



# Integrated Water Resources Management Project in Lao PDR

Project progress  
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# BACKGROUND

## Nam Ngum pilot project: objectives and activities implemented since 2011

Project financed by **Loire-Bretagne** and **Rhin-Meuse French Water Agencies**

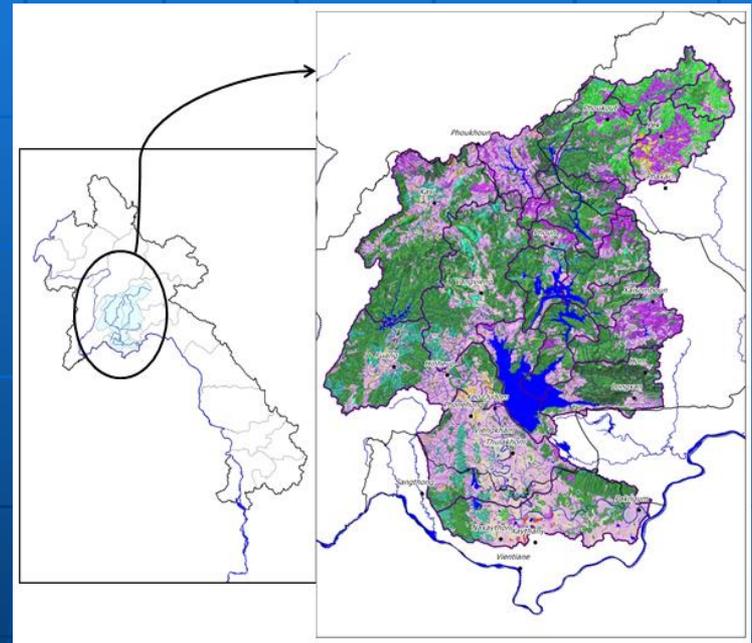
Operated by the **International Office for Water**

Phase 1: 2011-2013

Phase 2: 2013-2015

Phase 3: 2016-2017

Phase 4: 2018-2019



*Area: 16 900 km<sup>2</sup> / Nam Ngum river length: 354 km*

→ **Main objective: improve skills and develop tools for IWRM within the Lao teams, at national and basin levels**



# **BACKGROUND**

Main beneficiaries: **DWR and line agencies**

Other beneficiaries: **Other sectors**

**Capacity building and technical support on following topics:**

- 1 – **Governance** and capacity building for IWRM
- 2 – Development of **River Basin Management Plans**
- 3 – Improvement of **water data management and data sharing** among institutions
- 4 – Improvement of **financing mechanisms and economic analysis**

# Phase 1

2011  
2013

## Main steps of RBMP

Nam Ngum  
river basin

Main issues, Action Plan,  
costing

Nam Ngum  
river basin

Governance, funding,  
data management



1 local coordinator Feb. 2012- Jan. 2014

10 missions of French experts  
(+ other small workshops)

# Phase 1



**Trainings**



**Formations**

**Workshops**



**Meeting with stakeholders**





# Phase 1



## Main output:

- ✓ Redefinition of **the objectives of the Nam Ngum river Basin Committee Secretariat** (NNRBCS) officially established in January 2013
  - Ensure the well-being of everyone
  - Contribute to the economic development through the resources sharing
  - Protect the aquatic environment
  - Reinforce the uniformity of the water governance
  
- ✓ **Programme of Measures** responding to the basin objective

# Phase 2

2013  
2015

**Transition of pilot project  
experience to national level**

National  
level

Strengthening of IWRM  
participative planning experience

National  
level

Action cards, data sharing and  
enhancement



1 local coordinator Jan. 2014 - Dec. 2015

9 missions of French experts  
(+ other small workshops)

Mekong seminar in October 2014

# Phase 2

## Main output:

- ✓ Guide of the « **Action cards** » for Participative River Basin Management Planning
  - Organisation/Governance
  - Basin characterization/knowledge management
  - RBMPlanning
  - Action plan implementation
  - Monitoring/Assessment
  
- ✓ **1<sup>st</sup> meeting of the NNRBC**
  
- ✓ **Decree on the Fees of Natural Resources**

No	Type of use	Rate of collect Kip/m3
1	Using of natural water for industrial activities	5
2	Using of natural water for mining activities	10
3	Using of natural water for tourism and sports such as resort, hotel, guesthouse, restaurant, and other sports activities services	5
4	Using natural water for water supply	5

# Phase 2



Action-Card n° 2: Characterisation of a River Basin

**Synthesis of the action-card**

Included, the Component(s) the action-card is part of:

Organisation/governance	Basin characterisation	Establishment of the Action Plan	Action plan implementation	Monitoring/Evaluation
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**Overall objectives:** Participative preparation of River Basin Management Plans in the 3 or 4 Lao PDR river basins, to be worked out with DVR, POINAs and working with all the POINAs concerned by the hydrographic area.

**Specific objectives of the action:**

The action card gives a methodology for the characterisation of basins (river basins profiles) and helps to identify the main issues in river basins. The methodology is based on a collection of socio-economic and technical data (online) at river basin scale and on mapping in order to help the decision (decision aid tool).

**Key steps to identify potential water pressures and impacts on river basin:**

- socio-economic and technical data = human activities (agriculture, population growth, etc)
- pressures = pollution, water usage, big works (pollution from agriculture, increasing water intakes, etc)
- impacts on = human health, tourism, water quality, etc

This characterisation helps to adapt the institutional organisation and implement all the WRM process.

**Expected results:**

An atlas with maps and tables in order to organise WRM implementation:

- lookup and socio-economic data at river basin level (see action-card 1, action-card data management).
- maps with socio-economic and technical data at river basin level.

Data are adapted regarding river basins issues. Maps are produced at Lao level (global planning) or at river basin level (specific basin issues).

**Name of the Lao person in charge/ managing the action**

**Persons/bodies involved:** DVR, POINAs & local agencies

**Main steps:**

- Step 1: collect easily basic data at Lao level and river basin level;
- Step 2: mapping data at Lao and/or river basin scale;
- Step 3: collect more information about river basin with big issues.

**Main capacity building needs:** Data management & GIS management

**Main tools needed:** GIS data tools, spreadsheet software

Action Card n°2: Water Information System and Data Management

**Synthesis of the action-card**

Included, the Component(s) the action-card is part of:

Organisation/governance	Basin characterisation/knowledge management	Establishment of the Action Plan	Action plan implementation	Monitoring/Evaluation
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**Overall objectives:** Participative preparation of River Basin Management Plans in the 3 or 4 Lao PDR river basins, to be worked out with DVR together with 3 or 4 coordinating POINAs, and working with all the POINAs concerned by the hydrographic area.

**Specific objectives of the action:**

- set up a thematic atlas of the hydrographic areas/basins (using paper maps and web-mapping tools); to continuously answer the needs of characterisation

With a preliminary atlas including:

- set up an inventory of the available data using the questionnaire when necessary and the catalogue of data source for description/review and downloading (with authorization if given)
- organize the accesses and when necessary the archiving of the necessary data

**Expected results:**

<b>Name of the Lao person in charge/ managing the action</b>	
<b>Persons/bodies involved:</b>	
<b>Main steps:</b>	<ul style="list-style-type: none"> <li>Role assignment</li> <li>Implementing on the server and web portal with necessary tools</li> <li>Develop inter-connected shared water information systems</li> <li>Diagnose the existing situation in data management</li> <li>Develop the necessary elements of common language</li> <li>Implement scenarios of data exchange between partners</li> </ul>
<b>Main capacity building needs:</b>	<ul style="list-style-type: none"> <li>Training on the use of the catalogue of data sources</li> <li>Training on map production</li> </ul>
<b>Main tools needed:</b>	<ul style="list-style-type: none"> <li>On-line server</li> <li>On-line database</li> <li>On-line catalogue of data sources (metadata catalogue)</li> <li>On-line web mapping tools</li> <li>Tools for dynamic questionnaire development</li> <li>GIS tools for geographic information processing</li> </ul>

**Methodological actions**

- General recommendations (key message)

Action-Card n° 6: implementation of an action plan

**Synthesis of the action-card**

Included, the Component(s) the action-card is part of:

Organisation/governance	Basin characterisation/knowledge management	Establishment of the Action Plan	Action plan implementation	Monitoring/Evaluation
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**Overall objectives:** develop tools to implement an action plan

**Specific objectives of the action:**

- build a stakeholders directory
- develop tools for project management

**Expected results:**

<b>Name of the Lao person in charge/ managing the action</b>	
<b>Persons/bodies involved:</b>	DVR, POINAs
<b>Main steps:</b>	Local agencies and all the stakeholders
<b>Main capacity building needs:</b>	Build a stakeholders directory
<b>Main tools needed:</b>	Project management
<b>Main tools needed:</b>	Networking

**Methodological actions**

- General recommendations (key message)
  - To give life to WRM, through the implementation of a participative river basin management planning, it is important to coordinate agencies' activities, to motivate project owners to do the necessary actions to improve or to protect water resources. Therefore, networking, identifying a main task for an WRM coordinator.
- Step by step implementation
  - Step 1: build a stakeholders directory
  - Step 2: develop tools for project management
- Useful tools (data, information, partnerships...)
  - Database (Industry, impact...)
- Where to find the tools

Action-Card n° 5: funding the action plan

**Synthesis of the action-card**

Included, the Component(s) the action-card is part of:

Organisation/governance	Basin characterisation/knowledge management	Establishment of the Action Plan	Action plan implementation	Monitoring/Evaluation
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**Overall objectives:** funding to implement the action plan in a step by step process

**Specific objectives of the action:** begin to implement the action plan and develop a financial long term strategy.

**Expected results:**

- improve coordination between different plans, financial water actions through the other plans;
- develop incentive instruments create water fees and develop an autonomous water budget.

**Name of the Lao person in charge/ managing the action**

**Persons/bodies involved:** DVR coordination team, District municipalities

**Main steps:**

In the short term, the most important is to begin to implement and find money based on existing situation (plans and self-financing) in the medium-term, it is necessary to explore existing options (add actions to existing plans); in the long-term, it is necessary to develop permanent financing mechanism.

**Main capacity building needs:**

Good knowledge of current plans in the long term, economic analysis skills

**Main tools needed:**

Timeline diagram showing: Short term: existing situation, Medium term: explore existing options, Long term: Permanent financing mechanism. WRM 27 May 2014

# Phase 3

2016

2017

**Support for IWRM implementation  
at the national level**

Nam Sa-  
Nam Kadan  
River Basin

Start of the basin characterization  
on the pilot basin

National  
level

National WIS database LaoWIS,  
web-portal and data collection



1 local coordinator Dec. 2015 – Nov. 2017

10 missions of French experts

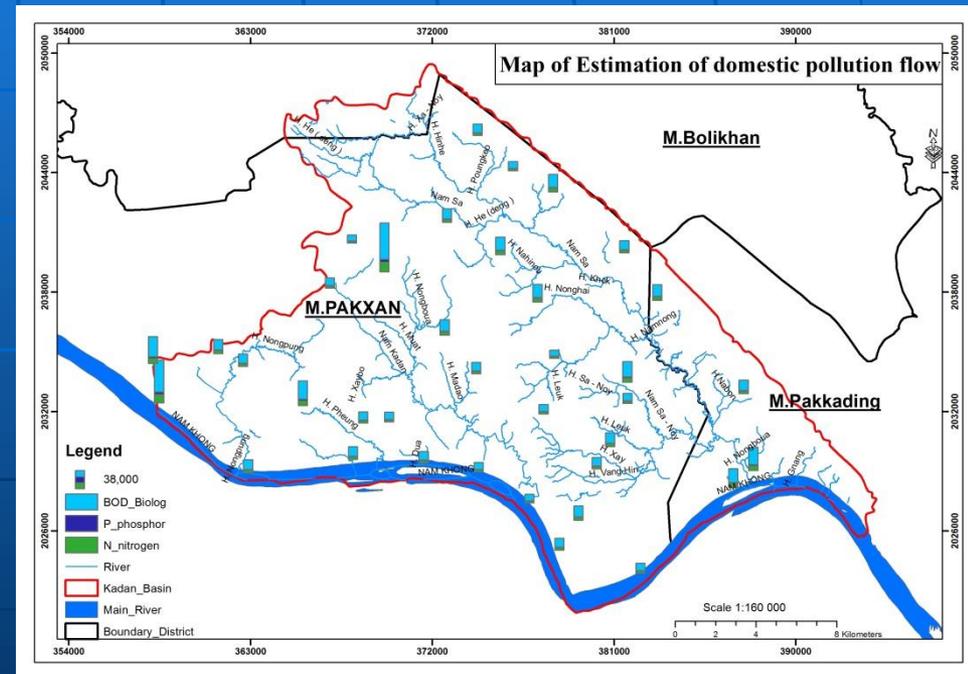
# Phase 3

Nam Sa-  
Nam Kadan  
River Basin

Start of the basin characterization  
on the pilot basin

## ➤ Support on the Nam Sa- Nam Kadan characterization

- Collection of data on the field
- List of maps to produce
- Creation of a part of the maps

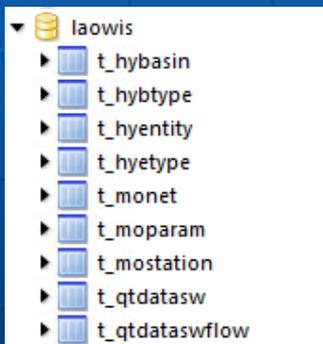


# Phase 3

National level

National WIS database LaoWIS, web-portal and data collection

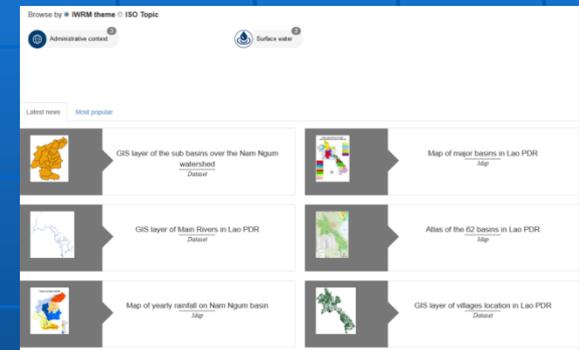
- **Building up the National Water Information System**
- Setting up of the DWR server
- Organising data into databases
- Valorising and sharing data



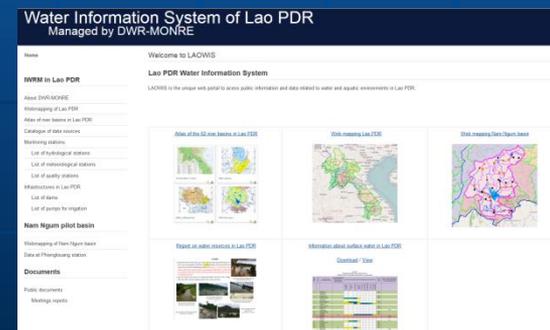
Databases



Web mapping



Metadata catalogue



Website

# Phase 4

On-going

2018

2019

**Case study of the Nam Sa Nam Kadan basin and WIS development**

Nam Sa-Nam Kadan River Basin

Identify the main issues of the basin, objectives and actions

National level

Develop data exchange and dissemination of information



1 local coordinator Nov. 2017 – Oct. 2018

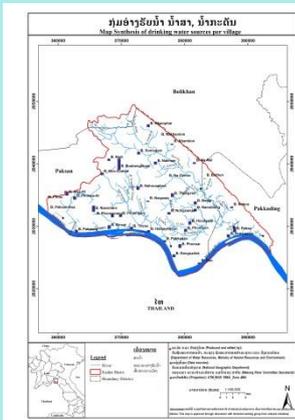
3 missions of French experts

1 study visit in France

# Phase 4

## Nam Sa-Nam Kadan River Basin

Identify the main issues of the basin, objectives and actions



Nam Sa Nam Kadan characterisation									
Answer to the Questionnaire for data collection on water resources management at Village level									
3. Areas of "In Wetlands and ponds"									
Form no.	Functional purpose	Name of wetland/ponds	Area(ha)	Distance from village (km)	Regulation				
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## National level

Develop data exchange and dissemination of information

- Exchange with PoNRE and other Department / Ministries
- Dissemination of information to public
- Develop tools for decision makers



# Thank you for your attention!

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