



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity



Ministry of Public Works and Transport
Department of Waterways

Ref. No./PWT.DOW
Vientiane Capital, date

“EMERGENCY AND OIL SPILL RESPONSE IN PORTS AND TERMINALS”
Invitation for Bids

Date of Invitation	28 January 2019
Deadline for Bids	15 March 2019 at 10:00 O'clock,

The Department of Waterways (DOW), Ministry of Public Works and Transport (MPWT) of the Lao PDR (the “Employer”) invites sealed bids from eligible bidders which meet the qualification criteria prescribed below for the execution and implementation of a consultancy project on the “Emergency and Oil Spill Response in Ports and Terminals”.

The Employer wants to assign an international consultants and/or a local consultant firm for the project as mentioned above. The total duration of the project is 24 months.

Outputs and activities - Following outputs and activities are expected:

1. Regulations and guidelines on emergency response and oil spill management reviewed, drafted and approved by the competent authority(ies).
2. Institutional arrangements for ports and terminals at the national level for emergency and oil spill response management analyzed and recommendations provided;
3. Recommendations on minimum equipment requirements for emergency response and oil spill equipment at local and national levels provided;
4. Two pilot projects regarding preparation and implementation of contingency plans for dangerous goods management, including training and exercises, prepared and implemented;
5. Cross-border cooperation on emergency and oil spill response management strengthened.

The full Terms of Reference can be found on the website of the Lao PDR Ministry of Public Works and Transport <http://www.mpwt.gov.la/en/projects-en/2819-osandimg-porj-en>

Qualifications of the consultant(s) - The successful consultant(s) should demonstrate extensive consulting skills and experience:

- Degree in Master Mariner, Port Engineering or Marine Transport with specialization in waterway safety, risk management, dangerous goods, environmental science;
- High level knowledge and experience in transport planning and operating, risk management and transport of dangerous goods;
- Good knowledge of Inland waterway transport on the Mekong River;
- Demonstrated ability to write technical reports which can be readily understood by decision makers and the general public;
- Fluency in spoken and written English;
- Excellent writing, presentation, and reporting skills.

Bidding documents – Following documents must be included in the bidding:

1. Organizational structure and declaration of availability;
2. Overview of similar projects undertaken during the past five to seven years;

3. Brief description of solutions and general methodology;
4. Work program, including main items of work, manpower and estimated percentage of working for international specialists. The international consultant(s) should select one or more national experts to assist and to be the focal point and should select a translator or translation company to translate the reports and training courses and to interpret during meetings and workshops from English to Lao;
5. Curriculum Vitae for each concerned expert;
6. The statement of financial bidding (in US Dollar) should include the fees of the international consultant(s) and national expert(s), the Daily Subsistence Allowance (DSA) for each day in the Lao PDR, the taxes to be paid in the Lao PDR, the international, regional or local travel costs related to official business travel, the meeting and training costs and the translation of reports from English to Lao.

Details and further information

To obtain further information and inspect the bidding documents, Bidders should contact:

Mr. Somphone Louanglath, director of the Planning and Budget Division
Department of Waterways, Ministry of Public Works and Transport
Lane Xang Avenue
Vientiane Capital, Lao PDR
Tel +856 (0) 20 2222 0433 or +856 (0) 20 5552 7035
Email: somphonell@gmail.com

To submit the bidding documents in English language, the eligible bidders should write to the below address on or before the bidding deadline, so that the bids can be opened immediately after the deadline for bid submission in the presence of bidders' representatives who choose to attend.

The Planning and Budget Division,
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Director General

Houngla

Sengmuang

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF PUBLIC WORKS AND TRANSPORT
DEPARTMENT OF WATERWAYS

**TERMS OF REFERENCE FOR THE PROJECT
“EMERGENCY AND OIL SPILL RESPONSE IN PORTS AND TERMINALS”**

Content

1. Technical/financial file
2. Background and rationale
3. Objectives
4. Implementation Agency and stakeholders
5. Outputs
6. Activities
7. Work plan and time schedule
8. Short logical framework analysis
9. Estimated budget

1. Technical/financial file

Project Implementing Agency: Lao PDR Ministry of Public Works and Transport – Department of Waterways

Indicative Starting Date: 1 May 2019

Duration of the project: 2 years

Sector intervention: Inland Waterway Transport, Ports and Terminals

Sub-sector intervention: Risk Management, Oil Spill Response

Project Description:

Navigation on the Mekong river has improved and the Lao PDR already has more than 29 river ports that have been built to ensure loading and unloading between vessels and trucks. With a growing demand for river transport, the storage and handling of dangerous goods is also expected to grow. Dangerous goods transported are currently limited to fuel products. Growing demand will result in the construction of new ports to store and handle these products. If not carefully managed, the growing demand for storing and handling of dangerous goods will pose a serious threat to public health, welfare, safety and the environment.

Although much improvement has been made in preventive measures, there will never be a guarantee that a major incident will not occur. It is therefore essential that Lao ports and terminals, handling dangerous goods and oil products have in place effective mitigation measures in case of an emergency. Lao ports should have an effective Emergency Response Plan (ERP) containing documented emergency procedures, organizational roles/responsibilities and facilities to ensure that the port or terminal is capable of effectively managing an incident.

The project will address the existing legal situation, draft guidelines to improve emergency and/or oil spill response, train facility personnel, prepare reporting procedures for incidents, address financial responsibility, provide safety requirements and propose minimum emergency and oil spill equipment. The project will also look at strengthening the cross-border cooperation with Thailand.

2. Background and rationale

2.1. Introduction

The main objective of an Emergency Response Plan and Oil Spill Response Plan is to protect people, minimize damage to property and the environment and reduce disruption to business operations in the event of an emergency.

2.2. National Legislation

- Environmental Protection Law, 17 January 2013
Part II, Chapter 1: Prevention of Environmental Degradation

Article 5, Basic Principles of Environmental Protection reads:

“The basic principles of environmental protection are: ... 4. Whoever causes damage to the environment is liable under the laws for such damage.”

Part III, Chapter 3: Preventing and Countering Disasters

Article 17, Disasters, reads:

“Disasters are phenomena or events caused by nature or humans that affect the health, life and property of the people, and the environment. Disasters include floods, droughts, fires, landslides and erosion, insect infestation, epidemics, earthquakes, oil spills or others.”

Article 19, National Disaster Prevention Committee, reads:

“The government establishes a National Disaster Prevention Committee. The National Disaster Prevention Committee shall cooperate with agencies and concerned local administrations in areas where disasters will occur, are occurring or have occurred, in order to develop plans and determine measures to prevent and counter disasters, and to restore the area suffering from such disasters. At the same time they shall regularly monitor vulnerable areas or locations in anticipation of future disasters.”

Part VI, Chapter 2: Restoration of the Environment

Article 28, Restoration of Areas Destroyed by Disasters, reads:

“Any person or organization engaged in production, business, services or other operation that cause disaster is obligated to remediate the damage and to restore the affected area under the supervision of the local administration or the concerned sectoral agency.”

- Nineteenth ASEAN Transport Ministers Meeting

The Nineteenth ASEAN Transport Ministers Meeting (ATM) was held on 19 December 2013 in Pakxe, Champassak Province, Lao PDR. Under the section to strengthen ASEAN Maritime Cooperation, the Joint Ministerial Statement reads:

“The Ministers recognised the importance of effective preparation for and response to oil pollution incidents at the national, sub-regional and regional levels to minimise the damage from an oil spill.”

2.3. Emergency Response

It is essential for Lao ports to have an effective Emergency Response Plan (ERP) containing documented emergency procedures, organizational roles/responsibilities and facilities to ensure the port or terminal is capable of effectively managing an incident. Preparing for emergency situations greatly reduces the risk of injury, illness, and fatalities, and may limit the damage done to infrastructure, the surrounding environment and communities. Emergency planning and frequently rehearsed emergency procedures will assist the internal emergency response personnel of ports and terminals to respond quickly and effectively to an emergency. In general, the Emergency Response Plan should address:

- all possible types of emergencies that can be envisaged in the context of particular activities at the port or terminal such as fire/explosion, grounding within port limits, collision of vessels/road vehicles, natural disasters, acts of terrorism, medical emergency, gaseous release;
- use of emergency equipment such as firefighting equipment, self-contained breathing apparatus (SCBA), resuscitation equipment and stretchers;
- manpower necessary to initiate and sustain the response plan at all times; and
- training and emergency response exercises.

2.4. Emergency Response plan

An Emergency Response Plan (ERP) should contain the following components and procedures:

a) Preparation

The Emergency Response Plan shall cover all aspects of actions to be taken in the event of an emergency. The plan shall be developed in close cooperation with the port authority, fire brigade, police and other emergency services. The plan shall include:

- Action to be taken by those at the location of the emergency to raise the alarm;
- Initial action to contain and overcome the incident;
- Procedures to be followed in mobilizing the resources of the terminal;
- Evacuation procedures;

- Assembly points;
- Emergency organization including roles and responsibilities;
- Communication systems;
- Emergency control centers; and
- Inventory and location of emergency equipment.

Once the emergency plan is formulated, it shall be properly documented in an Emergency Procedures Manual and be made available to all personnel working at the port.

b) Control

The Emergency Response Plan shall specify:

- A list of the person or persons who have the overall responsibility for dealing with an emergency, listed in order of priority;
- The role and responsibility of all personnel within the terminal to contain and control the emergency; and
- The location of the designated emergency control center that will be used by key personnel to coordinate the emergency response activities. The control center shall be located at a central point, not adjacent to likely hazardous areas, and be fitted with appropriate emergency and communications equipment.

c) Communication and Alarms

The Emergency Response Plan must include:

- A description of the alarm system and how it will be operated;
- Full contact details, both during and outside office hours, for those inside and outside the organization (fire brigade, police and emergency services) which must be called in case of emergency;
- A reliable communication system for dealing successfully with an emergency situation. A suitable communication system shall provide a link with all necessary contacts both inside and outside the terminal; and
- Keeping the emergency response team free from communications requirements with other parties not involved in handling the emergency. A dedicated person shall be appointed to handle central communications, press and public relations.

d) Site Plan and Maps

A detailed map of the facility and surrounding area shall include plans showing firefighting and emergency equipment, major facilities and road access. These shall be up to date and readily available.

e) Access to Equipment

All emergency equipment shall be readily accessible and kept free of obstructions at all times.

f) Road Traffic Movement and Control

The Emergency Response Plan shall specify that:

- Roadways in the terminal approaches and areas in the way of jetty heads shall be kept free of obstructions at all times; and
- During an emergency, traffic into the terminal or onto the berth should be strictly restricted to those vehicles and people required to deal with the emergency. Limitations on vehicle weights shall be taken into account before emergency vehicles access jetty areas.

g) Outside Services

The terminal emergency plan shall make the best possible use of external services. The success in responding to an emergency may depend on the cooperation from third parties including:

- Port authorities, Vessel Traffic Service (VTS) control center, police and fire service;
- Pilots;
- Rescue launches; and
- Medical facilities.

h) Training for emergencies

All personnel shall receive emergency response training that addresses:

- Individual roles and responsibilities;

- Potential threats hazards, and protective actions;
- Notification, warning, and communications procedures;
- Emergency response procedures;
- Evacuation and shelter procedures; and
- Location and use of common emergency equipment.

2.5. Oil Spill Response

For ports and terminals handling oil products, an oil spill can cause operational disruptions, personal injury, and socio-economic and environmental impacts of varying degrees of severity. Spills can happen on land or water, at any time of day or night, and in any weather. The consequences of these spills are directly associated with the characteristics and quantities of product involved, with individual features and sensitivities of the environments affected and/or threatened. When oil is released into the environment, it is exposed to natural weathering (spreading, evaporating of light fractions, dispersing, sedimentation and emulsification). In the event of an oil spill, the most important factor is time: rapid and timely action will reduce the extent of a spill and damage to the environment. The faster the response can be implemented, the lower the potential damage to the surrounding areas. The speed and quality of the response depends principally on the degree of preparedness. A well-prepared oil spill contingency plan is therefore the key to a successful response. Effective oil spill preparedness and response can only be possible if suitable oil spill equipment is readily available, well maintained and all personnel involved are sufficiently trained in the correct use of the equipment.

2.6. Oil Spill Response plan

The Oil Spill Response Plan should be developed with the view of providing an immediate response to a river pollution incident so that the incident is controllable and does not seriously damage lives, properties and the environment. The Plan should contain:

a) Preamble/Introduction

I. Background:

- Information of the operator of the port (name, address, contact information, etc.);
- Type and characteristics of dangerous goods handled;
- Cargo handling equipment; and
- Other relevant information.

II. Objectives of the Action Plan.

III. Areas of Responsibility:

- A clear description of the area that falls under the responsibility of the operator; and
- Relevant environmental information such as water depth, river bottom, tide, current and wind direction and force, specially protected coastal resources;

IV. Risk Analysis

- Quantity, frequency and type of dangerous goods handled; and
- Possible damage to human life, property and the environment in case of a spill.

b) Organization and Duties/Responsibilities

I. Responsible Persons Appointed:

- Description of duties and responsibilities; and
- Organizational chart.

II. Alternatives for:

- Combating Marine Pollution;
- Control of situations;
- Assistance to injured persons;
- Control of areas;
- Evacuation of people in the vicinity (if necessary);
- Medical care of injured staff; and
- Compilation of all relevant expenses.

III. Logistics Plan:

- Request for assistance from other authorities/organizations and the joint work plan.

IV. Training and Exercise Plan:

- Regular training program or joint exercises at least once a year.

c) Operations

- I. Follow-Up and Evaluation of the Pollution Movement.
- II. Guidelines Coordination with Local and Central Authorities.
- III. Contact Details of Relevant Local and Central Authorities.
- IV. Method and Equipment for Combating the Spill.

d) Report and communication

- I. Preliminary Notification of Emergency Incidents:
 - Contact details of parties to be notified; and
 - Emergency or situation report system to responsible authorities.
- II. Report Format.
- III. Summary Report of the Incident:
 - This should be submitted to the relevant authority whenever an incident occurs.

e) Administrative and Supporting Work

- I. Expenditure Indicating a Budget Reserved for the Operation.
- II. Compilation of Evidence for Expenditure and Damage.
- III. A Person or Group of Persons Appointed to Collect Evidence for Expenditure and Damages to be used as Claim for Compensation.
- IV. Revision of the Action Plan.
- V. A Person or a Group of Persons Appointed to Collect and Analyze Information Relating to the Incident to Prepare Lessons Learned and Subsequent Revision of the Plan.

f) Annexes

- I. Map Illustrating Areas of Responsibilities (see Section 1.c.).
- II. Map Illustrating High-Risk Areas and Protected Areas.
- III. Communication Chart.
- IV. Information on Environment, Hydrography, Hydrology and Other Relevant Information.
- V. List of Parties Concerned.
- VI. List of Relevant Authorities and Experts/Specialists.
- VII. List of Providers of Necessary Services such as Rental Cars, Motor Boats, Labor, Materials and Food.

It is difficult to plan for a spill when the size is not known. The table below shows proportions used as a rule of the thumb for many years to determine the maximum credible spill size¹.

¹<http://www.oilspillsolutions.org/planning.htm>

Source of Spill	Maximum Credible Spill Size
Tanker	50 percent of largest tank
Barge	50 percent of largest tank
Tank Truck	100 percent of largest truck
Rail Car	50 percent of rail cars
Pipeline Rupture	6 hours – 25 percent of maximum flow + drainage
Pipeline Pinhole	2 percent of maximum flow for 4 days
Storage Tank Rupture	50 percent of largest tank
Material Transfer	50 percent of maximum flow for 1 hour
Process Unit	Throughput for 8 hours

3. Objectives

To reduce the impact on the aquatic environment of the Mekong River system, protect human lives and limit damage to property by establishing and implementing an effective emergency and oil spill response plan at local, national and cross-border levels.

Apart from combating possible fire and explosion, an Emergency Response Plan (ERP) shall also include an Oil Spill Response Plan (depending on the volume of oil products handled). The ERP should set in motion the necessary actions to minimize the emergency or spillage of oil and mitigate the effects. This shall be achieved by:

- preparing and implementing a local and national emergency response plan and/or oil spill response plan;
- training staff and relevant authorities;
- making oil spill equipment available at local and national levels; and
- establishing cross-border cooperation.

4. Implementation Agency and Stakeholders

The project will cover all public and private ports and terminals along the Lao PDR stretches of the river. This means that it shall be implemented on a national basis by the Department of Waterways under the Ministry of Public Works and Transport. Although the main focus will be the ports and terminal facilities along the Lao PDR stretches on the River, also smaller fuelling stations and all other landing stages where petroleum products (or other dangerous goods) are handled or stored should also establish an Emergency and Oil spill Response Plan.

The Department of Waterways is a government department under the Ministry of Public Works and Transport (MPWT) responsible for emergency and oil spill response in ports and terminals.

The Department is considered the most appropriate Implementing Agency for this project on Emergency and Oil Spill Response in Ports and Terminals because it is a port state organization that controls and supervises the safety of transport of dangerous goods by inland waterways and ports.

However, as most ports and terminals along the Lao PDR stretches of the Mekong are close to the border with Thailand, cross border cooperation in case of an emergency or oil spill should be addressed. So, the Mekong River Commission will have a coordinating role between the countries. MRC will not only monitor the implementation of the project but will also facilitate and assist on harmonization issues where the project has cross-border impacts.

The implementation shall be done in cooperation/coordinated with:

- *The National Disaster Management Prevention and Control Committee*, providing expert advice, promoting coordination with ministerial focal points, promoting disaster mitigation and preparedness activities at the local level, implementing community awareness activities, providing training, guidelines and plans to make disaster risk management more effective and establishing disaster management implementation teams at the national, provincial and district levels.
- *The Ministry of Natural Resources and Environment (MonRE)*, directly responsible for managing the environment, land, forest, water, air, biodiversity and minerals including natural disasters, climate changes, hydrology and meteorology throughout the country.

- *Port and Terminal Operators*, responsible for developing an emergency and/or oil spill response plan, buying necessary equipment and training personnel.
- The Local Authorities and Municipalities
- The *Mekong River Commission (MRC)*; Since the project is part of a Regional Action Plan, MRC will have a coordinating role between the countries. MRC will monitor the implementation of the project but will also facilitate and assist, especially on harmonization issues, where the project has a cross-border impact. In order to materialize this role, the Navigation Specialist of the MRC Secretariat will work closely with the Implementing Agency and the Secretariat of the Lao and Thai National Mekong Committee, with the relevant Line Agencies, the Private Sector and with other Regional Agencies.

5. Outputs

The Outputs of the project will be as follows:

- I. Regulations and guidelines on emergency response and oil spill management reviewed, drafted, and approved by the competent authority(ies).
- II. Institutional arrangements for ports and terminals at the national level for emergency and oil spill response management analyzed and recommendations provided.
- III. Recommendations on minimum equipment requirements for emergency response and oil spill equipment at local and national levels provided.
- IV. Two pilot projects regarding preparation and implementation of contingency plans for dangerous goods management, including training and exercises, prepared and implemented.
- V. Cross-border cooperation on emergency and oil spill response management strengthened.

6. Activities

Output I Regulations and guidelines on emergency response and oil spill management reviewed, drafted, and approved by the competent authority(ies).

Activity I.1 Prepare minimum requirements regarding emergency response (Chemical spillages, collisions, groundings, oil spill, fire and explosion).

Activity I.2 Provide recommendations for ports and terminals handling dangerous goods on how to improve or develop an emergency response/oil spill response plan in case of non-compliance with existing regulations.

Activity I.3 Determine minimum requirements for training emergency response teams and testing emergency systems, equipment and procedures at ports and terminals handling dangerous goods and at the national level.

Activity I.4 Develop emergency and oil spill reporting and notification requirements.

Activity I.5 Establish requirements of “evidence of financial responsibility” for owners/operators of ports and terminals handling dangerous goods and oil products.

Activity I.6 Present and discuss above requirements with relevant stakeholders at a national workshop.

Output II Institutional arrangements for ports and terminals at the national level for emergency and oil spill response management analyzed and recommendations provided.

Activity II.1 Access all ports and terminals handling dangerous goods and or oil products regarding their status/level of emergency and oil spill response and verify compliance with national regulations.

Activity II.2 Establish a system at the Competent Authority to receive and approve the emergency response and/or oil spill response plans prepared by ports and terminals handling dangerous goods.

Activity II.3 Prepare a standard training and exercise program for all facility staff involved in the emergency response or oil spill response plan to be used at ports and terminals handling dangerous goods. Such a program shall include:

- correct use of available emergency equipment, including initial equipment familiarization, operating principles and techniques and equipment deployment;
- transfer of dangerous goods away from the emergency;
- fire isolation;
- correct use of Personal Protective Equipment (PPE);
- coordinating operations with outside services;

- rescue, including training for selected personnel in life-saving from water;
- spill containment and clean-up; and
- advanced training to ensure that the level of knowledge is maintained and enhanced.

Output III Recommendations on minimum equipment requirements for emergency response and oil spill equipment at local and national levels provided.

Activity III.1 Determine minimum equipment requirements for emergency and oil spill responses for ports and terminals (liaise with Activities I.1 and II.1)

Activity III.2 Assist the Competent Authority to identify ports and terminals not complying with the equipment requirements determined by the Competent Authority and prepare a plan for ports and terminals to comply

Activity III.3 Assist the Competent Authority to make an inventory of all available oil spill equipment along the Mekong River which can be used in cases of major emergencies and spillages

Output IV Two pilot projects regarding preparation and implementation of contingency plans for dangerous goods management, including training and exercises, prepared and implemented.

Activity 4.1 Identify two pilot port or terminals to participate in developing an emergency response and/or oil spill response plan

Activity 4.2 Develop and implement an emergency response and/or oil spill response plan for the selected pilot ports or terminals and identify inadequacies in response equipment

Activity 4.3 Provide recommendations for minimum response equipment and assist in procurement

Activity 4.4 Provide training for port and terminal employees on how to implement the emergency and/or oil spill response plan

Activity 4.5 Arrange activities making use of the two pilot ports as demonstration ports.

Output V Cross-border cooperation on emergency and oil spill response management strengthened.

Activity 5.1 Assist relevant line agencies in Lao PDR and Thailand to develop a joint strategy on minimum emergency response/oil spill response. Such a strategy shall include recommendations on:

- requirements for response planning;
- communication procedures at national and cross-border level (to be coordinated with activities under the MRC Environment Program);
- type, quantity and location of equipment; and
- cross-border agreement on use of national equipment in cross-border responses.

Activity 5.2 Arrange a cross-border exercise on emergency/oil spill response.

7. Proposal of Work plan and time schedule

Proposal of Work plan

Activity		International Consultant		Nat. Expert	Workshops/ meetings	Training Courses	Reports
		Home base	Lao PDR	In Laos	In Laos	In Laos	
I.1	Prepare minimum requirements						1
I.2	Provide recommendations to improve or develop ERP						
I.3	Determine requirements for training						
I.4	Develop requirements for reporting						
I.5	Establish requirements for financial responsibility						
I.6	Present and discuss with stakeholders				2		
II.1	Assess port status and verify compliance						
II.2	Recommendations to approve ERPs						1
II.3	Prepare standard training						1
III.1	Prepare min. equipment requirements						1
III.2	Assist Authorities to identify non-complying ports and terminals				2		
III.3	Assist Authorities to make inventory				1		
IV.1	Identify two pilot projects						1
IV.2	Develop ERP for selected ports						
IV.3	Provide recommendations for equipment						
IV.4	Provide training for port staff					4	
IV.5	Arrange activities for demonstration				2		
V.1	Assist line agencies in Lao and Thailand to develop joint strategy				1		1
V.2	Arrange cross-border exercise						
Total		60%	40%		8	4	6

This work plan is only a proposal. The bidder is free to change the percentage of working in Laos (but not less than 40%) for the international consultant(s) and the national expert(s) but not the number of meetings, training courses and interim reports.

Proposal of time schedule

Activity	Month																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Output I Regulations and guidelines drafted and approved																								
I.1	■	■	■																					
I.2				■	■	■	■																	
I.3							■	■																
I.4																								
I.5									■	■														
I.6											R													
Output II Institutional arrangements analyzed and recommendations provided																								
II.1																								
II.2																	R							
II.3																	R							
Output III Recommendations on minimum equipment provided																								
III.1																						R		
III.2																								
III.3																								
Output IV Two pilot projects including training prepared and implemented																								
IV.1																								
IV.2																								
IV.3																								
IV.4																						R		
IV.5																								
Output V Cross border cooperation strengthened																								
V.1																								
V.2																								R

This time schedule is only a proposal. The bidder is free to make any changes, but still within the total period of 24 months or less.

8. Short logical framework analysis

The following risks have been identified, which can result in poor project implementation:

- Lack of interest and awareness among port and terminal operators;
- Lack of resources at the Implementing Agencies;
- Little cooperation between stakeholders;
- Changing staff at key positions at stakeholders and the Implementing Agencies; and
- Lack of interest in developing cross-border cooperation.

OBJECTIVES		
<i>To reduce the impact on the aquatic environment of the Mekong River system, protect human lives and limit the damage to property by establishing and implementing an effective emergency and oil spill response plan at local, national and cross border levels.</i>		
RESULTS (OUTPUTS)	MEANS OF VERIFICATION	INDICATORS
I. Regulations and guidelines on emergency response and oil spill management reviewed, drafted, and approved by the competent authority(ies).	<u>Report 1</u> : Review report on regulations	Stakeholder workshop and authority approval
II. Institutional arrangements for ports and terminals at the national level for emergency and oil spill response management analyzed and recommendations provided.	<u>Report 2</u> : Report on compliance and recommendations <u>Report 3</u> : Report on standard training	Stakeholders approval
III. Recommendations on minimum equipment requirements for emergency response and oil spill equipment at local and national levels provided.	<u>Report 4</u> : Report on minimum requirements	Equipment inventory plans
IV. Two pilot projects regarding preparation and implementation of contingency plans for dangerous goods management, including training and exercises, prepared and implemented.	<u>Report 5</u> : Stakeholder identification report	Training course certificates distributed
V. Cross-border cooperation on emergency and oil spill response management strengthened.	<u>Report 6</u> : Report on joint strategy	Training and exercises

9. Financial bidding (in US Dollar)

The bidder is requested to use following table to make his statement of financial bidding:

NR.	OUTPUT	Amount
Output 1	Regulations and guidelines on emergency response and oil spill management reviewed, drafted and approved by the competent authority (ies).	
	Act. 1.1	
	Act. 1.2	
	Act. 1.3	
	Act. 1.4	
	Act. 1.5 Act. 1.6	
Output 2	Institutional arrangements for ports and terminals at national level for emergency and oil spill response management analyzed and recommendations provided.	
	Act. 2.1	
	Act. 2.2 Act. 2.3	
Output 3	Recommendations on minimum equipment requirements for emergency response and oil spill equipment at local and national level provided.	
	Act. 3.1	
	Act. 3.2 Act. 3.3	
Output 4	Two pilot projects regarding preparation and implementation of contingency plans for dangerous goods management including training and exercises prepared and implemented.	
	Act. 4.1	
	Act. 4.2	
	Act. 4.3	
	Act. 4.4 Act. 4.5	
Output 5	Cross border cooperation on emergency and oil spill response management strengthened.	
	Act. 5.1 Act. 5.2	
Equipment Lump Sum (Max.33,000)		
Lao Translation & Number of publishing (Lao and English language 5 full sets)		
Procurement 2 aluminium boats and 3 lubber boats with engine, Lum Sum (Max.40,000)		
TOTAL		