are well matched to the states' objectives, the question of how the present programme evolved remains of interest.

The Senegal River projects are in their infancy. Only now are the first major dams being constructed. Although the full implications of the experience cannot yet be fully determined, the relatively long history leading to construction in relation to other African states following the same path gives some indications of the promises and dangers such cooperative ventures engender. More and more Third World states are undertaking or considering development of their international rivers, and some are looking to the Senegal as the model. For instance the Gambia River basin organization, the OMVG, is directly modelled on the Senegal's own organization, the OMVS. It may be premature to attempt a definitive history of the Senegal experience, but it is not premature to examine what has happened to date and ask is the OMVS an appropriate model for international river development among Third World countries? We want to learn the positive features that can be drawn from it, the pitfalls to avoid, and the lessons germane to other similar areas of international resource sharing and international cooperation.

The Issues: Technical or Political?

If the OMVS programme is misdirected what should the response be to avoid the same mistakes in the future? The answer depends on how the issue is characterized. Is the outcome a failure of the planning process or is it the result of the political process of accommodation? If it is the former attention need only be given to improvement of the analytical process in order that decisions be based on more reliable information. If it is the latter attention must be directed at the international environment and the motivations of the main actors. To make some sense of the international environment as it affects river issues we need the assistance of theory. It can provide the suppositions needed to formulate propositions explaining how the Senegal may have evolved as it has.

Functionalism characterizes international river basin development as one kind of technical issue of many that are coming to dominate international life. The theory focuses on the technological dimension of domestic and international society and sees in the non-political means to solve technical problems the way to improve welfare and create an international community of shared interests free from conflict. The theory deserves attention: first because it shares our normative concerns for improving welfare and promoting international stability; second because many of the experts in the water resources field, much of the literature, and the specialized international agencies concerned with water issues put aside the political dimension to the issues and treat them as if they were technical issues; and third because the theory foresees greater integration of the international community, a long-term goal explicitly held by the Senegal state leaders. Even though the theory focuses directly on the problem and reflects many of the assumptions held by those peoples and organizations involved in international river work, we must ask whether or not the theory offers suitable assumptions and concepts for improving our understanding of the

Senegal experience.

Functionalism and the other pluralist, federalist and neo-functional integration theories are part of a broad reformist orientation that sees the present international nation-state system as perhaps anachronistic; it is at any rate a part of the problem of international conflict. The state system is incapable of dealing effectively with regional and global welfare and security problems. Balance of power manoeuvring within the international system and traditional nation-state concerns regarding independence, territorial integrity and above all sovereignty are not constructive. They provide no basis for avoiding conflict nor solving emerging transnational problems such as oceanic and atmospheric pollution, exploitation of the deep seabed, world hunger, population growth or equitable distribution of wealth in the world economy. Narrow sovereignty concerns in fact aggravate the problems and hinder their solution. International river problems are of this type, though regional.

Proponents of this view take comfort from what they see as the decline in the significance of the nation-state as the primary unit in the international system. They see the world becoming enmeshed in a global communications network, its regions becoming increasingly interdependent in the supply and maintenance of the modern technological society, and its peoples forming attachments to transnational groups that weaken national loyalties. These trends undermine the sovereignty and the primacy of the nation-state, and create conditions leading to a new global political system.

As the nation-state is seen as the source of many of the present problems, the weakening of the state should be encouraged. Integration theorists part company on what the new system will be like, the exact dynamics to bring it about, and the measures needed to help along the change. Like many social and political theories the prescriptive and explanatory elements are mixed; the identified forces of change are at work and are immutable as far as we can understand them, but it nevertheless

does no harm to assist them. Federalists and pluralists look to the political process and political innovation for the change. The functionalists see a 'technological determinism' at work.²

Functionalism concerns itself with welfare problems, and in the effort to solve them the creation of a 'working peace system'. David Mitrany, the person most closely identified with the theory, finds in both national and international society a host of social, economic, and technical needs that transcend formal political jurisdictions. Mitrany thinks a dispassionate examination of these welfare needs - free of ideology, dogma, or philosophical systems - reveals that each need has its own best way of being treated, both in geographical scope and in appropriate administrative arrangements. Prior rules and constitutions interfere with the creation of the appropriate form and 'embarass the working of these arrangements'.³ The response to felt needs must be flexible for as needs and conditions change the arrangements created to handle them must also change. Form must follow function. In satisfying welfare needs the sovereignty concerns of the state can only be a hinderance. As functional linkages multiply sovereignty becomes largely irrelevant.

Mitrany regards river basin development as a particularly appropriate welfare problem for regional application of the functionalist approach. The Tennessee Valley Authority (T.V.A.) was a formative influence on his thinking. The logic of water resources planning requires that the river basin should be taken as the planning unit. In turn, this suggests a unified approach to planning, development and management. But at a minimum it would require a basin-wide agency to coordinate and integrate sectorial and public inputs into planning and operation of basin projects and programmes. The agency would operate irrespective of political jurisdictions. In an international setting it might even have supranational powers. In the depths of the depression President Roosevelt created the innovative T.V.A. for the Tennessee River and its seven basin states. The states for

years previously frustrated attempts to develop the river. Mitrany felt the constitutional approach to developing the river had failed and that the T.V.A.s' success in the face of numerous legal challenges could be accounted for by the fact that it was an administrative innovation, not a political one.⁴ Even though the T.V.A. was imposed on the states by the federal government Mitrany feels it is a good prototype for international arrangements.⁵ Indeed it is often thought of as such, though in practice no inter-state or international agency has gone as far as the T.V.A. Mitrany also comments favourably on less institutionally integrated international river development schemes such as the St. Lawrence Seaway and dam projects along the Rio Grande.

Mitrany finds an array of functionalist organizations spreading throughout the world creating a new international community and the conditions for a 'working peace system'. The improvement in material conditions will go some way to removing causes of war. More important, however, is the process itself of solving the welfare problems. Participation in the process by the public who benefit and the people who work for the functional entities will change their attitudes and values.⁶ Moreover, the spreading network of organizations will increasingly enmesh governments in interdependent endeavours that bring benefits to their peoples, and make the cost of waging war, through the loss of the benefits, too high to contemplate.

The irenic aspects of functionalist theory present too rich a mix of assumptions and speculation to be of much use for the study of a particular case like the Senegal. The Senegal does not have the depth of history to illustrate functional advances towards regional stability. The basin states only recently initiated a joint programme and possible 'spillover effects' and 'attitudinal change' will not be apparent for some time. More immediately what can be said of functionalist problem solving is that a river can be a source of tension and conflict. Successful cooperative arrangements over the long term remove the river as an existing or potential irritant and thus contribute to regional stability. Perhaps in that way river basin cooperation

can contribute to greater overall peaceful relations and a 'working peace system'. Is that not sufficient in itself?

Of the welfare aspect, functionalism looks to solutions of problems as operational objectives on the route to creation of a new international community. Again, why can we not be satisfied simply with solving particular welfare problems?

Functionalists assume that welfare problems, and in particular international river development problems, are in essence technical ones best solved by technical remedies and non-political institutional arrangements. The objectives are evident and shared by all. There would appear to be much support in the literature of international rivers and the activities of many professional and international officials concerned with river issues. River problems are approached as if they require only application of the technical analysis of engineers, lawyers, economists and other specialists. In the thinking of international organizations, governments and the academic entourage that provides the intellectual backup, welfare problems are reduced to technique and appropriate strategies of detailing benefits from cooperative programmes. The evident benefits are seen as the incentive and dynamic force leading to creation of new international arrangements.

Economists devise optimal patterns of development, engineers trade off dam heights and generating capacity, ecologists detail the effects of dams on migratory fish, sociologists concern themselves with population resettlement, lawyers try to tie it all together in a treaty or international agreement. Institutionally the technical-functional approach leads to emphasis on the establishment and strengthening of basin-wide organizations.

Since international river issues are for the most part about technical matters these discussions on fact, technique and evaluation are absolutely essential. But the totality of the specialist contribution does not add up to the totality of the issues. What then is missing? Practitioners agree there is a political element. The catalyst to make international endeavours

a success is the 'political will' to cooperate. Without question the commitment of political leaders to put aside sovereignty preoccupations and support cooperative endeavours over the long term is essential. Technical analysts leave it at that and return to their desks to better elucidate their conception of development and the benefits available from cooperation.

Functionalists are too sanguine about the political neutrality of welfare objectives. No one is against improvements in welfare, but if the benefits from any new functional arrangements are to be of sufficient scale to be effective they will entail major distributive and redistributive effects among the groups affected.⁷ Moreover, they can alter the relative power relationships among the participating states by making one dependent on another and by benefitting one disproportionately to the others. Achieving a consensus on the welfare effects is by no means politically neutral.

Functionalists must be given credit for drawing attention to the welfare dimension of international politics and helping legitimize the study of such 'low politics'. But it offers little insight into how new functional arrangements are to evolve. 'Form follows function' says little of the dynamics of how transnational opportunities are to be realized in specific instances. Neo-functionalists, like Ernst Haas, readily take up the challenge of supplying explanations of the dynamic forces at work. They accept the political nature of many international welfare issues. They see in the process of collective decision-making among the various interest groups the dynamic mechanism leading to greater accretions of power to international organizations and eventual integration of participating states.

If political integration was a normative interest of this study or if integration was a dominant feature of the international scene it would be worthwhile to follow further the neo-functional path. But our normative interests are limited to welfare and stability. People may hold that integration is a valid goal in international society - and the Senegal River states do - but there is little evidence to suggest that integration as a process on its own is more than a curious aberration, of partial relevance to Europe and

of almost none elsewhere. Nevertheless neo-functionalists do focus on an important aspect of international interaction - the convergence of interests and its effects on international organizations. Some of the concepts and typologies they use to explain the expansiveness of different types of international organization are useful. Of particular interest is the recurrent pattern of outcomes to negotiation that Haas notes. They emerge from the structure of organizations, their subjects of interest and the mixture of computation, judgement and compromise that goes into decisions. They are:

1. 'minimum common denominator outcomes' typical of classic diplomatic negotiations;
2. 'splitting the difference', common in situations where gains and losses can easily be enumerated, such as for economic issues; and
3. 'upgrading the common interest', where the parties to negotiation overcome differences by expanding the initial mandate and tasks considered to encompass the different positions.⁸

Haas goes on to explain how the latter outcome is the most expansionist.

Interest groups are important in foreign policy - though in a case like the Senegal they are less specific in their interests than in North America and Europe and their influence on foreign policy less apparent. It can be a mistake to concentrate on interest groups at the expense of the state. Interest groups may influence foreign policy and thus the outcome of issues, but it is the state's government that places priority on what issue to press and it is the government which is responsible for agreeing to outcomes of international negotiation. Governments filter from their public what national interests to pursue internationally and what outside demands to cater for domestically. Governments are influenced by domestic and international pressures, but those pressures are in turn conditioned by the pressures on the state arising from its relations and standing with other states. Concentrating on interest groups rightly highlights one aspect of the political nature of international welfare issues but loses sight of another aspect - the sovereignty concerns of states that hinder the creation of effective

international institutions. Experience, even in the E.E.C., shows that transnational interest group collaboration has insufficient momentum to overwhelm traditional state concerns.

The state and its government remain central to international relations. Forces at work independent of them are of little consequence for most international welfare issues. State governments are instruments of change. Once new functional arrangements have been established and there is no longer any dispute over goals perhaps the benefits they bring will draw states closer together. But the issue is how to establish the functional arrangements in the first place; how do states come to 'upgrade the common interest'? The T.V.A. is an innovative and exceptional organization, not the least for inspiring praise but few emulators, certainly not among international basin states. The norm in international river cooperation is 'minimum common denominator' and 'splitting the difference' type outcomes. The states go to great lengths to retain as much sovereign control as possible. For instance, it is common for states sharing a river forming the boundary between them to split ownership of a dam across the river at the boundary line rather than agree to some form of common ownership.

The reluctance of states to respond fully to the functionalist challenge of international river issues may in part be explained by the state's need to preserve sovereign control, independence and territorial integrity. A state is defined by those attributes and erosion of them brings into question the survival of the state. Of course few states are in immediate danger of destruction. Nevertheless the concern for self-preservation manifests itself indirectly by the states working to preserve the attributes of a statehood. That is, governments seek to ensure freedom of control from outside authorities and the freedom to exert supreme jurisdiction over their subjects and territory. Now, as before, no state is isolated and impermeable to the influences of multinational corporations, the spread of ideas and foreign values through modern communication, and other instruments of transnational penetration.

In this sense a state's sovereignty, integrity and independence is forever being eroded. But practically, the transnational effect on relations among governments is negligible. Governments are responsible for dealing with important issues among states and they settle them through normal diplomatic means. In international relations governments themselves control the rate of erosion of sovereignty, independence and territorial integrity.

States are equal in law and similar in the governmental tasks or functions they perform. They make laws, execute, enforce and interpret them; they collect revenue, provide for internal and external security and take responsibility for the welfare of their citizens. Of course, the manner in which the functions are performed and a state's capability for performing them varies greatly.

Within the international sphere states have security and welfare opportunities that can only be realized through cooperation. But the equality of the states in law and the differences in capability and power constrain the opportunities for cooperation. Waltz notes the parallel of states to firms in an oligopoly.⁹ The small number analogy is apt for states within the same river basin as states are often concerned about their power relative to their neighbours. Firms are more concerned with relative strength than absolute advantage. They must compromise between maximizing their profits and minimizing the danger of their own demise. States, like firms, face prospects of cooperation for mutual gain by asking not 'will both of us gain' but 'who will gain more?' They consider how agreement will affect their relationship with prospective partners. Will they become relatively more weak through implementation of the agreement than their partners, even though in absolute terms they will gain?

The effect of these considerations works against agreements requiring specialization among states. States in the system are functionally anarchic in that they perform similar tasks. There is no task specialization as

there is within a centralized or federal state. Specialization creates structural dependence and hierarchy. The greater the specialization the more a state becomes dependent on its partners and the less room it has to manoeuvre to protect its interests.¹⁰ Integrated river basin development can require just that element of specialization. A storage and regulation dam upstream may allow great regional growth to a downstream state, but at the cost of long-term dependence on its upstream neighbour, no matter how relations in the future may change.

Senegal and Mauritania have entered into just such specialized arrangements with Mali. The fate of the downstream state's major regional development programme is dependent on the three basin states maintaining good relations. The economic rationale may seem obvious, but is that incentive enough to overcome the long-term dependence the storage dam in Mali creates? The answer to the question is of central interest to this study.

Propositions

Returning to the premise of this chapter - that the Senegal experience has been a political success to date but will be an economic failure - we suggest a number of speculative propositions that might explain how this situation arose. The propositions anticipate discussions in the following chapters and crystallize some of the themes encountered. The propositions could be thought of as test hypotheses, but their nature defies rigorous testing. On a practical level, access to appropriate documentation is a major problem. Many of the issues raised require information about differences in policy among the governments and within the institutions. As will be discussed, aside from many governments' and official organizations' reluctance to reveal more than they have to, in the Senegal case they seek to maintain a united front before the financiers of the projects and are reluctant to provide information that reveals internal differences.

On a methodological level, the propositions do not lend themselves to rigorous tests. The propositions are synthesized from applicable theory

and the actual experience in the Senegal. They are presented in a general form. The relative importance of the variables selected and tendencies suggested are too problematic to allow application of analytical techniques. Unlike economic propositions they are not sufficiently formal to allow manipulation of variables in which some variables are held constant to test the relative significance of others. Although the propositions are presented in the format if A then probably B the contextual nature of the propositions and the single case they are rooted in do not allow statistical determination of probabilities. The methodology employed simply required collection and interpretation of information. The information came from interviews, official documents and the literature. The propositions are tested and found satisfactory only to the extent they can be interpreted from the information available and they provide a better explanation of events than other explanations for the purposes intended.

Institutional Dynamics

Positive international law for the use and development of international rivers has been evolving away from rigid sovereignty formulations to acceptance of more cooperative ideas of equitable apportionment of resources and in recent years equitable utilization. However, few commentators express optimism that states will go beyond equitable utilization - separate but equitable - to an ideal of unified and optimal management of river basins. Parnell and Utton suggest that the Senegal may be an exception and the experience there offers hope that a precedent will be set whereby basin states put aside sovereignty concerns and act as a single community to evolve truly transnational management.¹¹ What could be the dynamic that permits such functional integration?

The dynamic for cooperation arises from the interaction among the different institutional actors. For the Senegal, and similar cases in the Third World, there are three different types - the states themselves, the river organization, and the financiers.

Integrated river basin development is a planning approach to make the best use of a valuable resource. Planning should reveal greater economic benefits for the participating states through cooperation than by going alone. That should be the incentive stimulating cooperation. But such an approach entails resolution of a number of difficult issues over enumeration and allocation of benefits and costs, and other issues such as ownership of the works. As states do not want to be caught in arrangements that restrict them in the future or give their partners a relative advantage in the use of the river the results of negotiations, when successful, tend to be conservative, requiring the least loss of sovereignty.

The calculations of the states alter when finance for the joint endeavour may be available on concessionary terms. The prospect of obtaining subsidized loans and grants provides incentives on top of the benefits from joint development. Aid secured for international projects might not have otherwise been available to the states individually. The prospect of aid changes the bargaining relationship among the states. Before, each state would attempt to obtain the best possible terms for itself with the least concession of sovereignty. Now, with the financiers and donors in view, the states must present a common front to convince them of the worthiness of the programme.

1. Proposition: To maintain a united front and not otherwise undermine the credibility of the basin states' commitment to development in face of the donors, the basin states can be expected to commit themselves to radical institutional solutions by ignoring problems of detail in a way that does not occur when development does not depend on outside aid.

One means to avoid divisiveness is to put off contentious issues.

In North America and Europe the contracting states to a river development scheme generally settle all the major issues - apportionment of benefits and costs, ownership of the works, etc. - beforehand in a comprehensive treaty. In the Senegal case the states settle such issues piecemeal. A comprehensive treaty raises too many difficult issues at one time and there usually is insufficient information for the political leaders to know fully

the consequences of a particular decision. They put the issues off, not until they have sufficient information, but until they have to make a decision in response to an ultimatum from the donors who need a decision to proceed with their assistance.

2. Proposition: With the need for basin states to maintain a united front the states tend to put contentious issues aside, with the result that they emerge again only at a crisis point, when the governments are forced to decide or lose gains achieved to that point.

3. Proposition: The incremental crisis decisions for the major issues mean that the eventual institutional arrangement is much more evolutionary than if all the issues were decided in advance of a treaty. Incremental decisions lead to incremental losses of sovereignty which in the end may result in a greater total loss than the treaty approach and thus the final arrangements may be more innovative.

Turning from the effects of concessionary finance on inter-state cooperation, we look to the interaction of the basin states and the international river organization. The functionalist premise 'form follows function' may be refined to the idea that organizations will try to control the elements in their environment needed to ensure success of their mandates. The international river environment can be divided in two: first, development, implementation and operation of the physical projects to regulate the flow of the river: and second, regional development to make use of the regulated flow and the services, such as hydro-electric power, that river regulation projects can supply. The first requires international cooperation; the river is a shared resource and in the cases of interest it can not be beneficially developed without international cooperation, usually with the aid of a river commission. The second encompasses activities such as irrigation and industrial growth - areas normally of domestic concern and requiring no international cooperation.

International river organizations with a mandate to pursue physical development of a river normally have no reason to expand into areas of domestic concern. But what if, as in the Senegal case, there is a danger that the recipient regions will not be able to make full use of regulated water supply or the services from the projects. The projects would become

white elephants. The international river organization will want to promote development in areas of domestic responsibility to create a market for its services. A government's need to assert sovereign control over an issue area that can have far-reaching welfare and political consequences on its people checks expansion. That is the reason why in most basins international river organizations have so little independence. But in developing regions with the support of aid agencies a basin organization can be quite strong. Aid agencies tend to regard it as the vehicle for carrying out the development programme and provide it with the technical expertise needed. It may thus be more well-supported, vigorous and competent than the counterpart domestic organizations. The governments will still want to retain as much control as possible, but we can speculate that there will be a strong tension between the states' efforts to limit the organization's role and the organization's efforts to take more control in areas of national responsibility.

4. Proposition: For river basin development where the river basin commission is supported by outside donors and the complementary domestic regional development programme is weak, the river basin organization will work towards securing greater influence over the design and implementation of domestic regional development in the basin.

In other words there may be a case for expecting some functional expansion into areas of domestic responsibility.

Symbols, Certainties and Subsidies

The OMVS and other institutional arrangements for the Senegal may be innovative, but to restate the question at the beginning, to what effect? The priority in favour of dam projects and the over-investment in them demands an explanation. The basin states have their own explanations which will be discussed in later chapters. Here we suggest some additional reasons. A bias towards physical development is well noted in economic and regional development programmes. We can suggest three propositions that might account for such a bias.

5. Proposition: In politics, political leaders need to be able to demonstrate that they are working for the benefit of their constituency. When faced with alternative means to achieve the same objective they will select the alternative that symbolizes most clearly their efforts. That is, they will favour physical projects over non-physical ones.

6. Proposition: In planning, non-structural alternatives are based on many social features such as changes in attitudes, training, etc. that call for interpretation, judgement, and flexibility - qualities at a premium in any organization, let alone expertise-poor ones in developing regions. The greater the technological component of a programme the more specific the objectives, the more precise the requirements, and the more detailed the operating procedures, the less chance of the programme going astray. Planners will thus tend to favour solutions to regional development that have a high technological or engineering component, over which they can be assured of control.

7. Proposition: In the field of foreign aid, many donors tie bilateral aid to goods and services their own economies can provide. They tend to be capital intensive and technological. Bilateral donors, with tied aid requirements will tend to favour alternatives that are capital intensive.

As normal inter-state bargaining relationships may be altered and sovereignty concerns eroded by the common need to obtain concessionary financing, such financing may also alter the benefit-cost calculations of the states. The prospect of obtaining grants and subsidized loans provides incentives on top of the benefits from joint development. Two of the Senegal basin states are in the category of 'least developed countries'. Any development financing for these 'poorest of the poor' must be grants or soft highly concessionary loans. The International Development Association (IDA), which is run by the World Bank, provides the model for such financing. It offers long-term loans of 50 years, including an initial 10 year period of grace, at .75 per cent interest. The grant element, depending on prevailing interest and discount rates, is over 80 per cent. Outright grants and concessionary financing, with its large grant element, change the recipients' perceptions of investment in their development projects.

8. Proposition: When financing is offered to states as grants or on highly concessionary terms the recipients will tend to regard the investment funds for their development projects as benefits, not as costs to be minimized. Thus the basin states will have little incentive to economize in the design of common development projects and programmes.

Upgrading the Common Interest

As we are interested in the Senegal as an international river is there anything in the nature of the international setting that might be added to explain the priorities and over-investment in dam projects?

We noted that states do not easily enter into relationships with other states that require specialization and increase dependence. This reluctance would seem to work against river basin development. But what if the development programme could be designed to minimize total dependence of one state on another. Mauritania and more importantly Senegal may have demanded the seemingly unnecessary Diama Dam to reduce dependence of their irrigation and other regional development plans on the upstream storage dam located entirely within Mali. Should relations deteriorate, as they have in the past, the two downstream states would be vulnerable to Malian political decisions and therefore would want to be able to salvage something from the programme. Of course such a means to resolve the issue makes nonsense of the economic rationale for integrated development.

9. Proposition: The economic rationality of an international integrated development programme may be undermined by the vulnerable states' desire to spread the investment and reduce their dependency within the programme to a minimum.

Such expansive outcomes are termed by Haas 'upgrading the common interest'. In his neo-functional approach he sees such forms of decision making as providing the dynamic for political integration. But in this case, the outcome, seemingly leading to greater integration, permits possible disintegration of the joint endeavours with the minimum of damage.

Foreign Aid and Information

Over-investment is possible only because the donors finance it.

Donors respond to requests for aid at two levels - political and technical. Some donors are more influenced by political motives; while others, particularly the lending institutions are persuaded by technical,

generally economic efficiency, criteria. Analysts need a good imagination to find over-investment in the Senegal programme efficient by any recognized criteria. This raises the issue of the motivations of the donors and the mechanics of aid granting.

We noted donor inclination to subsidize export sectors of their economies. Typically about 80 per cent of tied aid is spent in the donor country. Even Germany which offers untied aid finds that about 80 per cent of its assistance funds are spent on German goods and services. Donors may also have foreign policy or other reasons for investing in certain types of projects or in certain regions. France has continued its colonial connection in the lower Senegal valley by concentrating irrigation investment there and in the delta. Its long involvement in the region has led it to support the Diama project. In effect, France has become the dam's sponsor and patron. Germany plays a similar role for the Manantali dam. It first became interested in upstream regulation as part of its industrial interest in exploiting iron ore reserves in the upper basin. Other donor concerns may be less direct - for example, Canadian desire to support projects in francophone Africa to reflect the bilingual nature of Canada, or the conservative Arab oil-producing states interests in extending their influence beyond the Arab world to nearby Muslim black African states to win wider international support for their policies against Israel or counter the influence of radical Arab states, like Libya.

10. Proposition: Political, domestic economic or other reasons dilute donor concern to see the most productive use made of their aid funds.

The Senegal projects, along with many other development projects, provide further specific incentives for donors like France and Germany. Much of the financing for the projects comes from Arab sources who have no competing export sectors to subsidize. President Giscard d'Estaing thought of the relationship as a 'trilogue' - Arab funds financing European expertise for African development. Some observers of the Senegal projects

view the relationship more cynically as 'Arab money for European contractors'.

11. Proposition: Large sums of untied Arab assistance for development projects provide an incentive for Western donors to participate in the financing in order to capture a share of those funds for their export sectors. These donors may thus be more concerned with ensuring high domestic returns for their contributions than in ensuring that the most economical use is made of the investment funds for the development projects.

The multi-donor nature of funding for costly programmes in combination with multi-project development create conditions that may encourage over-investment. Funding is complicated by the large number of donors participating in the financing of costly programmes, each with their procedures and requirements, as well as different and sometimes competing interests. In such conditions agreement on programme design and financing may be difficult to achieve. On the other hand, as with France and Germany, donors may wish to support certain projects or components that meet their needs. The recipients may then be able to build up piecemeal donor commitments to specific parts of the programme into a package that satisfies their own interests and has donor support, but is of questionable economic merit. Economic rationality is lost in the process of cobbling together a financing plan that satisfies donors and recipients.

12. Proposition: Multi-donor financing may be a long frustrating process, but the political and other interests of the many donors may provide the basis for building up donor commitments to otherwise unacceptable economic programmes.

In addition to the motivations of the donors, another issue raised by concessionary financing of development projects is the actual mechanics of granting aid. Aid for development is usually justified on economic grounds and administered by institutions guided in varying degrees by economic criteria. How then is economic rationality reconciled with political motivation.

The political leadership in a few states like France take direct interest in the use of their foreign aid and respond to requests in political terms. But normally the participation of national leaders in aid programmes is distant and sporadic. The less the political involvement

at a high level the more the operating agency must rely on procedure and technique in responding to requests for assistance. They will set priorities at the political level on where to supply aid and the types of programmes to support. Some, like the Canadian aid agency CIDA, make only a cursory examination of the economic rationality of the requests. Others, including the national and international lending institutions, look much more closely at the economics.

Application of evaluative techniques requires the necessary information to make the evaluations. Information is the currency of exchanges between the potential recipient and the potential donors. In planning and decision theory the call is often for generation of better and more appropriate information to reduce the uncertainties of the different alternatives for the decision makers and to give them more confidence in their decisions. In a complicated exercise such as integrated river basin development poor nations, as in the Senegal basin, do not have the financial or technical capability to produce the information needed for the political leaders or the donors. A number of international agencies and donors are generous in giving the support to basin organizations so that they can carry out the necessary planning and put together sound proposals.

But contrary to accepted wisdom in a case like the Senegal greater information can increase uncertainty for the political leaders. It exposes their political decisions made early on to the scrutiny of officials from outside the basin. They will note where the proposal is economically deficient and either reject it or suggest changes that will meet with their criteria. As the proposal is the outcome of political bargaining and negotiation among the basin state leaders it represents a political consensus. Tampering with the proposal could well destroy that consensus and the prospects for any international river basin development. In response to this possibility the basin state governments and river organization will: 1. appeal directly over the heads of the agency officials to the political leaders of the donor states for a political commitment

to their proposal, and 2. try to control the information produced and criteria used.

13. Proposition: Where an aid request is based on political compromise and not economic criteria the basin states' leaders will attempt to obtain a political commitment from donors to support it.

14. Proposition: Unrestricted generation of information in the planning and evaluation of development programmes increases the uncertainty for the basin state governments that the programmes will be accepted by the donors. They will thus attempt to control what information is produced and the criteria by which it is evaluated.

Summary

The Senegal basin states have responded to separate economic, political and social problems in the basin with plans for the integrated development of the river. The cooperative efforts of the three states have to date lead to the creation of innovative institutional arrangements on the one hand and the prospect of implementation of wasteful projects doomed to failure on the other. Looking to the reasons for these outcomes we note in particular that the political basis for cooperation requires over-investment by construction of two dams, and the consequences that has for the river organization and the states' dealing with the donors. The market for the projects is not developed; thus the operators of the dams, the river organization, have an incentive to move into domestic areas of responsibility to ensure some use for the projects. The expansive and innovative role of the river basin organization is abetted by donor support. Moreover, the normal sovereignty constraints imposed by states are lessened by their need to please the donors who finance the projects. Securing donor support for a politically rather than economically sound river basin scheme presents problems to the states. They must of necessity be suspicious of planning and evaluation that may well expose the excessive investment. At one level they will attempt to control the information gathering and evaluation functions; at another they will try to win a political commitment from the donors that is not dependent on the satisfaction of economic criteria.

Chapter Three

THE SENEGAL BASIN: ITS PEOPLES, PROBLEMS AND PROGRAMMES

In a poor region of the world the peoples of the Senegal River are poorer still. The region once was important in the rise and fall of West African empires and in the penetration of the interior of Africa by traders, slavers, explorers, conquerors and colonizers. But since the nineteenth century economic progress has passed the basin by and nature has been unkind. The region has become marginal to the political and economic concerns of the new independent states. It forms the southern boundary of Mauritania, a black populated region in a dominantly Moorish country. It forms the northern boundary of Senegal, a Toucouleur and Soninké mixed region in a dominantly Wolof country.* It lies in the western region of Mali, a long neglected area in a country centred on the larger Niger River. Once a vital trading route, the railway, later air routes and more recently roads bypass it. The people cultivate subsistence flood-recession and rain-fed crops, which because of the unreliability of the rainfall and the annual flood of the river cannot guarantee subsistence. The economy of the region is kept alive by the remittances to home from migrants working in other areas of West Africa and in France.

The region, so poor, is not without hope. The river has the potential to lift the economy from its backwardness and contribute to the fulfilment of national development goals of the three states. In a semi-arid region the curse is climatic and hydrologic unpredictability. Dams on the Senegal River can regulate the flow to avoid the waste of the annual flood and the long months of low or no flow. They can provide water for year round irrigation to produce rice and other crops for consumption

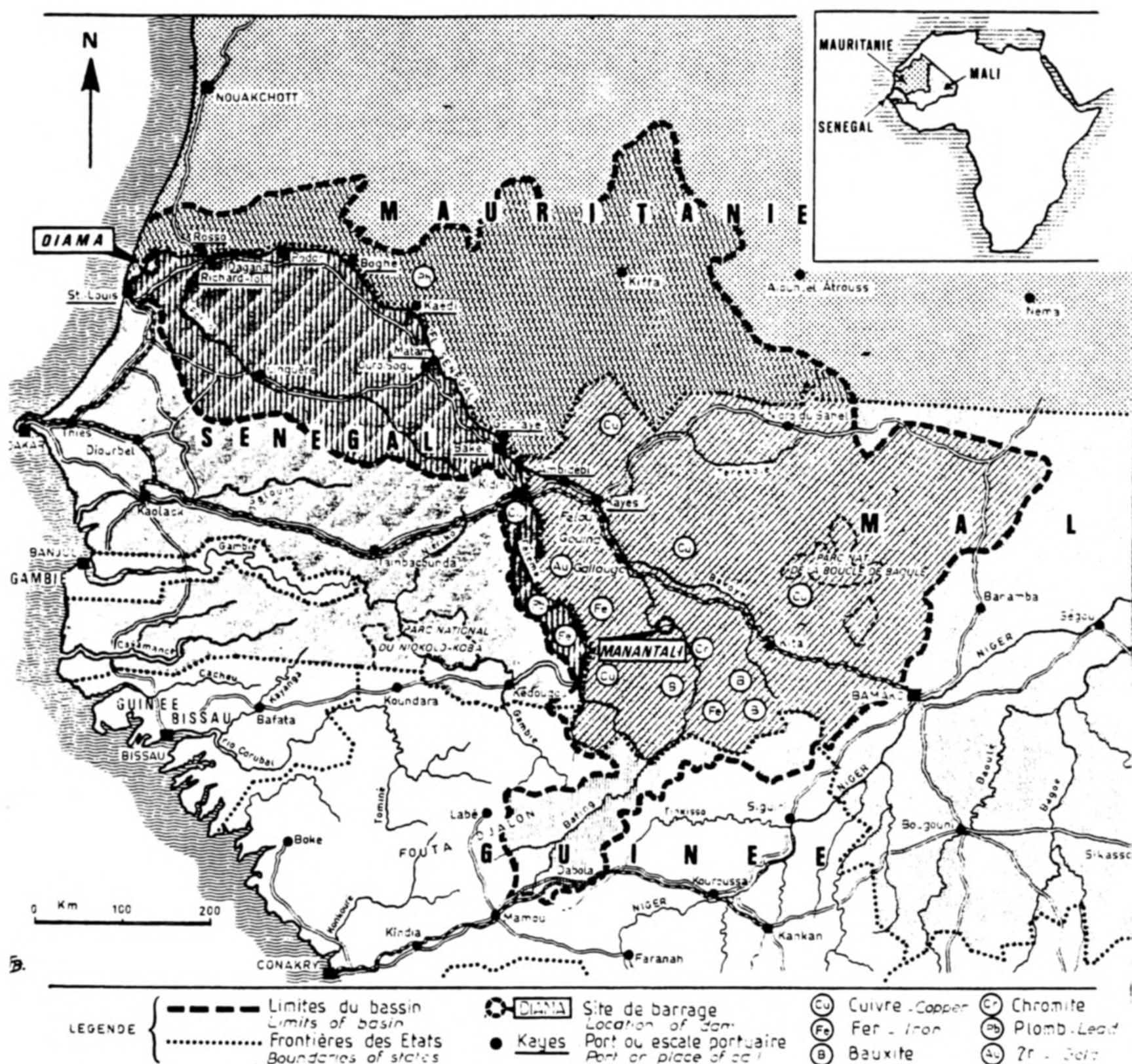
* For the names of ethnic groups French nomenclature is used, except for the Moors (Maure in French). French transliteration is not always consistent, e.g. Wolof and Oulof, nor nomenclature, e.g. Soninké and Sarrakolé.

and sale by the valley producers and, as well, to reduce the importation of rice to the countries; they can give depth to the river for year round navigation as far as 800 kilometres inland; and they can generate hydro-electric power to countries suffering greatly from their dependence on imported oil.

The Senegal basin states share many of the same constraints imposed by climate, poverty and traditional societies. And they expect development of the river to help remove those constraints, both for the benefit of the peoples within the basin and their own wider national economies. Although the states share a number of similarities there are important differences. Politics aside, they have different terrain, ethnic composition, mixes of agricultural production and expectations about what development can bring. Integrated river basin development entails more than physical integration of projects, it must accommodate these different expectations in a framework of development that sustains each side's commitment to the common programme.

This chapter sketches the setting and the plans for development of the Senegal. It should be noted that figures, which may be presented with precision in official documents belie a confusing array of hard fact, estimate, guess and perhaps fantasy. Any major undertaking of this nature will require educated approximations by the planners and consultants. For developing countries basic information on the physical, social and economic conditions is often non-existent or inadequate. Much effort has been devoted in the Senegal programme to filling in the information gaps. By some standards the Senegal is a highly studied area. The OMVS Documentation Centre at St. Louis has catalogued thousands of documents produced over the past 160 years that pertain to the river. Nevertheless basin-wide and national information is poor. Even basic estimates vary widely among official reports prepared at the same time. For example a simple matter such as the amount of land to be irrigated in the programme varies from 255,000 to 400,000 hectares in two major OMVS reports produced in 1980.¹ Figures must be accepted with some scepticism and treated as only indicative.

The Senegal River basin



The River and Basin

The Senegal Basin covers 289,000 square kilometres and is divided into three regions distinguished by climate, hydrology and geology - the upper basin, the middle valley and the delta. The source of the Senegal and most of its flow is in Guinea, though in area the major part of the upper basin lies in Mali. The upper basin is mountainous in the Fouta Djallon in Guinea and generally rugged and hilly. It is a transitional zone between the tropical and Sahelian zones. Rainfall ranges from more than 2,000 millimetres in the Fouta Djallon to less than 750 millimetres at the beginning of the middle valley near the Senegal-Mali border. The rugged terrain offers a number of sites suitable for storage dams, including

Manantali, the site of the first storage dam. The generally adequate rainfall during the long rainy season, or hivernage, allows extensive rain-fed agriculture throughout the upper basin. The steep valley affords few opportunities for irrigated agriculture. The upper basin contains only about six per cent of the land in the valley suitable for irrigation.

Senegal and Mauritania share the middle valley. It is a flat region marked by old levees and depressions left by the meandering river. The middle valley lies within the Sahel proper, with rainfall ranging from a low 300 millimetres in the drier lower valley to 750 millimetres upstream near the Malian border. The annual flood, which reaches its peak in September, dominates the area. Two types of traditional agriculture are practised - rain-fed on the diéri soils outside the area of flooding, and flood-recession on the richer oualo flood plain soils. The ratio of flood recession to rain-fed agriculture varies with the amount of rainfall. The middle valley and the delta have great potential for irrigated agriculture and the agricultural programme of the OMVS concentrates on these regions.

The delta lies entirely within Senegal. Rainfall is slightly higher than immediately upstream. The lack of refuge during the flood in this flat region has made the delta less populated than other areas of the basin. Construction of dikes in the 1960s permitted the area to be settled and farmed. Salt water intrusion up the river and saline soils make the delta less fertile than the lower and middle valley; none the less the region contains the largest area of land presently irrigated. The salt water barrier dam at Diama and a year round salt free water supply will permit a great expansion of land suitable for irrigation and will increase productivity. There are no dikes on the right bank in Mauritania and the area is sparsely populated.

The land area of the basin is divided 11 per cent to Guinea, 53 per cent to Mali, 26 per cent to Mauritania, and 10 per cent to Senegal. It covers 12 per cent of the total surface area of the four countries. Guinea, the only

state not participating in the international development programme, is the source of most of the river's flow.

The Senegal River is formed from the union of two of its three main tributaries - the Bafing and the Bakoye. The longer tributary, the 750 kilometre Bafing, meaning 'black river', has its headwaters at about 800 metres in the Fouta Djallon highlands of Guinea. The well-watered highlands, with rainfall averaging 2,000 millimetres a year, give the Bafing an average annual flow of 420 cms,² more than half the total average flow of the Senegal. The Fouta Djallon also is the headwaters and provides most of the flow for the 1,100 kilometre Gambia and 4,100 kilometre Niger rivers. From the so-called château d'eau of West Africa the Gambia descends to the west, the Niger to the northeast, as does the Bafing at the start of the 1,800 kilometre arc the Senegal describes on its way to the Atlantic at St. Louis, Senegal.

Flowing northeast then north through the upper basin the Bafing descends through a number of suitable hydro-electric sites, including Manantali. About 90 kilometres downstream from Manantali at Bafoulabé, Mali, a small administrative centre, the 560 kilometre long Bafing meets the Bakoye River or 'white river', which has an average flow of 165 cms. It originates in the Mandingue Plateau in Guinea, the divide between the Senegal and Niger basins. At Bafoulabé, 1,500 kilometres from the sea,* the river takes the name Senegal and starts its long sweep northwest then west.

Past the Felou rapids, the last suitable hydro-electric site, just upstream from Kayes, Mali, the gradient of the river eases as it moves onto the Senegambia plain. At Kayes, 950 kilometres from St. Louis, the river is barely 20 metres above sea level. When the flow of the river is high small ocean going ships can reach the town. 'Kayes, ocean port' is

* Distances along the river are marked from base zero at the Faidherbè Bridge at St. Louis on the Coast.

the slogan the government in land-locked Mali uses to promote navigation development of the river. Still flowing northwest the Senegal picks up a number of low and sporadically flowing tributaries on the right bank until it meets the Falémé River on the left bank, the last major tributary. Like the Bafing, the Falémé has its headwaters in the Fouta Djallon. The 650 kilometre long river, with an average flow of 185 cms, parallels the course of the Senegal and for some reaches forms the Senegal-Mali boundary. It meets the Senegal at the most westerly point of Mali, the point where the borders of Senegal, Mali and Mauritania meet. From this point to near St. Louis, 857 kilometres away, the Senegal River divides Senegal from Mauritania.

Bakel, Senegal, 810 kilometres upstream, and just downstream of the Falémé-Senegal junction, marks the beginning of the middle valley. Below Bakel a few minor tributaries join the Senegal but by this point the river has most of the water it will have. The flow of the river is measured at Bakel. The average flow is 748 cms. This compares to 1,620 cms for the Blue Nile and 1,180 for the Volta - African rivers of similar length. The highest recorded annual average flow was 1,241 cms in 1924; the lowest 264 cms in 1972 in the midst of the six-year long Sahel drought.³

Within the year the flow rises sharply during the flood and then drops to practically nothing. Rains in the highlands last from May to October and by September the flood peak reaches Bakel at an average rate of 3,315 cms. After the peak the flow rapidly declines until on average it reaches 9.30 cms⁴ - an annual fluctuation of 350 times. By comparison the Columbia River, which has a wide variation in flow for the temperate zone, differs between the flood peak and the low flow by 35 times. In extreme years the Senegal's flow varies dramatically. September 9, 1965 saw a peak of 7,180 cms; by the following May it had dropped to 2 cms.⁵

Downstream of Bakel the annual flood bursts open on to the wide alluvial plain of the middle valley. During the flood, near Maghama in

Mauritania, the river can expand across the flood plain for as much as 25 kilometres. The average width of the flood in the 500 kilometre reach of the middle valley is 15 kilometres. The river spreads out and fills in many depressions and old river channels, called marigots, leaving water for the dry season. During the flood many of the villages are cut off and can only be reached by boat.

The meandering river in the middle valley has left a complicated pattern of depressions and levees with a variety of soil types. The alluvial flood plain, or oualo lands, are divided into three types - the fondé light sandy soils (30 per cent or less clay) which form the banks of the river and old channels, the heavy clay hollaldé soils (60 per cent or more clay) in the depressions and the transitional faux hollaldé soils.

As the river flows west to the lower valley and the delta salt water begins to intrude, as far as 450 kilometres upstream the bed of the river actually lies below the average surface level of the Atlantic. When the flow falls below 300 cms, as it does for a good part of the year, the low elevation of the river bed allows the heavier salt water to wedge its way upstream beneath the fresh water. In 1973 - a record low flood year - sea water penetrated 50 kilometres upstream of Boghé or 251 kilometres from St. Louis.⁶ In normal years during the low flow salt water reaches Dagana 200 kilometres from the sea.

Below Dagana, Senegal, the river branches out into the delta. The boundary between Senegal and Mauritania follows the right bank of the river and thus the delta is entirely located within Senegal. Along the right bank in Mauritania lie a number of depressions filled by overflow of the river. The water and soils are largely saline. Twenty five kilometres downstream of St. Louis the river reaches the sea. On the Atlantic shore a long sand bar, the langue de Barbarie, blocks the mouth of the river and during periods of low water it restricts access to St. Louis and the river for ocean going ships.

The Traditional Economy

Agriculture and in particular traditional flood-recession and rain-fed dryland farming dominate the economic life of the Senegal Valley. Eighty-five per cent of the valley population engage in subsistence agriculture.⁷ Raising livestock and fishing are the other two major components of the traditional economy. Traditional practices have hardly altered but in recent years economic factors have not remained constant and profound changes have been forced on the people.

Agriculture

The annual cycle of the rains and flood sets the pattern of agriculture in the middle valley and in this subsistence economy the variations in the cycle set the level of annual prosperity. In a good year before the flood, when there is rain in June and July, the farmers plant their crops of mostly millet and beref on about 80,000 hectares of diéri land, sandy poor soils outside the flood plain. Around Bakel, where rainfall averages 700 millimetres, more than half of the total agricultural production is from diéri land.⁸ Once the floods have come and subsided the farmers move to the richer clay soils on the low-lying oualo land to sow their main crops. They grow maize and vegetables on the lighter fertile fine sand and silt soils along the banks (fondé soils) and sorghum and millet in the heavy, hard to work by hand, flat lands (hollaldé soils). In a good year they sow 80,000 to 100,000 hectares, concentrated in the drier regions with rainfall of less than 500 millimetres. The maximum amount of land that can be cultivated in this fashion is in the order of 125,000 hectares.⁹ In arid areas of the middle valley as much as 70 to 80 per cent of the total agricultural production comes from these flood recession crops.¹⁰

Uncertainty in output from the two crops is the most significant feature of the traditional sector. If the rains in the valley are poor the diéri land is not cultivated. If the flood is small little oualo land can be sown. In 1970-1971 103,000 hectares were cultivated; in 1972-1973

14,000 hectares.¹¹ If the flood is large but remains too long before subsiding the desiccating Haramatten winds, which begin to blow from the Sahara in March, cut short the growing season. At the best of times in this land-extensive form of subsistence agriculture yields are low and uncertain - an average of 400 kilogrammes per hectare for millet in the diéri, and 400 to 500 kilogrammes per hectare for sorghum in the oualo.¹² Despite the extreme variability and unpredictability of the rains and floods the alluvial soils are generally fertile. In good years the farmers may reap a surplus that can carry them over the next couple of lean years.

In the upper basin most agricultural production depends on the rains. In addition to the types of crops grown in the middle valley the Malian farmers grow groundnuts as a cash crop. Senegalese agriculture in the delta falls within the modern sector. After completion of an 85 kilometre dyke in 1964 the land was colonized for rice growing by the Senegalese parastatal irrigation organization La Société d'Aménagement et d'Exploitation des Terres du Delta (SAED).

The valley has been for a long period in a precarious balance between the production of cereals and the subsistence needs of the people. The Sahel drought tipped the balance and the traditional agricultural sector no longer produces sufficient cereal. Prior to the 1972 drought much of the peasant economy operated by barter. Fishermen on the river, artisans in the valley villages, farmers working out of the villages, herders on the fringes of the valley bartered fresh and dried fish, milk, butter, soured milk, artisan services and goods, herding services, millet, vegetables and sorghum. Millet and sorghum were the basic units of exchange.¹³

Money sent home by the migrant workers before the drought introduced a monetary element into the economy. The drought, however, virtually eliminated the barter system and now only the social relationships that complemented the trade still exist.¹⁴ Without sufficient millet and sorghum to go around - as well as a decline in fish and milk products - the people

had to buy their food from outside the valley.

The new dependence on imports altered the food eating habits in the valley. Over 50 per cent of food purchases are for foods not produced in the valley.¹⁵ In fact since 1972 the diet has rapidly changed from one based on millet and sorghum to one based on rice.¹⁶ The valley economy has come to depend on a money income, even though the economy on its own is incapable of generating it. For basic subsistence and for material wants the people must rely on the funds sent home from their expatriot relatives.

Livestock

Cattle are an important part of the traditional rural economy of the OMVS countries, especially in Mauritania where until the 1960s most of the population was nomadic. It is the primary activity for less than 25 per cent of the population, but anyone who can afford to has cattle as a secondary activity. In Mauritania, even in the south near the river where traditional subsistence agriculture prevails, livestock still accounts for 75 per cent of the value added by the traditional rural sector.¹⁷ In all three countries livestock contributes the greatest value added to the basin economy, generating about 20 per cent of the wealth in the river basin.¹⁸ The basin contains a quarter of the cattle in the three countries and a fifth of the sheep and goats.¹⁹ The nomadic pastoralists prize the cattle for the social status they reflect and for the milk, curdled milk and butter they produce. As the pastoralists prize the cattle in themselves they are not generally raised for slaughter. They are a form of savings. Meat, unlike milk products is uncommon as an exchange commodity. Cattle raised for slaughter in Mauritania find their way on the hoof as unofficial export to Senegal and Gambia.²⁰

In a normal year the Peul and Moorish herders roam the desert fringes during the hivernage, or wet season, and return to the banks of the river in the dry season for the waters left in the marigots and to graze on the straw left in the fields after the crops are harvested. During the drought

years the herders overgrazed the pasturage along their traditional migration routes between water holes and damaged the trees by cutting down branches to supplement the meagre forage for their herds.²¹ Since the drought the herders have tended to stay closer to the river with the result that they are coming into increasing competition and conflict with their sedentary neighbours over the scarce watered lands available. In the basin countries the drought devastated the herds, with losses estimated at 50 per cent for Mauritania, 20 per cent for Senegal, and 40 to 60 per cent in Mali.²² However, the herd sizes seem to have recovered quickly, in part because of the great store the herders put in their cattle and the sacrifices they are willing to make to preserve and increase the herds.²³ Another reason is that migrant workers invest in cattle. The low prices offered for the cattle during the drought encouraged this form of investment. The permanent cattle population is now much higher within the valley and the higher concentrations contribute to the overgrazing around the villages.²⁴

Fishing

Fishing is the third major sector of the traditional economy. About half the fish caught are netted by Senegalese fishermen. For the Toucouleur in the middle valley, where fishing is most important, fish account for 80 per cent of the animal protein consumed.²⁵ None the less fishing is a declining profession among the Cubbalo, the traditional fisherman caste, and they depend now more on farming. The drought reduced the variety and quantity of fish available. Moreover, and perhaps more critical to the decline of river fishing, salt water fish caught on the coast are replacing freshwater fish in the markets and in the diet of the Toucouleur.

Transportation

A major reason for the stagnation of the valley economy is its isolation. During the flood period ocean going boats of a draft of less than 2.6 metres, sufficient to clear the sand bar at the mouth of the river, can navigate

as far as Kayes, 950 kilometres upstream in Mali.. Non-traditional vessels with drafts of 1 metre can reach Matam, 649 kilometres upstream, for 180 days a year and Boghé, 406 kilometres upstream, all year round. But in recent years no vessels regularly travel as far as Kayes. Most river transportation is local. The present river fleet consists of several barges of 200 tonne capacity, a number of small private vessels that ply from St. Louis to Boghé and several hundred pirogues, the traditional native canoes, of a 10 to 20 tonne capacity. All together the fleet carries about 10,000 tonnes of charcoal, construction materials and foodstuffs through St. Louis to upstream destinations. Eighty per cent of the freight goes to Mauritania.²⁶

Through traffic to Mali goes by railway from Dakar to Bamako, the only usable land link between the two countries. Local road traffic can use an all weather road that now reaches Matam, 268 kilometres from St. Louis. Upstream there are no paved roads. On the Mauritanian side only a few of the major towns have usable road links to the outside. As a consequence of the inadequate transportation network the development plans for irrigated agriculture are constrained. Particularly in the rainy season, supplies and service to the isolated villages and perimeters are difficult to provide and the villagers can not get their surplus crops to market.

The People

Along the river live the descendants of some of the great empires of West Africa - Takrur, Ghana, Mali and Jolof. These peoples capitalized on the relative agricultural richness of the flood plain in the middle valley and used the river as a major east-west trade route, exchanging products and slaves with Arabs in the trans-Saharan trade and Europeans on the coast. Particularly in the upper basin conquest, empire, decline, dispersion and assimilation over the last millennium left the demographic composition of the valley heterogeneous and complex. The population is made up of Peulh and Toucouleur, Bambara, Soninké, Khassonké, Wolof, Malinké and smaller groups mostly of Mandé origin.

Based on mid-1970s census data the total population in the drainage basin, excluding Guinea, is about 1.76 million - 550,000 in Senegal, 34,000 in Mauritania, and 871,000 in Mali.²⁷ About 13.5 per cent of the population of the three OMVS states live within the valley. Two demographic trends are notable. First, there is a fairly rapid rate of urbanization in the valley. Figures for Senegal and Mauritania show growth rates of valley towns to be 7.9 per cent and 5.8 per cent per annum respectively over the past 20 years.²⁸ The Mauritanian rate, however, is much less than the national rate of 10 per cent per annum over the past fifteen years - a staggering social change from a nomadic to urban society. Excluding the population of St. Louis (89,000), about 100,000 of the 705,000 residents of the lower and middle valley live in towns. None the less the population is predominantly rural; even in the towns 40 to 50 per cent of the population are engaged in traditional primary activities. Most of the people work at farming, fishing, herding and artisan activities.

Second, the growth rate in the valley, close to 1.5 per cent, is less than the national average of 2.4 per cent in Mauritania and 2.8 per cent in Senegal. The difference is similar in Mali.²⁹ Migration out of the valley of young and often married men accounts for the lower fertility rates and slower population growth in the basin.

The upper basin over the centuries has been a crossroads for peoples and traders moving back and forth from the Sahara to the Soudan and from the Soudan to the Senegambia. The ethnic composition reflects the many successive groups that came to dominate all or part of the region at different times. With the exception of the Peul and Moors, the different groups came from the northeast and east, and are of the Manding-speaking language group. The original groups were the Malinké and Soninké now found respectively in the upper reaches of the Bafing and the transition zone between the upper basin and middle valley. Successive Khassonké Bambara, and Peul conquests fragmented the region ethnically.

The population is unevenly distributed corresponding to areas of soil fertility and urban settlement. The lateritic soils of the upper valley discourage settlement and it is the least densely populated region of the basin. Further north outside the valleys large areas are cultivated for groundnuts. In more arid zones the land is used by nomadic herders. The river valleys support the highest population densities and as alluvial soils become more common downstream of Bafoulabé the population density increases.

As the river flows downstream from the Khassonké country in the valley from Bafoulabé to Kayes and on to Senegal the river takes on a more central role in the economy. There is much land suitable for irrigation in the region from Kayes in Mali to Bakel in Senegal. The region divided by the Mali-Senegal-Mauritania border is known as the Gajaaga and is home to the Gajaaga Soninké. The Soninké are one of many groups throughout West Africa that trace their origins to the first major political unit of the Western Soudan, the empire of Ghana. By oral tradition the empire was founded after the dispersal of all the Soninké from Wagadu. The powerful trading empire was at its peak from 800 to 1200 AD, and was located in the area north of and between the Niger and Senegal rivers. Unlike many of the groups sharing the Wagadu tradition, the Gajaaga Soninké retained the original language and culture of Ghana. They also retained its commercial orientation. The Muslim cleric class of the Soninké were noted long distance traders in gold, slaves, gum arabic, kola nuts, millet, groundnuts and other products of the Soudan for which they could strike an exchange with European traders on the coast or Berbers to the north.³⁰

Colonization by the French ended the Soninké's role as middlemen. The end of the Atlantic slave trade, the decline in importance in gum, the freeing of their own slaves with the arrival of the French, and direct commercial penetration by the trading firms from Bordeaux undermined the economic role they had played.³¹

Downstream from the Gajaaga is the Fouta Toro, home of the Toucouleur and the centre of the old empire of Takrur, at its peak about 1000 AD. The Toucouleur are the most populous group in the middle valley, comprising about 63 per cent of the population.³² As early as the eleventh century the people of the Takrur empire converted to Islam, becoming the first black African group to adopt the faith. The present descendants are still noted for their strong commitment to Islam. Like the Soninké the Toucouleur form part of a wider ethnic community found throughout West Africa. Their name is subject to great terminological confusion - Peulh, Fulani, Fulbé, Fula, etc. - since Anglophone and Francophone ethnologists gave them the names their neighbours throughout West Africa called them. French nomenclature makes a distinction in the Senegal basin between the sedentary residents of the Fouta Toro, the Toucouleur, and their kin, the Peulh, who are for the most part pastoralists, though many Peulh are settled in other parts of West Africa. They share similar customs and they have the same language - pulaar.

The Fouta Toro in the middle valley has been described as a pump that has throughout the last millennium squeezed out Peulh herders in waves with the result that today they are found as far east as Chad. In good years the herds expand along the river and nearby dry dién lands, but when the rains fail reduced forage forces the Peulh to move off to the south and east in search of pastures.³³

The Toucouleur were a part of a major Islamic revival in the eighteenth century. In the nineteenth century marabouts from the region successfully sought converts to Islam in the upper basin and the Senegambia and they organized resistance to French occupation. The Toucouleur are a more inward people than their upstream neighbours the Soninké. Historically they maintained their distance from the river trade except to sell surplus millet and cotton.

The Wolof, the dominant ethnic group of Senegal, form the majority of

the population in the sparsely settled lower valley and delta. They comprise about 13 per cent of the total population of the delta and middle valley.³⁴ In the fourteenth century the Wolof empire of Jolof (or Dyolof) came to control much of what is today Senegal and in doing so established the basic cultural homogeneity of the country. Once the coastal provinces began to trade with the Portuguese the interior-based Jolof empire could not control them. One of them was the kingdom of Waalo, based in the lower valley. In collaboration with European traders, established at St. Louis since the fifteenth century, the Wolof nobles controlled much of the trade up the river in the early period of European contact.³⁵

Nomadic herders roam throughout the valley - Peulh generally on the left bank, Moors on the right. They are found in camps and semi-permanent settlements in the valley. In the hivernage they seek grazing land outside the valley. They have often been in conflict in the past with the farmers in the valley. Moors comprise 13 per cent of the middle valley population, 27 per cent on the Mauritanian side, and the Peulh about 16 per cent, three-quarters of whom are on the Senegalese side.³⁶

In earlier times black tribes populated southern Mauritania. Increasing aridity forced the pastoral Berber and Arabs further south and into conflict with the sedentary black population. The Atlantic coastal trade in gum arabic from Mauritania and slaves drew the Moors to the banks of the river and though they did not form a majority of the population on the right bank they were the dominant force there. Their interests were trade and herding and they did not engage directly in agriculture. They used the manpower of their slaves and serfs, the Haratines, to farm parts of the flood plain. The Haratines, though black, adopted the language of their Moorish masters. The slave-serf system has been eroding rapidly since the drought. As the Moors have moved to the cities their ties and control over the land and the Haratines who work it have slackened. The problem is politically explosive for the Moors have not forsaken their claims to the

land and there has been conflict between Moor and Haratines when the Moors have tried to sell land without reference to the Haratines living and working on it. The Haratine tend to form a kind of rural proletariat in the valley now living on the fringes of the small towns as outcasts.³⁷ Although the abolition of slavery was reaffirmed in 1980 in Mauritania slavery still exists and the condition of many slaves and ex-slaves is abject.³⁸

The peoples of the basin share a number of characteristics. Most of the population is Muslim, large numbers of people fervently so, and Islam is a unifying force. The basin shares with the Western Soudan a hierarchial social structure made up of freemen, artisans and slaves. But the influence of climate, geography, and history makes for a number of economic and political differences. The lack of strong centrally controlled states in the upper basin accounts for politically decentralized organization based on the village with a communal approach to problems. The region depends on land extensive rain-fed agriculture. There is no great value in the land and thus no powerful landed aristocracy controls the means of production.

Whereas the social and political order in the upper basin has been shaped by its position as a crossroads, the middle and lower valley are more fortress-like.³⁹ Land in the flood plain is of value, and control of it a central feature of political and social life, particularly among the Toucouleur. In Toucouleur society economic and political power resides with a religious elite, the Torodo, who maintain a more centralized control of the region. Historically the Waalo region of the Wolof has been controlled by a military aristocracy. The society is hierarchical with a caste system. The influences have come from Arab-Berber pressure from the north and European contact on the coast.

The society along the river between Senegal and Mauritania is much the same. The Toucouleur occupy both banks. Of the farmers on the Senegalese side who practice flood-recession agriculture 14 per cent have plots

across the river.⁴⁰ The differences arise from the greater number of Moors on the right bank and their political power, which is based on the commercial interests of certain Moorish groups and more importantly on the control of nomadic routes, rather than on cultivation.

Migration

Once the railway from the Atlantic coast to the Niger River on a route south of the Senegal River was completed in 1923, the delta and middle valley became a backwater of the French empire. The river, no longer the main route into the interior for trade and conquest, became merely the boundary in the middle and lower valley between the territories of Mauritania and Senegal. The river people were on the periphery of the administrators' concern. In Mauritania the French were interested in pacifying and controlling the Moorish tribes and showed little interest in the largely black population along the river. In Senegal the focus shifted south to the groundnut region and its cash crop. As for irrigated agriculture, the Niger Project along that river in the Soudan captured the attention of the French more than the poorly worked out schemes suggested for the Senegal.

Colonial consolidation left the river people largely ignored; none the less they were a part of an empire which brought social and economic dislocation at the same time as it increased the people's need for cash to pay taxes and purchase goods. Moreover, the traditional subsistence economy was stagnating and the population was increasing. People have always been on the move in the Sahel region to seek new more fertile lands for a growing population and to escape old enemies. The modern migration began with the Soninké. With their trading incomes eliminated and their captives freed they started moving in the late nineteenth century at first seasonally and then for long periods out of the valley to find work. Young men moved south along the railroad to the groundnut areas opening up and worked seasonally as navetanes or sharecroppers. Others, as an extension of

their role as boatmen on the river found work as coal stokers and after 1918 as seamen on French ships. Freed slaves particularly joined the French army as tirailleurs and fought in the first world war. Later in keeping with their history as long distance traders Soninké found work in the towns, other African countries, and most notably in France.⁴¹

Soninké migration is well established. Around 80 per cent of men aged 70 to 75 have left the valley to find work at least once.⁴² Since 1960, when immigration laws relaxed, most Soninké migrants have gone to France. Of a sample taken in six Soninké villages 50 to 85 per cent of the migrants went to France.⁴³ Of the 60,000 to 70,000 black African workers in France about 70 per cent are Soninké and 15 per cent are Toucouleur - 85 per cent of the total from the Senegal Valley.⁴⁴ In the Soninké villages in the valley on average 46 per cent of the men are away working.⁴⁵ Many of them have one or more wives, but few women accompany the men.

The Toucouleur began to migrate later and in contrast to the Soninké they tend to stay closer to home, preferring Dakar and other nearby towns to non-basin African countries and France. More than 80 per cent remain within Senegal and Mauritania.⁴⁶ After finding steady work the men tend to bring their families to the city, with the result that valley population has grown slowly while for the past 35 years the Toucouleur population of the cities has grown rapidly.⁴⁷ The Toucouleur emigration rate is less than for the Soninké, but still high - 30 to 40 per cent of adult men.⁴⁸ The rate of emigration declines as one goes downstream.

Migration north out of the middle valley in Mauritania is of recent origin. In some villages as much as 80 per cent of the migrants join the massive influx of nomads settling down to work in the iron ore mines and the expanding towns where there is some chance of employment for unskilled labour. Nouakchott has been expanding at a rate of 22 per cent per year since 1962.⁴⁹

Peulh and Moor-Haratine herders tend to stay with their cattle.

Although during the Sahel drought they lost much of their stock and perhaps 10 to 20 per cent of the men left. They went mostly to the villages and towns within the valley and remained only a short time.⁵⁰

In total perhaps 220,000 to 280,000 people from the valley live in the urban centres of Senegal and Mauritania, about four times more than 20 years ago.⁵¹ The migrants' prospects once they reach the towns are by no means bright - unemployment in a city like Dakar can reach 38 per cent.⁵² Nevertheless the rate of migration continues to increase - seasonal migration remains about the same and long-term migration (semi-permanent and increasingly permanent with families joining the migrants) is rising.⁵³

Emigration touches all classes within the valley. Different groups within the social structure may have different motivations - the ex-slaves and lower artisan classes to escape the restriction of the social order and to increase their earning power; the aristocratic classes to earn income to maintain the family standing with all its costly obligations and patronage to lower caste clientele and family.⁵⁴ The essential motivation for all is to increase their money income and provide some security for the family. The disaster of the Sahel drought hastened the rate of departure but the need to leave was well established before then. In a subsistence economy with an uncertain climate and a rising population there is no security of food supply and other than through emigration, no means to secure a money income.

The migrant saves for his return to support his family while he is away. Workers in Paris, for example, may save as much as 50 per cent of their, by French standards, low incomes.⁵⁵ While back home in many villages as much as 50 per cent of the money income originates from migrants.⁵⁶ The Soninké region with its large number of men in France is most dependent on the money sent home and the most vulnerable to the consequences of immigration restrictions imposed by France.

The income provides some basic security for the family and in periods

of drought prevents widespread famine. On a less basic level it helps purchase consumer goods and contributes to family investments in education, cattle, construction of houses, and even real estate in cities like Dakar and Nouakchott. Some of the money finds its way into community investments such as new mosques, post offices (needed to receive money) and shops. To date little of the savings goes directly into improving agricultural productivity, but there are examples of returning migrants investing in village-level irrigation schemes.⁵⁷

Migration in many parts of the valley complements and sustains social and economic activity in the valley, but there is a cost - not the least being the hardship to the separated families. It affects the social structure. Women and children take on greater responsibilities in running family affairs. Returning migrants, with some money of their own and a taste of independence, demand a greater say in their own personal lives and in control of the family budget. Control by all-powerful family elders and community leaders is being eroded. Nevertheless the family and the social structure remains strong. They help maintain the system of temporary migration. The family provides the security to those left behind to enable the migrant to leave; once away the men often remain in close contact with other migrant and village members, in effect importing the obligation, responsibilities and support of the social structure; and in return the migrant contributes to the family income.

The shortage of able-bodied men is one of the major causes of the low level production of the primary and artisan economies. To offset the departure of manpower the family members left in the valley increasingly use part of the money sent home to hire substitute labour to maintain normal levels of subsistence production. Agricultural wage-labourers tend not to take an interest in improving productivity and their lack of motivation contributes to the stagnation of the agricultural economy. The OMVS recognizes that the shortage of manpower committed to irrigation schemes is a serious constraint on its plans for hydro-agricultural development.⁵⁸

National Economies

The economic stagnation of the valley is matched at the national level. Mali, Mauritania and Senegal are a part of the Sahel, a region of stagnant and even negative economic growth. In this 'poverty belt'⁵⁹ food production has declined relative to the needs and the area is less self-sufficient than it was in the 1960s. The average Gross Domestic Product (GDP) per capita for the Sahel is \$196. The African average is \$490.⁶⁰ Mali and Mauritania are considered by the World Bank as part of the group of the 'least developed countries'.

The mainstay of the economies of the three basin states is agriculture. Mauritania and Senegal have modern industrial sectors, but their impact on the majority of the population is slight. The agricultural base is poor and in the long term becoming poorer. Erratic annual rainfall and a steadily increasing population lead to over exploitation of already fragile and poor soils, deforestation for firewood, erosion and desertification. The cycle of increasing environmental degradation has its parallel in short term economic collapses and longer term economic deterioration. Drought years reduce export earnings from cash crops and increase imports to meet the shortfall in cereal production - with predictable consequences on the balance of payments and development plans. A series of crop failures over the past decade has greatly increased the states' indebtedness and dependence on foreign aid. In general the economies are characterized by negative balance of payments, high debt servicing, widening resource gaps between exports and imports and low productivity.

The first step in breaking out of the spiral of poverty and debt must be to establish a more stable base for development to reduce the dramatic fluctuations in export earning and food imports. Given the limited resource endowments of the states this can only be provided by agriculture, which employs and sustains the majority of the population. There is scope for increasing productivity of rain-fed agriculture, but irrigation provides

the hope for greater self-sufficiency. Mauritania must look to development of the oualo and fondé lands along the Senegal River. Senegal devotes 50 per cent of its agricultural budget to irrigation and 70 per cent of that to the river region.⁶¹ Mali has some suitable areas in the upper basin for irrigation, but improving and expanding the already extensive irrigation projects in the Niger basin offer better prospects.

The economic stagnation of the basin states is not the sole result of the environment; it has as much to do with politics as with climate. Mauritania's participation in the war against Polisario in the late 1970s and the subsequent political turmoil in that country have done little to help on the economic front. Over ambitious government programmes and a costly bureaucracy inhibit efficient investment. In Mali and Senegal especially, the 'dead hand' of state enterprises and government centralization has had an enervating effect on the whole economy and on the market-oriented agricultural sector in particular. The farmers are forced into marketing arrangements with parastatal or government sponsored 'cooperatives' that give them low prices for their crops. The parastatal marketing organizations are intended to provide stable prices for the crops, fertilizers and seeds for production, expertise to increase productivity, and other services depending on the circumstances. Inefficiency, bureaucratic bottlenecks, patronage, and overstaffing make for high costs and sometimes destructive impacts on farming operations with the result that the farmers are forced into ever increasing debt. The non-market price for the crops keeps the food prices low in the cities, a requisite for maintaining political support among urban population, including the large number of public sector employees working for the government parastatal organizations. The profits from export crops go back into supporting the costly government superstructure. Predictably the farmers lack incentives and they do what they can to evade the system. Malian peasants smuggle their groundnuts to Senegal and their rice to the Ivory Coast. The Senegalese smuggle

their groundnuts to Gambia. Observers estimate that in some years as much as 25 per cent of the crop ends up in Gambia where the groundnuts are sold for cash.⁶² Many farmers have reverted to growing traditional crops outside the control of the parastatals and are refusing to pay back their debts. In both Mali and Senegal there are moves to reform the system and to do away with much of the parastatal marketing system, moves much encouraged by outside financiers like the IMF and the World Bank.

Mauritania

Iron ore gives Mauritania (population 1.5 million in 1977)⁶³ GDP per capita of \$270, which is relatively high for the Sahel. But the growth rate of GDP in the 1970s has been less than the population growth (1.7 per cent to 2.5 per cent),⁶⁴ with the result that per capita income has been declining for the past decade. Of the working population, 90 per cent are engaged in traditional agriculture and livestock production. In 1968 these activities accounted for 50 per cent of GDP, but less than 20 per cent in 1977.⁶⁵ The self-sufficiency rate for cereal production is the lowest in the Sahel (apart from the Cape Verde Islands). Formerly in a normal year cereal production would meet 60 per cent of the domestic needs; in 1979 it met 16 per cent.⁶⁶

Iron ore provides the major source of export revenue, up to 90 per cent of the total in 1979.⁶⁷ It represents 22 per cent of GDP and 25 per cent of total public revenue.⁶⁸ Major new mines are planned, which as existing deposits are depleted, should maintain the position of iron ore in the economy. Fish, fish products and copper concentrates are the other modern sector products. More traditionally, live cattle and gum arabic are also exported. Stagnation in world prices for steel led to a decline in ore production and a drop in the value of export earnings by 43 per cent from 1976 to 1978.⁶⁹

In the years 1973 to 1977 the total value of imports doubled due to increases in cereal imports during the years of drought, high world

commodity prices (particularly petroleum), defense expenditure in the fight against Polisario, and inflation. In 1977 exports covered 46 per cent of imports leaving a resource gap of \$208 million or 47 per cent of GDP in 1977.⁷⁰ As a consequence foreign debt rose 4.5 times from 1973 to 1979 and represents 150 per cent of GDP.⁷¹ Debt servicing takes 30 per cent of export earnings and 50 per cent of government revenue.⁷²

Mali

Mali (population 6.1 million in 1977) is the poorest of the three basin states with a GDP per capita of \$120, though of the three basin states it is the only one generally self-sufficient in cereal production. About 85 per cent of the population is engaged in agriculture and livestock and the sector accounts for 50 per cent of GDP.⁷³ In normal years Mali is self-sufficient in food production, but its economic growth like the other Sahelian countries is upset by drought and the consequent dependence on food aid and imports.

The Malian government has devoted a large share of its investment for development to creating a modern industrial sector. The investments have proved uneconomic and there is little modern industry. In 1975 the industrial sector accounted for 17 per cent of GDP, of which about two-thirds was artisan production.⁷⁴ Mining projects in the upper Senegal basin and other areas offer good potential for exploitation. A limited transportation network and high transportation costs handicap development. There is one road to the coast from Bamako and the Dakar-Bamako railway to service Mali's trade with the outside. The railway has limited capacity and is meeting increasing competition from the Bamako-Abidjan road for the transport of goods.

Balance of payments are vulnerable to fluctuations in agricultural production and world commodity prices. In 1979 exports covered 40 per cent of imports.⁷⁵ Exports are mainly agricultural products and livestock. Imports account for 25 per cent of GDP, the major share of which is for food.⁷⁶ The country depends on foreign loans and subsidies. In 1979

foreign subsidies exceeded the states' operating budget by 33 per cent.⁷⁷ The foreign debt in 1980 was about \$600 million. Despite the potential for increasing cereal output production in the last few years has been about half of that in the 1950s.⁷⁸

Senegal

Senegal (population 5.24 million in 1977) inherited from the colonial period an administrative structure designed to service all French West Africa and a small industrial sector. This legacy has put Senegal ahead of its neighbours with a GDP per capita of \$380. However, since independence the economy has stagnated and its GDP per capita has since the mid-sixties been declining by .2 per cent annually. Of the 17 francophone countries in Africa its economic performance ranks fifteenth.⁷⁹ The economy is sharply divided between modern and rural sectors. The rural sector has 70 per cent of the population and its per capita income is \$150. The Cap Vert region (around Dakar) has a per capita income of \$850. The region has 10 per cent of the population and produces 60 per cent of GDP.⁸⁰ The direct contribution of agriculture to GDP is about 30 per cent, though indirectly its contribution is much greater for it supports much activity in the secondary and tertiary sectors.

After Mauritania Senegal is the Sahelian country most dependent on cereal imports. It produces only 57 per cent of its cereal needs - just 27 per cent for rice. Over the past decade the eating habits in the towns have changed from a diet based on millet and sorghum to one based on wheat and rice. Senegal has 18 per cent of the Sahelian population, yet it imports 49 per cent of the total for the region.⁸¹

Total exports cover 75 to 80 per cent of imports. Groundnuts account for 75 per cent of export earnings. The rest of the earnings come from phosphates and fishing. In 1979 the current account deficit was estimated to be \$436 million or 51 per cent of exports. In 1977 the deficit was \$68

million. Poor rains and a fall in the groundnut crop reduced earnings from \$322 million in 1977 to \$196 million in 1979.⁸² In 1981 the government was borrowing funds to purchase soya beans simply to provide throughput for its groundnut oil refineries. Petroleum costs added to the bill, rising from \$92 million in 1977 to \$137 million in 1978. High levels of food imports (\$199 million in 1979) and other imports fuelled by expansionary government policies added to the high import bill.⁸³ Debt services accounts for 20 per cent of exports and 25 per cent of the national budget.⁸⁴

Chapter Four

DAMS: BURDEN OR BENEFIT?

If the need for economic development within the Senegal basin cannot be questioned the development strategy can. The large-scale capital-intensive dam projects planned for the river raise questions about the appropriateness of the investment. For the projects to succeed the economy in the valley must be transformed from a subsistence traditional one to a technologically dependent market-oriented one that will make use of the services the projects supply. Planning for the projects must consider whether the transformation of the economy is necessary prior to implementation of the projects or whether implementation of the projects is part of the process of affecting the transformation. The OMVS and the basin states have accepted the latter approach to river basin development.

This chapter argues that the OMVS strategy is inappropriate, that investment in the dam projects adds an unwarranted burden on the primary task of effecting socially acceptable changes of the rural economy, and that the investment does nothing to alleviate the pressing economic problems faced by the three states. The World Bank appraises the appropriateness of investments in water resource projects according to seven categories - economic, technical (including environmental), managerial, organizational, commercial, financial, and social.¹ This study uses only the documentation available and does not attempt such a comprehensive assessment. But our review does touch on many of the categories in our concern to answer the following questions. Is the investment in the dams and navigation the most efficient use of funds? Can the projects recover investment and operational costs? The OMVS thinks of the projects as pre-investments - investments not in themselves profitable, but ones that make possible returns from other related investments, as in the irrigation sector. If the projects

in themselves do not recover investment and operation costs do the states have the financial capacity to carry them and the capability to make a success of the related investment programme?

The OMVS produces most of the reports on the dam projects and accompanying development programme and predictably the OMVS supports the investment. Only one consultant's report attempts an overall economic and technical evaluation. Responding to questions from the donors about the complementarity of the Diama and Manantali dams, the OMVS in 1978 hired the British consulting firm Sir Alexander Gibb and Partners to provide quantitative and qualitative evaluations of the effects of the combined functions of the Diama and Manantali dams in relation to the objectives of the OMVS. While not directly attacking the projects, the firm's report seriously undermines them by raising doubts about their complementarity. The OMVS disagreed with the global study and challenged its findings in its own reports. More importantly it asked Gibb and Partners to meet with the project consultants for Diama, Manantali and the navigation projects. Their reports were more optimistic than the sceptical global report and the OMVS wanted the consultants to reconcile the differences among them. The results in the follow-up report were a compromise which formed the basis for the final design of the projects.² Many of the economic and technical points made in this chapter are derived from these two reports.

Senegal Basin Development

The OMVS governments believe that the river development can end the economic stagnation of the river region, provide some stability of agricultural production in the face of extreme climate variability, and ease the foreign exchange cost of cereal imports. The governments formulated their joint long-term development objectives in 1974 as: 1. to ensure the reliability of incomes and to increase them for a maximum of the population; 2. to establish a more stable ecological equilibrium between men and the environment in the

basin itself and as much of the three states in the Sahelian zone as possible; 3. to reduce the economic vulnerability of the three states vis-a-vis climatic and external factors; and 4. to accelerate economic development of the three countries and inter-state cooperation.

Of the many constraints that hamper regional development regulation of the river is intended to remove those of climatic uncertainty, poor transportation and high energy costs. For the Senegal Valley the greatest potential lies in agriculture and, to a lesser extent, in mining and industry. Development of the agricultural sector can be directed to remove one of the major constraints on national development - the wildly fluctuating drain of foreign exchange for cereal imports. In other words the potential of the river can be exploited for local, national and international ends. Development will improve economic welfare within the valley and remove some constraints on national development. Coordinating and integrating the development programme among the three states will have its own rewards in closer international cooperation and possible economic integration.

The first step in the river programme includes four projects:

1. construction of a \$680 million (as estimated by the sources of finance and consulting engineers in November 1980) hydro-electric storage dam at Manantali, which will A) guarantee a regular flow of 300 cms at Bakel, B) produce 800 GWH of electrical energy per year with guaranteed power of 100 MW, C) reduce the 100 year flood peak to that of the 10 year peak, and D) enable double crop irrigation of 255,000 hectares;
 2. construction of the \$186 million anti-salt barrier dam at Diama which will A) stop the intrusion of the salt tongue, B) create a water reserve that will permit annual irrigation of 42,000 hectares in the delta and the right bank in Mauritania, C) help fill the natural depressions in the lower valley for irrigation and water supply in the dry season;
 3. development of the river navigation from St. Louis to Kayes in Mali;
- and

4. construction of a river-maritime port at St. Louis, a port at Kayes as well as port facilities at ten stops along the river.

Given the difficulty in funding the programme all at once priority was given to the Manantali and Diama dams.

There are about 480,000 hectares of alluvial flood plain land suitable for irrigation in the valley - 6.25 per cent in Mali, 37.5 per cent in Mauritania, and 52.25 per cent in Senegal. The OMVS foresees double crop irrigation of 375,000 hectares. Manantali will enable 255,000 hectares to be developed, Diama a further 42,000 hectares - operated in combination the two projects will open another 78,000 hectares for irrigation. Of the planned irrigation more than 70 per cent of the area will be in Senegal. Irrigation has been tried sporadically in the valley over the past 160 years, but the present development efforts date from independence in 1960. In July 1980, 27,885 hectares were under some form of single crop irrigation - 22,904 hectares in Senegal (mostly located in the delta), 4,714 hectares in Mauritania, and 267 hectares in Mali.³

In rough terms, using 1980 costs for irrigation development of about \$2,000 per hectare for small perimeters and \$8,000 - \$10,000 for large perimeters and subtracting the approximately 28,000 ha already irrigated, the investment required to irrigate the land will be well over \$3 billion. This figure takes no account of inflation or operating costs. Taking into account a modest rate of inflation (about 8 per cent) and a modest goal of developing one third of the large perimeter land or about 82,000 ha by the year 2000, the basin states will have to raise by that time in the order of \$2 billion on top of the financing for the dams.

Economic Demand

River basin development can be a simple-minded approach to economic growth. If it is followed without thought to the society in which it is applied it can be environmentally, socially and economically destructive. It can be destructive socially and economically if too little attention is paid

to the demand for the services the projects provide. If the market is not sufficient to make efficient use of the investments, the projects become a financial burden on the country implementing them. All too often the burden weighs most heavily on the people in the valley, the supposed beneficiaries of the projects. Unsophisticated river basin planning assumes a demand for river regulation. Planners and engineers create the physical infrastructure to break the constraints holding back the productive forces of the region. In developed economies this physical approach often works. Hydro-electric generating capacity may temporarily be ahead of demand, but growth in the region quickly consumes the excess and the power component of the project becomes profitable. Irrigation in arid regions may also meet immediate consumer enthusiasm as farmers take advantage of increased water supplies to bring new lands under cultivation.

In developing economies the temptation is to overestimate demand. Need is confused with demand. There may be a need to expand the productive capacity of land in arid regions with irrigation; there may be a need for the agricultural sector to become more productive to relieve the burden of paying for imports of basic food stuffs; there may be a need for electric power; there may be a need to improve transportation; there may be a need to diversify the economy by exploiting the mineral potential of the region - but if the groups in need cannot make use of the service, even when subsidized, there is no adequate demand. As a result projects built to satisfy very real needs stand in danger of going unused by the people they are designed to benefit because they may not have the means - education, resources, support or incentives - to make use of them.

Electricity

Manantali will be constructed during the 1980s but it will not start generating electricity until there is enough demand to justify the cost of constructing the power station and installing the generators. It is predicted the first generators will be installed about the year 2000. The relatively

small amount of power, 800 GWH per year from 200 MW installed capacity, and the high cost of transmission limit the market to within a 300 kilometre radius of Manantali. The major power consumption centre of the region is Dakar, about 1,000 kilometres away. A 1975 World Bank report notes, apart from the cost, there may be some political considerations - in Mali reluctance to have Senegal pre-empt the bulk of Manantali's output and in Senegal reluctance to become dependent on a power plant located in another country.⁴ The demand for power must come from Bamako (population 400,000) and Kayes (population 60,000), the two urban centres within the region, or from future mining development in the upper basin in Mali and Senegal.

In 1977 the OMVS gave priority for use of electricity to the mining sector. Senegal has iron ore deposits in the Kedougou region west of the Faleme tributary and these deposits extend into Mali. That country also has iron ore and bauxite deposits in the region between Bamako and Bafing tributary. Miferso, a consortium of foreign and Senegalese mining interests, would like to begin exploitation of the Senegalese reserves in the 1990s. If these deposits were to be exploited at the same time as the Malian reserves the demand for electricity from the mining sector would greatly exceed the capacity of Manantali - 800 GWH of generation to a demand of 1,100 to 1,200 GWH and more when the reserves are being fully exploited.⁵ However actual development depends on the outcome of feasibility studies, financing, and world market conditions. There is no certainty of mining development and no way to predict when the reserves might be exploited.

The uncertainty associated with mineral development shifted emphasis to urban consumption. In the immediate future electricity in the region will be supplied by the Selingué dam on the Niger River which will be completed in the early 1980s. Estimates of future demand vary among the consultants who have considered it. But there is not expected to be sufficient demand until the end of the century. The OMVS favoured construction of the power house along with the dam, but it was persuaded by the Gibb report to delay it until there

was enough demand.

Financially the lack of a market for the power component of the projects makes the Senegal scheme a unique if dubious experiment. Major integrated river basin development projects are multipurpose. The Senegal projects have three main purposes or components - navigation, irrigation and energy. The dams are designed to accommodate the different purposes. Manantali must provide storage capacity, for example, to maintain 100 cms flow for navigation, guarantee 800 GWH per year of power in nine out of ten years, and sufficient water to irrigate 255,000 hectares. To meet these requirements there must be enough storage to permit an average flow of 300 cms below the dam.

Some costs are common to the three components while others are separable in the sense that if one use for the dam is taken away the dam would be smaller and costs would be less. There are numerous formulas for dividing equitably the common and separable costs of the projects among the different components. Generally navigation costs (except locks) are non-reimbursable and farmers pay for irrigation water according to their ability to pay rather than the cost of supplying it. Invariably the major burden for paying the costs falls to the electricity consumer.⁶ If prosperous farmers in the United States South-West cannot afford to pay the full cost of the irrigation water supplied to them from the Colorado River, it is difficult to see how the agricultural sector in the Senegal Valley can carry the costs of the projects. Of course the costs are subsidized by the concessionary terms of the assistance the donors provide. And after 20 to 30 years of power production electricity may redeem 40 per cent of the capital cost of Manantali.⁷ None the less there will be interest and recurrent costs to pay in the first years, which for the weak economies of the basin states will be a burden.

Navigation

The Gibb Report concluded '... it has not proved possible in the global study to identify any quantifiable economic benefits arising from navigation that can be attributed to the Manantali project'.⁸ Economic benefits are

defined here as the cost savings between transport on the river and by rail or road. Unit costs on a tonne per kilometre basis favour barges over the railroad. But taking into account trans-shipment and other costs such as for fuel, on balance barges suffer a 60 per cent disadvantage to rail. The report argued the railway offers the lowest cost mode of transport for international traffic between Senegal and Mali and is likely to remain the least expensive for years to come.

The OMVS did not accept the global report conclusions. An OMVS report pointed to previous consultant reports reporting favourably on navigation.⁹ Sir Alexander Gibb and Partners were asked to reconcile their findings with those of the different consultants working on the Manantali, Diama and navigation projects. In the follow-up report navigation was shown as a highly sensitive component in the determination of the internal rate of return. If major phosphate deposits in Mauritania were exploited using the river to ship them out and if other profitable river traffic developed, navigation would contribute significantly to the rate of return for the projects (adding 1.4 to 1.8 per cent depending on the cost assumptions).¹⁰ The report did not argue against the Gibb Report or offer the rationale for justifying the traffic projections. Privately some consultants remained convinced that economically navigation was 'a nonsense'.

Agriculture

The Global Report found '... the Diama and Manantali dam projects depend almost entirely upon irrigation to justify economically the large capital expenditure necessary for their construction'.¹¹ One Global Report estimate of the internal rate of return gives the two projects nine per cent for the agricultural component alone; adding the hydro-electric component increases the return by only .25 per cent. The report concluded 'irrigation in the Senegal basin is economically feasible on a large scale but as with all such projects its success will depend very much on the manner in which it is

implemented and managed'.¹²

The requisites for success of irrigation are 1. the profitability of the land irrigated and 2. the rate at which new land can be brought under irrigation. The follow-up report to the global study found that the single most critical element in the whole development programme was to achieve as quickly as possible a profitable return from irrigation. The rate at which new land is brought under irrigation is the fourth most important element. (The second and third are profitable river transportation with and without phosphate exploitation in Mauritania.)¹³ A slow rate of irrigation implementation will extend the time needed to implement fully the programme. As most of the investment in the dam projects comes at the beginning of the programme there is a need to bring land under irrigation and make it profitable as quickly as possible to start making some return on the investment. Also the larger the area under single crop irrigation prior to regulation of the river the greater the immediate returns to investment in the dams. The land can be switched over to double crop irrigation.

The basin states in 1974 set the medium-term target rate of 10,500 hectares a year by 1982, with 69,400 hectares irrigated by 1982, with an average yield in paddy rice equivalent to 8 tonnes per hectare.¹⁴ The Global Report suggested for a reasonable economic return the rate should rise from 10,750 hectares in 1980 to 16,100 hectares a year by 1990.¹⁵ Since 1975 the states have averaged 2,740 hectares a year, with at times half that rate being lost in established perimeters from poor management. Overall productivity is low, about 3.8 tonnes per hectare per year.¹⁶ The OMVS has revised its target to 4 tonnes of paddy rice per hectare and just 4,100 hectares a year in the period 1981-1990,¹⁷ which is less than the most pessimistic projection of the Global Report (5,325 hectares in 1980 to 8,050 hectares by 1990).

Can the irrigation programme achieve rates of implementation, profitability, and standards of operation needed to justify investment in the dams? Much attention is being directed at improving irrigation. The OMVS has drawn

up an indicative plan for a \$500 million investment programme for the irrigation sector in the period 1981-1990. USAID proposes a \$78 million programme to attack some of the major constraints holding back effective performance. Many other donors are investing to increase the numbers of hectares under production. The OMVS in 1980 completed a major socio-economic study of the problem.¹⁸ The problems as the study shows remain daunting. There is to date little evidence suggesting that techniques have been found to successfully transform the subsistence rain-fed and flood-recession based agricultural society into one founded on double crop irrigation at a rate to justify investment in the dams. As so much depends on the irrigation sector it is worth sketching some of its problems.

To be successful the transformation of the valley requires the right mix of direction, incentive and support from above, and from below the motivated participation from the people in the valley. The irrigation programmes are implemented by parastatal corporations - SAED in Senegal, SONADER in Mauritania and OVSTM in Mali. SAED formed in 1965 is the oldest, most experienced and best staffed of the three. SONADER was established in 1975 and like SAED is a public corporation with a commercial and industrial character. However, it has less of a commitment to rice production and is less comprehensive in the control it takes of its perimeters. In Mauritania there are some significant private irrigation schemes. OVSTM is a regional development agency in which Senegal River projects are of secondary importance. The agencies have promoted two types of irrigation schemes - large perimeters and small or village perimeters.

The large perimeters are highly centralized and they have been formed according to technical and physical criteria. They take little account of the people who must work them. The basic production unit is the producer group made up of 12 to 20 workers. The agencies form the groups and their size is arbitrarily set to fit the area of the large elementary irrigation network of 10 to 20 hectares. Site preparation is highly mechanized with little use of paid labour and no participation by the

producer groups. Once the perimeter is in operation the agency decides and carries on the major mechanized operations - ploughing, sowing, reaping and threshing. The producer groups take a share of the profit after the agency charges them for some of the costs the perimeter has incurred.

The approach has failed to produce satisfactory results. The corporations have taken on too many responsibilities, their administration is overcentralized, they lack sufficient competent field staff, they have applied inappropriate criteria for design of the projects, and they have alienated the workers. The latter two points demonstrate some of the weaknesses of the approach.

In determining the benefit-cost calculations for the irrigation projects the agencies have assumed a constant yield per hectare. If only so many tonnes per hectare can be produced the only way to maximize profits is to reduce the high costs of implementation and operation. As a result the large perimeters are under-designed. Skimping leads to inadequate maintenance of machinery, breakdowns, slow supply of spare parts and fuel and the halting of farming operations often at critical times. Top-heavy administrative procedures aggravate the problems by making it impossible for the agency to react quickly to problems in production. For cost reasons irrigation canals are often placed close to drainage ditches with the consequence that the banks are breached. Cost cutting or simply lack of expertise causes such problems as too steep contouring, inadequate levelling, poorly installed equipment, and poor placement of perimeters. Once a perimeter is completed too little attention is given to maintaining and improving it. The yields decline and land within the perimeter goes out of production. A typical large perimeter may have had 1,000 hectares prepared for irrigation, 500 hectares cultivated and 250 harvested.¹⁹ Many of the old perimeters need complete rehabilitation and considerable investment must be diverted from establishing new ones into rehabilitating old ones.

OMVS studies show that crop yields vary greatly among the perimeters -

over 30 per cent produce less than 3.5 tonnes of rice per hectare and 15 per cent produce more than 6 tonnes.²⁰ If there is such a wide variation in output it makes sense to improve productivity as a means of improving profitability. If a 25 per cent increase in the cost of production produces a 75 per cent increase in yield the extra cost should be incurred. The OMVS hopes that the agencies will adopt this criterion instead of a cost minimizing one.

The most distressing aspect of the large perimeter programme has been the failure to organize the workers successfully. They are described as passive and alienated. Based on the egalitarian and socialist principles of the Senegalese government, SAED organizes the farmers into producer groups. In a society that is highly structured and hierarchical, the agencies have had difficulty in striking the right blend of ethnic, caste, political affiliation and family composition with leadership qualities, land allocation, group and individual responsibility and incentives. Rapid turnover in the composition of the producer groups, absenteeism, subcontracting of work by members of the group to outside day labourers, misuse of collective equipment, inattention to basic operations like weeding, and irresponsible debt accumulation by the groups are major problems. Lack of motivation, little feeling of communal enterprise and no feeling for the land they work leads members to milk the schemes for what the governments put into them, not for what they might get out of a fully productive irrigation perimeter.²¹ Reports describe a 'social welfare recipient mentality' among many of the producer groups, and 'a state of latent crisis' in some perimeters.²²

The costs of the perimeters and the market price the crops receive also discourage the commitment of the workers. Although the costs of implementing and operating the perimeters are subsidized the mechanized and centralized approach of the developing agencies is costly. The agencies still have to charge the producer groups for the unsubsidized costs. Many

groups are going increasingly into debt. The prices they receive from the agencies for their crops may be artificially low and this leads to increasing debt, unofficial selling and further alienation. In official figures, for example, the production of tomatoes is declining in Senegal, but many kilos find their way onto the local market instead of going to the canning plant. Some critics argue participation in the irrigated perimeters makes the people of the valley worse off than before. To start with, many people lose their traditional flood recession lands when a new perimeter is diked. Land tenure promises to become a significant problem, especially in Mauritania where the Moors retain claims to the land along the river and there is no national land law. The government of Senegal claims ownership of all land under its land law, but in practice traditional ownership prevails. The appropriation of most of the valued floodplain land for irrigation is potentially a major source of contention. Once working in a perimeter the farmers become in effect impoverished labourers rather than independent farmers. They are even worse off than day labourers for they are not paid a wage.²³ They are forced into debt by the management costs of the agencies - upon which they are totally dependent and over which they have no control.

For the majority of the farmers irrigated agriculture remains an alien part-time activity. They are not wholly committed to it. Traditional values based on producing two crops in two different locations - the rain-fed diéri crop and the flood-recession oualo crop - prevail. The development agencies have yet to convince the farmer to accept year-round farming of the same land.

Many of the same institutional and motivational problems afflict village perimeters also. Nevertheless village perimeters are more successful than larger ones. The farmers themselves have much more independence and are more motivated than the workers in the large perimeters. SAED and SONADER formed the first groups, but now villagers for the most part organize their own groups and then go to the development agencies for assistance. The

agency advises the groups where to locate the perimeters, helps level the ground, and provides the pump and trains a local operator. Later it tells the group what crops it would like grown and the fertilizers to use. Many serious problems do arise given the often inadequate institutional and professional competence of the development agency and the scattered location of the perimeters - often difficult to reach during the flood and rainy season. The problems include pump breakdowns with long waits for repairs; delays in obtaining vital supplies; poor credit arrangements for buying seeds, fertilizers, pesticides and fuels; and poor extension advice. On the latter point farmers are more likely to improve productivity by learning from fellow farmers than from extension workers.²⁴

The shortcomings of SAED were highlighted when it attempted to introduce village perimeters to the Gajaaga region near Bakel close to the Mali border. The Soninké villagers had already begun to organize village and inter-village associations. They had their own communal approach to cultivation. It conflicted with the approach favoured by SAED and accepted by the Toucouleur and Wolof farmers of subdividing the elementary irrigation units into smaller individual plots. Also the Soninké were less disposed to grow rice; they favoured the more traditional millet. Moreover in this wetter region irrigation is less attractive than in the more arid regions downstream. The village associations resisted submitting to the bureaucratic centralized control of SAED with its uniform approach to cultivation and social organization. In reaction inexperienced SAED field staff became authoritarian in their attempt to overcome local reserve.¹¹ The conflict has become a minor cause célèbre in the rural development sociology and politics literature.²⁵

Despite the setback in the Gajaaga the village producer groups have been accepted. Success to a large extent depends on creation of a socially homogenous compatible group. The failures - often created by the SAED - are poorly constituted and contain the ethnic and political divisions of

the valley.²⁶ The development agencies have difficulty keeping up with the demand from villagers for more new perimeters. A sign of success is that villagers with one perimeter ask SAED to help establish more. The OMVS socio-economic study suggests another explanation. The perimeters are too small for the villagers to achieve an 'attractive' return from their plots and need more irrigated land for irrigation cultivation to provide a worthwhile supplement to their income.²⁷

SAED and SONADER salesmanship may have little to do with the relative success of the village perimeters. At any rate the success achieved to date is tentative. The Sahel drought and continuing years of low rainfall and poor floods dispose the villagers to turn to a style of farming that promises a more certain crop. Just as drought turned the peasants to irrigation, a series of good rains and floods may tempt them to return to the less costly and restrictive rain-fed and flood-recession crops and neglect of the perimeters. Further, unlike FED sponsored small perimeter schemes in Mauritania, on the Senegalese bank many of the perimeters are unprotected by dikes. They are on high fondé land free from flooding on average only eight of ten years. One high flood could destroy the farmers' hard work in establishing the perimeters. New perimeters are to have protective dikes. Moreover, one study found that all the farmers sampled in three ethnically different perimeters participated in the irrigation schemes as a secondary activity. Their commitment is still tentative and it is difficult to see how they will be persuaded to adopt double cropping at the expense of their primary activity in the traditional agricultural sector.²⁸

One can be enthusiastic about village level perimeters for they do incorporate many rural development planning precepts (and catchphrases) of the 1970s - labour intensive agriculture, appropriate technology, and peasant participation. And the small perimeters are cheaper - capital costs of about \$2,000 or 200,000 CFA francs compared to \$8,000 - \$10,000 or 2,000,000 - 2,500,000 CFA francs per hectare (1980 figures). Smaller perimeters also

give higher yields - 4 to 5 tonnes of paddy rice per hectare compared to 2.5 to 4 tonnes for large perimeters.²⁹ Given the acceptance of the approach by the people the problems mentioned above do not seem insurmountable. Unfortunately small perimeters are not the answer to basin states' needs for full agricultural development of the valley. Only about 15,000 hectares of land is suitable. The real agricultural potential of the valley can be exploited only by bringing under irrigation the heavy rich hollaldé and faux hollaldé soils of the floodplain. That requires mechanization, heavy capital investment and the creation of large perimeters. Attempts are being made to incorporate the positive organizational lessons of the small perimeters into the large one. But the scale of the problems are quite different and it will most likely be a long time before the large perimeters can be organized successfully to enable a high rate of implementation and profitability.

The further problem remains of funding. The OMVS claimed in its October 1980 Programme indicatif that it has commitments from donors for 56 per cent of the \$500 million needed for the 1981-1991 programme to irrigate 41,000 ha. Ignoring inflation and more detailed cost estimates, which always raise the programme figures far above the original estimates, by no means all that funding has been approved by donor governments. Donors provide much of the financing for the projects; nevertheless the state have to bear some of the costs. For example a USAID proposal calls for a \$78.5 million investment in rural development of which \$21.5 million must be provided by the governments.³⁰ The governments have not supported the parastatal irrigation agencies with sufficient funds in the past. Their performance leaves open the question of whether the national governments in their weak financial conditions can or will provide the necessary counterpart financing for budgetary and personnel support to the irrigation agencies.

There can be little doubt that irrigation presents the long-term hope for expanding food production in the valley. The three states are not overburdened with lucrative investment possibilities. If the region is to benefit

from international assistance, investment in irrigation (particularly in Mauritania and Senegal) is likely the most fruitful area. However OMVS analysis has tried to show how irrigation can justify investment in the dams. The question of real interest is how investment in the dams will benefit the irrigation programme. There needs to be an economic evaluation of the irrigation programme with and without river regulation. The OMVS has not done such an evaluation.

The World Bank no doubt has made such an evaluation for the bank refuses to invest in the dams, yet is willing to invest heavily in irrigation. The analysis behind the bank's decision would provide instructive reading, but no documentation was available for this study. However, it is known that at one point the bank was uncertain of the technical prospects for expanding irrigation without river regulation and it held off committing itself to either approach. The bank is now assured - taking account of organizational and resource constraints - that investment can be devoted to irrigation at realistic rates of implementation for 20 to 30 years. Some observers feel that the river may never require the regulation now being implemented for the river.

The Global Report was right to stress that '...the Diama and Manantali dam projects depend almost entirely upon irrigation to justify economically the large capital expenditure necessary for their construction'. Although in theory irrigation is economically feasible on a large scale, the evidence to date suggests that the problems in practice will result in rates of development far short of the targets needed to justify economically the large capital expenditure.

Project Design

Water resource planners design complementary projects yielding optimum benefits for the different purposes of the regional development programme. We argued that the rationale behind the projected demands for power, navigation and irrigation water was speculative and took little account of the

difficulties encountered in the basin. Now we ask does the design of the system minimize the investment costs? The question requires the answer to three further questions: 1. are both projects necessary; 2. are they designed to the least cost to satisfy identifiable objectives, and 3. if both dam projects are considered necessary are there any cost advantages in staging their construction? The issue of economic demand is inter-related with these cost and design questions because the projects are designed to satisfy anticipated demands.

The Global Report found 'the degree of complementarity between the two projects is slight'.³¹ The conclusion destroys the economic justification for constructing the two dams and constructing them at the same time. Lack of complementarity means that the projects are unrelated and can be treated separately. The Global Report felt the complementarity that did exist lay in better and more economical use of the water in the lower river - in the long term.

The report argued Manantali could perform most of the functions of Diama. The delta dam is not necessary, at least in the immediate future. The report accepted a technical argument that Manantali could supply a continuous flow in the delta and lower river of at least 100 cms. The flow would push the salt water wedge back to the sea and thus eliminate Diama's anti-salt barrier function. The 100 cms flow could also give enough depth to meet the navigation objective. Manantali will have the storage capacity to release an additional 200 cms. That flow is enough to meet the irrigation demand in the valley for many years - including the perimeters Diama is supposed to supply. The only point of complementarity between the two projects would be in the long term when the flow above the 100 cms set aside for navigation is consumed by irrigation. Diama would then be constructed, its reservoir providing the depth needed for navigation in the lower river and the now surplus 100 cms flow used to expand irrigation by 78,000 ha in the delta and lower valley.

For the reasons discussed in the following chapters the two dams were

designed separately. Complementarity was not designed into them; it was assumed. Because they were not designed together as part of a system there is duplication in the benefits available from the two projects and they are over designed. When evaluating the rates of return of the system, the global report found the rates of the projects taken singly had higher rates of return than when combined owing to the duplication and lack of complementarity.

If the states are determined to construct both projects together the Global Report argued a 30 per cent saving in the cost could be made by scaling down the projects. Diama would retain its anti-salt water barrier function, but lose its storage function. The marginal cost of storing water in the Manantali reservoir is very much less (about 85 per cent) than storing water in the flat lower river valley. Manantali could take over Diama's storage function. The height of the Diama reservoir could be reduced from 2.5 to 1.5 metres IGN. Besides the cost savings for the smaller dam the lower reservoir elevation reduces the priority to construct a costly 90 kilometre long dike along the Mauritanian bank. The report excluded the costs of a proposed new St. Louis-Nouakchott road link over the dam and the cost of the navigation lock in its calculation of the stripped down plan.

The generation of 800 GWH per year of firm power at Manantali requires a reservoir level of 208 metres IGN. The level is the best solution if there were a market for the power soon after the dam comes into service.³² The Global Report argued that if the firm power requirements were reduced appreciable savings could be realized by reducing the dam height. Only the generating capacity would be reduced, not the capacity for meeting the navigation and irrigation objectives.

The OMVS disliked the findings of the Global Report. The organization criticized the consultants for deviating from the terms of reference and for questioning the objectives reached by the consensus of the three governments.³³ Faced with donor scepticism about the programme the OMVS asked the consultants to meet with the project consultants for Manantali, Diama and the navigation

projects to iron out their differences. The project consultants in their reports expressed more optimistic views of the economic demands in the valley and the complementarity of the projects. The resulting follow-up report and recommendations were a compromise. The project consultants and the OMVS gave way on some features - Diama would be reduced to 1.5 metres; with reluctance they accepted a smaller lock for Diama, deferred the decision to build a dike on the right bank, and accepted delaying construction of the Manantali power house until there was sufficient demand for the power. Gibb and Partners accepted the original reservoir elevation of 208 metres IGN in anticipation that optimistic power demand projections would be fulfilled.

The follow-up report did not, however, consider at all the Global Report's argument that Diama was unnecessary, or deal effectively with the criticism of the lack of complementarity. The OMVS in its own report challenged the assumption that 100 cms would be sufficient to stop salt water from entering the river - making Diama unnecessary. The technical studies were fragmentary and incomplete. As to how the projects do or do not complement each other, the Global Report said 'the degree of complementarity is slight' and pointed to the long-range prospects for use of the extra 100 cms to irrigate an additional 78,000 ha. The follow-up report did not directly challenge the view. It rather misleadingly detailed the 'slight' area of complementarity, with the effect of implying greater complementarity than there was. It failed to mention that complementarity was a long-term prospect.

In conclusion it would appear the design of the present development programme makes little concession to minimizing investment costs. First, no realistic assessment is made of the possibility of fully exploiting the opportunities for irrigation without regulation. As indicated by the investment plans of the World Bank there are opportunities to invest in irrigation for a number of years before returns are limited by the lack of regulation. Regulation does not significantly reduce the capital cost of perimeter development and the increased benefits in the perimeters from regulation will not offset the burden of repaying the capital investment in the dams - at

least until the non-regulation opportunities for irrigation development are fully exploited. Second, the case for the Diama project is not proven, at least in the short term. Third, even if the need for Diama is accepted, nothing is made of the possibilities for staging development - apart from delaying installation of the generators at Manantali.

The much less costly Diama could be constructed first. Much of the past investment in irrigation has been within the range of Diama in the delta and the lower valley.³⁴ Free from saline intrusion the perimeters could realize their potential for double crop irrigation. Meanwhile new irrigation perimeters could be created upstream. Diama will enable 42,000 ha to be irrigated. Adopting the average rate of irrigation development anticipated in the period 1981-1991 of 4,100 ha per year the Diama potential would be exploited in 10 years; doubling the rate to 8,200 ha per year it would take only 5 years. The delay in the start of Manantali would allow the market for its hydro-electricity to grow and thus allow a quicker return to the \$680 million investment. However, upstream navigation would not benefit from early construction of Diama. And with completion of the upstream dam a massive amount of irrigatable land would become available - 333,000 ha, 255,000 ha from the dam and a further 78,000 ha from the release of the final 100 cms of flow for irrigation use - which at anticipated rates of development of 4,100 ha per year would take 81 years to exploit; at 8,200 ha per year 40.5 years.

Alternatively, Manantali could be constructed first. At the above rates of irrigation development the 255,000 ha of Manantali irrigatable land would be exploited within 31 to 62 years. Diama could then be constructed bringing a more manageable incremental lump of land ready for irrigation of 120,000 ha - 42,000 from Diama and 78,000 ha from the release of the final 100 cms of flow for irrigation use. Such an approach would reduce the initial capital cost by \$160 million (the cost of Diama). Ideally the savings from putting off this investment could be diverted to accelerate the rate of bringing new land under irrigation. But as this study shows in following chapters, the sources

of finance are not always interested in the most productive forms of investment, and it is unlikely that much of that saving could be freely transferred away from the capital projects. The point here is that, for whatever reason, OMVS plans make no attempt to spread out the high initial capital costs for investment in the infrastructure projects or to gear construction to the capabilities of the basin states to make use of and pay for the projects.

Recurrent Costs and Foreign Exchange

The budgets of the basin states are overcommitted and do not adequately provide funds to maintain existing projects. In this context the irrigation programme, without the added burden of interest payments for the dam projects is challenge enough. The Club du Sahel and CILSS studied 29 development projects in the Sahel and found only 2 were a success.³⁵ Projects that were expected to produce revenue did not reach a level of operation where they could recover the operating costs. The governments were called upon to provide the funds to improve performance and maintain operations - a burden on the treasury they could not bear. Donors do not like open-ended commitments. They prefer to limit themselves to the implementation of the projects - leaving the costs of operation or 'recurrent costs' to the states. Donors expect the projects, like irrigation perimeters, to become fully operational when they end their investment. But for many of the reasons outlined above agricultural projects are of the kind that suffer from under-investment and under-utilization.³⁶ They require long periods to reach the point when they can become self-sustaining. Quite simply the projects themselves do not generate enough revenue to recover investment, interest, and operation costs, and the governments have too small a tax base to keep the projects operating at their designed capacity.

The dams are long-term investments for the three basin states. In the short term the projects do not respond to the pressing economic problems of the states. In the medium term the dam projects will likely worsen existing problems. Much of the investment will be spent on foreign consultants,

contractors and components. Considering the scale of investment the direct benefits to the national economies - local contractors, labour, and supplies - is small. Moreover, the states have undertaken to pay interest to donors during the implementation period of the programme. Even though the loans are on favourable concessionary terms the states will have to pay in hard currency consideration sums - perhaps \$50 million a year - without the prospects of receiving any returns until far in the future. The states are chronically short of foreign exchange and their foreign debt is excessive even by Third World standards. The states need foreign investment with more short-term impact and more immediate returns. Investment in the dams increases the balance of payment problems in the medium term and does nothing to help correct current problems.

Moreover, the impact of the dam investments may distort national planning and investment. Reportedly a 1980 French study argued that the basin states were concentrating their already modest technical and financial capabilities in the basin. Seeing river basin development as a panacea, the basin states were neglecting other regions and less costly alternatives to increasing food production. Mali has the Office du Niger projects, the Sélingué Dam on the Niger nearing completion, and opportunities for improving the yield from rain-fed crops in the high rainfall areas of the country. In Senegal there are opportunities in the higher rainfall areas of the Casamance and Oriental regions to improve agricultural production at less cost than the Senegal River schemes. Only in Mauritania are there very limited opportunities for improving rain-fed production.³⁷ However, on the floodplain it shares with Senegal in a normal year 80,000 hectares after the flood can be cultivated. Modest investment in improving flood-recession production should increase the present low average yield of .4 tonnes per hectare to over a tonne.³⁸

CONCLUSION

There is little economic justification for constructing the Diama and Manantali dams. The conditions for making an economic success of river regulation hardly exist. There is no immediate demand for electric power, generally the most profitable component of multi-purpose projects. The potential for improved navigation is at best a question mark. Irrigation must bear the responsibility for proving the dam projects an economic success.

To justify investment in the dams the irrigation perimeters must be made profitable quickly. However the problems that plague the irrigation programme do not lend themselves to quick solutions. They are social, institutional and economic. The solutions must evolve and be tested over time.

The planning perspective in the valley is backwards. It focuses on the river, not the land or the people. It is resource oriented not sector oriented. The issue is not how irrigation can justify investment in the dams; it is how does investment in the dams enhance the irrigation programme? In this perspective river regulation is only of long-range benefit. The dams will not greatly enhance the irrigation sector until the present implementation and operational problems are solved and until the opportunities for irrigation expansion without regulation have been exploited. River regulation need not be planned for many years.

The Senegal basin states have made construction of the dam top priority for development in the valley. Accepting the priority, the decision to construct both Diama and Manantali and to construct them at the same time is not an optimal solution. The slight complementarity between the dams and the duplication of benefits suggest opportunities for considering only one of the projects or staging of construction to optimize returns. The scheme is over-designed and requires an over-investment in the dam projects.

The projects will not be self-financing in the immediate future, even though the original loans are on highly concessionary terms. The basin governments will have to pay interest on the loans for the dams in addition

to the interest and recurrent cost burden for the investments in the irrigation programme. The projects will end up aggravating the most pressing economic problems of the states - their very large foreign debt and debt servicing.

This discussion suggests that the Senegal River dam project falls far short of being the appropriate plan of action for improving the welfare of the people in the valley and more generally improving welfare in the basin states. The following chapters attempt to provide some explanation of how the plan was created and accepted. They look to the interaction of technical opportunities for development and the political environment in which projects are planned and implemented. Rarely are major projects exclusively economic in conception and execution. They respond to political needs as well as economic ones; they must meet with political approval; and they are modified by political considerations. It is legitimate to ask what price politics? In the Senegal case the non-economic considerations appear to impose a very high price.

Chapter Five

ROOTS OF COOPERATION

The French conquest of their West African territories at the end of the nineteenth century united politically under colonial rule the Senegal basin. It also divided the French controlled lands into an administrative federation of eight territories - now the independent francophone states of West Africa. For Africans the federal structure of the Afrique occidentale française (AOF) could evolve in two directions - towards political unity in a federation or a cluster of separate states. The immediate political rewards of statehood without the complications of a federation proved the more attractive - and suited the French who could more easily retain their influence among eight weak governments than one stronger one - and the colonial federation was dismantled. Many Africans believed they had lost an opportunity to achieve a more worthwhile social, political, and economic future. They shared the ideal of pan-African unity and believed Africa should represent more than just a collection of territories arbitrarily created during the colonial era.

Prior to independence Leopold Senghor in Senegal fought against the 'balkanization' of the colonial federation. His neighbours within the basin, Modibo Keita in the Soudan (now Mali), and Sékou Touré in Guinea shared his goal of maintaining the unity of the federation, but not his conception of what the federation should be like. Their approach was more political and their politics more radical. They sympathized with the pan-African approach expounded by Kwame Nkrumah who stressed total political and economic independence from colonial and neo-colonial powers. Keita and Touré argued for a complete break with France. Senghor regarded such political preoccupations as arid. Unity could not be created on shared goals, good intentions and a common oppressor alone. It needed France's and other states' assistance in building up the region's economy, and mutually reinforcing technical and economic cooperation. Senghor saw

federation as the political framework allowing for a process of functional integration. Success would depend on material benefits the federation would bring, not on the political structure imposed on it. Development of the Senegal River ideally blended technical opportunity with political aspiration. After independence and the balkanization of the region Senghor became the leading promoter of Senegal River development as one means to regain some of the unity of the colonial period. The other basin state leaders shared some of his interests in the river. The problem was to find the proper arrangements to exploit the shared interests without being overcome by inter-basin conflicts and different conceptions of the political aims of river basin development.

River Development Prior to 1960

Present actions for Senegal River development are rooted in the studies, institutions, projects, and controversies of the colonial era. France controlled the whole basin and colonial administrators could think freely of the means to exploit the river for the benefit of France and the colonies. The newly independent states drew their ideas for integrative development from the technical work conducted during the jurisdictionally unfettered colonial period.

The agricultural potential of the valley was recognized early. As early as 1685 Louis de Chambonneau proposed creating plantations on the floodplain. But France made no attempt to start agricultural projects in the valley until after the Napoleonic wars. The French in their colony at St. Louis (founded in 1695) were content to trade in slaves and gum arabic. But in 1817 the English, who had captured St. Louis during the wars, forced France to abandon its trans-Atlantic trade in slaves. In an attempt to restore the fortunes of St. Louis and other colonies, and to cater for France's raw material needs the colonial administration turned to the idea of agricultural colonization. Rather than transport labour

across the Atlantic as slaves to the French plantations, the labour could be used in place. European colonists using the black manpower of the region would cultivate the sugar cane, cotton, tobacco and other crops needed in France. Louis XVIII's Director of Colonies Baron Portal chose Senegal, Guyana, and Madagascar.

By the 1819 Treaty of N'Gio Colonel Schmaltz, the Governor of St. Louis, obtained from Wolof chiefs a concession of land near Dagana at the head of the delta. The Walo, as the Wolof territory of the lower valley and delta is called, was then subject to raids from the Moors and hostility from the Toucouleur in neighbouring Fouta. After initial problems in achieving peace in the region, the colony began growing with vigour - but it soon failed. Schmaltz's successor Baron Roger (Governor of St. Louis from 1822 to 1827) had scientists of the calibre of Gay-Lussac analyse plants from the valley. Lesser known scientists came to work for the colony. Richard, a nurseryman for Louis XVIII, created an experimental farm along the outlet of Lac de Guiers into the Senegal River. The town there still bears his name - Richard-Toll or Richard's farm in Wolof. He tested about 50 types of fruit and vegetables, cereals and industrial crops for their adaptability and suitability for commercial agriculture in the colony. The settlement had a library and an agricultural society to promote scientific agriculture. By 1826, 6,500 hectares were allocated for farming to European and habitant farmers. Five years later nothing remained of the agricultural colony.

The colony failed because its crops could not compete at the prevailing market prices in France. H.B. Gerbidon, who followed Baron Roger, summarized the reasons why the crops of cotton and indigo were not competitive:

It is because the lands where we are established are less fertile, because several physical causes impede the growth of vegetation, and finally because greater expenditure is needed, especially in labour, to obtain lower yields.¹

The administrators did not foresee the physical problems from inappropriate plants, saline soils, dessicating Haramatten winds, vigorous weed growth,

irregular flooding and inadequate irrigation. Politically and militarily the colony remained insecure because of continuing hostility from the Moors and Toucouleur. Socially the local Wolof were also hostile. They did not share their chiefs' support for the scheme and would not work on the projects. They feared the loss of their land and sabotaged many of the works. The colonists were forced to use indentured labour. The French and habitant were little interested in investing in their plots and in training a skilled work force. Many seemed more interested in collecting bonuses and subsidies offered for their participation. In St. Louis the local native and métis traders feared the loss of their economic role and worked to undermine the colony.² Many of the problems were unique to the time, but others reappear in the litany of economic, physical, and social problems that trouble much later agricultural projects in the valley.

The French Government waited until 1945 before attempting another major agricultural project in the valley. This is not to say the colonial administration took no interest in the river. From 1901 the French began to monitor and study it. The river and basin had economic potential; the problem was how to exploit it given the territorial budget, the contending demands on it, and the greater interest the French had in the profitable groundnut growing region further south. The first interest in the river was improvement of navigation to reach the Soudan. Governor General Roume in 1903 wanted a deep water port at St. Louis and the river navigable for deep draught ships to Kayes in the interior territory. Shortly afterwards engineers proposed constructing a series of low barrages to maintain depth for navigation and water for irrigation. Emile Belime assessed the feasibility of cultivating cotton with a regulated water supply. In his report in 1922 he concluded regulation and cotton cultivation were impracticable because of the then unprecedented large scale of the scheme and the physical and social constraints on cotton cultivation.³ He found better prospects along the Niger River and went on to make his name as the

father of the Office du Niger. The UHEA (l'Union hydroélectrique africaine), a private power utility company, in December 1927 released a report advocating construction of a major multipurpose upstream dam at Gouina in the Soudan for power generation, navigation and agriculture.

River regulation was still in the air when the colonial federation administration established the first Senegal River institution. In 1935 it created MEFS (Mission d'étude du fleuve Sénégal) as a study group with the task of

conducting and executing all research and experimental work throughout the length of the Senegal River aimed at developing it from the triple standpoint of agriculture, navigation, and power production, within the territories of Senegal, the Soudan, Mauritania, and Guinea.⁴

MEFS started basic technical research but was absorbed in 1938 into a new branch of the federal Public Works Department called MAS (Mission d'aménagement du Sénégal). MAS was to continue the MEFS work and in addition implement agricultural projects similar to those then getting underway in the Soudan along the Niger River. Before the war stopped its work MAS conducted a number of topographic, hydrologic, and agronomic studies, and started three small experimental perimeters, two of which lasted only a short time. The third, the 1,000 hectare perimeter at Guédé is still in operation. The studies and projects were piecemeal and sectoral. They were not coordinated in any integrated programme for development of the river.

As with the Office du Niger the territorial government wanted MAS to cultivate cotton for the French market. After the war the priority was changed to rice cultivation for the territories. In Senegal food production for local consumption had declined as farmers switched to growing groundnuts. The war exposed the federation's dependency on imported rice, the staple food of the people in the cities.⁵ In 1945 MAS was reorganized to concentrate on cultivating rice at a major new scheme at Richard-Toll. MAS planned to bring 50,000 hectares under irrigation over a 10 year period. Lac de Guiers would be used as a year-round source of

fresh water. The project was never successful and only 6,000 hectares were cultivated. The project was founded without adequate understanding of the physical conditions - soils, hydrology, pests, and weeds - and with a poorly trained and motivated work force. In 1970 the irrigation scheme was turned over to CSS, the Senegalese sugar company, to grow sugar cane.

After the war two contending factions emerged in the federation over how to develop the river. Then as now the controversy was between the merits of a downstream salt barrier dam and an upstream regulation dam. The UHEA proposal in 1927 for a regulation dam at Gouina was rejected at the time, but the company revived the proposal in the late 1940s. The proposal received support from a well respected French engineer, G. Drouhin, the President of the Comité française des grandes barrages, who prepared a report on the possibilities of regulation in 1949. MAS opposed the Gouina scheme and favoured a barrier barrage and dike in the delta near Dagana and Richard-Toll. It would permit expansion of irrigated agriculture in the delta and lower river without interfering with traditional flood-recession cultivation. The Governor General was sufficiently interested in the UHEA proposal to contract a subsidiary UHEA body in 1950 to produce a general report on river management of the Senegal under the authority of MAS. Although MAS was nominally in control of the river management study, it undertook its own study, and thus two contending plans were written. The UHEA plan called for a major multipurpose regulation dam at Gouina and smaller barrages downstream to enable ships to navigate to Kayes and to develop the potential for irrigation in the middle valley. There was no economic evaluation of the programme. The MAS plan called for four small barrages on the river, the first at Dagana. A fifth larger reservoir barrage would be constructed later near Bakel to provide depth for navigation to Kayes.⁶

Neither report was well received. The territorial government had

neither the resources nor interest to pursue major development of the river, and the Ministry of France d'outre mer in Paris was uninterested in major schemes with questionable financial return. Both plans were dismissed in reports to the minister as too costly and socially unrealistic. If eventually the projects were to be constructed the Dagana project should precede Gouina. Only the discovery of minerals or a profound transformation of agricultural techniques in the valley would make Gouina profitable. One report to the minister in 1957 concluded that in the next two decades it would be illusionary to found an important rural economic development project on rice cultivation. The human factors, which it would be dangerous to neglect, demand that the returns from traditional agriculture, that is flood-recession cultivation, be the economic foundation for development. In this context priority should be given to extending the amount of irrigated acreage - not in dam projects that would interfere with traditional practices.⁷ Neither plan was accepted and MAS was told to limit its studies to sectorial issues.⁸

Sovereignty or Federation?

While contending colonial factions argued over the direction development of the Senegal River should take, the African leaders in the 1950s were more concerned over the direction the federation was going. The direction was towards independence, but under what political structure? Should the territories become the primary political unit or should the federation be strengthened to represent African interests in Paris and in the territories? Felix Houphouët-Boigny of the Ivory Coast led the territorialists, Léopold Senghor the federalists.

Apart from pan-African idealism, Senghor had pressing economic reasons for wishing to maintain some derivative of the colonial federal system. Dakar benefited substantially as capital of the French West African federation. The city had an advanced administrative infrastructure and was

the commercial entrepôt for the federation. In the latter stages of the colonial period Dakar attracted industry to serve all French West Africa. Like the Ivory Coast, Senegal was richer than the hinterland and the colonial government redistributed much of the revenue generated in the coastal territories to pay for services in the poorer regions. But the revenue and investment into Dakar more than compensated for the direct loss of tax revenue. Without that revenue, investment, and the expanded market of the federation the Senegalese economy would stagnate.

A number of features of the colonial system favoured federation. The whole of the AOF was administered by France as a single unit, though divided into territories. The region had free movement of goods, capital and labour; common tariff, currency and fiscal policy; and centralized planning from Dakar. During the Third Republic Paris used the federation simply as a structure to control and administer the vast region. But during the Fourth Republic Africans were granted more political responsibility. They could be elected to the territorial assembly and as colonial deputies to the National Assembly in Paris. The federation had evolved and it seemed it could progress further as the political unit to represent African interests in Paris and, as first argued by radicals like Keita and Touré, gain total independence.

Second, traditional life carried on regardless of the colonial boundaries. Toucouleurs might be divided along the Senegal River into Mauritania and Senegal, but that did little to alter their way of life or ethnic unity. The Dioula traders still followed age old trade routes through Mali, Upper Volta and Niger. With no restrictions on the movement of labour, migrants from the poor interior moved to take advantage of new economic opportunities in the expanding cash crop economies on the coast. These peripheral groups had little direct political influence, but their activities did point to basic traditional links and demonstrate the lack of social and economic cohesion of the territories. If the

territories became separate and independent the new governments would have difficulty in instilling a sense of national identity or in controlling anti-government activity, such as smuggling.

Third, the federation brought Africans from different parts of the federation together and this helped forge a uniquely francophone African outlook. In the melting pots of Dakar and Paris ethnic affiliation among the new African elites was less important than their shared colonial experience and 'Africanness'. For example, much of the pre-independence generation of African intellectuals, politicians and administrators attended the Ecole William Ponty in Dakar. The effect as Modibo Keita and Léopold Senghor put it in 1959 was:

All the French West African elite for the last half century have received the same training. Whatever may have been their origin, all the cadres of the former colonial civil service went through William Ponty. This experience of rubbing shoulders together has created strong ties, a single will, and common aspirations.⁹

Inter-regional political parties also brought together the modern elite. The Rassemblement démocratique africain (RDA), formed in 1948, was the largest of the inter-territorial nationalist parties. It included members from the conservative Houphouët-Boigny, who was president, to radicals like Keita and Touré. It did not, however, have much Senegalese representation and it did not include Senghor. He had his own inter-territorial party, the Indépendants d'outre mer (IOM). Similarly, the military, civil service, federation-wide African unions, and cultural and sporting activities brought Africans together from all parts of the federation.

Not everything favoured continuation of the federation. Migrants were often resented in the coastal territories where they found work. Some of the Senegal basin territories disputed their boundaries. For example, after 250 Moors were massacred in the Hodh region of the Soudan, the colonial administration in 1944 gave the region to Mauritania. The Soudanese government demanded return of the region. Despite a realignment of the boundary in 1963, the loss of most of the area remains a potential

source of dispute.¹⁰ On the other side of the racial coin, in 1957 a group of Toucouleur formed the Union des originaires de la Mauritanie du sud to work for the creation of a new black territory in the middle valley in which blacks would be free from repression and domination by the Moors. Since independence President Senghor has never advocated the succession of the south but he did feel Senegal had a responsibility for the region should racial relations deteriorate, and periodically the issue is raised.¹¹

Despite Senegal's role at the centre of the federation and Senghor's efforts to continue it, Senegal was the odd territory out. It had much longer contact with France and a professional class had emerged that was assimilated into French cultural and political life. The contacts with the elites from the other territories was less strong than with their counterparts in France.

The most serious threat to federalism was Felix Houphouët-Boigny for he was influential and determined to dismantle the colonial federation. As the leading spokesman for the Ivory Coast, he resented its loss of tax revenue to the federation and the dominance of Senegal at, he felt, the Ivory Coast's expense. It could do much better on its own as a colony with direct ties to France. As Pierre Biarnes puts it, the Ivory Coast sought independence more from Dakar than from Paris.¹²

To counter Houphouët-Boigny's opposition to a federation based in Dakar, Senghor in 1954 proposed that the colonial federation should be split in two. One region would consist of Dahomey, Niger, Upper Volta and the Ivory Coast, with Abidjan as capital; the other would include the four Senegal River territories with Dakar as capital.¹³ These groupings were close to the economic trading configurations of the time. Senegal, Mauritania and the Soudan formed one, the Ivory Coast and Upper Volta another, and Niger and Dahomey a third. Guinea had few inter-regional links. The Soudan, as the Sahelian trading crossroads, also had fairly strong traditional trading links with the Ivory Coast and Upper Volta.¹⁴

Houphouët-Boigny at the time rejected the proposal, though ironically he formed in 1959 the Conseil de l'entente based on the Abidjan grouping.

After the January 1956 French election Houphouët-Boigny was made minister of state in Guy Mollet's government. He worked with Gaston Defferre, the Minister of France d'outre mer, to restructure the colonial federation. The reforms were passed and under the so-called loi-cadre executive authority in the federation was transferred from the Governor General and federal Grand Council in Dakar to the territorial governments. Senghor dismissed the reforms as 'playthings and lollipops',¹⁵ but Houphouët-Boigny had succeeded in his first aim of breaking the political domination of Dakar. Political life now revolved around the governments in the territories and in Paris. He would later work to break Dakar's economic dominance in the federation.

By 1957 Senghor and Keita were arguing for the federation as the primary political unit of the West African territories within the French domain. In pre-independence politics Senghor was a moderate between the conservatives like Houphouët-Boigny and the more radical leaders like Keita and Touré. The latter two supported the idea of a primary federation, but as a structure from which to achieve independence from France.¹⁶ Senghor was not eager for independence if it meant disrupting ties with France.

In 1958 President de Gaulle - clearing the decks for the coming challenge from Algeria - gave the French territories the opportunity to vote for his plan of association in which the individual territories would become part of a French community of nations. He offered no options for forming regional governments. Only Guinea, under Sékou Touré's direction (or misdirection)¹⁷ voted non. De Gaulle granted Guinea independence, but in spite and as a lesson to the other territories he withdrew all French support for the new state.

The Mali Federation

In a late bid to salvage the federal idea Senghor in October 1958 appealed to the now relatively autonomous territorial governments to form a new federation. The idea was at first popular. Delegates from Senegal, the Soudan, Upper Volta and Dahomey met in Bamako, in December 1958, and in just three days drafted a constitution for the new Mali Federation as it was to be called. But neither the French nor the Ivory Coast governments wanted it. The French might lose control of the territories and the Ivory Coast could be shut out of its natural hinterland. They put pressure on the weakly committed and economically vulnerable Upper Volta and Dahomey. These two territories withdrew and joined Houphouët-Boigny's counter group, the Conseil de l'entente, in May 1959.

Sékou Touré took an early interest in the Mali Federation. Senghor and Keita, however, misunderstood the interest and saw it as an opportunity for bringing Guinea back into the francophone fold. The Parti démocratique guinée reacted against such presumptions and restated Guinea's major political objectives - independence and African unity. Furthermore, the Senegalese government had criticized Guinea's post-independence economic performance and in reaction Touré bitterly attacked the Senegalese leadership. The acrimony poisoned relations between the two countries immediately preceding and following Senegalese independence.¹⁸

Senegal and the Soudan persisted with the federation. It took shape with Mobido Keita as Premier, Mamadou Dia of Senegal as Vice-Premier and Minister of Defense, and Léopold Senghor as President of the inter-territorial party. The leaders could not agree on who should become president and left the position vacant. The government of the new federation asked for independence from France in July 1969. After some delay President de Gaulle granted it independence in June 1960. On 20 August 1960 the federation ended. The Soudan (retaining the name Mali) and Senegal became independent states. In bitterness and mistrust the two new states

turned away from each other and it was not until 1963 that they established normal diplomatic and economic relations.

The federation was ill-starred, principally because of the differences in personality, conceptions of the federation, and politics of the leadership. The francophile cosmopolitan Senghor wanted a federation that retained links with France, or rather achieved 'independence with interdependence'. For the radical Keita - radical, yet with family roots in the traditional African aristocracy - federation and absolute independence were synonymous. Although France remained unenthusiastic about the federation, preferring to deal with the territories individually, President de Gaulle eventually did allow independence on terms acceptable to both Keita and Senghor. The two leaders differed in their conception of the structure of the federation. Senghor thought of it more as a confederation in which much of the political and administrative autonomy of the territorial government would be preserved. The federal government would provide only political and economic coordination at the top. Keita was much more centralist and wanted a unitary state. Integration offers dynamic political leaders of small weak states a larger state to exert influence, but only if they are not eclipsed by their rivals. In a unitary state either Keita or Senghor would take second place and given the tendency in African politics for the strong personalization of power the loser would be relegated to obscurity. In any head-on clash Senghor was in the weaker position. Keita had an authoritative grip on political life in the Soudan, whereas Senghor was vulnerable in Senegal. The socialist party strongly opposed him and he could not rely unquestioningly on his supporters. Tactically to strengthen his position in Senegal and to counter Keita he needed to become president of the federation. The two leaders also clashed on a number of policy issues, such as recognition of the Algerian FLN and Africanization of the civil service.

The constitution reflected Senghor's conception of a loose federation,

but it was not sufficient to safeguard Senegalese interests. Keita appointed a Soudanese as head of the armed forces of the federation without the support or approval of his Senegalese Minister of Defense Mamadou Dia. Senghor became alarmed when he learned that Keita had tried to turn some Muslim religious leaders (marabouts) against him - a sensitive point for the Christian politician who depended on Muslim rural support against his socialist rivals who had the backing of the bureaucrats in the urban areas. He finally gave up on the federation when he realized that Keita would block him from becoming president. He received tacit French support for any decision to withdraw, for the French did not trust Soudanese political intentions for the federation, particularly with regard to its withdrawal from the franc zone, removal of French military bases, and support for the FLN.¹⁹ The end came on 19 August at a council of ministers meeting in which two Senegalese ministers refused to attend. The council stripped Mamadou Dia of his duties and gave them to Keita. Dia and Senghor reacting against what they said was an attempted coup arrested the Soudanese leaders and shipped them back to Bamako in a sealed train.

In effect, as Foltz points out, Senghor and Dia favoured the federation only to the limit where they could enhance or at a minimum sustain their political power.²⁰ Or as Dia wrote reflecting on the frailty of constitutional guarantees '...the central power concentrated in the hands of one of the partners, soon becomes a terrible instrument of domination, weighing heavily on the territory of the state where it is located - in this instance the territory of Senegal'.²¹ The purely constitutional and political approach was not the way towards integration.

In the aftermath of the Mali Federation both Senegal and Mali suffered. The Malian government cut off its own best route to the sea by closing the Dakar-Bamako railway. Senegal lost the much needed revenue for the line and access to the Malian market. Mali had to rely then on long,

seasonally unreliable and costly routes through Upper Volta and the Ivory Coast. In the first critical years of the country's independence its vulnerability as a land-locked state was its most crippling constraint on any kind of development.

After the breakup of the federation Senegal was economically and politically isolated. With its large commercial and industrial capacity it had only a rump market left - its own domestic market and Mauritania. Despite a customs union treaty signed among the West African territories in 1959 designed to preserve the economic unity of the region, Houphouët-Boigny had undermined Dakar's economic domination. First the Ivory Coast imposed a tax on all goods entering the country, thus breaching the uniform tariff barrier of the states and destroying the entrepôt role of Dakar. Second, the government imposed a value added tax dependent on the stage of manufacture, which lost at least half of Senegalese industry's advantage in the Ivory Coast market and its hinterland.²² With the loss of access to Mali, Senegal also lost access to Malian beef and had to make do with the then undeveloped Mauritanian market of costly and inferior beef. Politically, Guinea sided with Mali against Senegal after the breakup and the two states went through the motions of forming a radical regional group with Ghana, the Union of African States. In the region Senegal only had good relations with Mauritania.

Mauritania

Mauritania under the leadership of Moktar Ould Daddah since 1957 stood aside from the territorialist-federal manoeuvrings. Ould Daddah's inclinations were clearly territorialist, but he had to move cautiously for the territory's very existence was in doubt. Mauritania was ethnically, tribally and politically divided; it had virtually no modern economic base (in the period before exploitation of its large iron-ore deposits); its administrative and commercial capital was not even on its own territory -

it was in St. Louis; above all Morocco claimed that Mauritania was a colonial creation which by right should belong to it. The Mauritanian leadership had to unite the disparate groups and factions within the territory, create a sense of national identity, develop a modern economic and governmental infrastructure, and obtain international recognition of Mauritania's right to exist. These tasks required continued dependence on France and Senegal. Mauritania could not turn its back on those governments that supported it. In the longer term Ould Daddah could work to reduce Mauritania's dependence on France, break the economic hold of Senegal, and steer an international course that reflected more the Arab-Moorish personality of the majority of the population and the leadership without appearing to threaten the security of its large black minority along the river.

The most important problem immediately before and after independence in 1960 was the Moroccan claim.²³ The cherifian government of Mohammed V argued that Mauritania prior to the colonial era was and should again be part of Morocco. Mauritania as an independent state was an artifice of French neo-colonialism designed to secure one of Algeria's borders. Some notable Mauritaniens and an illegal political party supported the irredentist claims and the so-called Moroccan Liberation Army which invaded the territory in 1957-1958. The French Army quickly routed the invaders. The Moroccan government mobilized Arab League and other sympathetic states' support to prevent widespread recognition of the new state and to block its admission to the United Nations. Shortly before Mauritania became independent a group of black francophone and pro-French states meeting in October 1960 at Abidjan offered Ould Daddah their support. They had come together to work out a common approach to issues then dividing the newly independent states - recognition of the FLN in Algeria, policy towards the Congo and recognition of Mauritania. Despite their support, the Soviet Union in December 1960 vetoed Mauritania's application for admission to the United Nations and Morocco continued to win allies to

its cause. As a counter to the Abidjan meeting and the following ones of the moderate group in Brazzaville and Monrovia (known as the Monrovia Group), King Mohammed V brought together a group of more radical newly independent states in Casablanca in January 1961 (the Casablanca Group). Guinea, Mali and Ghana attended from black Africa and backed the Moroccan claims. Sékou Touré accepted the Moroccan argument that Mauritania was a neo-colonial puppet of France. Keita had more opportunistic motives for he saw the opportunity to advance Mali's claims over its long disputed border with Mauritania and possibly gain some territory should Mauritania be dismembered.

President Senghor maintained his support and in 1961 and 1963 he tried without success to mediate between Morocco and Mauritania. Senegal backed Mauritania because of the economic bond and the ethnic link of the blacks along the river. Also as Mali supported Morocco Senegal tended to favour those states Mali opposed. Mauritania's future became more secure in October 1961 when the Soviet Union traded its objections to Mauritania's admission to the United Nations for western acceptance of the admission of Outer Mongolia. Mauritania's relations improved with Mali in 1963 when the governments concluded a settlement to the boundary dispute. Ould Daddah gained more confidence in Mauritania's standing and started to back away from his largely conservative pro-French black supporters. He saw Mauritania's role as a bridge in the non-aligned sense and more uniquely as the bridge between black Africa and Arab North Africa and more widely in the Arab world. He began to follow a more radical and independent line. He exploited divisions in the Arab world to win greater recognition and in 1964 he established diplomatic relations with communist states like China and North Korea. It was not until 1969, however, that Morocco dropped its claims and the two states normalized relations.

Mission d'aménagement du Sénégal to the Comité Inter-Etats

The signs at the time of independence were not propitious for cooperation to exploit the now 'international' river. The Mali Federation left a legacy of personal bitterness and suspicion between the leadership of Senegal and Mali. And attitudes in Guinea and Mali towards Mauritania were less than fraternal. In the broader context of African policies the four basin states were divided into two opposing political camps - the Monrovia and Casablanca groups. Senegal and Mauritania at independence were cut off politically, diplomatically and economically from upstream Mali and Guinea. The interest of the states in the river reflected, though less dramatically, the wider political expectations and upsets. Although the signs were not propitious in 1960 the river was still a common bond and when the states felt ready to begin the process of reconciliation in 1962 they turned to it.

As independence approached MAS was taken out of the Public Works Department and reconstituted in preparation for its new federal and international role. Most of the African staff were Senegalese but under the new statute of July 1959 Mauritania, the Soudan and Senegal made up equally the political membership. MAS in 1959 and 1960 initiated new research for the integrated development of the river which revived the controversy over upstream regulation versus the delta dam versus no dams but expansion of the irrigated land. The collapse of the Mali Federation stopped the studies, though not MAS itself. Mali did not at first formally leave the organization, but stayed on as an observer. The new state wanted its right to free navigation on the river recognized. In early 1961 Malian representatives suggested to Mauritania that Guinea should join discussions on the future of the basin and that they should all launch a study leading to agreement on the internationalization of the river.²⁴ Despite this interest Mali formally withdrew from MAS in January 1962 and it became a bilateral Senegalese-Mauritanian organization. MAS had served a useful purpose for its studies

and research had drawn attention to the value of the river. But little progress could be made towards exploitation of the resources until the political climate improved.

Although Mali withdrew from MAS in 1962 the political climate started to improve in that year. By 1962 Malian and Guinean ideological enthusiasm for their Union of Socialist African States with Ghana had waned. Sékou Touré's opposition to his francophone neighbours lessened somewhat, when in December 1961 he thought he detected the work of the Soviet Union in the so-called 'teachers plot' against him²⁵ - the first of many plots to come. He still mixed invective against France with conciliatory gestures, but he expressed willingness to resume relations with neighbours despite their 'neo-colonialist' domination. Senghor and Dia took advantage of the new mood and visited Guinea in May 1962. The leaders agreed to form a bilateral cooperation commission and on African affairs they stressed the need for rapprochement between the Casablanca and Monrovia groups of states, which split Africa as well as the Senegal basin between 'revolutionary' and 'reformist' states.²⁶

Within the basin the conciliatory spirit manifested itself in renewed interest in the river. The public works ministers met in Conakry in July 1962 and it was the first time political representatives of the four states had met since independence. Their discussions opened the door to further technical and political contacts.²⁷ Looking back to the MAS and UHEA studies they resolved the fractious controversy over upstream regulation versus downstream projects by recommending the construction of both. They set the objectives for development of the river, which in principle have remained unchanged, as: regulation of the river by means of a large storage dam at what they expected would be Gouina, Mali; the construction of an anti-salt barrier dam in the delta, and the improvement of navigation - first of all by cutting through the sand bar at the mouth of the river - and making a new port at St. Louis.²⁸

As the states had neither the financial nor technical resources to do much to reach their objectives the ministers asked the United Nations to help them launch the planning phase of the proposed development programme. The United Nations sent an eleven man mission to the basin states in October 1962 for a three month reconnaissance study.²⁹ The mission was headed by Father Emanuel de Breuvery, a Belgian Jesuit and Director of ECOSOC's Water Resources Development Centre. In the 1950s he had been a leading advocate of international integrative river basin development and he felt the United Nations was ideally suited to taking the initiative in promoting such functional international ventures. The United Nations mission prepared the way for the dominant financial and technical role the United Nations would have in supporting the necessary planning phase.

Meanwhile what would be called the 'spirit of Addis Ababa' gained force throughout Africa. The Monrovia and Casablanca groups put aside their differences to form the Organization of African Unity (OAU) in May 1963 at Addis Ababa. The basin states for their part contributed to the spirit by learning to tolerate different 'paths of national construction' and overcoming their differences. Already the Senghor-Touré meeting in May 1962 had eased tension between their governments and other visits followed. By early 1962 the Senegalese government was ready to come to an accommodation with Mali, though the presence of anti-Senegalese rebels in Mali set back the initiative.³⁰ Nevertheless representatives from both governments by June 1962 were considering normalizing relations and in December the governments agreed to form a mixed commission. At that time President Senghor had just survived a coup d'état attempt lead by his Premier, Mamadou Dia. The commission was to handle bilateral problems such as arrangements for re-opening and operating the Dakar-Bamako Railway and the releasing of Malian assets frozen in Senegal. By February 1963 most issues had been settled. Presidents Keita and Senghor talked informally during the Addis Ababa Conference in May and in the following

month they formally cemented their renewed friendship. Symbolically they met on a railway bridge over the Falémé River, the boundary tributary of the Senegal River.³¹

During the ceremony President Senghor drew attention to development of the river:

One country by itself cannot find sufficient capital and technical expertise to make for a successful enterprise. By collective effort, this river can be used in an integrative manner throughout its course. It will constitute an inexpensive means of transportation for the delivery of our products. It will be able to be used for irrigation and the supply of hydro-electricity.³²

Senghor passed off the demise of the Mali Federation as an 'absurd incident'. Keita declared that 'no further problems existed'.³³ That was not strictly true. Mali withdrew its currency from the franc zone in July 1962 with the result that it became non-convertible and this hindered repayment of debts Mali owed to Senegal. The issue lingered for a number of years.

Mali-Mauritanian relations reached a low point in early 1962 when Moroccan-based terrorists used Malian territory to stage attacks against Mauritania. But in October they came to a 'turning point' when the Mauritanian Minister of Planning went to Bamako to discuss economic and commercial matters as well as the states' boundary. This 'positive' meeting was followed in February 1963 by three days of negotiations between Ould Daddah and Keita in Kayes, Mali concluding with agreement on re-alignment of the boundary.³⁴ Mauritania's relations with Guinea improved after a Mauritanian delegation attended a party congress in Guinea in 1962 and Ould Daddah visited Guinea in late 1962.

The 'spirit of Addis Ababa' manifest at the political level continued at the technical level. Following up the landmark ministerial meeting in Conakry, the ministers of public works signed a convention at Bamako in July 1963 constituting the proposed ministerial committee - the Comité Inter-Etats. In December at Nouakchott an inter-state group of experts fleshed out the bare bones of the Bamako Convention with proposals for the first meeting of the new committee scheduled for February 1964 at Dakar.

At Dakar the ministers signed another convention enacting Mali's longed for international statute for the Senegal River. At this first meeting the Comité asked the United Nations Special Fund (the forerunner to the United Nations Development Programme) to finance and conduct pre-investment and feasibility studies for the proposed Gouina Dam, the Diama anti-salt barrier dam and another small dam at Saldé. Indicative that problems still remained, the ministers failed to agree on the formal organization, where to locate the permanent secretariat, or who to select as secretary general.³⁵

The Bamako and Dakar Conventions

The Bamako Convention (the Convention relating to the Development of the Senegal River Basin of 26 July 1963) created the Comité Inter-Etats giving it the responsibility to promote and coordinate studies and work for development of the river. The Comité was two tiered - the committee of ministers composed of one minister from each state (generally the public works minister) with one minister in annual rotation becoming president; and the secretariat directed by a secretary general with authority over his own staff and three commissions in charge of respectively administration, navigation and transportation, and hydroelectricity and hydroagriculture. The states, according to the convention, were to submit to the Comité development plans that might affect the river. The Convention foresaw a multilateral approach for securing aid. The president could represent the Comité and negotiate with international aid agencies on the behalf of the basin states. The states could make their own bilateral aid agreements with donors for river development studies and projects, but the states were to consult the Comité first. Finally, the Senegal was declared an 'international river'.

The Dakar Convention (the Convention relating to the Statute of the Senegal River of 7 January 1964) extended and filled out the institutional

and legal aspects of the Bamako Convention.³⁷ The riparian states were to submit to the Comité any plans that might affect significantly the river's navigability, agricultural or industrial exploitation, sanitation, or flora and fauna. The Comité Inter-Etats was given new duties. These included elaborating regulations for application of the convention, supervising enforcement of the regulations, collecting data, preparing study and project programmes for development of the river, informing the basin states of each others plans, assisting in the settlement of disputes, and securing technical and financial assistance.

A section of the convention concerned navigation. The riparian states were guaranteed freedom of navigation and equal access to the river for commercial shipping. Each state was obliged to maintain their sectors of the river in a navigable condition and to carry out the work necessary to improve navigability. The principles applied to tributaries, and roads, railways and canals constructed to bypass non-navigable reaches of the river.

The two Conventions laid the legal and institutional foundations for future cooperation by elaborating a statute confirming the riparians' common interest and by creating the institution with a mandate to promote development. They were the product of a number of different influences. First, after independence, there was a legal vacuum in riparian law. The basin states did not inherit from the colonial period a legal regime for the river. Unlike the Niger and Congo Rivers, the Senegal River was not considered by the Berlin Conference of 1885 or subsequent European conferences that discussed African rivers. The Act of Berlin followed the principles for freedom of commercial navigation on 'international rivers' (those rivers that traverse more than one state or form a boundary between two), namely that rivers must be free and open to vessels of all nations and any rules or regulations applied to navigation must accept the principle of non-discrimination. France, as it controlled all the territory in the Senegal basin, opposed the internationalization of the river.³⁸ Independence

left the basin states with a shelf of studies pointing out how the river might be used, but nothing on their rights and responsibilities in using it.

Second, Mali at least from 1961 when it raised the issue wanted to internationalize the river.³⁹ Its isolation as a land-locked country, especially as experienced after the failure of the Mali Federation, made free and open river transportation an important objective for the government.

Third, the Conventions declared the river to be an 'international river' and for there to be 'freedom of navigation', but the meaning was more restrictive than the concept that evolved in the nineteenth century and reaffirmed by the Niger basin states in 1963 in their own convention. The Dakar Convention follows more in the tradition of the Barcelona Convention of 1921 than the Congress of Vienna.⁴⁰ For the Senegal River freedom of navigation derives from the principle of reciprocity, not the principle of universal accessibility. The Barcelona Convention also stresses the duty of basin states to maintain the navigability of their reaches of the river.

Fourth, the fragile and tentative nature of the relations among the basin states favoured acceptance of Senghor's limited functional approach. In comparison to other African international institutions and the ones that followed for the Senegal River the Comité Inter-Etats was politically stunted - despite its ambitious goal of harmonization of planning and promotion of economic integration. It focused solely on non-political technical issues. Most African international institutions follow the OAU structure of three levels - the supreme level in the form of a heads of state conference, the policy level usually comprised of a council of ministers, and a hierarchically structured secretariat.⁴¹ The Comité lacked the supreme level. None the less the Comité had more formal authority than the Niger River Commission, which was formed about the same time. The Niger River Commission had only a consultative role, whereas the Comité had a direct responsibility for approving some aspects

of national planning. It could not, however, support its mandate with sanctions against recalcitrant member states. It depended on the unanimous support of the members.

Fifth, the United Nations helped fill the legal and institutional vacuum. The United Nations Secretariat, or more narrowly the Resources and Transport Division and its Water Resources Development Centre, had an active interest in water resource development problems and in international river issues. The Economic and Social Council had passed in the 1950s a number of resolutions directing the Secretariat to promote water resources development and calling upon basin states in international basins to cooperate.⁴² The preamble to the Dakar Convention refers directly to the resolutions. The secretariat formed a panel of experts to look at integrated river basin development. In its 1957 report the panel called upon the United Nations to take the leadership in the early stages of international river development issues 'to promote sound and harmonious programmes'.⁴³ The World Bank in the 1950s had helped Pakistan and India settle the Indus River controversy and its work there pointed to the role international organizations could have in settling acrimonious river disputes.⁴⁴ Moreover, the United Nations Secretariat had in the late 1950s a pivotal role in supporting the massive planning effort then underway on the Lower Mekong River, which involved the four basin states, twenty donor countries, twelve United Nations agencies and three foundations.⁴⁵ Its experience showed the way towards joint planning and development for integrated development of international rivers. By the early 1960s the United Nations Secretariat had a coherent view of the preliminary steps needed in arranging cooperative endeavours on such rivers. The United Nations advocated as one of the first steps the creation of river basin institutions, like the Comité Inter-Etats, to coordinate basin state policies and activities, and serve as the vehicle to channel financial and technical assistance from the international and

other aid agencies to the basin states.

Sixth, the preamble to the Bamako Convention refers to the objectives of the recently formed Organization of African Unity. The preamble views regional cooperation in the Senegal basin as in sympathy with the OAU strategy of working for African unity through the creation of new inter-African institutions and harmonization of policy in the fields of economics, transportation and communication. But at the time it was not clear whether or not the OAU saw regional organizations as obstacles or building blocks to unity. A resolution of the OAU Council of Ministers in August 1963, after the Bamako Convention was signed, conferred the OAU's blessing on regional organizations, if they met its criteria.⁴⁶ Curiously the Dakar Convention makes no reference to the OAU and its August 1963 resolution, though later agreements do.

Two Steps Forward...

The Technical Programme

The shape of future planning for the river was clear by the time the Dakar Convention was signed, but the ministers in their second meeting, at Conakry in August 1964, set out officially what the general development policy would entail - agricultural development, production of energy for industrial and mineral development, and improvement of navigation. Since then all planning has been geared to integrated development of the basin.⁴⁷ The August meeting also decided, finally, that St. Louis should be the seat of the secretariat, the secretary general should be Robert N'Daw (a Malian), and the president of the Comité Inter-Etats would be for the first year the Guinean Minister of Development, Ismael Touré.⁴⁸

The technical and financial foundations for proceeding with substantive studies were laid in January 1965. The United Nations Special Fund, upon receiving the application supported by a United Nations mission report made in 1964, approved financing for two major studies. The fund approved

a two and a half year \$1,264,000 study to determine the feasibility of constructing a hydro-electric storage dam at Gouina⁴⁹ and a \$4,611,000 five and a half year hydro-agricultural survey in preparation for longer term studies and projects.⁵⁰ Once the United Nations studies started the technical work gained a momentum that was only partly slowed by the coming crises at the political level.

The Nouakchott Consensus

Signing of the Bamako and Dakar Conventions provided the institutional setting for drawing the basin states into an elaborate planning programme. The engagement of the United Nations to conduct the planning studies provided the fuel to drive the institution. For the national leaders these events inspired thinking of how the states might evolve together politically. Guinea prior to the other states' independence posited 'unity and independence' as its twin aims. If the basin state leaders spoke generally there seemed to be a consensus emerging on the forms unity might take. The main problem to achieving practical results was the purist line Sékou Touré felt obliged to follow on 'independence'. It hampered the prospects of Guinea associating with any state that had strong ties with neo-colonialist states, in particular to France.

The year 1965 started well. Sékou Touré and Senghor met amicably and pledged closer economic cooperation and the harmonization of economic policies. None the less Sékou Touré delayed basin wide political consensus when in February he balked at attending the first heads of state meeting of the Senegal basin states. He would not have anything to do with the moderate and conservative francophone states that had just met in Nouakchott to form the Organisation commune africaine et malgache (OCAM).⁵¹ Presidents Senghor and Ould Daddah had played a major part in creating the new organizations. They wanted an organization that was acceptable to all the francophone states and in accord with the aims of

African unity as set by the OAU. In September 1961 France sponsored creation of the Union africaine et malgache (UAM), a broad based political association of its former colonies linked to its functionally oriented sister organization, the Organisation africaine et malgache de coopération économique (OAMCE). Mali and Guinea had stood aside and condemned these 'neo-colonialist' creations. Sékou Touré, after the OAU was formed, argued vociferously that the UAM sapped the dynamism from the Addis Ababa Charter.⁵² There should be no African political group to rival the OAU. Presidents Senghor and Ould Daddah were themselves unhappy with the political nature of the UAM and sought to establish a more functionally oriented grouping that could include the radical states.⁵³ The UAM was formerly dissolved in March 1964 to make way for such an organization, the Union africaine et malgache de coopération économique (UAMCE). It was stillborn for the Ivory Coast, Niger, Upper Volta, and the Central African Republic refused to join. The Nouakchott meeting brought the francophone states together to form yet another new group, the Organisation commune africaine et malgache (OCAM). Touré was not mollified, and with some reason for the OCAM never did entirely shake its political character.

Sékou Touré's refusal to attend the following meeting in St. Louis to inaugurate the Comité Inter-Etats and install its new secretary general did not stop the other presidents. They postponed installation of the secretary general, but otherwise they had a productive session. They affirmed the progress made in improving bilateral relations and their intention to work towards greater integration and African unity. Senghor declared that 'Mali could count on the friendship, affection and loyalty of Senegal'. Ould Daddah saw the meeting as 'making concrete the will for the union of the basin states and the sharing together of their potential'. Keita said 'our organization will serve as an example for other regional groups; it will constitute an indispensable stage on the route to African unity'.⁵⁴ Despite the failure of the Mali Federation,

he noted

here we are again today with our Mauritanian brothers to build a strong edifice based on the Senegal River which will be an example to the African people. I am convinced that the Comité to be installed in St. Louis will become the heart of Senegal, Mauritania, Guinea and Mali'.⁵⁵

Touré supported the idea of unity and under the Guinea constitution (and Malian) it was a national goal, but he had qualms about unions in which Guinea's pure independence might be sullied by neo-colonialist associations. In particular, as Le Monde correspondent Philippe Dracaene points out, Touré was concerned about the fate of Guinea's independent currency. Guinea in 1960 established its own bravely independent but non-convertible currency. He feared that by associating with Senegal and Mauritania, members of the West Africa franc zone, Guinea would have to integrate its currency into their monetary system, which to a large extent was controlled by France.⁵⁶

Sékou Touré's refusal to attend the February 1965 heads of state meeting was not a serious set back, though it portended events to come. The Comité held its third meeting in March and fourth in August. The ministers in March set the budget for the organization at about 32 million francs CFA (about \$128,000), examined the United Nations Special Fund planning programme, and gave authority to the president of the Comité to meet the heads of state to solve harmonization problems. In April the secretary general visited the United Nations headquarters and talked to U Thant about the start of the basin studies.⁵⁷ In August the ministers adopted two new study proposals for United Nations financing - one concerning a pilot scheme to transform traditional methods of agriculture and stock raising to modern methods; the other for a complementary survey to the Gouina study to formulate a rational plan for regulation in the upper basin.⁵⁸

Mauritania, in June 1965, withdrew from OCAM, even though Ould Daddah was the president of the organization. Its withdrawal caused some

resentment in Senegal,⁵⁹ but not enough to disrupt seriously the work of the Comité or bilateral relations. OCAM had not achieved the functional character Ould Daddah wanted, and when Moise Tshombe's Congo - then the bogy in African radical and non-aligned politics - was admitted Mauritania withdrew. The move asserted Mauritania's growing independence from its traditional supporters and helped secure Arab support. Egypt and Mauritania's strongest Arab supporter Algeria strongly opposed Tshombe's regime. Ould Daddah was negotiating important financial and technical assistance conventions at the time with them and he did not want to alienate them.⁶⁰

Ould Daddah did not turn away from his basin state neighbours, however. He along with the other presidents enthusiastically supported the Comité. Although the Bamako and Dakar conventions did not provide for heads of states meetings the presidents decided to meet for a second time to further inter-state links. They met in Nouakchott in November 1965. No doubt the fact that only Senegal now remained in OCAM made the atmosphere more agreeable to Sékou Touré, for he attended, even though from June he had been attacking Senegal's support of OCAM.

At Nouakchott the presidents proposed integration measures that had been germinating for some time. The Comité Inter-Etats was fine as far as it went and it showed the value of the functional approach. They now felt ready to extend it to other important areas of national life. The four states shared a strong link in the river, but cooperation need not be limited to it. They could form a 'sub-regional group' as part of a wider West African regional group. The presidents first discussed expanding their integration efforts at an OAU conference of heads of state at Cairo in July 1964, where they had talked informally.⁶¹ At the inauguration of the Comité in February 1965 the three presidents attending again discussed expanding the level of cooperation.

The heads of state gave Ould Daddah the task of contacting the other heads of state in West Africa to determine their interest in participating

in a West African group. The other presidents' trust in giving Ould Daddah the assignment was an indication of the international progress he had made personally and for his country since the early days of independence when the very existence of Mauritania was questioned. Mauritania in 1965 was largely outside of antagonistic foreign policy alignments that divided the region. Its pursuit of the role as bridge between black Africa and the Arab world only made it friends and its support of the OAU and functional African organizations won it credit. At that time Ould Daddah was the only head of state of the four that would be welcomed in all the capitals of West Africa.⁶²

At the Nouakchott conference the presidents instructed the secretary-general of the Comité to prepare a statute for the economic integration of the basin state subgroup. The economic ministers were to discuss harmonization of national development plans and reinforcement of cooperation among the states. The presidents agreed to meet annually and scheduled the next conference for November 1966 in Labé, Guinea. The final communiqué rather got carried away with geographic symbolism. It envisioned cooperation not just around the Senegal River but more grandly cooperation around the major rivers of West Africa with their source in the château d'eau, the Fouta Djallon of Guinea.⁶³ None the less the meeting introduced a new stage in West African integration leading to the formation of the Organisation des Etats riverains du Sénégal (OERS) in 1968 and the Economic Community of West African States (ECOWAS) in 1975.

The Nouakchott consensus initiated a productive year for the Comité. It met three times in 1966 - in Bamako in February, in Nouakchott in March, and in Dakar in August. In February the ministers looked at the problems of establishing the sub-regional group. They agreed to procedures for working with the United Nations, then its only source of technical and financial aid. They partly re-organized the Comité. Officials of the secretariat were made employees of the Comité and they would no longer

be responsible to their national governments. The secretary general was given power to conceive, orientate, and control technically and financially the projects.⁶⁴ The Bamako Convention stipulated three commissions to supervise planning, but the Comité had not been able to employ enough competent personnel to get them going. The president was asked to obtain officials from the basin states and foreign experts to staff the organization. This implied an increase in the budget - though in 1967 the Comité secretariat still had only eight full time employees.⁶⁵

In March 1966 the ministers discussed issues relating to navigation, erosion, the creation of pilot irrigation and livestock projects, and the economic integration of the states.⁶⁶ The August meeting was devoted to the latter topic in preparation for the forthcoming heads of state meeting scheduled for November.⁶⁷

From the beginning of June to the middle of September an interstate group studied the basis for economic cooperation and recommended for the long term to take advantage of Gounia power and nearby iron ore deposits by constructing a large steel mill. The group also reported the need for certain common institutions for scientific and technical cooperation, transportation, trade, and medical activities.⁶⁸

The United Nations Special Fund, the Resources and Transport Division of the United Nations and the Comité jointly announced in October 1966 the plan of operation for the upper basin regulation studies. But the contract for the studies was not signed until the following year - five years after the basin states first asked the United Nations for planning support. The contract was awarded to a consortium of European consulting firms who adopted the name Senegal Consult. In November 1966 the plan of operation for a hydro-agricultural study was announced. FAO was to carry it out.

One Step Back

By the beginning of 1967 progress had been made at the functional level but at the political level relations deteriorated. The consensus of the November 1965 heads of state meeting in Nouakchott quickly evaporated. Despite Touré's attendance at the meeting, he had earlier in the year vociferously attacked OCAM. As a result of Guinea's ill managed economy and the consequent decline in the standard of living, Touré faced wide-spread domestic opposition. In the now familiar response he struck out at France, other powers, and his neighbours. In November, about the same time as the president's meeting, he accused France, the Ivory Coast and its Entente partners of complicity in a 'traders plot' against his government and he broke off diplomatic relations with France.⁶⁹ In 1966 Senghor and Senegal started to feel the sting of his invective. In January the Guinean government announced that Guinea would not attend the First World Festival of Negro Arts and Literature, an event to be held in Dakar and which Senghor strongly promoted. It is reported that Senghor could never forgive Touré for this rebuff.

Senegal was the refuge for large numbers of Guinean exiles and in April 1966 a group of them formed an anti-Touré party. In June Touré accused Senghor of supporting them and letting France establish a training camp of 'anti-Guinean' factions. Senghor, offended by the accusation, 'froze' relations with Guinea. He declared that he would not attend the next meeting of the Senegal Basin heads of state, scheduled for November 1966, unless Touré publically retracted this accusation.⁷⁰ Touré did not and the meeting was not held. In January 1967 he suspended Guinea's participation in the Comité Inter-Etats. He would not lift the suspension he said, until the members of the Comité pledged not to permit foreign powers to strain fraternal basin state relations. He also suspended relations with Senegal until in his eyes Senghor's attitude was motivated by defence of African and Senegalese interests and not the African policy

of France.⁷¹ He noted that

each time Guinea has had excellent relations with the French government, her relations with Senegal have been excellent, but each time Guinea has had bad relations with the French government, Senegal immediately aligns herself with the French position in order to denigrate and attack Guinea.⁷²

Modibo Keita also faced increasing popular discontentment arising from his government's poor economic performance. Instead of, like Touré, turning on his neighbours to distract domestic opposition, he sought to strengthen his relations with them as a means to promote development. He balanced a revolutionary policy at home with a flexible and pragmatic foreign policy.⁷³ In December 1966 he returned to Dakar for the first time since the night in August 1961 when he and his Soudanese companions were expelled and sent back to Bamako in a sealed train. Forgetting the past he effusively praised his Senegal host's pre-independence efforts to prevent the balkanization of the old colonial federation. He stressed the need for greater economic cooperation and saw for the Comité an exemplary role in drawing together the disparate West African states into first a sub-regional group and then a broader West African group. With the limited size of Mali and Senegal, Keita declared, they could never solve their economic problems alone.⁷⁴

After Guinea's withdrawal from the Comité no ministerial meetings took place, but the secretariat continued with its work. Plans of operation for two more major studies were approved - water regulation in the upper basin (24 February 1967) and navigation-port studies (8 May 1967). By the end of the year work had begun on the four major foundation studies - the two above, the Gouina Dam study and the hydro-agricultural study - though the Guinea government did not allow United States consultants on Guinean territory to collect data until 1968. The United Nations Special Fund had committed about \$8 million to carry them out. The states were obliged to provide counterpart funding in species and kind for \$2.8 million.⁷⁵

The OERS

Modibo Keita and Ould Daddah were anxious to repair the rift and they mediated between the two feuding leaders. The improvement of relations was marked by a resolution of the congress for the Parti démocratique de Guinea which urged the government to normalize relations with Senegal and resume its participation in the work of the Comité. The heads of state met - one year late - in Bamako in November 1967.

The four presidents returned to the theme of the last conference, and resolved to continue working for creation of a West African regional group and a sub-regional group centred on their common link, the Senegal River. They renewed Ould Daddah's mandate to contact other West African heads of state and supported a proposal that President Tubman of Liberia host a West African heads of state conference in April 1968 in Monrovia. In December Ould Daddah visited all the capitals of West Africa to raise support for the Monrovia summit. As for the Senegal sub-regional group, the presidents called for a series of ministerial meetings to prepare the way for the formation of a new organization at their next meeting in March 1968 at Labé, Guinea.⁷⁶

Preparations went according to plan. The ministerial meeting that followed renewed the budget at approximately \$128,000, each state to pay an equal share, and re-elected Robert N'Daw as secretary general.⁷⁷ The second meeting, held in February 1968, which included the foreign ministers, drafted a statute for the new sub-regional organizations. The statute was completed by a special enlarged ministerial meeting later in February, and a meeting of the foreign ministers in March at Labé.

On 24 March 1968 the heads of state in Labé approved the new statute.⁷⁸ The function of the Comité Inter-Etats became subsumed under the new organization, the Organisation des Etats riverains du Sénégal (OERS). River development became just one aspect of the new organization's wider mandate.

The Statute

The objectives of the OERS were broad. The states in the Statute of the OERS committed themselves to promote the harmonization of development plans not just for the river, but also for 1) agriculture and stock raising; 2) education, training and information; 3) public health; 4) industrial development; 5) transportation and telecommunications; 6) commercial exchanges; 7) judicial cooperation, and 7) civil and commercial legislation. Under the statute the states were to promote, in conformity with the OAU Charter, the creation of a West African group of states with a view to the realization of African unity.

The structure of the OERS was to have three deliberative and four executive organs. Unlike the Comité Inter-Etats, the OERS had as its supreme body the conference of heads of state. The conference made policy decisions regarding cooperation, development and general economic policy. It was to meet once a year in ordinary session. Each state had one vote and all decisions had to be unanimous, with all four states present. Decisions were binding on the states.

The council of ministers was the executive body, its structure similar to the heads of state conference. The council was larger than the ministerial council of the Comité - three members of ministerial rank for each state rather than one. It was to meet twice a year, one of the sessions to precede the regular heads of state conference. The council elaborated and proposed general policy relating to the objective of close cooperation and development. Again decisions needed the unanimous support of the member states. Where decisions were not unanimous the council had to refer the issue to the conference. The council was responsible to the heads of state conference.

The statute created an interparliamentary committee composed of five deputies from each state. Its functions were to follow the activities of the OERS and keep the national assemblies informed, and to be available

for consultation by the council of ministers. It was to meet twice a year.

There was a secretariat headed by an executive secretary. The secretariat located in Dakar (no longer St. Louis), prepared the budget for approval by the council, or the conference of heads of state when the budget exceeded 50 million francs CFA about \$200,000 (by 1970 it was 65 million). Under the executive secretary there were three secretary generals - one for the management of the Senegal River, who took over the duties and functions of the secretariat of the Comité Inter-Etats as set out in the 26 July 1963 Bamako Convention and the 6 February 1964 Dakar Convention; a second for planning and development, who was charged with studies aimed at the harmonization and coordination of national development plans and elaboration of a programme for economic integration; and a third for education, social and cultural affairs, who had similar duties to the planning and development secretary. The secretary generals were responsible to the executive secretary who in turn was responsible to the council of ministers.

Gautron notes that the heads of state conference is characteristic of African organizations. It reflects the leading role of the heads of state in African international relations, the subordinated role of the diplomatic service, and the absence, because of financial limitations, of a diplomatic network among the states. Regular conferences with a supporting secretariat assure permanent administrative links among the member states.⁷⁹

The Labé constitutive conference passed a general resolution that incorporated the recommendations from the sessions of the preceding working groups and ministerial meetings. The resolution expanded on the OERS objectives to promote development, economic independence, and harmonization and coordination of plans and activities in a wide variety of fields. It suggested various institutional arrangements. These included arrangements for animal health, resource inventories, maritime fishing, coastal shipping, joint regional industrial and mining research. It

also recommended far reaching common approaches for institutes, programmes and inter-state communication in the fields of cultural affairs, education, health and migration.⁸⁰ The resolution implied a level of cooperation and the achievement of a degree of integration that the states had hitherto shown little ability or will to accomplish. If nothing else the resolution set the agenda items for the innumerable ministerial and inter-state experts meetings that took place in the coming three years.

Great hopes were placed in the new organization. The Senegalese saw it evolving into a 'confederation' - not of any existing type but a 'confederation sui generis'.⁸¹ President Senghor called it a landmark in African relations, 'the first time that (African) states are creating a confederation'.⁸² Sékou Touré agreed that it was a confederal organization, but he expressed a more expansive view: 'it must end up as rapidly as possible in the form of a unitary state'.⁸³ President Keita was more circumspect noting the political differences between the more socialist and liberal states. But the problems could be overcome, he thought, and each state's citizens 'should regard themselves as citizens of the Senegal River states rather than as Malian, Guineans, Mauriticians, or Senegalese'.⁸⁴ Ould Daddah called the OERS an economic, social and cultural cooperative organization, in effect a political organization. He stressed that the OERS 'responds to the definition that the OAU gives for regional sub-groups and that is created in the framework of the OAU'.⁸⁵

Domestic Instability and Regional Dissension

Formation of the OERS set off a round of inter-state meetings to realize institutionally the aims of the Labé agreement. In July the council of ministers appointed the secretary generals with Ahmed Ould Daddah, the Mauritanian President's brother, as executive secretary. Nationals from the three other states filled the three secretary general posts. Salif N'Diaye, a Malian, was made secretary general responsible for the Senegal

River planning and projects, replacing his fellow countryman Robert N'Daw the secretary general of the Comité. More meetings followed, which illustrate the ambitious scope of the new organization: a ministerial meeting in August to discuss trade and the founding of a film institute; an experts meeting in September to discuss coordination of national development in the areas of industry, mines, geology and power; another experts meeting in October on fishing; also in October a meeting of unionists to discuss closer cooperation; in November the first meeting of the ministers of transport, post and telecommunications to discuss coordinated navigation of the river, the creation of an inter-state navigation company, construction of a postal and telecommunications training centre, pooling of telex facilities, ship-building and repair facilities.⁸⁶

The productive calm did not last. On 19 November 1968 the Malian army overthrew their government and arrested Modibo Keita. The coup paralysed the political work of the OERS for more than a year. Keita's overthrow particularly upset Sékou Touré, for whom Keita was a radical ally. Touré's response, by past behaviour, was rather muted; fearing, it was thought, the breakup of the OERS, his public criticism of the new regime was restrained.⁸⁷ As president of the OERS that year Touré called an extraordinary summit on the 'Malian political problem' to determine whether Mali should be allowed to remain within the OERS.⁸⁸ Radio Guinea claimed Mali had been invited, but the new regime did not respond. At the 'friendly' three-power gathering in November the presidents decided that the Malian problem should be settled at a special meeting before the scheduled heads of state conference in March at Dakar.⁸⁹ Radio Conakry reported that the presidents agreed before any of them revived bilateral relations with Mali 'the Malian authorities must first define their attitude towards the OERS'.⁹⁰ The new and inexperienced leadership, headed by Moussa Traore, was not yet ready to face the other presidents and did not respond to Touré's invitation. The meeting did not happen

and Touré suspended Guinea's participation in the OERS. The investigative studies funded by the UNDP continued, but there were no inter-state meetings to continue the process of economic and political integration.

In the spring the new regime started to mend its fences with Senegal and Mauritania. Traore visited Dakar and Nouakchott. The communiqué of his meeting in April 1969 with Senghor noted that both presidents restated their attachment to the OERS and agreed to consolidate the organization, which they saw as 'one of the essential instruments in the rapid achievement of the development targets of the four basin countries'.⁹¹ Traore's foreign policy, and his domestic policy, did not break with Keita's. His meeting with Ould Daddah was equally successful. But for the time being neither Guinea nor Mali was ready to resume bilateral relations.⁹²

Once the Malian regime had gained some confidence, Traore wanted to restore harmony with Guinea. With the help of Ould Daddah, Touré agreed to send a ministerial delegation to Bamako and Kayes. Traore acceded to the Guinean request not to put Modibo Keita on trial.⁹³ At the Kayes there was agreement that the political work of the OERS should resume. In October 1969 a meeting of experts from the basin states on cattle problems signalled the renewal of the OERS.

Once the OERS resumed operation the financial commitment and ability of the states to sustain the organization's technical work came into question. The start of the five major UNDP sponsored studies, costing in total about \$13.5 million, obliged the states to counterpart financing of the equivalent of \$3.7 million for the period 1967 to 1971 on top of the states' contributions to the OERS budget. The states found this modest commitment difficult to bear and the council of ministers at their second meeting in July 1968 asked the executive secretary to find a way to lighten the counterpart payments. Some states were in arrears in their payments and were not supporting the projects. As a consequence a number of proposed studies were shelved.⁹⁴ On the other hand, despite

suspension of activities the states continued to contribute to the OERS operating budget.⁹⁵

On the United Nations side there were problems in coordinating the criteria of the executing agencies. The UNDP favoured the study of projects likely to realize a profit quickly; the FAO wanted to support studies capable of being implemented quickly; while the United Nations Resources and Transport Division, which was overseeing the navigation and river regulation studies, had a much longer perspective - twenty-five to thirty years - for conducting an integrated river basin and industrial development programme for the basin.⁹⁶ To rationalize assistance the UNDP after meeting with OERS in October 1969 announced that a ten year programme of activities was being drawn up and would be ready for the following year.⁹⁷ The United Nations would harmonize its approach, but the different criteria of assistance agencies would still be a major problem in the financing stage.

In January 1970 the council of ministers met for the first time since July 1968, followed a few days later at the beginning of February by the overdue annual conference of the heads of state. Abdou Diof, then Senegal's minister of planning and industry, commented to the ministers that the Malian coup crisis had forced members 'to reconsider and take stock of the exact value of the organization'. He added that the aim of the organization remained 'the gradual integration of the economies of the four member states, while continuing their effort to achieve a West African regional group, as well as genuine unity in Africa through the OAU'.⁹⁸

The ministerial and heads of state sessions were particularly productive. The ministers proposed a consultative commission to replace the interparliamentary commission. The new commission would be similar to the previous group, but expanded to include seven representatives from each state - four deputies and three representatives from socio-economic groups such as trade unions. The executive secretary's position was

affirmed, and the budget increased to 65 million francs CFA to finance current expenditures. The ministers made a number of other decisions concerning the broader integration objectives of the OERS in the areas of industry, rural resources (including a survey of the potential for rational use of hydrologic resources for irrigated agriculture in the Niger basin), energy, telecommunications, harmonization of legislation in mining exploitation and codes of investment.⁹⁹

More significantly the ministers decided formally the river basin development programme. By that time Senegal Consult had identified the most likely projects for regulation of the river. The consultants early on rejected the upstream Gouina site for technical and cost reasons. Senegal Consult concentrated its studies on three other sites - Gourbassi, 240 kilometres up on the Falémé River on the Senegalese-Malian border, Galougo on the Senegal River itself in Mali, and Manantali upstream of Galougo on the main Bafing tributary. Gourbassi would cost only about \$45 million (1970 estimates), but it only partially satisfied the states' objectives. With storage of 2 billion cubic metres of water it could assure only 100 cms flow below Bakel - not enough to permit navigation and extensive irrigation downstream - and it would generate 104 GWH per year and there would be no irrigation for Mali. Most important for Mali Gourbassi would not open Kayes to year-round navigation. Galougo had none of these problems. Its storage capacity of 30 billion cubic metres could regulate the river below Bakel at 500 cms - more than enough for irrigation and navigation - and it would generate 1,520 GWH. But it was costly, more than \$180 million, its reservoir would cut the Dakar-Bamako railway line and necessitate a costly realignment, and too much of its storage would have to be used to maintain artificially the annual flood in the transition period from flood-recession to irrigated agriculture. It was more suitable as a long range-development. Manantali met the power, irrigation and navigation objectives and it was less costly - about

\$120 million (as estimated in 1970). Its 19 billion cubic metres of storage would provide a flow of 300 cms - adequate for both irrigation and navigation to Kayes. In the transition period it could artificially supplement the flood from the unregulated Falémé and Bakoye tributaries - which account for 50 per cent of the Senegal's flow - and generate 800 GWH.¹⁰⁰

A ministerial resolution (No.13/70/CM-SG-D, 30 January 1970) decided the river should be regulated to meet the navigation, power and irrigation objectives at 300 cms. The regulation dam would be constructed at Manantali. Although no pre-investment studies had yet been undertaken navigation projects and a delta dam would also be a part of the first phase of the river development programme.

The old argument about whether to invest in a regulation dam or an irrigation barrage in the delta was not entirely put aside. The Malian OERS Secretary General in charge of the river programme, Salif N'Diaye, felt the delta dam was unnecessary. But President Senghor, who during the 1960s was the strongest advocate of river development, wanted both projects. He was reluctant to base the programme on one project located entirely within Mali. He wanted some security for Senegal and the delta dam was it. His demands were supported by the French.¹⁰¹

In 1960 the Senegalese government formed OAD (Organisation autonome du delta) to take over the irrigation work of MAS and promote rice production in the delta. A similar organization was established in 1961 for the rest of the valley in Senegal - OAV (Organisation autonome de la vallée). The first major undertaking was construction of an 84 kilometre long dike along the left bank of the river between St. Louis and Rosso to protect 30,000 hectares of land from saline intrusion. In the colonial period MAS planned such a dike to be constructed in conjunction with a dam in the delta. The French aid agency FAC (Fonds d'aide et de coopération) financed the delta dike and supported the effort by SAED - OAD's successor, created in 1965 - to introduce controlled submersion irrigation to the

diked-off land. In the period from 1959 to 1969 FAC invested about \$7.4 million in the delta and lower valley irrigation projects, about 18 per cent of its total project loans and subsidies to Senegal, the greatest part of the investment going to the delta projects.¹⁰² Thus French interests centred on the lower river and delta and favoured the delta dam over the more costly and seemingly less practical upstream regulation dam. Incidentally by 1970 it was clear the controlled submersion approach was not suitable to the Senegal basin and SAED with FAC support was preparing to launch a more technologically sophisticated and expensive approach to control irrigation water.

Following the ministerial meeting the heads of state met in conference. Sékou Touré before the conference argued for 'intellectual liberation'. The OERS states had enough trained personnel to 'liberate themselves from expensive and dangerous foreign technical assistance'. He concluded that Guinea was ready to belong to 'any independent monetary zone - at the time a major problem to greater economic integration'.¹⁰³ Guinea still remained outside the CFA franc zone and its sily could still find few buyers in foreign markets. Mali also had its own currency, but it was associated with the CFA franc. The creation of a common currency, a development bank, common customs and trade regulations were on the agenda and agreed to at the heads of state conference. But Touré's attachment to currency, untainted by neo-colonialism, and Senghor's support for the French-backed stable CFA franc were obstacles to creating a common currency that conference resolutions could not easily remove.

The heads of state conference started off a new round of ministerial and expert meetings. A meeting on transportation in March 1970 urged co-ordination of railway activities, common classification of roads, establishment of a shipping code, creation of a coastal shipping firm and an office to coordinate all sea and river shipping.¹⁰⁴ In April the finance ministers adopted recommendations for creation of a common market,

customs cooperation, a single currency, and measures for enhancing economic cooperation, solving trade problems and development of resources. Ismael Touré's comment at the meeting that in common market, exchange, customs union and development problems 'we must go beyond the planning stage',¹⁰⁵ indicates that in these areas integration was more verbal than real. The same applied to other areas, except for the work being done by the United Nations in their planning studies.

The meetings went on. In May 1970 the OERS stock breeding commission met for the fifth time, in June there was a ministerial conference in which a three-phase navigation plan was adopted and another which drew up a list of sub-regional industries to integrate. The executive secretary was to study the requirements for the industries and the problems of harmonization of investment codes and existing industry.¹⁰⁶ At Nouakchott in late June the council of ministers approved the budget for the OERS at 76 million CFA, up from 65 million the year previously. The ministers also approved a development budget of 112 million francs CFA. The new consultative commission met for the first time in July and supported the recommendations for a common market and monetary system. In October at Conakry the cultural commission met for the first time and discussed creation of a common policy for cultural development, elaboration of an action programme, and various measures such as sporting events to promote inter-basin contacts.¹⁰⁷

The Final Crisis

On 22 November, 1970 a sea-borne force of Guinean exiles, with some Portuguese military support, attacked Conakry and almost succeeded in overthrowing Sékou Touré and his government. The Portuguese were eager to be rid of Touré because of his support for the liberation movement then fighting in neighbouring Portuguese Guinea (Guinea-Bissau). Once again crisis in Guinea brought the political work of the OERS to a standstill.

Touré wanted assurances of support from the OERS states and in a special council meeting two days later - asked for by Touré - the ministers condemned the Portuguese aggression. In a now familiar pattern Touré did not limit his accusations and attacked the Senegalese government for harbouring Guinean exiles who had taken part in the invasion. In January 1971 Senghor responded by recalling his ambassador in Guinea and expelling the Guinean ambassador in Dakar. He said that he hoped the Guinean president 'in his moments of lucidity' would understand the significance of the decision.¹⁰⁸

The OERS held a summit meeting in January at Bamako, but Touré did not attend. As Guinea was 'still in a state of war' he sent in his place the minister of state in charge of the economy. The heads of state ritually condemned Portugal and agreed in principle to form an OERS military committee. It would promote close inter-state cooperation 'in order to parry any attempt at aggression or violation of the territorial integrity of the four states'.¹⁰⁹ The conference and the council of ministers meeting beforehand were not entirely preoccupied with Guinea. The council of ministers introduced the idea that would form the basis of ownership of the river projects. It passed a resolution approving creation of an inter-state company as a service owned in common by the riparian states.¹¹⁰ Following up Morocco's recognition of Mauritania in 1969 and Ould Daddah's diplomacy and foreign policy objectives, the heads of state recommended steps be taken to establish close economic cooperation with the Maghreb. The heads of state also reaffirmed the council of ministers' resolution of the previous year to regulate the river at 300 cms through construction of a dam at Manantali. The meeting, however, did not heal the rift between Senegal and Guinea.

At Guinea's request and under the sponsorship of Ould Daddah there followed in February an OERS meeting of foreign ministers in the neutral capital of Nouakchott. Its purpose was to settle the fate of the exiles

in Senegal, though the meeting communiqué did not mention it. The Guinean government wanted the exiles accused of taking part in the invasion - and condemned (some to death) in their absence - extradited from Senegal. The ministers agreed that Guineans who still retained their citizenship and were convicted by the Guinean revolutionary tribunal should be returned. Although Senghor disapproved of the invasion he would not hand over the exiles. The Senegalese government expelled or put under house arrest 21 people of Guinean origin and took action to amend Senegalese law to prosecute any exiles in future who plotted the invasion of another member state of the OERS. But the government argued that the OERS foreign ministers' decision was made subject to approval by the heads of state - and President Senghor for one did not approve. The proposal was 'unacceptable both to Senegalese law and to the judicial convention between Senegal and Guinea'. In that convention, Senghor argued, political exiles were excluded, and it was not possible to change the agreement to suit the interests of each government.¹¹¹

Ould Daddah, in his capacity that year as President of the OERS, worked hard to effect a reconciliation. He proposed a heads of state meeting for 20 April. But Touré felt Senghor had violated the OERS by refusing to return the exiles and he demanded that Ould Daddah 'require the Senegalese government to implement the resolution adopted by the OERS'. Ould Daddah sent two missions to Conakry to try and persuade Touré to attend - one of the missions headed by the new Mauritanian executive secretary of the OERS Mohamed Ould Amar. The answer came over Radio Conakry. After the first visit the radio announced that the Guinean government 'felt a serious concern for the future of the OERS' and accused the Senegalese government of breaking the February agreement. Later Touré on Radio Conakry announced that it would not be useful to hold another summit meeting to study the dispute between Guinea and Senegal. The meeting was postponed, as it turned out permanently.¹¹²

Meanwhile in the midst of the political turmoil the OERS entered an important new stage. Having decided the projects to construct, the OERS wanted to raise interest among potential financial institutions and donors. In March the OERS with representatives from the member states - except Guinea - met with representatives of the World Bank, FED, BAD, UNDP, Canada, France, USSR, USA and Yugoslavia for a 'round table' conference. It initiated the multilateral approach to financing for the Senegal programme. The gathering tentatively explored what had been accomplished and what needed to be done. The conference accepted the idea of Manantali to regulate the river as the basis for development and recommended that a consortium of investors be formed to facilitate financing.¹¹³

Back at the political level no progress had been made in bringing Guinea back into the fold and the Senegalese had virtually given up on the OERS. At the council of ministers meeting in June 1971, which Guinea failed to attend, Prime Minister Diouf of Senegal hinted that Senegal would form a new organization without Guinea. 'Senegal' he said 'wanted to develop its natural resources and could not wait indefinitely on President Sékou Touré for the OERS to start operating again'. The communiqué from the meeting admitted the OERS was going through a crisis and the meeting was held 'to study measures to preserve the technical institutions of the OERS until the present crisis can be solved'.¹¹⁴ But the crisis did not lessen and on October 29 President Senghor informed Ould Daddah, President that year of the heads of state conference, that Senegal would withdraw. The intention was made public in the following month at another council of ministers meeting - again without the participation of Guinea. The council conceded that 'the OERS no longer answers to the needs it was founded to satisfy in 1968' and that the three delegations 'examined concrete measures for proposals to the heads of state, which would permit attainment of the development goals of the Senegal River'.¹¹⁵

President Senghor visited Bamako immediately after the breakup of

the OERS and made the best of the situation. He argued that the OERS projects and objectives would be written up in a new perspective, over and above the old framework, towards strengthening the West African Economic Community (CEAO). 'I have the impression,' he said, 'we have taken a large step forward. I believe it is in this way that African unity and particularly West African unity will be established.' Traore, for his part, hoped Senegalese and Malians would benefit from the creation of a regional sub-group 'with a view to carrying out a united effort to exploit the vast economic industrial and organizational potential offered by the development of the Senegal River'.¹¹⁶ After Ould Daddah visited Dakar in January 1972 similar views were offered on creating a new Senegal basin sub-regional group and the wider West African economic community.

On 11 March 1972 the OMVS was created.

Integration or Cooperation?

If success of an international organization can be measured by the number of meetings and institutional arrangements it spawns then the OERS was a success. But of the grand plans for regional integration little remained. Jean-Claude Gautron, a observer of West African francophone politics, comments that one must not confuse institutionalization with integration.¹¹⁷ Proliferation of institutions and intergovernmental meetings is not a reliable indicator of integration; it is simply a characteristic of African diplomacy. Diplomatic links among states are weak and there is no strong foreign service pursuing national interests of the various government departments. What might be normal internal diplomatic activity in other regions is externalized in the West African context and carried out at the political level through the medium of regional organizations and meetings. The structure of regional organizations, such as the OERS, reflects the personalization of international relations. There is a heads of state conference and below that a council of ministers.

The council typically meets prior to the heads of state conference to negotiate the terms of some regional policy, such as monetary union, tariffs, or investment codes. The heads of state finalize the negotiations and raise new initiatives for discussion. The secretariat has a narrow mandate on its own, little discretionary power, and few if any international civil servants who owe their loyalty and pay to the organization. There is no tendency to transfer domestic administrative activities to the secretariat.

The political organs are essentially forums for multilateral diplomatic negotiation. Agreement must be unanimous, and even then it is subject to reappraisal either through the requirement of ratification or national legislation to implement agreement. The founding conventions are usually vaguely phrased allowing the political leaders to interpret them. The leaders are not restrained by judicial review or interpretation of the constitutional provisions. The organizations have no internal dynamic to sustain the organization other than that which the political leaders give it. This style of diplomacy has its attractions for states without the resources or institutions to maintain a foreign service that can adequately represent national interests. But the bloodless organizations the style engenders are not capable of advancing the stated aims of an organization, like the OERS, of integration. Success depends too much on the personal relations of the national leaders. When they neglect the organization or become opposed to each other the organization stagnates.

Despite the OERS's aims it was not an organization of integration, but a forum for negotiation and for cooperation. In this context it can be seen that the Comité Inter-Etats and the OERS did make progress in the 1960s - at least as regards river basin development. The governments agreed on common objectives for development, they brought in the United Nations to conduct and finance the planning stage, they came up with a programme of development, and they interested some potential donors in the programme. What they achieved was within their area of shared interests

in the river. The potentially troublesome issue of agreeing to common objectives proved to be no problem. The political leaders looked at the plans of the colonial era, which if taken collectively gave Mali, Mauritania, and Senegal something from development of the river. They simply upgraded the objectives until each state was satisfied it was getting something it wanted. The problems of financing such a package were a long way in the future and did not need to restrict thinking at that early stage. There was no problem in asking the United Nations to conduct the planning, and once the necessary contracts were signed and approved by the states the planning could proceed independently of what was happening at the political level.

Three of the four states and their leaders had sufficient political and economic interests to uphold the planning process, particularly as it demanded so little of them. The main problem was to maintain harmony among the fractious neighbours. The driving force behind river development and regional economic cooperation was President Senghor. River development fitted ideally into his functional approach. Domestically it would direct international development funds to a politically and economically neglected region of Senegal both for the benefit of the region and the national programme of cereal self-sufficiency. Internationally it suited his ideas of structuring Senegal's foreign relations according to, in his terms, concentric circles - neighbouring states, francophone West Africa, Atlantic Africa, Euro-Arab-African states, and the globe. Although he regarded regional cooperation with the basin states as the basis for wider African cooperation, since independence Senegal was seldom free from dispute with one or more of its neighbours. Senghor may have had the driving force to keep river development on the top of the regional agenda, but his own mistrust of Keita and especially of Touré and their mistrust of him often hindered communication among them. Fortunately Ould Daddah was ideally placed to act as conciliator.

He had interest in development of the river for similar economic reasons to Senghor's and in addition he wanted to give attention to the neglected black population to the south. Given Morocco's claim to Mauritania in the early years of independence it was prudent to emphasize the dual nature of the country and its links to black Africa. The role he saw for Mauritania on the wider international scene was of a bridge between east and west and between Arab and black Africa. In this role he worked to maintain friendly relations with all states and thus was able on his own to keep the lines of communication open when the other leaders would not talk directly with each other. Keita did not have the same interest in rural development in Mali's section of the basin, but he did feel keenly the Malian need for désenclavement, the need for Mali to have an exit to the sea, which was strongly felt after the breakup of the Mali Federation. Whether realistically or not, he saw 'internationalization' of the river and its regulation as the means to open up Mali to navigation from the outside and ease Mali's dependence on trans-shipment from his coastal state neighbours.

Sékou Touré was obviously the spoiler. Since 1958 he had been the odd man out and his personality clashed with Senghor's. Looking at the plans for the river it is clear they offered Guinea little. Planning logic suggests that the region supplying most of the water - as does Guinea - must be included in the planning for the basin. But none of the essential works were to be located there, nor could any of the projects be seen to greatly benefit the country. If he was to gain anything from basin development it would have to be political benefits.

Thus his interests were primarily political. He wanted to bring Guinea out of its political isolation and he sought African unity. But Touré was unwilling to compromise his ideas of independence and unity. The broad economic integration programme of the OERS became a means to further this political interest. Economically Guinea was cut off from the Senegal-Mali-Mauritania trade group and realistically the OERS could offer little trade

stimulus, though it might be a channel for securing much needed foreign aid. Guinea's independence criterion conflicted with the other states' economic interests. As Guinea's dismal economic performance attests - and it is rich in natural resources - independence carried greater weight than economic development. For Mali and Mauritania independence was fundamental to their domestic and foreign policies, but they were pragmatic and willing to compromise in favour of attaining their economic development objectives. Touré would not compromise Guinea's.

Touré's behaviour was influenced by a more than erratic personality and lack of incentive or rigid ideology. It can be accounted for by his reaction to domestic opposition. Not without reason, Touré had widespread and at times violent opposition to his autocratic regime. As with many governments before to divert domestic opposition he manufactured an external crisis. In each crisis of the OERS and the Comité - and Touré was the instigator of them all - the source can be seen in some domestic upheaval in Guinea. The Mali coup was something of an exception, though Touré's reaction was in part influenced by his fear of the unfortunate example it might set in Guinea.

Touré was less interested in the substantive work of the OERS than in the political symbol it represented. If the symbol became tarnished there was little left for him. Despite Ould Daddah's best effort he could not contain the animosity between Senghor and Touré, and without political accord there was nothing to keep going the work of the OERS. For Touré it did not much matter, but Senghor wanted to build on the functional progress that had been achieved. For that reason he withdrew Senegal from the OERS and formed a new river basin organization, the OMVS.

The other three states had had their own quarrels, yet after the post independence turmoil they maintained normal diplomatic relations. After 1965 Senegal had bilateral problems with both Mali and Mauritania, but the basin state organizations were not used as the forum for settling the issues.

Once the three states were on their own in the OMVS they would continue that policy. Its objectives would be limited to the functional problems of planning, financing, and implementing the river development programme. To a large extent its work would be shielded from the extraneous political problems that arose among the members. There was scope enough for political disagreement from the work of the organization itself without adding other issues. The OMVS embodied the new maturity and as a consequence the issues that affect it have much more to do with the institutional arrangements for implementing an international development programme than wider bilateral and multilateral problems of the participating states.

Chapter Six

ORGANIZATION POUR LA MISE EN VALEUR DU FLEUVE SENEGAL

With the founding of the OMVS there was an easing of the political turmoil that embroiled efforts to develop the Senegal River. Disputes arose and internal dissension still threatened international cooperation, but the dramatic upheavals of the 1960s no longer characterized the new period. President Senghor wanted the OMVS 'designed to concentrate on development rather than politics'.¹ Gone were the sweeping plans for integration in economic, cultural, and health matters. The river was what mattered and the states could put aside the other issues until they proved to themselves the value of working together. The aspirations of the leaders were lower and more realistic; the decision less symbolic. They would focus on 'development not politics' and that put a premium on arranging a modus vivendi for implementing their common work.

International river basin development is feasible when it offers advantages from cooperation not available to the basin states acting alone - the economic advantages usually derive from economies of scale. Once the states have established an area of common interest the next steps are to devise a common programme to realize the potential benefits and to create the institutional mechanisms to implement the programme. When the OMVS was formed in 1972 the broad outline of the development programme was in place - an upstream dam to regulate the river at 300 cms, a salt barrier dam in the delta, and navigation and port improvements. The package of projects encompassed each state's commonly and differently held political and economic objectives. But the states lacked the international institutional, legal, economic and financial arrangements needed to plan in detail, implement, and operate the river development projects and complementary rural development schemes.

The Senegal basin states are very poor, which makes them dependent on technical assistance and concessionary finance to implement their common programme. Thus in addition to the OMVS and the basin states, the donors are a third set of institutional actors shaping both the framework for cooperation and the substantive content of their common efforts. Donors take the most direct interest in the content of the development programme. But as the programme and the arrangements for implementing it can not be entirely divorced the donors may attempt to influence directly the institutional arrangements among the states. Generally, however, their influence on inter-state arrangements is indirect, an unseen force affecting the manner in which the basin states interact. In the planning and financing stage for the Senegal projects, the stage which this study covers, the basin states gave priority to financing of the projects. Thus as the states bargained for best advantage among themselves and evolved their common institutions, they had to keep one eye on the effect their actions had on the donors and the prospects of achieving the necessary financing. This chapter focuses on the framework for international cooperation within the basin. As the priority of the basin states has been on financing, they have given less attention to the issues associated with creating a strong long-term framework for cooperation. As a result there is less to the OMVS than meets the eye. Nevertheless the basin states have had to address a number of issues which give some indication of the innovating and constraining forces influencing the evolution of the OMVS and related inter-state arrangements. The following chapter examines the impact of the funding process on international development in the Senegal basin.

The Founding Conventions

The OMVS has much more modest objectives than the OERS, but when it was formed in 1972 it did not seem institutionally any more capable

of implementing its mandate than the OERS. The political leaders agreed on the works they wanted constructed, and they agreed on broad principles governing the cooperative endeavour, but they had not yet addressed themselves to the important provisions that would bring the endeavour to life - sharing of benefits and costs, apportionment of water and services, ownership of the works, guarantee of the loans. They also still seemed reluctant to give the river organization a freer hand than the OERS to get on with its functional tasks. Its success still depended on the political force and direction from above. The new Secretary General, Ould Amar, pointed out in a report shortly after the OMVS was created that in the reconnaissance phase - carried out by the OERS and its predecessors - the basin states could do much as they pleased without stopping the technical work. But in the second phase, which the OMVS was undertaking, progress would be very difficult if the states and the OMVS did not work closely together.² The OMVS must be allowed to guide the states towards attainment of their common regional goals. Like the 1963 Bamako Convention and the 1964 Dakar Convention the two new conventions signed on 11 March 1972 presented no obstacles in the way of the river organization taking on this role, but then like the earlier conventions they gave the OMVS no power to assume the role. They provided only a broad framework in which it would be up to the political leaders to fill in the powers allowed to the river organization.

Convention on the Status of the Senegal River

The new Senegal River Convention follows the spirit and often the letter of the Bamako and Dakar conventions, though it does stress the internationalization of the river more. From the Bamako Convention, the 1972 convention declares the Senegal River, including its tributaries, to be an 'international river'.³ From the Dakar Convention comes the declaration of the will of the states 'to develop a close cooperation to

allow rational exploitation of the Senegal River resources and to guarantee free navigation and equal treatment of the users'.⁴ As Guinea is no longer a signatory the articles do not apply to it.

The 1972 Senegal River Convention takes a stronger stand on projects likely to modify the river as regards to navigability, agricultural or industrial exploitation, sanitation or biology. In the new convention projects that might alter water levels are added to the list set down in the Dakar Convention.⁵ The earlier convention left to subsequent inter-state agreements the task of defining the conditions for executing such projects and the reciprocal obligations of the states. The new convention adopts an advanced principle of international water law that such projects must have the prior approval of the contracting states.

The navigation and transportation articles are much the same as in the earlier conventions, though the 1972 convention does not include out of hand all tributaries, as does the Dakar Convention. They are to be designated subsequently. The common principle of the 1964 Dakar Convention and the 1972 Senegal River Convention is that navigation is to be 'entirely free and open to the nationals, to the merchant boats and to the goods of the Contracting States, to boats chartered by one or several Contracting States, on an equality basis concerning harbour rights and commercial navigation taxes'.⁶ The 1972 convention adds that foreign merchant boats shall be subject to common regulations to be elaborated subsequently. Both conventions stress non-discrimination, equality, and the promotion of river traffic as the basis for charges and regulations, but the new convention emphasizes more the internationalization of the river. The states are required to approve ad hoc or through subsequent conventions provisions on exploitation regulations, taxes, fees, financing of navigation improvements, tolls, and navigation safety regulations. In the earlier Dakar Convention somewhat more discretion is given the states so long as they follow the principles of equality, non-discrimination

and promotion of river traffic. Nevertheless, one should note the provisional nature of the 1972 convention - only the broad principles are stated, almost everything else is left to 'subsequent' agreements.

The 1972 Senegal River Convention leaves open the possibility for Guinea to adhere to the Statute: 'Any Senegal River riparian state may adhere to this Convention'.⁷ The contracting states may terminate the convention, but only after it has been in force for ten years - in the Dakar Convention it was five years.⁸

The Senegal River Convention states that the 'Contracting States agree to create a joint cooperation agency which will be responsible for the application of the Convention and for promoting and coordinating the Senegal River development studies and works'. This article was filled out in the accompanying convention signed on 11 March 1972, which created the OMVS.

The OMVS Convention

The OMVS Convention of 1972 gives the new organization much the same structure as the OERS, but limits its mandate to river basin development. The OMVS is entrusted with the promotion and the coordination of the studies and works for the development of the Senegal River Basin resources on national territories of the member states of the organization. Like the OERS the OMVS has the three level structure of Heads of State Conference, Council of Ministers and Secretariat. Perhaps to emphasize the depoliticization of the organization the Heads of State Conference had no requirement to hold an annual meeting; the heads of state would meet only when they felt it was necessary. They were still the high decision-making authority and they defined the policy of cooperation and development, the general economic policy, and the extent of the OMVS's jurisdiction. As before decisions had to be unanimous and the decisions were binding on the states.⁹

Without a regular heads of state meeting the Council of Ministers took on a more powerful role. The council is the organ of conception and control and it elaborates general policy and defines the priority projects for harnessing the river and the development of its resources. It determines the contributions of the member states for financing the recurrent budget, the studies, and the works of the organization. Unlike the OERS council which contained three members for each state, the OMVS council has only one. Appointment of the members from each state is at the discretion of the state governments. The council is to meet annually in regular session, and as needs be for extraordinary session. Decisions of the council must be unanimous. The President of the Council of Ministers is appointed for a two year term which rotates among the member states.¹⁰

The Secretariat is headed by a Secretary General, who is appointed by the council for a three year renewable term. He prepares the budget, hires personnel (apart from the directors of the directorates within the Secretariat, who are hired by the council) and he serves as secretary to the council. His duties are to gather data, prepare studies, and suggest projects for development of the river. He coordinates the activities of the directorates under him.¹¹

Strengthening the OMVS

The Secretary General in his January 1973 report outlining the medium-term action programme set forth the two main tasks of the OMVS. First, it had to promote national development programmes in the basin states to complement and make productive the investment in the international infrastructure projects. Second, it had to obtain funding from the international financial and donor community to invest in the international projects.¹² To convince donors of the worth of the dam projects the OMVS needed some analytical muscle for its programme. The 1970 Senegal Consult study had selected Manantali as the best site for upstream regulation, but

gave no detailed engineering design or detailed cost estimates. A similar study, conducted by SOGREAH from April 1971 to March 1972, selected Diama as the best downstream site for a dam to prevent salt water intrusion in the delta. The Council of Ministers in their first meeting reconfirmed the basic development programme agreed to in 1970 by the OERS council, but specified Diama as the downstream site to complement Manantali upstream. The river was still to be regulated at 300 cms, navigation improved and ports built.¹³ The studies supporting the adoption of this programme had been done piecemeal and there was no analysis of the programme as an integrated whole which could form a basis for negotiating the financing of the programme. The consultant firm of Norbert Beyrard France was hired in 1973 to provide such a study. Its report and the reaction to it will be discussed in the following chapter.

In promoting the implementation of the development programme the Secretary General foresaw three types of activities:

1. those performed entirely by the OMVS, such as the planning, financing, and construction of the infrastructure projects:
2. those performed entirely by the states, such as implementation of the accompanying agricultural programme; and
3. those performed partly by the states and partly by the OMVS.

He thought the latter type should include:

- a. basic agricultural research;
- b. training of the practitioners and extension workers needed for implementation of the agricultural programme;
- c. navigation services;
- d. studies of energy supply and demand; and
- e. studies on specific problems in hydroagriculture.¹⁴

The report recognized the vulnerability of the OMVS. It had a substantial international mandate to construct the projects, but no responsibility for the associated programmes needed to make the projects a success. Without the national governments working in harmony with the OMVS, the

organization was in danger of building 'white elephants', which it could do nothing to prevent. If the OMVS could not have supranational power to make a success of its mandate it needed authority to promote coordination and harmonization among the states. The OMVS had to be able to set out the direction the states should follow and then work to keep them on course. Foreign aid could also help the OMVS fulfil its mandate. Through the aid it attracted it could sponsor research in areas vital to the success of the programme - such as agricultural research, problems in the implementation of irrigation perimeters, and the market for hydro-electricity - even though they may be within jurisdictional authority of the national governments.

The operational weakness implicitly recognized in the Secretary General's report soon became apparent. The Secretary General had little power to implement the infrastructure projects and stimulate coordinated implementation of the associated regional development programme. He had not been able to establish strong formal links with the appropriate state institutions to ensure effective coordination. Internationally, the Secretary General had no power to search for and capture aid funds. The first Heads of State Conference in April 1973 gave additional power to the Secretary General by allowing him to negotiate with bilateral and multilateral assistance sources for financing of the studies and projects.¹⁵ But the real executive power remained with the Council of Ministers, and between meetings with the President of the council. As the President was also a minister in his own government he could only be a part-time executive head of the OMVS. The organization suffered from lack of executive leadership and it languished.

The structure of the OMVS was much the same as that of the OERS and the Comité Inter-Etats, but during the period the latter two organizations operated full-time executive involvement was not so important. The 1960s had been a period of initiating studies and waiting for results.

Once the studies were underway the consultants needed little executive direction. With the start of the OMVS period the executive had to be more involved if the OMVS was to be successful in obtaining the needed investment funds and in influencing the national programmes.

The OMVS held its first multi-donor meeting in July 1974 at Nouakchott. As discussed in Chapter 7, the OMVS was ill-prepared and failed to make a convincing presentation to the donors. In the Heads of State Conference that followed President Senghor succeeded President Ould Daddah as President of the Heads of State Conference in accordance with the two year rotation rule. Senghor was worried about the lack-lustre performance of the organization and he pushed for a review of its structure. In the following year the OMVS conducted two inconclusive internal reviews and a team from the French government prepared a brief study. The French team recommended:

1. The responsibilities of the Secretary General for financing should be expanded, at least in the implementation period, in order that he be free from the need to await Council of Minister approval to finance and carry through technical matters.
2. The Secretary General should delegate some of his duties.
3. Posts in the OMVS should be occupied on the basis of competence, and
4. Posts should be defined and the need for foreign experts assessed.
5. The principles for sharing the river's waters should be defined now rather than later.
6. A catalogue of the potential points of conflict between the states should be made, and
7. The steps needed to be taken to implement the programme should be defined.¹⁶

The Council of Ministers, while expressing satisfaction with the report were rather prickly about the role the French had assumed. The council 'reaffirmed its commitment not to admit any external intervention in the definition of the structures and the responsibilities of the organization'. The council made a recommendation for the Heads of State Conference 'that the important posts within the secretariat will be confined to basin-state nationals or in their absence African experts.¹⁷ The

ministers feared that they could lose control of the OMVS to the donor countries and agencies who supplied the technical and financial support for the organization.

There was one issue the OMVS itself was in no position to consider and which the French study only referred to obliquely in its recommendation that the Secretary General delegate more of his authority. It was the personality and competence of Ould Amar, the Secretary General. He appeared suspicious and secretive, he did not work well with his staff, and he lacked the confidence of the donors. But he could not be removed easily. He was a Mauritanian and there was an informal consensus among the states that the top appointed executive position of the OMVS should be a Mauritanian. The consensus had formed during the OERS period out of Mali and Mauritania's fear of Senegal dominating the organization. The Senegalese in return for having the OMVS headquarters located in Dakar were denied the top appointment. The Niger River Commission in the late 1970s faced a similar situation. Nigeria claimed the top executive secretary post, but the government appointed a totally unsuitable diplomat to head the technical organization. Among the largely francophone membership he spoke little French and he managed to make himself unwelcome in almost all of the capitals of the nine members states. Ould Amar did not bring the work of his organization to a halt like his Nigerian counterpart, but he was unsuitable and he could not be removed without his government's concurrence - and that seemed unlikely.

The dissatisfaction with Ould Amar was aggravated by the issue of financing for the Manantali Dam. Ould Amar, supported by his government, placed his hopes on the Peoples' Republic of China to finance and construct the dam. While the Chinese were making a feasibility study of the project Ould Amar had done little to interest other donors in the project. Press reports suggest that the Senegalese government was unhappy with the gamble on China and that their dissatisfaction added to the tension in the spring

of 1975 between Senegal and Mauritania.¹⁸ Among other problems Mauritania had raised issues relating to the long standing grievance about the frontier between the two states. The boundary followed the north bank of the Senegal River, rather than the more common international conventions of the median line of the river or the channel of greatest depth, the Thalweg line. By March 1975 the Chinese had completed their study, but showed no further interest in Manantali. The Chinese gamble had not paid off. The Council of Ministers denied press reports that the work of the OMVS had become blocked,¹⁹ but it is clear Ould Amar's failure to secure a Chinese commitment to Manantali had increased the dissatisfaction with him.

After the French team made its report in March 1975 President Senghor adopted another tack to reform the OMVS and get it moving more effectively. In his capacity as President of the Heads of State Conference he invited Mamadou Aw, an Inter-Sectoral Counsellor in the United Nations Economic Commission for Africa, to review the structure of the OMVS. Mamadou Aw was a Malian engineer who after independence served as Minister of Public Works, Power and Communication, among other posts, in Modibo Keita's government. After the 1968 coup in Mali he moved to the Economic Commission for Africa. He was well acquainted with the Senegal plans for he had been on the Council of Ministers in both the Comité Inter-Etats and the OERS. He had his own radical ideas on the problems faced by the OMVS. Until then ideas on reform were concerned with strengthening the executive role of the Secretary General. Mamadou Aw thought the problem was essentially political - the Council of Ministers controlled the executive but the concerns of the council were not those of the secretariat. The ministers on the council acted primarily as representatives of their states and conducted themselves as negotiators. The council did not act as a collegial body with the states' common interest foremost. The problem was to reform the political structure to give expression to the commonality of interests and to align the political interests with those of the

secretariat's. With his background and ideas, and as a Malian, Mamadou Aw was an astute choice.

The Mamadou Aw Report

The Aw report goes to the heart of the problem of creating effective international functional arrangements.²⁰ The usual council of ministers arrangement, because of the periodic interaction of the ministers, leaves the river basin organization on the periphery of the political concerns within each of the states. Although the objectives of common development may be important to the states, the periodic sessions in which the political leaders meet and the intermittent attention they give to the programme does not favour formation of a common view. Rather the ministers respond to parochial preoccupations and work for national or political advantage to the detriment of fruitful international cooperation. The secretary general does not have the political authority in the states to counteract the political manoeuvring of his executive council. The Aw Report attempts to put the common international goals more forcefully into the political life of the states by

1. making a political constituency out of the river basin organization for the state ministers and officials involved, and
2. creating a network of coordinating and harmonizing committees to draw the states together.

The most sweeping reform suggested by Mamadou Aw was the replacement of the Council of Ministers by an executive council and a high commission. The members of the new council would be of ministerial rank, but they need not be members of their governments; they could be high level government officials. The council would retain the powers of the Council of Ministers as set out in the 1972 OMVS Convention; that is, the executive council would originate policy and have responsibility for the execution of the organization's programme. The draft convention that accompanies the report does not give a decision rule for the council, though for the

heads of state conference - which is retained - it states agreements must be unanimous.

In the July-August 1975 meeting of the Council of Ministers the Malian Minister, seemingly as a trial balloon, launched the idea of an executive council. As described in the summary report of the meeting, the new structure would be a multi-national society similar in conception and operation to the successful interstate African and French airline, Air Afrique. The report concluded that there was a profound divergence of views on the question and it should go before the heads of state.²¹ Obviously the idea of an executive council meant something more than the Council of Ministers.

The Aw Report argued that the proposed executive council would not be the usual council of African intergovernmental organizations, whose essential task is limited to preparing for meetings of the heads of state. The council would be devoted to the development programme. It would have the high authority of a council of ministers, but with the technical competence of an administrative council. That means it would not be concerned just with good administration; it would also see that the basin development enterprise is integrated into a process of harmonious and balanced development in the member states of the sub-region. The report reintroduces the OERS goal of progressive economic integration of a 'sub-region', though no emphasis is given to political integration. Neither the report nor the draft convention states explicitly the idea, but the thrust of the argument suggests that members of the executive council would be in their own governments primarily responsible and devoted to the inter-state organization and programme. Perhaps because of the reaction of the Council of Ministers in their July-August meeting the arrangements for the council were left imprecise.

The executive council would be headed by a high commissioner appointed from the council by the heads of state. The high commissioner would thus

be a national of one of the member states and have ministerial rank. He would hold office for a four year renewable term and his place on the council would be taken by a national from his country. The high commissioner guards the interests of the organization and is not a representative of any government. He would assume the powers of the President of the Council of Ministers, but unlike the President he would devote himself full-time to the organization. He also assumes the powers of the Secretary General. Hence he would take on all the executive and administrative responsibility that was shared in the OMVS and, it is argued, provide a unity of direction for the whole organization. The report suggests that the new organization be called the 'Haut commissariat à l'aménagement du bassin du fleuve Sénégal'. The high commissioner would have his own staff, known as the high commission. He would delegate his authority by means of internal regulations back to the Secretary General and the Secretariat. The report suggests that the role of the Secretary General should be to coordinate the work of the directorates of the organization. The high commissioner and his staff would take over some of the management functions, such as personnel, documentation and information, and finances.

In this way the Secretary General would be effectively neutralized. The troublesome Ould Amar could stay, but he would have no independent authority. But by the time the draft report was submitted in November 1975 the Mauritaniens had already slipped out of the trap. Ould Amar in September resigned as Secretary General and was made Minister of Hydraulic Resources in his government. In that position he became Mauritania's representative on the OMVS Council of Ministers and as Mauritania was in line for the presidency, according to the two year rotation rule, he became President of the Council of Ministers.

Within the orbit of the high commission and the executive council came five other permanent organs. Some of them, like the permanent water

commission (Commission permanente de contrôle et de surveillance des eaux) were already the subject of a Council of Ministers resolution, while the suggested national and consultative committees were operating informally. The report argued that functions and powers needed to be set out formally. Among the five organs the high commissioner and his staff would have the role as animateur and coordinator, for some of the bodies are more legislative in character than executive. The five organs are:

1. the consultative committee for coordination to assist the high commission in mobilizing the financial resources necessary and to liaise among the sources of financing and the high commission;
2. the permanent water commission to define the principles and means for sharing the river's waters among the states and different users;
3. the national committees of experts, composed of representatives of government departments involved with the river organization;
4. regional development committees, composed of the active members of the national committees of experts, to study ways to harmonize national plans and promote cooperation in all sectors of the economy where it proves useful and practical; and
5. external bureaus to represent the high commission's interests at the national levels.

The last section of the report outlines the administrative requirements for long-term cooperation and defines the cooperative framework. It foresees cooperation evolving from development of the valley's resources towards an integrated economic community of the Senegal basin states.

The Aw Report, while attempting to make the river organization politically significant on its own, was careful not to usurp the political authority of the states. The organization was not to be a supranational organization in the sense that the high commission could make policy on its own that committed the states. The paramountcy of the heads of states' decisions and those of the executive council are recognized. Reform would simply give unified and permanent executive direction at a high level to implement those decisions. None the less the problems of implementation in such a jurisdictionally complex environment were political

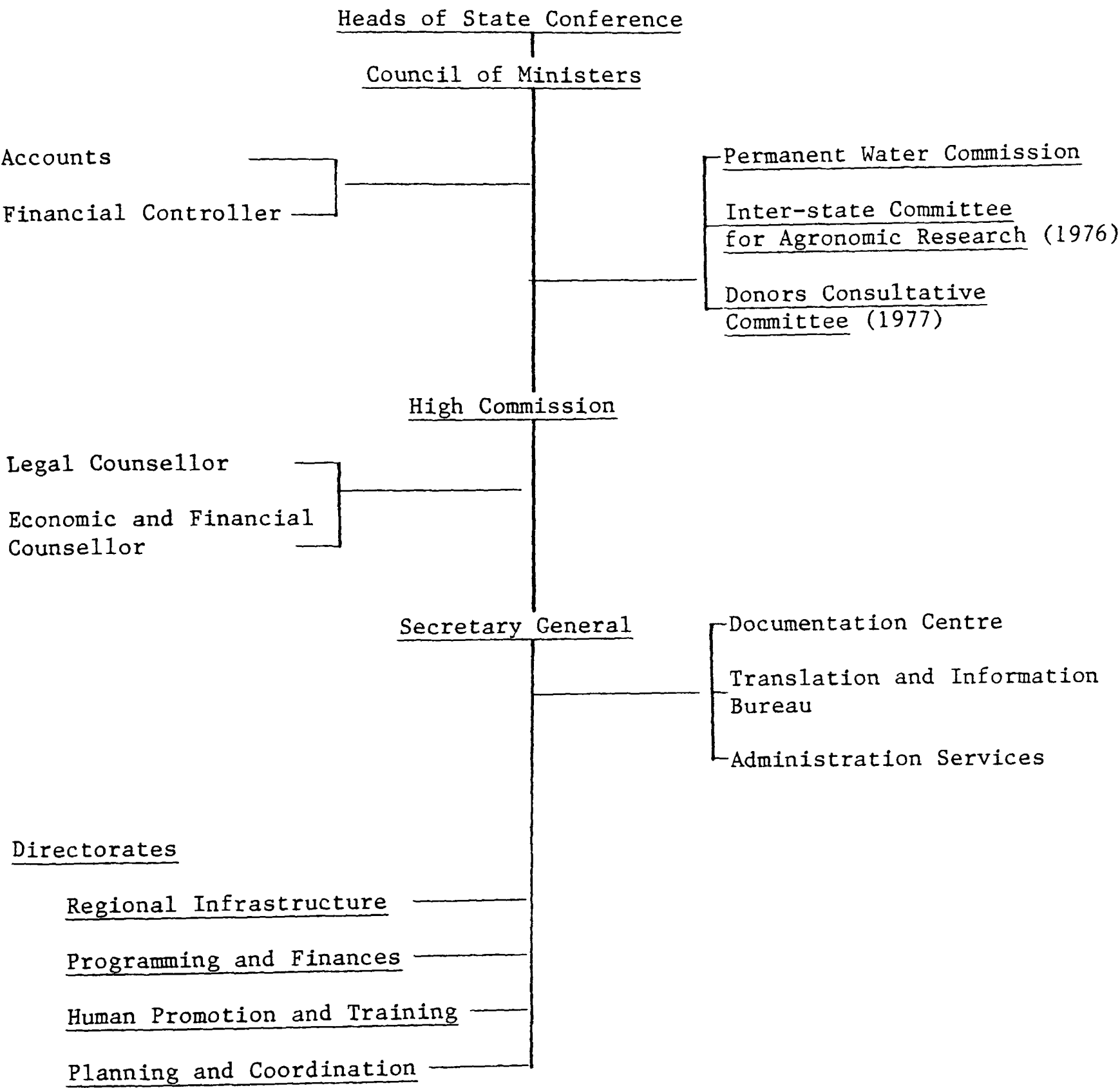
and the new organization would be innovative in that it would have the political authority to solve them. It was not possible, Aw believed, for an essentially administrative organ like the Secretariat to have the political clout to ensure coordination - even when supported by the national leaders. Nor could it secure the necessary high level of investment, for at times fund raising would require political rather than simply procedural approaches to donors.

'Nouveau Départ'

The Council of Ministers was not prepared to see itself disbanded and recreated in another form. As Ould Amar, now President of the council argued, the OMVS had done important work and it needed only to be reformed, not overturned.²² The ministers unanimously rejected the executive council idea and agreed to keep the Council of Ministers with all its power under the 1972 OMVS Convention. They, perhaps rightly, felt that economic development could not be confined to 'some commissioners who are not ministers in their states even if they have ministerial prerogatives conferred on them'.²³ They cited the experience of the Niger River Commission and the Mekong Committee, where the organizations suffered from lack of political direction from the member governments. The Council of Ministers would be retained, but they would meet twice a year instead of once.

The ministers did agree to the creation of the post of high commissioner and a high commission. The high commissioner would be nominated by the heads of state, but be responsible and accountable to the Council of Ministers and carry out their instructions. He would be endowed with the power previously held between sessions by the President of the Council of Ministers, but he would assist - not preside - at the council meetings. Ould Amar wanted the Council of Ministers to delegate any power the high commissioner would have, rather than letting him have independent authority

Figure 1: Structure of the OMVS



derived from the convention.²⁴ However the amendment to the 1972 OMVS Convention accepts the more ambiguous wording suggested by Mamadou Aw in his draft. The amendment reads: 'He takes all decisions at his level of competence, in respect of the directives of the Council of Ministers and within the limits of the power delegated to him.'²⁵

The heads of state met in December 1975 and signed amendments to the 1972 OMVS Convention creating the High Commission and the position of High Commissioner. The changes to the convention followed the ministers' recommendations. The structure for the OMVS is shown in Figure 1. As for operation it should be noted that:

1. The heads of state agreed to meet at least once a year in regular session, more often if need be. The 1972 OMVS Convention did not require any regular meeting.
2. The convention amendments did not take up Mamadou Aw's ideas for formally incorporating all the subsidiary committees and commissions. The amended convention called for only three permanent bodies - the Council of Ministers, the High Commission, and the Permanent Water Commission.
3. The post of Secretary General was given management powers over his directorates, and thus the High Commissioner could not exercise full control over the whole organization.

Mamadou Aw's bid for OMVS hegemony in river basin development failed; nevertheless he accepted President Senghor's invitation to become its first high commissioner. The Mauritanian government was unhappy to lose the top executive position and before Mamadou Aw was appointed Ould Amar, as President of the Council of Ministers, argued for the Mauritanian case. After the ministers agreed to create the position of high commissioner he wanted the post of Secretary General eliminated for he no longer saw its purpose if its powers were taken over by the new executive. Now that Ould Amar was no longer Secretary General and the position was vacant there was indeed little reason for keeping the post. None the less the Senegalese and Malian ministers wanted it retained on the grounds that while the High Commissioner was taken up with the responsibilities formerly held by the President of the Council of Ministers the Secretary General

would be needed to manage and coordinate the directorates. Mamadou Aw reflecting in 1979 on the role of the Secretary General admitted that it was unnecessary. It created an overlap in authority. The OMVG, he noted, which was modelled on the OMVS for development of the Gambia River, did not have a secretary general. The Gambian and Senegalese governments recognized that it was not needed.²⁶

In conjunction with the argument against the post of Secretary General, Ould Amar sought recognition of the informal consensus in favour of giving the top executive post to a Mauritanian. He stated the consensus as 1. the seat of the OMVS was Dakar; 2. the chief executive was to be Mauritanian, and 3. Mali, in compensation, would have nationals in charge of most of the OMVS directorates. It is clear the Senegalese and Malians had Mamadou Aw in mind for the post and did not want to be restricted to selecting a Mauritanian national. In reply to Ould Amar the Senegalese and Malian ministers said they had never heard of the consensus, it had not been written down anywhere, nor had the heads of state given any instruction on the point.²⁷ Mamadou Aw was chosen with Ould Allaf, a Mauritanian, taking the post of Secretary General.

Mamadou Aw accepted the post with hopes of increasing the mandate and power of the High Commission and the OMVS. In talks with donor officials prior to the second donors conference in June 1976 he admitted that he had trouble convincing the Council of Ministers of the need for the office of High Commissioner as he envisioned it. He had greatly impressed the donors by his performance since taking office in December 1975 and with their sympathy he asked for their support in his effort to expand the OMVS's role.²⁸ In June 1979, six months before he was removed as High Commissioner, he expressed his views on the performance and role of the OMVS. He said it was not having the impact it should. He wanted it to participate directly in the national rural development programmes tied to the Senegal River projects. The OMVS should work

with the irrigation authorities for the river - SAED in Senegal and SONADER in Mauritania - to ensure their programmes make effective use of the river when regulated.²⁹ He still had not given up working for the OMVS hegemony over water use issues in the basin.

Mamadou Aw was never able to implement the reforms he wanted. In fact he had trouble exercising freely the authority he had won for the High Commission and the OMVS. He argued that the Council of Ministers should act simply as a deliberative body making decisions on programmes and major political issues. The council should then leave the High Commissioner to get on with the job. However, the Presidents of the Council of Ministers, though denied their former authority between council sessions, continued to presume powers of executive supervision and they interfered with the work of the High Commissioner. He felt that someone without his political background would have difficulty standing up to the interference.

The heads of state met in December 1979 and decided not to renew Mamadou Aw's term for another four years. They appointed a Mauritanian, Moktar Ould Haiba, as High Commissioner. Ould Haiba, a former government minister himself, was less ambitious for the position of the High Commission and the OMVS. He has been much more single-minded (and successful) in pursuing what the Council of Ministers felt should be the OMVS's first priority - securing investment funds for the infrastructure projects. None the less Mamadou Aw's ambitions for the OMVS were not unfounded in the realities of creating a successful international river development programme. In a sense the donors have taken up the torch of OMVS reform where he fell. As is discussed more fully in Chapter 7 in 1979 a year prior to the ending of his term the Arab donors lead by the Kuwait Fund started expressing their concern about the dismal performance of the irrigation programme and the low priority the OMVS seemed to give it. Among other reforms some donors advocated a broader mandate for the OMVS in the agricultural sector.

The OMVS has great potential under its founding conventions and amendments to adopt an active role in rural development, but in practice it has had only a limited role in research, planning, and coordination of agricultural development. In July 1976 the Council of Ministers created the Comité inter-états de la recherche et du développement agricole (CIERDA) as a consultative body to aid in harmonizing national agricultural research and development programmes. The committee has two members from each state and one from the High Commission. With donor financing the OMVS undertook, in cooperation with the states, some significant agronomic research, but as for development planning there was little harmonization. For example, in December 1977 an OMVS report noted that the Senegalese and Mauritanian national plans showed that irrigation development was being concentrated within the Diama project's zone of influence. Manantali was the river regulation project, but Senegal and Mauritania had planned for little of the investment needed in the middle valley to take advantage of regulation and to prepare for elimination of the artificial flood.³⁰ Some of the donors wanted the OMVS to go beyond its limited role as adviser and coordinator to ensure that national rural development programmes were fully in tune with the international plans for river basin development.

In 1980, responding to donor reaction about the slow rate of agricultural development, the United States Agency for International Development (USAID) proposed a \$78.5 million rural development programme, of which USAID would provide \$57 million, to catalyse donor interest in irrigation.³¹ The OMVS had taken one positive step in reaction to donor criticism about the lack of progress in the agricultural sector and in October 1980 produced a medium-term development plan, the Programme indicatif des aménagements hydroagricoles du bassin du Fleuve Sénégal, 1981-1990.³² In conformity with the Programme indicatif the American proposal offers a planning and implementation framework in which the other donors can participate in supporting agricultural development in the valley. The unique feature

of the proposal is the use of the OMVS as the overseer (with USAID) in the management of the total project. National government agencies might take on immediate tasks such as perimeter construction, road building, and specific feasibility studies, for which concessionary financing would be arranged bilaterally. But for medium- and long-term studies and designs donor assistance would be channelled through the OMVS. The organization would take over planning of irrigation development in the valley and it would be given the financial support by American assistance to contract out activities to firms in the planning, construction, and operation phases. Thus national development agencies, like SAED and SONADER, would be forced to go through the OMVS to obtain donor support for irrigation and other works. What in effect the proposal advocates is that if the basin states are unwilling to give the OMVS the authority to coordinate effectively and stimulate agricultural development, the donors will provide the OMVS with the financial and technical resources to purchase that authority.

The basin states would prefer bilateral aid for their agricultural schemes, in which they would be unrestricted by OMVS plans and procedures. In the face of earlier donor challenges for the OMVS to expand its role in the agricultural sector the High Commissioner pointed to the resistance the basin states would make to such moves. Without doubt there would be resistance. The states will be torn between wishing to retain as much sovereign control as possible, without losing the financial assistance needed to fund their irrigation programmes. If the donors, as a precondition for assistance to irrigation, insist on the OMVS having a more pivotal role in the domestic agricultural sector in the valley, the interplay among the donors, the OMVS, and the basin states will be given added force and intensity. Will the OMVS evolve towards a true international river basin development institution with responsibilities for both implementation and operation of river works and associated rural development programmes? There are no precedents to learn from and the fate of the

OMVS over the coming decades will be one of the most interesting questions for those people interested in international river issues and international functional organizations.

Common Ownership

The role the basin states allow the river organization to have is one dimension of the institutional arrangements needed to implement a major international integrated programme. The specific arrangements the states work out among themselves and with the river organization concerning the ownership, liabilities, responsibilities and benefits the works incur is another. A number of related issues come together in the decisions on how the works are to be owned. Are the works to be owned in common or by the state on whose territories they are located? The Senegal states accepted common ownership. The issues then arise of guarantees for loan repayments, apportionment of water among the different users and then among the states, allocation of the costs of the works for repayment among the different users and states, plus a host of other considerations such as legal liability, the institutional form in which the works will be operated, and the details of project construction.

Under the OERS the states agreed to form a commonly owned shipping company. Such companies have precedents in internationally owned firms like Air Afrique, but when the OMVS was formed it was unclear who would own the proposed infrastructure projects - the states in which the projects were located, the OMVS, or the states in common. Nor was there agreement on how the states would guarantee and repay the debt incurred in financing the projects. In May 1974 the OMVS Council of Ministers decided that the dams and ports would be 'works of common interest'. The works would be operated by a specialized interstate agency under the tutelage of the OMVS and the debt incurred in financing the construction would be guaranteed by each of the states.³³

The decisions were more resolutions of intent than judicial instruments. What they would mean in practice was left to subsequent conventions and agreements prior to construction of the works. Mamadou Aw when he became High Commissioner recognized the OMVS did not have a personalité juridique and this would be a source of problems in dealing with international organizations, governments, financial institutions and foreign enterprises.³⁴ The 1972 OMVS Convention passed on the burden of this issue by saying 'a Special Convention between the Contracting States shall define precisely the conditions of construction and operation of the works of common interest as well as the mutual obligation of the States'. In 1976 with construction of the Diama Dam then scheduled to begin in 1978 and Manantali in 1979 the High Commission began to consider the areas that needed new legal arrangements.

First, the 1974 Council of Ministers decision elaborated the principle of common ownership, but it had to be put in the form of a convention that would satisfy the donors and be compatible with national laws. The High Commissioner pointed out the problem: 'common property being a totally new notion in public international law, there exist few precedents to serve as a model or an inspiration for a study of a judicial regime, or for works of common interest'.³⁵ The states needed to define what common ownership and the related principle of financial solidarity would mean. If the OMVS borrowed funds for construction of the projects, how would they be guaranteed? In 1974 the Council of Ministers agreed to the principle of solidarity; that is, each state guaranteed 100 per cent of any loans to the OMVS making in total a 300 per cent guarantee. Some donors insisted on this solidarity, even though a 300 per cent guarantee was unnecessary and, moreover, would greatly increase the external debt burden of each state and reduce their capability to attract foreign investment in other sectors of their economies. By 1978 the High Commissioner was having second thoughts.³⁶ Another formula was needed that did not

burden the states with excessive external debt and that reflected the benefits each of the states could expect from the projects. The benefits would not be the same for each of the states, nor could each state be expected to make use of the services from the projects at the same rate. Hence the states should not be expected to divide the debt burden equally. Although the OMVS and the consultants working for it suggested demands and benefits from the projects that would justify donors investing in them, it was quite another matter for the states to be committed to those conjectural benefits as the basis for deriving loan guarantees and a schedule of loan repayments for each of them.

Second, the OMVS projects were supposed to be complementary, but there still would be differences of interests among the users and states. For instance, should priority in a low flow period be given to irrigation, or to power, or should the minimum flow required for navigation be maintained? The Manantali Dam could only guarantee 300 cms flow nine years out of ten. Compounding use conflicts would be the interests of the states. Some uses would be more concentrated in one country than another. Mali would support the power and navigation interests, Senegal and Mauritania the irrigation interests. Then there was the more general problem of sharing hydro-electric power and irrigation water among the states. Priorities had to be established. It was for this purpose that the Permanent Water Commission was created.

Third, on a more mundane level, the states had to define arrangements for exempting the projects from restrictive national laws and taxes. State taxes on goods and services going into the projects - for example, vehicle registration, permits, excise taxes, income taxes - would increase total project costs, give one state a revenue advantage over another, and distort the distribution of the donors' investments. Arrangements needed to be worked out to exempt the goods and services from such charges or to collect them in a fund that could then be divided among the member states.

In 1978 the 1972 OMVS Convention was amended and a new convention signed - the Convention on the Legal Status of Common Works.³⁷ The amendments gave the OMVS additional power. They vested the OMVS with the legal power to 1. contract, 2. acquire and dispose of movable and immovable property required for its ordinary operation, 3. receive grants, subsidies, legacies and other gifts, 4. subscribe to loans, 5. resort to technical assistance, 6. institute legal proceedings. The Council of Ministers was made the legal representative with the power to delegate to the High Commission the authority to perform the actions listed above. One amendment required that for any state to withdraw from the OMVS it must first satisfy both other member states and interested third parties that it had liquidated its rights and obligations it had subscribed to within the context of the OMVS Convention.

The new Common Works Convention did not deal fully with the elaboration of all the principles that needed to be settled. Financial solidarity was reaffirmed but a subsequent convention was to define more fully what it meant. Rights and obligations were to be based on equality and equity, and investment and operating costs allocated on the basis of the benefits each state derives from the projects.³⁸ It did not detail any methods for applying the principles, and it said nothing on the water use principles to be applied for sharing the water and services from the projects.

But the convention did define in principle how the common works are to be owned and operated. The works are to be the 'common and indivisible property of the member states of the OMVS'.³⁹ The co-owner states will 'have an individual right to an indivisible quota and a collective right to the use, tenure and administration of the common work, its ancillary and secondary works'.⁴⁰ The convention detailed how the works in their construction and operation will be free from normal constraints of national sovereignty - fiscal and customs regulations, seizure, and restrictive legislation on contractors. The states agreed to renounce

sovereignty over the works and their operation.

The works when completed will be operated by individual management agencies under the tutelage of the OMVS. They will have their own statutes enumerating their functions, powers and procedures. The High Commission will have a coordinating role to ensure rational management of the common works as a whole.

International river law can offer few examples of works held in common. States generally go to great lengths to preserve their sovereignty over works on international rivers. Cano, for example, found that in South America agreements do not provide for joint ownership or joint management, but rather 'each country has retained its sovereignty and thus responsibility for administering those parts of the works situated on its side of the Frontier'.⁴¹ More often works across boundary rivers are managed by joint boards or commissions while ownership of the works is retained by each state separately. On the Rio Grande the Amstead Dam, for example, was constructed by the United States government on one side, the Mexican government on the other, with each state owning their half of the dam. A joint management board runs the St. Lawrence Seaway, but the works were divided to give the United States responsibility for construction and operations of works on its side, Canada responsibility on its side.

Close to the principle of ownership adopted by the Senegal states - and similarly institutionally advanced - are the ownership arrangements for international public utility corporations. The navigation works on the Moselle River, for example, are owned and operated by the International Moselle Company. Each of the three riparian states holds shares which they can distribute as they like, and the shares of any two of the states combined give control. The scope of the company is strictly limited to operational issues, however.⁴² It does not have to handle the potentially contentious issues over water apportionment among different users and

states as will the Senegal operating agencies.

The decision-making authority for the Senegal works agencies is not yet clear. Can the wishes of two states override the third? The states certainly intended to limit the authority of the OMVS itself. Ownership of the works is vested in the states, not the OMVS, and the states delegate operating authority to it and the agencies created separately to run the projects. The states retain their control and limit the potential for the OMVS to evolve into a supranational operational and management authority.

One would think that the issues involved in setting the arrangements among the states for implementation and operation of the projects would be a source of controversy. The outcome in effect sets the net benefits or losses each state receives from the development projects. Unfortunately information on the considerations that went into the legal instruments creating those arrangements is not readily available. The High Commission, under Moktar Ould Haiba, has not permitted outsiders, at least this outsider, the privilege of examining recent records of the organization. Only some of the inter-state agreements are available. They are of intrinsic interest for they mark innovative new arrangements for international public ownership of international river works. But at the present stage they are of more interest to lawyers searching for precedents in international law and signs that one or another legal theory is gaining recognition and expression in international agreements. On paper the OMVS and its programme is perhaps the foremost expression of the community theory of international river law. The states have gone beyond recognition of the more common view that each state in an international basin has the right to make equitable use of the water, the equitable utilization theory, which implies separate but equitable use and development. They have accepted the 'community' perspective, which views the river as a single unit and as common property to be used and

exploited in an optimum manner for the benefit of the basin states. Here we are more interested in substantive changes that have proved themselves in practice. It is too soon to know if the OMVS and the states will evolve more than a paper expression of the community theory.

Like many of the international agreements for the Senegal River the 1978 Common Work Convention is more a statement of principles to be given application in later agreements than a working document binding the states and stating in detail their rights and obligations. The agreements have not needed to be substantive, because the legal regime that really matters is the one worked out with the donors. All that needed to be concluded in preliminary stages was a statement of principle showing the states' intentions. In a sense they make a series of successive approximations giving appropriate indications to satisfy themselves and the financiers that the final arrangements will be acceptable. Reviewing the reports of OMVS-donor meetings there is little evidence to suggest that the donors have applied pressure for more complete agreements or that they have taken an early strong interest in the ownership issue. They need only commitments from the states that show in principle that the arrangements will be acceptable. Only when they come to negotiating the final loan agreements do they look in detail at ownership and loan repayment arrangements. These agreements set the meaning of common ownership and the related issues.

The approach is quite unlike that for more developed regions. For example, in the Columbia River negotiations the Canadian and American governments gave the International Joint Commission the task of determining principles suitable for reaching agreement on development of the river. They were used to help design the treaty, but the treaty once signed was complete in itself. It set out the rights and responsibilities of the states at one time which were to last the stipulated life of the Treaty.

The actual loan agreements only started to be finalized in 1981 and

the details of them are not available. But from what observers have commented it appears the OMVS may have avoided the problem of joint guarantees; the loans need not be guaranteed 300 per cent. The states will guarantee and repay the loans according to a formula that apportions the costs among the different uses and then among the states. It allows the donors to conclude agreements directly with each state responsible for its share of the total loan repayment. Some donors prefer this approach, for their financing procedures are directed towards bilateral agreements and they are hesitant - if not constitutionally restricted - about making loans to legally imprecise international consortiums of states.

The formula was derived from the work of consultants from Utah State University, financed by USAID, who have been working on the cost allocation problems since 1976.⁴³ They looked at a number of different methods and developed models to test them against the uncertain conditions in the Senegal basin. Based on equity criteria, the different methods require some estimate of the expected net benefits over time for each different use from the projects and for each state. It is thought the costs for Manantali will be apportioned 51 per cent to irrigation, 34.5 per cent to power and 14.5 per cent to navigation. All the costs of Diama, aside from the locks, are charged to irrigation and in the same way the costs of navigation improvements are charged to the navigation sector. The apportionment formula has been agreed to by the Council of Ministers, but it is not known - though Senegal will pay more than half the total costs and Mauritania will pay the least amount. Nor is information available on the discount rate used or on provisions for rescheduling payments over time in light of the experience of implementing the schemes.

In this late phase of negotiations it appears the Council of Ministers have restricted the role of the High Commissioner. He can negotiate the loans but he needs the approval now of the Council of Ministers to finalize them. Once the Council of Ministers approve the agreement is

binding on the states. The High Commissioner now speaks only for the OMVS, no longer the states, and can not bind them to any agreements by his action alone.

Inter-State River Basin Development

The Senegal basin state leaders created the OMVS with the expectation that it would have the key role in planning, promoting, and implementing river basin development. What that role would entail for the states and the OMVS was left to emerge in practice. In the planning and financing phase the first priority of the states and the OMVS has been given to financing the river regulation projects. Despite the division of the OMVS Secretariat into appropriate functional directorates, the issue of what responsibilities the OMVS will have in areas, such as agricultural development, has been neglected and the organization has only evolved a limited research, planning and coordinating role. Nevertheless the experience to date of the interaction among the states and the OMVS gives some indications of the problems of creating an inter-state river basin development agency.

In practice the role of the OMVS has been shaped by the ambivalence of the states to their creation. They seem uncertain how to take it. Is it the goose that can lay golden eggs, requiring only a little nurturing to yield a billion dollar foreign assistance package? Or is it a Trojan horse insinuating itself into the political life of the states to capture part of the states' sovereignty? The states recognize the need for the organization to carry out planning, secure financing, and generally give expression to inter-state solidarity; but they fear it may take on a life of its own, in which it owes less allegiance to the states than 1. to itself, 2. the donor community that supports it, or 3. to one of the basin states to the detriment of the others.

When the Council of Ministers frustrated Mamadou Aw's proposed reform

in 1975 the ministers signalled that they were not prepared to sanction the operation of a relatively autonomous organization with substantial responsibilities in the domestic sphere of agricultural development. The reform accepted was a cautious, though still innovative, recognition of the need to create a politically significant permanent executive to represent and pursue the common interests of the states at all times. The reform, however, left unclear the authority between policy making and policy implementation and this increased the tensions between the Council of Ministers and the High Commissioner. The Council of Ministers' interests were not necessarily those of the High Commission. The ministers were unwilling to concede in fact the authority they conceded in the amendments to the 1972 OMVS Convention. Much of the tension and interference between the Council of Ministers and the first High Commissioner may have been due to personality. But the tension also reflects the fact that the common interest may not be the same as the individual interests of the ministers or even their governments. Limiting the role of the OMVS is quite understandable because states rarely allow international organizations the authority to promote programmes in areas of domestic responsibility. Although it is understandable it is also regrettable since the states have not made the reforms in the domestic sector needed to complement the international programme. For example the Senegalese minister on the council was not even the minister responsible for SAED, the Senegalese irrigation development agency. The states did not seem to take seriously the link between irrigation performance and river regulation. The rural development programme USAID proposed aims to redress the lack of coordination between the two major aspects of the basin development. Given the Council of Ministers' reluctance to broaden the mandate of the OMVS, the USAID proposal puts the states in a quandary: how to obtain the assistance offered by the donors through the OMVS while preventing the OMVS from becoming an unwanted supranational rural development agency?

The problem with the USAID proposal is heightened by the states' worries about losing control of the OMVS to the donors. At the time of the OMVS reform the ministers insisted that basin state nationals hold all key executive positions. Expatriate personnel could act as advisers, but only on condition they worked for the OMVS and owed their allegiance to the organization, not to the country or agency that sponsored them. The council rejected World Bank institutional support in which the staff offered would remain responsible to the bank.

There is little doubt the basin states are limiting the role the OMVS can have. For example, ownership of the common works has been vested in the states, not the OMVS. In addition the power of the High Commissioner to negotiate and conclude financing agreements on behalf of the basin states for implementation of the common ownership projects has been withdrawn. These moves reflect the desire of the states to retain sovereignty. They also reflect the practicalities of implementing an international programme. It is acceptable for states to work out any arrangement they want among themselves, but the Senegal states do not have the financial and technical resources to implement independently their programme and associated institutional arrangements. They rely on the donor community, and its members have their own requirements. States have legal personalities which are understood and used by the donors when setting the financial arrangements for the projects they finance. The basin states may create a legal personality for the OMVS, but it remains an international agency whose power and responsibilities are unfamiliar and untested. When the time comes to advance the funds the donors may prefer to work in familiar legal surroundings. Thus, though the works are held in common, financial responsibility is apportioned on the basis of the net benefits each state expects from the projects. In this process the OMVS can have only an advisory role. If the states are responsible for repayment, and not the OMVS, they must be the ones to approve the loans. The High

Commissioner has no proper authority to bind the states, and it is doubtful the donors would be happy with loan agreements that are not directly negotiated and approved by the states.

Although the role of the OMVS has been restricted, one should not lose sight of the fact that the OMVS and the basin states have evolved an innovative and in many ways a unique international institutional approach. Functionalists see international arrangements expanding through incremental decisions and advances. For the Senegal basin there is some truth to the idea. But the evolutionary dynamic comes not just from the interaction among the basin states and their river basin organization. The donor community directly and indirectly encourages an international institutional approach. For example, led by the United Nations donors provided assistance to plan development of the river and associated basin resources as an international whole rather than country by country. Of course the states have long recognized the planning logic of river basin development and see it as a vehicle for promoting their functional integration objectives. But the promotion of the international river approach by donors with the prospect for the basin states of exploiting a new lucrative source of concessionary finance strengthened the basin states' resolve in pursuing such development. As the USAID proposal demonstrates, and as is discussed in the following chapter, the donors can take a more active part in encouraging innovative new arrangements. When it comes to arranging loans the donors may be institutionally conservative, but they are not conservative in urging the states to submerge their sovereignty concerns and adopt international rural development programmes.

Within the basin the states set down only principles for cooperation in the conventions and determine the details only when, as one official put it 'the time is ripe'. The High Commission sees one of its tasks as the identification of issues requiring resolution and the preparation of information for the Council of Ministers to enable it to make a decision.

The ministers, however, take their time in making decisions. For example, it took them more than two years to decide a policy exempting fuel used by contractors for project construction from national taxes. The question of cost apportionment has long been discussed but agreement was reached only when it became a necessary pre-condition to final negotiation of loan agreements with the donors. The Permanent Water Commission was formed in 1976, but by 1979 it had only met once, and by 1981 it had still to settle any substantive issue - for example, apportionment of water among the states when the river is regulated. For some of the issues the delay may be attributed to the need for more information. But many issues of this nature are potentially contentious. The first priority in the pre-construction phase has been financing. From the states' point of view, without financing for the dams there is nothing. Thus though the creation of the inter-state arrangements for operation of international development projects are important, they raise issues which divert attention from the first priority and reveal weaknesses among the states that might affect donor confidence. It remains to be seen whether or not the states will consider the 'time to be ripe' to take more substantive institutional decisions once the river regulation projects are under construction or in operation.

Chapter Seven

DEVELOPMENT STATESMANSHIP

I would say that economic evaluation of dams is not the concern of the donors. Technically, if someone says that the dams are not good, they have to prove it and we can discuss it technically. But economically they do not have to evaluate it, it is our choice.

Diop Assane, Deputy Director, Mauritanian
Ministry of Planning and Mines.¹

Should we really give the Sahelians something which is going to be a millstone around their necks just because they say they want it?

R.W.H. Morris, Dept. of Agricultural
Economics, Purdue University.²

The Senegal projects - simply Arab money for European contractors.
International Agency Official.

Foreign aid is a grey area of foreign policy in which the motivations and objectives of donor and recipient are clouded in ambiguity. Since the 1960s economic development has been widely accepted as the rationale for foreign aid, and assistance policies have been formulated accordingly. Poor states are poor because of innumerable physical, economic, social, educational, and institutional constraints that limit their economic performance. Aid should be directed at removing those constraints, thus enabling the states to achieve their economic potential and the concomitant human potential made possible by material progress. Humanitarian feeling against poverty and starvation, particularly in times of disaster, is an important motivation in providing assistance, but the well of charity often runs dry. Political interest, or rather 'enlightened self-interest' as it is expressed, provides another generally richer source. Domestically the donor governments might expect a foreign aid policy to appeal to contractors, consultants, manufacturers, and farmers who would benefit from the sale of their goods and services. Internationally, the policy could be expected to have, if not direct political benefits, at least indirect foreign policy rewards in terms of influence, prestige, maintenance

of historical connections, or general support to governments that are looked upon with favour. The political dimension of aid will lead donors to favour certain countries and certain types of assistance over others. Equally, the recipient governments will have any number of reasons for seeking development assistance. Both donors and recipients may well be aware of each others' political needs and design their aid strategies to take advantage of them. But as with all exchanges where there is a real or imagined element of charity appearances are important. Recipients, generally newly independent nations jealous of their sovereignty and sensitive to 'neo-colonial exploitation', can not appear to have domestic investments dictated by the interests of the donors. Nor can donors appear to hand over their funds without adequate guarantees that they will be used productively for some generally accepted useful purpose. Economic development provides a neutral concept with which to rationalize aid exchanges. The concept, though it may provide the rhetoric masking the political motivations behind aid, has substance for it imposes on the participants a technical approach and technical institutions to conduct the assistance relationship.

The provision of aid and the policy for its distribution are political decisions. Where the investments are large and the state leaders have solicited aid directly from their donor counterparts, the decisions to support certain projects may also be political. But the mechanics of aid dispersal are technical and the administration of aid is relegated to aid agencies of the donor governments, with only sporadic intervention from politicians. Few states, with France an exception, accord aid a high political priority and give to the issue constant political attention and direction. Aid agencies, faced with policy objectives which are a vague blend of national self-interest, commercial advantage, and humanitarian concern, tend to rely on technique to decide aid administration and dispersal issues. Where development objectives are stressed the model may be

international lending institutions like the World Bank, whose day to day operations are governed by technical considerations and criteria. Economic evaluation and analysis tend to be the point of reference, though the disinterestedness of the analysis and rigidity with which the criteria are applied vary greatly, depending on the objectives stressed by the donor governments. Agencies may give weight to the political elements inherent in aid requests, but often they, at least in form, adhere to technical criteria insensitive to political necessity.

The OMVS and the basin states faced complicated financing problems. The scale of investment for the OMVS projects was large (by 1981 \$866 million) and as a consequence financing would have to come from many sources of finance, each with its own expectations and requirements for participation. In general the OMVS plans 'to push back the desert' struck the right political chord with western and Arab sources of finance (or donors, as all financing for this poor region would be on highly concess- ionary terms). But the rigidity of the OMVS's insistence upon both an upstream regulation dam and a salt-barrier dam in the delta was one note that jarred many of the agencies that were to administer the dispersal of funds. In line with professional standards and technical criteria of evaluation the technocrats in the donor agencies took little notice of the essential political accommodation among the basin states that the OMVS projects enshrined and which made development of the inter- national river possible in the first place. For the OMVS the projects were sacrosanct, for the technicians in the donor agencies OMVS proposals were the clay from which to shape a productive investment. The conflict between the political and technical conceptions of river basin development made for a long and frustrating but eventually successful financing phase. This chapter examines how the OMVS was eventually able to secure financing for its costly economically questionable projects.

The Information Base

The OERS Secretary General for the Senegal River, Salif N'Diaye, first presented the broad argument encouraging donor investment in projects that would show poor economic returns. Speaking at the first gathering of donors, the Round Table meeting in March 1971, he stated the assumption that there can be no development in the basin without development of the river. It is not possible to create progressively a physical, social, and economic infrastructure before regulating the river because, as a precondition to the creation of such an infrastructure, water had to be available in the dry season. At that time the pre-feasibility study for upstream regulation had been completed and the OERS Council of Ministers felt Manantali to be the key regulation dam. The ministers were also committed to a salt barrier dam in the delta, but the studies for it had yet to start. Salif N'Diaye argued, because there could be no development without regulation, the Manantali project would be unable to meet the classic criterion of economic return. It was necessary to transcend the notion of economic return in order to conceive of 'the construction of the Manantali dam as an investment serving to initiate a process of sustained growth in the region'.³ Regulation was a precondition to economic 'take-off' and should be considered as a pre-investment. At the time all the planning had been oriented to regulation and the alternative of development within the basin without regulation had not been seriously considered.

Once the OMVS was formed in 1972 it needed a strategy to secure financing for the projects. The currency of exchange between the OMVS and prospective donors would be the information by which the donors could evaluate the scheme. Despite Salif N'Diaye's plea the sources of finance needed evidence on the productivity of the 'pre-investment' projects. Ould Amar, the first Secretary General of the OMVS, recognized that there was a problem in providing suitable information, but he was optimistic

that his strategy would secure the needed investment. In a report setting out the organization's strategy the Secretary General noted that by the end of 1973, when the Diama pre-feasibility studies would be completed, the OMVS would have a fairly precise dossier of the technical feasibility of the projects and their costs.⁴ With this information the OMVS could start negotiating with the sources of finance. However, there would not be enough information to demonstrate the projects' profitability. Profitability depended on the sale of hydroelectricity. The most promising short-term consumer was the mining sector, but there was insufficient information on expected mineral development, and thus no way to forecast the demand for electricity. Nor had information been produced on agriculture and cattle raising that showed how these activities would benefit from river regulation. Finally, the uncertainty in the mining and agricultural sectors made evaluation of the navigation and port investments uncertain. Despite these shortcomings the Secretary General did not think the lack of reliable information should delay the start of the projects. There were enough results to demonstrate the favourable impact of the projects both within the basin and in the national economies of the basin states.

The strategy Ould Amar proposed was.

1. approach the sources of financing;
2. improve on existing studies and show the productivity of the infrastructure investments, and
3. implement concurrently complementary projects able to start without regulation.

This latter activity required the states to invest in irrigation projects. The increase in irrigation, within the limits imposed by the unregulated river, would help create a market for a regulated water supply. When regulation came the irrigation perimeters would shift from single to double cropping and thus realize an immediate return on investment both from the perimeters and the dams. To a less important extent

improvements in navigation and transportation along the river would work in the same manner. Irrigation need not await completion of the dams, nor the infrastructure projects creation of any specific acreage of land under irrigation. The two aspects would be mutually reinforcing - investment in irrigation improving acceptance of regulation, and the regulation works increasing the profitability of irrigation. Neither need be held back by the difficulty of financing the other. The strategy encouraged the states' own irrigation programmes and put those programmes within the wider context of international integrated development. It differed from the OERS Secretary General's view that prior development was not possible without regulation. The strategy, however, assumed a market for the regulated river would evolve and produce a favourable rate of return for investment in the dams.

'The strategy,' Ould Amar felt, 'had the advantage of improving in a continuous way the negotiating position of the OMVS and member states while progressively involving the donors in peripheral activities before finally attacking the regulation of the river.'⁵ In other words, the OMVS must try to induce the donors to increase their stake in the basin to the point where it would be awkward for them to withdraw and abandon their investment. He warned 'in spite of the legitimate impatience of our states, it must be realized with soberness that the negotiations for the financing of the regulation works present in the short term uncertainty as to their length'.⁶ With foresight he added that some donors would be kindly disposed to the basin states' requests despite the lack of technical and economic studies, while others would react, no matter how complete and comprehensive the studies were, by arguing that they were not sufficient.

By early 1973 the pre-feasibility study for Manantali was completed and the Diama one was soon to be, but two other kinds of information were necessary to complete the dossier. First, a study was required

to synthesize existing information and justify investment in the river projects. Second, the prospective donors needed a statement of the states' objectives and the main outline of the integrated programme they proposed.

The Beyrard Report

In 1973 the UNDP followed up its financial support of the indicative and pre-feasibility studies with funds for the synthesis study. A consultant was first hired among other tasks to 'define the technical and political-economic parameters that may or may not justify an integrated development approach' and 'to assist in the preparation of the terms of reference for a subsequent multi-disciplinary mission which will concern itself with a realistic assessment of the economic potential of the Senegal River Basin'.⁷ The consultant, Fred H. Hubbard, found that, based on patchy and inadequate information, there was no economic basis for integrated development. As an essentially single purpose project for irrigation he thought Diama was worthwhile, but Manantali could not satisfy the criteria applied to integrated projects. That is, not all the uses benefiting from the regulation of the dam could bear their allocated share of the total costs. He found agriculture could yield a positive internal rate of return of 11.5 per cent and justify 50 per cent of the financial cost of the dam. There was insufficient information on navigation, but Senegal Consult studies suggested navigation might be able to cover another 10 per cent. The remainder would have to come from the sale of electricity, but based on mineral studies the proposed exploitation schemes would not be feasible if they had to bear their share of the dam. He concluded:

too little is actually known to appraise integrated development of the Senegal basin projects on an economic basis, but if as it appears, agriculture alone is economically justified, then a single purpose, not an integrated approach is required.⁸

None the less he did not dismiss the integrated approach. 'From a purely technical point of view' he recognized that if the agricultural, navigational, energy and other potentials in the basin were to be exploited

as the states wanted it would have to be done in an integrated manner. Moreover, he saw from a political point of view integrated development was desirable. Geography and financial dependence forced the states to act together. He found 'the most telling point ... is that no one country has the financial capability to "go it alone" and must seek development funds from external financing sources. In order to do this a united front is required ...'⁹ For each state to remain committed to the front they had to get something out of it. Despite his sympathy for the non-economic arguments he recommended undertaking a study from the perspective of what funding agencies required to evaluate the profitability of the investment. He also pointed out many areas where information was deficient.¹⁰

Up to this point there had only been piecemeal planning and analysis of the various components. The subsequent multi-disciplinary mission intended to remedy information weakness by analysing the projects as the basis for a basin-wide development programme. A French consulting firm, Norbert Beyrard France, worked from September 1973 to April 1974 to produce an eleven volume 3,150 page synthesis study.¹¹

The Beyrard report expressed none of the economic scepticism of Hubbard. Beyrard envisioned a two pole plan of development to last until the year 2011. The two poles - agriculture and mineral exploitation - would both be dependent on the dams and navigation projects but not dependent on each other. The report foresaw the rapid transformation of the agricultural sector from subsistence flood-recession and rain-fed cultivation to cash crop irrigated farming. As the transformation took place the agricultural sector would progressively feed the people in the valley, replace imported cereals, and finally produce food for export. Forage crops would greatly increase commercial meat and milk production in the valley. In the minerals sector exploitation of bauxite reserves in Mali and iron ore reserves in Senegal and Mali would serve as the

basis for economic and industrial expansion in the upper basin. Press reports of the Beyrard study spoke of an 'African Ruhr'. The OMVS projects made the anticipated regional development possible for they would furnish the agricultural sector with a regulated water supply, the mineral sector with electricity at a price that would make exploitation competitive with reserves elsewhere, and both sectors with a navigation route to ship out the ores and agricultural products. As the basin developed the basin states' economies would be drawn together.

The report estimated an internal rate of return for the total programme of 16 per cent (19 per cent for the productive projects). The rate was based on a high rate and scale of development. For example, by 2011 there would be 425,000 hectares of irrigated land employing 500,000 trained people producing among other products 54,000 tonnes of forage raised beef and 75,000 cubic metres of milk. By 1990 mineral exploitation would be intense, river transport would be carrying high tonnages, and construction of the second and third phase dams would begin. The report estimated the cost of the 40 year programme to be \$3.4 billion.

A 1975 United States Bureau of Reclamation internal report that reviewed the progress on the Senegal projects commented:

Although the Beyrard report, being a synthesis of previous reports should have been the main source of information for this analysis, this did not turn out to be the case. Deficiencies in supporting details and in clarity of presentation in the Beyrard report resulted in heavy dependence on the Senegal-Consult and SOGREAH reports and the papers of the previous reviews and commentaries.¹²

The bureau report criticized Beyrard for not addressing any of Hubbard's concerns. In general, the basic technical information for evaluating the OMVS programme was still lacking.

The Beyrard report, and to a lesser degree the other reports, did not clearly describe all of the physical facilities proposed to be constructed or the development programs to be implemented. Especially in the Beyrard report, it could not be determined what some of the physical components of the development consisted of, what their dimensions and capacities were, how they were proposed to be operated or where they were located on a map. For example, the best map of the development in the 11 volumes of Beyrard is the map on the front cover of each volume.¹³

There was little basis for evaluating Beyrard's claims about the economic feasibility of the OMVS programme. The bureau went on to point out 17 areas in which information was deficient.

Among the donor community the most polite comment about the Beyrard Report was that it supported the client's objectives. But even the OMVS Council of Ministers had some misgivings - not so much on the optimistic economic evaluation as on the report's weakness in some areas in presenting the OMVS case to the donors.

1. It lacked information in areas such as soil and forestry conservation and fishing;
2. Perhaps cognisant of the difficulties in achieving a high rate of irrigation development, the ministers expressed unease at the emphasis given to the agricultural sector. The Council of Ministers had decided on less ambitious rates - 10,500 hectares a year instead of the 14,000 hectares in the report .
3. The ministers found the bipolar approach did not allow comparison of the benefits from the different uses of the water.
4. The report's evaluation criteria were used by only some of the sources of financing;
5. The ministers felt the cost estimates for irrigation development were too high;
6. The report used only marginal cost evaluation and did not look at sectoral approaches.

In short, the Beyrard Report could have presented a stronger case. Nevertheless, the Council of Ministers felt it was 'sufficiently coherent to justify development of the basin',¹⁴ and the ministers recommended that it 'be presented to the sources of financing as a hypothesis for a master scheme for integrated development of the Senegal River'.¹⁵

The Objectives Report

In concert with the synthesis study the national committees prepared a report entitled 'The Objectives and Main Outline of the Integrated Development Strategy of the Senegal River Basin'.¹⁶ The report served as a framework for elaborating the master plan and harmonizing regional plans with national ones. It presented a non-technical review of the

physical potentials, conditions, and constraints on the regional and state economies. And it set down for the first time the common objectives and the commitments each of the states was willing to make in the related domestic sectors. The report gave the states' reasons for seeking the development package, but it did not attempt to demonstrate its economic feasibility.

The long term-objectives were:

1. to insure the reliability and increase the incomes for a maximum of the population;
2. to establish a more stable ecological equilibrium between men and environment, not only with regard to the basin proper but also with regard to the maximum of the territory of the three states located in the Sahelian zone;
3. to reduce the economic vulnerability of the three states vis-a-vis the climate and the external factors, and
4. to accelerate the economic development of the three countries and inter-state cooperation.¹⁷

The medium-term objectives were:

1. to establish the infrastructure necessary for water regulation, protection against saltwater intrusion, transportation, energy production, and mining in order to make available the basin resources for a first stage of integrated development (that is, the Diama, Manantali and navigation projects), and
2. to prepare the superstructure necessary for the accelerated and integrated use of the resources which will be available upon the termination of the infrastructure projects. To accomplish the superstructure objective a number of targets were set for achieving the institutional and technological capacity to make use of the projects and transform the regional economy. For example, the states planned to have the institutional capacity to implement 10,500 hectares a year of new irrigation land.¹⁸

The long-term objectives were cast in the context of the Sahelian drought that was devastating the region at the time and which had created so much international sympathy for the Sahelian states. One should be reminded that the states had decided eleven years earlier to construct an upstream and downstream dam. From a planning perspective the approach was backwards. The projects did not follow logically from the conditions faced by the states and objectives they formulated to counteract them. The conditions were used later to rationalize a decision taken long ago.

July 1974 Donors Conference

In early 1974 the OMVS was optimistic that it could raise the \$180 million Beyrard estimated was needed for the package of the projects - \$100 million for Manantali, \$28 million for Diama, and \$52 million for navigation and ports. Already a number of donors seemed committed. The Malian government, with the other states' support, asked the government of the Peoples' Republic of China to design the Manantali dam, and in April the Chinese planning mission made its second visit to the region. The basin state governments were hopeful that the Chinese would construct the dam. The French government, meanwhile, was committed to the Diama project and wanted to draw together a consortium of donors to finance it. President Ould Daddah had long been cultivating the friendship of Arab leaders and his efforts were paying off, first with aid to Mauritania and then with promises of aid to the OMVS. In May 1974 a Saudi team visited Dakar to discuss Saudi participation in Diama. The West German government had also recently become interested and were willing to participate with other donors for specific projects. The Sahelian drought, just then easing, had brought donors from the wider donor community together in the massive Sahelian relief operation and they were well disposed to any plans that would promise insurance against further drought.

Twenty-six states and organizations attended the first donors conference at Nouakchott in July 1974 to hear the OMVS proposals for river basin development. The proceedings revealed the inexperience of the OMVS and the difficulties in securing enough funds - and securing them on OMVS terms - from so many donors with different approaches, interests, and assistance procedures. When at the conference the OMVS asked the donors what they would contribute most of them stated their interests, the prospects of them being able to commit funds, and the terms on which they would be offered.¹⁹ They were not ready to pledge funds until they had studied the projects further and made their own evaluations. For

instance the representative for the example setting World Bank stated that the bank would like to contribute to the dams in keeping with its experience of supporting international river projects, but it could not offer any funds until the bank had undertaken lengthy evaluation studies. In the meantime the bank would provide funding for irrigation schemes for which evaluation had already been completed. It would spend \$30 million for irrigation works and land development on top of existing contributions to delta irrigation projects. Nevertheless the OMVS did receive some substantial commitments. Germany offered about \$14 million on IDA terms (50 year term, 10 year period of grace, 1 per cent interest). France \$17 million on top of existing bilateral aid, the African Development Bank \$56 million (10 to 25 year term, 5 year period of grace, 6 per cent interest plus other charges), and Saudi Arabia a \$10 million long-term no interest loan.

According to the American representative's report of the meeting the OMVS leaders 'were confused by the restrictions and preferences attached by the donors to their commitments and seeing that the total so far did not provide full financing for the two dams they were at a loss to decide on the next step in the process'.²⁰ They postponed the following session while they decided what to do. When the conference reassembled the OMVS leaders pressed the donors for further pledges, but the donors reiterated and stressed some of their reservations.

The donors, worried about the lack of coordinating structure between the donors and the OMVS, the institutional weakness of the OMVS, the cost calculations for the projects, and the yet unresolved issue of Chinese participation in Manantali. They wanted a coordinating structure that could meld donor contributions - monetary and advisory - with OMVS plans. They were concerned that there was no programme for training staff. The technical, organizational and management structure of the OMVS needed strengthening to undertake the development programme. On cost, some donors

felt the Beyrard figures were greatly underestimated, perhaps as much as 100 per cent for Manantali. The estimates needed updating, and further engineering studies needed to be made. China was not represented at the meeting and the donors wanted to know if that country would participate in the financing of Manantali. But the Chinese had not made their decision. The OMVS wanted donors to allocate funds to Manantali, with the provision that should the Chinese fund the project the donors' funds could be switched to other projects. The donors held back to await the Chinese decision saying that their procedures did not easily permit switching of allocated funds. There was, however, scepticism among the donors about the worth of the Manantali project. Most donors, in line with the Hubbard report, thought Diama much the better project.²¹

In response to the lack of coordination the OMVS proposed a planning and coordination committee. The Americans, at least, found the proposal less than satisfactory, since it appeared the OMVS wanted a forum 'to reach compromise on financing rather than a permanent technical committee that would plan a realistic schedule of implementation based on the available funds and consistent with the integrated development plan'.²² The meeting, nevertheless, favoured creation of such a committee, grouping the OMVS and the interested donors. It would determine the means to mobilize and make quick use of the financial resources for implementing the projects.

The OMVS was disappointed but the conference was by no means a failure. It revealed donor interest and started them on the road to allocating funds for the projects. Within two weeks Iran offered \$4 million and Kuwait \$34 million. On the other hand the donors lacked confidence in the OMVS. As the American representative reported, there was a feeling among many of the donors that the OMVS might not have the necessary skill in 'development statesmanship' or understanding of the politics of foreign aid to exploit effectively the goodwill of the donors.²³ The donor criticism and reservations about the OMVS's competence put the organization on the

defensive.

The OMVS sought to regain the initiative from the donors who in their responses to OMVS proposals showed no great respect or commitment to the basin states' immediate objective of constructing two dams. One action, as discussed in the last chapter, was to reorganize the OMVS. The 1974 conference exposed the weaknesses of the Secretariat to the basin government political leaders and increased their resolve to give the OMVS greater political strength to deal both with the member governments and the donors. The creation of the High Commission and the appointment of Mamadou Aw as High Commissioner in December 1975 was the result. As for the proposed coordinating committee, the OMVS wanted to avoid a consortium in which the basin states' concerns as they expressed them - income security, re-establishment of ecological equilibrium, and the reduction of the vulnerability of the national economies - might take second place to the donors' concerns, that is their lack of interest in Manantali.²⁴ It was important to retain the initiative in

1. the securing and using of funds;
2. financing procedures;
3. loan conditions; and
4. institutional arrangements for implementation.²⁵

While the OMVS was still weak the coordinating committee, if formed, would likely be dominated by donor interests. The coordinating committee did not come into existence until November 1977.

In formulating the strategy for dealing with the donors the OMVS set the conditions for assistance: all studies, including detailed implementation studies were to be funded by outright grants; construction was to be supported by grants as much as possible; failing that, loans should be without interest or on IDA terms. In late 1974 the OMVS had in mind different donors for different parts of the programme. France was expected to finance the design studies for Diama, while France, Iran, Saudi Arabia

and eventually the USAID would pay for construction. Canada would finance the port studies at St. Louis and Kayes, and also finance their construction while FED and FAC would finance the navigation works and the inter-state navigation company. For Manantali the hope still was that the Peoples' Republic of China would conduct the studies and construct the dam. If China decided not to participate Germany, the World Bank, FED, Kuwait, Canada and others would be approached to provide the funding.²⁶

The Donors

The appeals for help from the Sahel beginning in late 1972, when the rains failed for the sixth year and mass famine struck, started re-appraisal among the donors and the Sahelian states about aid for the region, including aid for the Senegal projects. The loss of as much as 40 per cent of the livestock of the region, the destruction of the pastoral way of life for 2 million people and the death through famine of an estimated 100,000 people focused attention on the neglected region. During the 1960s western states let France provide the major share of bilateral assistance to its former colonies. But French aid to the Sahel by the late 1960s was limited - less than 25 per cent of its aid to all black Africa.²⁷ Politically, in the face of Africanization of government employment, growing Arab influence, EEC aid, and a resentment of what was considered by some Sahelian governments as neo-colonialism, French dominance was waning. The French government, moreover, was not prepared to provide the necessary assistance to overcome the drought or bring the Sahelian countries from their extreme poverty. The Sahel was not a priority area of interest for any donor.

In 1969 and 1970, after the drought had begun, total bilateral aid to the Sahel from the major donors, including France and the United States, was just \$50 million, less than the same states had given to Ghana alone.²⁸ When the drought became critical in 1972 the United States lead the way

with food assistance. The total relief cost more than \$500 million. The multilateral rescue mission was only a temporary and an expensive palliative. The donors were interested in lessening the region's vulnerability to drought and thus reducing the prospects of them again having to mount such an operation.

The Sahelian states responded to the drought in traditional franco-phone West African fashion - they formed at Ouagadougou in September 1973 a regional grouping, CILSS (Comité permanent inter-état de lutte contre la sécheresse dans le Sahel). Later two non-francophone states, Gambia and Cape Verdé, joined the original six of Senegal, Mauritania, Mali, Niger, Upper Volta and Chad. CILSS was organized to attract aid for 146 first priority projects set out in the Ouagadougou Programme. Soon it evolved into an organization to promote region-wide integrated planning. French influence was on the decline and the new interest of outside bilateral and multilateral donors gave the Sahelian governments hope that CILSS would help break their dependency on French technical assistance and put them in a better position to control the inflow of aid funds according to their priorities rather than the donors'.²⁹ The objectives formulated in 1974 were:

1. mitigation of consequences of future emergencies;
2. attainment of self-sufficiency in food staples; and
3. acceleration of economic and social development with particular emphasis on the least developed countries.

The international donor community largely accepted the objectives.³⁰

The United Nations established the Sahelian Office (UNSO) in September 1973 to coordinate the United Nations specialized agencies' relief work and promote long-term rehabilitation and reconstruction. A trust fund was established by the United Nations to hold funds for the CILSS projects, but the CILSS leadership was not happy with the way it operated. The United Nations fund tended to bypass CILSS and work directly with the state governments and thus CILSS had little control over how the funds should be allocated.³¹

Meanwhile the country donors in their relief operations had built up a network of contacts and a multi-donor approach that they felt could be useful in coordinating post-drought assistance. At the instigation of the French Minister of Overseas Cooperation, Jean Audibert, with the support of the American ambassador to Niger, Samuel Adams, and USAID administrator, David Sheer, the donors came together in March 1976 in Dakar to form a donors club for the Sahel - Club des amis du Sahel, later shortened to Club du Sahel.³²

The Club operates through the offices of the OECD in Paris. Its mandate is to coordinate and design international development programmes for the Sahel.³³ The Sahelian states participate on an equal footing with the Club and meetings are chaired by representatives from both CILSS and the Club. By the Spring of 1977 the two organizations had drawn up a two-phase strategy for the Sahel. Within the long-term goals of 'regional food self-sufficiency in staple foods' and 'sustained socio-economic growth' Phase I priorities included 'planning for development of the region's major river basins'; in Phase II 'prime attention will be focused on implementing river basin development....',³⁴

The OMVS was quick to put its projects within the context of Sahelian rehabilitation. As noted, the 1974 long-term objectives of the OMVS states, included creating 'a more stable ecological equilibrium between men and environment' and reducing 'the economic vulnerability of the three basin states vis-a-vis the climatic and external factors'. Understandably the drought became a new and constant theme in the arguments to attract funding for the OMVS projects. Given the tragic climatic conditions and the new forums for assistance in CILSS, the UNSO and the Club du Sahel, which promoted aid for the region, many donors were drawn to the OMVS arguments. The position of some of the donors is outlined below.

France

The French government did not need the Sahel drought to be persuaded to support the Diama project. Although France may have neglected the Sahel region the French government consistently supported Senegal with technical and financial assistance. Aid in the river region continued the irrigation work begun in the colonial period under MAS.

After independence Senegal remained closer to France than its basin state neighbours. Guinea was in the francophone wilderness, and Mali in the 1960s, flirting with the USSR, was only slightly less distant in the view from Paris. When the French government renewed its interest in Mali its aid in the water resources field focused on the Niger - the Selingue dam and the Niger project. Mauritania needed French assistance but Moktar Ould Daddah's early concerns for asserting Mauritania's independence as an Arab-Berber-black state strained relations and made for less generous assistance than Senegal received. During the colonial period France had done little for agricultural development on the right bank of the Senegal. Without the early studies and investment Mauritania gave little attention to hydroagriculture until the 1970s. French aid within the basin was thus concentrated in Senegal in the delta region where most of the colonial interest had focused.

In the immediate post-independence period France supported, mainly through FAC (Fonds d'aide et de coopération), with small sums the continuing basic research of MAS. The Senegalese were eager to improve on the indifferent performance of the small pre-independence irrigation schemes and in 1963 the delta irrigation organization (OAD) commissioned MAS to construct an 85 kilometre dike along the left bank of the river in the delta. The dike was designed to make possible controlled submersion of 30,000 hectares of land for rice crops. FAC loaned 17 million francs for construction of the dike.³⁵ FAC was the first and until 1972 the only backer of SAED (the successor organization to OAD) and its enterprises in the

delta. From 1964 to 1972 it committed 52 million francs to rice projects in the delta, about 50 per cent in the form of grants.³⁶ There was little attempt to develop lands further upstream until the early 1970s when SAED was reorganized and took over the middle valley irrigation organization, OAV.

At the time when the severity of the Sahelian drought was increasing other donors began to provide for creation of new irrigation perimeters in the middle valley and major new ones in the delta. By 1978 French assistance to Senegalese hydro-agricultural projects had been considerably augmented by other sources of finance - IBRD \$25.5 million, most of it for two large perimeter projects in the delta; FED \$7.6 million; USAID \$4.36 million; the Netherlands \$1.8 million; and Kuwait \$5.2 million.³⁷ The Peoples' Republic of China was also developing a perimeter. Despite the growing multilateralization of funding France remained the biggest contributor, with FAC in the period 1972-1978 adding a further 62 million francs (about \$14 million) and the CCCE (Caisse centrale de coopération économique), involved for the first time in 1977, committing another \$10.9 million.³⁸ According to the CCCE France gives its highest aid priority in Senegal (and elsewhere in Africa) to agriculture.³⁹ Of French investment in the Senegal valley most of it is concentrated in the delta - in the period 1964 to 1978 an investment of about 114 million francs in loans and grants.⁴⁰

France was the natural choice to lead the financing for the Diama project. The French could capitalize on their previous investments in the delta. The dam would enable the irrigation perimeters to increase their productivity by doubling the number of harvests from one to two a year. The OMVS asked the French government to undertake the design studies for Diama. The French government at the time proposed that financing of Diama design studies be undertaken jointly with those for Manantali. The French, however, thought of Manantali as more of a long-term project, unlike Diama which could begin construction with little lead time.

Mamadou Aw, the new High Commissioner, wanted the studies undertaken separately and directed French support to Diama.⁴¹ Later when the idea that both projects should proceed together was accepted by the donors France was asked to assist with Manantali.

China

With France supporting Diama, the OMVS in the early 1970s sought a similar benefactor for Manantali. Mali had had assistance ties with the Peoples' Republic of China for a number of years. The Chinese provided some military aid which the Malians found useful to counter-balance Soviet influence.⁴² But the main Chinese assistance was devoted to the agricultural sector. Stimulated by the example of the Tan-Zam railway as a large-scale Chinese aid project, the Malian government, with OMVS support, in 1973 asked the Chinese if they would make a preliminary dam design for the Manantali site.⁴³ The Chinese agreed and made two trips to the region before completing their studies in March 1975. In an oral report to the OMVS the Chinese team proposed a dam designed more for irrigation than navigation or power generation. The dam would store 9.5 billion cubic metres of water which would allow irrigation of 428,000 hectares. The storage was less than the 13 billion proposed by the 1970 Senegal Consult study. As a consequence navigation could be guaranteed for only six months of the year and the power generated would be less - 771 million kwh per year opposed to the 800 million kwh of Senegal Consult, though the power generation would be 90 per cent guaranteed opposed to the 80 per cent of the Senegal Consult study. The dam would cost about \$250 million.⁴⁴ The OMVS thought the project met the navigation, irrigation and power generation criteria, though the OMVS was disappointed in the proposal for a smaller dam than first advocated by the Senegal Consult study.

After making the report the Chinese withdrew from further participation in follow-up investigations, final design studies, or construction

assistance. They argued the project was too large and expensive for them to undertake alone and it was thought the Chinese were unwilling to work with other donors.⁴⁵ The Mauritanian Secretary General of the OMVS, Ould Amar, had gambled on the Chinese to lead development of Manantali. When the gamble failed the OMVS was left with a gap in its physical and financial plans. The Chinese team made only an oral report to the OMVS; nothing had been submitted to the organization, not even the data and findings in Chinese. The OMVS had lost two years with no study or financial commitment to show. The Chinese are still active in the valley, though they are working in, for them, the more traditional areas - irrigated rice perimeters.

Germany

Once it became clear China was withdrawing from the Manantali project the Federal Republic of Germany immediately helped fill the gap. On top of the \$14 million committed in 1974 Germany in 1975 offered a further \$2.4 million grant to conduct the design studies for Manantali.⁴⁶ By the end of 1976 another \$5.5 million IDA type loan was offered for the studies plus over \$51 million for construction.⁴⁷ The German interest and support of Manantali revived the project and attracted interest at a time when the project was viewed by many donors with scepticism.

Germany at this time was beginning to take on a role in foreign aid more appropriate to its position as the leading industrial state in Europe. With the 1972 accord with the German Democratic Republic the West German government put aside the Hallstein Doctrine of the post-war period where it refused to have diplomatic relations with any state that recognized the East German government. In 1973 Germany was admitted to the United Nations where it was exposed to Third World problems.

The West German government was first attracted to the Manantali project because of the iron ore deposits in the upper Senegal basin in

Mali and Senegal. Krupp, the important German steel manufacturer, had entered into a partnership with French and Japanese steel interests and the Senegalese government to form MIFERSO, a company created to explore and then exploit the Falémé iron ore reserves. In the mid-1970s there was speculation that \$250 to \$300 million would be invested in exploitation of the reserves. The Manantali project fitted in with the mineral exploitation for it was expected to supply sufficient hydroelectricity to make mining of the reserves economic. Assistance for Manantali would help secure reserves for German industry. At the time Germany had taken little interest in the irrigation projects in the middle valley or delta. Later it would support some of those projects, notably the Gorgol and Boghé irrigation schemes in Mauritania. However, the major German interest remained the Manantali dam.

United States

The American position regarding the Senegal dam projects was ambivalent and that ambivalence became a source of consternation to the OMVS. Basically USAID had no mandate to contribute to large capital intensive projects. In reaction to the Vietnam War Congress in 1973 revised the Foreign Assistance Act (PL 93-189). The act was intended to prevent the government from providing aid for purely political purposes. Aid should go for projects that benefit the poorest majority.⁴⁸ Large dam projects, which in the United States itself were increasingly unpopular, were not regarded as bringing any immediate help to the poorest of the poor. The OMVS wanted the United States to invest directly in the dams, not so much for the capital, but as a psychological green light for other reluctant donors to come forward. Without providing capital assistance USAID found that it had little leverage with OMVS; USAID had little power to influence the OMVS to accept the recommendations of its planning and environmental studies, which it did support. The agency wanted the Foreign

Assistance Act amended by Congress to allow it to provide some support for the infrastructure projects.⁴⁹

As the Sahel drought deepened into a major crisis the United States, along with other donors, contributed heavily to the rescue mission. In the aftermath the United States participated in the rehabilitation programmes for the region proposed by the states themselves through CILSS. Development of the major rivers of the region, including the Senegal, was high on the list of priorities. USAID did not deny the importance of the rivers, but in its 1976 strategy document for the Sahel it saw dam projects in a much longer term perspective than the Senegal basin states.⁵⁰ Eventually the dams would have to be constructed, but only in the long term after all the preliminary training, planning and rural demand had been established.⁵¹ The Bureau of Reclamation made the point when reviewing the information base for the Senegal projects:

The urge to alleviate the sufferings of the present drought should not blind us to the facts that building major projects, changing cultural patterns, training personnel, and establishing institutions to plan, construct and operate major projects take time. It is quite possible that the present drought will have run its course long before any major projects can become operational.⁵²

As for the two projects, the bureau thought Diama much the more immediate prospect. Manantali's justification relied too much on speculation about rapid rates of irrigation development and power use. More investigations needed to be undertaken and other upstream storage sites appraised - some which appeared to the bureau more promising than Manantali.

In the meantime, without a mandate to invest in the dams, USAID would assist by filling in some of the information gaps that the Bureau of Reclamation's report found, support irrigation projects that might pilot the way towards more effective and faster rates of irrigation development, and provide technical expertise to strengthen the technical capacity of the OMVS. In 1975 the USAID started to support OMVS agronomic research and in 1976 the agency provided \$2.6 million for environmental studies of the consequences of building the dams.⁵³ The agency would have liked to

have made an environmental impact statement, on the American model, as an input into project selection, but as the decision had already been made the agency had to be content with a study of the consequences in the hope the findings might influence the final designs. Later the USAID would provide funding for a major mapping project of the valley and a cost allocation study for the OMVS. In the donor community and the OMVS the United States gained the reputation of 'too much study, not enough decision', though by any planning standards the United States provided a valuable service in conducting studies that might otherwise have not been made and which produced information essential for long term integrated development of the valley.

The World Bank

Like the United States Bureau of Reclamation the World Bank in the mid-1970s was more impressed by the Diama dam than Manantali. There was too much uncertainty regarding the economic justification of upstream storage. Too much depended on the uncertain prospects for mineral development. Only with such development could Manantali find a market for the bulk of its power and justify the high tonnage projections for river transportation. Without mineral exploitation downstream irrigation developments would have to justify economically the investment in the dam.⁵⁴ The bank concluded in 1974 'that it makes economic sense to proceed with construction of Diama Dam but considerable additional information would be needed before donors could make a decision on upstream storage'.⁵⁵ A bank report in 1975 agreed with the Bureau of Reclamation study that the Manantali dam 'is not necessarily the optimum choice and that several upstream storage alternatives merit consideration'.⁵⁶

In 1975 the bank was willing to consider financing on IDA terms part of the cost of Diama. It had already become involved in IDA financing of irrigation projects in the delta, notably the 5,000 hectare Debi-Lampsar

project. The 1975 bank report recommended: 'complete engineering and build Diama Dam as quickly as possible...' and 'complete conversion of single cropping perimeters in the Delta to double cropping and construct new irrigation networks totalling some 30,000 hectares to utilize Diama storage as quickly as possible'. The report also made some recommendations for irrigation further upstream, but the recommendations did not have the same sense of urgency. Medium scale irrigation perimeters in the middle and upper valley should be initiated in order to make use of storage when it becomes available, and studies for staged development of upstream storage should be started. At this time the bank was not yet ready to commit itself to either dam project, though its own studies inclined it to Diama.⁵⁷ The bank supported the OMVS and was ready to provide technical assistance to strengthen it, but before obligating funds to the dam projects more comprehensive economic evaluations would have to be undertaken.

The Arab Funds

Often Arab aid is dispersed directly by the governments, sometimes between heads of state over a cup of coffee. But as balance of payment surpluses of the Arab oil-producing states have increased with rising oil revenues and the funds available for assistance have grown, greater amounts of Arab aid have been institutionalized through national and multilateral Arab development funds and often international institutions like the World Bank (Saudi Arabia is the bank's largest contributor). Kuwait has the oldest, the most experienced and the most respected of the development funds. As one policy to gain recognition and influence in the Arab world and to placate its hostile and threatening neighbour Iraq, the newly independent country formed in 1961 the Kuwait Fund for Arab Economic Development (the Kuwait Fund) to loan funds on generous concessionary terms to other Arab countries. In 1971 Abu Dhabi followed with the Abu Dhabi Fund for Arab Economic Development (the Abu Dhabi Fund).

In the wake of the oil price rises in 1973 and early 1974 the current account surpluses swelled and new national and multilateral development funds proliferated - of relevance to the Senegal case, in 1974 the Saudi Fund for Development (the Saudi Fund), the Iraqi Fund for External Development (the Iraqi Fund), the Arab Bank for Economic Development in Africa (BADEA), in 1975 the Islamic Development Bank (IsDB), and in 1976 the OPEC Special Fund. More than five per cent of Kuwaiti and Saudi GNP is offered as aid; for the United Arab Emirates the figure is around ten per cent. (The average in OECD countries is .33 per cent, with the Netherlands and Sweden the highest at .7 per cent).⁵⁸

Table 1: Capital and Reserves of OPEC Aid Funds 1980⁵⁹

	\$ million
Saudi Fund	4,033
Kuwait Fund	3,381
Venezuelan Fund	1,448
Arab Fund	1,074
IsDB	1,065
OPEC Fund	1,008
BADEA	799
Iraqi Fund	677
Abu Dhabi Fund	565

With the rising revenues and increasing scope to exert influence and garner respect Kuwait and Abu Dhabi changed the mandates of their funds, in 1974 and 1976 respectively, to permit lending beyond the Arab League states. From the point of view of the Arab funds black Africa was a prime region for assistance. Institutions providing concessionary investment have a special interest in the neediest countries and the relative poverty of Africa, with many of the least developed countries there, attracted the funds. Also, rather than spreading themselves thin by investing further afield they could concentrate their impact and influence in countries close to home, many with religious ties. In 1977 at the Cairo summit of the OAU, Arab oil-producing states promised an additional \$1.45 billion in assistance to Africa. The Saudi Fund was given an additional

\$850 million to administer for distribution in Africa.⁶⁰

The types of investments needed for the Senegal programme are of particular interest to the funds. As Abdel Latif al-Hamad, the former Chief Executive Officer of the Kuwait Fund and the most respected official of all the Arab funds, comments, 'other things being equal, I always prefer to lend to a food project'.⁶¹ The funds also like to invest in infrastructure and energy projects, particularly hydro-electric. Another Kuwait Fund official comments 'we are very happy to take part in any sort of energy project that can substitute for oil'.⁶²

Table 2: Percentage Distribution of Development
Project Loans 1980⁶³

	<u>Agriculture</u>	<u>Public Utilities</u>	<u>Industry</u>	<u>Energy</u>	<u>Infra- structure</u>
Kuwait Fund	18.3		24.4	26.3	32
Saudi Fund	21.3	12.3	3.3	20.4	42.6
Abu Dhabi Fund	10.6	23.6	51.7		11.1
IsDB	11.6	12.9	39.8		26.6

The Chief executive officers of the funds are generally of a high calibre, but for the scale of their lending operations the staff is small and the funds often have difficulty recruiting qualified personnel to handle the increasing workload. This has led most of the funds to depend on co-financing arrangements in which they can rely on the analysis and assessments of international lending institutions, especially the World Bank. Many of the funds will also take the lead from the Kuwait Fund, whose experience and reputation give it a leadership role. A Kuwait Fund decision to support a project will often be enough justification for other funds to also support the project. Arab funds, however, will rarely invest in major development projects without the participation of respected outside lending institutions.

Multi-donor Financing

The first OMVS donors conference in 1974 set the pattern for the conferences to follow over the next seven years until the OMVS secured full financing for the dam projects. The OMVS would call the conferences with a list of issues and high expectations that the issues would be settled without causing delays in the implementation schedule. An often unwieldy collection of as many as 100 officials representing 15 to 25 bilateral and multilateral donor agencies and lending institutions would attend. The officials would bear sympathy and goodwill for the OMVS, but seldom would they have the authority to commit their organizations to the types of decisions the OMVS wanted them to make. Unable on their own to make significant decisions and as potential bankers to the OMVS programme reluctant to suggest changes, which if mistaken might make their organizations liable, they could only respond to OMVS initiatives. The officials, many of them insensitive to the political pressure the OMVS was under, would scrutinize OMVS proposals, find faults, demand more evaluations and information, and impose conditions before considering a decision. Considering the scale of investment and weaknesses of the OMVS programme the donor responses were generally reasonable, but the process was frustrating, time consuming and it constantly disappointed the expectations of the OMVS and the basin states. The inexperienced OMVS had to steer a course through a seemingly endless series of uncharted shoals and strong currents that threatened to wreck the enterprise or at least deflect it from arriving at a destination acceptable to the political masters.

1976 - A New Start

In the period between the first donors conference in July 1974 and the second in June 1976 the OMVS was reorganized. The High Commission was created and Mamadou Aw appointed as High Commissioner. The 1976 conference was the new High Commissioner's first major test. He still

but had to prove himself and the reform of OMVS he championed. The three presidents supported him, but he had to work more closely with the OMVS Council of Ministers. The ministers only grudgingly accepted the reform of the OMVS and the appointment of a forceful High Commissioner capable of standing up to them. In the politically sensitive inter-state and transnational environment in which the OMVS operated the ministers were reluctant to concede the clear division of authority the reforms suggested - legislative authority to the council, executive authority with considerable discretionary power to the High Commissioner. Nor were the ministers convinced that the OMVS should take on a more active role in promoting regional development in the basin states. The only result over the coming years that could consolidate Mamadou Aw's position and allow the High Commission's executive role to expand was the securing of the financing for the projects and on terms acceptable to the basin states.

The High Commissioner for his first donors conference had some leeway. The target date to achieve full financing would be near the completion of the final design studies for the dams. A consortium of three French engineering firms (SOGREAH, Coyne & Bellier, and GERSAR) financed by FAC was due to complete its 18 month study by the end of 1977. Because of the Chinese withdrawal the Manantali project was further behind, but the 30 month KfW financed design study was ready to be tended for bids. The study was expected to finish by April 1979. In the interim the OMVS had to persuade donors to finance the OMVS projects in accord with OMVS objectives and principles, create an OMVS-donor consultative mechanism, and negotiate individually with the donors the terms of the grants and loans pledged. The High Commissioner intended the June conference to lay the groundwork for the resolution of these issues over the coming months.

In preparation for the June conference, the OMVS produced a document outlining a ten year plan of action. The action plan⁶⁴ followed up the 1974 objectives report by presenting the concepts and reforms that would guide planning, financing and construction. It did not justify further

the economics of the dams. In accord with the new High Commissioner's views on fully integrating the OMVS into national planning activities, the report discussed the important role the OMVS would have in promoting regional development. As the development programme was conceived as a common enterprise harmonized to national policies of development, the programme had to take account of political constraints as much as economic and technical constraints. Optimization could not be reduced to maximization of economic returns from production. Priority must be given to the alternatives which maximized common interests and profits of all three states equally. The report argued that taking account of political constraints would lead to better economic results than evaluations based on short-term considerations of profitability.⁶⁵

In the pre-regulation stage, the report emphasized that funding for activities, such as training and strengthening of institutions needed for improving the social means of production, should be thought of as pre-investments that need not be subject to any returns in themselves. They will make further investment profitable. In particular investments in hydroagriculture, where so much work had to be done to transform the methods of production from flood-recession to irrigation agriculture, should be thought of as pre-investments.⁶⁶

The report characterized the planning process as a continuous one of 'successive approximations'. The Beyrard Report presented a first hypothesis for integrated development and the 1974 objectives report set out the common policy of the states and what they intended to achieve from the river. The present and subsequent reports would detail a work programme to fix the responsibilities and functions of the OMVS and the many participating national agencies. In time there would be a guiding plan to polish the planning mechanism, elaborate national programmes and harmonize national policies with regional development. In light of experience the planning would be monitored and continually updated and revised.

The June donors conference in Dakar was the first sub-regional meeting of Sahelian states and donors held since the formation in March of the donors' group, the Club des amis du Sahel. The donors' mood was favourable to the OMVS and the High Commissioner. They approved of Mamadou Aw's reforms and were impressed with the 'forward momentum' and 'sense of mission' he had inspired in the organization. The volume and quality of work produced by the OMVS in the 6 months since Mamadou Aw and Ely Ould Allaf, the new Secretary General, assumed their posts was greater than produced by the organization in the previous 18 months. Despite the favourable mood and the new confidence in the OMVS the June conference was inconclusive.⁶⁷

President Senghor opened the Dakar conference with a speech that touched on the donors' experience with the Sahel and put the OMVS projects in the context of the drought and beyond the necessity of rigorous economic evaluation of the projects. He argued:

Calculations as regard profitability are indeed necessary, but they can hardly alter our decision to go ahead with the Diama and Manantali dams during the next decade, since, as is actually the case, the problem of profitability can, at a pinch, be expressed in terms of the increased cost of a glass of water in the hot consuming desert. A cubic metre of water which can save human lives is beyond price.

With regard to purely financial considerations, it is worth noting that the bulk of emergency assistance to the victims of the latest drought - over \$500 million - exceeds the cost of the OMVS sub-regional infrastructure. Even if we increase it by the addition of hydroagricultural development equipment (sic), which would require investments of something like a billion dollars in the next three decades following the coming on stream of the dams, the financial allocation would still be less than the cost of the salvage operations by the international community if another such drought occurred before we could make available to the people concerned the minimum needs in water. This is the angle from which the question of profitability should be examined, as well as the controversy between protagonists and opponents of large and small dams...⁶⁸

Prior to the conference Mamadou Aw sought support for increased authority for himself from the Council of Ministers and the donors to manage as he saw fit the planning and implementation process. He was, he argued, in the best position to oversee the interplay of the technological, ecological, economic and political elements of the process and balance them

to maintain the continued support of the basin states. As part of the strategy to obtain management control he wanted the donors to view the OMVS scheme as an integrated whole and support the total package rather than plant their flag on individual components. Ideally he wanted discretionary authority to assign funds to the needed components from a common fund. His management would be subject to periodic review by the Council of Ministers and an advisory donors' council.⁶⁹ However, in the June conference itself he limited his appeal to the donors to acceptance of some financing principles. They were:

1. all additional studies should be grant funded;
2. given the integral relationships among the two dams, the navigation improvements and the river ports, they should all be regarded as inter-dependent parts of the same project and be given uniform terms of financing;
3. until revenues are realized from the major capital projects donors should accord the most favourable terms of financing, approximating as much as possible IDA terms; and
4. agricultural projects should not be evaluated individually from the standpoint of their internal rates of return, but viewed collectively from the standpoint of their introducing more productive agricultural practices and thereby improving the well-being of the basin population.⁷⁰

The donors were willing to offer moral support for the High Commissioner against the Council of Ministers, but they would concede none of their flexibility to contribute to the investment programme as they saw fit.

The High Commissioner, though not expecting major new pledges at the conference, would have wished to have seen from the donors' indications that the sums would be forthcoming. But most of the donors were no further prepared in 1976 than they were in the 1974 conference to offer funds. They wanted to wait until the final design studies were completed. Some delegations were eager to make a commitment, but had no final authority to make it. For example, the EEC's assistance agency to associated Third World countries, the European Development Fund (FED) put aside in its fourth fund, negotiated under the Lome Convention, \$356.5 million for regional development. The funds were to co-finance projects that promoted

regional integration. However the fund officials had not decided whether to meet the OMVS's request for \$115 million or reduce the amount to cover the needs of more eligible claimants.⁷¹ At the conference only Germany announced a major new commitment. It raised to 146 million D.M. (about \$56 million) its loan on the favourable KfW terms for construction of Manantali. It also announced a further 14 million D.M. would be available for navigation and other studies on top of the 6 million D.M. already given for the Manantali design studies.

Many donors were willing to offer technical assistance to strengthen the OMVS, but they held in abeyance their offers until the High Commissioner could overcome the resistance of the Council of Ministers to his expanded work programme.⁷² There were other problems with technical assistance. The World Bank, for example, had earlier offered to support a team of technical personnel for the OMVS, but the High Commissioner would accept the aid only on OMVS terms. The expatriate staff was to be hired and be responsible to the OMVS. The bank demanded that it select the team and have it under a team leader still responsible to the bank.⁷³ Neither side compromised and the offer was eventually withdrawn.

1977 - The Consultative Committee

By mid-1977 the design studies for Diama and Manantali were progressing and the German funded navigation studies had just begun. The first phase of the Diama design study had been completed in July and the OMVS hoped it might be put to tender late in 1978, and Manantali in 1979.⁷⁴ Although the design studies were well-advanced, funding remained uncertain. The OMVS had little problem obtaining funds for preliminary, pre-feasibility, design and other studies. Since 1964 the OMVS and its predecessors were given more than \$49 million for studies. Securing investment funds for the infrastructure projects was more a problem. The design study for Diama included expensive new features the Council of Ministers had decided

Table 3: Funded Studies to 1977 (non-reimbursable)⁷⁵

	(\$ million)
Pre-feasibility studies - 1964-1974 - UNDP (mostly)	12.0
Design studies Diama - France	2.8
Design studies Manantali - Germany	4.8
Navigation studies - Germany	3.2
Port studies - Canada	5.0
Agronomic research - UNDP	5.31
USAID	.96
France	.4
Environmental study - USAID	3.0
Survey and mapping - USAID	8.35
Socio-economic study UN/OTC	1.25
Italy	.13
OMVS institutional support - UNDP	2.25
	<hr/>
	\$ 49.45

on in 1975. In contrast to the SOGREAH 1973 preliminary study the new design incorporated a much larger lock, more substantial diking, and a road from the dam to the Rosso-Nouakchott road. Taking into account the new features, accurate cost estimates from the design studies, and inflation the OMVS was actually losing ground. The cost of the port, navigation and dam works in 1974 was estimated at \$180 million, in 1976 at \$350 million, and in 1977 at \$500 million - Manantali \$300 million, Diama \$100 million, navigation and ports \$100 million. In 1976 the OMVS estimated it had 60 per cent of the financing, but by 1977 the figure had fallen to 40 per cent. In fact there was no certainty about that 40 per cent. Only Germany and France were firmly committed - \$56 million and \$16 million respectively. The Kuwait Fund, Saudi Arabia, Iran and BAD had earmarked funds, but they had not formally obliged them. With the coming completion of the design studies the High Commissioner needed to make up the shortfall in investment to implement the projects on schedule. In these circumstances the funding priority was restricted to the dam projects in the belief that if the dams were constructed funding for the port and navigation works would follow in due course.⁷⁶

The OMVS astutely involved the French with Diama and the Germans with Manantali. This had the short-term benefit of giving each of the major works a patron and thus the credibility to attract other donors and sources of finance. Longer term it had some negative consequences. To protect the political compromise inherent in the two dam approach the dams needed to be considered as an individual package and financed as a single unit. Separate evaluation and design studies of the dams could not demonstrate why the different projects should be considered as indivisible; that is, how they complemented each other. The total package would cost \$500 million and it was uncertain whether the money could be raised. The German and French sponsors in order to ensure that their respective projects would be financed became competitive. Technically each side found reasons why their project should be constructed now, while the other could wait.⁷⁷ The old debate about the merits of upstream storage versus salt protection in the delta had re-emerged. The French thought Diama immediately realizable and that it could benefit greatly the large existing investment in hydroagriculture in the delta. They did not attack Manantali directly, except to point out that it was a very costly project, it would take a long time to become operational, and an even longer period before hydroagriculture in the middle valley could make productive use of it. The Germans were dismissive of Diama believing once Manantali was completed it would be redundant or at least unnecessary for many years. The upstream regulation dam could perform most of Diama's functions. It would provide a constant source of water for irrigation along the length of the productive reaches of the river, including the delta, while Diama would supply irrigation only to the delta and the lower reaches. More technically controversial, the Germans argued, with a constant flow of 100 cms needed anyway to meet the navigation objective, the salt-water wedge would be pushed back. It thus eliminated the principal function of Diama, its salt barrier function.

KfW officials wanted an evaluation study that would determine whether both could be justified.

The United States was still restrained by legislation from participating in capital intensive projects. The World Bank remained committed to irrigation and it increased its assistance in that sector by \$50 million for the coming five years, but for the dams it needed better economic evaluations to decide. The major sources of finance would be the Arab states. The Kuwait Fund and Saudi Arabia had already promised \$35 million and \$33 million respectively, and their pledges would increase and other Arab lending institutions would join them. However, Kuwaiti and Saudi officials were beginning to feel uneasy. They noted the debate over the respective merits of Diama and Manantali and that they were expected to finance the major share of the OMVS package, but they had no technical analysis to illustrate its economic worth.

To bring the donors up to date, answer their questions and alleviate their concerns, and above all to encourage the donors to make up quickly the shortfall in investment, the High Commissioner invited 21 governments and institutions to attend the first meeting of the long gestating consultative committee.⁷⁸ Following from the interest of the donors in the 1974 donors conference the High Commissioner proposed a consultative committee to serve as a forum for information exchange among all the states and institutions involved and coordinate their assistance. The 1976 donors conference approved the proposal and the Council of Ministers in July 1976 authorized its creation. Sixteen governments and institutions attended the first meeting in Dakar in November 1977. (Reviewing the work of this committee meeting and subsequent ones it is not clear how the committee meetings differed substantially from ordinary donors conferences).

The first session of the committee meeting discussed and amended the draft rules and operating procedures for the new committee. The

sessions continued with the OMVS presenting a progress report on the design studies and project financing. In the discussion the donors questioned the role of Diama. The OMVS side-stepped some of the questions by noting that supplemental economic analysis for Diama and the first phase report on Manantali would not be available for a couple of months. The OMVS responses did not satisfy the donors and it was unable to 'dispel doubts' that Diama would be unnecessary if Manantali was constructed. The donors' attitudes had changed completely since the 1974 donors conference when Diama was the favoured project. Actively promoted by the Germans Manantali was now the project most donors wanted to support.

Half-way through the three day meeting the High Commissioner announced that the OMVS would conduct a 'global study' of the programme, such as advocated by the World Bank and KfW. The High Commissioner spoke with emphasis on the indissoluble unity of the port, navigation and two dam projects. Previous studies, he said, established their feasibility and validity, and the political leaders of the three states found that they formed a package balancing the interests of their states. The High Commissioner recognized that insufficient information had been produced to demonstrate the economic value of the package and that such information was needed by some donors. The global study would show its value and, without questioning the validity of any of the projects, the evaluation would, where appropriate, recommend changes to increase the complementarity of the projects. Given the assumption he seemed to anticipate a more limited exercise than most economists would want. Nevertheless he invited advice from the donors on the concept and scope of the study.

The Council of Ministers passed a resolution in December 1976 approving a global evaluation of the OMVS programme. The American representative suspected that the High Commissioner had kept this study option in reserve 'in anticipation of hard questions and increasing doubts among donor delegations'.⁷⁹ Although the High Commissioner said he had no objections to

independent evaluations by the donors, he may have wished to pre-empt such analysis. Donor representatives had a cavalier disregard for the political assumptions upon which the OMVS package was founded. If there was to be an overall evaluation it would be better for the OMVS to control it and ensure due regard for the political assumptions.

Apart from the French delegation, the donors strongly supported the global evaluation. KfW offered the funds to hire the consultants. The Germans insisted that the global evaluation must be undertaken. They hinted that if the study was not made they might take their support elsewhere. The French delegate, however, questioned the usefulness of such a study and complained that it might delay the start of Diama. The French had pointedly reaffirmed their commitment to Diama by announcing their intention to release funds for the start of construction in the coming year. They hoped to encourage other donors to join with them to enable Diama to go ahead on schedule, but this was now in doubt. Perhaps worse was to come. The French delegate expressed concern that the study might put into question fundamental decisions already taken - that is, Diama. He did admit, however, that the study would be useful if it enabled more funds to be released. By the end of the meeting most of the principal donors looked on the study as a pre-condition to their further participation.

For the OMVS the meeting was a setback. The High Commissioner had hoped to bring the donors to the point of signing assistance conventions. But there were no new commitments and a number of the donors were further from signing than before. The leading Arab contributor at the time, the Kuwait Fund, was highly critical and stated no funds would be forthcoming until there was more information. The major European donor, KfW, was almost openly attacking one of the fundamental components of the programme. Without any new pledges the implementation process would stop with completion of the design studies. To maintain any momentum the OMVS needed funds, which were not forthcoming, to cover the cost of constructing the

access roads to the dam sites. On other issues the OMVS had no more success. Its plea, backed up by the UNDP, for a further \$20 million to continue the OMVS agronomic research programme for the next five years met with no response. The donors paid little attention to the High Commissioner's wish to have a common fund from which he could allocate money for parts of the package in need, for example, Diama. The High Commissioner in his closing address asserted that the OMVS did not want aid that would interfere with the sub-regional cooperation and unity the basin states had achieved. At the time the amount of funds available on those terms seemed limited.

Political Initiatives

If the financing was stalled because of resistance on the technical front, the High Commissioner felt it was time to make a political offensive. Aid administrators were taking aim at the OMVS package of projects and threatening to upset the political equilibrium that kept it together. The High Commissioner said he had no fear of technical studies, but from the type of criticisms that were being made it is clear that many donors did not share his assumption and there was good reason for the OMVS to be concerned. The High Commissioner might restrict the terms of reference for the global evaluation to reflect the OMVS view but that still might not guarantee the desired results. If sub-regional cooperation to develop the river was based on political premises then should not aid be offered on that basis? The people in the best position to understand that proposition were the political leaders of the donor countries themselves. Mamadou Aw suggested to the three basin state presidents that they take the political initiative and visit as a group the heads of state of the donor countries to secure and solidify assistance for the OMVS package.

In December 1977 presidents Senghor, Ould Daddah, and Keita made the first of a series of unique aid gathering missions. They visited

Qatar, Kuwait, Abu Dhabi and Saudi Arabia, where King Khaled offered his services as a 'sponsor' for the OMVS.⁸⁰ In March 1978 they returned to Saudi Arabia and Abu Dhabi, and in May they visited President Giscard d'Estaing in Paris. And in November, after Ould Daddah had been overthrown in the July 1978 coup d'état, the two remaining presidents and the Mauritanian planning minister saw Chancellor Schmidt in Germany and Prime Minister Trudeau in Canada.

The direct political approach was effective. The presidents could take advantage of the current donor interest in Africa and the Sahel. The oil-producing Arab states in March 1977 at the Cairo OAU summit conference promised an additional \$1.5 billion of assistance to Africa. An important meeting of CILSS and the Club du Sahel had taken place in Ottawa in May 1978 in which the participants had formulated an assistance strategy for the Sahel. Above all the presidents could make the political case for the OMVS to the other political leaders. They argued the OMVS was a successful regional organization and it had a dynamic development programme to overcome some of the major physical constraints dooming the region to poverty and periodic drought. The OMVS and its programme was one of the few positive international examples of development and it needed to be sustained and encouraged. Three presidents visiting at one time added force to the argument. Moreover it was difficult to turn them away empty handed. For example the Canadian assistance agency CIDA had been content to limit its involvement to financing the port studies. After the presidents visited Prime Minister Trudeau the Canadian government increased its support with a \$7.6 million commitment to the Manantali project.

By November 1978, after the next consultative committee meeting, the OMVS had increased the funds available from \$204 million in October 1977 to \$443 million.⁸¹ Saudi Arabia and Kuwait had increased their pledges and Abu Dhabi had joined them to raise the Arab commitments from

\$68 million to \$225 million. The OMVS anticipated further loans from the Islamic Development Bank and other Arab funds. In some cases what was left unclear in the prevailing spirit of political good fellowship was the nature of the commitment. Was the additional \$67 million that King Khaled pledged from the government on IDA terms or from the Saudi Funds on slightly less generous development financing terms?

The Global Report

After the October 1977 consultative committee meeting the OMVS, funded by KfW, hired the British consultant engineering firm Sir Alexander Gibb and Partners to conduct the global evaluation of the OMVS package. The firm submitted its report in July 1978. The High Commissioner wanted the report to give the analysis the donors required without questioning the political foundations of the projects. The terms of reference set the objective:

to determine the return from the Programme taking into account the complementarity of the two works in light of the functions assigned to them...

The study was

to focus on setting out an appreciation of the costs and benefits attributable to the combined effects of the two barrages within the context of the integrated development of the Senegal River basin, with optimization of the conditions for development, but without putting aside the implementation of this or that part of the works.⁸²

The OMVS assumed complementarity between Diama and Manantali. The consultants found 'the degree of complementarity between the projects slight'.⁸³ The consultants interpreted the terms of reference loosely - encouraged by some donors - and took a fresh sceptical view of the works. They rethought the scheme by examining the functions each project performed and determining the economic value attributed to them. As discussed more fully in Chapter 4 the results questioned the existing OMVS package. The consultants did not violate the terms of reference by rejecting any part of the programme, but their report did make the case that many aspects

of the programme could not be justified economically, and to increase the economic returns the projects should be more modestly designed.

Rather than calm the debate over upstream storage versus downstream sea water barriers the report added new fuel.

1. It pointed to the over-investment in physical infrastructure and under-investment in the potentially most productive sector, irrigation. This was a welcome argument to the World Bank and USAID, though most donors at the time were more interested in the dams.
2. Without much thought it could be seen that Diama was unnecessary, at least immediately, if Manantali was to be built. In fact it might never be needed if other upstream regulation projects were to proceed after Manantali. If Diama was to be constructed the report recommended, to increase the economic return, the dam should be stripped of all but its salt barrier function - no storage and thus no right bank dike, also a smaller navigation lock than the 200m by 25m one the OMVS wanted.
3. It showed that there was virtually no complementarity between the projects; the much publicized integrated development was not integrated at all. Both projects showed higher rates of return by themselves than when operated jointly. Diama would be of more value if Manantali was not constructed, while Manantali did not need Diama to meet the major basin development objectives.
4. Manantali was over-designed to supply power for a market that did not yet exist. The report recommended delaying construction of the power station and reducing the dam height from 208m IGN to 195m IGN.
5. The river as a major transportation corridor was illusionary.
6. Reading a little deeper between the lines a critic could come to the conclusion that the whole infrastructure programme was invalid. The consultant's case to make any economic sense of the programme depended on a high rate of bringing new land under irrigation and high productivity. But given the experience in the valley, where even the modest rates hoped for have been beyond the present capabilities of the states and assistance agencies, the argument for any regulation project dependent on projected performance in the irrigation sector seems ill-founded.

The OMVS took exception to the report, particularly to the main findings that justification of Diama and Manantali are dependent on the benefits attributable to irrigation, the two projects are insufficiently complementary, and they should be scaled down in size. 'To question at this stage the objectives defined in the Terms of Reference means, at the same time, to destroy the basic OMVS consensus'.⁸⁴ 'It is our opinion that the Consultant, in proposing a couple of works essentially designed for irrigation, considerably deviated from the Terms of Reference.'⁸⁵ The OMVS 'definitely rejected' the single function of irrigation 'because it is contrary to the three states common interest',⁸⁶ - Mali has little irrigable land that would benefit from Manantali. The OMVS used the findings of previous consultants reports to challenge many of the technical points made and pointed to a number of omissions in the report. However, as stipulated in the terms of refernece the report did not explicitly reject the two project approach and found them 'as designed technically and economically feasible'.⁸⁷ The OMVS would point to this conclusion as Global Report support for the OMVS package.

The Second Consultative Committee Meeting

When the consultative committee held its second meeting, 18-19 October 1978 at Dakar, the political and technical conceptions of development collided.⁸⁸ The OMVS had four stated objectives for the meeting:

1. to review the Sir Alexander Gibb and Partners report;
2. to establish and agree upon a financial plan to allocate the donor funds among the different components of the two projects in accord with donor preferences and terms;
3. to settle on loan conditions, terms, and procurement procedures of the eight committed donors and institutions to reduce project tasks and management costs, and
4. to consider changes to present requirements of 100 per cent debt guarantee from each state that made for a 300 per cent debt guarantee for each loan and unnecessarily inflated the indebtedness of the three basin states.

From the OMVS point of view the most important but unstated objectives

were first to persuade the donors to release the lines of credit they had offered in accord with the OMVS's proposed tranching plan for expenditure and second, to secure more pledges to cover the shortfall in investment.

To avoid further delays it was important to achieve the first objective. Prior to the meeting, owing to the efforts of the presidents, the OMVS had financial pledges for \$396 million. In response to the Global Report and anticipating donors' objections the OMVS reduced the immediate financing needs for the two dams by deferring some aspects of them. The Diama work road and right bank dikes would be carried out, but rehabilitation of the old left bank dikes and the access road would be deferred. For Manantali the 208 metre high dam and the access road would go forward, but the power plant and transmission lines would wait. The deferrals reduced immediate financing needs to about the figure of the commitments, but not including the expected \$200 million increase over the period of construction due to inflation. As far as the High Commissioner was concerned the technical dossier for Diama was complete, and the OMVS was ready to offer the project for tender in preparation for the start of construction by the end of 1979. The Manantali design study was on schedule and the OMVS wanted to begin the access road from the railhead to the dam site within a few months, call for tenders in July 1979 and begin construction in 1980. It might take some time to complete financing, but in the meantime the OMVS could keep on schedule if the donors who promised funds released them for the implementation of the first stage of construction.

As at the previous meetings there was little overlap between the concerns of the OMVS and the donors. The donors took little notice of OMVS financing preoccupations. They were still concerned with the two dam approach and the costly designs. In particular, the Arab fund representatives, led by those from the Kuwait Fund, added their voices to the KfW complaints about the economic justification of some aspects of the programme. An American report of the meeting observed: 'most discussion

focused on the two dam issue, either openly or, more often, as an underlying current sweeping throughout virtually every delegation'.⁹⁰ The OMVS wanted the donors to make up the shortage in investment, but most donors felt if the investment needs were too high the dubious Diama project should be dropped. The Global Report had done nothing to discourage the argument. The High Commissioner, however, was not to be drawn. When some representatives tried to raise it in open discussion he 'politely but firmly deflected' the issue.⁹¹ As the American delegation reported the issue was 'not repeat not currently open for discussion as far as the OMVS was concerned'.⁹² Privately Mamadou Aw confided that he was in an extremely awkward position. Further analysis of the technical and economic data might conclude that Diama need not be undertaken, but this conclusion was entirely unacceptable to the Senegalese.⁹³

If the meeting succeeded in nothing else it made all the donor representatives fully aware of the direction and strength of support for Diama. President Senghor wanted a major river project located on Senegalese territory. He did not want Senegal dependent upon Mali for water, particularly during times of severe drought. President Senghor had the long-held and unwavering support from the highest levels of the French government. President Pompidou expressed his interest in the project when visiting Dakar in 1971 and President Giscard with President Senghor inspected the site from the air. Within the last few months the French had raised their pledge from \$16 million to \$50 million. According to the Global Report Senegal would benefit more from Manantali than its neighbours; nevertheless for Senegal Diama was the priority project. A well placed source, the leader of the French delegation, speculated that if Diama was not constructed it would mean the break-up of the OMVS alliance.⁹⁴

If the two dam approach was out of bounds for open discussion the donors still wished to see many technical issues resolved. Questions raised by the Global Report had not yet been satisfactorily answered.

In particular what was the justification for the right bank dike, the \$73 million 200m by 25m navigation lock at Diama, and the 208m IGN high dam at Manantali? Some donors, like the Abu Dhabi Fund, thought the OMVS should accept the scaled down plan of the Global Report. At any rate the critics felt the OMVS package should be reconsidered and it was premature to put Diama out for tender. Before the Arab funds would consider releasing their credits they insisted on further justification of the OMVS choices. The Arab insistence on economy was seen with some irony by OMVS officials for while the conference was on OPEC announced oil price rises from \$18 to \$24 a barrel.

The World Bank representative raised the neglected - but as the Global Report emphasized - vital issue of investment in irrigation perimeters. Most donors remained attached to large infrastructure investments, but if the rates of irrigation expansion needed to valorize investment in the dams was to be achieved up to \$40 million a year would need to be raised over the next ten or more years (\$5,000 to \$8,000 per hectare x 5,000 hectares per year). Privately the bank staff were tending towards a 'no dam policy', but they would not publicly advocate or admit it. The bank, like USAID, because of, in the words of the American report, their 'past shyness on the infrastructure question' were 'viewed as decorative at what is essentially a gathering of big-works investors'.⁹⁵ Nevertheless, the bank's statement on irrigation elicited some donor response. The FED representative questioned the reality of the 5,000 hectares a year target when at that time Senegal could only implement 1,000 hectares a year.⁹⁶ The Kuwaiti and German representatives supported such investment and felt the projects might have to be revised in light of the low level of donor investment in agriculture.

The High Commissioner at the end of the meeting assured the donors that he would inform the Council of Ministers of their concerns and the OMVS would respond to their technical questions, and welcome their

appraisal missions. Although the OMVS had not secured access to the committed funds, the High Commissioner asserted that Diama and the access road to Manantali were ready for tenders and that the OMVS after 'appropriate consultations' was going to solicit bids anyway. It was clear the High Commissioner was under pressure from the Council of Ministers and the heads of state to start the projects in the coming year.

Tensions and Frustrations

The financing failure added to tensions within the basin state alliance that were threatening to break it up. Despite the solidarity of the presidential aid lobbying, Mali and Senegal manoeuvred against each other to ensure donor support for the projects located within their respective national jurisdictions.⁹⁷ Against the background of the Senegalese-Malian rivalry, the OMVS had lost a stabilizing influence and committed supporter with the overthrow of President Ould Daddah. The new military government seemed less committed to the OMVS and there were persistent rumours in the press in late 1978 and early 1979 that Mauritania might withdraw.⁹⁸ Arab-Berber nationalists saw little direct benefit to them from the projects. Mauritania would not have direct control over either of the major works and the OMVS programme would channel investment for the benefit of the black population in the south. Following the coup Senegalese-Mauritanian tensions increased. Mauritania was in turmoil and as in the past in times of instability racial unrest increased. Persecution of the blacks drew the attention of President Senghor. He renewed a call made before the coup for a referendum in the south to give the black population the option of joining Senegal. He also permitted a Mauritanian black opposition group, the Walfougui Front, to form in Dakar in March 1979.⁹⁹ One note of continuing cooperation, however, was struck in December 1978 when the OMVS heads of state signed a convention making the OMVS project the common property of the three states, regardless of where they were located (see

Chapter 6). But the glue binding the alliance was concessionary foreign aid for the OMVS programme. If insufficient aid could be obtained there was little to hold the states together.

Given the donor criticism of Diama the first step to win support for the OMVS package was to silence that criticism. The most influential critic was the German aid agency, KfW, which while staunchly defending Manantali, undermined support for Diama. KfW's criticisms were supported by the Arab funds, particularly the ones from Kuwait and Abu Dhabi. Their support for the OMVS package was essential both for the level of their pledges and for attracting other Arab contributions such as those expected from the Islamic Development Bank, the Arab Bank for Economic Development in Africa, and from Qatar. Following the consultative committee meeting in October Presidents Senghor and Keita along with the Mauritanian planning minister visited Germany. One purpose was to solicit more German investment. Another was to get the 'green light' from Chancellor Schmidt to go ahead with Diama.¹⁰⁰ In other words they wanted the German leader to assure them of German political support for the OMVS package as it stood. An unconfirmed report states KfW officials were still raising objections at the beginning of 1979. Mamadou Aw went to Bonn to seek reassurance from the Chancellor on the German commitment to both dams, and when assured, to ask the Chancellor to make certain that position was understood in Frankfurt by KfW. Whatever happened, in the coming meetings KfW no longer argued for the dropping of the Diama project. In fact the one sign of progress at the next consultative committee meeting, held in Paris in June 1979, was the consensus accepting simultaneous construction of both dams.

However, the Arab funds led by Kuwait were unresponsive to the OMVS implementation schedule. An American representative at the October 1978 meeting commented 'that unless nudged by their political leaders, it appears that the Arab technocrats may keep the OMVS from proceeding on

its current schedule by insisting on more convincing justification for proceeding with both dam projects at the same time.¹⁰¹ The Arab technocrats along with the other donors now accepted the two dam approach. Their acceptance was no doubt influenced by the political commitment from above. Aid is given for political reasons; for it to be politically productive it must be directed at what the recipients want. In a case like the Senegal the project might be economically marginal, but the deficiencies are more than made up by satisfying three suitable recipients. Nevertheless the technocrats remained highly critical of the OMVS. President Giscard enthused over the 'trilogue' among Arabs, Africans and Europeans - Arab petro-dollars for African development using European technology and expertise. Arab aid is untied. It serves no Arab domestic economic interests and has no 'flow back' like most Western aid. Arab technocrats might reasonably suspect that the Europeans and African members of the 'trilogue' were less interested in the economic returns of the projects than in the financial returns to European contractors and the political returns to African politicians. The prestige of the Arab funds with their governments depends on their reputation for rigorous, fair, and informed appraisal of the projects submitted to them.¹⁰² The Arab funds were committed to the OMVS but in this case they did not have the World Bank endorsing the validity of the investments. The technocrats were largely on their own to try and make their investments as productive as possible. In this perspective the OMVS implementation schedule was of little concern.

OMVS leaders and technocrats for their part became increasingly frustrated by the demands and performance of the donors in general and the Arab funds in particular. The High Commissioner felt that the success of the presidential aid missions was due to the basin states leaders' ability to explain their priorities to the political leaders of the donor states and get their commitment to the OMVS programme. Once agreement

was reached at this high level the problem was that the funds were administered by low level officials. It was particularly annoying when these technicians attempted to redefine the OMVS orientation and programme.¹⁰³ OMVS officials complained that the Arab funds did not have good administrators and they did not have the engineering expertise to conduct detailed examinations; many of the officials the OMVS had to deal with were too low level and were badly informed. In this period of tension minor problems, such as the transmittal of documents, caused great irritation and delay. OMVS officials complained they would send documents to Kuwait by mail, but they would not arrive. The documents would be sent by courier, but the official who received them would move leaving no record for the fund administration that they had ever been received. The officials would arrive at the meetings unprepared and all the preparatory work of the OMVS went for nothing.

The frustrations became intense in 1979 as the OMVS tried vainly to rush through agreements on the outstanding issues in the way of releasing funds. The High Commissioner faced a political deadline for the start of construction. The basin state presidents, come what may, were determined that by December they would have the official ceremony to lay the first stone for the Dama dam.

Countdown

The Paris meeting in June 1979 foundered on the failure of the OMVS to justify to the Arab funds the high cost options selected for Dama and Manantali in light of the findings of the Global Report.¹⁰⁴ Arab fund representatives suspected the OMVS of trying to ignore the suggestions in the Global Report for smaller scale projects. In the Spring the OMVS had produced a second defence of the projects but the Arab funds were not convinced by the memorandum. They insisted that the OMVS suspend the awarding of the Dama engineering contract until they were satisfied

with the designs.¹⁰⁵ As a consequence the start to construction would be delayed beyond the official stone laying ceremony.

The OMVS asked Sir Alexander Gibb and Partners to work with the French and German consultants for the Diama, Manantali and navigation projects to reconcile the differences in their reports and to answer the questions raised in the June meeting. The questions concerned:

1. the appropriate size for the navigation lock at Diama;
2. the need for Diama to have a storage function and thus the need for the right bank dike;
3. the most economic height for Manantali;
4. the economic rate of return for the integrated programme.

The consultants cobbled the report together in just over a month and submitted it to the OMVS in August. The report concluded:

1. as Manantali would regulate the river Diama need not have a storage function. Although the right bank dike would serve useful functions - flood protection, filling of the depression in the lower valley with fresh water, and reduction of the height for pumping from the river - the storage function and the dike could be deferred without compromising the immediate objectives of the programme.
2. The proposed 200m by 25m navigation lock would be suitable for the needs of heavy cargo traffic and small ocean going craft, but a lock of 175m by 13m would be sufficient for traffic forecast in the medium term.
3. The 208m Manantali dam was the most economically favourable - better than the 195m high dam proposed in the Global Report.
4. The global rate of return would be approximately 7.8 per cent if only irrigation and energy benefits are considered and 9.3 per cent if navigation benefits are added.
5. Adoption of the proposed recommendations would reduce the total investment cost from about \$550 million to about \$460 million (105.4 billion F.CFA) at 1979 prices without including the costs from inflation during the period of implementation.¹⁰⁶

The report's conclusions eventually provided the basis for final agreement on the project designs.

September 1979

The OMVS and the donors met at Dakar for two days from 26 September.¹⁰⁷

They discussed the final project design, administration of engineering

contracts, the financing plan, and rural development - issues that provided the topics of discussion for the coming meetings. The meeting was largely inconclusive, making headway on the design issue but losing ground on donor demands for revision of contract administrative procedures. The OMVS agreed to the donor demands to reduce lock size for Diama and defer the right bank dike. The decision still had to be endorsed by the Council of Ministers and the heads of state, but the donors made clear that deferral of the right bank dike was 'a prerequisite for continuation of negotiations'.¹⁰⁸ The OMVS also indicated that the principle of the basin state financing interest during the period of construction had been accepted. Saudi Fund officials were still not satisfied with the justification for the 208 metre height for Manantali and requested additional written information from the consultants. Hence no decision was made on the Manantali design.

The donors examined the terms of the tender document - the OMVS had been ready to award the Diama engineering contract since June - and found it used a system with which not all were familiar. They wanted the documents for Diama and Manantali revised according to the international practice as set down in the 1977 FIDIC standards (International Federation of Consulting Engineers). A number of other administrative and financing issues were considered but not resolved. The Kuwait Fund representatives took up the irrigation investment issue, raised by the World Bank in the October 1978 meeting, and argued that the OMVS should assume greater responsibility in this sector. The Global Report had shown irrigation to be the prime justification for the dams, and thus the Kuwaitis reasoned, the OMVS as the borrower for the dams should have a greater role in planning, executing and controlling the irrigation projects.¹⁰⁹

November 1979

With the ground-breaking ceremony for Diama just two weeks away the donors and the OMVS met again in Dakar for three days from the 27 November.

Full financing and mobilization of funds seemed as far away as ever. The meeting, however, marked one major milestone. There was a consensus on the design package. The heads of state in the course of meetings in October and November approved the reduced lock size for Manantali and the deferral of the right bank dike. The Saudi Fund officials supported by KfW, complained that the consultants' technical note justifying the 208 metre height of Manantali was open to wide interpretation and was of little assistance in their efforts to persuade their governing bodies of the need for such a large dam. Nevertheless all donors now agreed to the 208 metre IGN high dam with deferral of the powerhouse until power demand justified its construction.¹¹⁰

The breakthrough on design was offset by a disturbing new condition. The High Commissioner's original proposal for a common fund from which the OMVS could draw funds for implementation of the projects as needed had been ignored. The donors insisted on funding directly those components that attracted them. Under pressure to begin Diama the High Commissioner wanted Saudi Arabia to abandon its preference for dividing its loan among the dams and navigation projects in favour of applying all its \$100 million to Diama. But now the donors accepted simultaneous construction of both dams and they would not allow the package to be broken up. One project could not go forward while the other awaited full financing. With the OMVS approximately \$130 million short of the \$643 million then anticipated as the full financing cost of both projects representatives from the Kuwait Fund stated that mobilization of their funds and their approval of the OMVS financing plans was conditional upon the OMVS obtaining full financing for both dams.

Stymied by the full financing condition the meeting addressed the now less pressing but difficult issue of allocation of loans among the projects and the 13 different financing components. The Arab funds long insisted that none of their loans could be joined with tied loans. German

aid was untied, but French, Canadian, and Italian was tied. The OMVS with the donors' approval had to avoid mixing tied with untied aid. Canada, for example, would support only components that favoured purchase of Canadian goods and services. The OMVS felt at the time that the modest Canadian support of about \$8 million would best be allocated to the separable component of resettlement of the approximately 13,000 people who lived in the area to be flooded by Manantali. The Canadians found the suggestion unacceptable because too high a proportion of funds would be spent locally. The OMVS had the problem of reallocating the funds to more expensive components without tainting them for Arab investment.

The Kuwait Fund representatives, supported by Saudi and Abu Dhabi officials, once again raised the issue of the agricultural programme. They sharply attacked the lack of progress of the basin states in accelerating the rate of irrigation development and the lack of OMVS priority given to this effort. The Kuwaitis proposed a seven point plan that called for an undated integrated agricultural development plan and a broader mandate for the OMVS in the irrigation sector.¹¹¹ Mamadou Aw, though personally in favour of such an expanded role for the OMVS, pointed to the political sensitivity of the issue. He cautioned that the jurisdiction for agricultural development lay within the national realm and it involved responsibilities that could not easily be delegated to an inter-state institution.

The Kuwait Fund, as discussed, has a strong interest in irrigation development. The interest was sharpened in 1979 for the Senegal when the fund invested for the first time (\$5.2 million) in one of the large scale irrigation perimeters.¹¹² The sector was in disorder and of concern if the river projects were to have any beneficial impacts. In 1974 the states agreed to a rate of irrigation which would see 50,300 hectares under cultivation by 1980.¹¹³ By July 1980 the total irrigated land was 27,885 hectares (including 7,400 hectares for commercial sugar cane

production) and much of that area was located within the Diama zone of influence.¹¹⁴ In light of the organizational, management, physical, social, and financing difficulties of achieving such a high rate early on in the programme the figures were revised to a target of 60,000 hectares by 1986 when Manantali was expected to be ready for operation. In 1979 the basin states had financing for an additional 12,700 hectares and were looking for a further \$200 million to finance the extra 20,000 hectares needed to reach the 1986 target. Although some progress had been made in removing constraints holding back irrigation many problems remained. There was little convincing evidence that the states, their irrigation development agencies, and a sufficient number of donors were operating at one with the OMVS in preparing the valley for river regulation. The state governments had not addressed the operational problems of the development agencies, SAED and SONADER, whose performance was cause for concern. The gross development figures, not impressive in themselves, disguised further physical and management problems which caused wide variations in yields and, for example, in 1978, resulted in about a third of the land within large-scale perimeters either not being cultivated or harvested.¹¹⁵ The major problem, once the management problems were overcome, was to mobilize sufficient funds to meet the development rates. Many more donors were starting to show an interest in the irrigation programme, but as the World Bank representative said, 'the big bucks are not attracted to irrigation'.¹¹⁶ It seemed that the priority of the OMVS, the states, and the donors was to solve the relatively straightforward technical and financing problems associated with the dams. The accompanying agricultural programme was not receiving the attention needed. In addition to technical and financial problems it faced the more difficult and complex political, social, and organizational problems of rural development. Now that the dam projects seemed assured, if not the implementation schedules, some donors, like the Kuwait Fund, sought reforms to ensure irrigation development kept pace with river regulation.

December 1979

The ceremony to lay the first stone for Diama took place on 12 December with the heads of state in attendance. Although press reports of the time were optimistic that the OMVS had sufficient funding to continue with the project there had been no breakthrough and no suggestion of when funds might be released.¹¹⁷ Prior to the ceremony the Council of Ministers and the heads of state met and decided not to renew Mamadou Aw's contract, which was expiring at the end of the year. He was highly respected by the donors for his competence and intelligence, but he never had easy relations with the Council of Ministers. The tension between them no doubt made him appear secretive and this contributed to Senegalese suspicions that as a Malian he was stalling on Diama to ensure Manantali went ahead. The Mauritians in any case were eager to replace him with a Mauritanian. His removal, however, was inevitable when he could not meet the political timetable set for implementation of Diama and he lost the support of his original patron President Senghor. Moktar Ould Haiba (known as Cheibani Ould Haiba) a Mauritanian economist who had held several ministerial posts - planning, finance, and rural development - in the Mauritanian government and had been the first President of the OERS Council of Ministers was appointed to replace Mamadou Aw.

The heads of state wanted progress on financing. With Mamadou Aw a lame duck appointment until the end of the year, the Council of Ministers took the initiative. They went to Paris to talk to the donors on 19 December to obtain their approval of the technical programme and thus enable a rapid start to Diama and an invitation to bid for Manantali. They were no more successful than Mamadou Aw. The Kuwaitis still demanded top priority be given to full financing and they reacted pointedly to implied criticism of their rigidity. The minutes of the meeting report them as saying: 'as to the request for more flexibility, some of the delays experienced in the past were due to the fact that financing sources

advice had not been sought, thereby necessitating backward moves. We want to be frank, very frank for the benefit of all.'¹¹⁸

The donors requested that the changes made in the OMVS plans over the past few months be submitted to the two lowest bidders for Diama in order that they could adjust their bids. The donors would examine the results and then discuss full budgeting of the financial plan.

1980

The inter-state tension of the previous year arising from the turmoil in Mauritania eased by the end of 1979, which gave the OMVS renewed political impetus. President Senghor made an effort to improve relations with the new regime in Mauritania and that regime, under Mohammed Khouna Ould Heydalla, reaffirmed Mauritanian support for the OMVS. Ould Heydalla took effective control of political power when he became Prime Minister in May 1979 after Ould Bouceif, the second head of state since the coup, was killed in a plane crash at Dakar. (In January 1980 Ould Heydalla became President.) In August 1979 Mauritania signed a peace treaty with Polisario and the government announced its intention to be neutral in the continuing war between the liberation group and Morocco. In the same month President Senghor visited Mauritania. Shortly after, the Dakar-based black Mauritanian opposition group, the Walfougui Front, ceased to operate. Ould Heydalla for his part worked to defuse the racial tension that had been building up. The black population was particularly upset by the new regime's plans to replace French with Arabic as the national language. He took a less stringent view, allowing local languages and French a place. As part of his policy of national reconstruction and reconciliation the OMVS reassumed the important role Ould Daddah had given it. The OMVS projects would benefit the blacks in the south while reducing Mauritania's dependence on imported cereals - an increasing part of the balance of payments problem as persistent drought devastated much

of the traditional economy.

As there would be no start to the projects until the Arab fund conditions had been met or the conditions eased, the basin state political leaders set out once again in search of funds. Ould Heydalla was not in such a secure position domestically that he could accompany in the Spring of 1980 presidents Senghor and Keita to Kuwait, France, Germany, Canada and Saudi Arabia. Officially, he was 'ailing' and sent his Minister of Supply, Ahmadou Baba Ly.¹¹⁹ In June President Senghor revisited Saudi Arabia and Abu Dhabi on his own. By November 1980 when the donors next met with the OMVS, the organization had committed funds raised from \$500 million to over \$600 million with promises from Saudi Arabia for a further \$50 million. But at the three day meeting in Dakar the donors, without OMVS representatives in attendance, discussed with consulting engineers revised costs for the projects. The total project costs including allowance for inflation during construction were revised upward from about \$600 million to \$866 million - Diama \$186 million and Manantali \$680 million.

The participants in November 1980 were less at cross purposes than at previous meetings but still far from agreement on the start of construction. An American report of the meeting summarizes the way it was conducted.

Given the disorder of last year's OMVS donors meeting and the subsequent sacking of the then High Commissioner, the current High Commissioner was clearly under the gun to produce. He conducted the meeting in an atmosphere of complete frankness and in a very open style. Cards were placed on the table by all parties - in plenary session as well as in working groups - to an extent seldom seen in such international conferences. In their closing remarks the OPEC delegations took the floor to express their particular appreciation to the OMVS High Commissioner for the smooth, very frank meeting. Clearly the High Commissioner in large part mended OMVS fences with OPEC. But this did not necessarily translate into additional funds for the dams.¹²¹

Early in the conference a working group session discussed agricultural development. The OMVS had responded to Arab and other donor criticism

about the lack of priority given to irrigation development by preparing an indicative programme for hydro-agricultural development for the period 1981-1990.¹²² The OMVS also presented the report of the major socio-economic study of agricultural development in the valley.¹²³ Many of the representatives were pleased with the indicative programme,¹²⁴ though representatives from the World Bank, CCCE, FAC and KfW doubted the proposed rates of irrigation implementation (about 40,000 hectares by 1990) could be met. Part of the reason for the poor performance of the irrigation sector was the weakness of the national irrigation development agencies. The donors returned to the argument of the previous meetings that the OMVS should have a mandate to promote irrigation development, even if such an expanded role would be at the expense of national programmes and agencies. The donors hinted that additional funding for the dam projects might be dependent on the basin states agreeing to such an expanded role. In the 'very heated debate' OMVS representatives pointed out the political realities entailed by such suggestions.¹²⁵ No agreement was reached in the working session or the plenary session. However on one related issue there was general agreement. One persistent problem was the fact that the ministers of supply or public works usually represented their states on the Council of Ministers. There was agreement that there should be greater coordination among the OMVS and the relevant agricultural and rural development ministries, including participation by their ministers in Council of Minister sessions.

In the main plenary session discussion focused on the trigger level for release of funds and the amount of funds presently obliged. In discussions with donors beforehand the OMVS found sympathy for a more flexible approach to investment coverage, but there was no agreement on the percentage that would release the funds. At first 80 per cent was suggested; however the Germans had reservations. Eventually the donors agreed that the invitation to tender for Manantali and renegotiation of the Diama contract

could start when 80 per cent of the funding was secured, but no physical works could begin until 85 per cent was achieved.

Once agreement was reached on the percentage, discussion focused on how much funding had been obtained and how much more the donors were willing to commit to reach the agreed level. For the moment the pressure was off the OMVS as the donors lobbied among themselves to increase the level of funding. King Khaled had promised the basin states presidents an additional \$50 million. But the Saudi Fund representatives said they were not authorized to recognize that sum as firm. It became clear, according to the American delegate, that the Saudis were holding back the \$50 million as a 'bargaining chip' to encourage other donors to increase their pledges.¹²⁶ The Germans indicated a willingness to increase their investment if others would increase theirs. They specifically asked the World Bank representative to commit the bank to some infrastructure investment, but he avoided the issue by saying he had no authorization to offer a loan. Italy came through with an additional \$12 million. The EEC (FED), whose allocation for regional projects had just doubled with the recent start of the fifth fund, raised its pledge by \$25 million. By the end of the sessions the pressure focused on the French delegation, which had remained fairly silent in these discussions. Donors 'tried none too subtly to extract statements' from the French, but it was clear they were 'specifically not authorized' to increase their contribution.¹²⁷

There was some discussion of who would make up the final 15 per cent once the 85 per cent trigger level was reached. The Kuwaitis thought that the basin states should provide the funds, but the High Commissioner and the President of the Council of Ministers cast doubt on the states' ability to raise the funds in light of the desperate economic conditions of the national economies. They promised only to continue to seek funds from every source.

One significant new contribution to the projects was that of the

United States. Because of the restrictions placed by Congress, USAID could not support investment in capital intensive projects, but the agency sought some means to have a more direct impact on shaping the development programme in the valley. In the course of the preceding donor meetings the Americans found two areas in which they could make contributions. When the Canadians expressed no interest in funding resettlement the Americans saw an opportunity to invest in the infrastructure package without violating the Congressional prohibition. At the November meeting USAID representatives expressed their intention to seek funding to cover the capital and physical costs of population resettlement. More substantially the USAID responded to the donor dissatisfaction with the basin states' and the OMVS's performance in irrigation development by proposing a \$77 million (\$56 million grant) project to promote irrigation development. The five year long project would attempt to increase agricultural production in the short term, provide feasibility studies of irrigation projects for medium term multi-donor financing, and conduct a series of studies aimed at rectifying long term river basin problems affecting agricultural development. Unlike previous donor investment in agriculture, which provided assistance through national agencies, this project would be coordinated through the OMVS. It would go a long way towards giving the OMVS the financial power to broaden its role in the irrigation sector. This investment, however, did nothing to meet the immediate capital needs of the OMVS, and the meeting ended in some despair over the shortfall in financing. At the October 1979 donors meeting the OMVS had been 17 per cent short of the financing target; a year later having obtained a further \$109 million (not counting the as yet unconfirmed \$50 million from Saudi Arabia) the OMVS was 30 per cent short.

1981: Take-off

The end of 1980 saw the retirement of President Senghor and the accession of Prime Minister Abou Diouf to the presidency of Senegal. Since

independence President Senghor must be seen as the driving force behind efforts to develop the Senegal River and the major influence shaping the OMVS programme. Although it is difficult to envision the OMVS ever getting as far as it did without his drive, by the time of his retirement he was becoming a liability. Despite his stress on good relations with immediate neighbours in his foreign policy based on 'concentric circles', his crusty pro-Western views were often out of step with his neighbours. His support of Morocco, his opposition to Algeria and Polisario, and his sympathy for Mauritanian black opposition groups made relations with Mauritania difficult. In recent years his support for Israel and Egypt did not endear him to the Arab states, particularly Saudi Arabia, upon which the OMVS depended for so much of its aid. His stubborn defence of Diama created suspicion that he might arrange with France to abandon the OMVS and construct Diama. President Diouf was quick to demonstrate a foreign policy independent of President Senghor that was more sensitive to the fears and interests of neighbours and donors alike.

Coincidentally the departure of President Senghor marked the turn around in OMVS fortunes. Within the first few months of 1981 the OMVS obtained the needed 85 per cent financing. The Saudi's extra \$50 million was confirmed. FED increased its loans from \$47 million to \$88.7 million. Iraq joined company with its more conservative Arab neighbours to offer \$20 million. The UNDP, which as a rule does not contribute capital funds, was so pleased with its protégé that it made an exception and contributed \$10 million.

The planning and financing process for the dam projects was one or two steps removed from the concerns and views of the people in the valley. The projects were supposed to be for their benefit, but they were not represented in any of the OMVS planning and decision making. It was in the words of Adrian Adams, an anthropologist working with the Soninkê, 'une affaire de techniciens silencieux'.¹²⁸ We noted in Chapter Three

the resistance the irrigation development agency, SAED, faced in attempting to extend its centralized operations to the Soninké area near Bakel. But of the actual river regulation, which would alter the basis of the valley's subsistence economy, the people seemed to know little. In the latter stages of the funding process, however, explicit opposition to the OMVS projects did arise, not in the valley itself but from expatriate Senegalese workers in France. The Union général des travailleurs Sénégalais en France focused on attempting to persuade some donors to withdraw their contributions. In 1979 the union attempted to look for support in France and then in Canada in their attempt to stop the projects. In Canada the union won the support of a Quebec labour group, Comité Québec-Afrique du Centre international de solidarité ouvrière. Apart from raising some press interest in Canada in early 1981 the opposition had no effect on either French or Canadian commitments.¹²⁹

The OMVS met with donors for a technical session in March at Grenoble to prepare contracts for the project engineering. The overall supervision contract was awarded to the Global Report consultants Sir Alexander Gibb and Partners. The engineering contracts for Diama and Manantali were awarded respectively to the French and German consortiums SOGREAH and Groupement Manantali, which had done the feasibility and design studies for the dams. The contracts were to be reviewed by the firms and then adjusted by the OMVS in preparation for donor review in May at Paris. The distribution of donor contributions among the dams and components and the schedule for disbursement of funds was also be decided in Paris.¹³⁰

The Paris meeting did not go well according to an American report because the OMVS was 'unprepared and unable to guide discussion in a professional manner'.¹³¹ The documents did not reach the donors in time and a number of donors - Germany, France, FED, and the Arab funds - complained that they had wanted their contracting officers and general counsels to review the documents before coming to Paris. The Arab funds, when reviewing

Table 4 Financing Commitments and Costs of OMVS Projects
1974-1981

	1974	1976 5*	1977 12*	1978 10*	1979 11*	1980 11*	1981 5*
	(\$ millions)						
Saudi Arabia	10	33	33	100	100	100	150
Kuwait	34	40	35	68	68	100	100
West Germany		32.5	55	60	92	92	87
France	17	18	16	50	56	70	70
Abu Dhabi				50	50	70	70
BAD & FAD	56	50	46	45	52	63	61
FED			17	19	19	47	89
Iraq							20
Italy					24	35	38
IsDB					20	20	20
Canada					8.5	8.5	21
Iran	4	4	4	4	4	4	4
UNDP							10
United States							10
Other**							58
Total Commitments	107	177.5	206.5	396	493.5	609	809
Dama	28		100	122	132.5	186	186
Manantali	100		300	414	463	680	680
Total	128		400	536	595.5	866	866***

* Month

** Financial accounts plus OMVS member states through FED

*** cost including est. for inflation for the period of construction.

the documents, felt the engineering firms were trying to hide costs and the Arabs wanted more information on the engineering firms' budgets and contract provisions. The American report observed:

OMVS tended to side with the Arab nations because it felt that France and West Germany had everything to gain by promoting the interests of their respective engineering firms while the Arab viewpoint was regarded as more akin to their own position.¹³²

Since there would be a delay in reviewing and then signing the contracts the meeting could not arrive at a schedule of disbursements. The OMVS was thus under pressure to satisfy the donors by the end of July when it wanted the contracts signed in order to begin the long delayed Diama by the end of November and Manantali in the first quarter of 1982. The meeting did, however, agree to a tentative allocation of funds (Table 5).

Table 5: Allocation of Donor Funds to the Dam Projects¹³³

	DIAMA (\$ millions)	MANANTALI	GENERAL ENGINEERING CONSULTANT
Saudi Arabia	31.074	118.926	
Kuwait	16.081	81.852	2.067
France	61.477	8.496	
AFDB	22.040	39.440	
Abu Dhabi	12.500	57.500	
FED	11.540	77.185	
West Germany		87.268	
UNDP	2.112		7.888
Iran	4.000		
Italy		38.000	
IsDB		20.000	
Canada		21.158	
USA		10.000	
Iraq			
Financial Account	1.150	4.300	
	<u>161.974</u>	<u>584.124</u>	<u>9.955</u>
OMVS member states through FED			52.951
Total			<u>809.004</u>
Total Cost			<u>865.700</u>
Percentage coverage			93%

During these discussions the World Bank representative 'attempted to make a plea against any financing of the dams by citing their most recent assessment of the OMVS member-states' poor balance of payments situation and their indebtedness. The OMVS High Commissioner quickly cut him off, leaving him unheard'.¹³⁴

The meeting was only a temporary setback and within a couple of months the contract problems were settled. The OMVS was able to keep to its much revised schedule and construction started on the preliminary work for Diama in late 1981 and on preparatory work for Manantali in early 1982.

Conclusion

Reviewing the financing phase for the OMVS projects one is left with two dominant impressions: 1. the chaotic and frustrating nature of the process, and 2. the fact that out of this chaos, in which the OMVS always seemed on the defensive, the OMVS was able to emerge with its original conception of two dam development remarkably intact. This study was conducted over the last few years of the financing phase and during this period it was by no means evident that the OMVS would obtain the necessary financing. Only after the November 1980 donors meeting did the OMVS appear to have made the critical breakthrough to assure financing and the start of construction. To what can we attribute the chaos and the success?

The chaos resulted from at least three factors. First, some of the confusion and delay can be attributed to the inexperience of the OMVS. The OMVS was fortunate in the quality of the high level officials and some of the expatriate staff but overall the staff was inexperienced and the organization faced difficulties in handling the amount and type of work required. For a stronger organization the problems would still be difficult for the OMVS was moving into largely uncharted waters.

There were few precedents to give guidance for an undertaking that was international, needed a very high level of concessionary finance, and demanded a large volume of complex development planning and evaluative information. Second, part of the problem was the nature of the projects; it prevented the staff and the consultants hired by the OMVS from producing the type of information the donors wanted. Notwithstanding the Secretary Generals' and High Commissioners' pleas to consider the projects as 'pre-investments' and thus not subject to rates of return criteria, the donor agencies sought information to show the productivity of the money they were to invest. But the package of projects sacrificed economic productivity to political accommodation. The projects' uneconomic nature stopped the World Bank from supporting the package. Donors, like the Arab funds who tended to rely on the bank's endorsement, did not have the leadership of the respected lending institution to allay their fears about the worth of the investments. The Arab funds were thus suspicious of their European funding partners and the OMVS. They felt the need to scrutinize closely the OMVS proposals. Third, the structure of the funding process invited chaos. As many as 100 delegates and up to 25 organizations were represented at donor meetings. With so many donors attending, the meetings were often unwieldy. The atmosphere was not conducive to detailed discussion and negotiation that would produce progressive resolution of the many issues that needed settlement. The OMVS formed the consultative committee to try and give some order to the process, but the committee was hardly less unwieldy than the open donors conferences. Moreover the funding process was not well structured to give guidance to the borrower. Lending institutions do not like to initiate proposals. They fear incurring responsibility and liability for mistakes the borrower might make under their instruction. They prefer to act by veto or by setting conditions and restrictions. They tend to respond to proposals. Thus the OMVS would propose and the donors would criticize and impose restrictions

and conditions. It put the OMVS on the defensive. Furthermore the attacks of the donors were not always coordinated and hence the OMVS had difficulty in satisfying sometimes conflicting demands on it.

But from the chaos of multi-donor financing the OMVS was able to fashion a strategy that eventually lead to success. First, the OMVS Secretary General in 1973 proposed progressively involving donors in the OMVS programme and thus encouraging their commitment to river basin development. The strategy worked for some donors. France, Germany, Italy, Canada, and the United States funded various studies which gave them the incentive to see through the projects to implementation. They and other donors financed irrigation perimeters which stimulated an interest in river regulation to increase the productivity of their investment. On the other hand the World Bank remained committed to irrigation, but found that no reason for investment in river regulation. Second, without the leadership of the World Bank the OMVS was astute to involve France with Diama and Germany with Manantali. Their involvement did have unfortunate delaying consequences as each fought to ensure its project received first priority in the distribution of what seemed would be a shortfall in investment. Both donors became strong supporters of their projects and were not prepared to abandon them. Thus any move to drop one project met with the determined resistance of its champion. In effect both projects would have to stand or fall together. Third, inter-basin rivalry had much the same effect as donor competition. It made for an all or nothing programme. Neither Senegal nor Mali would allow the projects located in the other state to go ahead without its own project. Given Senegal's commitment to Diama the basin states had nothing to lose by holding out for full financing of both projects and much to gain. Senegal might think about obtaining French support to go it alone on Diama, but without other donor backing France would probably have to finance the whole project. That would not accord with the benefits President Giscard hoped to achieve from

the 'trilogue' with Arab donors. Without Senegalese participation the Mali project made no sense at all and would not receive any donor support. The basin states, despite their differences, had to stand together to capture any of the concessionary finance that was at hand. Fourth, the success of the financing phase depended on the investment from the Arab funds. The untied assistance benefited the European donors and the basin states. It provided incentive for the basin states and European donors to keep up with the financing until the problems had been resolved. Fifth, in the first donors conference in 1974 the American representative worried that the OMVS might not have the skill in 'development statesmanship' to take advantage of the goodwill of the donors. He need not have worried. The High Commissioner, Mamadou Aw, recognized that the key to such statesmanship was not so much satisfying the technocrats in the donor agencies, but the political leaders of the donor countries. His initiative to persuade the basin state leaders to secure commitments from the donor counterparts was crucial. Donor meetings might not run smoothly as the donor agency officials found fault with OMVS proposals, but they could only try to alter the proposals and delay implementation. The decision to support the OMVS projects had been made at a higher level. In the end the officials would have to accommodate the OMVS.

Chapter Eight

CONCLUSIONS

The planning and financing of the Senegal River projects is a cautionary tale. In the arid poor western Sahel the Senegal River is a tremendous asset which promises to be of great value in bringing a more stable and prosperous life to the states and peoples of the region. The promise, however, offers different benefits to each of the states and the sources of finance. And yet they have built from their different political and economic interests a collective enterprise to attempt to realize the promise. But in the process of pooling individual interests the promise has faded and the people in the valley and the states may end up worse off than if no attempt had been made. The long-term potential has been undermined, perhaps lost, by the need to build a coalition based on the short-term interests of the basin states and the donors.

This chapter reviews the Senegal experience and draws from it conclusions on

1. the inappropriateness of the present dam building programme;
2. the faults in the planning process that produced the programme;
3. the political environment biasing development towards the present engineering approach;
4. the mechanics of financing, and
5. the effects of basin state-donor relations on institutional evolution in the basin.

The final section suggests how the planning and financing process might be better directed to deflect the pressures in international river development issues away from inappropriate approaches.

Timetable for Change

This study has argued from an economic and social point of view that the present dam projects are premature. They impose a timetable for the

economic and social transformation of life in the valley that at best is unlikely to be met and at worst will cause great social dislocation and economic hardship in the valley and impose a financial burden on the basin states.

The Economic View

The economic view takes the goals of the states and evaluates the most productive or efficient alternative to achieve those goals. The states' goals are:

1. to increase valley incomes;
2. achieve an ecological balance in the valley;
3. ensure security of state and valley economies from climatic and external factors, and
4. enhance regional cooperation and integration.

The goals translate into a strategy of increasing agricultural production to improve valley population incomes and, as part of national policies of import substitution, to increase revenue for the national governments. The strategy also concerns the removal of constraints holding back development in the region, particularly the constraints of poor transportation and costly energy. The Diama salt barrier dam and the Manantali regulation dam are the means, in the first stage, to implement the strategy. The dams, in addition, help achieve the other goals of inter-state cooperation and environmental improvement.

The evidence to date suggests that transportation may be a constraint on growth, but navigation is unlikely to provide the best mode to remove that constraint. Planned expansion of the road network and improvements in the railway to Bamako will make river transportation a poor choice for shipping most kinds of freight in and out of the basin. Costly energy is also a constraint on development, but there is no ready market for all the power that can be produced by Manantali. The rationale for immediate power generation at Manantali and for constructing the dam largely

evaporated when mineral studies revealed disappointing qualities of iron ore and bauxite, and world markets for such raw materials declined. The present programme recognizes the problems and wisely has postponed installation of the power station until there is a market - either when the economic climate turns favourable to exploitation of the mineral reserves or until the excess generating capacity of the Sélingué dam on the Niger River in Mali is committed.

Economic justification of the dams depends on irrigated farming. The states intend river regulation to increase the productivity of land under irrigation and allow expansion of irrigable land within the floodplain. But does this justify investment in the dams? To answer the question requires a comparison of what is possible with and without regulation. Such a comparison would show whether the lack of regulation significantly constrains the creation of a productive and profitable agricultural sector.

The OMVS has produced no studies showing that the most productive approach to increasing cereal production is investment in the dam projects. Increased productivity is assumed. The only question troubling the basin states has been, is the increase sufficient to justify investment in the dams? They recognized the difficulty of justifying investment in the dams simply on the basis of hoped for rates of expansion and increases in productivity per hectare, which is why they emphasize the navigation and hydro-electric components. As mentioned, these add little weight to the evidence in favour of investment. On another tack, they emphasize the dam projects are pre-investments - investments not in themselves capable of producing an acceptable economic return, but investments that will make investments in related areas like agriculture productive. The argument might make sense if there was no other way in which to improve agricultural productivity in the valley.

But the factors limiting expansion of agricultural productivity in the past and in the coming two decades have little to do with lack of

regulation. As OMVS studies do show the constraints on expansion and productivity have to do with the lack of incentives for the producers, over-centralized and under-manned and skilled administration, social maladjustment to new forms of production, poor perimeter designs, lack of funds for construction of new ones, insufficient revenue to maintain established ones, and a host of other problems. These problems have made bringing new land under irrigation and making existing irrigation operate smoothly a costly and inefficient process.

To justify investment in the dam projects the rate at which new land is brought under irrigation and the level of its productivity must be high. From the evidence it appears, given the above mentioned problems, that the states do not - at present - have the capability or the financial backing to implement such an agricultural programme. If the dam projects are not constructed the pressure to achieve those rates is off and a more realistic irrigation development programme can be formulated. The World Bank is confident that there is ample scope in the coming decades for productive investment in irrigation at realistic rates of implementation before reaching the limits of expansion set by the unregulated river. These arguments suggest that the funds being invested in the infrastructure projects would go further towards meeting the states' cereal and income objectives if invested directly in irrigation. When the states have reached the limits of irrigation possible without regulation and there is a growing demand for hydroelectricity then the major regulation projects would be economically justifiable.

The Social View

Perhaps the worst feature of the infrastructure programme is the timetable it imposes on social change. The Manantali dam will mimic the natural rhythm of the river with an artificial flood that will allow continuation of traditional flood-recession cultivation - but only for a period which

is likely to prove too short to achieve the necessary social change. Such a use of the dam can only be transitory for it undermines the purposes for which it is intended. It wastes the water needed both for the irrigation sector and for generating hydroelectricity. Once Manantali is completed the OMVS intends to maintain the artificial flood for ten years. If the approximately 700,000 people dependent on flood recession for their major crop have not switched to irrigated farming at the end of that period the economic basis of their subsistence economy will be destroyed with nothing immediate to replace it.

For practical and social reasons the transformation of a traditional economy and society can not be rushed. But the ten year timetable makes little allowance for solving the many physical, economic and social problems that exist. One can have little confidence based on past and present experience to think that the implementing organizations will be able to carry out the tasks or that the people will be ready to make the best use of the opportunities for irrigated farming. Postponement of investment in the infrastructure projects would have allowed the transformation to take place much more slowly and without the possible shattering social and economic consequences.

Faults in Planning

From a technical perspective the unsatisfactory development programme is the outcome of an unsatisfactory planning process.

1. Not enough of the right kind of information and analysis was produced.
2. The planning process was backward; the states first decided the type of projects they wanted and then elaborated a planning and information programme to justify that decision.
3. Planning focused solely on the river, when it should have concentrated on the socio-economic goals of the states individually and as a collective.

1. Information and Analysis

Studies from the colonial period and the more than \$50 million worth of studies conducted since independence produced volumes of information, but as valuable and necessary as some of these studies were significant information gaps remained. We noted the lack of a proper economic study showing alternative ways of investing in the valley the \$865 million (more than \$1 billion if navigation and port projects are included) allocated to the river projects to meet the states' goals. Such a study should in fact go beyond the valley to consider how such sums might be spent elsewhere in the basin states to meet the same goals. Studies should have been undertaken to consider the economic impact of such a large investment - for example one would want to know how the states will finance interest and recurrent costs, what the effect of these financial obligations will have on the external borrowing capacity of the states and their already chronic balance of payments problems. More generally one would want to know if such large investment projects might distort the national economies of the states by drawing financial and technical resources away from other possibly more productive investment and operating programmes.

2. Backward Planning

As early as 1962 the states in a ministerial meeting agreed that river basin development would at first consist of upstream regulation in Mali, a salt barrier dam in the lower basin, and navigation improvements. With UNDP assistance the states, through the river basin organizations, and the consultants made an indicative plan that inventoried the most cost-effective dam sites that conformed to the 1962 decision and pointed to the possible benefits for irrigated agriculture, energy production, and navigation. On the basis of some of these studies the OERS Council of Ministers and heads of state in 1970 confirmed the original decision and set the regulation target at 300 cms. Immediately after the formation

of the OMVS in 1972 the decision was reconfirmed. There followed among other studies: a pre-feasibility and site selection study for the downstream dam, the synthesis study - the Beyrard report - in 1973 putting the projects in the context of a regional development programme, the 1974 objectives report (12 years after the decision) stating the goals and objectives of the basin states for development of the basin, the 1978 Global Report to show the complementarity of the projects (which it did not) and to confirm that the projects were technically and economically feasible, the 1980 socio-economic study of the micro-level problems hampering the achievement of projected rates of irrigation development, and the 1980 environmental study of the impacts of the projects.

The information produced by these reports seemed to have two purposes: first, to elaborate a rural development programme to accompany the construction of the river projects, and second, to supply information to the donors that would help them come to a favourable decision to support construction of the dam projects. The basin states and the OMVS tried to direct all generation of information to these tasks and away from information that would question the basic decision supporting the river projects. Planning was used not as means to inform political leaders of the options open to them, but to confirm and build from a decision they had already taken.

3. Inappropriate Planning

Planning was backward from another point of view; it was resource-oriented when it should have been goal-oriented. Resource-oriented planning looks to the resource, in this case the river, and identifies basin development alternatives that are expected to give the greatest returns. It is essentially an engineering approach concerned with exploiting a physical resource to remove constraints on economic growth and supply goods and services for a projected growth in demand. A region may be

handicapped, as in the Senegal, by lack of steady irrigation water supply, high energy costs, poor transportation, and periodic devastating floods or low flows. Engineers and planners are confident that if they construct projects in the river that provide the means to alleviate those problems the market for them, if not already there, will quickly expand to take them up and provide a return to the projects. Their confidence is usually warranted in developed countries and the approach appropriate where there is an existing or projected demand for the services - though even here the approach is under attack from environmentalists and critics of unrestrained growth who feel too much emphasis is given to meeting unquestioned projections without consideration of alternatives that may dampen demand and better reflect other values held in society.

The constraints on development in the Senegal at present turn out not to stem from lack of river regulation, but from the socio-economic conditions of the traditional society in the valley and the political-institutional weakness of the national governments. The constraints on economic growth are human. The prerequisite to physical development is the social and economic capability to make use of such development. The states share goals to improve the socio-economic conditions of their societies but the present programme does not address directly strategies to attain the goals. While it offers some assistance it does not give priority to the education, incentives, backup services, and financial resources needed to involve the people more effectively in productive forms of agriculture.

Supporters of the development scheme would dismiss these technical criticisms of the planning process as beside the point for they do not account for the political reality in which the states have to operate. The states must devise programmes that are politically acceptable to each of them and responsive to the limited opportunities available for financing. The supporters are right to point to the political dimension.

We know where the planning process went wrong, but before suggesting how it might be corrected we need to know why it went wrong. For this explanation we need to look at the politics of the planning and financing phase.

Bias in Favour of Physical Development

The economic and political interests of the basin states and donors became manifest in a shared interest in the dam projects. The international projects were regarded as a means to stimulate economic growth in the valley and the basin states, while at the same time providing functional ties to bind them in closer and more fruitful regional cooperation. However, the need to accommodate a multiplicity of interests in one or two major projects led to an economically wasteful cooperative endeavour. And if the functional ties are unsound the prospect appears doubtful that the present innovative institutional arrangements among the states will contribute positively to future regional stability. A number of points in the Senegal case have favoured the physical engineering approach to development and discouraged adoption of more promising and suitable approaches.

1. The basin state governments took over the development proposals of the French colonial federation whose priority interest was resource exploitation, not socio-economic growth.
2. The newly independent states saw in the colonial proposals ready-made plans for regional economic development and a means to give political and symbolic expression to some domestic and integrationist ambitions.
3. Neither of the first stage proposals for an upstream regulation dam or the lower valley salt barrier dam offered sufficient political incentives to sustain a common development effort; only by agreeing to construct both dams did each of the three main participating governments gain enough of an advantage from river basin development to work together.
4. The political advantages of cooperation were underwritten and augmented by concessionary finance; it reduced the costs the states would have to repay and it increased the total amount of aid funds flowing into the basin states.

5. Although sceptical about aspects of the states' proposals, the donors found the dam projects met with their own political priorities for provision of aid, provided European donors with the opportunity to benefit economically from co-financing arrangements with Arab funds, and were well suited as a market for the goods and services available from the European donors' domestic contractors and manufacturers.

1. Historical Resource-Oriented Interest

The development programme for the Senegal River has its technical roots in the dreams and plans of the colonial administration. Regions may be colonized for many reasons, but once under the control of an imperial power the colonial administration will be charged with the responsibility to introduce commercial activity into the colony from which revenue can be extracted to pay for the colony's operating costs and, if possible, benefit the metropolitan economy. The administrators no doubt believe that the introduction of such an activity will benefit the peoples of the colony, but their priorities are not directed at improving social and economic welfare in the colonies. The colonial administration of the French West African federation saw at various times the exploitation of the agricultural potential of the Senegal River's floodplain and exploitation of other resources, such as the river's hydro-electrical potential, as means to increase the wealth generating capacity of the colonies.

Technical opinion divided among the agricultural interests and the energy interests on the appropriate plan, the former favouring a modest salt-barrier and small irrigation barrages while the latter favoured full river regulation. However all the choices were costly and the identifiable benefits insufficient to persuade the colonial administration to invest in either approach. Neither resource-oriented approach appeared in the 1950s to be profitable and the administration chose to maintain the modest irrigation programme started in the lower valley without any form of river project. Shortly thereafter the territories sharing the Senegal basin became independent and the new states inherited the resource-based plans

of the colonial promoters.

The rationale for developing the river changed from satisfying metropolitan needs to domestic ones. Exploitation of the resources was no longer seen as part of the means to make the colony pay and benefit far-off France; it was to increase the productive capacity of the states in order to meet the peoples' expectations of increasing prosperity that independence was to bring. The new governments needed to decrease their growing dependence on imported cereal which ate into the undependable foreign exchange income earned by production of ground-nuts in Senegal, cotton in Mali, and later iron ore in Mauritania. Unlike the colonial administration the new states held explicit welfare objectives. They wanted to increase the economic and social welfare of the people in the valley to slow and stop the loss of able-bodied manpower from the local economy as they left the valley to seek work. After the start of the devastating drought of the early 1970s environmental, ecological and climatic factors were given weight in the thinking on why and how the valley should be developed. Although the objectives changed and expanded the plans for meeting them remained centred on the colonial plans for river basin development.

2. Political Interests

The political roots of the river projects lie in the events and ideas accompanying independence. In addition to working towards economic welfare and development goals, the newly independent governments found river basin development could be used to meet political objectives. To the lasting regret of some political leaders independence brought the breakup of the colonial federation, and with it a setback to their hopes for an independent francophone West African federation as an entity on its own or as a step towards achievement of pan-African ideals. The basin states faced their own individual problems associated with the breakup of the federation and independence for which plans to develop the river seemed

to offer some relief. Senegal, with Dakar the seat of the colonial administration, lost most from the balkanization for it had an administrative infrastructure and a growing manufacturing sector geared to serve the federation rather than Senegal itself. Malians, after the ill-fated federation with Senegal in 1960, felt deeply their land-locked isolation and longed for some secure outlet to the sea to break dependence on coastal neighbours. Mauritania gained independence in the face of Moroccan claims that the Arab-Berber territory was historically a part of Morocco and that now the colonial domination had ended the territory should return to Moroccan control. Despite the inclination of the Arab-Berber leadership who looked north to the Arab world, the need to assert an independent Mauritanian identity made the leadership stress its large black minority in the south and its position as a bridge between the Arab states to the north and the black states to the south. Sekou Touré, president of the colonial outcast Guinea, was in search of schemes that would draw Guinea into African unions while at the same time reducing African dependence on old colonial masters. The mood of the leaders of the four basin countries was in favour of some form of regional integration - the downstream states stressing functional and economic ties, the upstream states political ones. The Senegal River was a common link and in plans for its development the political leaders found something physical upon which to crystallize feelings about regional integration and satisfy some of the economic and political problems they faced. Not to be underestimated was the symbolic value of the actual projects. They would demonstrate physically the will of the states to work together and the dynamism of the leadership in working for economic development of their states.

3. Upgrading the Common Interest

As pre-independence debates illustrate, development of the river could take different forms and after independence each alternative offered

each state different advantages and disadvantages. The modest downstream projects were financially the most feasible, but they were essentially single purpose and they excluded Mali and Guinea. Upstream regulation for navigation, power and irrigation would involve three states, but it was costly and would leave Mauritania and Senegal totally dependent for regulation of the river on a project in Mali. After the breakup of the Mali Federation, the Senegalese government under Léopold Senghor never entirely lost its distrust of Malian leaders and did not want to put itself in a position where its development plans for the river depended totally on Mali. To accommodate the various interests and reduce Senegalese and Mauritanian vulnerability to disruption of river flows for political reasons in Mali, both the upstream and downstream projects were adopted. The dual project approach with associated navigation improvements gave each state something and made no state entirely dependent on the other for the success of their domestic development programmes in the valley.

The political accommodation became the basis for all subsequent cooperation. The French during the late colonial period had made a number of studies for various upstream and downstream projects but had not devised any serious proposals to combine both types. The basin states when they made their first decision in 1962 to construct both had only the colonial plans, no alternative non-engineering proposals, and no information on the economic feasibility of the projects. The economic benefits were largely assumed to be great enough to permit some erosion of benefits as the price for political accommodation. In the following years nothing changed to alter the states' belief that the original political decision was the only acceptable basis for cooperation, and thus the 'backward' planning that followed could only be designed to justify the decision or show that it was totally unworkable.

4. Investment Costs Become Benefits

The basin states had their own economic incentives for staying with their original political decision, even if economic studies showed the projects to be of dubious value. The states had no hope or intention of financing the projects on their own. The projects would have to be financed on highly subsidized terms - a grant element of 60 per cent to 85 per cent depending on the terms of the loans. The economic advantages looked quite different from the basin states' point of view compared to that from a standard economic evaluation. While economists would search for alternative levels of investment to optimize benefits, the basin states naturally were inclined to promote higher levels of investment to obtain greater total subsidies.

Another reason for continuing with the river scheme rather than pursuing domestic alternatives was the fact that the assistance offered for the international projects might not be available for domestic ones. The United Nations and its agencies strongly supported international river basin cooperation and provided technical and financial assistance for studies to promote such cooperation. Other states responded to the opportunity to spread aid to three states while helping to finance one programme. The EEC's European Development Fund set aside funds to encourage regional programmes and from this fund the Senegal projects obtained about \$90 million on top of aid for domestic programmes.

5. Donor Interests

The donors wanted to accept the Senegal basin projects as workable. Most of them saw in international river basin development something that fitted their foreign aid policies. There was a general sympathy for the plight of the Sahelian states and a conviction among those donors after their participation in the early 1970s famine relief that assistance should be directed at increasing food self-sufficiency and reliability

of production for the region. The World Bank and USAID were sceptical that river regulation was the most appropriate alternative, but the United Nations, other international agencies and many bilateral donors were eager to support the schemes. The United Nations and the European Development Fund explicitly favoured regional programmes. Other donors had their own reasons, such as the historical French interest in the lower valley, Germany's interest in upper basin mineral deposits; or more generally the Arab funds' interest in extending the Gulf states influences to black African and especially black Muslim states.

Since bilateral western aid is explicitly or, as in the German case, implicitly tied and is intended to support domestic economic interests the growing level of free-floating Arab aid provided a strong further inducement for Western bilateral donors to remain committed. A Western state could not effectively participate in President Giscard d'Estaing's 'trilogue' unless it was willing to provide some assistance. A little tied seed money could provide extra returns to domestic consultants, contractors and manufacturers by giving them a better chance at winning contracts financed by untied Arab assistance.

Again, bilateral Western donors wanted to support domestic purveyors of goods and services. As appropriate to the western economy those goods and services tended to be technologically based and capital intensive. Thus the donors when asked to support projects that required these types of inputs were naturally sympathetic. The inclination of most donors was to support the river projects for they had a high foreign exchange component benefiting western business, used straightforward techniques, and were simple to administer. The value of the associated rural development programme was widely recognized and given some support. But becoming mired in the socio-economic problems of rural development offered donors none of the advantages of supporting physical works.

Financing Mechanics

Foreign assistance may subsidize domestic economic interests of the donors or serve as an instrument of the donor's foreign policy; but apart from assistance for reasons such as disaster relief or military support the ostensible purpose of aid is to promote economic development among the recipient nations. This type of assistance is generally administered by specialized agencies that operate with varying degrees of reference to evaluation technologies and criteria that address economic objectives. Donors may thus be politically inclined to support certain types of projects and requests from certain countries, but if aid requests fail the economic evaluation the inclination does not necessarily translate into actual assistance. Donors in assessing the Senegal proposal found parts of it acceptable according to their criteria, but none were happy with the total package. Nevertheless, as adoption of the total package was the basis for basin state cooperation the basin states had to work to receive support for all of the proposal.

What made financing even more difficult was the World Bank's refusal to endorse the dams. The Arab funds seek co-financing arrangements for large development projects in which they can rely on the judgement of technically competent financing institutions like the World Bank. The European Development Fund, the African Development Bank, and respected bilateral institutions like Germany's KfW in the end endorsed the OMVS proposal, but the World Bank's behaviour was a clear sign to the Arab funds that they had to come to terms on their own with the flaws in the OMVS proposal. As a consequence financing was much delayed as the funds' officials questioned and tried to change parts of the programme.

But the OMVS was finally able to secure financing, and without much damage to its original plans for development. Three points explain the delay and eventual success of the financing process.

1. Competition between the French supporting Diama and the Germans supporting Manantali delayed completion of funding for the projects; the German donor agency was unwilling to sanction Diama, none the less the steadfast support France and Germany gave to their favourite projects allowed, in the end, the OMVS to build from this support a coalition of other donor interests to complete financing for both projects.
2. By controlling the type of information produced the OMVS was able to direct criticism to the physical projects themselves and away from the basic conception of resource-oriented development for the river; however the OMVS could not produce the right type of information to overcome objections to the two dam proposal and donor agency criticism stalled the completion of financing.
3. The financing requirements for the two dams were too large and the nature of the projects of too questionable merit for aid agencies to approve of the loan applications as a normal submission; the success of the financing depended on the basin state presidents and the High Commissioner taking the initiative to solicit political commitments from the political leaders of bilateral donors.

1. Donor Competition

The OMVS capitalized on French interest in the lower valley and German interest in the upper basin by soliciting their assistance in financing the feasibility and design studies for the Diama and Manantali projects. Each donor became the champion of its project and French and German support gave both projects legitimacy. However, none of the donors were convinced of the validity of the total package and there was little donor effort to work as a team to raise the funding required for both projects. Among the donors there was the feeling that the total amount could never be raised. With that expectation the French and Germans lobbied for support of their own project and against the other. As the other donors took sides, mostly for the Germans, the rivalry threatened to scuttle the OMVS's two project scheme.

Despite the problems and delay the rivalry caused, the OMVS tactic of associating the two donors with different projects proved important in the eventual financing success. The OMVS dissuaded early French offers to associate with the Germans in financing and thus overseeing the feasibility studies. If the donors had worked together they may well have

reached a compromise and taken it upon themselves to recommend a modified, possibly staged, development plan for the river. In the face of such a recommendation the OMVS would have had no hope of securing financing for the original plan from other donors. But as rivals the two donors remained steadfast in the support of their respective projects and this reasonably assured support allowed the OMVS to continue working on financing the total package - though in the later stages of financing the common resolve of the basin states was tested as Senegal was tempted to go it alone with French support for Diama.

2. Information Control

Information is produced to inform decision making and reduce the uncertainty of following the wrong course of action. In funding major development projects information is the currency of exchange between donors and recipients. The donors need information to make their evaluations and, in cases like the Senegal, they are generous in giving grants for planning and research. However the basin state governments had already adopted the course of action they wanted to follow - derived from political decisions uninformed by appropriate studies - and unrestricted generation of information would increase the uncertainty that their projects would be financed. Unrestricted generation of information would expose the inadequacies of the proposals and thus the OMVS worked to direct the production and evaluation of information to reflect favourably on the proposals. We noted above the backward planning in which the studies served to justify the original decision without giving information on alternative courses of action. We also noted how the OMVS pursued its 'pre-investment' argument, which if accepted would reduce the significance of traditional economic evaluations.

In one sense the OMVS was unsuccessful in directing the generation of information to quell donor criticism. The donors largely ignored

the pre-investment argument. A consistent criticism was the inadequacy of the information; the OMVS lost time as it worked to fill in the information gaps. The OMVS responded to donor criticism about the lack of evaluative information on the total programme by commissioning a global study that would determine the technical feasibility of the dams and show the complementarity of the projects as they stood. The study backfired on the OMVS for the consultants found little complementarity and freely interpreted the restrictive terms of reference to recommend drastic modifications to increase complementarity.

But in another sense the OMVS was quite successful. Donor criticism remained fixed on the designs and suitability of one or another aspects of the projects and the lack of progress in agricultural development. No information was produced to compare investment in the river projects with alternative investments and the donors did not challenge the information weakness. Without information on the wider context of the development programme the donors remained content to criticize details of the proposals rather than question whether the approach was worthwhile or not. In the end, however, the OMVS's efforts on the technical level to convince donor agencies of the merit of the two dam programme stalled. If the approval process had remained with the professionals and officials of the donor agencies the OMVS would still be awaiting approval.

3. Political Commitments

When financing became stalled by criticism and demands for changes in the OMVS proposal the High Commissioner and the basin state presidents took the political initiative. The officials of the donor agencies like the German KfW and the Arab funds remained obdurate and the only way to overcome their objections was to influence them politically. For instance the missions to the German chancellor in 1978 and early 1979 served to exert political pressure on KfW to support the OMVS two dam

approach. As for the Arab funds a Saudi fund official confided that he was under no illusion about the technical and economic justification for the Manantali project. The fund was involved on political grounds.

But even with political commitments the release of funds was not a foregone conclusion. Time was crucial. The donor agencies retained various degrees of independence to exercise their professional and technical judgements and their criticisms and demands continued to delay completion of the funding and release of funds. And the German and Arab donors insisted on the OMVS being assured of obtaining a high percentage of the total funding required before they would release their funds. With inflation raising the total cost of the projects at the rate of more than \$1.5 million a week the amount needed to reach the target kept receding just beyond the increases in commitments. The basin state leaders kept up the political initiative by renewing contacts and building on the donors' growing involvement to persuade the donors to increase their commitments. The dedication of the donors became evident in the final stages when they started to pressure uncommitted institutions like the World Bank and donors like France who had not kept their contributions increasing in line with the growing financing requirements.

Institutional Dynamics

If relations between donors and basin states worked to bias development towards inappropriate engineering solutions, the aid relationship also influenced the institutional evolution among the basin states. Functionalism sees international cooperation and international institutions arising and evolving in response to shared and overlapping welfare problems. International river organizations are pointed to by functionalists with approval as examples of institutional responses to growing interdependent welfare problems. Many observers believe the basin states are showing the way for international cooperation in other Third World

international river basins and showing up the institutional timidity of international river arrangements in developed countries. The basin states have established innovative arrangements such as basin-wide planning, common ownership and a common institution charged with planning, financing and implementing the development projects while coordinating basin state programmes for regional development. These institutional innovations suggest that the basin states are attempting to give expression in practice to the largely theoretical notion of a community approach to international river problems.

Although the Senegal River organizations have a history dating back to independence and before, it is still too early to tell whether the OMVS and related institutional arrangements for the river can stand on their own. They have been nurtured and sustained under artificial conditions in which the full pressures of inter-state relations have been modified by the overriding need to secure concessionary financing for the development programme. As we noted concessionary financing perverts the recipients' thinking on the economics of project development. Instead of investments being treated as costs to be minimized the concessionary element to the loans becomes a benefit. If the states were in the position to arrange financing on commercial terms would they still be pursuing the same development programme and still cooperating through the OMVS?

The economic incentives to cooperate to develop an international river comes from the increase in net benefits available from development as a common effort over the sum of the net benefits available from each basin state going it alone. How the increase in net benefits is distributed is a matter of negotiation, but to remain interested each state would expect to obtain more benefit than it would receive from individual programmes and projects. If the Senegal projects were financed on commercial terms it is unlikely there would be any overall net benefits and there could even be a net loss. States do not act from strictly economic motives

and it is possible the states might cooperate for political reasons. If they did, one could at least estimate the value placed on political motivations. But as it is, it is difficult to disentangle political and economic motivations and see how solidly the states are committed to cooperation.

The river projects satisfy domestic and regional political objectives and respond - however ineffectively - to chronic economic and social welfare problems. The projects also draw in concessionary finance that might not otherwise be available to the states. But to obtain financing the states had to demonstrate that they had the will and the means to sustain their common enterprise. The OMVS was the expression of the will and the means. Is then the OMVS and the community approach it symbolizes a spontaneous expression of the states' desire to work together and draw themselves into closer functional relationships, or is it an artifice to impress potential donors and to serve as a mechanism to convert their interests into concessionary finance? Of course the motivations will be mixed, but the point where the motivations are fixed between the ends of the spectrum will give some indication of whether the OMVS is rooted in the temporary financing needs of the states or is more firmly rooted in their long-term overlapping interests.

The OMVS Council of Ministers is the forum for inter-state negotiations in which the ministers represent their state's interest. Under ordinary circumstances negotiators will attempt to obtain the best economic, technical and political advantages for their countries or institutional arrangements requiring the least loss of their government's freedom to conduct itself as it wants, that is with the least loss of national sovereignty. But, as in the Senegal, where the states are dependent on outside concessionary finance the negotiating relationship changes.

1. Until financing has been assured basin states have no economic benefits to negotiate over and thus prior to completion of financing important distribution and allocation negotiating issues receive little inter-state attention.

2. Basin state government attention is directed towards the sources of finance, which while providing the necessary funds threaten basin state sovereignty by promoting functional forms of cooperation that are insensitive to their political concerns.
3. The basin states fear the river basin organization may become the agent of the donors and they thus have to balance their desire to limit the authority of the organization against the need to demonstrate to the donors their willingness to adopt what institutional and other forms of cooperation are necessary to make the best of river basin development.
4. The need of the basin states to maintain solidarity in the face of the sources of finance leads to framework style inter-state agreements in which the states agree on non-contentious principles leaving until the need arises decisions on what the principles actually commit each of the states to.

1. Low Priority Issues

Normally once the economic potential of the basin has been revealed by indicative studies the states would start preparations to negotiate for themselves the best allocation of net benefits. Agreement to go ahead with international development would be accompanied by agreement on how the benefits and costs of the development would be allocated. But such negotiations to determine the allocation can be difficult and are rather pointless if there is no certainty that financing can be arranged, or what the terms of the financing might be. As a result issues that would be in the forefront of negotiation among states who are responsible for financing development projects themselves become low priority 'back burner' issues for states dependent on concessionary finance at least until the financing arrangements have been determined.

2. Donor Threat

The states are independent and, as with states elsewhere, jealous of their sovereignty; but unlike elsewhere the immediate threat to their sovereignty is not from each other but from the sources of finance. The donors, whether international agencies or bilateral donors, tend to see arrangements among the states in functional terms and ignore the sovereignty

sensibilities of the states. If river basin development is an inter-state endeavour then for planning and administrative reasons they find it sensible and practical to give the river basin organization the authority to implement it.

The donors with their functionalist approach looked to the High Commission and the Secretariat as their instruments to plan and lead development of the river and they provided the technical support to enable it to perform capably. When it became evident the domestic rural development programmes were lagging the donors encouraged the basin states and through them the Council of Ministers to give the OMVS greater responsibilities, in effect to allow it to assume almost supranational authority. The states and the Council of Ministers have been unwilling to allow the OMVS to expand in this way.

3. OMVS Tug-of-War

The basin states need the river organization to plan and arrange financing for the river projects, but they are suspicious of the role it seems to assume as the client of the donors. The state governments and the Council of Ministers seem to fear that the concentration of assistance on the OMVS may give it a life, supported by the donors, that they may not be able to control. As a result the states have tended to put aside their differences and close rank against the donors and keep the OMVS on a tight rein. The states did not encourage donors to provide funds to support the annual budget of the OMVS which pays the salaries of basin state nationals and local expenses. Donors supply and pay for expatriot personnel assisting the OMVS and for all the major consultants' studies, but the states have been careful to ensure the loyalty of the local staff and that their control over the organization is not eroded by foreign paymasters. And even though the heads of state pushed for the major reform of the OMVS in 1975 that created the High Commission,

the Council of Ministers were never willing to allow the High Commissioner the freedom to expand the role of the OMVS as he wanted or even to carry out his job without interference. The ministers wanted a High Commissioner who would concentrate more on doing what was necessary to obtain financing and concern himself less with strengthening and expanding the mandate of the OMVS. The High Commissioner was removed and a more amenable one appointed. Since then the authority of the OMVS to take independent action to negotiate with donors has been taken away by the states. Nevertheless, as the American proposal for supporting the domestic rural development programmes attests, the donors still see the OMVS as their favoured vehicle for promoting development within the basin.

While closing ranks to undermine unwelcome donor ideas on OMVS reform the basin state governments and the Council of Ministers could not offend the donors, and were under pressure to appear unified in order to retain donor confidence. The donors had to be assured that the river basin schemes they were being asked to support were based on the sincere desire of the states to work together to make them a success. Under such conditions the states had to keep under control inter-state differences and remain flexible to recommendations of the donors. Thus while resisting unwarranted expansion of the OMVS the states had to maintain it as the centre-piece of their cooperative effort.

4. Framework Agreements

The two tiered negotiating relationship - in which inter-state differences are minimized as a requisite for the common negotiating effort to influence the donors - accounts for the style of decision making and institutional evolution among the states. Developed states need only negotiate among themselves if they contemplate cooperative development of a shared river. Their energies are directed at creating a treaty in which the institutional details and all issues associated with the proposed

scheme are worked out. The stage of negotiation is important for it locks the states into arrangements over the use of their water resources in which the benefits and costs from exploitation are fixed for a long time. They tend to be conservative arrangements in which the partners retain as much sovereign control as possible and there is a minimal international institutional structure for implementation and operation of the river scheme.

In the Senegal basin the states have concentrated on common points and this has given rise to framework style agreements. As with the OMVS convention and the common works convention, institutional structures are created and broad principles enunciated. The more contentious issues of who will get what are left to be decided as the need arises. The approach allows the states to put off divisive issues until as late as possible. It enables them to maintain basin-wide solidarity in front of the donors. At crisis points agreements must be made, but accord in other areas and progress in financing give the states an incentive to resolve the issues and not jeopardize what has been gained. Incremental progress from innovative first principles gives rise to the speculation that the Senegal basin projects and institutions will evolve into new forms of international cooperation and resource management. The speculation is supported from another direction when we see the donors supporting the OMVS and the OMVS recognizing that the success of the river projects depends on the success of the rural development programme. The river basin organization has a functional incentive to take on greater responsibilities in the domestic realm and extend the scope of international development to fulfil its mandate.

But such an outcome remains speculative and judgement must be suspended. Not enough information is available on the states' intentions. The study ends with the completion of the financing phase at which time many of the issues regarding apportionment of benefits and costs and

services of the projects were still not settled. When these issues are resolved and the institutional mechanisms to plan and finance the rural development programme worked out, it will be clearer where the cooperative arrangements are heading. We have already noted the reluctance of the states and the Council of Ministers to permit the High Commission a wider mandate. We can not be certain the gains made to date can be sustained without the donors and the unifying incentive of concessionary finance. Nor do we know what will happen if inter-state relations are stressed by the burden of supporting uneconomic river basin projects. The case to date is interesting, but inconclusive.

Suggestions for Change

In previous sections we argued that the present unsatisfactory development schemes arose in a technical perspective from

1. inadequate information and analysis;
2. backward planning, and
3. inappropriate resource-oriented planning.

If international cooperation to develop a river was purely a functional exercise these faults in the planning process could be easily avoided in other basins where international development is being considered. But we noted that the faults to a large measure stem from the political interests of the participants. Technical cooperation depends on the political will to undertake it. And the political will had to be fortified by interests beyond the immediate technical and planning requirements of the basin. There could be no response to shared welfare problems without also incorporating motivations of the basin states and donors - interests, we noted, manifesting themselves in a strong physical bias towards engineering solutions. In such circumstances the scope for reform seems slight. Nevertheless the Senegal experiences offer some lessons and point to reforms that should be considered by basin states and sources

of finance thinking of participating in international river development projects. In general:

1. The focus on 'international rivers' as a resource to be developed is only appropriate after national studies have shown investment in international schemes meets the basin states' objectives better than national alternatives.
2. Technical and planning assistance must shift its emphasis from an ultimately fruitless and sterile concentration on international river basin organizations to building up domestic planning and technical capabilities.
3. The sources of finance must take on a more positive role in shaping acceptable proposals for development, in simplifying fund procedures, and then in working with recipients to solicit sufficient funds to implement the proposals.

1. International Rivers

Much of the attraction of the Senegal projects arises from the fact that the Senegal is an international river. If as so often happens states within an international basin exploit their sector of a river much of a economic and resource potential of the river is wasted in piecemeal development. Basin states show laudable foresight when they agree to cooperate and this cooperation should be encouraged. In the process of cooperating they may also improve basin state relations and regional stability - no small benefit in regions like Africa where neighbouring states may be suspicious and hostile towards each other. Most donors have no explicit policy for encouraging such international cooperative endeavours. But for the reasons above and the additional one that assistance to an international project spreads aid and thus influence to more than one recipient with only one grant or loan, they are attracted to such projects when they are presented to them.

The United Nations and the European Development Fund are exceptions in that they do have policies to encourage regional cooperation. In line with the EEC's own integrationist philosophy, the European Development Fund has a special allocation to support regional projects. The Senegal basin states are benefiting from that allocation by about \$90 million.

The United Nations Secretariat has long regarded river basin cooperation as an area of special interest in which the United Nations could have a special role. Compared to other donors the United Nations, through the UNDP and other agencies like FAO, has contributed only a small amount to the total Senegal programme. But the United Nations sees its role as a catalyst. Although many donors like to see themselves in that role, the review of the Senegal experience shows that indeed the United Nations agencies' initial support of planning was critical in supplying the basin states with credible information and plans with which the basin states could solicit financing for the projects.

The United Nations was right to think of international rivers as an area of special interest. But there is a danger in focusing on the international dimension. If one concentrates on the river as the common link among the basin states one can easily adopt a resource-oriented perspective in which the exploitation of the river's potential is seen as the principal means of meeting the common basin states' needs. This is what happened in the Senegal. Attention never deviated from exploitation of the international resource. The socio-economic and environmental conditions in the valley and the economic conditions of the states should have been the focus and river regulation regarded as one of a number of options for improving the conditions. The overlap of interests that the states first recognized should have been put in the context of the wider problems of development within the basin and the states. In some other basins such an approach might well lead to a resource-oriented option, especially where there is a ready market for the services of river regulation such as hydro-electric power. But by concentrating on the resource in the first place the development approach that follows will be development of the river.

Reform of the planning process envisages shifting the emphasis away from the river to the needs and objectives of the basin states. As the

planning process is supported by outside assistance such technical and financial help should be directed more to the states individually. They need to have the information on the net benefits to them from international cooperation over the net benefits from national alternatives requiring less international cooperation over use of the river. Politically the approach should be acceptable as states generally prefer direct bilateral assistance to assistance shared with neighbours. The preliminary planning should include at least the four following steps

- i. Careful elaboration of national basin problems and national economic problems as the basis for selecting development objectives.
- ii. An indicative plan of the river's potential that can suggest alternative river projects.
- iii. Consideration of alternative non-regulation schemes to assess the scope for national efforts to meet the objectives.
- iv. Comparison of international schemes with national ones to determine the most economic and most feasible alternatives.

2. International River Organizations

Greater emphasis on building up national institutions and capabilities implies less of a role for the international river organization. Despite the attention lavished on the OMVS by the donors and the hopes some of them seem to have for it in rural development, why should the Senegal basin states be less jealous of their sovereignty than more wealthy states? The basin states proclaim integrationist objectives but their behaviour shows a suspicion of the actual and potential power of the OMVS. Successful river basin development elsewhere such as for the Columbia, the St. Lawrence and the Rio Grande has been accomplished without elaborate and formal international river organizations. Most states prefer minimal international organization and are careful not to allow the organizations they do create mandates that might be expanded into areas of supra-national authority. Even though the OMVS mandate is broad and some donors may sponsor the OMVS taking on supra-national responsibilities, there is a good case to think

that the basin states will frustrate the expansion of the OMVS and perhaps even reduce the authority it now has.

It would be better to start with organizational arrangements that are more modest and organizations that are not charged with a mandate to develop the river. The apparent strength of the OMVS comes from comparison with national organizations which are weak, have only indirect responsibilities for river regulation, and do not have the capability to perform the type of functions the OMVS has for the river. To reorient development away from river development we need to build up the national organizations in order that they can truly represent the national interests in basin-wide planning.

The emphasis on national institutions does not imply that any obstacles should be put in the way of greater inter-state communication, consultation, coordination and cooperation. Projects undertaken piecemeal without reference to needs, potentials, and consequences in neighbouring states are a certain recipe for tension and controversy. International arrangements do need to be put in place. The exact arrangements will depend on the type of development the states undertake. But we can divide the issue areas:

1. generation of commonly agreed upon facts and information;
2. identification in order of each state's priority the projects they want to undertake;
3. if costs and services of projects are to be shared, the funding for the projects, and
4. allocation of water, services, costs and benefits among the different states and users, plus resolution of disputes arising from use and development of the river.

If the basin state governments have strong administrative capabilities most of the tasks can be undertaken by ad hoc working groups. However, the allocation and dispute resolution functions might be best performed by a permanent inter-state commission, such as the Permanent Water Commission for the Senegal. Depending on the preferences of the basin states it could

operate like the present OMVS Council of Ministers, that is as a forum for inter-state negotiation. Or it could function more radically as a collegial body dedicated to arriving at equitable solutions to problems submitted to it by the states. In either case the commission would benefit from a small international secretariat. The secretariat could also serve as the clearing house for data and information collected by the states on the river and assist the inter-state working groups. Thus we can suggest:

- i. A negotiating or quasi-judicial allocation and adjudication commission to be created on a permanent basis to settle issues submitted to it by the states arising from the development and use of the international river.
- ii. The commission should be supported by a small permanent international secretariat that would also:
 - a. collate and disseminate information regarding the river collected by the basin states,
 - b. serve as the administrative centre for basin-wide studies conducted by ad hoc working groups of national agency officials or international consultants,
 - c. assist in common fund raising efforts of the states.

3. Funding

The funding process was complicated, wasteful of time and effort, and from the donors' point of view the final development programme was less than satisfactory. The shortcomings of the OMVS proposals and the competence of the organization was in the eyes of a number of donors the cause of delay. However the nature of the funding process complicated the financing problems.

First, the donor meetings were too cumbersome. With up to 25 organizations and 100 representatives attending many of the meetings - the earlier ones especially - the delegates could not give the attention needed to settle the issues the OMVS put up for resolution. Second, the meetings were - except in the crisis year 1979 - held at yearly intervals or longer. Between meetings the preoccupations and views of the donors changed and the work of the OMVS was out of synchronization

with what the donors were expecting of the organization. Most of the meetings were held at cross purposes. The OMVS wanted to resolve the issues on the agenda while the donors remained preoccupied with issues they felt the OMVS had not addressed properly. Third, the donors offered little positive direction and guidance to the OMVS. In line with the financier's reluctance to interfere and incur the borrowers' responsibilities and liabilities for the success or failure of the projects being funded, the donors' role was negative - to set conditions and to disapprove of proposals in part or altogether. The donors responded to the OMVS proposals and then the OMVS had to amend them to suit or circumvent donor criticisms. The donors, of course, were not without ideas on how they thought development should be arranged or shy in promoting their views. But their manner was reactive and indirect.

The donors need to take some initiative to make multilateral co-financings more efficacious. It may mean shedding some of their bankers' reticence and becoming more heavily involved in shaping worthwhile proposals. To make the process more manageable for a major development proposal a few of the principal interested donors - including at least one leading international financing institution, preferably the World Bank - would take the initiative by forming a steering committee. The committee would liase between the recipients and the donor community. It would work out the types of information the donors required, the conditions the recipients would have to meet, and the various terms for the loans. Once the committee was confident in the proposals it could assist the recipients in soliciting the balance of the funds needed to complete financing. The committee would meet regularly with basin state organizations to inform them of donor requirements, to learn of their problems that might require donor assistance or modifications to financing conditions, and to identify issues that might require attention of a full donors conference or political resolution among political leaders. Perhaps the donors could learn

from the syndicate arrangements international bankers use to provide loans to governments, in which some bankers take the lead and raise support from other banks to complete financing. Development assistance is more complicated because the terms of the loans - having to incorporate tied aid - are more varied. The recipients may well not be happy with such types of funding arrangements for they reduce their flexibility in securing funding for proposals that are not economically well founded and they may see such funding consortiums as a threat to their sovereign authority to formulate policy as they see fit. None the less, if they do have a good basis for their plans the approach should improve the prospects of the recipients receiving helpful support and prompt funding.

The donors should consider:

- i. A steering committee made up of leading donors to a major development programme including an international financial institution should be created to coordinate donor financing.
- ii. The committee should meet often with recipients to be kept informed of their planning activities and problems and to transmit the donors' requirements and conditions.
- iii. The different requirements of the various donors should be simplified by the consortium by adopting as far as possible uniform conditions and evaluation criteria - perhaps taking as the standard the conditions and criteria of an international lending institution like the World Bank.

Development and Cooperation

International rivers form a significant portion of the water capital of the world and they are of growing importance to developing country governments as they strive to improve the standard of living and quality of life for their growing populations. In many cases political differences among the states undermine the political will for cooperation to make use of the shared capital. But this study has shown that states require more than the political will to cooperate if they are to mount a successful international development programme. With the strongest of political wills governments can cooperate and yet fail to make good use of the

valuable resources. In the process of accommodation the governments and the financiers, pursuing short-term interests, can lose sight of the functional basis for cooperation. In poor countries governments may be complacent believing that if all else fails they will still benefit from the large grant element in the investment loans. Economic failure may seem of abstract interest for it concerns the opportunity cost of capital that may not otherwise be available to them. It is the donors' concern, not theirs. But costs may be more concrete when the governments take over the projects and find the interest still owing after the subsidy must be paid in hard currency and the treasury can not afford to pay the bills to maintain the projects. And of course the social consequences are real enough to the people the projects are intended to benefit as they have to cope with the complete disruption and transformation of their way of life.

The political will must be disciplined to ensure that the political ambition and short-term interests of state and donors alike do not sanction projects that exceed the social, environmental, and economic capability of the states to make the most of the international investments. Who is to provide the discipline? Donors and recipients are equally implicated in the misallocation of investment and both must share the responsibility of making a greater effort to support productive projects. They can be helped if they have information on the costs of pursuing - as must be expected - non-developmental objectives.

As the Senegal case illustrates there may be strong pressures to subvert the production of information. But one can be optimistic in thinking that in other basins the basin state governments will not have the same history giving rise to such strong preconceived notions of how the river should be developed. Even though one can hope that the governments will be more open minded on the form development will take, as the river is the common link among the states there will still be a bias in

favour of resource-oriented river basin development. However, if planning follows from the needs and appropriate socio-economic objectives held by each state the states and donors will have a more realistic assessment of the opportunities for channelling their goodwill and political will to productive forms of regional cooperation.

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A number of weekly and monthly journals report on events in the Senegal Basin. The most useful are:

Africa Confidential
Africa Research Bulletin, Econ. Ser. & Pol. Ser.
Afrique Contemporaine
Bulletin de l'Afrique Noire*
Industries et Travaux d'Outre-Mer
Jeune Afrique
Marchés Tropicaux et Méditerranéens
Le Moniteur Africain
Telex-Afrique
West Africa

* Of value is the Bulletin de l'Afrique Noire which often provides a synthesis of major OMVS documents and reports. See:

- no.788 (3 Juillet 1974), pp.15399-407. (On the Beyrard report.)
- no.861 (24 Mars 1976), pp.16797-798). (On the Objectives and Main Outline report.)
- no.870 (2 Juin 1976), pp.16970-977. (On the 1976 Programme report.)
- no.913 (18 Mai 1977), pp.17826-838. (on the 1977 Hydro-agricultural study.)
- no.935 (23 Novembre 1977), pp.18269-279. (OMVS report for first Consultative Committee meeting.)
- no.984 (20 Décembre 1978), pp.19149-154. (OMVS reports for the second Consultative Committee meeting.)
- no.1005 (30 Mai 1979), pp.19506-508. (OMVS revisions to the river projects.)