

## **National Capacity Building (WATERSPS)**

### **1.1 Implementation of Law on Water Resources**

**GEUS Final Report 2003, December 2003**

**104.Vie.814-5**

Alex Sonnenborg, Jens Stockmarr, Per Rasmussen  
and Hans Guldager



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Government of Vietnam  
MARD - DWRHWM

Government of Denmark  
Danida

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### 1.1 Implementation of Law on Water Resources

GEUS Final Report 2003



Nov.2003  
104.Vie.814-5



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1.1 LWR Office	2	1
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NCBWRM Office (ADB TA 3528-VIE)	1	
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### Quality Assurance Statement

Action	Name	Signature	Date
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**Annex 3 List of Guidelines found on attached CD**

# 1 Main outputs, activities and tasks of GEUS inputs March – November 2003.

## 1.1 Main Conclusions and Achievements 2003

In the period from March 2003 to December 2003 GEUS has provided 4 inputs according to the Terms of Reference for "Technical Assistance to Implementation of Law on Water Resources - Registration and Licensing of Ground Water Use", DANIDA 30. January 2003 (Annex 1).

Hans Guldager, Per Rasmussen, Jens Stockmarr and Alex Sonnenborg provided the inputs.

		Denmark Preparation	Abroad Weekday	Abroad Weekend	Denmark Finalising	Travel Days
Input 1	Hans Guldager	1	20			2
Input 2	Per Rasmussen	1	13	2		2
Input 3	Alex Sonnenborg	1	16			2
	Jens Stockmarr	1	14			2
Input 4	Alex Sonnenborg	1	8			2
	Jens Stockmarr	1	8		1	2
Final report	Alex Sonnenborg				1	
<b>Total</b>		<b>6</b>	<b>79</b>	<b>2</b>	<b>2</b>	<b>12</b>

The achievements, conclusions and recommendations of each input are described in detail in four visit reports:

- National Capacity Building (WaterSPS) - 1.1 Implementation of Law on Groundwater Resources. **GEUS Visit Report No. 1 - March 2003.**
- National Capacity Building (WaterSPS) - 1.1 Implementation of Law on Groundwater Resources. **GEUS Visit Report No. 2 - June 2003.**
- National Capacity Building (WaterSPS) - 1.1 Implementation of Law on Groundwater Resources. **GEUS Visit Report No. 3 - September 2003.**
- National Capacity Building (WaterSPS) - 1.1 Implementation of Law on Groundwater Resources. **GEUS Visit Report No. 4 – November 2003.**

The main outputs of GEUS's Technical Assistance to MARD DWRHWM in 2003 have been:

### **Legislative framework:**

- Issuing by the Minister of MONRE of Ministerial Decision on issuance of Permits for Groundwater Exploration and Groundwater Abstraction, and Licence for Practising Groundwater Drilling. (Decision on Licensing).
- Final drafting of Decision on Groundwater Resource Planning and Management.
- Final Drafting of Decision on Groundwater Protection
- Final Drafting of Decision on Groundwater Monitoring.
- Final Drafting of Technical guidelines.
- Final drafting of Discussion Paper on the way forward to a National Policy, Strategy and Action Plan for Groundwater Management and Development in Vietnam.
- Preparation of an Action Plan for Implementing Groundwater Management and Development in Vietnam, including dissemination and implementing the Decision on Licensing.

### **Co-ordination to MONRE and other donors, e.g. ADB and AusAID.**

- Ensuring co-ordination to other donors, e.g. ADB and AusAID considering
  - Legislative framework on water resources
  - National Water Atlas of Vietnam
  - ADB / MONRE proposal for a National Water Sector Strategy to be elaborated in 2004.
- Ensuring co-ordination and timing with the plans on water resources management and legislation as scheduled by MONRE for 2003-2004-2005.
- Co-ordination concerning the emerging Interministerial Government Decree on Regulation on collection, management, exploitation and utilisation of water resources data and information. ( MONRE / AusAID).
- Co-ordination concerning the emerging Interministerial Government Decree on Regulation on licensing water resources, exploration, exploitation, and utilisation and wastewater discharge. (MONRE / ADB).
- Co-ordination concerning an Interministerial decree under preparation in MONRE / DWRM / BGWRM on “assign duties, arrange gradation on basic investigation of water resources”.

### **Other issues.**

- Undertake field visit to three provinces in Southern Vietnam together with representatives from MARD to examine planning procedures that are under development there.
- Monitoring the progress on test of guidelines and database in relation to Decision on Licensing.
- Input to 7 workshops at central and provincial level on groundwater licensing, monitoring, planning and management and protection.

Summary of outputs, activities and tasks provided by GEUS during the four input in Vietnam 2003:

Input 1	<ul style="list-style-type: none"> <li>• Undertake field visit to three provinces in Southern Vietnam together with representatives from Ministry of Agriculture and Rural Development (MARD) to examine planning procedures that are under development there.</li> <li>• Participation in a workshop with staff of MARD and Dr. Paul Taylor on Ground Water Planning and Management.</li> <li>• Preparation of draft Decision and Regulation on Ground Water Resources Planning and Management in close co-operation with DWRHWM Bureau of Ground Water Management.</li> <li>• Participation in a workshop on protection and monitoring of groundwater resources with emphasis on ground water protection practices in Denmark and assessment of its relevance to Vietnam.</li> </ul>
Input 2	<ul style="list-style-type: none"> <li>• The preparation of the first draft Decision on 'Groundwater Protection'.</li> <li>• Final review of the draft decision on 'Registration and licensing of groundwater exploration and groundwater abstraction, and licensing (authorisation) of drilling companies'.</li> <li>• Final review of five guidelines accompanying the decision on 'Registration and licensing of groundwater exploration and groundwater abstraction, and licensing (authorisation) of drilling companies'.</li> <li>• Preparation of workshop on groundwater protection.</li> <li>• Two workshops were held with BGRM, one on Danish and international practices on groundwater protection, and a second on the preparation of the decision on groundwater protection.</li> </ul>
Input 3	<ul style="list-style-type: none"> <li>• The preparation of the first draft on National Policy, Strategy for Groundwater Management and Development.</li> <li>• Action Plan for Implementing Groundwater Management and Development in Vietnam.</li> <li>• Review of Draft Decision on Planning and Management.</li> <li>• Review of Draft Decision on Groundwater Protection.</li> <li>• Drafting the Decision on Groundwater Monitoring.</li> <li>• Drafting the Guideline on Groundwater Monitoring</li> <li>• Preparation and conduction of 2 workshops dealing with Groundwater Planning and Management, Groundwater Protection and National Policy, Strategy and Action Plan for Groundwater Management in Vietnam with participants from Ministries, Provinces and scientific organisations.</li> </ul>
Input 4	<ul style="list-style-type: none"> <li>• Final QA of Final Draft Decision on Planning and Management</li> <li>• Final QA of Final Draft Decision on Groundwater Protection</li> <li>• Final QA of Final Draft Decision on Monitoring</li> <li>• Final QA of drafted guidelines to the 4 Decisions</li> <li>• Final drafting of Discussion Paper on the way forward towards a National Policy and Strategy for Groundwater Management and Development in Vietnam.</li> <li>• Co-ordination with MONRE of its schedule and action plan for legislative framework and program for water resource planning for 2004-2005-2006</li> <li>• Co-ordination with ADB of MONRE / ADB-proposal for Interministerial Decree on "Licensing Water Resources exploitation, utilisation and wastewater discharge".</li> <li>• Co-ordination with AusAID of MONRE / AusAID-proposal for Interministerial Decree on "Collection, Management, exploitation and utilisation of water resources data and information".</li> </ul>



The TA provided by GEUS in 2003 has been influenced by two major events for the WATERSPS this year.

- Transfer from MARD to MONRE / DWRM, final transfer carried through in November 2003.
- Change in CTA-position for WATERSPS.

The time schedule for the TA was currently adjusted and contact to the new Ministry MONRE was established.

## 1.2 Outputs.

In connection with the transfer to MONRE the Terms of Reference for assistance provided by GEUS was discussed with MONRE / DWRM in August 2003 as reported in GEUS's 3. Visit report. On this meeting MONRE reported on its program for developing legislative papers in 2003, 2004, 2005 and 2006 (Annex 9). The issue on "Policy and Strategy" is scheduled to 2004 and therefore it was not convenient for MONRE to participate in a working group elaborating Policy and Strategy on Groundwater Management and Development in Vietnam as originally provided in the TOR for GEUS, 2003.

In order to respond to this change in demand from MONRE the elaboration of the Policy and Strategy on Groundwater Management and Development was changed in agreement with WATERSPS. Instead it was decided to develop a "Discussion Paper on the way forward to a National Policy, Strategy and Action Plan for Groundwater Management and Development in Vietnam".

The purpose of Discussion Paper is to serve as an overall guide for the regulations and measures to be taken in implementing the LWR for management of the groundwater resources as part of the overall concept for Integrated Water Resources Management (e.g. defined in Danida Sector Politics and by the Global Water Partnership). It is also the purpose to support the concept of participatory approach by an expressed and transparent strategy and action plan. The Discussion Paper has also the purpose to support identification of the skills necessary for groundwater management in order to promote focused human capacity building at central and provincial levels.

Furthermore it is also the purpose to address the financial challenges for building up the sufficient staffs with adequate qualifications at central and provincial levels.

Dissemination of the Discussion Paper and the associated decisions and guidelines can support the strengthening of the co-ordination among the international donors in Vietnam's water sector.

Finally the Discussion Paper shall be seen as a contribution to the process towards a National Policy and Strategy on Water Resources scheduled by MONRE to be elaborated in 2004.

The final list of outputs is shown in the table below, together with reference and status of completion of each output requested in TOR. The main change is connected to MONRE's time schedule for Policy and Strategy to be elaborated in 2004.

<b>Input No.</b>	<b>Activities, Tasks and Outputs produced by GEUS. Status November 2003.</b>	<b>References</b>
<b>1</b>	Prepare National Policy, Strategy and Action Plan for Groundwater Management in Vietnam (Part 1). - Postponed by MONRE to 2004	GEUS Visit Reports 3 & 4 Discussion paper in GEUS Final Report 2003, Annex 8
<b>2</b>	Prepare Draft Decision on Planning and Management of Groundwater Use	GEUS Visit Report 1 GEUS Final Report 2003, Annex 5
<b>3</b>	Prepare National Policy, Strategy and Action Plan for Groundwater Management in Vietnam (Part 2). - Postponed by MONRE to 2004	Discussion paper in GEUS Final Report 2003, Annex 8
<b>4</b>	Prepare Draft Government Decision / Interministerial Circular on Ground Water Management in Vietnam	Two Inter-ministerial Decrees are under development by MONRE GEUS Visit Report 4
<b>5</b>	Prepare Draft Decision on Protection of Groundwater Resources and Decision on Monitoring of Groundwater Resources	GEUS Visit Reports 2 & 4 GEUS Final Report 2003, Annex 6 & 7
<b>6</b>	Finalise Decisions on Groundwater Extraction Permits and Licensing of Drilling Companies	Issued by Ministry of MONRE, September 2003. GEUS Final Report 2003, Annex 4
<b>7</b>	Complete Guidelines on Registration and Licensing	GEUS Visit Report 2 & 4 GEUS Final Report 2003, Annex 3
<b>8</b>	Prepare National Policy, Strategy and Action Plan for Groundwater Management in Vietnam (Part 3)	GEUS Visit Report 3 GEUS Final Report 2003, Annex 8
<b>9</b>	Conduct Overall Review of Groundwater Legal Framework Activities Carried Out under this Sub-component	GEUS Visit Report 4 GEUS Final Report 2003, Annex 11

## **2 Conclusions and Recommendations.**

### **2.1 Summary of findings.**

The final transfer of the WATERSPS sub-component 1.1 to MONRE and the physical move to the new Ministry greatly improves the possibility for co-operation and contact to the MONRE-staff and Management. Furthermore the possibilities for further co-ordination with other donors are strongly improved.

Issuing of the Decision on "the Regulation on issuance of permits for groundwater exploration and groundwater abstraction, and licence for practising groundwater drilling" (Decision on Licensing) by the Ministry of MONRE in September 2003 was a major milestone for the project.

The subject of licensing of groundwater, surface water and wastewater is one of the main issues on MONRE's action plan for 2003 and the fast process of issuing should be seen in that light. For the time being MONRE is preparing an Inter-ministerial Decree on "Licensing water resources exploration, exploitation, and utilisation, and wastewater discharge"(supported by ADB). The issued Decision on groundwater and drilling make up the first of four Decisions supporting the emerging Inter-ministerial Decree.

It is very important for the success of the implementation of LWR to fit the issues placed on the scheduled working agenda for MONRE as presented in annex 9. For 2004 the major subject will be "Policy and Strategy".

The legislative framework developed for groundwater is so far carried through in a very close contact and dialogue with the staff and the Management of MARD. With the transfer to MONRE it is obviously that some time must be spent in building up the same ownership and understanding within MONRE's staff and Management to the legislative framework on groundwater in Vietnam. Also the new possibilities for an extended co-operation with the MONRE / DGM should be considered as this Department is responsible for groundwater investigations carried through after Law on Minerals, which deals with minerals, gas and liquids, including water, below the ground surface. Three hydro-geological units with responsibilities on respectively Northern, Central and Southern parts of Vietnam are organised under MONRE / DGM.

From Provincial level the issuing of a legislative framework on groundwater resources management is highly demanded. Operational guidelines, technical tools and training is needed for solving acute groundwater problems. These are reported as mainly related to over-abstraction from the groundwater resources that is caused by increasing demands for water supply for private wells, domestic supply, irrigation and industries. Monitoring results shows rapid decrease in water levels and supports these considerations and shows that mining of the groundwater resources beyond sustainable yields is an ongoing process. Furthermore chemical problems related to intrusion of salt water in coastal aquifers are reported as well as high concentrations of arsenic in aquifers in the Red River delta.

### **2.2 Disseminate and implement Decision on Licensing.**

The dissemination and implementation of Decision on Licensing and the associated technical guidelines should be continued as scheduled and support to the technical capacity building at central and provincial levels should be provided.

### **2.3 Enhance MONRE's ownership to the 3 new Decisions.**

As soon as possible the three final drafted decisions should be presented and discussed more closely with the staff and Management of MONRE to ensure a proper ownership before they can be issued. Otherwise loss of time, working plans and agendas out of phase can be predicted. The legislative framework developed so far is evaluated as being adequate for this process of involvement. Groundwater issues, knowledge and tasks are placed in two departments of MONRE. Groundwater seen as a part of the water resources is the responsibility DWRM (Law on Water Resources) whereas groundwater seen as a part of the geological system is the responsibility of DGM (Law on Minerals). In the dialogue process and co-operation with MONRE it is important to gather and make use of the total competence within the departments of MONRE. The 3 Decisions could be issued in the priority: 1. Decision on Monitoring, 2. Decision on Planning, 3. Decision on Protection.

### **2.4 Conduct a National screening on major groundwater problems in Vietnam**

To identify the major groundwater problems in Vietnam a professional National screening should be carried through under leadership of MONRE. Terms of References were drafted during GEUS' visit in November 2003 (Annex 12). The screening shall contribute to the emerging National Policy and Strategy on Water Resources scheduled by MONRE for 2004. The screening shall partly be based on The National Water Atlas published by NWRC, 2003, partly on information from scientific institutes like the hydrogeological units within MONRE / DGM and other relevant scientific institutes, and partly on information from the provincial water resources agencies. The 8 selected provinces in the WaterSPS sub-component are used as pilots for the screening to enhance the capacity building on central and provincial levels. Furthermore the screening shall form the platform for establishment of tailor made monitoring programs for the major groundwater problems. The results from the screening are to be reported to NWRC and to pPC in the provinces.

### **2.5 Assist MONRE in 2004 preparing a National Policy and Strategy on Water Resources in Vietnam.**

The Discussion Paper on "The way forward towards National Policy, Strategy and action plan for Groundwater Management and Development in Vietnam" should be introduced and discussed with MONRE and other donors, e.g. ADB and AusAID for contributing to the policy process scheduled for 2004.

### **2.6 Prepare and conduct a study tour in 2004 for MONRE-staff and WaterSPS-staff to Europe on Policy and Strategy on Water Resources.**

To support the process within MONRE towards a National Policy and Strategy on Water Resources in Vietnam a study tour to Europe/ Denmark could advantageously be carried through in 2004. The ongoing implementation of EU Water Framework Directive demanding Integrated Water Resource Management to be implemented in River Basins throughout Europe makes up an excellent target for inspiration, exchange of experience and lessons learned. The studies should address Policy and Strategy, Integrated Water Resources Management, River Basin Management Plans, Uniform data management, Capacity building, cost recovery in the water sector, Licensing, Monitoring, Planning and Protection of the water resources. In the study tour a special workshop addressing arsenic pollution in groundwater and technical treatment techniques for water supply should be conducted.

## **Annex 1 – TOR, GEUS 2003.**

**Danida Ref. No. 104.Vie.814-5** 30 January 2003

**Draft Terms of Reference  
For  
Technical Assistance  
To  
Implementation of Law on Water Resources  
Registration and Licensing of Ground Water Use**

### **1. Introduction**

The Law on Water Resources (LWR), which provides for innovative and far reaching reforms in the way the water resources of Viet Nam are managed, was passed by the National Assembly in May 1998 and came into force in January 1999. Support to Implementation of Law on Water Resources, which is Subcomponent 1.1 of the Water Sector Program, was initiated in January 2001 and provides technical assistance to preparation of key legislative documents, within a program that also comprises institutional and human resources development, organisational strengthening and awareness raising on the new approach to management of water resources.

The LWR sets the framework for introduction of Integrated Water Resources Management in Vietnam, and delegates the task of water resources management to the Ministry of Agriculture and Rural Development (MARD), where the Department of Water Resources and Hydraulic Works Management (DWRHWM) is responsible for drafting of legislative documents to implement LWR.

LWR specifies 8 state management functions to be undertaken by MARD DWRHWM:

1. Establish policies, strategies and overall planning
2. Issue and organise implementation of legislation
3. Manage basic surveys, information and data Registration and licensing of water use
5. Water disaster management and mitigation
6. Inspection, control and conflict resolution
7. International relations
8. Institution development, capacity building and awareness rising.

DWRHWM has eight bureaus of which four have major responsibilities in water resources management:

- Legislation and Inspection
- River Basin Planning and Management

- Ground Water Planning and Management
- Environment and Water Quality Management

Since the LWR came into force the principal actions taken in terms of institutional strengthening have been formation of a National Water Resources Council (NRWC) as advisory body to the Government, and establishing the legal basis for River Basin Organisations for the major rivers of Vietnam.

In 2002, the LWR subcomponent contributed to water resource management functions through the initial development of a legal framework for groundwater management and development under the LWR. This work is to continue in 2003 and be supplemented with overarching policies and strategies at the national level, together with an action plan for implementation.

These TOR describe Technical Assistance that will assist DWRHWM to complete the necessary legislation on groundwater management and development, and registration and licensing of water use, as well as preparing the National Groundwater Policy, Strategy and Action Plan.

## 2. WaterSPS

At the request of the Government of the Socialist Republic of Vietnam, the Government of Denmark in May 2000 agreed to provide grant assistance to the implementation of Water Sector Program Support in Vietnam (WaterSPS), including Support to Implementation of the Law on Water Resources, and in December 2000 the Government Agreement on the WaterSPS was signed.

The development objective of the WaterSPS is:

*"Improved living conditions for the people in Vietnam by better access to water and improved water-related services, particularly for the poor or otherwise disadvantaged groups of society".*

The WaterSPS has 4 main components:

- National Capacity Building in Water Resources Management and Service Delivery;
- Rural Water Supply and Sanitation;
- Water Resource Management at River Basin and Provincial Level, and
- Urban Water Supply and Sanitation.

Component 1, which will assist the GOV to develop the national framework for the water sector, has the objective:

*"An enabling legislative and institutional frame work for sustainable use of water resources and water delivery system with capable staff for its administration and enforcement at central and provincial levels",*

The Support to Implementation of the Law on Water Resources is 1 of 4 sub-components under Component 1, and has the objective:

*"Assist MARD in implementing an enabling legislative and institutional framework for water resources management, based on the LWR, at national level, and at provincial levels within the geographic focus areas supported by the WaterSPS."*

In the initial planning phase 6 outputs were defined:

Output 1: Assist in a strategic planning and restructuring of DWRHWM to effectively implement appropriate state water management functions.

- Output 2: Assist DWRHWM to establish registration and licensing procedures for water users.
- Output 3: Assist DWRHWM in establishing capacity for basin water resources planning.
- Output 4: Assist DWRHWM to develop technical systems for cost recovery and financing water resources management and hydraulic works.
- Output 5: Assist DWRHWM to develop the human resource capacity to carry out appropriate water resource management roles.
- Output 6: Assist DWRHWM in developing and executing education, awareness and public consultation on the LWR.

The proposed Technical Assistance concerns Output 2, which will comprise registration and licensing of:

- Ground water abstractions;
- Surface water abstractions;
- Wastewater discharges; and
- Other uses of water.

The proposed TA will also provide inputs to Outputs 5 and 6 within the fields of registration and licensing.

For each type of water use the legislative process will comprise:

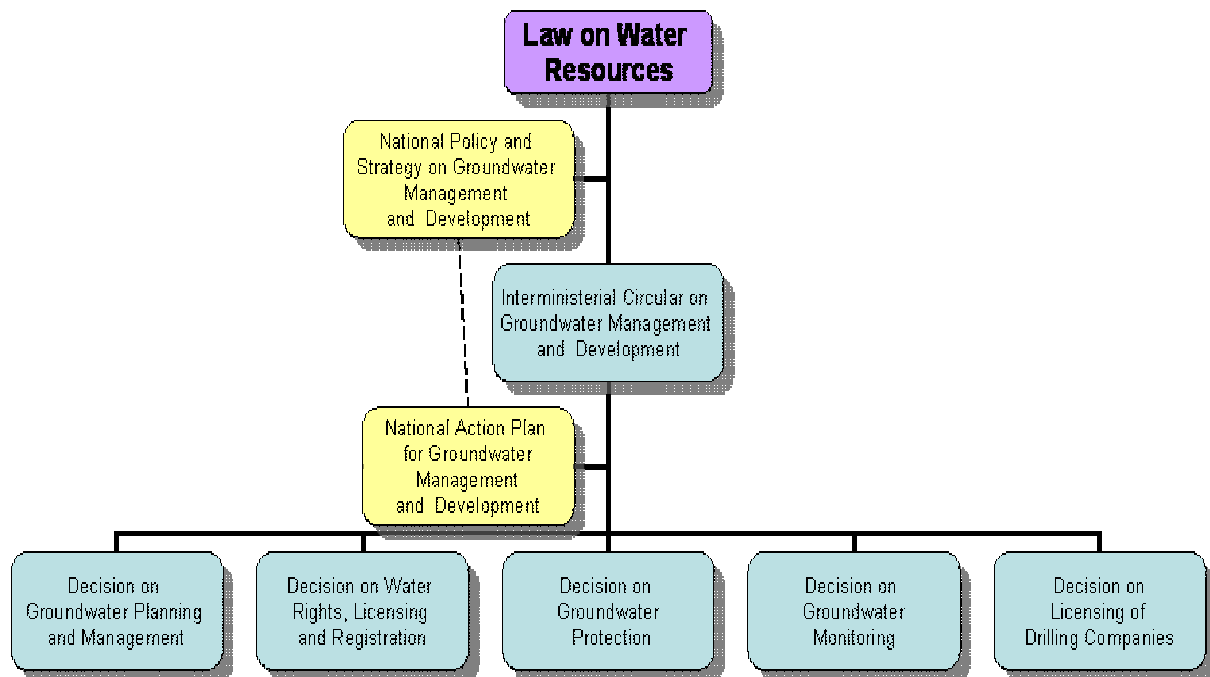
- a) Drafting of enabling legislation
- b) Assessment of institutional requirements
- c) Design of registration and licensing system
- d) Mobilisation of model provinces for testing of legislation
- e) Training of trainers and staff of model provinces
- f) Testing in model provinces
- g) Formulation of guidelines based on lessons learnt and best practices
- h) Action Plans for Nation-wide Implementation
- i) Revision of legislation
- j) Nation-wide dissemination of legislation

The proposed Technical Assistance will assist DWRHWM to further develop the legislative framework for groundwater resource management and development and continue the work that was initiated in 2002.

The target for 2003 is: the completion of development of the organisation and procedures to carry out the registration of ground water uses and users at central, river basin and provincial levels, and dissemination to provincial agencies that will be involved in their implementation; the preparation of a draft National Policy, Strategy and Action Plan for Groundwater Management in Vietnam; and the preparation of a draft Government Decision / Interministerial Circular on Groundwater Management in Vietnam.

### 3. Legal Framework

The proposed legal framework is illustrated in the figure below.



Clearly, the Law on Water Resources forms the legal basis for groundwater management and development and needs to be articulated in more detail to become effectively implemented. The Interministerial Circular (or Decree) is to provide more detail on the principles to be adopted, based on the National Policy on Groundwater Management and Development. Further elaboration of the details required for implementation is to be provided in five supplementary decisions on:

- Planning and Management
- Water Rights, Licensing and Registration
- Protection
- Monitoring
- Licensing of Drilling Companies

In addition, a National Action Plan for Groundwater Management and Development is to be produced to guide implementation in the short to medium term. Guidelines and procedures for specific activities need also to be developed, in order to facilitate the operation of the system.

### 4. The Technical Assistance

#### 4.1 Objective

The objective of the TA is:



*“MARD DWRHWM assisted to develop the legislative and administrative framework for sound management of ground water resources for sustainable social and economic development”*

The immediate object of the TA is:

*“MARD DWRHWM assisted to develop, test and introduce decisions and guidelines on the organisation and procedures for registration and licensing of ground water use at central, river basin and provincial levels”*

## 4.2 Outputs, Activities and Tasks

Following on from the activities undertaken during 2002, the Consultants will assist DWRHWM to finalise the development of a registration and licensing system for ground water abstractions as part of output 2 of the subcomponent. The work will comprise assistance to DWRHWM in the following activities:

- ***Finalise Decisions on Groundwater Extraction Permits and Licensing of Drilling Companies***
- ***Prepare Draft National Policy, Strategy and Action Plan for Groundwater Management in Vietnam***
- ***Prepare Draft Decision on Planning and Management of Groundwater Use***
- ***Prepare Draft Government Decision / Interministerial Circular on Ground Water Management in Vietnam***
- ***Prepare Draft Decision on Protection of Groundwater Resources and Decision on Monitoring of Groundwater Resources***
- ***Conduct Overall Review of Activities Carried Out under this Subcomponent***
- ***Prepare Action Plan for Nation-wide Implementation***

The scope of work, activities, tasks and assumptions related to the activities are summarised in the table below. These are divided into the three consultant inputs envisaged.

No.	Activities and Tasks	Assumptions
<b>Input 1</b>		
<b>1</b>	<b><i>Prepare National Policy, Strategy and Action Plan for Groundwater Management in Vietnam (Part 1)</i></b>	Working group of senior staff of DWRHWM available for consultations in accordance with weekly plans prepared by the consultants.
1.1	Assess the status of ground water resources, current use and future demand (Prepare TOR for contracting of national consultants)	
1.2	Prepare initial policy statement that is in line with national policy and the National Water Sector Strategy being developed under ADB TA-3528 (assisted by Paul Taylor).	
1.3	Prepare outline/framework of draft policy and strategy documents (assisted by Paul Taylor).	

No.	Activities and Tasks	Assumptions
1.4	Prepare work plan for Working Group activities for the preparation of draft policy, strategy and action plan documents on ground water management	
1.5	Lead working group in preparation of draft policy document on ground water management and development.	Working Group can be convened to undertake preparation work.
1.6	Lead working group in preparation of draft strategy document on ground water management and development.	
<b>2</b>	<b><i>Prepare Draft Decision on Planning and Management of Groundwater Use</i></b>	DWRHWM makes adequate staff available for working with the consultants
2.1	Undertake field visit to Dak Lak to examine planning procedures that are under development there.	
2.2	Review relevant material on groundwater planning and management practices in Vietnam, including the Law on Water Resources and supporting legislation	
2.3	Review groundwater planning and management policies and practices in Denmark and assess relevance to the Vietnamese situation	
2.4	Structure decision in close co-operation with DWRHWM Bureau of Ground Water Management and Bureau of Legislation	
2.5	Supervise national staff and consultants preparing draft decision	
2.6	Review and provide quality assurance to finalise draft decision	
<b>Input 2A</b>		
<b>3</b>	<b><i>Prepare National Policy, Strategy and Action Plan for Groundwater Management in Vietnam (Part 2)</i></b>	Working Group has completed assigned work on development of draft policy, strategy and action plan
3.1	Review the work done by the Working Group on the draft policy, strategy and action plan, and quality assure (assisted by Geoff Wright).	
3.2	Assist DWRHWM to convene a workshop to present draft policy, strategy and action plan to policy working group under National Water Resources Council	
3.3	Revise and finalise draft policy, strategy and action plan	

No.	Activities and Tasks	Assumptions
<b>4</b>	<b><i>Prepare Draft Government Decision / Interministerial Circular on Ground Water Management in Vietnam</i></b>	DWRHWM makes adequate staff available for working with the consultants
4.1	Review similar level decisions prepared by MARD	
4.3	Structure decision in close co-operation with DWRHWM Bureau of Ground Water Management and Bureau of Legislation	
4.4	Supervise national staff and consultants preparing draft decision (assisted by Geoff Wright).	
4.5	Review and quality assure draft decision	
<b>Input 2B</b>		
<b>5</b>	<b><i>Prepare Draft Decision on Protection of Groundwater Resources and Decision on Monitoring of Groundwater Resources</i></b>	DWRHWM makes adequate staff available for working with the consultants
5.1	Review relevant material on groundwater protection and monitoring practices in Vietnam	
5.2	Review groundwater protection and monitoring practices in Denmark and assess relevance to the Vietnamese situation	
5.3	Structure the two decisions in close co-operation with DWRHWM Bureau of Ground Water Management and Bureau of Legislation	
5.4	Supervise national staff and consultants preparing draft decisions	
5.5	Review and quality assure draft decisions	
<b>Input 2C</b>		
<b>6</b>	<b><i>Finalise Decisions on Groundwater Extraction Permits and Licensing of Drilling Companies</i></b>	
6.1	Revise and finalise decisions prepared during 2002, as appropriate	
<b>Input 3</b>		
<b>7</b>	<b><i>Complete Guidelines on Registration and Licensing</i></b>	
7.1	Review guidelines on registration and licensing previously prepared during 2002, and revise as appropriate	

No.	Activities and Tasks	Assumptions
<b>8</b>	<b><i>Prepare National Policy, Strategy and Action Plan for Groundwater Management in Vietnam (Part 3)</i></b>	
8.1	Prepare Action Plan for groundwater management and development, and registration and licensing of ground water abstractions	
<b>9</b>	<b><i>Conduct Overall Review of Groundwater Legal Framework Activities Carried Out under this Subcomponent</i></b>	DWRHWM makes adequate staff available for working with the consultants
9.1	Review entire legal framework as embodied in the various decisions developed in this Subcomponent, as well as existing legislation	
9.2	Prepare final recommendations on any further enhancements and modifications deemed desirable, as well as on proposed implementation arrangements	
9.3	Prepare a final report with description and assessment of the groundwater legal framework	
9.4	<p>Assist in preparing and conducting workshops to present the groundwater legal framework. There should be:</p> <ul style="list-style-type: none"> <li>• one workshop for central level organisations,</li> <li>• one regional workshop for provincial administrative staff and</li> <li>• one regional workshop for water companies, drilling companies and other major groundwater users.</li> </ul>	<p>There should be three regional workshops of each type (in the north, centre and south), but the international consultants will assist in the first of these only. It will be the responsibility of DWRHWM, with assistance of national consultants, to conduct the others. It is assumed that the responsibility for sponsoring these regional workshops and assisting in their delivery will be taken on by the ADB Second Red River Basin Sector Project (north), the ADB Dong Nai Water Resource Management Project, and the AusAID Vietnam Water Resource Management Assistance Project (south).</p>

## 4.3 Inputs

### Inputs by Danida

International Technical Assistance within a framework of maximum 18\* person weeks distributed on the following specialists:

- Ground Water Management Specialist (Alex Sonnenborg) 6-7 weeks
- Hydrogeologist (Hans Guldager) 3-4 weeks
- Ground Water Monitoring Specialist (Jens Stockmarr) 3-4 weeks
- Unallocated 3-4 weeks
- Water Policy Specialist (Paul Taylor) 2 weeks
- Water Resources Planning Specialist (Geoff Wright)\* 2 weeks

[\* The two supplementary positions are to be recruited directly. Their inputs are covered by separate TOR's and Contracts.]

National Technical Assistance:

- |                                    |                 |
|------------------------------------|-----------------|
| • Groundwater Resources Specialist | 6 person months |
| • Hydrogeologist                   | 8 person months |
| • Legal Specialist                 | 8 person months |

Workshop and training costs:

- 2 regional workshops in Central Vietnam (Da Nang)
- 2 consultation workshops (Hanoi)
- 1 round trip to Dak Lak

Travel, accommodation and per diem during work in Vietnam (International Staff) and during work in provinces (National Consultants and Staff).

Translation costs (All legal documents and consultant's reports will be prepared in English and Vietnamese)

### Inputs by GOV

National Staff (estimate):

- |                      |                  |
|----------------------|------------------|
| • DWRHWM Specialists | 6 person months  |
| • DWRHWM Trainees    | 20 person months |

Meeting room in MARD for working groups.

Workspace for Government staff in DWRHWM.

### 4.4 Assumptions and Risks

A Working Group will be established to assist in the development of draft policy, strategy and action plan documents on ground water management.

MARD/MONRE will provide competent and trainable staff.

MARD/MONRE will approve and issue decisions.

## 5. Implementation Arrangements

International TA and administered by MoFA Danida. National TA will be contracted by the SMU and together with operating costs funded under the decentralised budget.

GEUS, Geological Survey of Denmark and Greenland will be contracted by Danida, in accordance with KR-rules and rules for international specialists resident in Vietnam, to provide the international TA under supervision of the Subcomponent Management Unit. Specialists will be mobilised according to demand.

Supplementary inputs from the Water Policy Specialist and Water Resource Planning Specialist will be contracted separately by the Subcomponent Management Unit.

The Subcomponent Management Unit under a separate contract will contract national Technical Assistance Technical Assistance.

A team of five consultants will provide the International Technical Assistance – three from GEUS and two others, as specified above.

In addition, Dr. Jens Chr. Refsgaard will act as home based QA support.

National consultants will be recruited by advertising in the open market and nomination by DWRHWM.

## 6. Timing and reporting

The International Technical Assistance will be provided during 2003 as follows:

Activities as Specified in Section 3		2003											
		1	2	3	4	5	6	7	8	9	10	11	12
1,3,8	Prepare Draft National Policy, Strategy and Action Plan for Groundwater Management in Vietnam												
2	Prepare Draft Decision on Planning and Management of Groundwater Use												
4	Prepare Draft Government Decision / Interministerial Circular on Ground Water Management in Vietnam												
5	Prepare Draft Decision on Protection of Groundwater Resources and Decision on Monitoring of Groundwater												
6	Finalise Decisions on Groundwater Extraction Permits and Licensing of Drilling Companies												
7	Complete Guidelines on Registration and Licensing												
9	Conduct Overall Review of Activities Carried Out under this Subcomponent												
	Conduct Workshops												
	Submit Draft Final Report												

## 7. References

1. Water Sector Institutional Assessment Study. MARD & Danida, February 1999.
2. SPS Document for Water Sector Program Support, Vietnam. Danida, April 2000.
3. Component 1 Document: Support to Capacity Building in Water Resources Management at National Level. Danida, April 2000.
4. WaterSPS Sub-component 1.1 Inception Report. Initial Planning. PEM Consult, August 2001.
5. National Water Resources Council. MARD and ADB TA-2871. February and March 2000.
6. Licensing of Surface Water Extraction. MARD and ADB TA-2871. April 2000.
7. Water Resources Management Policy. Danida, 2000.

8. Water Supply and Sanitation Policy. Danida, 2000.
9. Report on a Mission to Vietnam. M. Solanes, Global Water Partnership, January 2002.
10. WATERSPS Sub-component 1.1 GEUS Final Report. GEUS, December 2002.

Lars Skov Andersen CTA  
Hanoi - January 30, 2003

## **Annex 2      List of Annexes found on attached CD**

- Annex 4    Decision on issuance of Permits for Groundwater Exploration and Groundwater Abstraction, and Licence for Practising Groundwater Drilling (Issued by the Minister 2003)
- Annex 5    Decision on Groundwater Resource Planning and Management (Final Draft).
- Annex 6    Decision on Groundwater Protection (Final Draft).
- Annex 7    Decision on Groundwater Monitoring (Final Draft)
- Annex 8    Discussion Paper on the way forward to a National Policy, Strategy and Action Plan for Groundwater Management and Development in Vietnam.
- Annex 9    MONRE 2004-2006 Actions Plans.
- Annex 10   Recommendations for Action Plan 2004.
- Annex 11   Final report with description and assessment of the groundwater legal framework.
- Annex 12   TOR for National Screening on major groundwater problems in Vietnam.



## **Annex 3      List of Guidelines found on attached CD**

Guideline I on Application groundwater exploration and groundwater abstraction  
(Final Draft)

Guideline II on Application for licence of groundwater drilling (Final Draft).

Guideline III on Authority Registration and Appraisal of Permits and Licence  
Applications and Approvals (Final Draft).

Guideline IV on Drilling for Household Boreholes (Final Draft).

Guideline V on Drilling for Rural Water Supply boreholes (Final Draft).

Guideline VI on Well Drilling, Construction and Completion (Draft).

Guideline VII on Calculation of Sustainable Groundwater Pumping (Draft).

Guideline VIII on Groundwater Monitoring (Final Draft).