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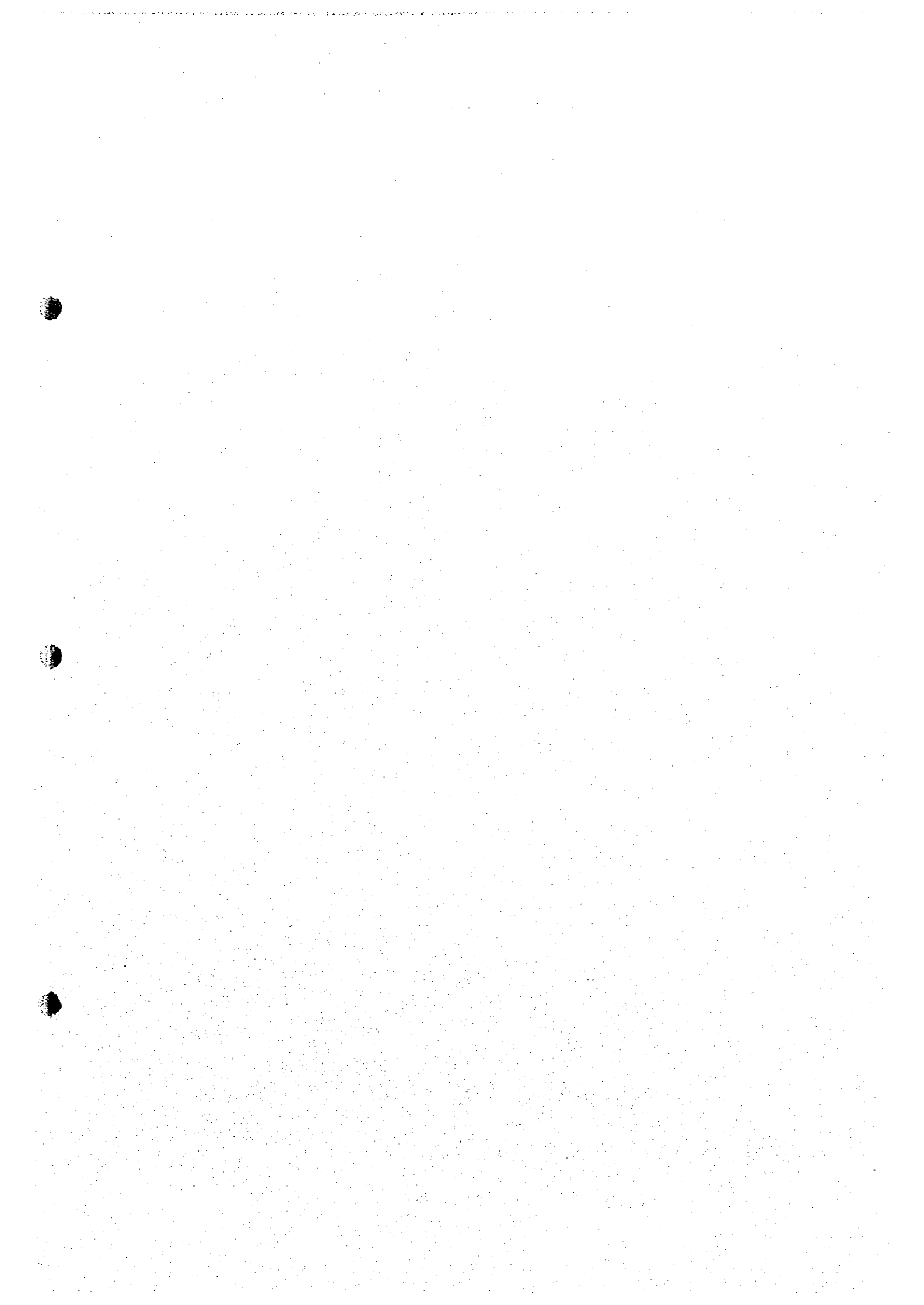


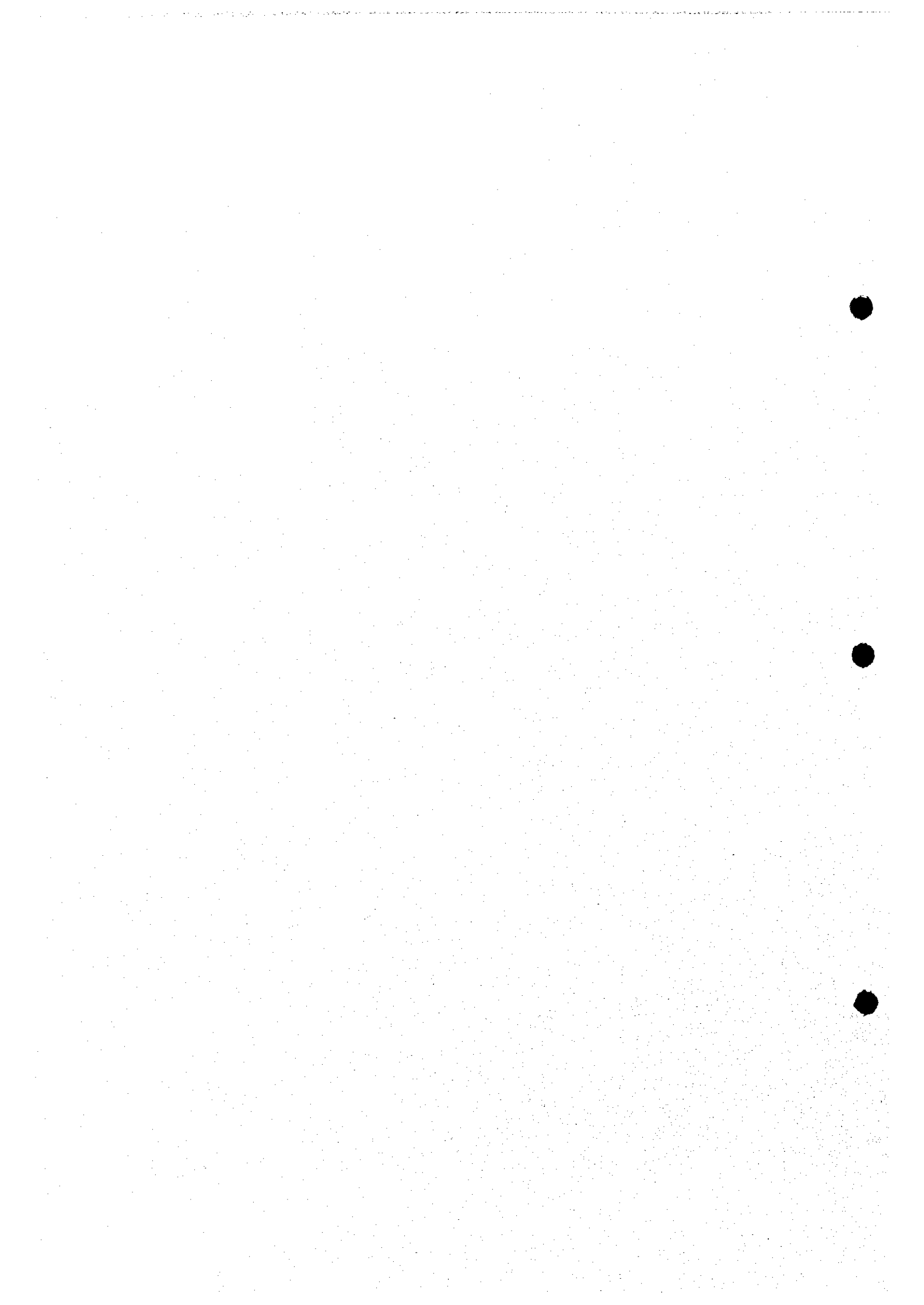
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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

THE MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
THE SOCIALIST REPUBLIC OF VIET NAM

THE STUDY
ON GROUNDWATER DEVELOPMENT
IN THE RURAL PROVINCES
OF NORTHERN PART
IN THE SOCIALIST REPUBLIC
OF VIET NAM
FINAL REPORT
SUPPORTING REPORT VOLUME B

JANUARY 2000

KOKUSAI KOGYO CO., LTD.
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Composition of the Final Report

The final reports are composed of the following 7 volumes.

1. Summary Report (Japanese)
2. Summary Report (English)
3. Summary Report (Vietnamese)
4. Main Report (English)
5. Supporting Report A (English)
6. Supporting Report B (English)
7. Data report (English)



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PART 1

STUDY REPORT

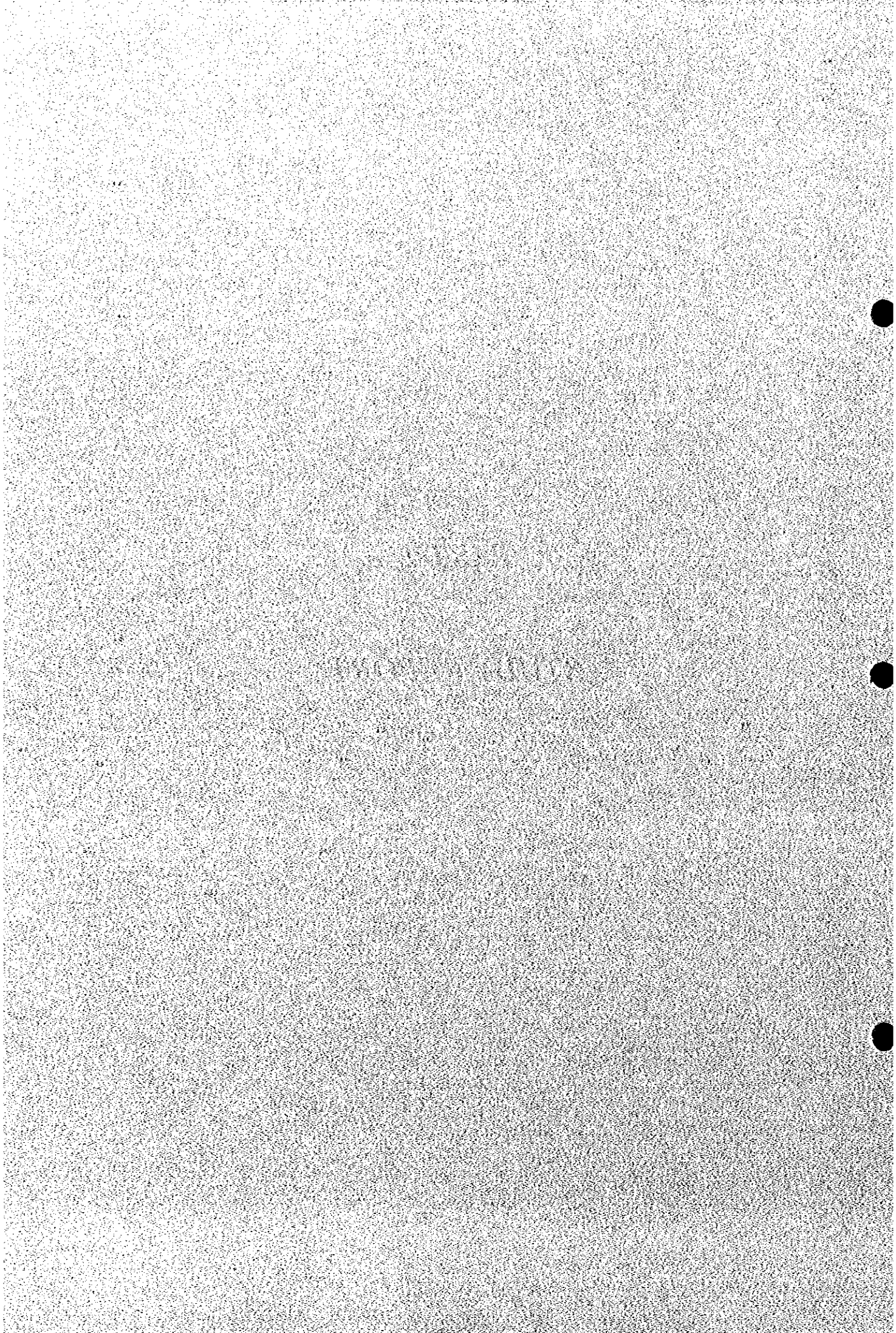


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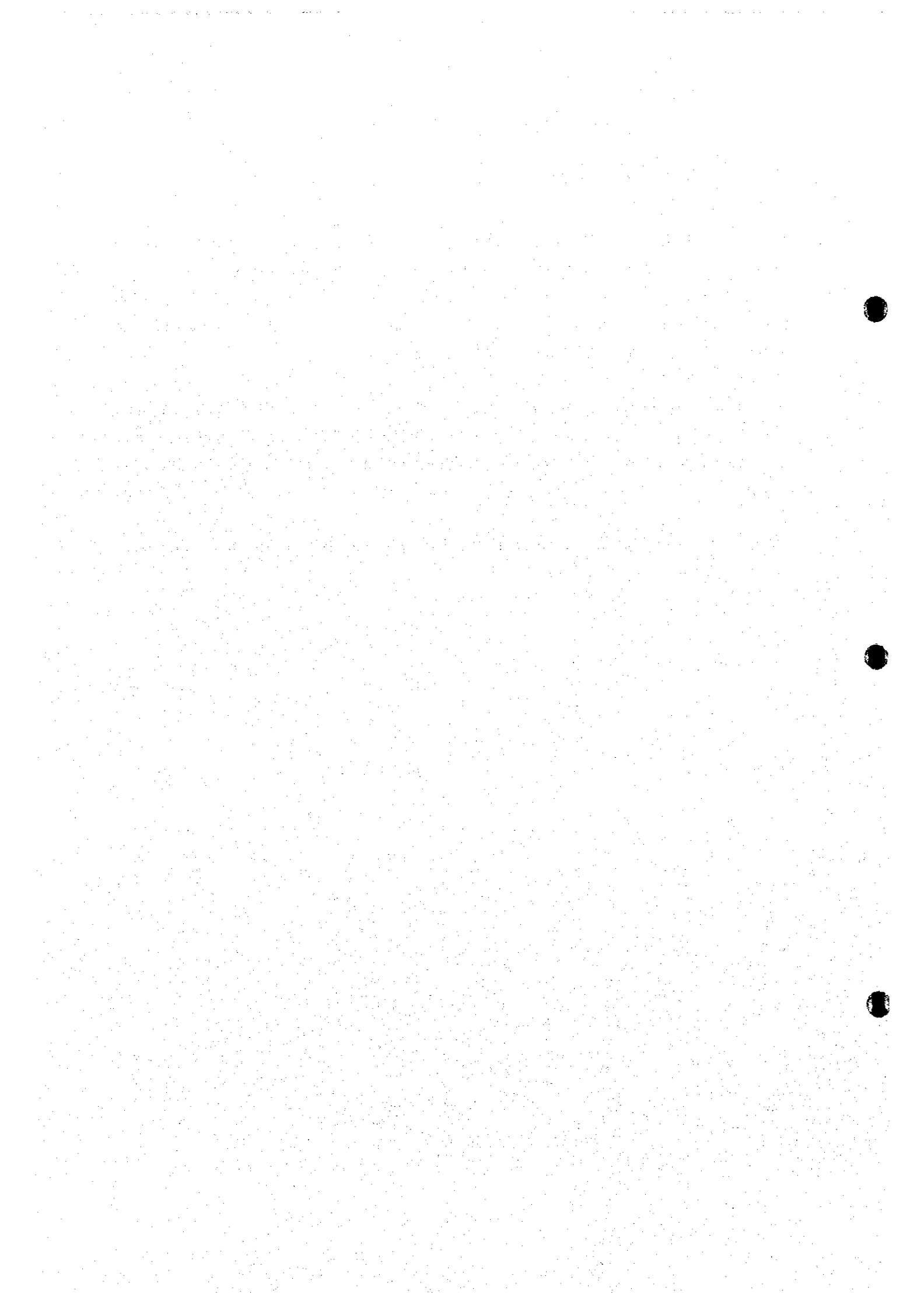
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CHAPTER 1 Introduction

The outline of this report is based on the Sector Programme Support Approach newly introduced by the World Bank and other donor agencies. The NRWSS strategy strongly supports a sector programme approach to developments within the rural water and sanitation sector. This Supporting Report has adapted the concepts of a sector programme study and the recommendations of the NRWSS strategy of Vietnam.

The aim of this document is to analyse the organisational needs of forthcoming commune water supply organisation in selected communes in Thai Nguen, Ha Noi, Ninh Binh, and Thanh Hoa and address related capacity building activities within a national institutional context.

A Volume B supports this report – presents the field visits undertaken to complete Volume A.



CHAPTER 2 Policy and Legal Framework

2.1 National Policy Objectives

At the Communist Party of Vietnam's Eight Congress in June 1996 the overall strategy for national development for the period up to year 2000 was outlined. The main thrust of the Congress was to accelerate the modernisation of the nation within the framework of an economy based on private and government ownership operating on market principles with State Management and a socialist orientation. Of particular interest to the present study was the policy objective of reaching 80% coverage of safe water for the population by year 2000. The Party identified a number of major economic and social programmes for development, which are detailed in the Public Investment Programme covering the period from 1996 to 2000.

2.2 Policies on Rural Water Supply and Sanitation

In 1992 a sub-committee under the National Committee for Rural Water Supply and Sanitation prepared a Master Plan for Rural Drinking Water up to Year 2000. The document adopts the general principles laid down in the 1990 Conference in New Delhi. The plan was never approved by the Government and, as such, does not constitute official policy. It does however provide a number of important technical and economic guidelines for the preparation of plans and projects for central and provincial authorities.

The concept of rural development was only officially introduced when the Ministry of Agriculture and Rural Development (MARD) was created in 1995. The first policy document on rural development was a draft plan prepared for the Eight Congress in 1996. The plan was based upon five basic principles upon which rural development strategy should rest:

1. Rural development is an important component of the socio-economic development and should have high priority;
2. Rural development implies a rural economy characterised by diversity, commodity production and an outward orientation to external markets based on comparative advantages of each region;
3. Rural development is established step by step as a civilised and modern society in rural areas, by improving the social welfare of the residents and by ensuring justice, democracy, security and order;
4. Rural development requires the protection and improvement of the natural environment;
5. Rural development is essentially the responsibility of the people, with the role of the state limited to support and guidance.

The Ministry of Health (MOH) prepared a similar plan for the Eight Congress. Its policy objectives states that 80 % of the population shall have access to clean water and 60 % of the households have standardised sanitary latrines by year 2000.

In addition the policy statement set a number of goals and targets for the year 2000 (and 2010) including:

- Reduce infant mortality rate from 45% to 30% (20% by year 2010);
- Reduce the under-five malnutrition rate from 45% to 30% (10% by year 2010)
- Increase the coverage of community health care services (CHS) from 90% to 100% in all communes;
- Increase the number of CHS, which have a medical doctor from 20% to 40% (100% by 2010).

The policy objectives stress the importance of equality in health care by narrowing the difference in health status between the regions, by emphasising the particular possession of the poor and remote regions and the need to implement policies of equal access to preventive health services for all citizens.

Based on this the following four main objectives addresses Government policy in rural water supply and sanitation (RWSS)

- The living conditions in the rural areas shall be improved: The majority of rural households shall have access to safe drinking water. Rural environmental sanitation shall be improved. This includes stopping the use of fresh excreta as fertiliser, and achieving a “clean, green and beautiful” rural environment;
- Rural households and communities shall take the main responsibility for rural infrastructure development and sustainable development. The government will play an active role and create favourable conditions;
- Implementation of RWSS shall be decentralised and the roles of the province, districts, communes and villages shall be emphasised in planning and implementation of RWSS.
- RWSS shall be implemented in accordance with the Dublin Principles including: treating water as an economic (and social) good; having decision making and management at the lowest appropriate level; and emphasising the participation of woman.

2.3 The Legal Framework

2.3.1 Present Situation

The relevant legislation for the RWSS sector includes ordinances and directives of water resource management, water supply, organisation, sanitation, and hygiene guided by a complex set of related legislation. As such the legal framework for the RWSS sector is fragmented (which is also reflected in the institutional set-up of the sector).

The legislative process is hampered by two important impediments, which include the lack of, a comprehensive data base of all regulations that are currently in force and the lack of an effective follow-up of implemented decrees when legislation has been approved.

The first constraint creates problems for the drafting committee as it has no reliable reference to eliminate overlaps between new and existing legislation. The second constraint has more serious consequences for the implementing and enforcing authorities and causes confusion and deadlocks at central and provincial level administration.

2.3.2 The Draft Water Law

The most important of the pending legislation is the Water Law that is currently in its 18th draft version. This draft essentially combines the three existing ordinances on hydraulic works, on flooding and on dike protection. The focus of the law is primarily on water resources and institutions involved in the management of them rather than domestic water supply, households and individual users. Only in Article 23 of the draft law is the preferential use of water for domestic purposes mentioned. The basic right to safe water for the citizens by the State is not upheld in the draft like in many other countries Vietnam can be compared with.

An other critical issue in the draft law is that there is no clear statement as to the number of regulations that needs to be drafted to implement the law. Nor does it state which ministry or institutions that will be in charge of the draft.

The implementation of a law which do not fully cover domestic water and its users will most certainly be delayed because no regulations can be issued. This is not conducive to the development of the RWSS sector. It is therefore expected that the present draft version of the Water Law is not the final version to be approve by the Peoples Committee.

2.3.3 Existing Legislation

(1) Legislation on the Organisation of the RWSS Sector

In connection with the preparation of the Master Plan for Rural Water Supply up to Year 2000, the Prime Minister's Office issued Decree 200 TTG. This is the basic document for the organisational aspects of the RWSS sector. After stating the main objectives of the decree, the document assigns duties to various institutions within the RWSS sector. Although the Public Administrative Reform has rendered a number of the a assignments obsolete to the decrees it remains still in force.

The most important change is the concentration of duties and responsibilities for managing water resources and water exploitation in the Ministry of Agriculture and Rural Development (MARD) and the creation of the Centre for Rural Water Supply and Sanitation within the

same ministry.

The Ministry of Construction is left with regulatory functions only but still remains the coordinating ministry for the implementation of the decree. This situation has led to actions by the National Steering Committee to assume functions that should be exercised by MOC.

The responsibilities for environmental sanitation is currently divided between the Ministry of Science Technology and Environments (MOSTE), the Ministry of Health (MOH), and MARD. This causes confusion especially at provincial level administration.

MOC and MARD currently claim responsibilities for water supply and sanitation (WSS) in class V towns, rural centres and peri-urban areas. Recently, also the Committee for Ethnic Groups and Mountain Areas (CEGMA) has entered a claim for the creation of groups rural centres (GCC) in remote areas which includes rural water supply activities (but not sanitation).

The decree assigns research to three different ministries as well as to the National Committee for Science and Technology. Research in particular the development of standard latrines has been undertaken for years with few results. The present approach seems to be overly academic and developed in a vacuum without being tested by the market.

(2) Legislation on Water Resources and Water Supply

The Law on Environmental Protection (1994) and Directive 478/TTG on the Strengthening of State Management of Water Resources are the two most important legal documents for the sub-sector.

Article 15 in the Law on Environmental Protection deals with the obligations of institutions and individuals to protect water resources. Article 20 instruct institutions and individuals to use appropriate technology in exportation, processing and storing of natural resources including ground water. The law also specifies various penalties for violation of the law.

Directive 478/TTG on the Strengthening of State Management of Water Resources was prepared in response to the increasing pollution and the threat it inflicts on the water resources. The use of wastewater and the discharge of solid and liquid waste into water resources has apparently reach such a dimension that strong measures have to be enforced. The directive is focusing on organisation measures and enforcement of existing legal instruments as well as stresses the unification of water resources management under MARD.

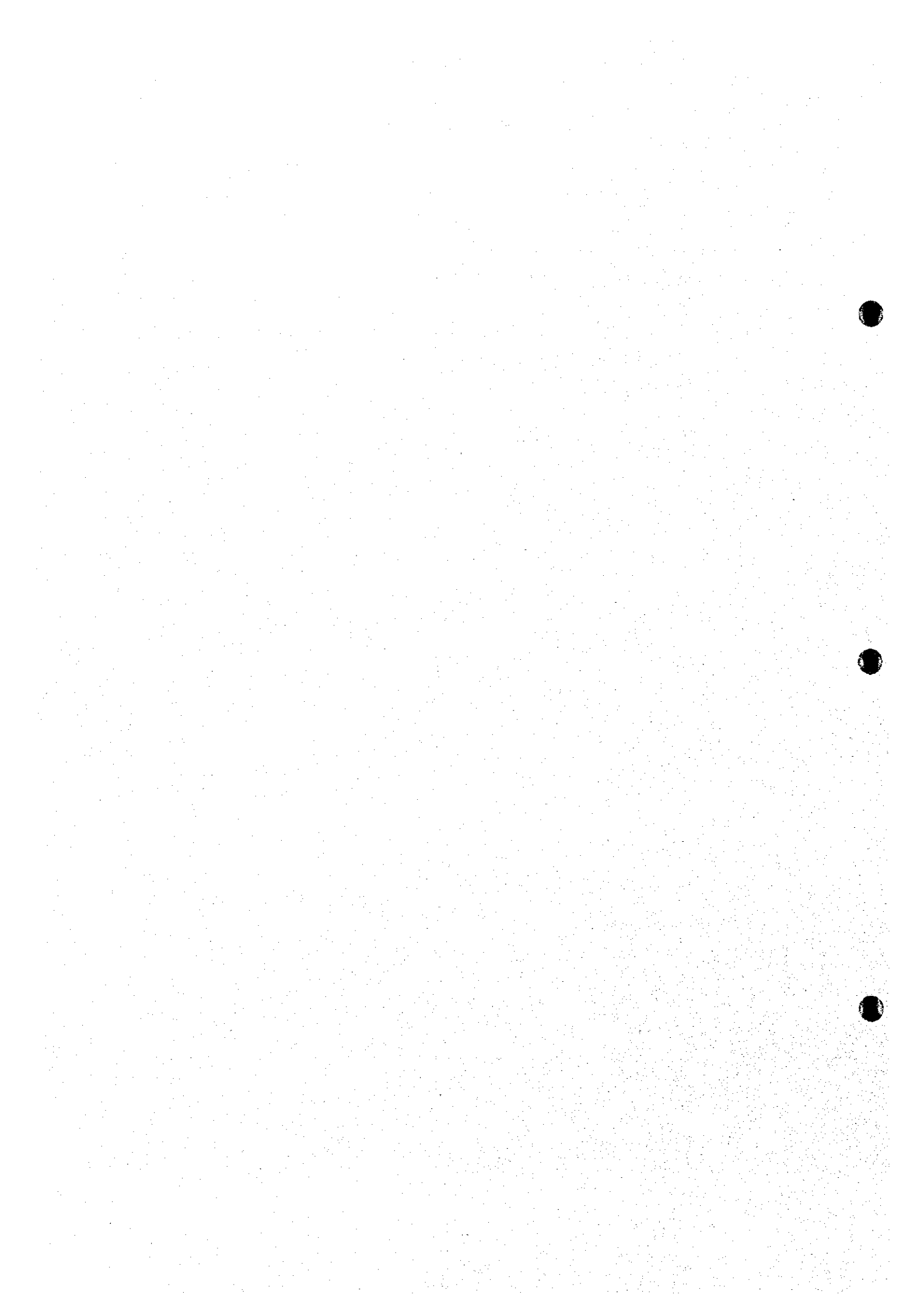
(3) Legislation on Sanitation and Hygiene

The Law on Protection of Public Health (1989) dominates legislation in this sub-sector of RWSS. It is very comprehensive and includes both definitions and articles and it assigns responsibilities for different ministries, departments and institutions to undertake information and education campaign (IEC) programmes in general hygiene, environmental management and childcare.

It also promulgates institutions in charge of water supply to ensure hygienic standards for domestic water and prohibit anyone from polluting water resources used for domestic purposes.

Other provision includes:

- Provision on hygiene for industrial and domestic waste disposal as well as disposal of waste in public places;
- Provision for medical treatment of people and persons with particular health problems including aged people, war invalids and ethnic minorities.



CHAPTER 3 National RWSS Strategy

3.1 Background

In 1982 the Government of Vietnam established the National Committee for Drinking Water and Environmental Sanitation and adopted the policy and objectives of the 1981-1990 International Drinking Water and Sanitation Decade. A Master Plan for Rural Drinking Water Supply was prepared in 1993. As a follow-up to the master plan the Government requested UNDP/World Bank's Water and Sanitation Programme in 1994 to prepare term of reference (TOR) for a Rural Water and Sanitation Strategy Study. Upon the completion of TOR the Danish International Development Agency (Danida) agreed to fund the study.

The National Rural Water Supply and Sanitation (NRWSS) Strategy Study was carried out January 1997 and May 1998 by the Centre for Residential Planning and Development (CERPAD) with assistance from a team of Danish and Vietnamese consultants.

The study team carried out a detailed survey in nine representative survey provinces. The findings were presented in eight volumes Mid Term Report. The Draft Final Report presents the strategy in a two-volume report¹.

3.2 Defining the RWSS Sector

The strategy consists of a vision of where the strategy wants to be in 20 years time and a general approach on how to achieve that vision. The strategy is not a master plan (a detailed plan for centrally organised implementation) nor an action plan on how to implement the strategy. The strategy is a brief statement of the Government's policies and approaches to RWSS. Further details on how the strategy will be implemented are provided in the associated document National Strategy Support Programme, Action Plan and Investment Programme. It is envisaged that the strategy will be regularly updated.

The strategy covers rural areas and small towns of up 30.000 people.

The RWSS sector is defined in a narrow way and includes:

- the identification and use of water resources for water supply;
- the supply of water for domestic purposes to households;
- the hygienic disposal of human excreta; and
- hygiene practices that affect water and sanitation related diseases.

¹ NRWSS Strategy Report Volume 1 and National Strategy support Programme, Action Plan & Investment Programme. Carl Bro International & CERPAD. May 1998.

3.3 Strategy Objectives

The strategy will achieve the following objectives in rural areas and small towns by the year 2020:

1. 90% of households use safe water for domestic purposes;
2. 80% of households use hygienic latrines;
3. 80% of the people follow good hygiene practices

These objectives are mainly about people's behaviour and they emphasise the use of safe water and hygienic latrines. Access to facilities is not enough to reach the objectives.

3.4 Strategy Approach and Implementing Guidelines

3.4.1 Approach

The strategy is based on the following considerations:

1. Demand-based Approach meaning that the users, after receiving appropriate advice will:
 - decide on what type of RWSS facilities they want, how they will organise this and how they will pay/finance the facilities;
 - either construct household facilities themselves or arrange for a contractor to build the facilities;
 - pay the contractor;
 - manage operation and maintenance of the facilities

The Government will be responsible for influencing and limiting user demands by:

- promoting an appropriate demand; and
 - banning certain technologies that are potentially harmful to health or the environment
2. Cost Recovery meaning that in principle the user will pay for all construction costs and all operating costs for RWSS facilities. In most cases it is expected that the users will pay at least 50% of construction costs. The Government² will also subsidise certain types of users and certain types of technologies. In all cases the users will finance all operations and maintenance costs and shall control all payments for construction.
 3. Construction by Contractors or Users meaning that the government will move out of RWSS construction business. Future construction of RWSS facilities shall be done by contractors³ or by the users themselves.

² The term Government is covering both central and provincial administration.

³ Contractors might be State Owned Enterprises (SOEs) such as provincial Water Supply Companies (WSCs), or private sector companies.

3.4.2 Implementing Guidelines

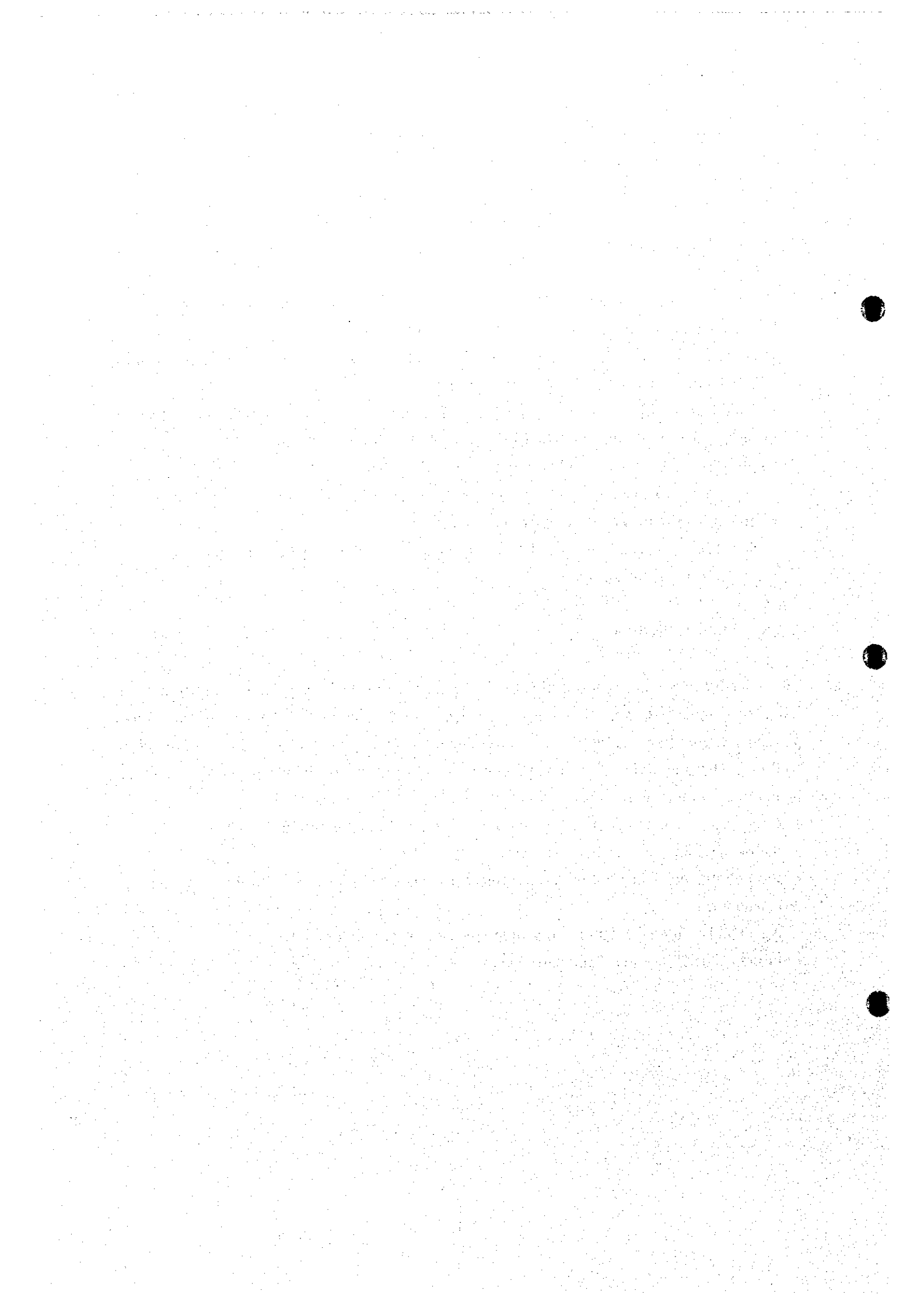
In order to implement the approach the following guidelines need to be followed.

1. Users will decide on the service level, technology and operational arrangements that they want;
2. Effective information, education and communication (ICE) programmes will be started before the planning or construction of RWSS facilities;
3. Users (with the exception of the poor) will pay at least 50% of the construction costs of RWSS facilities and 100% of operating costs;
4. For RWSS facilities that are intended to serve more than one household, an effective management organisation shall be formed before planning the scheme.
5. Appropriate technologies shall be promoted meaning that:
 - use spare parts that are readily available;
 - do not require the handling of fresh excreta;
 - have been tested and shown to be sustainable and acceptable by the users; and
 - are environmentally acceptable.

3.4.3 Main Activities

The objectives and approach described will require several basic changes in behaviour by a range of people and institutions. The main behavioural change is required by the users, particularly regarding their hygiene practices and the way they view their water and sanitation facilities. The underlying issue of strategy is therefore how to change people's behaviour including government officials and sector institutions. This will be done by:

- Conduct IEC where people are given information and explanation as a basis for changing their behaviour;
- Promote financial support and access financial means so people can afford to change their behaviour;
- Adapt and enforce regulations so people need to change worst practices;
- Promote social incentives and participation.



CHAPTER 4 Existing Sector Programmes

4.1 Introduction

A number of donor countries including Australia, Denmark, France, Finland, Japan, the Netherlands, USA have on-going programmes and projects in the water and sanitation sector. However, the majority of the projects are to be found in urban areas, a trend that seems to also to include loan-financed projects from Asian Development Bank (ADB) and the World Bank (WB). The different organisations have all policies for the water and sanitation sector (WSS) but a few has specific policies for the rural areas.

The main contributor on rural water supply and sanitation (RWSS) programme so far has been the WATSAN Programme, which started in 1982. This is a joint programme between the MARD, MOH, the Women's Union and UNICEF. Annual investments have been close to USD 6 mill. which is administrated by the Centres for Rural Water Supply and Sanitation (CERWASS) initially established for this purpose.

4.2 The UNICEF-assisted WATSAN Programme

4.2.1 Background

The programme started in 1982 in three southern provinces. By 1993 the programme had expanded to, at that time, all 53 provinces⁴ for rural water supply (RWS) and 44 provinces for sanitation. In 1997 it was stipulated that close to 50% of the rural population have access to safe drinking water and close to 20% have access to environmentally safe sanitary facilities.

Improvement of local management, community mobilisation and participation, basic hygiene education, promotion of cost recovery schemes and low-cost technologies are key elements of UNICEF involvement. In the future UNICEF supported projects activities will focus on increasing WATSAN coverage in poor ethnic communities in the mountainous areas.

The UNICEF-support to WASTSAN programme is guided by the goals set during the World Summit for Children in 1990 and Vietnam's National Plan of Action⁵.

⁴ The number of provinces by 1998 has increased to 61 due to a more decentralised government structure.

⁵ 80% of the rural population have safe drinking water and 60% have access to environmentally safe sanitary facilities by the year 2000.

4.2.2 Objectives

The objectives are:

1. To reduce the prevalence of water-borne and excreta-related diseases, parasite infection and other health risks and thereby reduce infant/child mortality and morbidity rate;
2. To strengthen the national capacity to implement and sustain water supply and sanitary facilities in rural areas;
3. To reduce the workload of women and children in carrying water;
4. To improve the rural living standards, thereby narrowing the urban-rural development disparities.

4.2.3 Programme Activities

The programme activities are divided into two main categories:

- Rural water supply; and
- Environmental sanitation

There is a close link between these two issues which, however, sometimes seems to be separated at the implementation stage as RWS is regarded as the main responsibility of the MARD while MOH is in charge of improving households awareness on waterborne diseases and environmental sanitation.

(1) Rural Water Supply

The objectives of the component is to:

- Reduce the prevalence of water-borne diseases by providing water in sufficient quality and quantity at convenient walking distance;
- Integrate water safe water supply with improve sanitation and promotion of personal hygiene;
- Strengthen national capacity to implement and sustain water supply facilities in rural areas;
- Reduce the workload of women in carrying water in order to facilitate more time and energy for better child care and income-generating activities;
- Improve the living conditions and reduce disparities.

The main RWS activities include:

1) Construction of water supply facilities:

- Rain water storage tanks;
- Slow sand filters;
- Tub wells with hand pumps;
- Protected dug wells with hand pumps;
- Gravity flow systems; and

- Small piping systems.
- 2) Capacity building to support sustained service delivery:**
 - Training of community mobilisers, health workers, technicians and system caretakers;
 - Technical and logistical support to province and districts;
 - Upgrade of planning and management capacity at central and provincial levels.
- 3) Information, community mobilisation and participation:**
 - Empowerment of community members/groups, especially women for active participation during the planning and implementation process of the different project activities;
 - Mobilisation of household resources and to improve system sustainability

(2) Environmental Sanitation

The long-term goal is to bring change at the household and community level towards better hygiene practices through education and to ensure access to facilities for safe disposal of human excreta and other waste to protect the environment.

Based on this the objectives are:

- To promote and improve knowledge, awareness and correct practises of personal hygiene and environmental sanitation among communities and among primary school children;
- To reduce parasite infections and other health risks by demonstrating scientific methods for safe disposal of human excreta and other waste in rural areas with likely consequent improvement in the nutritional status of children and adults;
- To improve the living standards of rural families by motivation them to adopt the essential minimum household sanitary facilities and protecting the environment.

In order to fulfil these objectives the following activities are applied:

1. Advocacy for sanitation and hygiene education

- Awareness creation and advocacy from central to grass-root level in order to motivate 4.8 million households to construct their own latrines and other sanitary facilities by the year 2000;
- Central and provincial government will form necessary policies and guidelines for districts and communes to carry out advocacy and other strategies to achieve the National Plan of Action (NPA) targets;
- The mass-organisations (unions) and NGOs play a key role in promotional and motivational activities.

2. Construction of sanitation facilities (demonstration and expansion)

In close collaboration with MOH this component is to carry out⁶:

- Different technical options for low-cost latrines;
- To construct 230,000 household latrines in 200 districts (2,400 communes);
- Vector control activities in 100 communes seriously affected by dengue fever;
- Promote the model of Intensive Sanitation Project of Thai Binh to an additional 20 districts.

3. Hygiene education and provision of sanitation facilities in primary schools

The following activities of this are carried out by MOET:

- Support for construction of sanitary facilities in 5000 primary schools;
- Train 10,000 teachers on hygiene education and maintenance of school sanitary systems by the year 2000;
- Monitor the quality of construction, use and maintenance of the system.

4. Capacity building to ensure sustainable development

- Train as needed community mobilisers, health workers, masons for promotion of sanitation activities to implement the project at commune level⁷;
- Orientation of mass organisations, commune functionaries and teachers in 2,400 selected communes.

4.2.4 Organisation and Management⁸

MARD/CERWASS is the implementing organisation for the water supply component. MOH/Department of Health for the sanitation component and MOET/Department of Education for the school component. The Women's Union and other mass organisations also play a major role in applying the community IEC campaigns and in the administration of revolving funds for sanitation. UNICEF is in charge of administering the international funding arrangements, promote appropriate technology and liaison with the main involved stakeholders at national level. UNICEF employs 7 professionals engaged in the WATSAN programme.

Liaison with CERWASS is done weekly but there is limited cooperation with other donor agencies to exchange experience. Liaison with the National Water and Sanitation Committee (NWSC) seems to be done in an ad hoc manner when need arises. The NWSC therefore does not perform any regular supervisory role.

⁶ According to UNIFEC the construction of facilities has now stopped. Emphasis is now switched towards IEC campaigns.

⁷ It is estimated that close to 10,000 health workers, teachers, motivators and masons have been trained along with 500 trainers for promotion of sanitation activities.

⁸ The organisation of the RWSS sector is explained in Chapter 4.

CERWASS is not structure specifically to deal with UNICEF's WATSAN programme. It has strong supervisory and controlling role towards the provincial CERWASS and it is very technically oriented⁹

Nether MOH, MOET or any of the mass organisations have established special units dealing specifically with the WATSAN programme.

4.2.5 Capacity Building

UNICEF consider capacity building to be one of their main functions, but their ability to implement this is limited as most donors place a high priority on physical construction. Capacity building is done in two ways:

- Supply of equipment to the provincial CERWASS; and
- Training

Training courses are planned and organised by UNICEF WATSAN staff and are run by both external resource persons and UNICEF staff. Training courses include construction of rainwater tanks; design of piped gravity schemes; management and planning. These courses are mainly conducted for central and provincial staff. In addition there is training of community motivators in the use of participatory tools as well as district and commune health staff are trained in promoting latrines and hygienic practices. There does not seem to be any overall training needs assessment prior to training and monitoring and evaluation of training is not done on regular basis.

According to the WATSAN Evaluation Report¹⁰ the present arrangements have resulted in a huge increase in the capacity of the provinces to implement water supply facilities through the provincial CERWASS. Still, the WATSAN programme is very much top-down oriented. In the case of PPS there do not appear to be any formally adopted selection criteria for sites where PPS are build. The sites tend to be selected on the basis of requests submitted by the CPC before this has been discussed with the target groups. There are no effective mechanisms in place, which enables the comparison of needs between different communities, and thereby prioritising of needs.

This results often in selection of sites for facility construction as well as the choice of technology does not always reflect the priority needs of the rural population. This stresses the need for a stronger focus on the "soft" aspects of WATSAN programmes e.g. mobilisation and participation, not only through cost- and labour contribution as very often the case is today, but also real decision making and awareness.

⁹ CERWASS (Centre for Rural Water Supply & Environmental Sanitation) has no unit dedicated specifically to HRD and training.

¹⁰ NRWSS Study Report October 1997.

According to a recent evaluation of the WATSAN PPS component¹¹ There is a tendency to develop drinking water projects that do not have a sanitation component and vice-versa. Consequently, most UNICEF assisted PPS projects do not have in-build sanitation activities. On an overall level it must be concluded that the UNICEF WATSAN programme has contributed substantially to the improvements of RWSS in Vietnam and that experience and lessons learned through the years are important inputs to guide sustainable implementation and operation of new projects within the sector.

¹¹ Evaluation of the Pumped-piped System (PPS) Component of the UNICEF Assisted WATSAN Programme in Vietnam. August 1998.