ADB

Water Sector Roadmap
Viet Nam

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VIET NAM

Part I: Background

The Link with the Comprehensive Poverty Reduction and Growth Strategy (CPRGS) - With over 77% of the poor living in rural areas, some 70% of the population of Viet Nam depending primarily on agriculture for income and subsistence and 90% of the poor living in rural areas, the development of agriculture and the rural sector is a critical component of the CPRGS adopted in 2002. At the 9th Vietnam Communist Party Congress, the Government agreed upon a ten-year agriculture and rural development strategy for the period of 2001 - 2010, which affirmed the development of a vibrant, sustainable, highly efficient, diversified and market oriented rural economic and agricultural sector. With the goal of attaining strong economic growth and poverty reduction, the strategy focuses on the achievement of three strategic goals:

- Increased income in the rural sector by broad-based, sustainable and high quality growth
- Reduced income disparities, risks and vulnerability, and improved food security and social well-being of the poor
- Improved sustainability of natural resources in rural areas

The water sector contributes to achieving all three goals through:

- Increased income: water is a factor of production in – above all – agriculture, the food and beverage industry, manufacturing (at all scales), tourism and hotels, hydroelectric power generation, and many other types of economic activity;
- Improved food security and social well-being of the poor: (i) water is a factor of production in subsistence/household food production; (ii) a safe and uncontaminated domestic water supply is a pre-requisite for good health and mental/physical vigour, and therefore for the ability to fully participate in schooling, food production, income generating activities, community affairs, etc; (iii) good water management restricts the habitat of disease vectors and the incidence of water-related diseases such as malaria; (iv) management of water-related hazards ("shocks") reduces vulnerability caused by too much water, too little water, chronic water pollution, or water contamination events such as petroleum spillage
- Improved sustainability of natural resources: good management of water quantity and quality maintains the ability of natural resources and the environment to provide "services" such as public water supply, water for agriculture, capture fisheries, and aquatic plants.

Water Resource Management - Viet Nam has a long history of water management that has developed in response to water shortages during the dry season, a monsoon climate that regularly causes extensive flood damage, and a need to intensify agricultural production. Viet Nam is also a disaster-prone country: about 70 percent of its population is exposed to the risk of typhoons and torrential rains in combination with strong winds, floods, landslides and mud flows. Of Vietnam's water resources, about 60 % originates from catchments in riparian countries. Examples of regional shared rivers are the Mekong River and Red River with their lower reaches in Viet Nam and the Se San River with the head reach in Viet Nam.

Irrigation, drainage, and flood control have traditionally been the main focus of water sector development with less than 1% to total water resources used to meet municipal and industrial demands. Due to the on-going urbanisation and industrialisation problems such as insufficient urban drainage capacity and pollution of surface and groundwater occur in many places. Domestic waste water in urban areas is considered to be a leading cause of surface water pollution.

The Government's strategies for the water sector have evolved significantly in recent years. Past sector plans were largely supply-driven and mainly focused on investment targets that were determined at central level. The Government's current approach is more demand-based and a start has been made with adopting integrated water resources planning in river basins. Most significant in this process was the adoption of the Water Resources Law (WRL) in 1998. River basin organizations are being established for water resource planning for large rivers such as the Red, Mekong, and Dong Nai river basins. The Government is also decentralizing water supply and sanitation assigning increasing responsibilities to the provincial level. It has adopted a rural water supply and sanitation strategy in 2002 (??).

Irrigation Service Delivery - At present, more than 2.6 million ha of agricultural land is irrigated thought 75 large and medium-scales schemes and thousands of small-scale systems. These systems are managed by 173 state-owned irrigation management companies (IMCs) and thousands of agricultural cooperatives and water user groups (WUGs). The IMCs serve about 63% of the country's irrigated area. Irrigation service fees are high in Viet Nam compared with the other countries in the region. Besides the fees, IMCs receive subsidies from the central and provincial governments of O&M. In 1995-1996, irrigation fees covered about 60% of the total O&M expenditures. The present fee structure and the subsidies do not provide and incentive for the IMCs to improve their performance, nor to farmers to use irrigation supplies efficiently.

The Government estimates that the country's irrigation systems realize only about 60% of the design targets as a result of a number of constraints that limit performance. These include (i) degraded or inadequate irrigation infrastructure (especially at farm level), (ii) weak institutional capacity to manage the systems, and (iii) inadequate integration of agricultural extension to development cropping systems. This low performance contributes to rural poverty, with the effect most severely felt by poor households at the tail end of irrigation systems.

Policies on irrigation service delivery have started to shift to a more decentralized and participatory approach. The Government's policy now is to promote autonomy for the Irrigation Management Companies (IMCs) and to strengthen the water users' groups (WUGs)/ associations at the local level. Some provinces have started to transfer operation and maintenance (O&M) of smaller systems to local authorities and WUGs. This will require a move away from the present strategy to implement or improve irrigation with a heavily subsidized engineering approach.

Water Supply and Sanitation - Urban water supply systems in Vietnam's cities and towns face a challenge of meeting the demand for clean, safe drinking water of the country's growing urban population. At present, piped water supply systems serve about 50% of the urban population. Apart from piped water supply, many urban residents rely on untreated water therefore present a major health risk to the urban populations. Furthermore, a significant proportion of the urban population purchase water for drinking and cooking from vendors at prices that are often 5 to 20 times existing tariffs for public supply.

In general, urban water supply systems are in poor condition and are therefore often unreliable and inefficient. Water supply companies have not been able to meet the service delivery standards. Non-revenue water can reach as high as 55% of water produced.

Coverage of sewerage systems in urban areas is low and in rural areas almost none existing. About 16 percent of Vietnam's urban population is served by combined sewerage and drainage systems. There are a few wastewater treatment plants, but most of the untreated sewage and industrial wastewater are discharged directly into water bodies and steams in the surrounding areas.

The current Government strategy for water supply and sanitation promotes the reorientation of water supply companies to adopt a more commercial approach, increase the cost recovery through user charges and gradually eliminate central subsidies. However, limited progress has been made to implement this strategy.

Donor Support for the Water Sector - ADB has provided substantial assistance to the water sector in Viet Nam and plans to continue this support as reflected in the County Strategy and Program (2002-2004) and the subsequent Update (2003-2005). Besides ADB, the sector is supported by several other external funding agencies including Australia, Denmark, France, Japan, the Netherlands, and the World Bank.

Part II: The Roadmap

A. Sector Outcomes	Indicators			
	5 past	Current	5 years	10 years
National Water Reforms				
1. Effective national water policy	Law on Water Resources (LWR) approved in 1998 Subsectoral policies exist, but are not coordinated	LWR is in place but not yet implemented effectively – few of the major reforms embodied in the Law have been implemented		LWR implemented effectively
2. Effective water action agenda	No Action Agenda	National Water Sector Strategy and Action Plan under development	National Water Sector Strategy and Action Plan adopted by the NWRC	National Water Sector Strategy and Action Plan being implemented
3. Effective water sector apex body	National Water Resources Council (NWRC) established in 2000	NWRC exists but is not yet effective		NWRC fully effective in providing guidance and oversight in the implementation of the National Water Policy and Strategy
Water Resources Management				
4. Total annual withdrawals as share of annual water resources (includes both ground and surface water 1991)	<10%	≈10%	11%	12%
5. Existing policy and capacity to collect and manage water data among agencies	No coordination	National water data strategy under development	National water data strategy adopted	National water data strategy fully effective
6. River basin perspective for management and development	River basin perspective exists for major river basins, but is limited to development planning	Focus is still on development, rather than resource management River basin organizations (RBOs) established in 2001 for the Red-Thai Binh, Dong Nai and Mekong; however, RBOs not yet effective	The three RBOs operating effectively	River basin management implemented in all river basins (but not necessarily all having RBOs)
7. Devolution of integrated water resources management (IWRM)	Limited participation and local authority in IWRM through irrigation and drainage companies (IDMCs) and water user groups (for irrigation and drainage)	Limited participation and local authority in IWRM through IDMCs and water user groups at commune level (for irrigation and drainage)	Responsibilities to be delegated clearly defined and understood by all	Full devolution of agreed responsibilities achieved
8. Water quality impacts	On average, ambient water quality is acceptable, and larger rivers have high assimilative capacity However, pollution is a problem in localized cases, with moderate impacts	On average, ambient water quality is acceptable, and larger rivers have high assimilative capacity However, pollution is an increasing problem in some areas ("hot spots"), including the Dong Nai and Cau Rivers, where there is evidence of severe impacts	Due to industrialization and urbanization, there is the potential for slight to moderate degradation of ambient water quality, and an increase in the number of hot spots	Due to further industrialization and urbanization, there is the potential for moderate degradation of ambient water quality, and severe impacts in an increasing number of hot spots

A. Sector Outcomes	Indicators			
	5 past	Current	5 years	10 years
9. Water quality (WQ) management for water bodies in place	Very limited	WQ standards are in place, but not effectively enforced Accordingly, water quality management remains very limited	WQ management effectively implemented in the most critical hot spot areas	WQ management effectively implemented in all hot spot areas
▪ Adversely affected coastal zone *[to be completed]*				
10. Economic losses from floods and droughts (annual average from 1990 to 2000)	156,000,000 USD			
11. Loss of life from floods and droughts (annual average from 1990 to 2000)	300			
Water Service Delivery				
12. Incidence of children under 5 with diarrhea		11%		6%
13. Urban population with access to safe water	<50%	50%	90%	100%
14. Urban population with access to adequate sanitation				
15. Performance of urban water supply and sanitation (UWSS) – non-revenue water				
16. Amount (%) of urban effluent that is treated	0%	<2%	<5%	25%
17. Cost recovery for urban water supply	<70%	<70%		
18. Private sector participation in urban water supply	None	Still very limited	Private sector participates in water supply for provincial towns	Private sector participation expanded to district towns
19. Effective regulatory system for urban water supply		The Ministry of Construction at central level provides some degree of regulation, but there is no formal regulatory mechanism		Effective regulatory mechanisms in place
20. Rural water supply and sanitation (RWSS) strategy	National RWSS Strategy approved in 2000	Implementation of the National RWSS Strategy initiated		Demand-driven approach replaces supply-driven approach Full cost recovery but with targeted subsidies for the poor
21. Rural population with access to safe water	<30%	30%	60%	85%
22. Rural population with access to adequate sanitation	<20 %	<25 %	50 %	70%
23. Self-sustaining rural water supply systems	Very few	Few	>15%	>25%
24. Private sector participation in rural water supply	None	None	On pilot basis	High participation
25. Irrigation efficiency	<40%	<40%		50%
26. Average yield of rice per ha or yield per volume of water	4 tonnes/ha (1999)			
27. Cropping intensity	< 2 crops/ year	2.2 crops/ year	2.5 crops/ year	2.5 crops/ year
28. Cost-recovery for irrigation system O&M	<60%	<60%	70%	80%

A. Sector Outcomes	Indicators			
	5 past	Current	5 years	10 years
29. User participation in irrigation (PIM)	Within large irrigation and drainage systems, water user groups and cooperatives exist at commune level MARD adopted a PIM strategy Small diversion-type irrigation systems and small pumps managed by local irrigation groups	Commune-level water user groups and cooperatives play a limited role in O&M of the tertiary system of large irrigation and drainage systems PIM strategy not yet adopted except for a few pilot schemes and in the case of one province Small diversion-type irrigation systems and small pumps managed by local irrigation groups	PIM strategy being implemented under system rehabilitation and modernization projects Small diversion-type irrigation systems and small pumps managed by local irrigation groups	Water user associations play a role in all aspects of governance of large irrigation and drainage systems Small diversion-type irrigation systems and small pumps managed by local irrigation groups

B. Sector Outputs	Current	5 years	10 years
▪ National policy / legislation and strategy development and institutional strengthening for IWRM within a basin context.	Subsectoral policies exist, but are not coordinated The Office of the NWRC being strengthened	National Water Policy and Strategy developed The Office of the NWRC fully capable to support IWRM	National Water Policy and Strategy being implemented
▪ River basin organizations (RBOs) strengthened and active involvement by provinces and basin stakeholders supported. Integrated river basin plans implemented through a coordinated and participatory approach.	RBOs established for the Red-Thai Binh, Dong Nai and Mekong.	The offices of all three RBOs capable to implement WRM	Integrated river basin plans developed for all major river basins
▪ Effective natural resource data management strategies at the national and river basin level.	Water resources information is still scattered in different ministries/ agencies and access to date is difficult National data directory being developed	National data directory completed and easy accessible to the users and the public at large	
▪ An integrated approach for flood, drought and disaster management.	National Disaster Mitigation (NDM) Partnership established	National Action Plan for NDM developed For flood management, structural and non-structural strategy adopted	National Action Plan being implemented
▪ Improved water quality (WQ) monitoring and mitigation of WQ problems related to water bodies.	The basic tools for WQ management not yet been developed WQ standards for water bodies are in place but not effectively enforced	Basic tools for WQ management, such as wastewater discharging permit system developed	Advanced tools for WQ management, such as discharge permit markets under development
▪ Increased water supply and sanitation (WSS) services in urban and rural areas.	WSS systems exist in Hanoi, HCMC, provincial capitals and a large number of provincial towns	WSS expansion targeting district and rural towns	WSS systems in place in most district and rural towns
▪ Improved performance of WSS systems	Service standards not well defined Drinking water not meeting internationally recognized water quality standards Low levels of cost recovery Insufficient autonomy of WSS companies	Service standards defined Promulgation of specific guidelines to enforce drinking water standards and protect users Ministry of Construction (MOC) issued guidelines for water tariffs	WSS companies adhere to service standards and supply water meeting internationally recognized water quality standards WSS companies adopted water tariff allowing a satisfactory level of cost recovery WSS companies operating with required level of autonomy
▪ New approach to rehabilitation and modernization of irrigation and drainage systems	Mainly investments in rehabilitation of deteriorated infrastructure following a subsidized engineering approach	System rehabilitation and modernization projects based on a holistic approach with full participation of the users	

▪ Improved performance and sustainable O&M of irrigation and drainage systems	Insufficient autonomy of Irrigation (and Drainage) Management Companies (IMCs) Insufficient participation of users in system management Inadequate O&M	IMCs acquired the required level of autonomy Water Users Associations taking over part of the O&M according to the PIM strategy and involved in overall system management O&M approaches developed for for sustainable O&M; subsidy criteria well defined	
▪ Improved Dam safety	Safety has been identified as a issue for a number of dams	Improved dam safety procedures adopted	Safety issues resolved

C. Sector Issues and Constraints	
	Policy and Legislation - The Government has paid special attention to the water sector in recent times The Law on Water Resources (LWR) was passed in 1998 and came into effect on 1 January 1999. At present only partial progress has been made towards implementing the reforms embodied in the LWR. The secondary legislation required to implement the LWR is presently being developed (licensing of groundwater extractions, licensing on surface water utilization, and wastewater discharge permits, etc). **Institutional Arrangements** - The responsibility for water resources management functions has now been assigned by degree to the new Ministry of Natural Resources and Environment (MNRE) established in 2002. This has created a conflict in the legislation that needs resolution, since the LWR still assigns these functions to the Ministry of Agriculture and Rural Development (MARD). Also, no personnel from MARD responsible for water resource management activities have been transferred to the new Ministry. National Water Resources Council (NWRC) and River Basin Planning Management Organizations (RBOs) for the Red-Thai Binh, Dong Nai and Cuu Long River Basins have been established under the LWR in 2001, but the NWRC is dormant and the RBOs are not yet operational. The provincial level agencies involved in water resource management have limited capacity, both technically and in their ability to implement the resource management reforms that have embodied in the LWR. This issue complicates the implementation of the LWR, in particular the devolution of responsibilities for IWRM to provincial level and below. Some conflict resolution activities are carried out from the central and provincial levels, but generally adequate conflict resolution mechanisms are not in place. The present institutional arrangements for the operation and maintenance (O&M) of the country's large irrigation and drainage systems do not provide an adequate framework for improving system performance. At present, water users have limited say in the overall system management and the management companies have little incentives to improve service deliveries. For the O&M of the country's water supply and sewerage systems, a similar situation exists. **Information Management** - Water resources data and information is still scattered in different agencies and ministries. Access to this data and information is difficult, costly and time consuming. Data is not compiled and edited in an easy accessible format. **Water Resources Infrastructure -** The generally poor condition of irrigation and drainage systems limits agricultural production, and given the rather limited scope for expansion of irrigation, there is a need to improve performance of existing systems. The country's irrigation system realize only less than 60 percent of the design targets and there is inadequate integration of agriculture extension with irrigation and drainage services. A heavily subsidized engineering approach is still adopted for rehabilitation and improvement projects. Present lack of performance assessments and diagnoses mean that the potential to

improve performance, the constraints, and the nature of effective improvement interventions (physical and non-physical) are not yet fully known.

Inadequate infrastructure for urban water supply and sanitation is also a critical issue. Coverage of piped water supply is still low: less than 50% of Vietnam's urban population is served and less than -- % of the rural population. Most of the existing water supply systems are in poor condition with high losses and a high percentage of non-revenue water. The quality of water supplied is generally poor and does not meet internationally accepted standards except for the larger cities. The urban sewerage systems generally are inadequate and suffer from lack of maintenance. Private sector participation in water supply and sanitation is still very limited despite the Government's strategy for private sector participation for systems where commercial tariffs are affordable.

Dam safety has been recognized as a issue for a number of the country's dams.

Increasing Competition for Water - Vietnam is vulnerable to increasing water shortage because of high regional, seasonal and annual variability of supply and relatively low capacity for water shortage and delivery. The highly variable seasonal distribution of water resources and the lack of water retaining structures under a scenario of more severe climate variation have made water resources availability more complicated, with too much water in the wet and reduction of low flows in the dry season. Salt water intrusion hampers the use of water for irrigation, or drinking water supply in several parts of Viet Nam's coastal zone.

The increasing population and economic growth is leading to increasing demand for water. Water shortages will create social and economic costs, reduce long-term development potential, may lead to greater upstream - downstream and inter-sectoral conflicts and possibly international tension, reduce water quality and impact human health and natural ecosystems.

Watershed Degradation - Changes in watershed conditions due to human impacts are making water resources availability more complicated, with too much water in the wet and reduction of low flows in the dry season.

Deteriorating Water Quality - While the assimilative capacity of Vietnam's major rivers is large, and on average, the ambient water quality is reasonable, moderate to severe pollution is increasingly occurring in specific areas ("hot spots") due to discharge of urban and industrial wastewater, increased use of fertiliser and pesticides in rural areas, salinity intrusion in coastal areas, etc.

Viet Nam currently does not have a specific water pollution act nor regulations developed specifically for the purpose of water pollution management, other than set of standards regarding the discharging of wastes into water bodies. The current legislative and institutional framework, however, has components which either directly control aspects of the management of materials which would normally be classified as hazardous wastes, or can be extended and adapted for such purposes.

Degradation of the Coastal Zone

[to be added]

Natural Disaster Management - Flooding is a major water management problem which each year causes a great loss of human life, property damages and loss of agriculture and other outputs in the flood prone areas. Climate change and upstream watershed changes both within Viet Nam and other upstream countries have created associated problems such as erosion of topsoil, especially in the central highlands, flash floods with great damage, serious bank and channel erosion, flooding and inundation in low lying areas, heavily deposited sedimentation and land encroaching by sea water. There is a clear bias to adopt structural measures in disaster management and flood mitigation efforts.

Financing - State funding for water resources development is a significant percentage of GDP but has not been sufficient to meet requirements for resource development and management activities.

Because of insufficient cost recovery, O&M continues to be subsidized to a large degree by the central and provincial governments. However, the funding for O&M is generally inadequate resulting in a deterioration of the infrastructure, declining service delivery

	performance, and the need for major rehabilitation projects. **Regionally Shared Water Resources** - With 60 % of the country's water coming from neighbouring countries, future water resource development and watershed degradation in these countries will have an impact on Viet Nam's water resources, mostly an adverse impact. Regionally cooperation needs to be strengthened for an optimal utilization and management (including flood management) of these shared water resources.

D. Actions, Milestones, Investments	By Issue	Schedule	ADB	Others/ External
D.1.Viet Nam Actions, Milestones and Investments				
D.1.a. Water Resources Management				
TA3528-VIE Component 1: National Water Resources Coordination Project	▪ Policy and Legislation ▪ Institutional Arrangements	2001 - 2004	Technical Assistance	
TA3528-VIE Component 3: Dong Nai River Basin Water Resources Management	▪ Institutional Arrangements ▪ Deteriorating Water Quality ▪ Increasing Competition for Water ▪ Watershed Degradation	2003 - 2004	Technical Assistance	
Vietnam Water Resources Management Assistance Project	▪ Institutional Arrangements ▪ Information Management	2001 - 2004		AusAID
Water Sector Program Support	▪ Policy and Legislation ▪ Institutional Arrangements ▪ Increasing Competition for Water ▪ Deteriorating Water Quality	2001 - 2005		Danida
Study on Nation-Wide Water Resource Development and Management	▪ Increasing Competition for Water ▪ Infrastructure	ongoing		JICA
National Hydropower Plan Study	▪ Increasing Competition for Water ▪ Infrastructure	First phase completed in 2002; second phase to start in 2003		Funded by Sweden and Norway
D.1.b. Irrigation, Drainage and Flood Control				
Study on the Impact of Irrigation on Poverty	▪ Infrastructure ▪ Institutional Arrangements ▪ Financing	2002-2003	Technical Assistance	World Bank
Irrigation Rehabilitation Project	▪ Infrastructure	1995 - 2003		World Bank
North Vam Nao Flood Control Project	▪ Disaster Management ▪ Infrastructure	1999 – 2003		AusAID
Mekong Delta Water Resources Development Project	▪ Increasing Competition for Water ▪ Deteriorating Water Quality	1999 – 2005		World Bank
Cuu Long Delta Rural Water Supply and Sanitation Project	▪ Infrastructure	2001 - 2006		AusAID
Second Red River Basin Sector Project – Part A	▪ Institutional Arrangements ▪ Deteriorating Water Quality ▪ Increasing Competition for Water	2002 - 2007	Loan	Co-financing from the Government of the Netherlands
Second Red River Basin Sector Project – Part B	▪ Infrastructure ▪ Watershed Degradation	2002 - 2008	Loan	Cofinancing from Agence Française de Developpement
Vietnam Water Resources Assistance Program	▪ Deteriorating Water Quality ▪ Increasing Competition for Water ▪ Infrastructure	2003 - ???		World Bank
Phuoc Hoa Multi-Purpose Water Resource Project	▪ Infrastructure ▪ Increasing Competition for Water	2003 - 2009	Loan	Cofinancing from AFD
Central Region Water Resources Project	▪ Infrastructure ▪ Institutional Arrangements ▪ Disaster Management ▪ Financing	2002-2003 2004 - ???	Technical Assistance Loan	Cofinancing from the Netherlands Government

Son La Reservoir Project	▪ Infrastructure ▪ Disaster Management ▪ Increasing Competition for Water			Government of Vietnam
Ta Trach Reservoir Project	▪ Infrastructure ▪ Increasing Competition for Water			Government of Vietnam
D.1.c. Water Supply and Sanitation				
Second Provincial Towns Water Supply and Sanitation Project	▪ ????	1997 - 2004	Loan	
Third Provincial Towns Water Supply and Sanitation Project	▪ ????	2002 - 2008	Loan	Co-financing from AFD
Rural Water Supply Project	▪ Infrastructure ▪ ???	2001 - 2005		UNICEF
Three Provincial Towns Water Supply and Sanitation Project	▪ Infrastructure ???		Grant	AusAid
Rural Water Supply and Sanitaiton	Financing structure design		TA	Danida
Four City Water Supply and Sanitation Project	▪ Infrastructure ???		Loan	World Bank
Rural Water Supply and Sanitation Program	▪ Infrastructure ???		Loan	World Bank
Small Towns Water Supply and Sanitation (DBL)	▪ Infrastructure ???		Loan	World Bank
D.1.d. Coastal Zone Management				
Vietnam Integrated Coastal Zone Management Program	▪ Degradation of the Coastal Zone ▪ Deteriorating Water Quality Increasing Competition for Water	Ongoing		Funded by Government of the Netherlands
PPTA : Livelihood Improvement in the Central Coast Provinces	▪ Infrastructure ▪ Institutional Arrangements ▪ Disaster Management ▪ Financing	2003 2005	Technical Assistance Loan	
D.1.e. Multi-Sector				
Rural Infrastructure Sector Project - Irrigation and Water Supply Subprojects	▪ Infrastructure ▪ Financing		Loan	Cofinancing from Agence Française de Developpement
D.1.f. Others				
Forestry Sector Project	▪ Watershed Degradation		Loan	Co-financing with the Netherlands Government
Forest for Livelihood Improvement	▪ Watershed Degradation	2001 - 2003 2004 - ???	PPTA Loan	Co-financing with the Netherlands Government
Natural Disaster Mitigation Partnership Program	▪ Disaster Management	ongoing		Funded by Government of the Netherlands
Support to the Disaster Management System	▪ Disaster Management	1998 - 2004		UNDP
Natural Disaster Mitigation Initiative	▪ Disaster Management			AusAID
Public Administration Reform Project	▪ Institutional Arrangements			UNDP
D.2. Regional Actions, Milestones and Investments relevant for Viet Nam				
Flood Management Program for the Mekong Basin	▪ Internationally shared water resources ▪ Disaster Management ▪ Infrastructure	2003-	RETA under consideration	Mekong River Commission with support from various donors
Mekong Basin Planning Program	▪ Internationally shared water resources ▪ Infrastructure	ongoing		Mekong River Commission with support from various donors

Mekong Water Utilization Program	▪ Internationally shared water resources ▪ Deteriorating Water Quality	ongoing		Mekong River Commission with support from various donors