



Nile Basin Initiative
Eastern Nile Subsidiary Action Program

Joint Multipurpose Program
Launch Phase
Draft Report



Eastern Nile Technical Regional Office
May 2008

Acronyms

AHD	Aswan High Dam
CBSI	Confidence Building and Stakeholder Involvement Project
CRA	Cooperative Regional Assessment
EN	Eastern Nile
ENCOM	Eastern Nile Council of Water Ministers
ENSAPT	Eastern Nile Subsidiary Action Program Team
ENTRO	Eastern Nile Technical Regional Office
JMP	Joint Multi Purpose Program
JMP1	First Joint Multi Purpose Project
NBTF	Nile Basin Trust Fund
NBDF	Nile Basin Dialogue Forum
NPC	National Project Coordinator
NRG	National Reference Group
OSI	One System Inventory
RBO	River Basin Organization
RPC	Regional Parliamentary Committee
RPT	Regional Power Trade
RWG	Regional Working Group
SDO	Social Development Office
SDBS	Socioeconomic Development and Benefit Sharing
SSEA	Strategic Social and Environmental Assessment
WRPMU	Water Resources Planning and Management Unit
WB	World Bank

EXECUTIVE SUMMARY

I INTRODUCTION

This summarises the EN JMP Launch Phase Completion Report prepared for the Eastern Nile Council of Ministers (ENCOM) within the broader framework of the Nile Basin Initiative. It gives a synopsis of activities and achievements to date, and outlines recommendation.

Ushering in a new era of cooperation in water resources, EN JMP is a direct outcome of the ENCOM and EN Power Ministers Meeting of February 2005 in Alexandria, Egypt, which sought to: “*Launch a first phase of identification of a major program of multipurpose joint development of the Eastern Nile*”.

More specifically, ENCOM sought to: “*Identify and prepare a major initial project, within a broader multipurpose program, to demonstrate the benefits of a cooperative approach to the management and development of Eastern Nile*”, while at the same time ensuring good practice in economic, social, environmental and consultation dimensions.

Why JMP? Rationale and Significance

The three Eastern Nile countries are linked by shared water resources, which play a central role in their histories and political economies. These resources offer significant development opportunities which, however, have not been sufficiently leveraged so far to promote trade and regional integration. The region – home to over 180 million inhabitants – is characterized by rapid population growth and environmental degradation and encountered series of extreme events (floods and droughts). On the whole, absence of an integrated, one-system approach has rendered inadequate the management of broader water resources challenges. Eastern Nile water productivity is constrained and system losses are significantly high.

Historically, EN countries have pursued their individual national solutions and development paths to address issues related to water resources. In more recent times, governments everywhere have come to realise that problems in shared resources require a shared approach to their solution and that unilateral or business-as-usual approaches carry significant risks, not the least of which is sub-optimal development. In the Nile Basin, the imperative for cooperation has led to the present Nile Basin Initiative and directly underpins the ENCOM agreement to pursue a joint multipurpose program for maximised mutual benefit. The opportunities afforded by this ‘*three-country, one-system*’ approach go beyond the direct benefits that will flow from joint infrastructure investments and joint water resource management into wider benefits of regional trade and commerce, and ultimately into the improvement of inter-country relations, regional security and peace.

What is JMP? - Key elements and features

JMP is first and foremost a *joint* undertaking of the three EN countries that use the shared EN resources as entry points to foster economic integration through *multipurpose* projects that eventually extend beyond the water sector to include other sectors, thus promoting EN-wide regional integration. JMP thus is expected to be realistic and ‘do-able’ i.e. *implementable* (timely outcomes with selected core investments; fundable – attractive to international financing sources; technically, socially, environmentally and politically feasible and acceptable) and does not unduly compromise future options for the countries (*no regrets*).

The JMP *goal* is to contribute to *transformational and sustainable* socio-economic development, economic integration and stability in the EN region. A more immediate *development objective* of the JMP1 is to undertake cooperative and sustainable development and management of the shared Blue/Main Nile water resources. This is to be achieved through:

- Putting in place transboundary institutions that serve as foundations for long term regional integration;
- Linking EN countries through multipurpose storage and power systems infrastructure;
- Improving watershed and floodplain management to enhance livelihoods and environmental management;
- Modernizing, improving and selectively developing irrigation systems; and
- Promoting related investments such as in transport, private sector, rural electrification, navigation and fisheries, to leverage growth and realize gains from reliable power and water.

II PURPOSE AND MAIN ACTIVITY AREAS OF THE JMP LAUNCH PHASE

The JMP Launch Phase was formulated in 2005/2006 and received technical assistance and support from the World Bank totalling USD 1.14 million.

The purpose of the Launch Phase has been to: (a) define JMP more closely and to enable identification of the first set of investments within a broader joint multipurpose program; and (b) create an enabling environment to move into a detailed Identification Phase concerned with identifying specific project choices, and eventually into a Preparation Phase as a precursor to construction. The components of the JMP Launch Phase are:

Information and Analysis: These activities focused on filling critical data gaps and advancing strategic analyses to facilitate selection of the first set of investments, including: (a) the first no-border baseline data collection and preparation of *One-System Inventory* of water resources, environment and socio-economics of EN sub-basin; (b) *Scoping Study* prepared by a small team of independent international consultants, to provide strategic analysis of the inter-woven physical behaviour of the Eastern Nile river system, characterizing its responses to potential future uses of shared water resources and infrastructure development; (c) thematic studies on *Financing and Implementation Arrangements*, and *Institutional and Broad Legal Considerations*; and supplemented by (d) other ENSAP projects such as the *Power Trade Study* and *Watershed Management* already in train.

Institutional Strengthening and development needed to carry JMP1 into the Identification Phase has been a key activity of the Launch Phase. This has included the establishment of the JMP Regional and National Working Groups noted below, along with ENTRO's management of the complex launch process.

A central activity of the JMP Launch Phase was **Consultation** with key stakeholders essential for the proper articulation, identification and planning of JMP. These included a Regional Working Group (RWG) – a three-country, multi-sectoral group of technical experts formed to advance JMP. RWG has held several meetings, including a knowledge exchange tour to the Senegal Basin. This group, assisted by broad-based National Reference Groups, arrived at a general consensus on JMP objectives and likely coordinated investments. The JMP Regional Parliamentary Committee, formed to facilitate broad-based stakeholder buy-in for JMP, has become actively engaged. This includes the consultation with ENCOM, EN Power Ministers and Power Steering Committee. Other consultations have taken place in the form of briefings and networking sessions with civil society organizations such as national Nile Basin Discourse Forums, Nile Media Network, lawyers, women's organizations, and academia, etc.

III ACHIEVEMENTS

The JMP Launch Phase has produced a series of what might be termed 'socio-political' achievements in Eastern Nile development cooperation and collective commitment to common goals. From the initial impetus of the enlightened Nile Basin Initiative, the Water Ministers of the Eastern Nile countries have demonstrated with their instruction to launch

JMP a clear belief in the virtues of working together to achieve something that could not be realized by working alone. There are many indications that this start is having a growing and cumulative effect.

Emerging convergence: There is almost complete concurrence among EN technical, legislative and political/executive bodies that raising EN cooperation to the level envisaged for JMP is a goal worthy of pursuit. In fact, in August 2007, the Regional Parliamentary Committee, formed for consultation on JMP matters, called in clear terms for an acceleration of cooperation and a scaling-up of coordination and joint action. This is a landmark in joint regional commitment.

Growing cooperation: Through the period of the JMP Launch Phase it has become apparent that cooperation has been enhanced by the experience of joint work on JMP, evidenced most clearly by the historically significant data-sharing that has made the *One System Inventory* of regional information possible. Cooperation is breeding cooperation and creating confidence that joint approaches to water resources management are constructive and effective.

Consensus on JMP: Increasingly, concurrence is also building among key stakeholders on the major outlines of the JMP framework, including its goal, development objectives and outputs, stated earlier. This began with the multi-sectors Regional Working Group arriving at a firm consensus on the nature and likely components of a JMP1. That is, a coordinated program of investments in a multipurpose storage with a hydropower facility and regional transmission system; watershed management; irrigation modernization, reform and development in selected areas; ancillary investments to leverage growth; supported and managed by appropriate transboundary institutions.

However, these achievements have not stood alone, but have produced concrete findings of technical, financial and institutional significance to JMP.

IV MAJOR FINDINGS

The following is an abridged summary of some key findings. In brief, JMP, despite anticipated complexities and challenges, is emerging as a worthwhile and viable concept for the Eastern Nile countries and their economic and social future.

Composition of JMP1

- Consensus among key stakeholders is that JMP1 should comprise a multipurpose dam and reservoir with associated hydropower facilities including transmission system, together with reservoir watershed management; regional 'hotspots'; floodplain management; irrigation enhancement; selected regional watershed management for livelihoods and sustainability; and associated regional institutions.

Location of JMP1

- Though the long term JMP is envisioned to include investment in all sub-basins, the Blue Nile/Main Nile sub-basin offers a potential development opportunities compared to other EN sub-basins.

Water Resources and Hydrology

- There are sufficient water resources available to support the envisaged JMP1 without impacting on the Eastern Nile countries.
- There are significant opportunities to improve water efficiency/ productivity within the Eastern Nile region.

Watershed Management

- Management of degraded watershed (enhanced agriculture, reduced poverty, improved livelihoods) is key to reducing sediment transfer and protecting reservoirs

- Potential benefits of watershed management are identified that accrue beyond national borders at regional level and global level (public goods)
- Fast track projects to show tangible benefits from cooperation on the ground have been prepared and implementation ready
- Profiles of 13 first round follow-on projects were developed.

Power Trade

- The study demonstrated there is a significant global/multipurpose benefit for Egypt, Ethiopia and Sudan to establish power trade among their power systems
- Options of power exchange have been studied and recommended interconnection scheme is 1200 MW capacity to Sudan and 2000 MW capacity to Egypt.
- The project would create short-term improvements in Ethiopia's power export revenue and long-term power use efficiency improvements in the Nile basin. In addition, savings in fossil fuels consumption and reduction CO2 emissions will be realized by Egypt and Sudan
- The proposed interconnection would be economically characterized by very good profitability, a short payback period and a high benefit to cost ratio

Financing JMP1 Anchor Project

- Availability of public funds is likely to be limited and partnership with private financing (debt/equity) will almost certainly be required.
- Financial viability of the project rests largely on its power benefits as electricity is the benefit that can be easily monetised. A power trade framework/agreement must precede investment.
- Risks of the project are large, leading to the conclusion that some elements (most likely the dam) will need to be a public venture. The power complex may be the most suitable for development by the private sector.
- Creation of an enabling environment is critical. That is, a positive business environment conducive to business viability.

Institutional Considerations

- Some form of Eastern Nile river basin organisation will be required to be formally established with legal identity and powers to manage public interest matters, especially related to water operations.
- One or more legal agreements among Eastern Nile countries are likely to be needed to define and give legal foundation to areas of cooperation and development including construction and operations and maintenance.
- Institutional matters will be strongly influenced by ownership of the anchor project – joint (all 3 countries) or national.

Benefit Sharing

- Benefit sharing provides an equity-focussed conceptual framework for project identification and preparation.

V THE ROAD AHEAD: Moving to Identification and Preparation Phases

With Launch Phase studies and analyses largely complete and a consensus on the generic projects of JMP1 and their preferable broad location, the next step is an Identification Phase.

In broad terms, the Identification Phase (ID) comprises all the work critical to make a firm and specific selection of the component projects of JMP1. This is estimated to require about two years and to cost USD over 9.0 millions. A proposal for this Phase was completed and presented to ENCOM, ENSAPT and NBTF Committee. The JMP ID Phase will have three components – Information generation, Regional analysis and comparative studies, and Supportive activities. Its outcome will be a fixed decision point in 24 months to identify the priority large multipurpose dam on the Blue Nile/Main Nile.

Identification will focus on in-depth studies and analyses, social, environmental, economic, cascading, sequencing, fillings, consultation and communication, sufficient to specify and select projects in terms of location, configuration, magnitude and cost estimates. However, a critical element will be institutional strengthening. The magnitude of JMP1 requires world-class skills and capacity in technical, financial and management spheres. With ENTRO already stretched, a necessary first step will be the establishment of a dedicated JMP group.

At the end of the Identification Phase, ENCOM will be in a position to start detailed preparation for these projects. Preparation includes full feasibility studies for the selected projects, along with full-scale impact studies, economic and financing studies, and so forth, undertaken to a degree that enables their feasibility to be established and for detailed preparation to then be carried out to enable them to be constructed.

Over the long-term, the JMP is envisioned to include cooperative sets of joint investments in all sub-basins of the Eastern Nile - *Abbay-Blue Nile, Main Nile, Tekeze-Setit-Atbara*, and the *Baro-Akobo-Sobat*. This will be supported by the continuous linkages and synergies between JMP and other ENSAP projects (ongoing & future). In the short term, and to initiate JMP, the first set of investments – JMP1 – will essentially focus on one sub-basin as described.

VI BROAD CONCLUSIONS

Accordingly, in relation to the first set of investments of the proposed Eastern Nile Joint Multipurpose Program, the following are broad conclusions:

1. Progress was made on various elements of the JMP Launch Phase, including JMP Consultation, JMP Information & Analysis, Institutional Strengthening and Development, together with the key messages from studies, consultations and discussions, along with the agreed views of the JMP Regional Working Group and key messages and call from JMP Regional Parliamentary Committee;
2. The JMP Framework was articulated, as detailed in Figure 1 of this report, comprising Goal, Development Objective, related Performance Indicators, and five Outputs:
 - Trans-boundary institutions established and foundations for long-term regional cooperation and integration put in place
 - Regional multipurpose storage and power systems infrastructure developed (linking Eastern Nile countries together)
 - Watershed and floodplain management improved (in priority catchments)
 - Irrigation rehabilitation, modernisation, reform and development program (implemented in selected areas)
 - Essential related investments influenced (e.g. transport, rural electrification, navigation, fisheries, etc.);

3. The first set of investments of the Joint Multipurpose Program, referred to as JMP1 and intended to demonstrate the benefits of a cooperative approach to the management and development of the Eastern Nile, as comprising a complementary and coherent regional package, likely including: transboundary institution, a multipurpose reservoir with hydropower facilities; regional power transmission system; irrigation modernization, reform and expansion in selected areas; watershed and floodplain management in priority areas; and, promotion of essential related investments;
4. Though the long term JMP is envisioned to include investment in all sub-basins, the Blue Nile/Main Nile sub-basin offers a potential for the first joint development compared to other EN sub-basins;
5. The arrangement of the Financing Package will require a high degree of cooperation between the EN Governments, including providing high level of support for the project in the form of guarantees, risk sharing and public equity. This work needs to be started in earnest as soon as the project is identified.
6. Institutional strengthening and capacity building is considered necessary as an ongoing feature of JMP and that a dedicated JMP Coordinator (Manager), technical specialists and consultants are considered necessary at ENTRO in order to allow JMP1 to proceed at a good pace, as well as strengthen the capacity in each of the EN countries' national offices. In addition to national and regional capacity, access to international experience (a range of consultants) will be needed to develop international-standard advice on technical matters relating to dams and reservoirs, irrigation, power systems, catchment management, environmental and social mitigations, financing models, institutional options, legal requirements, and the like;
7. ENTRO to build on the gains of the JMP launch phase and to progress into the JMP1 Identification Phase. The JMP1 Identification phase is come up with a minimum output, to identify a specific package of projects selected through a structured process of analysis and consultation that takes due note of the key messages outlined in Section 5 of this report, and which properly considers economic, environmental and social factors, and includes appropriate consultations. The projects are to be each identified and suitably quantified by size, site, costs and benefits. The proposal is to address poverty alleviation and environmental sustainability as key issues as noted by the Regional Parliamentary Committee;
8. ENTRO to build on the gains of the launch phase to proceed with a strategic communication and consultation strategy, informed by the NBI Shared Vision Program (SVP) Confidence Building and Stakeholder Involvement (CBSI) project, and which involves and coordinates the input of other stakeholders (including sector ministries, the private sector, and civil society) in the development of the multipurpose program and the first project;
9. ENTRO will take appropriate note of the communiqué headed 'Call for Accelerating Action on Eastern Nile Cooperation' issued by the JMP Regional Parliamentary Committee at Khartoum, Sudan, on August 13, 2007, and to take the requested actions regarding the growing impact of climate change, and to complete the second phase of the Study Tour through visits to Egypt and related international river basin experience.

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1. INTRODUCTION AND PURPOSE

The three Eastern Nile countries (Egypt, Sudan and Ethiopia), working together in progressing to complete the Launch Phase activities and consolidate the final document of an Eastern Nile Joint Multipurpose Program (JMP) with a directed focus on a first set of investments (JMP1).

The Eastern Nile JMP is a long-term program which includes a coordinated set of investments and enabling institutional environment that facilitates the sustainable development and management of the Eastern Nile shared water resources to provide a range of transformational development benefits across sectors and countries.

This document summarises the activities, progress and achievements under the JMP Launch Phase. Its purpose is a milestone report to the Eastern Nile Council of Ministers (ENCOM) including recommendations concerning the first JMP set of investments and the next steps beyond the JMP Launch Phase and into the Identification Phase which will analyse alternative projects in sufficient degree to allow sound choices to be made. Subsequently, a detailed Preparation Phase would follow that will enable their feasibility to be established and for detailed preparation to then be carried out to enable them to be constructed. This Launch Phase draft report has been prepared by the Eastern Nile Technical Regional Office (ENTRO) to document all the activities.

2. STRATEGIC AND DEVELOPMENT CONTEXT

2.1 EASTERN NILE RESOURCE CONTEXT

The Nile and its eastern tributary systems - the *Abbay-Blue Nile*, *Tekeze-Setit-Atbara*, and the *Baro-Akobo-Sobat* - link the Eastern Nile countries of Egypt, Ethiopia and Sudan and form an important, shared natural resource. Although rich in natural resources, the region faces many challenges of a transboundary nature. Populations are growing fast, placing additional demands on scarce water and other natural resources. Erosion, a natural process in the highland areas, has been exacerbated by deforestation, overgrazing, and cultivation of marginal lands by poor farmers. Land degradation is very serious in parts of the basin, contributing to low soil productivity and poor agricultural production. High erosion also causes downstream sedimentation, which decreases reservoir life, reduces the efficiency of hydropower production and irrigation, and damages habitats. Rainfall and river flows are highly variable and unpredictable, resulting in endemic droughts and floods. Damage caused by variable rainfall and unregulated river flows is a major constraint to the economies of the Eastern Nile. Economy-wide models that incorporate hydrological variability suggest that such hydrological variability, unmanaged, have substantial negative effects on GDP growth rates.

To date, this apparent paradox of abundant natural resources but multiple natural resources problems has been constrained in its resolution by a long history of regional political, cultural, and other factors. As a result, the significant development potential afforded by the Eastern Nile rivers has not been realised, and neither the benefits from water development, sustainable watershed management and access to good water supply, nor the benefits of mitigating damaging effects of flooding have been able to be widely enjoyed by regional populations.

**The Eastern Nile region has potential water resources benefits
awaiting coordinated development**

2.2 EVOLVING COOPERATION IN THE NILE AND EASTERN NILE

The paradox of unrealised development potential coupled with increasing natural resources problems as noted above is not limited to the Eastern Nile region but is apparent across the whole of the Nile Basin. This has prompted governments over the years to pursue cooperation in solving this paradox. This approach recognises the reality that problems in shared resources required a shared approach to their solution and that unilateral or business-as-usual approaches carry significant risks, not the least of which is sub-optimal development. These efforts have culminated in the present Nile Basin Initiative which represents an enlightened cooperation characterised by world-leading water management concepts.

The Nile Basin Initiative (NBI) had its origins in 1999 when the Basin countries¹ began a cooperative venture to “*achieve sustainable socio-economic development through the equitable utilisation of, and benefit from, the common Nile Basin water resources.*” To advance this vision, NBI set up a Shared Vision Program which is constructing the building blocks for Integrated Water Resources Management across the Basin, along with a Subsidiary Action Program (SAP) of on-ground investments in the two distinct parts of the Basin – the Eastern Nile region (ENSAP) and the Nile Equatorial Lakes region (NELSAP).

Cooperation in the Eastern Nile to advance the Eastern Nile Subsidiary Action Program (ENSAP) has resulted in the formation of joint institutions – the Eastern Nile Council of Ministers (ENCOM) comprising Water Ministers from each of the member governments, an advisory body of senior officials, the ENSAP Team (ENSAPT) and a secretariat, the Eastern Nile Technical Regional Office (ENTRO) located in Addis Ababa, Ethiopia. In addition, Eastern Nile Power Ministers and senior energy and power utilities experts are actively involved in power trade studies, interconnection and transmission, including the JMP.

Cooperation has however gone well beyond joint institutions. ENSAP under the guidance of its governing body ENCOM has taken a two-track approach – a ‘fast track’ component to demonstrate rapid and early benefits in cooperation, and a longer-term multipurpose program (including JMP) track to realise the significant development potential inherent in the water resources of the Eastern Nile sub-basin. Fast track projects are in varying stages of preparation and implementation and are on target to successfully meet their objectives.

The Eastern Nile Investment Program

The first set of ENSAP projects identified by ENCOM termed IDEN notable for their comprehensive scope. They include both fast track and multipurpose components:

- Eastern Nile Planning Model
- Baro-Akobo Multi-purpose Water Resources Development
- Flood Preparedness and Early Warning
- Ethiopia-Sudan Transmission Interconnection
- Eastern Nile Power Trade Investment Program
- Irrigation and Drainage
- Watershed Management

Further information and progress of IDEN is summarised in ENTRO Annual Reports.

Eastern Nile water resources cooperation is tangible, strong, and growing in magnitude, scope and sophistication

¹ Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda. The 10th country Eritrea is participating actively in observer capacity.

2.3 AN EASTERN NILE JOINT MULTIPURPOSE PROGRAM

Ministers' Mandate (ENCOM)

Recognizing that a *'three-country, one-system'* approach offers the greatest opportunity to unlock the development potential of the Nile and encouraged by the steady progress made in preparing Eastern Nile fast-track projects, ENCOM and the EN Power Ministers met in Alexandria on February 15, 2005 and agreed to *"launch a first phase of identification of a major program of multipurpose joint development of the Eastern Nile"*.

More specifically, ENCOM instructed its advisory body, the ENSAP Team (ENSAPT) together with its secretariat, the Eastern Nile Regional Technical Office (ENTRO) to:

- Concentrate efforts on identifying and preparing a major initial project, within a broader multipurpose program, to demonstrate the benefits of a cooperative approach to the management and development of the Eastern Nile.
- Ensure good practice in economic, social and environmental analysis and consultation in project preparation.

The Ministers also posed some key questions to be addressed by ENSAPT/ENTRO:

- How to involve, and coordinate the input of, other stakeholders (including sector ministries, the private sector, civil society) in the development of the multipurpose program and the first project?
- When to engage the heads of states of the three EN countries?
- What will be the information needs and processes to advance the multipurpose program?

ENTRO Response to the Ministers' Mandate

ENTRO formulated a project proposal for a JMP Launch Phase in 2005/2006 and secured through the World Bank and the Nile Basin Trust Fund technical assistance and support totalling USD 1.14 million.

The primary purpose of this Launch Phase was to narrow the focus on the selection of the first JMP and, perhaps most critically, to create an information-rich enabling environment which would make it possible to move ahead into actual project choices through an Identification Phase and subsequently into a detailed Preparation Phase. This required defining JMP more closely, and enabling the identification of potential joint multipurpose projects in a manner that was timely, effective and which demonstrated good practice consideration of economic, social and environmental issues.

The primary Launch Phase activities were broadly centred on:

- JMP consultations;
- JMP information and analysis; and
- Institutional strengthening and development.

The following sections of this report describe the activities in more detail, together with Launch Phase achievements and findings, and the broad consensus reached on identification of the first JMP project.

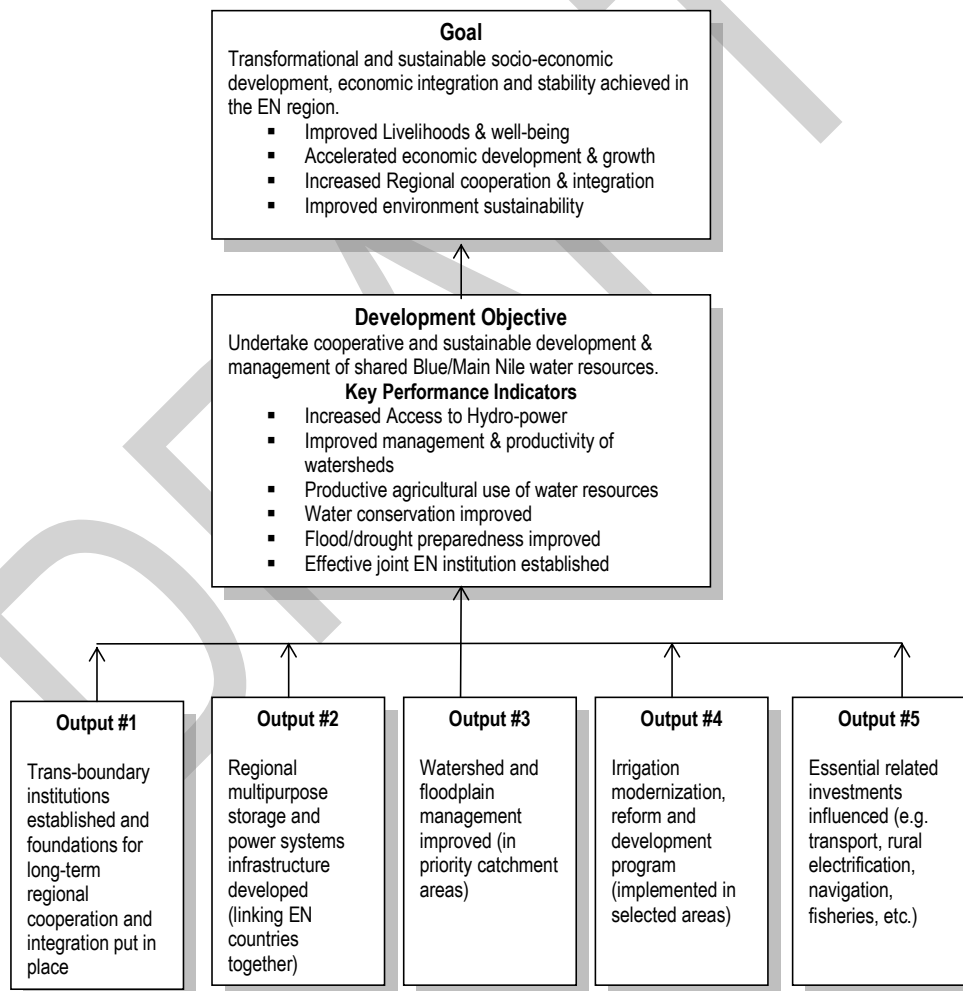
3. DEFINING JMP – A JMP FRAMEWORK

The following elaborated definition and framework (including goal, objective and key outputs) for the JMP arose from a series of consultations and workshops in the EN region as described in Section 4.1. The framework represents a consensus view of the key stakeholders.

The Joint Multipurpose Program has been conceptualised in the definition:

The JMP is a long-term program which includes a coordinated set of investments and enabling institutional environment that facilitates the sustainable development and management of the eastern Nile shared water resources to produce a range of transformational development benefits across sectors and countries.

Figure 1: Joint Multipurpose Program Framework



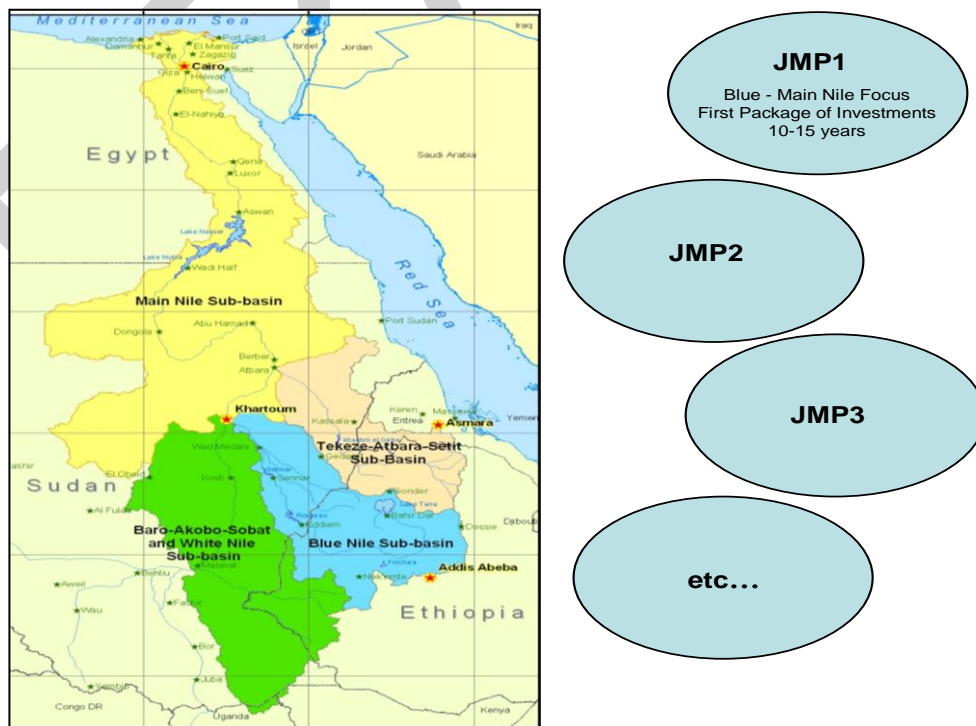
This conceptualization of the JMP supports the ENSAP 2020 vision which seeks to develop “strong, globally competitive economies working together in an environment of peace and stability”, achieved by “economic integration through joint physical, social and environment infrastructure,” and with “the Nile serving as the key catalyst.”

In arriving at the JMP framework above, stakeholders were guided by principles of best practice in integrated water resources management and in multi-government river basin management. These have been codified in various ways by various international bodies over the years, but for the EN countries in considering the form of a first JMP investment project (JMP1), these principles have been formulated as a set of mutually desired characteristics. That is, JMP1 should be:

- **Joint** – economic integration across EN, significant benefits to all EN countries from shared resource; benefits from and to cooperation
- **Multipurpose** – significant benefits across sectors; contributes to broad-based sustainable development; benefits to all EN countries
- **No-regrets** – does not unduly compromise future options
- **Implementable**
 - Timely outcomes from a few targeted core investments
 - Fundable: attractive for international financing (loans, grants, guarantees)
 - Technically and institutionally feasible; socially, economically, and environmentally acceptable (with sufficient knowledge base)
 - Political acceptance; contributes to country development.

Over the long-term, the JMP is envisioned to include cooperative sets of joint investments in all sub-basins of the Eastern Nile - *Abbey-Blue Nile, Main Nile, Tekeze-Setit-Atbara,* and the *Baro-Akobo-Sobat*. This will be supported by the continuous linkages and synergies between JMP and other ENSAP projects (ongoing & future). In the short term, and to initiate JMP, the first set of investments – JMP1 – will essentially focus on one sub-basin as described.

Figure 2: A Succession of JMP Investments



4. ACTIVITIES AND ACHIEVEMENTS OF THE JMP LAUNCH PHASE

4.1 JMP CONSULTATIONS

JMP Regional Working Group.

This regional forum comprises a 3-country multi-sectoral group of technical experts specifically formed to advance JMP² and to ensure a full range of sectoral and country input. To give cohesion and to facilitate exchange of information, the JMP Regional Working Group (RWG) is chaired by the ENSAPT Team Leaders.

The RWG has held three meetings/workshops and has participated in a very successful and informative Study Tour to the Senegal River Basin. This has led to a general consensus on the objectives of the JMP, and the most promising sub-basin for JMP1. The RWG also has reached consensus on the general nature of the likely coordinated program of investments in linked river and power infrastructure.

JMP Regional Parliamentary Committee

Country ‘ownership’ of ENSAP and a strong and informed commitment to mutual cooperation in preparation and implementation was regarded as a fundamental pre-requisite for a successful JMP. ENTRO therefore began regular parliamentary briefings in the EN countries Parliaments to lay a sound foundation for informed decision making by the governments. Successful formation and briefings of the JMP Regional Parliamentary Committee (JMP-RPC) have occurred and a Study Tour to Ethiopia and Sudan was undertaken in August 2007. This Study Tour will be completed by a visit to Egypt and study tour to an international river basin.

Success of the JMP-RPC and the dedication of the members has been demonstrated by the communiqué issued after the August 2007 visits, and which emphasised interest, relevance and commitment and called upon Eastern Nile governments and related institutions to strengthen and accelerate a series of both general and specific aspects of EN cooperation.

A Ministerial informal dialogue is planned in June 2008 to discuss the various options and to explore joint development opportunities.

Other Regional Consultations

It was important to consult stakeholders from government, academia, civil society/NGOs, and other sectoral specialists with demonstrated interest in sustainable development of the Eastern Nile. ENTRO has therefore fostered the formation of *National Reference Groups* (NRG) to provide national forums to discuss opportunities for joint multipurpose development in the Eastern Nile, and to build broad-based understanding of, and confidence and trust in the benefits of regional cooperation. Additionally, the NRG concept is facilitated by the appointment of JMP National Coordinators in each country. It is also intended that the group will build ownership in the JMP process.

In addition, miscellaneous consultations have occurred and these will increase as a JMP Communication Strategy is put in place, and as JMP1 gathers momentum. The complete scope and listing of JMP consultations is at Annex 6.

**Wide-ranging consultations have given confidence to the conclusions
of the JMP Launch Phase and have promoted regional cooperation**

² Refer to Regional Working Group Terms of Reference at Annex 1

4.2 JMP INFORMATION AND ANALYSIS

One System Inventory

A common, regional information base is essential to underpin and inform decision-making on joint multipurpose projects and is internationally identified as a crucial feature of good river basin management. Additionally, the task also promotes mutual cooperation and openness.

From the outset, ENTRO determined that a single, integrated database (designated the *One System Inventory*) of water resources, environmental, and socio-economic information on a sub-basin basis needed to be gathered. Three consultants hired from each of the three countries compiled information on three thematic areas (water, environment and socioeconomic) across each of the four sub-basins (Tekezie-Atbara, Abay/Blue Nile, Main Nile, Baro-Akobo-Sobat portion of the White Nile and the Main Nile). This has enabled nine reports synthesized by three themes and by sub-basins. The synthesized water report is being up-graded to include the other two themes and form the *Eastern Nile Water Resources Inventory Report*. Information Kit has also been prepared – one for each of the four sub-basins. The drafts of the one system inventory reports were discussed in a multi-sector regional working group including ENSAP national coordinators in November 2007.

Success of Eastern Nile data sharing is technically comprehensive and historically significant, boding well for water resources cooperation

Scoping Study

Also seen as essential was a broad hydrological study, or *Scoping Study*, designed to give an independent first picture of what might be termed the available ‘development space’ for JMP1 and, in so doing, to give a broad guide as to the most promising sub-basins for development.

The Scoping Study was prepared by a small team of international consultants, commissioned by the World Bank. *It does not represent the views of any riparian country or of the World Bank*. It does, however, provide strategic insights of an independent team on the interwoven physical behaviour of the Eastern Nile River system, characterizing its responses to potential future uses of shared water resources and infrastructure development. Based on existing information and available tools, the report is the first serious attempt to explore the Eastern Nile as a river system shared by three countries and to identify both the physical potential of the river to yield opportunities for cooperative development and the risks of cooperation and non-cooperation. It provides a base of information for further riparian consultation and project selection, and should be read alongside other studies underway in the Eastern Nile.

Findings of the draft Scoping Study were presented to the three RWG meetings and were extensively examined and discussed, in addition to consultants visits and briefings with the national offices and briefings with the Ministers of water in the three countries. The key findings of the scoping study have also been presented to ENCOM/ENSAPT meetings and are summarised in this report at section 6.1.

The Scoping Study is the first significant report that examines in a holistic one-system fashion, potential development and its hydrological effects on shared water resources of the Eastern Nile

Thematic and Other Studies

Thematic studies on *Financing and Implementation Arrangements* and on *Institutional and Broad Legal Considerations* have been drafted. Early drafts of each of these studies were presented to and discussed by the Regional Working Group. Further institutional and financing options studies await more specific and quantified identification of the elements of JMP1. Thematic studies on JMP economics will also eventually require drafting as will further studies on benefit sharing.

Cooperative Regional Assessments are progressing as part of sectoral, regional assessment in the power trade, watershed management, irrigation and drainage, and flood preparedness projects as part of the Integrated Development of the Eastern Nile, including the Eastern Nile Planning model. These assessments will form a critical source of information for JMP planning.

In addition, feasibility and pre-feasibility studies for a number of major irrigation and power projects are proceeding within relevant national agencies. These, likewise, form a critical source of information for JMP planning.

Studies to aid JMP planning and to identify potential financing models and institutional needs and legal considerations are advanced

4.3 INSTITUTIONAL STRENGTHENING AND DEVELOPMENT

Apart from the clearly necessary establishment and strengthening of institutional capacity and multi-disciplinary teams during the Launch Phase, a crucial activity has been the identification of institutional strengthening and development needed to carry JMP1 into the detailed Identification Phase. Alongside the establishment of ENTRO and the Working Group and associated reference groups previously referred to, a specific goal has been to achieve legal status for relevant EN institutions to enable their effective functioning in all three EN countries. ENTRO has arranged a Headquarters Agreement with Ethiopian Government and has initiated a process to acquire legal status in both Egypt and Sudan. The possibility of establishing ENTRO sub-offices in Egypt and Sudan is also being examined both for effectiveness, visibility and to promote cooperation and a shared vision.

The three fundamental institutions of ENSAP – ENCOM at the political level, ENSAPT at the senior official level, and ENTRO at the technical secretariat level – have continued to flourish and grow in strength through the discussion and consultations associated with increasingly specific planning for joint multipurpose development. To date, ENTRO has absorbed most of the JMP Launch Phase activities within its small, existing staff and this has led to some constraints due to workload. JMP1 will be large by any standards, potentially costing some billions of dollars. Consequently, ENTRO has identified the need for establishment of a small but highly-skilled group dedicated to JMP, and with access to international resources, so as to enable progress beyond the Launch Phase to occur at the rates desired by ENCOM and as expressed by the JMP Regional Parliamentary Committee.

JMP cannot progress further without establishing a dedicated, highly-skilled group to oversight specific studies, planning and analysis

4.4 RELATED ACTIVITIES AND STUDIES

Eastern Nile Planning Model

Although it is not a specific JMP Launch Phase project, the Eastern Nile Planning Model will be fundamental to progress of JMP1 and comprises Knowledge Base Development, a Modelling System, and Institutional and Human Capacity Building. The project preparation phase was completed and is ready for implementation. The project is closely tied to and is being developed in complete synergy with the overall Nile Basin Water Resources Planning and Management project, particularly the Decision Support System component which will enable further enhanced analysis of the type undertaken in the JMP Scoping Study.

Power Trade Study

The financing study shows clearly that viability of the JMP1 anchor project, the multipurpose dam and hydropower complex, rests squarely on power trade. The power trade study is therefore critical to JMP1 as it deals with both trade and with studies of inter-connection of transmission systems which will play a vital role in the success of JMP1.

Watershed Management

At the end of 2007 the Watershed Management project reached a significant milestone – the successful completion of a Cooperative Regional Assessment. This is not only an achievement in regional cooperation that many thought impossible, but has demonstrated the wide nature of benefits from tackling watershed management in a regionally-planned manner. This will form a vital part of the package of investments represented by JMP1 and, more specifically, is critical to managing reservoir sedimentation.

Linkages with Shared Vision Program

In addition to its role in fostering trust and building capacity, the NBI Shared Vision Program (SVP) is developing the building blocks for integrated water resources management (IWRM) in the Nile Basin. Most of the SVP projects are vital to JMP and linkages are therefore being created to ensure success of JMP.

4.5 JMP ACHIEVEMENTS

The JMP Launch Phase has produced a series of what might be termed ‘socio-political’ achievements in Eastern Nile development cooperation and collective commitment to common goals. From the initial impetus of the enlightened Nile Basin Initiative, the Water Ministers of the Eastern Nile have demonstrated with their instruction to launch JMP a clear belief in the virtues of working together to achieve something that could not be achieved by working alone. There are many indications that this start is having a growing and cumulative effect.

Emerging convergence: There is almost complete concurrence among EN technical, legislative and political/executive bodies that raising EN cooperation to the level envisaged for JMP is a goal worthy of pursuit. In fact, in August 2007, the Regional Parliamentary Committee, formed for consultation on JMP matters, called in clear terms for an acceleration of cooperation and a scaling-up of coordination and joint action. This is a landmark in joint regional commitment.

Growing cooperation: Through the period of the JMP Launch Phase it has become apparent that cooperation has been enhanced by the experience of joint work on JMP, evidenced most

clearly by the historically significant data-sharing that has made the *One System Inventory* of regional information possible. Cooperation is breeding cooperation and creating confidence that joint approaches to water resources management are constructive and effective.

Consensus on JMP: Increasingly, concurrence is also building among key stakeholders on the major outlines of the JMP framework, including its goal, development objectives and outputs, stated earlier. This began with the ministerially supported Regional Working Group arriving at a firm consensus on the nature and likely components of a JMP1. That is, a coordinated program of investments in a multipurpose storage with a hydropower facility and regional transmission system; watershed management; irrigation modernization, reform and development in selected areas; ancillary investments to leverage growth; supported and managed by appropriate transboundary institutions.

However, these achievements have not stood alone, but have produced concrete findings of technical, financial and institutional significance to JMP.

5. MATTERS OF EMERGING CONSENSUS

There is an increasing consensus among the well-informed that there is recognised, significant merit in the regional cooperative initiative encapsulated by ENSAP and by the wider NBI. The existence of the Nile Discourse shows that civil society views the cooperative management and development of the shared resources of the Basin as worthy of pursuit and that civil society wishes to engage in the process.

More particularly, there is further consensus at high levels, as illustrated by the August 2007 communiqué of the JMP Regional Parliamentary Committee (summarised at the end of this section), that the concept of an Eastern Nile Joint Multipurpose Program is of particular merit and carries significant potential benefits to the peoples of the region.

The JMP Regional Working Group has reached consensus on a number of key matters: The *specific definition* of a JMP has been agreed in terms of its goal, development objective and key outputs, and is shown in the JMP Framework in Figure 1 on page 4. The Goal is:

Transformational and sustainable socio-economic development, economic integration and stability achieved in the Eastern Nile region.

The Development Objective is: *Undertake cooperative and sustainable development and management of shared Blue/Main Nile water resources.*

Key Performance Indicators for this Development Objective are:

- Increased access to hydropower
- Improved management and productivity of watersheds
- Productive agricultural use of water resources
- Water conservation improved
- Flood/drought preparedness improved
- Effective joint Eastern Nile institutions established

The five Key Outputs of the JMP are agreed as:

- Trans-boundary institutions established and foundations for long-term regional cooperation and integration put in place
- Regional multipurpose storage and power systems infrastructure developed (linking Eastern Nile countries together)
- Watershed and floodplain management improved (in priority catchments)

- Irrigation modernisation, reform and development program (implemented in selected areas)
- Essential related investments influenced (e.g. transport, rural electrification, navigation, fisheries, etc.)

As noted, there is consensus of the RWG on the nature and likely components of JMP1 which is proposed as a coordinated program of investments in linked river and power infrastructure. (e.g. multi-multipurpose storage, regional transmission system); watershed management; irrigation modernization and reform; and appropriate trans-boundary institutions. The RWG believes this will generate critical ancillary investments to leverage growth and would ensure the sustainable development & management of shared Blue/Main Nile resources.

Most specifically, and most importantly from the point of view of the next steps and the planned Identification Phase, discussions among EN countries and conclusions from the almost-completed Scoping Study key messages (Annex 3) indicate that the best opportunities for such JMP1 regional investments are in the Blue Nile/Main Nile sub-basin.

JMP Regional Parliamentary Committee

The Regional Parliamentarian Committee (RPC) seeks to strengthen ties and cooperation among the EN parliaments on issues pertaining to the cooperative development of the Nile resources in general, and ENTRO and JMP in particular. Key concepts and messages expressed by the JMP-RPC in their communiqué of August 2007 are summarised below, whilst the full text is available at Annex 2.

The JMP RPC had two clear messages. Firstly, the Committee is highly committed to poverty alleviation and environmental sustainability and consider their involvement in JMP as vital from the outset in order that the ‘voice of the people’ is well represented. The Committee supports and encourages cooperation and scaled-up coordination and joint action as essential tools to collectively develop resources and to minimise threats and maximise benefits. The matter of promoting cross-border investments and creating an enabling environment and exploring financing modalities also received attention.

Secondly, the Committee emphasises the need to inform populations about sustainable resource management and to create an outreach that enlightens young people in particular about shared resources and the need for regional cooperation. Along with knowledge and awareness should go genuine involvement of civil society and local communities in water development and management in ways that create ownership of the process.

6. FINDINGS – A SPECIFIC MODEL FOR JMP1

A series of key findings and messages from studies, working papers, analytical work, discussions and consultations have emerged and form a strong background to the shaping of JMP1 and to guidance of future decisions on the eventually selected multipurpose project and its elements. A brief, high-level summary of the most important findings and areas of consensus among stakeholders is tabulated below, whilst more detailed summaries are provided in sections 6.1 and 6.2. The central subject of consensus is of course agreement on the generic elements of JMP1. This is shown both in the following tabulation and overall summary below and in more detail section 6.3 – A Consensus Model of JMP1.

The following is an abridged summary of some key findings. In brief, JMP, despite anticipated complexities and challenges, is emerging as a worthwhile and viable concept for the Eastern Nile countries and their economic and social future.

Composition of JMP1	<ul style="list-style-type: none"> • Consensus among key stakeholders is that JMP1 should comprise a multipurpose dam and reservoir with associated hydropower facilities including transmission system, together with reservoir watershed management; regional ‘hotspots’; floodplain management; irrigation enhancement; selected regional watershed management for livelihoods and sustainability; and associated regional institutions.
Potential Location of JMP1	<ul style="list-style-type: none"> • Though the long term JMP is envisioned to include investment in all sub-basins, the Blue Nile/Main Nile sub-basin offers a potential development opportunities compared to other EN sub-basins.
Water Resources and Hydrology	<ul style="list-style-type: none"> • There are sufficient water resources available to support the envisaged JMP1 without impacting on the Eastern Nile countries. • There are significant opportunities to improve water efficiency/ productivity within the Eastern Nile region.
Watershed Management	<ul style="list-style-type: none"> • Management of degraded watershed (enhanced agriculture, reduced poverty, improved livelihoods) is key to reducing sediment transfer and protecting reservoirs • Potential benefits of watershed management are identified that accrue beyond national borders at regional level and global level (public goods) • Fast track projects to show tangible benefits from cooperation on the ground have been prepared and implementation ready • Profiles of 13 first round follow-on projects were developed.
Power Trade	<ul style="list-style-type: none"> • The study demonstrated there is a significant global/multipurpose benefit for Egypt, Ethiopia and Sudan to establish power trade among their power systems • Options of power exchange have been studied and recommended interconnection scheme is 1200 MW capacity to Sudan and 2000 MW capacity to Egypt. • The project would create short-term improvements in Ethiopia’s power export revenue and long-term power use efficiency improvements in the Nile basin. In addition, savings in fossil fuels consumption and reduction CO2 emissions will be realized by Egypt and Sudan • The proposed interconnection would be economically characterized by very good profitability, a short payback period and a high benefit to cost ratio
Financing JMP1 Anchor Project	<ul style="list-style-type: none"> • Availability of public funds is likely to be limited and partnership with private financing (debt/equity) will almost certainly be required. • Financial viability of the project rests largely on its power benefits as electricity is the benefit that can be easily monetised. A power trade framework/agreement must precede

investment.

- Risks of the project are large, leading to the conclusion that some elements (most likely the dam) will need to be a public venture. The power complex may be the most suitable for development by the private sector.
- Creation of an enabling environment is critical. That is, a positive business environment conducive to business viability.

Institutional Considerations

- Some form of Eastern Nile river basin organisation will be required to be formally established with legal identity and powers to manage public interest matters, especially related to water operations.
- One or more legal agreements among Eastern Nile countries are likely to be needed to define and give legal foundation to areas of cooperation and development including construction and operations and maintenance.
- Institutional matters will be strongly influenced by ownership of the anchor project – joint (all 3 countries) or national.

Benefit Sharing

- Benefit sharing provides an equity-focussed conceptual framework for project identification and preparation.

6.1 KEY FINDINGS FROM JMP LAUNCH STUDIES

Key findings of studies conducted as part of the JMP launch phase are summarized in more detail below, whilst full reports will be compiled and annexed to the JMP launch phase final document.

Scoping Study

The following findings are those of the independent consultants. Beyond the broad emerging consensus noted in Section 5, their findings are still open to study and refinement, much of which will be made possible by the ENPM and NBI Water Resource Planning and Management project (DSS). Further detailed findings are included in Annex 4 and in the complete Scoping Study report indexed in the Bibliography.

In analysing the most promising sub-basin for a first set of investments along the lines of those of the broad JMP concept, the consultants found that regulation and canalization in the Baro-Akobo-Sobat sub-basin did not greatly enhance downstream flows and required infrastructure with challenging environmental and social dimensions. The Tekeze system although suitable for a series of small-scale developments, could not provide an anchor project of the scale envisaged for JMP1. The study showed however that the hydrology and topography of the Blue Nile/Main Nile provided a hydrologically viable opportunity for large hydropower development and with apparently small and manageable environmental and social impacts. Significant water savings opportunities were identified in the region and, in fact, much of the additional water consumption to enable development would come from a reduction in evaporation losses and spills from existing infrastructure.

The overall conclusion is that there are sufficient water resources available to support the development envisaged in a first JMP without impacting on Egypt, Ethiopia and Sudan's stated water requirements. The study emphasised the need for regional cooperation and appropriate institutions to support such a development and noted the imperative for a mutually acceptable power trade agreement or other equivalent means of monetising benefits.

Financing Options for the Anchor Project

The following is an overview of financing considerations for the envisaged JMP1 anchor project (Dam and hydropower complex in the Blue- Nile/Main Nile sub-basin). A more detailed summary is included at Annex 5, whilst full reports will be compiled and annexed to the JMP launch phase final document.

The Anchor Project is likely to have an all-up financing requirement of about US\$4 billion if transmission to Aswan is included. It is a large amount for a water project in the developing world, which makes it comparable to the Lesotho Highlands water transfer project in Southern Africa. There are many similarities with the Lesotho project from which lessons can be learned but perhaps the most important one is that financial planning started early and ran parallel with the technical studies from the outset.

Preliminary analysis suggests that it is unlikely that the whole Anchor Project will be bankable in the private sector. However the power complex looks as if it will be financially viable and, provided the risks can be handled, it should prove to be bankable. However it might depend upon which of the two projects is finally selected, as their characteristics are different. In particular, Mandaya produces more power and is probably less risky, but the costs are higher than Karadobi.

The dam and ancillary works create many economic benefits from flow regulation, but it is difficult to translate these into a regular revenue stream. The economic viability of the dam is strong, but its direct financial returns are weak if power is excluded. The risks associated with the construction of such a large dam make it an unattractive proposition for a private company, and consequently it will almost certainly have to be developed in the public sector. However this should not totally preclude the use of private finance if the project is structured as a commercially accountable parastatal company with the right guarantees in place.

The Power Trade Study shows that a transmission line interconnecting the three EN States should be financially viable as a project in its own right. Although it could be a candidate for a private BOOT-type concession, the risks are high and it is unlikely that it would be acceptable to place such a strategically important asset in the hands of a private company which might be foreign controlled. Therefore the regional grid could be developed and owned by the utility companies, as a separate undertaking from the Anchor Project.

Institutional and Broad Legal Considerations

The following overview of institutional and legal matters is accompanied by a more detailed summary included at Annex 6 whilst full reports will be compiled and annexed to the JMP launch phase final document.

Institutional considerations cover two broad areas – the commercial or quasi-commercial institutional requirements for the construction and operation of the anchor project, and complementary institutional requirements to manage matters of public interest in a multi-country environment. The first set of institutions will be heavily dependent on the adopted financing models. Financing studies are indicating broadly that power transmission might be separately viable as a joint venture of the national power utilities, the power generation complex could well attract private investment and be managed by some form of public-private partnership or similar, whilst the dam is likely to remain as a public (government) venture because of the nature of risks involved and the difficulties of monetising benefits. In other words, a number of new, joint or other institutions specifically associated with the anchor project can be anticipated.

The second set of institutions comprises those associated with public interest, in this case largely represented by the shared water resources. Some form of joint water commission can be anticipated to oversight transboundary aspects of river flows associated with dam operations and the like. An important set of public institutions already exists of course in the form of ENCOM, together with its advisory body and executive secretariat. However, these have other broader functions and are not necessarily appropriate to take on the more-focused and specific tasks likely to be associated with actual management of the anchor project.

All institutions will require legal robustness both to serve the public interest and to create an environment conducive to investment. This latter requires the establishment of high levels of certainty, thus producing acceptable levels of commercial risk. In addition, it is expected that one or more legal agreements between the eastern Nile countries are likely to be needed to define and to give legal foundation to areas of cooperation.

Benefit Sharing Approach to Project Conceptualisation & Design

The following is taken from a paper prepared at the request of the Eastern Nile Technical Regional Office (ENTRO) for the Regional Working Group meeting held May 31-June 2, 2006 in Alexandria, Egypt. It offers a theoretical framework for project conceptualization and design applying a benefit sharing approach.

The key messages were:

- Benefits sharing provides an equity-focused conceptual framework for project identification and preparation
- The ‘lens’ of benefit sharing can be used to help identify anchor investments and potential complementary/associated investments that will yield a range of benefits that can be equitably shared
- Benefit sharing can also be used to explore financial and institutional structures that will ensure equitable outcomes
- Fair distribution of benefits among all stakeholders and robust mechanisms for benefit sharing are essential for sustainability

6.2 RELEVANT ENSAP STUDIES – KEY FINDINGS

Whilst there is a wealth of information being generated by other ENSAP projects, two in particular are worthy of mention as being highly relevant to JMP.

Watershed Management – Cooperative Regional Assessment – For the first time in history the EN countries have worked together to better understand regional watershed systems (biophysics and people), for better planning management and development. The information gained through the processes described below will be of immense value to JMP.

The first stage of the process was to develop a common understanding of the available baseline information, existing studies on the Basin, carry out a stakeholder analysis and clarify the objectives and scope of the work, develop an approach to the methodology and identify the main elements of the assessment. There followed the in-country and trans-boundary analysis: first at the national level for the three countries and the results were consolidated into four sub-basin analyses to gain a common understanding of the four sub-basins as systems.

The trans-boundary analysis provided a “without borders” view of the watershed systems and associated livelihoods. Then distributive analysis re-inserted borders to analyze the distribution of costs and benefits that would accrue to each country from the proposed

watershed management interventions. In addition, potential “public good” benefits were identified: that is benefits that accrue beyond the national borders at regional and global level. The cooperative mechanisms analysis identified the various levels of cooperation that would be required to implement the various interventions, and undertook an analysis of the institutional implications of the various watershed management opportunities that had been identified in the trans-boundary and the distributive analysis.

The benefits of integrated watershed management are therefore identified firstly at the household and community level, and then at the national level (within the sub-basin), the sub-basin level and then at regional and finally global levels: **At the national level:** a proportionally greater impact will be achieved in reducing the numbers of households living below the poverty line by targeting the traditional agricultural sector rather than the commercial agricultural sector. **At regional level:** reduced erosion in the Ethiopian Highlands and sediment loads in the Abbay-Blue Nile and Tekeze-Atbara river systems will reduce downstream costs of dredging power intakes, irrigation canals and the loss of power generating potential due to the need for reservoir flushing. **At the global level:** there are a number of opportunities for increasing the sequestration of carbon dioxide and for conserving genetic, species and habitat biodiversity. The opportunities for carbon sequestration are particularly substantial in the area of increasing soil carbon – a hitherto neglected area. Soil carbon increases substantially under well managed or enclosed pastures and rangeland.

Drawing on the previous analyses a long-term program of watershed management activities was drawn up in the form of a project implementation plan. Profiles of thirteen first round follow-on projects were developed. Finally, based on all the analyses a short summary was provided of important watershed management considerations and linkages to be considered in the development of a multi-purpose program.

Power Trade Study - This is a highly technical area but, given that the JMP1 anchor project will depend on sales of hydroelectricity for its financial viability and that the possible transmission and inter-connection infrastructure may cost as much as one-quarter of the entire JMP1 anchor investment, investigations and conclusions from the power trade studies are crucial to evaluating options for JMP1. Already, the Eastern Nile Power Trade Study has concluded that there would be significant benefits for all three EN countries if their power systems were inter-connected.

Additionally, the findings suggest that there is a case for building the regional interconnection on its own merits, in which case it would be self-financing and not part of the anchor project. This would clearly assist financing of the JMP1 anchor project. These and similar emerging findings will have a significant bearing on selection of JMP1 and on its viability and financing. The key findings from the power trade could be summarized as follows:

- The study demonstrated there is a significant global/multipurpose benefit for Egypt, Ethiopia and Sudan to establish power trade among their power systems
- Options of power exchange were studied and recommended interconnection scheme is 1200 MW capacity to Sudan and 2000 MW capacity to Egypt
- The project would create short-term improvements in Ethiopia’s power export revenue; and
 - Long-term power use efficiency improvements in the Nile basin.
 - In addition, save fossil fuels and reduce CO2 emissions in Egypt and Sudan
- The proposed interconnection would be economically characterized by very good profitability, a short payback period and a high benefit to cost ratio
- Pre-feasibility study of Mandaya and Border and Dal.

6.3 A CONSENSUS MODEL OF JMP1

The following summarises JMP1 as the consensus model achieved at the completion of the Launch Phase. The following Figure 3 shows how JMP1 forms the initial set of investments within the wider concepts of the Eastern Nile Joint Multipurpose Program.

First Package of Investments:

3 countries, regional and national-level projects,
Potential and focus on Blue Nile/Main Nile sub-basin

Objective:

Cooperative & sustainable development and management of
shared Blue-Main Nile water resources

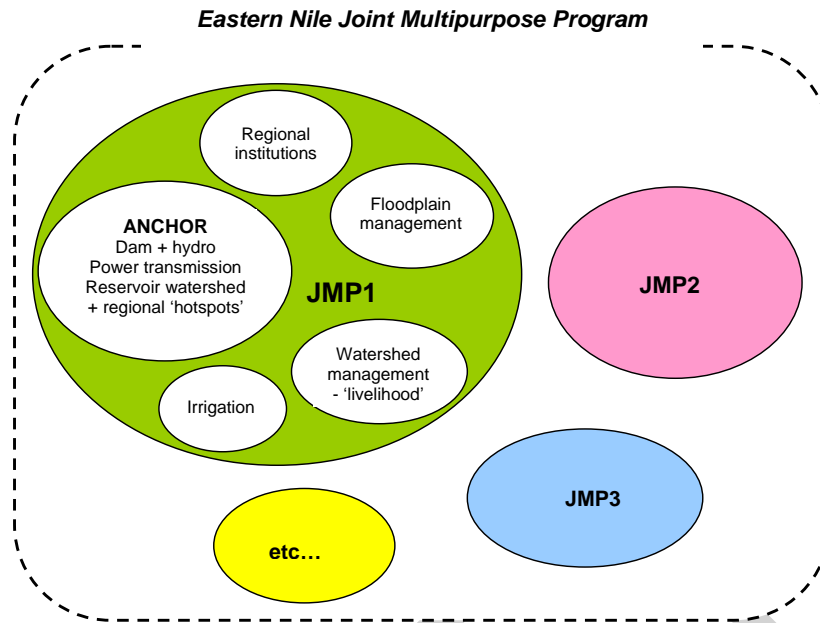
Long-term expected impacts

- Improved livelihoods and well being
- Accelerated economic growth and development
- Improved environmental sustainability
- Reduced vulnerability to hydrologic extremes and climate change
- Increased regional cooperation and integration

Likely Regional and National Projects

- Strengthening of transboundary institutions
- Anchor infrastructure:
 - Large multipurpose dam and hydropower complex on Blue Nile in Ethiopia
 - Regional transmission system
 - Directly related environmental and social management around reservoir and watershed management in critical regional hotspots.
- Agricultural water management:
 - Irrigation reform, modernization and (selected) development (projects likely to be agreed regionally and nationally implemented)
 - Productivity enhancing investments in rain-fed agriculture
- Watershed and floodplain management
 - Watershed management for improved livelihoods (likely upstream in Ethiopia)
 - Floodplain management and mitigation, possibly including riverbank stability & erosion control (likely downstream in Sudan)
- Ancillary growth-enhancing investments (e.g., navigation, roads, fisheries, etc)

Figure 3: The JMP Concept – Showing Generic Elements of JMP1



7. NEXT STEPS: MOVING TO THE DETAILED IDENTIFICATION PHASE

With preliminary studies and analyses largely completed and a RWG deliberations that JMP1 should comprise a multipurpose dam sited within the Blue Nile/Main Nile sub-basin, together with ancillary hydropower facilities and power transmission system, plus associated and complementary selected irrigation enhancement and watershed management, three broad Phases are needed to bring this concept through to projects on the ground. They are:

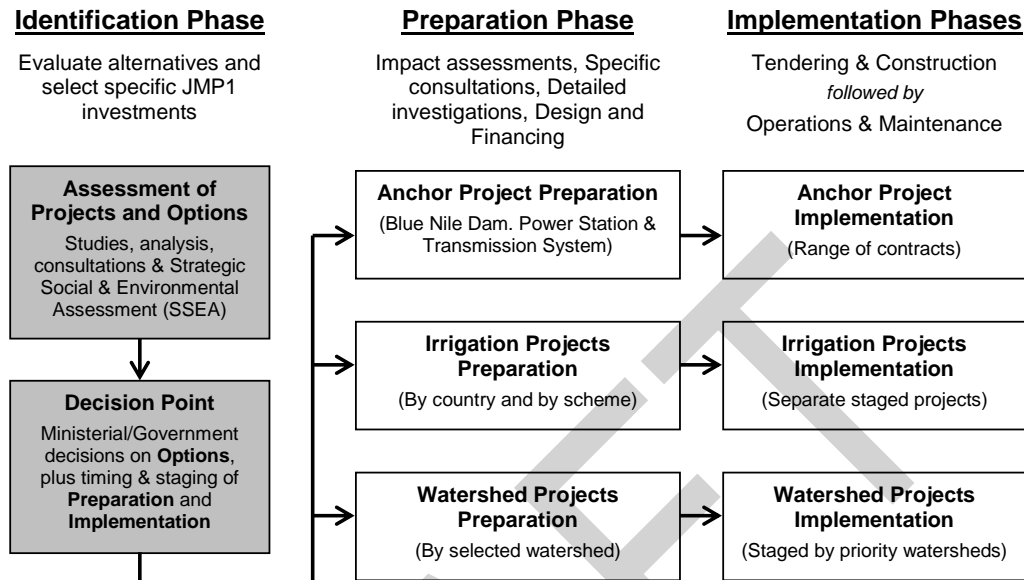
Identification Phase – In broad terms, the JMP1 Identification Phase comprises all that work critical to make a firm and specific selection of the project components of JMP1. This requires sufficient studies, analysis, consultations, economic studies, and Strategic Social and Environmental Assessment (SSEA) to adequately identify and confidently select the specific projects – location, configuration, magnitude, and preliminary cost estimates – that will comprise JMP1. It is anticipated that much of the following Phases will be ‘spun-off’ or divested from ENTRO to appropriate national or special-purpose multi-country institutions in accord with the NBI policy of subsidiarity.

Preparation Phase – Following the decision which formally identifies specific projects for JMP1, more detailed preparation is needed to establish their feasibility and to bring each project into a sufficient state of readiness to allow construction to be contemplated. This Preparation includes but not limited to: detailed site investigations, comprehensive social and environmental impact analysis, comprehensive consultations, formulation of mitigations (if any), benefit sharing analysis, and full costing and design. The Phase should also include development of a financing strategy. Actual securing of finance, further institutional and legal arrangements will need to be finalised and established.

Implementation Phase – This Phase – well into the future – involves any remaining completion of institutional arrangements including procurement/recruitment of project management services, any necessary final steps in the financing arrangements, then a tendering process followed by construction, commissioning and, eventually, operations and maintenance.

The general flow of activity through these three phases is illustrated below in Figure 4 where the elements of the phases are expanded to illustrate, in broad fashion, the steps leading from project identification through preparation to implementation.

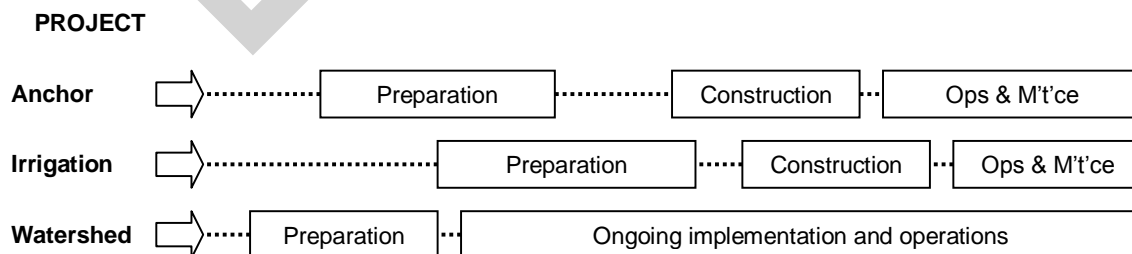
Figure 4: Identification and Preparation leading to Implementation



Of particular note, Figure 4 shows a ‘Decision Point’ at which EN countries will decide precisely which component projects will be included in JMP1 and how they will be programmed and timed. It might be noted that necessary ongoing institutional strengthening will be a feature of all phases.

It should also be noted that Preparation and Implementation Phases for each project are unlikely to be concurrent as implied in the simple figure above, but each will be programmed according to priorities of the Eastern Nile countries and to the realities of the complexity of the totality of JMP1 and the to inevitable delays and difficulties in matters such as project financing. Figure 5 below illustrates a more realistic sequencing, although still entirely speculative.

Figure 5: Illustrative JMP1 Projects Programming after Identification Phase



7.1 INSTITUTIONAL STRENGTHENING

This, in fact, is the very first action that will need to be taken. As noted, ENTRO has been stretched to its limits in bringing the JMP Launch Phase to practical completion. The Identification Phase is not possible without augmentation of existing resources accompanied

by targeted institutional strengthening. The institutional strengthening will be complementary to the overall NBI Institutional Strengthening Project (ISP) under consideration for commencement in July 2008.

It is proposed as part of the recommended Identification Phase (see next section 7.2) that a specific JMP Coordinator (Manager) and an associated skills group should be established within ENTRO as soon as possible. What is clear is that the scope of JMP1, which may exceed USD4 billion in total investments, will require world-class experts and skills to meet international standards in technical, financial and managerial aspects of what will be very large infrastructure projects by any measure. In addition to regional capacity, access to a range of consultants will be needed to develop international-standard advice on technical matters relating to dams and reservoirs, irrigation, power systems, catchment management, environmental and social mitigations, financing models, institutional options, legal requirements, and the like.

Whilst it is expected that some of this expertise will be contracted-in, there is a challenge for EN countries to build institutions and counterpart management agencies of adequate capacity. Ongoing capacity building in association with the NBI ISP at regional and relevant national line agency levels will be required from the outset.

7.2 IDENTIFICATION PHASE

A formal proposal for an Identification Phase costing over USD 9.15 million and of two years duration is prepared. The proposal was presented to ENCOM/ENSAPT and the NBTF C and the latter agreed to secure the needed fund. The JMP ID phase will follow immediately the JMP Launch Phase.

The draft objective for the JMP1 Identification Phase is:

To identify options for the package of investments that will comprise JMP1, and to describe and evaluate and the options to a degree sufficient to allow ENCOM to make an informed selection of the specific component projects of JMP1 and to authorise preparation of these projects.

The JMP Identification Phase is envisaged as having 3 components:

- Information Generation
- Regional Analysis and Comparative Studies
- Support Activities (including the crucial institutional strengthening)

The overall process involves bringing together all available information, then carrying out site-specific analysis such as: specific economic analyses and relevant environmental and social studies, including linkages and complementarities with any necessary additional studies such as specific pre-feasibility and feasibility studies. This will need to be accompanied by relevant stakeholder analyses and consultations. Options are then assessed, using an appropriate social, environmental and economic assessment methodology which, in effect, allows evaluation of options according to selected criteria, thus facilitating informed decision making.

Information Generation – There already exists through outputs of the Launch Phase plus the range of other ENSAP projects a large inventory of information (refer to Section 4.2 – JMP Information & Analysis). This can be supplemented by other Information – data and reports from national line agencies, consultancies, NBI/SVP, development partners and so on. In addition, planning has revealed the need to generate further river flow and sedimentation information. Other information required to assist with project selection includes additional

pre-feasibility studies, project sequencing studies and economic analysis of the anchor project.

Project Analysis and Comparative Studies – In addition to the key social, environmental and economic assessments, other studies will include: watershed and flood plain studies (reservoir and regional ‘hotspots’), preliminary financing strategies and institutional studies, and the program economics and identification of non-anchor projects.

Support Activities – These are in two groups. Firstly, a significant activity will be *Consultation and Communication*. Consultations, as well as involving groups and bodies currently consulted³ will need to involve relevant and appropriate project and site-specific groups. The Blue Nile/Main Nile multipurpose reservoir in particular will need specific consultations with directly affected groups and communities. A strategic communication and consultation strategy, informed by the NBI Shared Vision Program (SVP) Confidence Building and Stakeholder Involvement (CBSI) project will be required. These communications and consultations will need to be accompanied by specific stakeholder analyses, again to inform the decision-making process for JMP1 options.

The second support activity is *ENTRO Strengthening*. Rapid functional analysis of ENTRO quickly establishes that its resources are already well stretched by the current workload. The intensity and the nature of work required for the JMP1 Identification Phase raises this workload significantly. To complete this second phase within the planned two-year timeframe, some dedicated additional resources are required. At a minimum, ENTRO will require a dedicated project manager with appropriate technical background and extensive experience, plus an economist/financial specialist, a water resources engineer/planner, and environmental-social scientist, and a junior professional. This team will also require access to relevant short-term consultants at both individual and firm levels. Additionally, there will be associated training, equipment, and office expenses.

7.3 JMP PREPARATION PHASE

The Preparation Phase comprises the more detailed studies and preparatory activities following a specific selection of the anchor project, together with at least a significant narrowing of available options for the complementary elements of the total JMP1 investment package. These will include a complete feasibility study for the selected reservoir and power complex including transmission system, plus detailed studies of the selected sites for irrigation enhancement and watershed management, sufficient to allow investment decisions.

With the reservoir and power complex better defined and quantified, it becomes possible to initiate the necessary specific studies of financing models and implementation options, including the detailed and specific institutional and legal studies. More comprehensive hydrological, social and environmental studies will also be needed to consider the combined operations of existing reservoirs and the proposed JMP1 multipurpose reservoirs. This will require some considerations of water policy matters also.

At the point of initiating financial resource mobilisation it will be necessary to set up formal, independent expert review panels in order to satisfy risk management requirements of potential donors and financiers. The minimum matters to be referred for independent review include overall feasibility, including economic, environmental and social aspects, and engineering soundness of the proposed reservoir and power complex.

³ Eastern Nile Council of Ministers, JMP Regional Parliamentary Committee, JMP Regional Working Group, National reference Groups et al.

8. COOPERATIVE DIRECTIONS AND BROAD CONCLUSIONS

8.1 COOPERATIVE DIRECTIONS

It is important to choose multipurpose regional investments that have obvious benefits to all EN countries with minimum regret (from environmental, social, economic, or future opportunity foreclosure perspectives). Discussions among EN countries and the completed Scoping Study conducted over the past two years indicate that the best opportunities for such JMP1 regional multipurpose investments appear to be in the Blue Nile/Main Nile sub-basin. This narrows down the spatial area to focus upon and expand the analysis and consultation efforts to search for credible investment alternatives for regional JMP1 investments. That is, through the assessments and comparative evaluations proposed in the JMP1 Identification Phase. However, over the long-term, the JMP is envisioned to include cooperative sets of joint investments in all sub-basins of the Eastern Nile - *Abbay-Blue Nile, Main Nile, Tekeze-Setit-Atbara*, and the *Baro-Akobo-Sobat*. This will be supported by the continuous linkages and synergies between JMP and other ENSAP projects (ongoing & future).

The bio-physical benefits of such regional investments in the Blue Nile/Main Nile sub-basin (e.g. increased hydropower generation, flood control benefits, improved irrigation, sediment reduction, potential improvement in reliability downstream through cooperative management, and improved navigation) are expected to yield substantial development benefits for regional growth, trade, and poverty alleviation. Through the JMP Launch Phase it has been apparent that all stakeholders consulted are strongly agreeing that regional cooperation is essential to obtain the benefits of such transformational investments as well as to manage the evolving risks on the Eastern Nile (e.g. droughts, floods, climate change). This would require the consideration of such investments from a multipurpose regional perspective and not a single-country, single-purpose viewpoint. Preparation studies (e.g. feasibility studies) should maintain this broader perspective, facilitated by regional inputs and analysis. In addition to these focused strategic assessments, critical preparation/feasibility studies, and stakeholder consultations, appropriate regional and in-country institutional strengthening would be required to facilitate the preparation and implementation of JMP1 activities.

8.2 BROAD CONCLUSIONS

Accordingly, in relation to the first set of investments of the proposed Eastern Nile Joint Multipurpose Program, the following are broad conclusions:

10. Progress was made on various elements of the JMP Launch Phase, including JMP Consultation, JMP Information & Analysis, Institutional Strengthening and Development, together with the key messages from studies, consultations and discussions, along with the agreed views of the JMP Regional Working Group and key messages and call from JMP Regional Parliamentary Committee;
11. The JMP Framework was articulated, as detailed in Figure 1 of this report, comprising Goal, Development Objective, related Performance Indicators, and five Outputs:
 - Trans-boundary institutions established and foundations for long-term regional cooperation and integration put in place
 - Regional multipurpose storage and power systems infrastructure developed (linking Eastern Nile countries together)
 - Watershed and floodplain management improved (in priority catchments)
 - Irrigation rehabilitation, modernisation, reform and development program (implemented in selected areas)
 - Essential related investments influenced (e.g. transport, rural electrification, navigation, fisheries, etc.);

12. The first set of investments of the Joint Multipurpose Program, referred to as JMP1 and intended to demonstrate the benefits of a cooperative approach to the management and development of the Eastern Nile, as comprising a complementary and coherent regional package, likely including: transboundary institution, a multipurpose reservoir with hydropower facilities; regional power transmission system; irrigation modernization, reform and expansion in selected areas; watershed and floodplain management in priority areas; and, promotion of essential related investments;
13. Though the long term JMP is envisioned to include investment in all sub-basins, the Blue Nile/Main Nile sub-basin offers a potential for the first joint development compared to other EN sub-basins;
14. The arrangement of the Financing Package will require a high degree of cooperation between the EN Governments, including providing high level of support for the project in the form of guarantees, risk sharing and public equity. This work needs to be started in earnest as soon as the project is identified.
15. Institutional strengthening and capacity building is considered necessary as an ongoing feature of JMP and that a dedicated JMP Coordinator (Manager), technical specialists and consultants are considered necessary at ENTRO in order to allow JMP1 to proceed at a good pace, as well as strengthen the capacity in each of the EN countries' national offices. In addition to national and regional capacity, access to international experience (a range of consultants) will be needed to develop international-standard advice on technical matters relating to dams and reservoirs, irrigation, power systems, catchment management, environmental and social mitigations, financing models, institutional options, legal requirements, and the like;
16. ENTRO to build on the gains of the JMP launch phase and to progress into the JMP1 Identification Phase. The JMP1 Identification phase is come up with a minimum output, to identify a specific package of projects selected through a structured process of analysis and consultation that takes due note of the key messages outlined in Section 5 of this report, and which properly considers economic, environmental and social factors, and includes appropriate consultations. The projects are to be each identified and suitably quantified by size, site, costs and benefits. The proposal is to address poverty alleviation and environmental sustainability as key issues as noted by the Regional Parliamentary Committee;
17. ENTRO to build on the gains of the launch phase to proceed with a strategic communication and consultation strategy, informed by the NBI Shared Vision Program (SVP) Confidence Building and Stakeholder Involvement (CBSI) project, and which involves and coordinates the input of other stakeholders (including sector ministries, the private sector, and civil society) in the development of the multipurpose program and the first project;
18. ENTRO will take appropriate note of the communiqué headed 'Call for Accelerating Action on Eastern Nile Cooperation' issued by the JMP Regional Parliamentary Committee at Khartoum, Sudan, on August 13, 2007, and to take the requested actions regarding the growing impact of climate change, and to complete the second phase of the Study Tour through visits to Egypt and related international river basin experience.

TECHNICAL REPORTS & STUDIES THAT CAN BE ACCESSED

- JMP One System Inventory
- Scoping study
- Financial arrangements (thematic document)
- Institutional arrangements (thematic document)
- Senegal River Basin Knowledge Exchange Study Tour Report
- Regional Power Trade Study Executive Summary
- Hydropower Sites Pre-feasibility Studies
- Watershed CRA
- Report of Consultations
 - Communication strategy
 - Stakeholder analysis

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ANNEX 1 – TERMS OF REFERENCE FOR WORKING GROUPS

Name	JMP REGIONAL WORKING GROUP (JMP-RWG)
Mandate	<p>ENCOM and EN Power of Ministers (ENCOM 19, Feb 2005) have agreed to “<i>launch a first phase of identification of a major program of multipurpose joint development of the Eastern Nile.</i>” Specifically, ENCOM has instructed ENTSA/ENTRO “concentrate efforts on identifying and preparing a major initial project, within a broader multipurpose and development of the Eastern Nile,” and to “ensure good practice in economic, social and environmental analysis and consultation in project preparation.”</p> <p>Towards this end, ENTRO is initiating a series of activities to support the launch of the Joint Multipurpose Program (JMP). One of these activities is the formation of a JMP regional working group to provide a regional forum for discussions and to support ENTRO in successful completion of its work plan.</p>
Purpose	The JMP regional working group will provide a regional forum to discuss and contribute multi-sectoral perspectives on approaches and options for multipurpose development in the Eastern Nile.
Composition	<p>Given the multi-sectoral nature of the JMP, the regional working group will be composed of senior experts, lead by the ENSAPT team leader, representing a range of relevant sectors/ministries (7 per country). The proposed discipline and set-up is as follows:</p> <ul style="list-style-type: none"> ▪ Water (Chair, ENSAPT Team Leader) ▪ Power ▪ Agriculture ▪ Environment ▪ Socioeconomic/social development/poverty ▪ Finance ▪ JMP National Coordinator (Secretariat)
Roles & responsibilities	<ul style="list-style-type: none"> ▪ Provide a forum to discuss and assist in the identification of approaches and options for joint multipurpose development ▪ Assist in the development of a consultation and planning framework for the JMP ▪ Contribute detailed knowledge and experience to the JMP activities, and provide technical support to ENTRO ▪ Strengthen regional coordination and integration ▪ Serve as a liaison between ENTRO and national offices, as well as the national reference group ▪ Facilitate information sharing to support JMP activities ▪ Participate in regional and national meetings and workshops ▪ Provide review and constructive feedback on JMP reports, consultations and strategies
Qualifications	Senior experts with recognized technical expertise, broad understanding of policy context, and knowledge in project planning and implementation. It is the intent that a variety of ministries are represented.
Term	The JMP regional working group will support the launch of the JMP. During the launch stage, the appropriate institutional structures for project preparation will be determined.

Name	JMP NATIONAL REFERENCE GROUPS (JMP-NRG)
Mandate	<p>ENCOM and EN Power of Ministers (ENCOM 19, Feb 2005) have agreed to “launch a first phase of identification of a major program of multipurpose joint development of the Eastern Nile.” Specifically, ENCOM has instructed ENTSAPE/ENTRO “concentrate efforts on identifying and preparing a major initial project, within a broader multipurpose and development of the Eastern Nile,” and to “ensure good practice in economic, social and environmental analysis and consultation in project preparation.”</p> <p>Towards this end, ENTRO is initiating a series of activities to support the launch of the Joint Multipurpose Program (JMP). One of these activities is the formation of JMP national reference groups, in each EN Country, to provide national forums forum for discussion and to build broad based understanding of the benefits of cooperation.</p>
Purpose	The purpose of the JMP national reference groups is to provide national forums to discuss opportunities for joint multipurpose development in the Eastern Nile, and to build broad-based understanding of, and confidence and trust in the benefits of regional cooperation. In addition, the group will build ownership in the JMP process.
Composition	<p>Given the multi-sectoral nature of the JMP, the national reference groups should include broad representation from government, private sector, academia, and civil society/NGOs, as well as other NBI and ENSAP national representative. The composition of the national reference groups is to be determined at the national level; however, it is intended to reflect a diversity of sectors, such as:</p> <ul style="list-style-type: none"> ▪ Water ▪ Power/Energy ▪ Agriculture and Forestry ▪ Environment ▪ Socioeconomic/social development/poverty ▪ Finance ▪ Foreign Affairs and legal ▪ Health ▪ Legal/institutional development ▪ Tourism ▪ Transport ▪ Etc. <p>The national members of JMP regional working group will form the core of the national reference group. The JMP national coordinators will serve as the liaison between the national and regional working group, directly linked to ENTRO as well as secretariat for the national reference groups.</p>
Roles & responsibilities	<ul style="list-style-type: none"> ▪ Build national understanding and awareness of joint multipurpose opportunities and the benefits of cooperation in a regional context. ▪ Develop and maintain good communication on JMP activities at the national level. ▪ Support the Regional Working Group <ul style="list-style-type: none"> ○ Provide support on technical issues to the national JMP-RWG members ○ Provide information to the RWG as required ○ Identify relevant JMP issues that need to be discussed at the regional level. ▪ Liaise with national stakeholder groups and experts <ul style="list-style-type: none"> ○ Facilitate information sharing within/among the communities represented on the national reference groups, including national stakeholder groups and experts interested in sustainable development of joint multipurpose opportunities ○ Facilitate awareness building about JMP and the benefits of cooperation
Qualifications	Stakeholders from government, academia, civil society/NGOs, and other sectoral specialists with demonstrated interest in sustainable development of the Eastern Nile.
Term	The JMP national reference groups will support the launch of the JMP. During the launch stage, the appropriate institutional structures for project preparation will be determined.

ANNEX 2 – REGIONAL PARLIAMENTARY COMMITTEE

A Call for Accelerating Action on Eastern Nile Cooperation

Khartoum, Sudan, August 13, 2007

Upon the invitation of the Eastern Nile Technical Regional Office (ENTRO) and in cooperation of the Ministries responsible for Water Affairs of the Eastern Nile (EN) Countries, the Honorable delegation of the Joint Multipurpose Purpose Program (JMP) Regional Parliamentary Committee coming from Egypt, Ethiopia and Sudan, participated in the first part of a Study Tour to Ethiopia and Sudan that took place from 7-13 August 2007.

Having recognized the official statements by Excellencies from Ethiopia and Sudan:

- Honorable Speakers of Peoples Assemblies (Parliaments) who welcomed the participation of parliamentarian groups in the JMP process and their strong support to the Eastern Nile cooperation;
- Ministers responsible for Water Affairs;
- Ministers Responsible for Mines/Energy/Electricity;

Having been briefed on various thematic presentations on Nile water and related resources, electricity generation, transmission and power trade,

Having appreciated the development efforts, challenges of common concern to be addressed cooperatively and having explored opportunities for tapping the resource potentials for shared benefits,

Having deliberated on pertinent issues of the Joint Multipurpose Program, we members of the JMP Regional Parliamentary Committee of the Eastern Nile Countries:-

- Commend the achievements of the Ministries responsible for water and their joint institution, ENTRO on the progress made so far to achieve the Nile Basin Initiative (NBI), Eastern Nile Subsidiary Action Program (ENSAP) objectives;
- Recognize the importance of the Joint Multipurpose Program whose implementation demand high-level political commitment of the three countries; parliamentarians representing the voices, concerns and stakes of their respective broad constituencies, will have key roles in securing wider buy-in and legitimacy for any positive JMP-related decision in each country; and creating national and regional consciousness;
- Have acquired a shared understanding of the opportunities, constraints, and potentials of the sub-basins and appreciated the need for concerted effort to overcome the challenges facing the 180 million inhabitants of the region; realize that through regional, trans-boundary cooperation, we can achieve the objective of making a better future for our peoples: economic and regional integration, peace, security, prosperity and competitiveness in this increasingly globalizing world;
- Further acquired a deeper realization of the duties and roles expected of us as representatives of the peoples of Eastern Nile in facilitation of relevant legislations and building up of consensus to support Eastern Nile cooperation in general and ENSAP/JMP in particular; linking ENSAP/ENTRO and its project preparation, coordination and institutional capacity building activities with relevant parliamentary bodies and committees.

We finally call upon:-

Eastern Nile Governments

1. To expedite the attainment of legal status of ENTRO in Egypt and Sudan;
2. To take note that cooperative developments provide shared and enhanced benefits than unilateral actions and thus call for up-scaled coordination and joint action among the three sisterly countries to optimize the development and management of the shared Eastern Nile resources to lay the foundation for economic integration;
3. To enable ENTRO secure the required resources to guarantee sustainability and country ownership, particularly in covering operational costs and capacitating of the national NBI/ENSAP offices;
4. To realize that our populations in general, and the youth in particular, need to be enlightened and informed, as needed, about our shared Eastern Nile resources, and the need for regional cooperation to ensure their sustainable utilization and management;

Regional Parliamentary Committee

5. Having taken note of the progress made in the negotiation on the NBI legal framework, despite the complexity of the issues, to commit ourselves to have more briefing and to extend our support toward its successful conclusion and ratification;
6. To place emphasis on the need to strengthen the JMP-RPC to play sustained role in promoting and facilitating cooperation among our three countries;
7. To enhance linkage between the EN parliaments, the Ministries responsible for water, energy and other participating sectors of the three countries and the ENSAP Regional Office/ENTRO;

Ministries Responsible for Water

8. To continue their efforts in facilitating and realizing the cooperation;
9. To realize the complementary nature of the potentials of the natural and human resources in the three EN countries, and strengthen the cooperation towards optimal use of these resources for the benefit of the people.

Development Partners

10. Appreciating the support provided to the cooperation in the Nile Basin, and having regard of the complexity and large resources needed to implement the JMP, request the Development Partners to up-scale their support to implement cooperative investments.

Eastern Nile Technical Regional Office

11. Realizing and appreciating the concern about the growing climate change and the impact it will induce on our shared Eastern Nile resource base, we call on all stakeholders, including ENTRO, to create more awareness, plan and implement coping as well as mitigation measures.
12. To complete the second phase of the Study Tour through visits to Egypt concentrating on thematic areas and international practice in joint investments.

ANNEX 3 – SCOPING STUDY: KEY FINDINGS

The following findings are those of the independent consultants. Beyond the broad emerging consensus noted in Section 5.2, their findings are still open to study and refinement, much of which will be made possible by the ENPM and the NBI Water Resource Planning and Management project (DSS).

- There are sufficient water resources available to support the development envisaged in a first JMP without impacting on Egypt, Ethiopia & Sudan's stated water supply requirements.
- The Blue Nile/Main Nile provides the best opportunity with a large hydropower development at its core with small and manageable environmental and social impacts.
- Regional cooperation of the Eastern Nile is required to maximize the multipurpose opportunities that could be realized and to minimize risks. An appropriate set of institutions will be required to support this cooperation approach & maintain trust.
- An anchor investment in Blue Nile/Main Nile storage requires a mutually acceptable power trade framework/agreement.
- There are significant water saving opportunities within the Eastern Nile.
- Significantly enhanced agricultural production in the Ethiopian highlands is key to reducing sediment transfer to downstream water infrastructure, increasing food production and improving livelihoods.
- The Baro-Akobo-Sobat: regulation and canalization does not appear to provide significant increases in the volume of water to the White Nile. Environmental and social dimensions of major infrastructure mean that projects must proceed with great care in order to achieve sound development and to attract international finance.
- The Tekeze system offers many small-scale projects – none of the scale needed to be the anchor investment in a first Joint Multipurpose Program
- As consumption in the Eastern Nile approaches the estimated safe yield of the system, the Aswan high dam will operate close to its original designed levels, which is significantly lower than the current situation. It will also result in very few, if any, spills from the reservoirs.
- Additional water consumption to enable development comes from a reduction in evaporation losses at Aswan, a reduction of spills, and from actual flows in the Nile being slightly higher than assumed in the design.

ANNEX 4 – FINANCING OPTIONS FOR THE ANCHOR PROJECT: KEY FINDINGS

The key findings could be summarized as follows:

- The availability of public funds is likely to be limited, and therefore private financing in some form or another will almost certainly be required.
- No single prescriptive financing model can be applied. Financing options are highly site-specific and determined by the conditions surrounding each project.
- In this case the situation is complicated by the transboundary nature of the project, and the fact that some of the benefits will accrue beyond the country in which the project is located.
- A further complication is the fact that the financial circumstances of the three EN States are very different, with some States having access to funds that the others do not.
- It will therefore be necessary to establish an equitable financing arrangement that balances costs and benefits in a fully transparent manner, using commercial principles wherever possible.
- Private financing can come in the form of Equity or Debt. The private sector will be primarily concerned with Financial Viability and Risks, and will not invest unless it is satisfied on both counts.
- The financial viability of the project rests largely on its power benefits as electricity is the only benefit that can be readily monetised.
- However, the project is unlikely to be financially viable on its power benefits alone, and so it will be necessary to monetise the other (non-power) benefits arising from flow regulation.
- Work is needed to evaluate the non-power benefits, and the ways in which they might be harnessed to assist in the financing of the project. There are a number of possible options, but financing from the major development banks and other public sources will be required to underpin the private financing.
- The risks associated with the project are large, and some of them (particularly those relating to the construction of the dam) are likely to be unacceptable to the private sector. Although some risks can be mitigated by Guarantees, many risks will remain with the Owner.
- Construction risks are a major issue. It is very difficult to predict in advance the exact final cost and commissioning date of a project of this magnitude, where there are a lot of site-related uncertainties (geology, hydrology, access). Delays could be costly (>US\$1m/day).
- For the above reasons, the Anchor Project is unlikely to be bankable in its entirety in the private sector. The most probably model is one where it is developed by a publicly-owned parastatal SPV (Special Purpose Vehicle) company, operating on commercial lines with the backing of Sovereign guarantees. This model was used for the Lesotho Highlands project.
- Provided the publicly-owned company is able to provide an internationally acceptable security package, it should be able to access private debt. However this will mean backing Sovereign guarantees with international guarantees from the MDBs or similar agencies.
- The part of the project best suited for development by the private sector is the Power Complex. It might be structured as a sub-concession (in the form of a BOOT arrangement) under the main parastatal SPV Company. This would bring in private equity as well as debt, although only for about one-quarter of the overall cost.

- Under a situation where the Power Complex is a private concession, the public sector could still have a shareholding in the project company. It would be logical for the State-owned power utilities to be the vehicle for these public sector holdings.
- In principle the transmission line might be included in the BOOT concession for the Power Complex. However the private sector would probably not have much appetite due to the risks and the amount of equity needed, and it is arguably not in the interest of the EN governments to entrust such a strategically important asset to a private company.
- It would be preferable for the transmission line to be part of an overall regional inter-connection developed by the three power utilities. The Power Trade Study shows that interconnection would be financially viable, and that therefore the transmission should be self-financing. The Anchor project would then pay wheeling charges to deliver energy.
- Creation of an enabling environment is critical. That is, a positive business environment conducive to business viability. However, achieving this is complex in the case of projects involving several countries.
- Essential elements of the enabling environment include:
 - Transparent legal and regulatory framework.
 - Clear policy for private sector involvement.
 - Strong institutional and organisational framework.
- Questions of ownership and control need to be resolved at an early stage, as any SPV company has to be registered and operate under a specific jurisdiction. The exact nature of what is meant by 'joint' development will require resolution, especially in relation to the possible joint ownership of assets and the implications of joint financing.
- There is a lot of preparatory work to be undertaken on financing and implementation models before Ministers can be in a position to take any firm decisions. In particular it is necessary to:
 - Identify which of the two candidate projects currently under consideration (Mandaya or Karadobi) is preferred for first implementation.
 - Advance decisions on a Regional Grid to determine whether it is to be separate or part of the Anchor project.
 - Review the options for monetising all of the benefits, and quantify them as far as possible in financial terms.
 - Conduct an informed debate on the alternative financing models at Government and Regional level.
 - Raise the profile of the Anchor Project with prospective international (public sector) financing agencies including the main MDBs and Islamic funds.
- Finally it is necessary to strengthen the internal capacity of ENTRO in this area to provide continuity and a counterpart for external consultants working on financing and implementation arrangements.

ANNEX 5 – INSTITUTIONAL AND BROAD LEGAL CONSIDERATIONS - THEMATIC STUDY: KEY FINDINGS

The key findings could be summarized as follows:

- Some form of Eastern Nile river basin organisation will be required to be formally established with legal identity and powers to manage public interest matters, especially related to water operations.
- Basins where both the agreements on cooperation and the institutional roles are clearly detailed have a significantly better chance of achieving their vision.
- Donor support and investment is particularly affected by both the legal robustness and the competence of institutional arrangements.
- Sooner or later, one or more legal agreements between Eastern Nile countries are likely to be needed to define and give legal foundation to areas of cooperation.
- The IWRM doctrine of separation of regulatory functions and service or operation functions does not necessarily mean completely separate organisations. Mixed models are possible provided there is a clear, visible interface controlled by adequate instruments of obligation – operating licences or the like.
- Early discussion would be useful in order to formulate and clarify political and other preferences within the sub-basin countries.
- Mitigating environmental and social impacts after the event can be costly in both financial and political terms. Upfront agreements on sustainability, coupled with the creation of institutional and legal mechanisms to monitor and manage impacts, would generally be agreed to constitute a much better strategy.
- Such a strategy implies putting early effort into the creation of a transparent environmental regulatory capacity which takes into account transboundary matters in a legally effective manner.
- Public participation aspects of modern IWRM can be somewhat complex and demanding. In particular, the strategy to be adopted for watershed management elements of JMP1 can be expected to consume significant time and resources.
- At least some inter-government tensions can be minimised through sound, detailed communications strategies.
- A clear issue requiring debate is the matter of ‘joint’ versus ‘national’ ownership of major infrastructure.
- A second clear issue requiring debate, notwithstanding any augmentation of ENTRO for the identification and pre-feasibility phases of JMP1, is the nature of the ultimately needed institutions and legal arrangements for construction and subsequent operation of mainstem infrastructure.
- The above two issues will be heavily dependent on the adopted financing models which, in turn, cannot be defined more clearly until JMP1 itself is more clearly defined and its elements become more specific.

ANNEX 6 – SUMMARY OF CONSULTATIONS

Eastern Nile Technical Regional Office Joint Multipurpose Program

Summary Consultations November 2005 – January 2008

No	Stakeholder Group	Sectoral representation	Focus/Key issues	Venue/date	Participants	Remarks
1	JMP RWG Meeting I	Water, environment, power, socioeconomic, finance, agriculture, watershed,	JMP launch phase definition – goals, objectives; establishing a strong multidisciplinary RWG team; initial discussions to identify opportunities, options for joint action; concepts and approaches;	Addis Ababa, Feb. 1-3, 2006	RWG members (21); Partners (5) Consultants (3)	Partial tour/viewing of the Blue Nile Gorge
2	JMP RWG Meeting II	Water, power, environment, finance, agriculture, watershed, socioeconomic	Advancing the shared information base; scenarios for joint development; exploring institutional, financing, implementation arrangements; good practice for project preparation	Alexandria, May 29-June 1, 2006	RWG members (21); partners (5); consultants (3)	
3.	JMP RWG Meeting III	As above	RWG members conduct a study	Dakar, Nov 8-9,	As above	Study tour to

			tour of the Senegal River Basin to draw lessons of experience for EN JMP, with focus on institutional and legal aspects; participatory process and benefit sharing; financing and implementation; Learning methods: OMVS presentations; roundtable discussions; site visits; report writing	2006		Senegal River Basin, OMVS
5	NRG Meeting Sudan	Members of RWG	Briefing and Consultation on JMP	Khartoum	Members from the media, CSO, NGOs (35)	
6	NRG Meeting Egypt	Agriculture, power/electricity, research institutes, law, finance	Launch phase of JMP and role of NRGs; Discussion on JMP related issues: approaches and process; information base,; institutional strengthening	Cairo, 22 May 2006	Over 35 members from the MOWR, university and research centers, advisors to MOWR	
7	NRG Meeting Ethiopia	RWG members	xxxxx	Addis Ababa	NRG members nominated	Meeting not yet held,
8	CBSI NB MP Parliamentary Orientation Workshop	Lawyers, legislators, water, energy, environment, agriculture,	Role of parliamentarians in the NBI process – as	Kampala, July 17-18, 2006	NBI MPs (32), SVPs (7);	Organized jointly by CBSI, NTEAP

		and NBI SVP/SAP representations	legislators/ratifies; as links between NBI and their constituents and the governments; Updating on NBI programs and projects and the cooperation process, including JMP; issuing declaration; panel discussions on NBI cooperation, investment, next steps		CBSI NCs (8); Lawyers –consultants (2), Nile-Com, WB Nile Team Chair; Parliamentary speaker (Uganda); MOWR(Uganda); ENSAP, NELSAP,	and WP. Main Outputs: declaration of support to the NBI process and better informed and engaged NBI parliamentarians
9	EN parliamentary briefing -1	Parliamentary select committees – water, agric, environment, foreign affairs, power/energy, planning/finance, social	JMP features, status in the context of the NBI cooperation process, ENSAP progress	Addis, Ababa, June 8, 2006	Parliamentary select committees, MOWRs, ENSAPT leaders, NFPs, Sr. Dept. Heads; RWG members, JMP NCs (40)	
10	EN parliamentary briefing -2	Parliamentary select committees – water, agric, environment, foreign affairs, power/energy, planning/finance, social	JMP features, status in the context of the NBI cooperation process, ENSAP progress	Cairo, Egypt, June 4, 2006	Parliamentary select committees, MOWRs, ENSAPT leaders, NFPs,	

					Sr. Dept. Heads; RWG members, JMP NCs (45)	
11	EN parliamentary briefing -3	Parliamentary select committees – water, agric, environment, foreign affairs, power/energy, planning/finance, social	JMP features, status in the context of the NBI cooperation process, ENSAP progress	Khartoum, June 6, 2006	Parliamentary select committees, MOWRs, ENSAPT leaders, NFPs, Sr. Dept. Heads; RWG members, JMP NCs (45)	
12	Donor briefings	Sudan-based donors	Briefing on NBI/ENSAP progress and status – including the JMP	Khartoum, October 2006		
13	Embassy briefings	Netherlands embassy staff	Briefing on NBI/ENSAP progress and status – including the JMP.	Addis Ababa, Dec 2005		
14	Nile-COM	NBTF committee members, NBI, lawyers, TAC members	Including JMP status, directions, prospects	Bujumbura, Burundi, May 19, 2006		
15	NBI Informal donors meeting			The Hague, Netherlands		
16	NBI Informal donors meeting			Ottawa, Canada, October 2006		
17	Multi-stakeholder water and	International and regional	NBI briefing, EN cooperation,	Addis Ababa,	International	

	sanitation workshop	participants from the water and sanitation sectors	including major outlines and rational of the JMP	Ethiopia, October 2006	conference of over 150 participants	
18	ENCOM Meeting			Cairo		
19	ENSAPT 19 th Meeting	ENSAPT	IDEN projects, including JMP, progress report; ENTRO financial and administration report and budget review	March 2, 2006	ENSAPT members (9), ENTRO (11)	
20	ENSAPT 20 th Meeting	ENSAPT	ENSAP report to ENCOM; ENTRO's future institutional set up; ENTRO's strategic plan; IDEN project status, including JMP.	Addis Ababa, Ethiopia, September 18, 2006	ENSAPT members (11), ENTRO (7), Partners (1)	
21	ENTRO 4 th CC Meeting	ENSAPT, donors, consultative meeting	ENTRO strategy, ENCOM power ministerial meetings briefing; status of ENSAP projects; ENTRO work plan; financial matters, donor harmonization	Cairo, May 15-16, 2006	ENSAPT; WB; Donors: GB, Canada, France, Finland, Netherlands, ENTRO (30)	
22	Et-NBDF - 1	Ethiopia Nile Basin Discourse Forum, regional/basin chapters, environment, land use, power/energy; health,	Extensive orientation and briefing on the NBI history, rationale, cooperation process and what that means for the inhabitants of the specific Nile basin portion of Ethiopia; ENSAP projects, including conceptual outlines of	Makale, Ethiopia, August 2006	Issue/theme based (environment, water, women, etc.) CSOs and NGOs, NB provincial	

			the JMP.		government sectors (40)	
23	Et-NBDF - 2	Ethiopia Nile Basin Discourse Forum, regional/basin chapters, environment, land use, power/energy	Extensive orientation and briefing on the NBI history, rationale, cooperation process and what that means for the inhabitants of the specific Nile basin portion of Ethiopia; ENSAP projects, including conceptual outlines of the JMP	Bahr Dar, Ethiopia, August 2006	Issue/theme based (environment, water, women, etc.) CSOs and NGOs, NB provincial government sectors (45)	
24	Et-NBDF - 3	Ethiopia Nile Basin Discourse Forum, regional/basin chapters, environment, land use, power/energy	Extensive orientation and briefing on the NBI history, rationale, cooperation process and what that means for the inhabitants of the specific Nile basin portion of Ethiopia; ENSAP projects, including conceptual outlines of the JMP	Nekempt, Ethiopia, August 2006	Issue/theme based (environment, water, women, etc.) CSOs and NGOs, NB provincial government sectors (55)	
25	Women of/in the NBI National Consultation Workshop	Media, environment, poverty, arts, writers, law,	Briefing on the NBI, ENSAP including JMP and the role of ENSAP in addressing gender and poverty issues, gender mainstreaming	Addis Ababa, October 2006	Women representatives of NGOs, CSOs, professional associations.	
26	CBSI Nile Media Network Workshop	Print, electronic and mass media	Role of the media in fostering NBI	Cairo, Egypt,	Media	Included field visit

	1	representatives from the eight riparian countries	cooperation; informing and creating awareness; - JMP overview, part of presentation on ENSAP along with other SVPs	December 2005	representatives from all NBI countries (16), SVPs and SAPs, ENTRO (35)	to Alexandria
27	CBSI NMN Workshop 2 -	As above	A follow up of the Cairo meeting; launching a regional media network, Nile Media Network; Nile Magazine proposed, contents and approaches and NMN websites with English, Arabic, French sections	Nairobi, Kenya, May 2006	As above, (35); CBSI NPCs (8)	
28	ENTRO Social Development Second Regional Workshop	Agriculture, power, water, environment;	Capacity Building workshop on stakeholder participation in development (ENSAP) projects	Cairo, April 15-20, 2006	ENSAP focal persons, national coordinators of ENSAP projects	Included study tour of an irrigation scheme
29	Nile Media Network, Ethiopian Chapter	Print and electronic, government and private media house representatives	Media professionals as NBI stakeholders – roles and contributions definition; briefing on NBI, including updating on the JMP	Addis Ababa, Nov 14, 2006	Journalists (20)	
30	CBSI Regional workshop for NB	Prominent lawyers, 5-7 lawyers	Orientation on NBI and	Nairobi, Nov 20-	NB Lawyers	

	Lawyers	per country	identification of the role and potential contribution of lawyers, as stakeholders, in the NBI processes	22, 2006	(60)	
31	CBSI Regional Women's Workshop	Women representatives 4 per country	Orientation on NBI and role of women in NBI	Addis Ababa, 27-29, 2006	Women (50)	
32	Nile Basin Development Forum-2006 (NBDF-2006)	Water resources planning, management, irrigation, wetlands; water demand for irrigation development on Abay tributaries; water valuation; water balance modeling; river flow forecasting; Rainfall-runoff modeling; flow analysis; land reclamation effect on water management; water shortage and water conflict in rural Egypt; IWRM; climate change and variability; coping with climatic variability; demographic and socio-economic correlates; impact of water users associations, Gezira; migrant labor, Gezira; Rice production, marketing, Kenya; etc.	International conference on the "Role of the River Nile in Poverty Reduction and Economic Development -	Addis Ababa, Nov 30-Dec 2, 2006	Ministers (4), NBI family project managers, NB CS and NGO reps, academicians, scholars, researchers (350); 53 papers	Paper outlining ENTRO's perspectives and assessment of the NBI cooperation process of the preceding nine years presented. JMP identified as a milestone event.
33	Briefing to high government officials of Oromia and Amhara regions of the Abay Basin of Ethiopia (on planned schemes)	Regional MOWR reps, NBDF, regional administrations, NGO, Agriculture, power,	Briefing SDCO-MOWR co-organized.	Bahrdar Jan30, 2007	Over 85 participants	SDCO made extensive presentation (in collaboration with

						CBSI NPC and Dr. Solomon)
34.	Joint Multi Purpose Regional Parliamentary Committee	Development partner reps; NBI and ENSAP embassies and ambassadors; MOWR ETH, Media representatives, JMP RPC members; WRPM staff;	JMP goals and objectives; progress to-date; site visit to degraded Abay gorge and surrounding livelihood strategies; visit to Ethiopian and Sudanese parliaments and Gezira scheme, power generation plants, etc.	Addis Ababa, Khartoum, Addis, Khartoum August 8-14, 2007	Over 120 participants during opening in Addis; 15-20 RPCs and supp	This was a strategic knowledge exchange visit to consolidate EN parliamentary support for JMP; to promote dialogue among EN parliamentarians
35.	JMP OSI Consultation Workshop	power, social sciences, environment, water resources, hydrometeorology, irrigation and drainage	Share current status of OSI work; validate the findings and solicit inputs and identify directions for the OSI as it becomes a shared, living EN knowledge base	Addis, November 2007	Over 50 participants the three countries, experts in	Consultation on results of the JMP One System Inventory
36	SDBS Inception Workshop	Addis Ababa University professors and staff, ENTRO	Inception of AAU collaborative unit; presentations of benefit sharing and JMP	Addis, May 2007	Over 25 participants	
37	ENSAPT-ENCOM	ENCOM ministers; ENSAPTeam	JMP progress report	Cairo, September 2007	27 participants	
38	ENSAP	ENSAPT	JMP progress report	Khartoum November 2007	15 participants	
39	Youth Briefing	Youth briefing by MOWR,	JMP goals, objectives, progress	Addis Sept 2007	30 participants	

		Ethiopia about NBI including JMP				
40	NBDF-Sudan Dams workshop	NBDF national chapters of the nine NBI countries, MOWIR of Sudan and technical person; development partners	JMP goals, objectives and progress and detailed presentation on role of multipurpose projects, including the potential role of dams in ENSAP and social and environmental safeguards of same.	Khartoum, Jan 19-21, 2008	Over 100 participants from women, NGOs, etc.	
41	NBTF-C	Development partners, ENTRO	ENSAP in general and emphasis on JMP	Helen ski, Montreal and Bujumbura; October 2005, 2006 and 2007 respectively		
42	ENTRO Consultative Committee Meeting No. 4	Review of ENSAP progress in general, including IDEN projects and JMP;	ENSAP-Donor representatives	Addis Ababa, November 2007	30 participants	
43.	JMP National Reference Groups, Cairo	MOWR technical staff and engineers; private sector; MOW electricity; MO Transport, National planning	JMP launch phase introduction; clarifying role of NRGs; options in identifying components of JMP1	Cairo, May 2006	35 participants	Meeting was addressed by Egyptian MOW minister Dr. Abu-Zeid
44.	Egyptian Embassy visit to ENTRO premises	Staff of Egyptian Embassy in Addis and HE the Ambassador	ENSAP, ENTRO, IDEN Projects including JMP	Addis, Nov 2006	25 participants	
45.	Sudanese Embassy Visit to ENTRO premises	Staff of Sudanese Embassy in Addis and HE the Ambassador	ENSAP, ENTRO, IDEN Projects including JMP	Addis, Nov 2006	25 participants	
46.	National Media Practitioners	Addis-based print, electronic and	NBI, ENSAP and IDEN projects	Addis Ababa,	25 participants	Moderated by

	Sensitization Workshop	broadcast media practitioners	including JMP	October 2007		CBSI NPC and ENTRO SDO
47.	Annual Multi-stakeholder Workshop	Water Supply and Sanitation international workshop	NBI, ENSAP, IDEN Projects including JMP	Addis Ababa, October 2006	Over 150 participants	Workshop attended by significant number of Representatives of development partners
48.	Socioeconomic Development and Benefit Sharing workshop	NBI, ENSAP goals and objectives progress to date including JMP as indicator of deepening and broadening of the cooperation process – and the relevance of the concept of benefit sharing for underpinning ENSAP	Addis Ababa University professors	Addis Ababa, May 2007	25 participants from Addis Ababa University	ENTRO prepared a paper on benefit sharing in the ENSAP context
49	Nile Basin Dialogue Forum, Sudan Branch	Dams and development in the Eastern Nile: Lessons Learned. ENTRO Presentation on need and role of dams to support balanced development in the Eastern Nile, JMP, Climate change	NBDF members from the ten riparian countries; Sudanese environmental and other CSOs, CBOs, NGOs	Khartoum, January 2008	Over 100 participants	ESAP/ENTRO presented three well-received papers. Workshop closed by HE Kemal, Minister, MIWR, Sudan.