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National Workshop

WATER SUPPLY AND SANITATION DECADE

Report of National Workshop III

Cipanas, West Java, November 18-22, 1985

DIRECTORATE GENERAL OF REGIONAL DEVELOPMENT,
MINISTRY OF HOME AFFAIRS

DIRECTORATE GENERAL OF CIPTA KARYA,
MINISTRY OF PUBLIC WORKS

DIRECTORATE GENERAL OF COMMUNICABLE DISEASES CONTROL
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Incooperation With

WORLD HEALTH ORGANIZATION AND GTZ

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ABBREVIATIONS

Bangda - Directorate General of Regional Development
Bappeda - Regional Planning Board
Bappenas - National Planning Board
BPAM - Interim local waterworks enterprise
Bangdes - Directorate General of Rural Development
Bina Marga - Road Development
Cipta Karya - Directorate General of Human Settlements
Desa - village, rural area
DIP - sectoral budget
DIPP - project development budget
Dinas - local services
Gotong Royong - mutual cooperation or community work
GOI - Government of Indonesia
Ha - hectare
IKK - (Ibukota Kecamatan) - water supply project for sub district capital/semi-urban
Inpres - (Instruksi Presiden), Presidential Instruction. It refers to fund allocated to local government for public works projects.
Kabupaten - District or administrative level II local government.
Kecamatan - sub-district or administrative level III local government.
KIP - Kampung Improvement Programme
LKMD - (Lembaga Ketahanan Masyarakat Desa), village development association
Ipcd - liter per capita per day
lps - liter per second
m - meter
m³/sec - cubic meter per second
MCK - (Mandi-Cuci-Kakus), communal bathing facility.
Pengairan - Water Resources Development
PDAM - local waterworks enterprise
PKK - Women Welfare Association
PMP - government equity
PU - Public Works
RDI - government domestic loan
Repelita - National Five Year Development Plan
Sarekda (Sarana Ekonomi Daerah) - Regional Economic Infrastructure Bureau
SAN - Sanitation
WS - Water Supply

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EXECUTIVE SUMMARY

1. Many efforts to develop Indonesia's urban and rural areas have been undertaken for the past 16 years through a series of five year development plan or Repelita. The provision of basic services—water supply and sanitation—for the urban and rural areas were implemented through various development programmes of many government departments/institutions and also through self-help projects by the communities and the private sector.
2. In the context of the International Water Supply and Sanitation Decade, the Government of Indonesia has established target for 1990. The goal is to ensure access to clean water for 75% of the urban population and 60% of the rural population; whilst, 60% of the urban households and 40% of the rural population should have access to sanitation facilities. The National Water Supply and Sanitation Programmes coincide with the implementation of the last 3 years of Repelita III and the whole period of Repelita IV and the first 2 years of Repelita V.
3. In the efforts to accelerate the provision of clean water and sanitation facilities, Workshop I of the National Water Supply and Sanitation Decade which was held in 1981 called for the involvement of various government departments, the local governments, the communities, and the private sector in the implementation of water supply and sanitation projects. It also established the financial scheme for the development of water supply facilities. Attention were also given to operation and maintenance aspects of the completed facilities. The community was also expected to participate in the whole development process—from the preparation of planning to the sharing of costs for operation and maintenance of the systems. The use of appropriate technology was also given emphasis. In order to accelerate the development in the water supply sector, mass approach by utilising standardised design and production of package treatment plants was adopted. Actions recommended by the Workshop I were manpower development for planning, construction and management, education and training of personnels, formulation of water resources development. Workshop I has also agreed to form National Action Committee/Steering Committee and Working Group with members from the government departments involved. In respect to external assistance, Technical Support Team consisting of UNDP, WHO, the World Bank and other UN organisations was also formed to assist the Government.
4. Workshop II was then held in 1982 and was able to formulate detailed national water supply and sanitation programmes/plans for the Decade. Consequently, in 1983 a guideline for the local government in the planning and programming of water supply and sanitation projects in the regions was developed. This guideline was distributed to the Bappeda (Regional Planning Board) of the level I local government in order to improve their involvement in the sector development.

5. A mid-Decade Review Workshop (Workshop III) was then held in 1985 revealing the estimated coverage for urban water supply was 40% and sanitation was not able to quantify in percentage; while, for rural water supply was 36% and sanitation 31%. Workshop III also discussed a number of issues, particularly constraints and obstacles which are hindering the progress in the sector development. In order to reach the Decade's targets by 1990, new approaches should be developed and appropriate measures must be taken to remedy the various constraints. With a view to achieve the Decade's targets, new approaches to be developed should cover:
- 1) increase attention to sanitation sub-sector;
 - 2) a more balance input between the urban and rural sub-sectors;
 - 3) an integrated approach in urban infrastructure development aiming to optimise the use of available resource, to give a greater role to local government in the planning and implementation of urban development projects and to encourage the participation of the private sector;
 - 4) one-river one-plan approach in the development of water resources in the region to ensure a more orderly development;
 - 5) total package programme in the rural sub sectors in order to attract foreign aids;
 - 6) encourage private investment for the urban sectors;
 - 7) integrated approach to promote greater community participation;
 - 8) reorientation of sector financing from social to economic sector.

Remedial measures recommended by the Workshop are among others :

- 1) increase investment in the urban and rural water supply and sanitation sectors;
- 2) facilitate resources mobilisation at the local government level, and establish new resources of funding/credit and financing arrangement for the sector development;
- 3) increase local financial responsibility on cost-recovery and costs of operation and maintenance;
- 4) greater portion of foreign aids in the financing of local components;
- 5) increase involvement of local government and community in the sector programme development;
- 6) extended involvement to other government ministries in the sector programme development;
- 7) inclusion of communication support component as part of the project activity;
- 8) strengthening local government institutions;
- 9) further implementation of human resources development;
- 1) recruit and retain adequate and skilled personnels;
- 11) greater emphasis for waste water and water quality surveillance;
- 12) develop management information system in support of rural and urban water supply and sanitation programmes;
- 13) better coordination of programme development at central and local level
- 14) formulation of government regulations required for better development of water supply and sanitation sectors;
- 15) further promote bottom-up planning as defined in the government regulations.

1. INTRODUCTION

At the launch of the National Decade, the Government of Indonesia set the goals of raising water coverage to 75% for urban areas and 60% for rural areas; and sanitation coverage to 60% for urban areas and 40% for rural areas by 1990. The result of Workshop I held in Bali in 1981 was among others agreed to share the responsibility of WS/SAN development among the three executing government agencies, namely the Ministry of Public Works, Ministry of Health, and Ministry of Home Affairs. It was also agreed to rotate the chairmanship of the Steering Committee among the member agencies concerned.

Workshop II which was organised by the Ministry of Health was held also in Bali in 1982, and was able to formulate the national programmes for the Decade. In 1983 the Working Group was able to develop guidelines for the Regional Government in the Planning and Programming of WS/SAN development in the region.

Owing to certain circumstances at that time, Workshop III which was planned for 1983 was postponed, and eventually was held in Cipanas, West Java, in November 1985, in time to make review and evaluation of the mid-Decade progress. In the meantime, six Working Groups were formed with the task to prepare outlines for the papers to be presented at the Workshop III. Each Working Group discussed specific issue, covering Decade's achievements, institution and manpower development, water resources development and water quality control, local government and community participation, planning mechanism and information system, and funding.

The Workshop III, held in Cipanas, West Java, from November 18th to 22nd, 1985, was organized by the Ministry of Home Affairs (Directorate General of Regional Development), in cooperation with the Ministry of Public Works (Directorate General of Human Settlements), Ministry of Health (Directorate General of Communicable Disease Control and Environmental Health), World Health Organisation) and GIZ ^{Deutsche} (Gesellschaft ^{für} Technische Zusammenarbeit). The theme adopted by the Workshop III was : "Toward A Successful Implementation of WS/SAN Decade".

2. OBJECTIVES

The objectives of the Workshop were to review and evaluate the mid-Decade achievements, to formulate policies and strategies, and to define priority areas for action in order to reach the Decade targets by 1990. Six major topics had been presented and discussed during the Workshop.

3. PARTICIPANTS

Workshop III was attended by 130 participants presenting members of the Steering Committee and Review Team consisting of

various government departments (Ministry of Home Affairs, Ministry of Health, Ministry of Public Works, Ministry of Finance, Bappenas, Ministry of Industry, State Ministry of Population and Environmental Affairs), representatives of the Bappeda (Regional Planning Board level I local government), Public works Offices from 9 selected provinces, Health Offices from 9 selected provinces, non-government organisation, social institution, University of Indonesia, and representatives of WHO and UNICEF. The complete list of participants is given in Annex I.

4. INAUGURAL SESSIONS

In the absence of Mr. Supardjo Rustam, Minister of Home Affairs, the opening ceremony was done by Mr. Atar Sibero, Director General of Regional Development Ministry of Home Affairs. In his opening address, he acknowledged that the national programme to provide clean water and sanitation for urban and rural population in improving their well-being is a great undertaking, involving the whole nation; that is, the central government, local governments and the people as a whole.

He pointed out the Law No.5 year 1974, which stipulated local responsibility in providing basic services. Having this legal basis it is expected that local governments coordinate and integrate all development activities in the regions, in order to attain optimum results.

Coordination among the local agencies, and between local and central government agencies, should be continuously conducted as an effort to attain efficient joint undertaking. Integration of various components of the water and sanitation sector financed from various resources is also needed for the successful implementation of the sector.

The Minister urged that development of water and sanitation in the region should be consulted and coordinated before hand with the local administration concerned for it's the local governments that will eventually bear the responsibility in its utilisation. Successful development is among other achieved through a proper planning. This is reflected in the Minister of Home Affairs Regulation No.9 year 1982 which defined the mechanism for bottom-up planning. Essentially development programmes should be based on bottom-up planning which accomodates people's aspiration and formulates projects priority. The Minister stressed that successful development will be ensured when it responses to local initiatives and has the support of the people. In this view, the Minister urged that in formulating sectoral programmes all agencies involved should pay attention to and take into account the development programmes already prepared by the local government.

The government fully realized that local agencies responsible in providing basic services to the people should be strengthened in the effort to improve its management capability. He then suggested that this workshop participants should give more attention in the discussion to assess the capability of the local services in providing basic services to the people.

He also stressed the importance of community participation in particular in the rural areas. He urged, the participants to continuously promote community participation to make the people aware of their responsibility as beneficiaries as well as partners in the development process. Through their active involvement basic facilities built by the government will then be better used and properly maintained for longer service. The local government should encourage community participation in the hope that people will take up self-help projects in meeting their basic needs. Awareness creation and other related programmes can raise the interest and responsibility of the people in fostering better development. Non government organisation, such as PKK (Family Welfare Association), LKMD (Village Development Association) etc should be stimulated to take active role in the development process.

The Minister further stressed the importance of water resource development and conservation in water and sanitation development programmes. He referred to the Constitution 1945 which among others defined the development and utilisation of land, water and natural resources therein is intended for the welfare of the people. He pointed out that in urban areas reliable water resources and water quality which meet the required standards are being heavily polluted and are becoming scarce. He then drew attention of local government on the issuance of regulations as instrument to regulate and control the utilisation and development of water resources in the region.

In ending his speech, the Minister then invited all participants to take active part in the Workshop which is expected to produce improvement and recommendation for further implementation of Decade's programmes in attaining the Decade's target by 1990.

The Governor of West Java in his address read by Mr. Aboeng Koesman welcomed all participants and expected useful resolutions will be produced by the workshop. He considered the problem relating to WS Development as enormous, covering water resources, management and utilization. Comprehensive and integrated measures on national wide basis would be required to deal with the many problems arising from the development. He further mentioned that conflicting interest may arise between regions. As in the case of Jakarta, its raw water is supplied from water resources in the West Java region. He suggested the establishment of a water board responsible for the coordination in the use of water resources. Problems arising from such conflicts can then be resolved by the board. Whereas, the water services provided to the consumers are managed and distributed by the waterworks enterprise concerned.

The Minister of Public Works in his speech read by Mr. Soenarjono Danoedjo, stressed the role of water supply and sanitation in the national development. Despite the low priority given to the sector, water supply development actually supports the development of other strategic sectors, such as in the development of tourism, harbour, industry. The water supply therefore should be regarded also to have economic importance, which should be supported with sufficient financing.

Referring to the current economic condition of the country, the Minister appealed that scarce resources be utilised in an efficient manner. In the water supply sector, this can be achieved through realistic planning, supported with reliable data and also greater involvement of the community in the development process. He further stressed the importance of proper utilisation and maintenance of the completed facilities.

Mr. Gamil Hamdy, the UNDP Resident Representative, extended his warm wishes for the successful attainment of the objective of the Workshop. The International Decade has provided a stimulus for Governments and international or bilateral agencies in accelerating the provision of safe water supply and basic sanitation which is essential in fulfilling the development of man as an individual and as an integral part of the society. All have the right of access to those services in the quantity and quality required for their basic needs.

In respect of UNDP role in the Decade Programme, Mr. Hamdy pointed out the involvement of UNDP as focal point for the external support extended to the Steering Committee established by the Government of Indonesia. In collaborating with other international agencies, the UNDP has assisted the government in the development and implementation of the national programmes for water supply and sanitation. Activities taken up by the Technical Support Team was also mentioned.

Mr. Hamdy then referred to some of the UNDP contribution in 4 specific projects which were executed by the WHO, namely NTT rural water supply and sanitation project, training in Pre-investment Planning, Rural Water Supply and Sanitation for South Sulawesi, and Manpower Development for Rural Water Supply and Sanitation, all amounting to US\$ 4,150,000.— During the UNDP Third Country Programme, UNDP will also support the implementation of 3 new Water Supply and Sanitation projects. They are the extension of NTT Rural Water Supply Project into Tim-Tim areas, the second Project in Training in Pre-Investment Planning for Water Supply and Sanitation, and the Rural Water Supply and Sanitation Project for Bengkulu and Lampung provinces. These projects will cost about US\$ 2,640,000.—

In closing his speech, Mr. Hamdy disclosed that the UNDP support to National Decade is only to stimulate further development by the Government and the people themselves. Finally, he noted the importance of education and training which act as catalyst for encouraging people participation.

On behalf of the WHO Representative, Mr. Erdogan Pancaroglu expressed his appreciation of being able to address the Workshop. He then mentioned the commitment of the Government of Indonesia to the goals of the Decade. Activities of the first half of the Decade were described—highlighting a number of actions taken up and also pointed out the obstacles in implementing the Decade's plans. Mr. Pancaroglu was very pleased to note the establishment of new directorates in Cipta Karya and Depkes which deal with environmental sanitation, and also expressed concerned of the imbalance input given to the urban and rural subsectors.

He expressed confidence that the Workshop will place emphasis in further strengthening the local government institutions.

Turning to the prospect of the second half of the Decade, he stressed the importance of a more coordinated actions among the sector agencies and with the donors. In light of the economic situation, effective investments to the sector should be sought. Thus, projects and programmes that are affordable, replicable, self-reliant and self-sustaining should be given emphasis. Involvement of the local government and the communities at every stage of water supply and sanitation development should be improved.

He further mentioned the role of WHO in the Decade which is health oriented. Collaboration with the Government of Indonesia in all fields of environmental health was also mentioned. WHO will continue to provide support to the Decade Activities in respect of the Technical Support Team. Finally, he expressed his thanks and wished all the success in the deliberation.

After opening ceremony was held, workshop was started with plenary session, three Director Generals give their addresses.

The Director General of Cipta Karya, Ministry of Public Works reminded the participants that this Workshop is to review and to evaluate the implementation of the National Decade programmes and to make recommendations. He remarked that the Decade programmes were not even mentioned in the document of the Repelita. It is however in line with the Repelita's programmes since both programmes were formulated by the Government. In its implementation the urban and rural WS/SAN are treated differently.

Indonesia will experience a high population growth which will reach a total of 182.5 million people by 1990. About 55 million or 30% of which live in urban areas; 7% in semi-urban areas and 63% in the rural areas. He then drew attention to the provision of urban water supply and sanitation which will be affected by the high rate of urbanisation of 2.5 million people per annum, which is mainly due to reorientation of the economic development. By 1990 about 44 million people will have to be provided with basic services.

He noted that the water supply sector has made significant progress in raising the total production capacity to 38,500 l/s capable of serving about 38.5 million people. In terms of distribution coverage however only 16.5 million is presently being served with piped water system. To catch up with this gap, a total investment of Rp 2.4 trillion will be required for the next five year, among others to expand the distribution network, to reduce losses due to leakages, to improve the service through better management. He mentioned that for the Repelita IV only Rp 1.2 trillion is provided from development budget. Other sources of funds therefore would have to be secured.

He referred to the financing scheme adopted by the government in the development of urban water supply, namely government's full assistance will be given to system utilising

basic needs standard (60 lpcd); system using 60-125 lpcd will be financed by government equity and domestic loan; while, system above 125 lpcd will be financed through loan. He cited that many cities are able to take up loans thus lessen the burden of government budget. Allocation of government budget therefore can be extended to other cities requiring government full assistance.

Another possibility of funding is to allocate fund from other development sector (i.e. economic sector) since water supply has a role in stimulating economic growth. Commercial and industrial activities and private and government investments are concentrated in the urban centers. Thus efforts/measures to safeguard the investments from environmental degradation would be required through development of WS/SAN facilities. It is for this reason that this sector should be given high priority.

The development of water supply in large cities will require high investment due to increase pollution of water resources from domestic and industrial wastes. As in the case of Jakarta and Surabaya expensive programmes for protection of water resources are therefore required. Owing to the limited funds, the government then adopted the approach on an integrated urban infrastructure development, which among others coordinates the various urban components, consolidation/mobilisation of various available resources, thus ensuring a more effective implementation of urban development projects. In this connection, the Director General also urged that private housing developers be given the opportunity to invest in the water supply sector.

With regard to institution, the Director General mentioned the absence of local apparatus in level I local government which deals with urban development. He also remarked that Cipta Karya has no direct control over the Dinas/local waterworks enterprise of local II government, thus making it difficult to exercise its function to provide technical guidance and assistance. However, he referred to the circular letter of the Minister of Home Affairs authorising the Kanwil (Regional Office) of the Public Works to extend its supervisory control over the local waterworks enterprises in the region.

With respect to cost recovery for urban services the Director General illustrated the possibility of urban services to be self-financing. As an example, he mentioned the establishment of local waste disposal enterprise in the city of Bandung.

With regard to IKK water supply, the Director General suggested recovering cost of O&M through the use of Inpres fund since not enough revenue can be collected from the consumers. In order to increase service coverage, he also urged the creation of financing credits for the house connections.

The second Director General, Dr. M. Adhyatma, Director General of Communicable Diseases Control and Environmental Health presented a profile of health condition in Indonesia. He briefly explained the relations of clean water and health. Four factors affecting the level of health are heredity, health services, people habits and attitudes, and the living environment (which has

the most strong effect on the health of person). He then illustrated the Indonesian health situation through infant mortality rate (IMR), life span, etc. In Indonesia diarrhea which is water related disease accounts for 24% of the major causes of infant death and tetanus (related to hygiene) places 3rd or 20.2% of death. These diseases are related to clean water. Nevertheless, Indonesia has been able to reduce infant mortality rate from 143 in 1971 to 100 in 1980. By the year 2000 it is expected to reduce IMR to 45 per 1000 death.

It was mentioned that the development of water supply and sanitation facilities is shared among three government ministries. The Ministry of health is responsible for water quality control and other aspects related to health. The Ministry also implements water supply and sanitation development programmes in the rural areas. With regard to the rural water supply, 31% of the rural population is estimated to have access to clean water, which are mostly provided through the shallow and deep well hand pumps. About 67% of the rural water supply facilities utilize ground water sources. In view of this, the Director General mentioned the need to establish Drilling Task force which has the task to carry out drilling works. The works are to be supported by adequate manpower, provision of spareparts, and reliable hydrogeological maps. The investment needed totaled US\$ 730 million, of which 52% is to be provided through government funds; while, 48% will have to come from foreign aids sources. He also mentioned the imbalanced development between the urban and rural areas, of which 90% of the funds go to urban water supply. He suggested that in order to reach the Decade targets more priority should be given to the rural areas; that is 84% for the water supply and 16% for sanitation.

In this connection, he cited the difficulty of obtaining foreign aids for the rural water supply development, which is regarded by the donor countries/agencies to be "unbankable". The donor countries/agencies stressed the need to promote greater involvement of the local government, community participation, and the private sector. The managerial capability of the local government then needs to be strengthened, a new approach in rural development by hiring social scientists/sociologists should be adopted, and local production of water supply equipment and tools should be encouraged. These were suggested by the speaker in order to attract foreign aids.

With regard to rural sanitation, he described the programmes undertaken by the Ministry of Health which cover the construction of latrines, communal bathtoilette, drainage, training for sanitarians and health workers, laboratory, and related equipment/tools. He further mentioned the need to carry out water quality surveillance and also warned of the danger of improper handling of insecticide/pesticide chemicals.

The last address was given by Director General of Regional Development Ministry of Home Affairs. He made general remarks with regard to local government's responsibility in providing basic services. He was also concerned with the need to strengthen the managerial and technical capability of the local government. He

further underlined what have been said by his colleagues. He especially noted the importance of government supervisory and technical assistance to the local government apparatus in ensuring the proper functioning of the facilities. He also stressed the need to promote and stimulate greater involvement of the community in maintaining and proper usage of the completed facilities. Finally, he cited the low turn out of survey reports from the region, and was eager to receive reports from other provinces.

5. PRESENTATION OF PAPER AND DISCUSSION

5.1. A review of the progress of Water Supply and Sanitation development

Mr. Wahyu Widodo, Director of Environmental Health Ministry of Health and Mr. Martsanto DS, Director of Environmental Sanitation, Ministry of Public Works, discussed the difficulty in reviewing and evaluating the progress of WS/SAN development for the past five years. Survey reports from the provinces were incomplete, many programmes in the WS/SAN sector were not reported, information/data submitted were not reliable, etc. To review the progress, the first speaker mentioned that he has to rely and used other information, namely from the sectoral agencies of the central government. For easier reading, the paper divided its discussion into urban and rural areas respectively. The paper identified the issues which consisted of accomplishments and constraints in the implementation of WS/SAN programmes.

During discussion a participant mentioned the difficulties in obtaining complete and reliable information. One of the reason was that the Bappeda level I government was not properly informed and not involved by the level II government on the projects undertaken in the region concerned. He cited several cases to support the allegation. The participant further stated the need to have information and monitoring system. In response to this problem, another participant complained that such field survey was not properly financed, thus making it difficult to have reliable and complete information.

5.2. Mid decade's review of urban WS/SAN development

Mr. Hendropranoto Suselo from Ministry of Public Works reviewed the policy and strategy of urban water supply and sanitation of the current Repelita IV within the context of Decade's programme. Progress in urban water supply and sanitation implemented by the Ministry of Public Works were presented. The paper noted several achievements in terms of number of systems built, population served, number of systems functioning, and regional development.

The progress to date is as follows :

Water Supply :

- Coverage 37.8% or 15,628,000 people have access to piped water.
- Total number of systems built : 350 cities and 390 IKK.
- Total investment by the end of Repelita III : Rp 563.6 billion.

Sanitation :

- About 6,200,000 people benefitted from KIP.
- Total area improved with basic infrastructure : 25,000 Ha covering more than 220 cities.
- Total investment (KIP and Urban Sanitation/PLP) : Rp 101.4 billion.

The paper identified the constraints and difficulties in reaching the target :

Water Supply :

- Low service coverage
- Weak institutional capability
- Insufficient funding
- High water leakage, poor maintenance of existing facilities.

Sanitation :

- Low priority, thus low funding
- Lack of comprehensive urban planning resulting in deterioration of environmental condition.
- Weak local services.

To reach the Decade's target for 1990, several measures need to be considered in formulating the strategy :

- Investment needed for water supply Rp 1,919 billion; for sanitation Rp 376.6 billion.
- shifting of priority (status) of water supply from social to economic sector.
- Intensive joint undertaking and better coordination among the sectoral agencies involved.
- Institutional building (i.e. strengthening of BPAM).
- Various new financial schemes, which are more responsive to the need should be made (i.e. provision of short-term credit for expansion of pipe distribution and house connection, soft-loans for improvement of plant operation).

During discussion the speaker described the service coverages achievement among others in term of funds allocated. He proposed that the O&M for IKK be covered by Inpres. Since the water supply sector played important role

in the economic growth (i.e. development of tourism, industry, etc.), the sector should be treated as having economic value so that more funds will be allocated. He further made some corrections on the investments provided for the sector. The speaker proposed many items for improvement in achieving the Decade's target.

One participant asked whether the unit cost for water service could be reduced in light of economic difficulty and constraints in achieving the target. The speaker agreed to consider it. With regard to foreign aided projects, the unit cost tends to be higher due to higher standards. Another participant asked the percentage to be charged for waste water which is included in the drinking water tariff as in the case of Bandung waterworks. The speaker answered max 30% should be charged for waste water.

5.3. Mid decade's review of rural WS/SAN development

Mr. H. Soekanto from Ministry of Health started by describing the policy and strategy of rural water supply and sanitation. It also mentioned the general consensus on programme implementation among the government agencies involved in the development of urban and rural water supply and sanitation.

The water supply facilities built in rural areas are financed through National and Regional Development Budget (APBN/APBD), Presidential Instruction (Inpres), local development funds and foreign assistance. The facilities consisted of piped water systems, artesian wells, protected spring taps, rainwater storage, dug wells, shallow and deep well hand pumps, infiltration gallery, slow and rapid sand filters, filtration and aeration. By 1984, through government programmes, about 29.2% of rural population benefitted from the various facilities. Whereas, an additional 7% is estimated to have access to clean water through local government, private and foreign aided undertakings.

Various surveys to assess the condition of facilities and water qualities were conducted by CARE, UNICEF, and Ministry of Health in 4 provinces and several district areas of Yogyakarta. The surveys indicated the causes of failures of the facilities as follows :

- inadequate supply of water
- lack proper maintenance
- poor quality of hand pump
- high-fecal contamination of water sources

The review of rural sanitation included fecal disposal, household and industrial waste water, household hygiene, public hygiene, industrial pollution, food hygiene, pesticide control. Based on a survey conducted in selected villages in 1982 by Ministry of Health showed that about 27.5% of households have latrine. The number of pit latrines built by

the government totalled 263,295 latrines in 1985. It is estimated therefore about 31.3% of rural population use latrines. The paper noted high tendencies of environmental pollution through poor drainage and improper handling of pesticide. By the end of Repelita III, the government however has built a total of 50,174 waste water drainage or about 1% of the total rural households. Sanitary condition of rural housing investigated were reported poor. Death among children under five, due to pesticide poisoning was quite high (CFR 18%), while, pesticide poisoning was 104 person/1,000 or CFR 10.6%. The paper identified the issues as follows :

- optimisation of the use of foreign assistance
- a clear division of responsibility among various government agencies involved in the development of rural and urban water supply and sanitation sector.
- manpower development
- major causes of breakage of the facilities
- level of coverage for rural sanitation
- low priority
- insufficient environmental and water quality control due to lack of skilled technician etc.
- low community participation
- low economic potential
- land problem for community facilities
- lack of interest on the part of business community
- weak service unit
- limited supportive components

He concluded by recommending items to be considered in the formulation of policy and strategy, notably the establishment of drilling task force, manpower development for sanitary workers, etc.

During discussion one participant questioned the service coverage of rural water supply mentioned in the paper which is regarded to be low. The speaker admitted that the figure was obtained by using certain assumption. Another participant was surprised to note poor water quality on some of piped water systems as mentioned in the report and asked for confirmation.

5.4. Institution and manpower development

In the absence of Mr. Sugiarto, his paper was read by Mr. S. Panjaitan from ministry of Home Affairs. The paper started with the discussion on Government Regulation No. 17 year 1953, No. 49 and 50 year 1951, and Law No. 5 year 1974.

All of which stipulated local responsibility for the provision of basic services. The author further discussed and reviewed the status of local services, relationship with level I local government, training and manpower. In reviewing the capability of local services in providing basic services, the author noted various kind of organizations

involved in providing the services which are shared among a number of government departments, such as Dinas PU, Dinas Kebersihan, Sub Dinas, Seksi, PDAM, BPAM. He made distinction between those services provided by the Dinas and the regional enterprise (i.e. PDAM). The Dinas has a limited capacity in providing services due to its financing arrangement which is under the local budgetary system. Whereas, the local enterprise operates as a revenue earning enterprise with its accounts independent of local budgetary system.

By November 1985, there were 113 PDAM and 260 BPAM. The BPAM are eventually to be converted to PDAM as stipulated in the Joint Decrees between the Minister of Home Affairs and Public works No. 5 year 1984/No.28/KPTS/1984. In the meantime, through the Ministry of Public works about 300 personnels have received training; while, 150 personnel received training from Perpamsi (Indonesian Waterworks Association). Minister of Home Affairs Regulation No. 690-1572 year 1985 regulates institutional framework for establishment of waterworks enterprise covering board management, the management, carrier planning, etc. The author suggested the establishment of regional services for the operation and management of urban environmental sanitation as stipulated under the Minister of Home Affairs Decree No. 363 year 1977. Further, he stated that it is the responsibility of local government to establish such an enterprise. He cited as an example the municipality of Bandung who formed a solid waste disposal enterprise, and also incorporated waste water management under the existing waterworks enterprise.

The author discussed the role of central and local government in the development of institutions and manpower within the context of regional autonomy (decentralisation). Many efforts to strengthen the institutional capability and manpower should be undertaken among others through technical guidance, issuance of regulations, etc.

In his paper the author proposed a uniformity in the organisation of the local services. Water services should be operated by PDAM. While, urban sanitation should be managed under the Dinas of the municipality concerned. Realising the problem, the central government has taken the effort to reorganize the Public Works of level I local government into 3 separate Dinas, namely Cipta Karya, Bina Marga, and Pengairan so that the management and operation of urban sanitation will be more intensive and efficient.

The central government still has the responsibility to provide technical guidance and assistance to the local governments in the development of WS/SAN sector. He proposed that physical development in the regions should be supplemented by other supportive programmes, such as institution development, manpower or that such supportive programmes be included as one of the component of the project.

He concluded that the consensus reached by the Workshop III should have a legal basis/framework to be recommended to higher authority/government for its formulation and issuance.

During discussion one participant underlined the importance of manpower development. Other suggested the establishment of a water board in level I local government responsible for the orderly development of the water resources in the region. Another participant asked what responsibility/authority still belonged to the local services as defined by the Law in view of the decentralisation. A participant from Yogyakarta mentioned a policy problem related to the refusal of the mayor of Yogyakarta in accepting the handover of BPAM which is experiencing deficits.

5.5. Utilization and development of water resources and water quality control

Mr. Badruddin Mahbub from Ministry of Public Works presented a paper which was organised into 6 chapters : introduction, utilisation and development of water resources, water resources conservation, water quality control, government regulations and water quality standards, and conclusion. Water resources development and utilisation are regulated by the Law No. 11 year 1974 concerning water resources development. The Law specified 3 categories of uses in decreasing order of priority; first drinking; second, agriculture; and third, power generation. The paper projected water demand by the year 2000. About 95 million m³ per year is needed for irrigation purposes or about 64% of the total demand of 149 million m³/year, of which 58% will be used for agriculture in the island of Java. Water supply demand will be in the order of 7.3 million m³/year and for industry about 0.78 million m³/year.

The author described the uses of drinking water. Up to now, about 42,998 l/s is consumed for drinking purposes. About 60.6% is supplied from surface water. Water demand in the urban as well as rural areas by the year 2000 is estimated to be equal (about 3.53 to 3.76 million m³/year, respectively).

The author reported 3 major reasons associated in the deterioration of water resources, that is denudation of catchment areas causing heavy sedimentation of river, salt-water intrusion, and pollution due to domestic and industrial wastes. Heavy sedimentation is occurring in most major rivers in Java (i.e. Citarum, Cisadane, Brantas, Solo, Tuntang, etc). Salt-water intrusion is being experienced in Kalimantan coastal areas (i.e. Kapuas, Barito estuaries), and also in Jakarta. While, pollution of water bodies can be found in most large cities, such as in Jakarta, Surabaya.

Water quality control is implemented to protect water quality at the sources and at the waterworks' intake. The Ministry of Public Works has conducted water quality

inventory/mapping for 120 rivers, lakes, and reservoirs throughout Indonesia. In the meantime, water quality map is being prepared. While, the Ministry of Health is reported to have conducted water quality surveillance by laboratory examination of some 3,812 samples in 1980 and about 11,177 samples in 1983.

A regulation on water pollution control is now being formulated. However, in its implementation, coordinative efforts among various government agencies involved is very important. This function should be clearly defined in the Presidential Instruction and Joint Decrees of the government ministries concerned. The author further discussed water quality standards, which up to now is difficult to establish. The criteria for raw water and waste water standards will be different for different purpose/applications (i.e. drinking water, fresh water fishery, agriculture, etc). The implementation of the standards will also face many difficulties/obstacles among others because of weak law enforcement, political reasons (since sources of pollution also originated from many small-capital intensive industries which adsorbed employment). Nevertheless, it is agreed that there should be a national water standards which can safeguard the water resources.

During discussion one question concerned the absence of private business community in safeguarding the water resources. Those who produced more waste should be charged accordingly. Other participant concerned with the depletion (water drawdown) of community dug wells in the vicinity of a factory which used large capacity pumping. Question was raised with regard to water quality mapping. A participant asked whether the Center for Water Resources Research & Development in Bandung has given some information/data concerning water availability to the study on national urban development strategy which was undertaken by Cipta Karya. Another participant mentioned that in the case of Surabaya water supply project, the funds from the loan can be utilised only if water pollution around the Surabaya area is solved. He proposed that there should be a strong law enforcement or even a water board to minimize and control/monitor waste discharges. In the case the water sources at the intake is polluted, which agency has the authority to take action in eliminating such pollution. Last question was raised with

regard to the lack of expertise in carrying out Environmental Impact Assessment Study.

5.6. Community participation and local government involvement in WS/SAN activities

Mr. Mardjono from Ministry of Home Affairs explained the importance of community participation in all stages of the development process. Without community involvement the development target will not be achieved. In the water supply and sanitation sector, it was found that community

participation and local government involvement are still limited and weak, resulting in project failures and delays. The paper further identified the constraints in achieving the Decade target as follows :

- community resources have not been fully utilised;
- NGO/Community institution are still weakly organised;
- private sector on water supply and sanitation development are oriented toward profit making;
- social institution have not been fully involved in water supply and sanitation development;
- water supply and sanitation schemes in several projects are found to be improperly planned and implemented;

The author then discussed the various programs to promote community participation in each stage of development process including the target groups involved in the programs. The author concluded by recommending actions to be taken in the coming years, namely an integrated program on community participation through training seminar, community participation in O&M, community contribution to water supply and sanitation measures, financing arrangements/schemes for house connection, financial resources to promote community development, establishment of workshop and repair services units.

During discussion the speaker identified and acknowledged that there are already many efforts implemented to promote community participation in the regions. He admitted however that the yardstick to measure accomplishment in community participation still needs to be developed. He further elaborated the need to adopt a measure which integrate the various programs through training seminar. He gave illustrations on what have been planned for the Bengkulu province through UNDP assistance. He further mentioned various ways and means to achieve better community participation.

A participant suggested the need of sociologist in the community participation program to better understand the tradition and custom existed in the rural areas. He also recommended to include the communication component as part of project activities to ensure better development. Other participants suggested a way to measure community participation in term of materials, labours, money contributed by the community. Other mentioned that it can be measured by evaluating how the community manage the facilities. The degree of participation of course will fluctuate in time. He further mentioned the difficulties in conducting such evaluation.

5.7. Planning mechanism and program implementation and information system

Mr. Warsito Rasman from Ministry of Home Affairs referred to various government regulations, notably the Minister of Home Affairs Decree No.9 year 1982 on Planning

Mechanism and Programme Implementation for the Region. As stipulated in the decree level I and level II local governments are required to formulate and prepare :

- Guidelines for Regional Development.
- Five year regional development plan.
- Annual regional development plan.

The guideline and plans provide direction and screening of annual programmes which are processed according to planning mechanism through village level consensus, Kecamatan (sub-district) level I (Province) coordinative meeting, regional consultation, and national consultation.

According to the Decree the Bappeda level I and level II has the function to integrated various development programmes in the region and also coordinate the central and local government agencies which executed the development programme. In each stage of screening project proposal are agreed upon and priority are set forth in accordance with the budget cycle.

The paper noted several constraints in the planning and programming mechanism of water supply and sanitation programme. These are :

- involvement of level II government and community in the planning process is limited
- lack of understanding of Information System
- proper and timely attention of project proposal inadequate
- the bases of screening proposals which represent actual needs and priority are lacking
- data from the regions are not sufficient to support planning for water supply and sanitation development.

The author suggested changes in the planning mechanism. In order to encourage bottom-up planning, and programming, information on water supply and sanitation development prepared by the central government should be provided to Level I local governments which in turn disseminate/distribute the information to level II local governments for setting up priority according to local needs.

During discussion the speaker explained in great details the planning mechanism as stipulated in the Minister of Home Affairs Decree No.9 year 1982.

5.8. Funding for Water Supply Services

In the absence of Dr. J.B. Kristiadi, Mr. Hatomi from Ministry of Finance read his paper. In its first chapter, the paper reviewed the progress in the water supply sector, the management of waterworks enterprises, and the financing of water supply development. In chapter 2 the paper discussed and analysed the impact/effect of investment on the development of waterworks enterprises, on the community, and

on the involvement of the local government. Finally, in chapter 3 the author recommended the need to formulate investment strategy in the water supply sector, participation of local government in the financing of water supply development, involvement of the local government in each stage of the development process, and improvement/upgrading of personnel in the management skill, particularly in the financing and accounting aspects.

The paper described the existing pattern of finance in the water supply sector, namely Health Inpres for rural water supply and sanitation; DIPP (project development budget) for the IKK (semi-urban) system; DIP (sectoral development budget) for urban water supply system. While, the PDAM (local waterworks enterprise) can be financed through DIP, RID (government domestic loan), PMP (equity contribution to public utilities), own receipt. There are 2 criteria for funding, namely full assistance and soft loans.

In analysing the present investment, the paper used financial reports from 5 PDAM. The investment structure of the PDAM is divided into central government funds, level I and level II local government assets. The gearing ratio (own receipt and total capital) tends to decrease which indicated that the PDAM's capital is wholly dominated by loan. This mean that the revenue will be used mostly to pay interest.

With regard to assets which is derived from government investment and PDAM own's receipt, the author suggested that inventory be made to distinguish the various assets. The author further discussed the "bankability" of the PDAM, which in order to cover the fixed costs must set a high water tariff, and the existence/occurance of high water leakage, make it difficult for the enterprise to reach the break-event-point.

The allocation of funds can be done in 2 ways, that is through total investment for selected PDAM only or fragmented investment for the PDAM in the region. This strategy however needs to be further formulated/defined. Priority of investment for the water supply also needs further clarification. The author further suggested the need of greater share of the local government in financing the development.

During discussion, participant mentioned that in the DIP system, community participation is not clearly defined. Other stated that in the case a PDAM fails to pay back the loan. Two participants suggested the need to coordinate the financing of the water supply subsector and the sanitation subsector, and the need to implement cross-sectoral funding as in the case of harbor development.

6. CONCLUSIONS OF THE WORKSHOP

The Government of Indonesia, since the launch of the National Drinking Water Supply and Sanitation Decade, has conducted Workshop I and Workshop II and developed Guidelines for the Regional Governments in the Formulation of Water Supply and Sanitation Plans and Programmes in the Regions. Within the framework of the National Decade Programmes, the Government has completed Repelita III and set forth the policies and strategies for Repelita IV as continuation of previous Repelitas. After 5 year into the Decade, a third workshop was held with the aim to review and evaluate the progress of the national decade plans and programmes during Repelita III and the past 2 years of Repelita IV. Workshop III reviewed the implementation of the water supply and sanitation (WS/SAN) in the regions, and discussed 6 main issues for review and evaluation, namely progress in water supply and sanitation coverage, institution and manpower development, water resources development and water quality control, local government and community participation, planning mechanism and information system, and funding.

The conclusions of the Workshop are outlined into 5 main subjects :

- 1) Review of progress in water supply and sanitation coverage.
- 2) Issues for the rest of the Decade.
- 3) Policies and strategies for the remaining years of the Decade.
- 4) Policies on external assistance.
- 5) Plan of actions.

6.1. Review of progress in WS/SAN coverage

6.1.1. The development of WS/SAN for the past years has achieved a significant progress. This was made possible among others by favourable economic condition during Repelita II and widespread development during Repelita III. Briefly, the progress achieved by the end of fiscal year 1984/1985 are as follows :

6.1.1.1. 36% of the rural population is estimated to have access to clean water supply; whereas, 31% is estimated to benefit from sanitation improvement through latrines.

Mid decade's progress in sanitation development in the rural areas can be reported as follows :

- construction of 50,170 prototype waste water drainage.
- construction of prototype home industry waste water treatment in several provinces.
- construction of 255 sanitorium facilities for turbuculosis patients (will be expanded to cover other rural areas.

In view of the increasing environmental pollution in the rural as well as urban areas, surveillance programmes on pesticide control were carried out covering about 30% of the listed sources of pollution, food hygiene covering 25% of the registered restaurants and food manufacturers, 30,000 public facilities, solid waste disposal sites in 48 towns.

As many as 400 graduates of Public Health Inspector Academy and 2000 sanitarians were recruited and assigned to community health facilities throughout of Indonesia. More than 200,000 rural development staffs/cadres received training in the construction of pit latrine and waste water drainage scheme, 224 rural health inspectors in pesticide control and 108 health workers in environmental sanitation.

- 6.1.1.2. Water capacity installed has reached 39,581 l/s, capable of serving about 15,625,000 people in 350 cities and more than 500 IKK; But in terms of water distribution, only 54% of the total production capacity is distributed. In addition, operation and maintenance of IKK water supply systems are not satisfactory.

Within the sanitation subsector, the progress achieved can be reported as follows :

- 1) Solid waste disposal : 81 modules serving about 2.43 million people were implemented as pilot/stimulus project. In addition, 30% of the urban population benefitted from improvement undertaken by the local government and communities.
- 2) Drainage : 25 cities benefitted from drainage improvement implemented as immediate measures through labour intensive projects covering a total of 108,000 metres of drainage. About 35% of the urban population is estimated to benefit from the works undertaken by the local governments and the communities.
- 3) Sewerage : sewerage are being constructed in the city of Tangerang on a pilot project basis, and in the cities of Bandung, Medan and Jakarta as stimulus project on a town-wide basis.

3) lack of involvement of the local governments and the community in the development process.

6.1.2.2. As compared to the water supply sector, the progress achieved in sanitation is however far below the Decade targets.

6.1.2.3. Systems/facilities are not maintained properly and underutilized due to :

- 1) limited affordability of the people to pay for services,
- 2) limited capacity of the local government to share the burden of service, particularly in operation and maintenance of the completed facilities.

This occurred mostly in the schemes which are partly functioning and also in the systems for IKK utilising treatment and pumping.

6.1.2.4. Water resources for water supply is becoming critical due to :

- 1) increased domestic demand,
- 2) depletion and deterioration of water resources associated with increased crowding and industrial activity,
- 3) lack of sufficient hydrogeological information resulting in slow development.

6.2. Issues for the rest of the Decade

6.2.1. In view of the progress achieved, it is realised that efforts in extending coverage has been limited, and the progress is still far below the Decade targets which set the goal of raising water supply coverage to 75% in urban areas and 60% in rural areas; and sanitation coverage of 60% in urban areas and 40% in rural areas by 1990.

6.2.2. A high level of investment will be needed to reach the Decade targets. due to the current economic condition of the country, it is most unlikely to finance such programmes entirely from the central government budget.

6.2.3. In view of the economic condition, it is felt necessary to assess the targets into more realistic programmes which take into account the national budgetary outlook, capability of the local governments, and community supports. Such assessment however must be based on the objective of attaining maximum coverage without lowering the priority and reducing the targets by mean of incorporating appropriate technology which is cheaper to build, easier to operate and maintain, and repair.

6.2.4. Environmental sanitation development should be given more priority to attain a more balanced service, to improve sanitary condition in the urban and rural areas, and to utilize the systems/facilities to maximum extent through an integrated measure.

6.3. Policies and Strategies for the remaining years of the Decade

In the implementation of the Repelita IV and the Decade programmes, the policies and strategies adopted in WS/SAN development will be based on the guidelines given in Repelita IV with emphasis on the following :

6.3.1. The targets of the Decade will not be revised, eventhough the service coverage is still below the desirable targets.

6.3.2. Reliable data and information are required to ensure a more realistic planning which is responsive to the needs.

6.3.3. Utilisation of appropriate/simple technology that can accellerate development will be intensified.

6.3.4. The existing institutions should be strengthened through provision of adequate skilled personnel/staff and related hardwares.

6.3.5. Environmental impact assessment should be implemented as an instrument to protect the water resources from environmental degradation.

6.3.6. Coordination in the development and conservation of water resources and also water quality surveillance should be intensified.

6.3.7. The "one-river one-plan" approach in the development of water resources should be promoted and implemented for ensuring orderly development.

6.3.8. Local governments share in the financing of WS/SAN sector, made up of local resources as well as Inpres fund, should be intensified. Utilisation of available

Inpres fund or establishment of new sources of Inpres fund for WS/SAN development, or at least to cover the cost of O&M, should be explored.

- 6.3.9. In the effort to intensify community participation, it is felt necessary to explore the possibility of private business communities (i.e. housing developers) to invest in the WS/SAN development as already taking place in other sectors such as in road and electricity development.
- 6.3.10. As supportive programmes in the effort to promote greater role of local government and community involvement in WS/SAN development, the following programmes should be implemented :
- 1) Better recruitment and training of personnel/staff for the WS/SAN development.
 - 2) Establishment of better management/operation & maintenance programmes for WS/SAN systems/facilities.
 - 3) Establishment of information system capable of involving the local governments and the communities.
 - 4) Dissemination and training seminar should be intensified to promote wider and larger participation among the people. Such an activity should be implemented as a component of the project/physical development to attain a more effective dissemination.
 - 5) Establishment of monitoring and evaluation system in the implementation and utilisation of WS/SAN systems/facilities.
- 6.3.11. As stipulated in the Government Regulation No.49/50 year 1952 and the Government Regulation No.18 year 1953 the provision of water supply and sanitation in the region is basically the responsibility of the local government. However, realising the high investment required and the limited capability of the local government, the Central Government therefore will provide technical as well as financial assistance to the local governments in WS/SAN development.
- 6.3.12. The authorities, duties and responsibilities of the Central Government in WS/SAN development are shared among the three executing government agencies, namely:
- 1) Ministry of Public Works is responsible for technical development and guidance.
 - 2) Ministry of Health is responsible for the guidance and control of the environmental and water quality related to health aspects.
 - 3) Ministry of Home Affairs is responsible for general management and promotion of community participation.

- 6.3.13. In the case the Dinas PU Kabupaten is not completely established, the Ministry of Health for the time being may undertake the construction of simple water supply systems. When the Dinas PU is ready and in the position to undertake the construction of sophisticated systems, the works should then be handed-over to level II local government concerned. Whereas, the technical ministries concerned will still be responsible to provide technical assistance.
- 6.3.14. In view of the magnitude of the problems in the implementation of WS/SAN the executing agencies involved should be sensitive and responsive to the needs, and should implement the WS/SAN projects in the spirit of mutual cooperation (gotong royong), through joint undertaking of the project among sectoral agencies concerned as well as between the central and local government at early stage of the project development.
- 6.3.15. As stipulated in the Presidential Decree No.27 year 1980, the Bappeda (Regional Planning Board) level I and level II local government should exercise coordinating function for the WS/SAN programmes prepared by the central and local agencies in an integrated manner.
- 6.3.16. As stipulated in the Minister of Home Affairs Regulation No.9 year 1982 and Minister of Home Affairs No.4 year 1981, the planning mechanism for WS/SAN development in the region should follow the principles/ processes of the bottom-up planning so that the role of the local services in the region is well developed.
- 6.3.17. In line with the efforts to mobilise available resources for the WS/SAN development, a more effective planning mechanism which ensure better coordination and integration in the use of the resources (national budget, internal loans, Inpres, local development funds, private funds) should be formulated. In addition, such planning mechanism should be able to involve the local governments and the community in WS/SAN development.
- 6.3.18. In the effort to increase the level of investment required for the WS/SAN development, mobilisation of available resources will be intensified, including the effort to promote community participation in the form of cash, labours, materials contribution.
- 6.3.19. The WS/SAN should be regarded to have economic priority since it also supports the development of other strategic sectors, such as tourism, harbor, industry. Therefore, the investment required for

WS/SAN should be supported by the contributing sector concerned as well as by the other economic sector.

- 6.3.20. Utilisation of foreign aids will still be supplementary to national development budget, and it should be made more responsive and effective to the needs in reaching the Decade targets.
- 6.3.21. Assistance in the form of loans will be provided to cities and WS/SAN projects which have the potential to generate revenue. Such financing scheme will be supplemented with the effort in improving the management of WS/SAN in the cities concerned.
- 6.3.22. The need for financing for survey, project preparation, planning and supervision, institution and manpower development, promotion of community participation and management services, in addition to physical component, should be well considered in the formulation of the investment required.

6.4. Policies on external assistance

The policies on the use of external resources for the remaining years of Repelita IV and Decade programmes are as follows :

- 6.4.1. External assistance for the development of rural WS/SAN should be given more priority.
- 6.4.2. External assistance for the development of urban and semi-urban (IKK) areas with basic needs standard will still be required and should have the same priority.
- 6.4.3. In view of point 1 and 2 mentioned above, it is proposed that donor countries/agencies consider the following changes :
 - 6.4.3.1. Revision of loan requirements so that more consistence to local condition :
 - 1) cost recovery should be excluded in the requirement, allowing only the requirement for covering the O&M costs.
 - 2) procurement of imported materials and services should be excluded in the requirements owing to the adoption of simpler technology in the construction of the systems.
 - 3) complicated institutional set-up should be avoided and excluded in the requirement.
 - 6.4.3.2. External assistance should be provided to finance 80-90% of the total costs of the project.

- 6.4.3.3. Bilateral assistance will be given more emphasis and intensified so that more donor countries participate and allow for larger assistance in the WS/SAN development.
- 6.4.4. Cities capable of providing local funds or taking up loans and have the management capability for better service and expansion of the system still be given priority in obtaining external assistance in order to reach maximum coverage. Local matching budgets for this scheme will be provided through internal loans.
- 6.4.5. External assistance should be intensified for the development of urban sanitation within the integrated urban infrastructure development programme which covers water supply, housing, urban roads and other urban facilities.

6.5. Plan of actions

In order to reach the Decade targets, the following actions should be taken :

- 6.5.1. To implement timely schedule which fits into the way of life/condition of the rural areas in order to ensure community participation.
- 6.5.2. To involve water supply consumers, private enterprises and government agencies in the implementation of WS/SAN development starting from project preparation.
- 6.5.3. To strengthen the role of local government apparatus of the level I as well as level II administration in the implementation of WS/SAN, such as the Bappeda (Regional Planning Board), Bangdes (Rural Development Office), PU (Public Works), Kesehatan (Health Office), Bangda (Regional Development Office), and Sarekda (Regional Economic Infrastructure Bureau).
- 6.5.4. To recruit and retain adequate skilled personnel in the respective central and local government agencies involved in the development of WS/SAN.
- 6.5.5. To develop local regulation on Integrated Utilisation of Water Resources and Environmental Pollution Control.
- 6.5.6. To adopt and develop "one-river one-plan" approach that can maintain effective coordination in the development of river.
- 6.5.7. To make people aware the importance of Environmental Impact Assessment in the development of water resources.

- 6.5.8. To give bigger support for the development of WS/SAN by adequate financing from economic or other development sectors.
- 6.5.9. To obtain foreign aids/loans for the financing of local components by increasing the present proportion of local and foreign funding.
- 6.5.10. To obtain more foreign aids for the financing of rural sanitation development.
- 6.5.11. To develop information system for the purpose of monitoring and evaluation of WS/SAN development.
- 6.5.12. To increase in adequate number the skilled personnel for the management and operation of WS/SAN facilities.
- 6.5.13. To stimulate and motivate community participation in the implementation and operation and maintenance of WS/SAN systems/facilities, among others through dissemination and demonstration projects.
- 6.5.14. To conduct intensive dissemination and training programmes in WS/SAN sector in a more integrated and coordinated manner.
- 6.5.15. To develop community organization, such as NGO, LKMD involved in the development of WS/SAN through dissemination, field visits or other related activities.
- 6.5.16. To promote training seminar as a comprehensive system in motivation, information and communication.
- 6.5.17. To improve the implementation of water quantity and quality control through additional recruitment of manpower and provision of related hardwares.
- 6.5.18. To make greater involvement among the people for maintaining and safeguarding the environment (i.e. water-resources).
- 6.5.19. To carry out and improve waste water and water quality surveillance.
- 6.5.20. To further strengthen the programmes on environmental pollution control relating to industrial waste pollution, food hygiene, pesticide control, solid waste disposal, and public hygiene.
- 6.5.21. To further process the issuance of government regulation concerning water pollution control.

- 6.5.22. To implement cross subsidy among the waterworks enterprises to ensure proper functioning and operation of the facilities which are experiencing deficits.
- 6.5.23. To promote the public and the private sectors to invest in WS/SAN development, giving priority to public interest.
- 6.5.24. To improve the technical and managerial capacity of personnel engaged in WS/SAN development among others through education and training.
- 6.5.25. To establish task force and to assign the LKMD (Village Development Association) in the operation and maintenance of WS/SAN systems/facilities.
- 6.5.26. To establish reasonable water tariff, so that enough revenue is generated for the expansion and O&M.

6.6. Closing

The Workshop agreed to further implement the actions mentioned above, particularly in developing management information system for the purpose of reviewing and evaluating the progress of Repelita IV, and to be used for the preparation and formulation of Repelita V.

In carrying out the tasks, the Steering Committee and the Working Groups should be strengthened and supported by involving the Ministry of Industry, State Ministry for Population and Environment Affairs, and other technical government departments concerned.

ANNEX-I

LIST OF PARTICIPANTS

1. Ministry of Home Affairs

- | | |
|-----------------------------|---|
| 1) Mr. Atar Sibero | Director General for Regional Development |
| 2) Mr. Soeradi Hadisoewarno | Director |
| 3) Mr. E. Koswara | Director |
| 4) Mr. Warsito Rasman | Director |
| 5) Mr. Mardjono | Director |
| 6) Mr. Mulyadi Widodo | |
| 7) Mr. Sahat Panjaitan | |
| 8) Mr. Colyubi Yahya | |
| 9) Ms. Roch Budiati | |
| 10) Mr. Nazaruddin | |
| 11) Ms. Soegiarti | |
| 12) Mr. Aminudin Malintak | |
| 13) Mr. Sinaga | |

2. Ministry of Health

- | | |
|----------------------------|---|
| 1) Dr. Adhyatma | Director General for Communicable Disease Control and Environmental Health. |
| 2) Mr. H. Sukanto | Director |
| 3) Mr. Wahyu Widodo | Director |
| 4) Mr. Soewardi | |
| 5) Mr. Sri Yanto | |
| 6) Mr. Sunaryo | |
| 7) Ms. Sri Suwasti Susanto | |
| 8) Mr. Slamet Nugroho | |
| 9) Mr. Henning Darpito | |
| 10) Mr. Baharuddin | |

3. Ministry of Public works

- | | |
|-----------------------------|--|
| 1) Mr. Soenarjono Danoedjo | Director General for Human Settlements |
| 2) Mr. Soeratmo Notodipoero | Director |
| 3) Mr. Hendropranoto Suselo | Director |
| 4) Mr. Martsanto | Director |
| 5) Mr. Darmawan Saleh | |
| 6) Mr. Nana Rukmana | |
| 7) Mr. Priyono Salim | |
| 8) Mr. Sudjoko | |
| 9) Mr. Sudarminto | |
| 10) Mr. Sismono | |
| 11) Mr. Risyana Sukarma | |
| 12) Mr. P. Sidabutar | |
| 13) Ms. Saptorini | |
| 14) Mr. Budiman Arief | |
| 15) Mr. Erik Siagian | |

- 16) Mr. Badruddin Mahbub
- 17) Mr. Pandji Ama
- 18) Mr. Abdi Jazid Anwar

4. Ministry of Finance

- 1) Mr. Baharuddin Parintak
- 2) Mr. Supomo
- 3) Mr. Agus Salam
- 4) Mr. Abdul Mungin
- 5) Mr. Hatomi

5. National Planning Board (Bappenas)

- 1) Mr. Saad Basaib
- 2) Mr. ST. Pardede
- 3) Mr. F. Adam
- 4) Mr. F. Tulong

6. W H O

- 1) Mr. Pancaroglu
- 2) Dr. Reyes
- 3) Mr. Damrong Nitipavachon
- 4) Dr. Mathur

7. UNICEF

- 1) Mr. Z. Karim

8. State Ministry of Population & Environment Affairs

- 1) Mr. Sri Oeripto

9. Regional Planning Board (Bappeda)

- | | |
|---------------------------|--------------------|
| 1) Mr. Djalente P. | South Sulawesi |
| 2) Mr. | South Kalimantan |
| 3) Mr. Suharto | DKI Jakarta |
| 4) Mr. S.M.L. Tobing | Central Sulawesi |
| 5) Mr. | D.I. Aceh |
| 6) Mr. Tadjudin Rainuddin | West Kalimantan |
| 7) Mr. Muhidin Azis | West Nusa Tenggara |
| 8) Mr. Imam Sanyoto | Yogyakarta |
| 9) Mr. Bintaro Thahir | North Sumatera |
| 10) Mr. Effendi Chan | South Sumatera |
| 11) Mr. Wahyudin Wahab | Bengkulu |
| 12) Mr. Zainal Abidin | East Kalimantan |
| 13) Mr. Masduki | East Java |
| 14) Mr. Henky Hermantoro | Central Java |
| 15) Mr. H. Siagian | Jambi |
| 16) Mr. Yunanie | Central Kalimantan |
| 17) Mr. A.M. Latucousinza | Maluku |
| 18) Mr. Thamrin Nurdin | West Sumatera |
| 19) Mr. A. Yus Ismunandar | West Java |

20) Mr. Mogni Harun	Lampung
21) Mr. J.F. Kumurur	North Sulawesi
22) Mr. Rivai Rachman	Riau
23) Mr. Renaka/Wayan Rendha	Bali
24) Mr. Sol Therik	East Nusa Tenggara
25) Mr. Harsaedi	Irian Jaya
26) Mr. Rusdi J. Ottoluwa	Southeast Sulawesi
27) Mr. Farid Mulya	Timor Timur

10. Office of Rural Development

1) Mr. Ali Dinar Nurdin	West Sumatera
2) Mr. S. Warma	Irian Jaya
3) Mr. Zainal Abidin	Riau
4) Mr. Dedi S. Tanuatmaja	West Java
5) Mr. Hussain S. Madin	North Sulawesi
6) Mr. Manuhutu	Maluku
7) Mr. Soegeng Wirjono	West Kalimantan
8) Mr. Imam M. Muhardio	Central Kalimantan
9) Mr. Ismet Lubis	North Sumatera
10) Mr. A. S. Nasution	Timor Timur

11. Health Regional Office

1) Mr. Budi Setiono	Central Java
2) Mr. K. Aminudin Arief	South East Sulawesi
3) Mr. Sofyan Muchamad	South Sulawesi
4) Mr. Djohan M. Bakri	Lampung
5) Dr. A.H. Gultom	Timor Timur
6) Mr. Mulyarta	Bali
7) Mr. Paulus Kedaru	East Nusa Tenggara
8) Dr. Wahidin Wahab	Bengkulu
9) Dr. Sularto Hadisuwarno	South Kalimantan

12. Public Works Regional Office

1) Mr. Umirza Abidin	Jambi
2) Mr.	South Sulawesi
3) Mr. Zulkarnaen Arbain	DKI Jakarta
4) Mr. Heriwiyanto	East Java
5) Mr. Haniruring	North Sulawesi
6) Mr. Aswin Yotolembah	Central Sulawesi
7) Mr. Zakaria Ismail	D.I. Aceh
8) Mr. Nurmawan	West Nusa Tenggara
9) Mr. Sahat Hutapea	Bengkulu
10) Ms. Tri Martini	Yogyakarta
11) Mr. M.K. Anwar	East Kalimantan

13. Non-government Organisation

13.1. Indonesian Waterworks Association (Perpamsi)

- 1) Mr. Razak Manan
- 2) Mr. Edy Kurniadi
- 3) Mr. Gebyar Triono

13.2. Indonesian Institute of Sanitary Engineers (IATPI)

1) Dr. Benny Chatib

13.3. Women Welfare Association (PKK)

1) Ms. Kusnaniah Wiramihardja

14. Ministry of Industry

1) Mr. W. Sibarani

15. University of Indonesia

1) Mr. Amir Susanto

ANNEX-2

A G E N D A

1. Sunday, November 17, 1985

Registration of participants

2. Monday, November 18, 1985

08.00 - 09.00	Registration
09.00 - 09.10	Welcome Address
09.10 - 09.20	Address by West Java Gubernur
09.20 - 09.30	Address by Representative of WHO
09.30 - 09.40	Address by Representarive of UNDP
09.40 - 09.50	Address by the Minister of Public Works
09.50 - 10.00	Keynote Address by the Minister of Home Affairs
10.10 - 10.40	B r e a k
10.40 - 11.15	Directives by Director General for Human Settlements
11.15 - 12.00	Directives by Director General for Communicable Disease Control and Environmental Health
12.00 - 12.45	Directives by Director General for Regional Development
12.45 - 14.00	Luncheon
14.00 - 14.15	Guidelines on the Workshop Discussion

Plenary Session/Paper Presentation

14.45 - 15.15	Evaluation of Survey Reports by Messrs. Wahyu Widodo and Martsanto
15.15 - 17.00	Progress of WS/SAN Decade by Messrs. Sukanto and Hendropranoto Suselo
17.00 - 19.00	Break and dinner
20.00 - 20.30	Film show

3. Tuesday, November 19, 1985

08.30 - 09.30	Institution and Manpower Development by Mr. S. Panjaitan
09.30 - 10.30	Local Government and Community Participation by Mr. Mardjono
10.30 - 10.45	B r e a k
10.45 - 11.45	Planning Mechanism and Information System by Mr. Warsito Rasman
11.45 - 13.45	Luncheon
13.45 - 14.45	Funding by Mr. Hatomi
14.45 - 15.45	Water Resources Development and Water Quality Control by Mr. Badruddin Mahbub
15.45 - 16.15	Guidelines for Group Session

16.15 - 19.30 Break and dinner
 19.30 Slide show

4. Wednesday, November 20, 1985

Working Group Session

08.30 - 17.00 Working Group Discussion (WG I to WG VI) and
 formulation of Results of Discussion

19.00 - 20.00 Dinner

5. Thursday, November 21, 1985

Plenary Session

08.00 - 10.00 Presentation of the Results of Working Group
 Discussion WG I and WG II

10.00 - 12.00 Presentation of WG III and WG IV

12.00 - 13.00 Luncheon

13.00 - 15.00 Presentation of WG V and WG VI

15.30 - 19.00 Formulation of Workshop's Conclusion

19.00 - 20.00 Dinner

20.00 - 21.00 Closing of Workshop III

6. Friday, November 22, 1985

08.00 - 11.00 Meeting with Donor Countries/Agencies

ANNEX-3

CONCLUSIONS OF THE WORKING GROUP DISCUSSION

Working Group I : Progress in the Implementation of WS/SAN Decade Programmes
 Chairman : Mr. Djalente P. (Bappeda, South Sulawesi)
 Rapporteurs : 1. Mr. Umirza Abidin (Public Works, Jambi)
 2. Mr. Budi Setiono (Health Office, Central Java)

Summary :

The discussion elaborated the presentation of the two speakers in the plenary session. It covered the achievements in the WS/SAN, identification of constraints and issues for the rest of the Decade. It was agreed that to reach the Decade target by 1990 the coverage programme required the support of other programmes, namely institution and manpower development, water resources development, local government and community participation, planning mechanism and information system, and finance. The support programmes will play important role in the development of WS/SAN sector, and determine the success of the coverage programme.

Several recommendations were highlighted for consideration.

Working Group II : Institution and Manpower Development
 Chairman : Mr. Tobing (Bappeda, Central Sulawesi)
 Rapporteurs : 1. Mr. Zulkarnaen Arbain (Public Works Office, DKI Jakarta)
 2. Mr. Ali Dinar (Rural Development Office, West Sumatera)

Summary :

The discussion was divided into 2 main topics, that is institution development, and manpower development. With regard to institution development, it was agreed to recommend improvements among the various institutions involved in the implementation of WS/SAN development covering the organization at the national level and down at the village level. Organization of LKMD (Village Development Association) should be properly established. On the subject of manpower development, emphasis were given to training and organization aspects.

Working Group III : Water Resources Development and Water Quality Control
 Chairman : Mr. Iman Hadisanyoto. (Bappeda, Yogyakarta)
 Rapporteurs : 1. Mr. Sofyan (Health Office, South Sulawesi)
 2. Mr. Haniruring (Public Works Office, North Sulawesi)

Summary :

The discussion stressed the need to safeguard the water resources, to promote the use of appropriate technology in the development of water resources, and to make more efficient in the utilisation of the completed facilities. Integrated development of water resources through the adoption of one-river one-plan approach was also recommended to ensure orderly development. The role of the Bappeda in the coordination of the utilisation of the water resources should be given more emphasis. It also noted the need for a more concerted action in policy matters taken up by the sectoral government agencies and the regional government concerned with regard to conservation and utilisation of the water resources.

Working Group IV : Local Government and Community Participation
 Chairman : Mr. Masduki (Bappeda, East Java)
 Rapporteurs : 1. Mr. Imam H. Muhardio (Rural Development Office,
 Central Kalimantan)
 2. Dr. Tobing (Health Office, Timor Timur)

Summary :

The discussion called for concerted effort in the dissemination activities which have been variously implemented by many government departments. It also stressed the need for improvement in the participatory methods among others through training seminar. Improvement of training materials was also recommended. It further saw the need for inclusion of the communication component as part of the physical development activity.

Working Group V : Planning Mechanism and Information System
 Chairman : Prof. Dr. Thamrin (Bappeda, West Sumatera)
 Rapporteurs : 1. Mr. Mulyarta (Health Office, Bali)
 2. Mr. Ismet Lubis (Rural Development Office,
 North Sumatera)

Summary :

The discussion centred mainly on the importance of bottom-up planning for the promotion of community participation. It called for the need of guidelines for an integrated planning and strengthening the function of the Bappeda in the coordination of WS/SAN development programmes as stipulated in the Presidential Decrees No. 27 year 1980. It further called for the need to follow the planning mechanism defined in the Minister of Home Affairs Regulation No. 9 year 1982, which called for mobilisation of funds, integration of physical components, etc. With regard to the information system, the Bappeda should play a more active role supported by the agencies/institution responsible for the implementation of WS/SAN projects in the region concerned. Monitoring should also be regularly conducted for the WS/SAN projects, and reported on a periodic basis to the Bappeda.

Working Group VI : Funding
Chairman : Mr. Rivai Rachman (Bappeda, Riau)
Rapporteurs : 1. Ms. Tri Martini (Public Works Office, Yogyakarta)
2. Dr. Wahidin Wahab (Health Office, Bengkulu)

Summary :

The recommendation put forward by the WG VI have been included in the Workshop's Conclusion. The discussion stressed the need to mobilise sources funds from the private sector for WS/SAN development, and a more effective use of loans.

ANNEX-4**HIGHLIGHTS OF MEETING WITH THE DONOR COUNTRIES/AGENCIES**

The meeting was chaired by Mr. Atar Sibero, Director General for Regional Development, who welcomed and expressed appreciation to all representatives of the donor countries/agencies for their time to come to the meeting. He then asked his colleagues, Dr. Adhyatma, Director General for Communicable Disease Control and Environmental Health, and Mr. Soenarjono Danoedjo, Director General for Human Settlements to brief the meeting on the development of the Indonesian WS/SAN sector.

The representatives of the donor countries/agencies responded to the presentations and made the following comments :

1. World Bank (WB)

- 1) The WB was eager to know the investment needed for the next 5 years.
- 2) The WB described obstacles in providing aids and also noted issues which should be given more emphasis.
- 3) The WB explained the Bank's position with regard to loan on WS/SAN sector. In processing such a loan, certain standards have to be met i.e. financial projection, proper functioning of the facilities. To consider the loan for small-sized project, Bank remarked that it would be advisable to combine the projects for the whole province. With regard to rural WS, cost-recovery and the level of service required in the urban WS scheme should also be similarly applied. Combining rural WS with urban's or IKK and dealing with the whole Kabupaten as one package or handling the rural WS through rural development would be one of the approaches for loan consideration.
- 4) The WB acknowledged the comprehensive training materials that Indonesia has developed and proposed to use the materials for other parts of the world, and also suggested to produce similar materials for sanitation by using the existing materials as example.
- 5) The WB commented on the cofinancing agreement with Australia for East Java WS project covering 8 PDAM.

2. Australia

- 1) Australia informed the on-going activity in reviewing the Indonesian WS sector which will determine the future Australian assistance.
- 2) Australia informed their involvement in the rural WS project in Lombok. At present modular approach is being developed for the rural WS scheme.

3. WHO

- 1) In response to the comment on Bank's interest to provide loan for small sized project, the WHO suggested 2 approaches, namely integration of rural WS with in the framework of Kabupaten or inclusion of semi urban areas.
- 2) The WHO also noted the problems in dealing with WS on regional development basis.

4. UNICEF

- 1) The UNICEF commented on Dr. Adhyatma's presentation which has health impact.
- 2) The UNICEF underlined the importance of institutional development, adoption of simpler technology, etc.
- 3) The UNICEF mentioned their involvement in the rural WS development and also informed of their commitments.

5. Nederland

- 1) The Nederland remarked that lots of attention are given to manpower development aspects. It is now the time to implement the training programme.
- 2) The Nederland commented on the integration of training activity in WS with sanitation, and also underlined ways in dealing with the rural WS.
- 3) The Nederland stressed the importance of community information programme, which is now ready to be implemented with Cipta Karya.

6. Japan

- 1) Japan's government policy toward international cooperation was clearly explained. Japan main aid goes to urban areas.

7. Swiss

- 1) The Swiss remarked to the comment made by the WB concerning low cost sewerage. The Swiss government in providing aid for the City of Cirebon has made use of low cost sanitation/system.

8. United Kingdoms

- 1) The UK has little to offer with regard to WS/SAN development in Indonesia. It mentioned the UK's involvement in water resources development project in Gunung Sewu.

9. USAID

- 1) The USAID provided assistance on WS/SAN through CARE, a private voluntary organisation, and remarked that USAID do not provide assistance to the government.

10. Women Welfare Association (PKK)

- 1) The PKK was not aware of the government programme on WS/SAN, but then eager to give its support, and asked for information.