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Forming the Nam Ngum River Basin Committee

by

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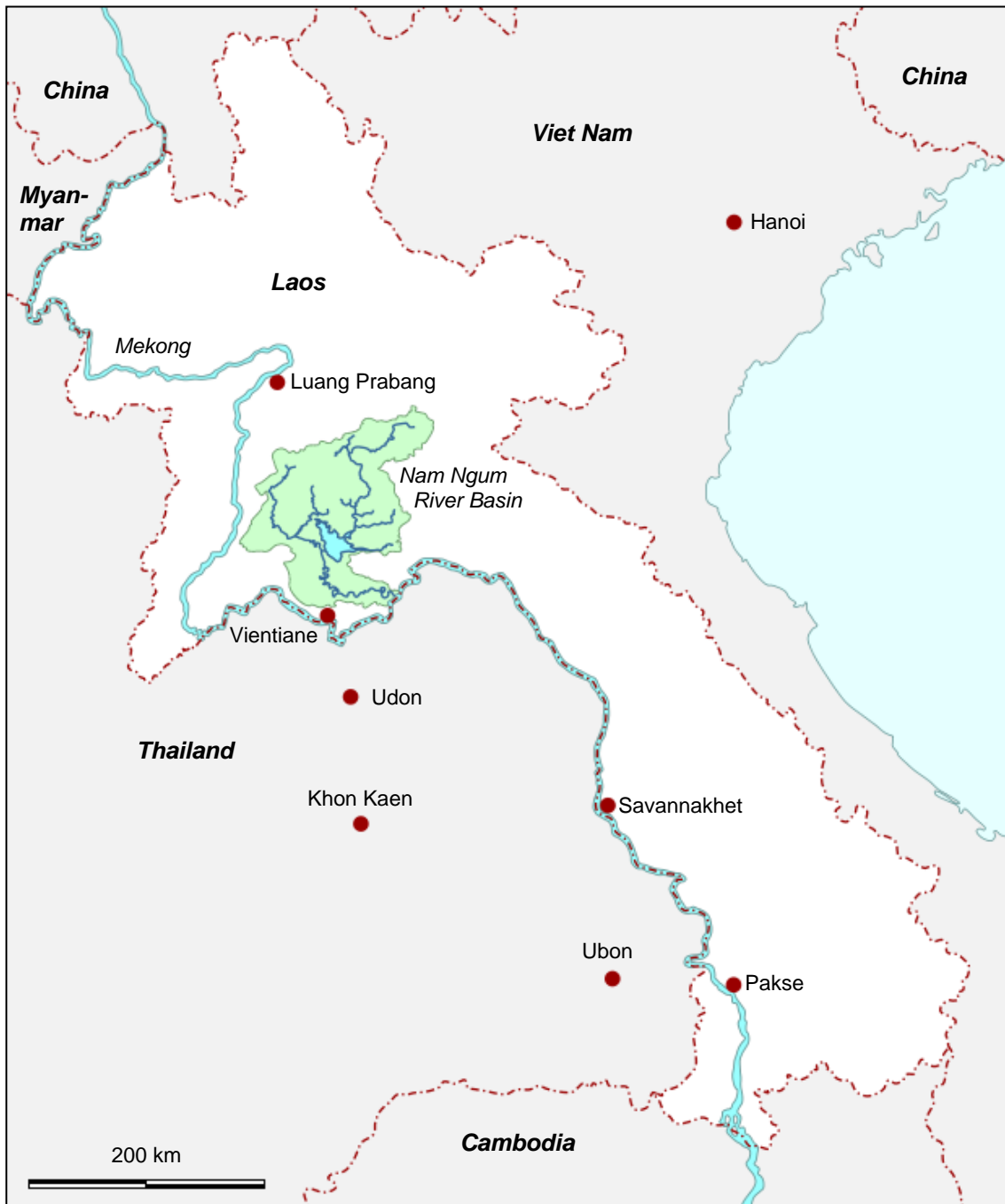
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Location map



Borders are indicative

About the Nam Ngum River Basin

The Nam Ngum River Basin has an area of 16,841 km² (7 percent of the country) and a population of some 502,000 (9 percent of the country). Water is abundant. With a rainfall of 2,200 mm per year and a discharge of 22,000 million m³ per year, the basin contributes 14 percent of the flow of the Mekong at the confluence (and 5 percent of the total discharge to the sea of that river). The wet season is from June to October.¹

The Nam Ngum River Basin is a true multi-purpose river basin. The basin is rich in hydropower. There are currently four hydropower plants with a total storage capacity of almost 7,300 million m³ and a generation capacity of 255 MW. An additional six dams are at various stages of planning and construction. They are all expected to be completed within the next ten years, bringing the total storage volume to around 17,000 million m³ and a generation capacity of 1,622 MW.

The 150 MW Nam Ngum 1 hydropower scheme (see photo) was commissioned in 3 stages, from 1971 to 1984, and is again being upgraded in 2010-11. It was the only such project implemented by the Mekong River Committee (the precursor of today's Mekong River Commission). It provides pump irrigation to some 9,000 ha in the wet season and some 4,000 ha in the dry season. The 400 km² reservoir is used for fisheries, tourism and recreation.² Development of hydropower can impact local communities and their access to water and arable land.



The Nam Ngum River Basin is also rich in mineral resources, forestry, fisheries and upland agriculture, and so there is considerable potential for conflict between these water impacting sectors. Development of the water resource also has potential for negative impacts on local communities and livelihoods as well as further downstream including in the wider Mekong river basin.

¹ This and the following paragraph extracted from DWR (Jun 08)

² IEA (May 06)

Acronyms and abbreviations

DMH:	Department of Meteorology and Hydrology (of WREA)
DWR:	Department of Water Resources (of WREA)
IEA:	International Energy Agency
IWRM:	Integrated water resources management
LNMC:	Lao National Mekong Committee
MAF:	Ministry of Agriculture & Forestry
NARBO:	Network of Asian River Basin Organizations
NNRBC:	Nam Ngum River Basin Committee
NNRBD(S)P	Nam Ngum River Basin Development (Sector) Project (2004-2010)
RBC:	River basin committee
WRCC:	Water Resources Coordination Committee
WREA:	Water Resources and Environment Administration (formerly WRCC)

Summary

A Prime Minister's Decree which provided for the establishment and activities of River Basin Committees in Lao PDR was passed in June 2010. Following this decree, a new Nam Ngum RBC and Secretariat was established. The following tasks have been assigned:

- i. To advise the government on water-related development policies, strategies, and plans;
- ii. to monitor implementation of these plans;
- iii. to coordinate development projects in order to reduce negative water resources impacts;
- iv. to advise the government on resolving water-related disputes in the basin; and
- v. to coordinate and promote water resources awareness and participation.

The new RBC will operate under the umbrella of the Lao National Mekong Committee and it will require strong coordination and leadership due to the range of

- political and administrative interests and geographical boundaries, including the wider Mekong River Basin;
- established (and sector-based) legal and institutional infrastructure and processes;
- established (and sector-based) planning practices; and
- imperfect information and knowledge.

It will face several challenges:

- A need for resourcing and human resources development;
- a need for information-building, knowledge management, integrated planning and policies; and
- a need to develop mechanisms for institutional networking and dialogue, including with governments and their agencies, the private sector and civil society.

With the backing of a Presidential Decree, government support and increased resourcing, the outlook is bright for successful future achievements. It is hoped that the new RBC will set a standard for national basin-level management in Laos as well as in the Mekong region.

1 Introduction

Nam Ngum River Basin Committee was established by the Prime Minister's Decree on 15 June 2010 as the first of several such organizations in the country.

This paper describes why and how it was formed.

Figure 1: View of Nam Ngum



2 The institutional landscape

Laos has the following levels of administration:

- The national government;
- 16 provinces and Vientiane Municipality;
- 142 districts; and
- around 11,400 villages.

Ministry of Planning and Investment (formerly the State Planning Committee, SPC) prepares national medium and long-term development plans, and coordinates other public planning.

As elsewhere, a number of government bodies are involved in water resources management in one way or another. In early 2007 these were:

- Lao National Mekong Committee (LNMC), which is responsible for coordination with Mekong River Commission and for supervising the planning and management of river basins in Laos consistent with the Mekong Agreement and its plans and strategies;

- Ministry of Agriculture and Forestry (cultivation, irrigation, livestock, fisheries, forestry, watershed management, meteorology and hydrology);
- Ministry of Communication, Transport, Post and Construction (urban water supplies, inland waterways);
- Ministry of Energy and Mines (electricity, hydropower, mining);
- Ministry of Health (safe drinking water);
- Prime Minister's Office:
 - Science Technology and Environment Agency (STEA);
 - The Water Resource Coordination Committee (WRCC) (the national apex body) (today merged into WREA);
 - Lao National Mekong Committee Secretariat (LNMCS) (Mekong Basin affairs and inter-agency networking); and
 - National Tourism Authority.

In mid 2007, the WRCC secretariat and the LNMC secretariat were merged into a new Water Resources and Environment Administration (WREA) which included a new Department of Water Resources. The new WREA also included Department of Meteorology and Hydrology (formerly under MAF) and environmental responsibilities (formerly part of STEA). Today, the LNMC serves as the national water resources apex body.

The key water laws and regulations that underpin water resources management in Laos are as follows:

Water-related laws and regulation	
1995:	Mekong River Agreement
1996:	Water and Water Resources Law Forestry Law
1997:	Law on Electricity Mining Law Law on Lands (amended in Oct 03)
1998:	Law on Agriculture Prime Minister's Decree establishing Lao national Mekong Committee (updated in 2008)
1999:	Law on Environment Protection Decree on Establishment of WRCC Decree on Establishment of LNMC
2000:	Regulation on Environment Assessment
2001	EIA for Electricity Projects Decree for Implementation of Water and Water Resources Law Prime Minister's Decree stating coordination between line agencies and local authorities in developing water resources plans at River Basin level Environmental Management Plans for Electricity Projects
2007:	Mining Law Forest Law
2010:	Prime Minister's Decree on Establishment and Activities of River Basin Committees

3 Advantages of a basin-level perspective

3.1 Concerns and opportunities

Millington and Birch (Nov 06) reviewed the status of water resources management in Laos in preparation for a programme of institutional strengthening. They concluded that there was an important need to:

- Update the Water and Water Resources Law and implementing decrees to clarify roles and responsibilities;
- strengthen international and national water related cooperation and coordination;
- prepare and implement a national water resources management policy and strategy;
- strengthen organizational mandates, structure, staffing and financial resourcing;
- strengthen the coordinating and management role and approaches both centrally but especially for river basins;
- strengthen water related data and knowledge management systems; and
- develop community participation and education programmes.

Water resources planning and management are often dominated by sectoral activities. For example, it is common for hydropower, irrigation, mining, forestry, and rural and urban water supply etc agencies to develop and manage their separate plans with little or limited consideration of the impacts of their plans on other sectors. This leads to fragmented and uncoordinated management with unintended and unrecognized consequences on other sectors as well as the environment, and downstream and regional communities.³

Water management is also usually in the hands of top-down institutions which do not have a well developed and coordinated system for linking national goals from above with grass-roots needs from below. This results in loss of benefits from good water utilization and inefficient use of limited financial and human resources. Often, the real needs of regional communities are not addressed.

River basin planning and management can share the opportunities and benefits of developing water resources,

- to protect the quantity and quality of water resources and of the water environment;
- to manage floods and droughts;
- to coordinate the activities of water sector agencies in the river basin; and
- to give developers secure access to water resources particularly in regard to the quantity and timing of flows, the quality of water, and right to discharge waste water.

3.2 Aims of basin-level management

The central function of basin- and sub-basin level management is the equitable, productive and sustainable sharing of the basin's water resources, including:

³ This and the remainder of this chapter are extracts from WREA (Apr 09)

- **Quantity:** Sharing of surface and groundwater between users such as irrigation projects, urban centres and the river ecology including of downstream and transboundary rivers;
- **flow and seasonal timing:** Sharing of flow between users may be required where river channels have a limited discharge capacity. Water regulation and hydroelectricity projects will change flow patterns and the daily and seasonal availability of water for downstream uses and the environment will be affected. Management of flood and drought is addressed through regulation of storages, and land use zoning; and
- **quality:** Water quality is important for many users and uses, including the environment. Rivers and waterways have only a limited assimilative capacity for the absorption of pollution whether it be from point sources such as towns and industries, or from non-point sources such as agriculture and forestry. This is usually addressed in sub-basin/watershed planning. Sedimentation resulting from catchments or river bank erosion is also important as it affects drinking water quality, causes loss of reservoir storage capacity and affects river conditions, degrading the aquatic ecology and potentially causing flooding and changing river courses.

3.3 A cross-sectoral approach

Coordination of sectors with water management responsibilities is required for the overall management of the river basin. Existing agencies are typically sectoral (such as irrigation, hydro electricity, mining, environment) with no one agency having the authority and independence for integrated water resources management. Under the cross-sectoral river basin management approach, a river basin organization is necessary and responsible for developing and implementing the river basin plan. Each sectoral agency is responsible for its own planning and management in a manner which is consistent with the river basin plan and the water resources development guidelines.

A cross-sectoral approach will address impacts on other developments and the environment.

3.4 Linking management scales

Basin-level management is well suited for integrating policies and management at a range of levels:

- Transboundary policies and targets;
- national government and line agency policies;
- provincial and district priorities and needs; and
- management by resource users at the watershed and sub-watershed scales.

Hereby, the needs of the river basin community must be recognized, aiming at actions at the lowest appropriate level.

4 Roles and responsibilities of the Nam Ngum RBC

4.1 Background

A Nam Ngum RBC was first established in mid 2001 under WRCC. It had a weak mandate, inadequate resources and as a result never met.

The benefits of a functional RBC, which coordinated the many agencies and levels of government, became clear during the preparation of the Nam Ngum River Basin Development Sector Project (2004-2010). This project then developed the approach and capacity for river basin management including development of a comprehensive knowledge base, prepared a basin development plan, and generated human skills and capacity in the process.

In the Nam Ngum basin development plan (WREA, Mar 09), the first of six key result areas (KRAs) was 'building the capacity to manage the Nam Ngum River Basin'. The related strategy was

to strengthen organizational arrangements in the Nam Ngum Basin to enable integrated planning and management of the basin's water related resources and to work with the community and private sector.

The following activities were recommended:

- 1 Strengthen Nam Ngum River Basin organizational arrangements
- 2 Knowledge management and research
- 3 Stakeholder engagement and awareness building

The plan for RBC strengthening is attached as Appendix A.

The other key result areas of the river basin plan were:

1. Sustainable water resources management to ensure the long term, reliable and sustainable supply of good quality surface and groundwater for economic, environmental and social purposes
2. Optimizing overall outcomes through coordinated management of the hydropower sector in the Nam Ngum River Basin through a forum of hydropower operators
3. Developing the sustainable irrigation potential of the basin
4. Management of priority river sub-basins (watersheds) to improve living conditions, protect and share the water resource between users and the environment
5. Reducing risks from water related disaster specifically relating to flooding, dam safety and pollution from mining accidents

4.2 A new Nam Ngum RBC

A Prime Minister's Decree which provided for the establishment and activities of River Basin Committees in Lao PDR was passed in June 2010.⁴ Following this, a Nam Ngum River Basin Committee and Secretariat was established. The NNRBC operates under the umbrella of the LNMC for national water resources management as well as for compliance with the Mekong Basin Agreement and collaboration with Mekong River Commission.

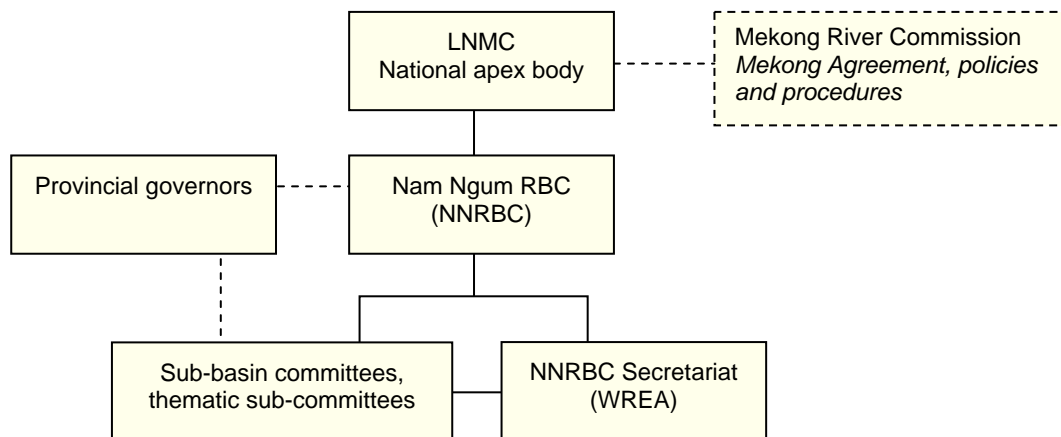
The decree describes responsibilities, duties, authority, organizational structure and operation of the RBC in support of good water resource management practices. Government resources for the secretariat are provided through WREA's Department of Water Resources.

The NNRBC has been assigned the following tasks:

- i. To advise the government on water-related development policies, strategies, and plans;
- ii. to monitor implementation of these plans;
- iii. to coordinate development projects in order to reduce negative water resources impacts;
- iv. to advise the government on resolving water-related disputes in the basin; and
- v. to coordinate and promote water resources awareness and participation.

Its institutional links are shown in the figure below.

Figure 2: Institutional context of the Nam Ngum RBC



⁴

No. 293/PM, dated 15. June 2010, 'Decree on Establishment and Activities of River Basin Committees'

5 Discussion

5.1 RBC consolidation

Continued capacity development is a necessity for any basin management body, as well as an ability to adapt to new challenges and new opportunities.

The new RBC will operate under the umbrella of Lao National Mekong Committee. It will require strong coordination and leadership due to the range of

- political and administrative interests and geographical boundaries;
- established (and sector-based) legal and institutional infrastructure and processes;
- established (and sector-based) planning practices; and
- imperfect information and knowledge.

It will face several challenges:

- A need of human resources development;
- a need for information-building, knowledge management, integrated planning and management; and
- a need to develop mechanisms for institutional networking and dialogue, including with governments and their agencies, the private sector and civil society.

Apichart Anukulampai (Jul 10) sees RBC consolidation as an process, supported by

- firm legal support;
- adequate budget allocations;
- clear definitions of roles and responsibilities;
- strengthened role of stakeholders through capacity building; and
- broad involvement of civil society.

Thatheva Saphangthong and Paulo N Pasicolan (Jul 07) observe a need to link with farmers, communities and other resource users at the ground level: *'There shall be a demand-driven and community-based approach to river basin management involving two parallel components. Firstly, one where the demand is determined by national priorities and concerns. Secondly, one in which the direct stakeholders can articulate their needs and actively participate in the planning, conservation, management and sustainable utilization of their local watershed resources for multiple purposes'*.

5.2 Keys to success

Keys to success for the NNRBC include:

- Adequate resourcing and legal mandate so that it can carry out its responsibilities;
- good coordination and cooperation with government agencies at the different levels and with water using and impacting sectors;
- a good information and knowledge base which leads to effective and accepted river basin plans and which provides clear guidance to water using and impacting sectors;

- river basin plans that share water between users and the environment and which comply with the goals and rules for Mekong river management;
- strengthening the understanding, capacity and cooperation of resource users; and
- good involvement and awareness raising of the community land and water users.

6.3 Bottom line

The new Nam Ngum RBC has got a head start with the Nam Ngum River Basin Development Project, which has provided a knowledge base, planning tools, a basin development plan, and institutional and individual skills.

Since the completion of the project, good progress has been made as evidenced by the Prime Minister's Decree on river basin committees, development and agreement by the LNMC of the National Water Resources Policy and Strategy; the establishment of 2 river basin committees and their secretariats[initial implementation of the Nam Ngum IWRM Plan through sub-basin management activities in two priority sub-basins; and the initial meetings of a hydropower operators coordination forum.

With continuing support from governments the outlook is bright for successful future achievement and it is hoped that the new RBC will set a standard for national basin-level management.

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Appendix A: Plan for RBC strengthening

Quoted from Nam Ngum basin development plan (WREA Mar 09)

Activity 1: Strengthen Nam Ngum River Basin organisational arrangements

Purpose: To support and strengthen the coordination of agencies at all levels for the coordinated management of the Nam Ngum River Basin.

Tasks:

- 1 NNRBO Mandate and Regulations: Government to agree the mandate and composition of the NNRBO, prepare and implement relevant regulations.

Support Arrangements: Support for the coordination of management agencies will be provided by the NNRBO Secretariat. The capacity of the NNRBO Secretariat to provide this support will be strengthened.
 - 3 Convene meetings of a River Basin Organisation: Half yearly meetings of a NNRBO will take place and rotate between Provinces. It will include presentations and field visits to sites of particular relevance to the shared management of the NNRB. Membership will include national line agencies and Provincial governments.
 - 4 Prepare and implement the NNRB Work Plan: A 3 year work plan will be developed by the secretariat and agreed by the NNRBO to address the priority issues needed to implement this IWRM Plan.
 - 5 Undertake capacity building of NNRB Organisation members: Capacity building will be arranged using various means including study tours to regional river basin organisations to investigate river basin and water resources management. Presentations to the NNRBO on topical water resource management issues for the river Basin will be arranged.
 - 6 Prepare State of the Basin Report: Review and update the river basin profile.
- Responsibility:** Nam Ngum River Basin Organisation Secretariat supported by Department of Water Resources, WREA and Provincial Cabinet and Water and Environment Offices

Activity 2: Knowledge management and research

Purpose: To build and maintain a knowledge system (data, information, databases, inventories, analysis and reporting) that supports river basin management and the needs of the governments of the NNRB.

Tasks:

- 1 Prepare and Implement a NNRB Information Management Plan: Identify information needs to satisfy the requirements of sectors and governments including reporting and maintaining registers of development plans and concessions. Assess available data and information availability (for example to be used to develop the river basin profile and plan). Identify gaps and needs (data, software and hardware) and, propose an Information Management Plan for the Nam Ngum RB. This activity should be coordinated with national level activities in building information management systems.

- 2 Priority Research and Investigations: Preparation of this IWRM Plan has shown many areas where knowledge and information is lacking. For example, preliminary studies of climate change and reforestation suggested that annual hydrological yields would be reduced. The longevity and long term sustainability of hazardous tailings dams was also brought into question. The issues and results of the studies conducted during the scenario and risk analysis work should be reviewed to identify important information needs and to identify studies that should be conducted. These studies should be coordinated with any activity at the national level.

Responsibility: Department of Water Resources supported by other WREA Departments

Activity 3: Stakeholder engagement and awareness building

Purpose: To engage key stakeholders and raise the awareness of the wider community so that the water and related resources of the Basin are managed sustainably.

Tasks:

- 1 Stakeholder Engagement Strategy: Analyse stakeholders in the management of the NNRB, develop and implement a Stakeholder Engagement Strategy which would include consultation with basin stakeholders that are important to the sustainable management of the river basin. This should deal with government agencies, industry sectors both public and private, schools as well as the wider community.
2. Stakeholder Awareness Raising Plan: An awareness raising plan (including project web site) and its implementation should be included within the Stakeholder Engagement Strategy. This should involve identifying key messages and target groups as well as reviewing the approaches used by other agencies as well as the MRC. As well as the general community, a focus on schools could be included.

Responsibility: WREA Cabinet Office, Department of Water Resources supported by line agencies and Provincial Offices of Water and Environment.

Milestones and outputs

The expected outputs are:

RBO active and holding meetings

NNRB Work Plan developed and under implementation

Development and Implementation of NNRB Information Management Plan

Priority Research and Investigations identified and conducted

Stakeholder Engagement Strategy developed and under implementation

Awareness Raising Plan developed and under implementation

State of the Basin Report

Priority: High

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