Short Training Course

Community Water Supply & Environmental Sanitation for Low-Income Urban Communities

IRC

Content.

General information

Block 1 :   Introduction and problem identification

Block 2 :   Management of community water supply and sanitation services for urban low-income areas

Block 3 :   Community-based approaches

Block 4 :   Developing a strategy

Individual papers and collected documentation

General Information

Block 1: Introduction and problem identification

Session outline   1.1

Subject: Welcome and introduction to the course programme
                and organization

Timing: 9.00 - 10.30

Course staff: Course coordinators and course assistants

Objectives: To get acquainted with the course and discuss its
                purpose and possible result

This session will have an informal character. General
introductions and explanations will be given. Participants will
receive their course file. The cooperation between IHS and IRC
will be explained.

Background information: Course manual, general information
provided by the course organization

<u>Session outline</u>   1.2

Subject: Individual discussions with course coordinators

Timing: 11.00 - 12.30

Course staff: Course coordinators and course assistants

Objectives: **To discuss the reasons to participate in the
                course, and to identify subjects of particular
                interest to each participant.**

The course coordinators will have a session of about 15 minutes
with each participant individually. The expectation of the
participants will be discussed. Any point regarding the
presentations by the participants (Afternoon sessions) can be
raised.

Parallel to these discussions the course participants will
discuss logistical and practical issues with the course
assistants.

<u>Background information</u>: Practical information distributed by the
course organization, professional briefing documents prepared by
the participants.

Session outline   1.3

Subject: Professional presentations by participants

Timing: 13.30 - 17.00

Course staff: Course coordinators

Objectives: To get acquainted with the experience available
                within the groups of participants and the various
                challenges faced in the area of community water
                supply and environmental sanitation for low-
                income urban communities

Each participant will make a short presentation. After each
presentation there will be opportunity to ask questions and
discuss main issues. Participants are stimulated to make use of
audio-visual means for presentation.

Background information: Papers prepared by participants.
                          Suggested outline sent to participants
                          before the course.

Session outline   1.4

Subject: Introduction to key issues of the course

Timing: 9.00 - 10.30

Course staff: Course coordinators

Objectives: To provide an overview of the key issues relating
                  to urban institutions and finance, drinking water
                  supply and sanitation provision and community
                  involvement in an international context.

The issues will be presented in a lectures including references
to examples and slides of local situations. The imporvement of
quality of life is an improtant consideration both in human
settlements policies and in the sector policy regarding water
supply and sanitation. The basic needs approach was adopted
earlier as a developmental strategy. The results of earlier
efforts are important, but urban growth is outpacing the increase
of services. Unplanned urban growth and other factors hamper
water supply and sanitation provision. Urban poor are most
affected by these problems. It is vital that innovative
strategies are implemented where urban institutions and
communities work in partnership.

Background information: Hand-out
                          Article

Short Training Course

Community Water Supply & Environmental Sanitation for Low-Income Urban Communities

IRC

Session: 1.4

Subject: Key Issues of Urban Water Supply and Sanitation
             Provision

HANDOUT

Key Issues
of Urban Water Supply & Sanitation Provision

Tuesday, 28 August 1990

General

Community water supply and environmental sanitation are aimed at improving the life of human beings in urban settlements. They are considered as one of the basic needs. The UNCHS accepted therefore the following solutions in 1976:

"1. The improvement of the quality of life of human beings is the first and most important objective of every human settlement policy. These policies must facilitate the rapid and continuous improvement in the quality of life of all people, beginning with the satisfaction of the basic needs of food, shelter, clean water, employment, health, education, training, social security.........

2. In striving to achieve this objective, priority must be given to the needs of the most disadvantaged people."

The 'basic needs' approach is one of the developmental strategies which has gained favour in the last few years. It aims at providing the basic requirements of life to the poorest people by direct investment in these needs and by re-directing resources, monetary and otherwise, to this end.

The basic needs approach has been adopted by many developing countries and international agencies e.g. the World Bank. The approach of improving water supply and sanitation is also seen as an economic factor.

In Water Supply and Waste Disposal, a paper presented to the Executive Directors of the World Bank in 1980 (as adapted by J.M.Kalbermatten, Senior Advisor, World Bank), the problems of providing water and sanitation in the developing world are set out:

* The principal purpose of improving water supply and waste disposal is to help overcome the scourge of debilitating and killing diseases that afflict developing countries to improve their well-being and productivity. Various studies and estimates indicate that in these countries disease typically takes up about a tenth of the average person's potentially productive time and, in addition, affects risk-taking and initiative adversely, disrupts the education and nurture of children, stunts physical development, and causes vast suffering and hardship."

Thus, the provision of good quality drinking water in sufficient quantities and the hygienic disposal of waste water and of solid waste are two basic preconditions for achieving a reasonable standard of living, good health and economic progress. These conditions will be satisfied only if there is a reliable supply of water close at hand and effective sanitary facilities. In addition arrangements are required for the disposal of polluted surface waters, household waste water (including excrement) and industrial waste water.

In 1970, 35% of the urban population and as much as 87% of the rural population had to make do without a proper water supply. A certain amount of progress had been made by 1980,

but 26% of the urban population and 67% of rural inhabitants still lacked safe drinking water, while 50% of urban dwellers and 87% of the rural community had to do without proper sanitary facilities. Apart from the common lack of proper facilities in working order, growing population pressures in both rural and urban areas have meant that existing facilities have become increasingly polluted or inadequate.

In the international context, the 80s have shown an extra effort through the International Water & Sanitation Decade. As a stimulus, the International Water Decade has been effective. Notable progress has been made in the water supply and sanitation sectors as a result of large-scale efforts in recent years, most notably in the developing countries themselves, where non-governmental organizations (NGOs) and the national authorities have assigned high priority to these sectors. The large-scale deployment of resources by national governments and substantial efforts on the part of the many NGOs, combined with numerous initiatives by users, have resulted in a particularly rapid increase in the construction of facilities. In financial terms, the developing countries are estimated to have funded two-thirds of the total costs themselves.

Recent estimates by the WHO say that 18% of the urban and 37% of the rural population are unserved by water. For sanitation 28% of the urban population and 61% of the rural population is unserved. For the urban population the 80s have brought sanitation to 315 million inhabitants, while 370 million inhabitants have been provided with water.

At present, there is a concern of how to sustain and increase the gained momentum, both in the sense of political commitment and finance. At this moment, at least three urban residents out of four have access to safe water services, supplied either by means of house connections or standpipes, and a little over a half have access to adequate sanitation.

Another concern is the growing urban poor either by rural-urban migration or by natural growth. The extra efforts made in the past years can hardly cope with the pace of growth. But who are they and how do they live and what is their environmental condition?

Urban low-income communities
Urban slums are usually located near the centres of large cities, but, recently, slums have also been noted on urban peripheries. Slum properties, being legitimate, are usually served by municipal utility networks. However, because of the age of many slums and the problems of overcrowding, services are deteriorating and out-of-date and cannot cope with the demands made on them. Water supply in those settlements sometimes takes the form of a single tap in each house but it is often a public standpipe shared by hundreds of people. Sanitation frequently consists of primitive household systems, such as the bucket conservancy system, and is usually only available on a communal basis. No refuse disposal service is usually provided in these areas and, consequently, refuse accumulates on the limited access-ways available for circulation within these communities or on unofficial dumping grounds, such as verges of water courses. Where surface drains are provided, these serve as convenient disposal points. The result is a hazard to health and a reduced efficiency of other infrastructure, such as access ways and drainage systems.

Between one third and a half of present urban populations in most developing countries live in squatter settlements. They are also the foci of new migration and will accommodate most of the naturally accruing population growth in urban centres. Squatter settlements have grown on sites usually unsuitable for conventional development and are often located on inaccessible

areas, such as flood plains, swamps and steep hillsides. Services in these areas are often non-existent, and opportunities for connecting to municipal utility networks are poor.

A variety of naturally occurring water sources, such as springs, are used where available, and many communities are served with mobile tankers selling water. These communities usually pay more for their supply than communities legitimately connected to the municipal supply network. Standpipes connected to the municipal supply are used by squatters who have reasonable access to them, but very large settlements cannot be served by such inadequate, unreliable and improvised facilities.

Sanitation in squatter settlements is very primitive, where it exists at all. Open defecation and inappropriate systems, such as bucket latrines, are widely used. Communal sanitation blocks are sometimes provided, but a majority of these are inadequately operated and maintained and are unsatisfactory.

Sullage, i.e., all domestic wastewaters originating from sources other than the WC, from squatter households is freely discharged on to the ground surface without concern for its ultimate fate. Consequently, naturally formed channels, containing sullage and latrine discharge mixed with solid-waste, are found throughout squatter settlements and give rise to unpleasant odours for most of the dry periods. The same channels act as drainage for rainfall during wet periods, when they receive a degree of dilution and flushing, but whole areas are frequently flooded, and diffused contamination is common. Inadequate means of disposing of sullage often leads to a deterioration of roads and footpaths and has been responsible for increased incidence of filariasis in certain urban centres of developing countries.

Few squatter settlements have any proper roads and pathways. This limits accessibility to dwellings, and few of the conventional refuse-collection vehicles can even enter these settlements. The limited capacity of low-income squatter communities to pay for refuse disposal services and the fact that a majority of these communities do not pay municipal taxes have been used as the principal arguments against providing any form of refuse-collection service to them. Yet, it is in these communities that population densities and limited public awareness of the hazards of uncontrolled and indiscriminate disposal of refuse promote the spread of diseases and unhygienic neighbourhoods.

Squatter settlements are frequently located on inadequately drained flat areas or on steep slopes. Consequently, adequate drainage often becomes a priority in alleviating flooding of low-lying areas and in the prevention of erosion on steep slopes. The large demand for limited land in these areas, together with the lack of community awareness of the hazards of flooding, often results in the encroachment of housing units directly on to natural watercourses. Such encroachment, besides presenting a danger to the life and property of the encroacher, increases the threat of local flooding.

Constraints of providing water supply and sanitation

What are the constraints of improving living conditions in urban settlements?

Many factors have affected the delivery of infrastructure to low-income settlements in developing countries. Without a national human settlements policy or plan, agencies have approached the provision of infrastructure to low-income settlements on an ad hoc basis, in terms of the selection and implementation of projects. Efforts to improve and upgrade infrastructure in low-income settlements have been confined to a 'project' approach as

opposed to a 'programme' approach and have tended to be one-off actions rather than first steps in a strategy for large-scale action.

Even where sector development plans exist, they rarely address the special needs of low-income communities. As a result, very few infrastructure interventions in poor areas have managed to extend their coverage or 'scale up' to broadly based programmes. Target communities have rarely been involved in the planning or implementation of projects and, after completion, they have had no interest in the continuing success of what they perceive as a governmental responsibility. Planning of infrastructure systems by outside agencies, not familiar with local needs, customs and aspirations, has led to the use of technologies and systems which have, on occasions, proved unacceptable to the users.

Quite often, institutional arrangements are so complex, with many different agencies having responsibility for different elements of infrastructure, that the administrative problems of coordination and delivery have not been overcome. Qualified manpower is in short supply in most developing countries, and agencies responsible for infrastructure services have been handicapped by inadequate staffing as well as limited budgets. The quality of staff in many agencies has not allowed imaginative approaches to be taken, and all too frequently costly developed-country technology has been applied indiscriminately. Technical training has followed conventional practices and approaches and has had little or no relevance to the needs of the majority of the poor. Heavy reliance on external funding for infrastructure projects, with few or no effective local mechanisms for recovering of reinvestment in the concerned sectors and so has constrained the expansion of services to the poor.

Design criteria and standards used in the provision of infrastructure for low-income settlements have not been appropriate, and this has limited the number of people that could be served using the budget available. Legislative instruments such as codes, regulations and standards, suggest the use of unnecessarily high standards and contain recommendations to adopt inexpedient technologies. These instruments have, as a result, prevented the use of cheap and relevant technologies.

What are the escalated standards we speak of? They include standards requiring the use of excessively large pipes for sewage collection. Requirement of unnecessarily high quality material in pipe manufacture, spacing manhole covers closer together than necessary, using heavier covers for them than necessary. Sometimes the use of such standards together creates special irony: in Egypt designers fear there will be no maintenance and therefore use larger sewer pipes intended to be self-cleaning. On the other hand, they are likely to place manholes (whose sole purposes is to facilitate maintenance) 40 meters apart whereas they could be used to rod out the intervening section of sewer equally easily if they were twice as far apart. And the manhole is topped by a cover weighing 285 kg rather than a weight in the order of 175 kg used in other countries. The matter is important because manholes are a significant part of the total cost of sewage.

Many sector agencies fail to budget for system maintenance, with the result that systems fail and fall into disuse. The quality of service suffers as a consequence, and the need to replace service facilities is precipitated prematurely. Intended benefits are often substantially reduced by poor operation and maintenance.

What may be the reason for the lacking operation and maintenance services?

o   Maintenance is low-regarded by politicians and chief executives because it is not perceived as being as politically 'visible' and 'glamorous' as new capital works. There is consequently a preference for the latter which is also often regarded as being less complicated in institutional and administrative terms.

o   Because of the generally low priority and attention accorded to maintenance, departmental and individual responsibilities in this area are not always clear, and there is not the same degree of accountability as in the more 'visible' areas of new capital works.

o   Lack of funds is almost universally stated to be a reason for poor maintenance. This chronical underfunding may be partly explained by a lack of understanding among politicians and decision makers of the importance of maintenance. The sometimes very costly downstream consequences of deferring necessary maintenance work are not understood, and maintenance budgets are the first to be slashed in tight fiscal situations.

o   While central governments have often delegated responsibilities for the provision of a wide range of urban services to local governments, the necessary authority and power to mobilize revenues at the local level to sustain operation and maintenance of these services has not always been given. Consequently, local authorities are highly dependent upon grants from central authorities, and rational planning and budgeting at the local level is hampered because of inadequate grant allocation mechanisms. Cost recovery, based on user charges and general taxes and fees, also generally needs to be improved.

o   Infrastructure and other public service facilities are frequently planned, designed - and in some cases constructed - by line ministries, parastatal agencies or other central authorities and subsequently turned over to local authorities for operation and maintenance. The decision makers for sectoral investments at the central level are in many cases isolated from the operational realities at the local level, and when the local authorities are not properly consulted and involved in planning and design, maintainability is not given its due consideration in design and specifications. Also, the concept of 'life cycle costing' needs to be further developed as a basis for investment decisions.

o   It may be argued that the preference in the past of international development agencies to finance capital investments rather than recurrent costs has contributed to biasing borrowers against maintenance because borrower governments would seek to use limited funds in areas where foreign financial participation would be maximized.

o   At the local level a 'management by crisis' situation frequently exists because even a minimum of basic critical information is not available to managers in the form and at the time needed. As an example, there are very often no suitable records of assets and their condition on which to base systematic multi-year planning and monitoring of routine and periodic maintenance, and there are no maintenance standards on which performance targets may be based. And because management information systems based on the 'management by exception' philosophy are not in place, managers get inundated in petty problems, irrelevant details and public complaints. In these chaotic circumstances, they are likely to base their decisions on political consideration rather than objective and technically sound criteria.

o   Very low and rigid pay scales for local government staff makes it difficult to retain qualified and motivated personnel and create the 'esprit de corps' that is so essential for good maintenance. The lack of incentives for individual performance hampers efforts to establish and follow performance targets, and often the pay is so low that

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maintenance workers have to have 'sidelines' to be able to subsist. Widespread absenteeism and extremely low productivity are the obvious results.

o   The absence of appropriate and standardized maintenance equipment in sufficient quantities is a major constraint in most developing countries. Many bilateral development programs have provided easy access to financing of equipment, resulting in the proliferation of a wide range of makes and systems, thus hampering rational spare parts and workshop management. The result is that vehicles and major equipment are often out of service for long periods because even simple spare parts are not available or because the foreign exchange to procure them is lacking. It is not uncommon to see trucks or major items of equipment being cannibalized to get a few essential spares for other units. The absence of renewal funds and replacement policies for equipment is also a common problem.

o   Training of staff at all levels is crucial. Training of managers and supervisors in management aspects of maintenance is particularly needed but there are obviously important skill gaps across all operational aspects of maintenance works.

o   Lack of inter-agency and inter-departmental coordination is a major issue in urban maintenance, as evidenced, for example, by the many uncoordinated street diggings and by utility trenches that are not properly reinstated. Also, it is important to stress that efforts to maintain a road are futile unless the road side drains are properly maintained and well functioning. The road side drains will not function properly unless turnouts, collectors and downstream main drains are well maintained. These, in turn, are dependent upon proper solid waste collection to avoid clogging by garbage. There are many such interdependencies, and urban infrastructure will only yield its expected benefits if a coherent, coordinated maintenance effort is made across all service sectors. To achieve this may mean reviewing local government organization with a view to making it more function-oriented.

A final field of problem is related to cost recovery of infrastructure provision & services and its - supposed - pricing policies. Pricing policies for infrastructure services have generally been concerned with economic efficiency and with raising financial resources for the sector in question. For most services - in Africa in particular - the policies have not been successful on either count; prices frequently fall well below marginal cost and, often, below what is needed for financial purposes. There is also much to be done to improve metering and billing systems, even where the idea of cost-reflecting policies is accepted.

Conclusion

From the foregoing it is evident that the problems in infrastructure delivery and management are those of technology, institutional/financial and communities. The main problems are:
- Lack of awareness of appropriate low-cost relevant technologies;
- Inadequate operation and maintenance of systems.
- Lack of specific sector policies which form part of a national human settlements policy defined to include the needs of low-income communities;
- Existence of several governmental agencies with overlapping and competing responsibilities;
- Lack of trained manpower.
- Inadequate response to needs of low income communities;
- Inadequate mobilization of community resources;
- Lack of integrated approaches for provision & management.

FRAMEWORK

URBAN ENVIRONMENT

BASIC NEEDS

- indoor
- neighbourhood
- City
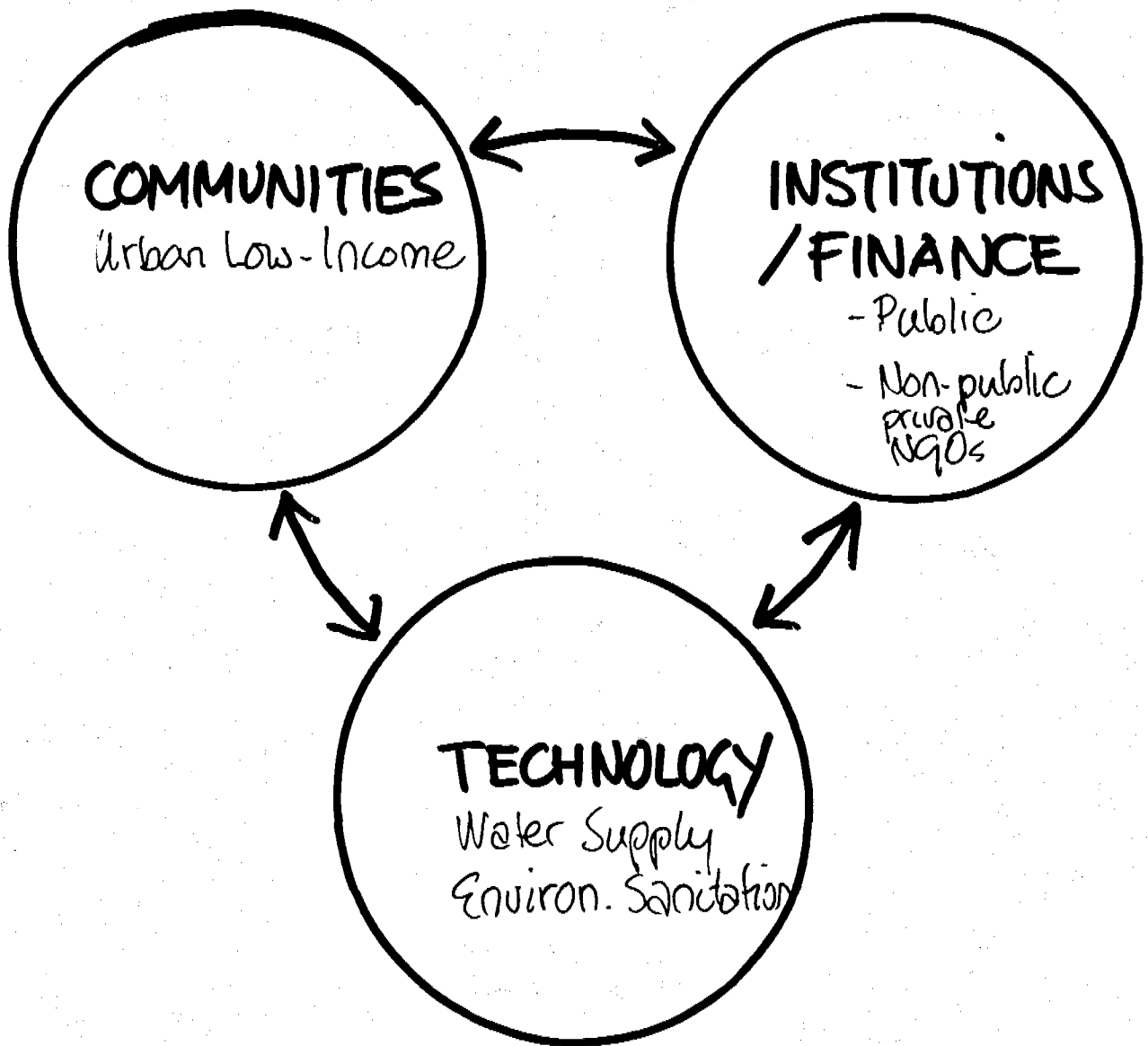
food
shelter
clean water
sanitation
employment
health
education
social security

QUALITY
OF
LIFE
- survival
- development

(UNCHS, 1976)

MAIN ISSUES

COMMUNITIES
Urban Low-Income

INSTITUTIONS / FINANCE
- Public
- Non-public private NGOs

TECHNOLOGY
Water Supply
Environ. Sanitation

COMMUNITIES Key-Issues

Present environmental situation

- water supply
- sanitation
- solid waste
- drainage
- accessibility

} city centre slums
squatter areas
peri-urban areas

↳ Decade Performance

Social organisations

- age of settlement
- social dynamism & affiliation
- leadership ; men & women
- common interest

Resources

- Economic
- Responsibilities & duties

DECADE PERFORMANCE

	1980	1990
Urban Water Supply	77% 721 million	82% 1089 million
Urban Sanitation	67% 641 million	72% 955 million

WHO, May 1990

TECHNOLOGY   Key Issues

- Appropriate ; needs, local circumstances, material, equipment, parts

- Affordable   ; users & institutions
                   standards
                   service levels

- Accessible   ; social factors
                   physical factors

- Sustainable   ; skills, institutions, finance

- Environmental Impact ; coverage, integration
                         short-long term aspects

INSTITUTIONS & FINANCE

- Key-Issues

  - Many agencies for   - project stages
    - sectors WS & SAN
  - Coordination, Responsibilities _ Duties

  - Project Approaches vs Programmes

  - Community Needs & Involvement

  - Staffing ; skills & salaries

  - Weak financial basis ; cost recovery mechanisms, pricing policies

  - Reliance of outside funding

  - Conventional technology approaches

  - Crisis management

  - Maintenance :
    - status
    - budgeting, priorities
    - maintenance revenue collection
    - implementing vs operational agencies
    - information, data
    - standardization, routines, manuals
    - training
    - foreign reliance ; spare parts, knowledge

Session outline   1.5

Subject: Workshop to identify key issues and problems and
                their relations

Timing: 11.00 - 12.30 and 13.30 - 15.00

Course staff: Course coordinators, interested lecturing staff

Objectives: To inventorize the problems and their causes as a
                basis for the formulation of strategic objectives
                which are generally applicable

The various key factors and problems will be identified on the
basis of earlier presentations by participants and background
information concerning key issues and problems. The problems will
be organized in a problem tree or problems trees to identify the
main problems and their causes. This will form the basis for
individual work on a strategy paper to be presented at the end of
the cause.

Background information: Hand-out concerning the making of a
problem tree.

Hand-out for session 1.5

How to make a problem tree

Source: GTZ

gtz

**Deutsche Gesellschaft
für Technische Zusammenarbeit**
GTZ GmbH

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9. PROBLEM ANALYIS

Is a set of techniques to:

- analyse the existing situation surrounding a given problem condition

- identify the major problems in this context

- define the core problem of a situation

- visualize the cause-effect relationships in a diagram (Problem Tree)

11. PROBLEM ANALYSIS

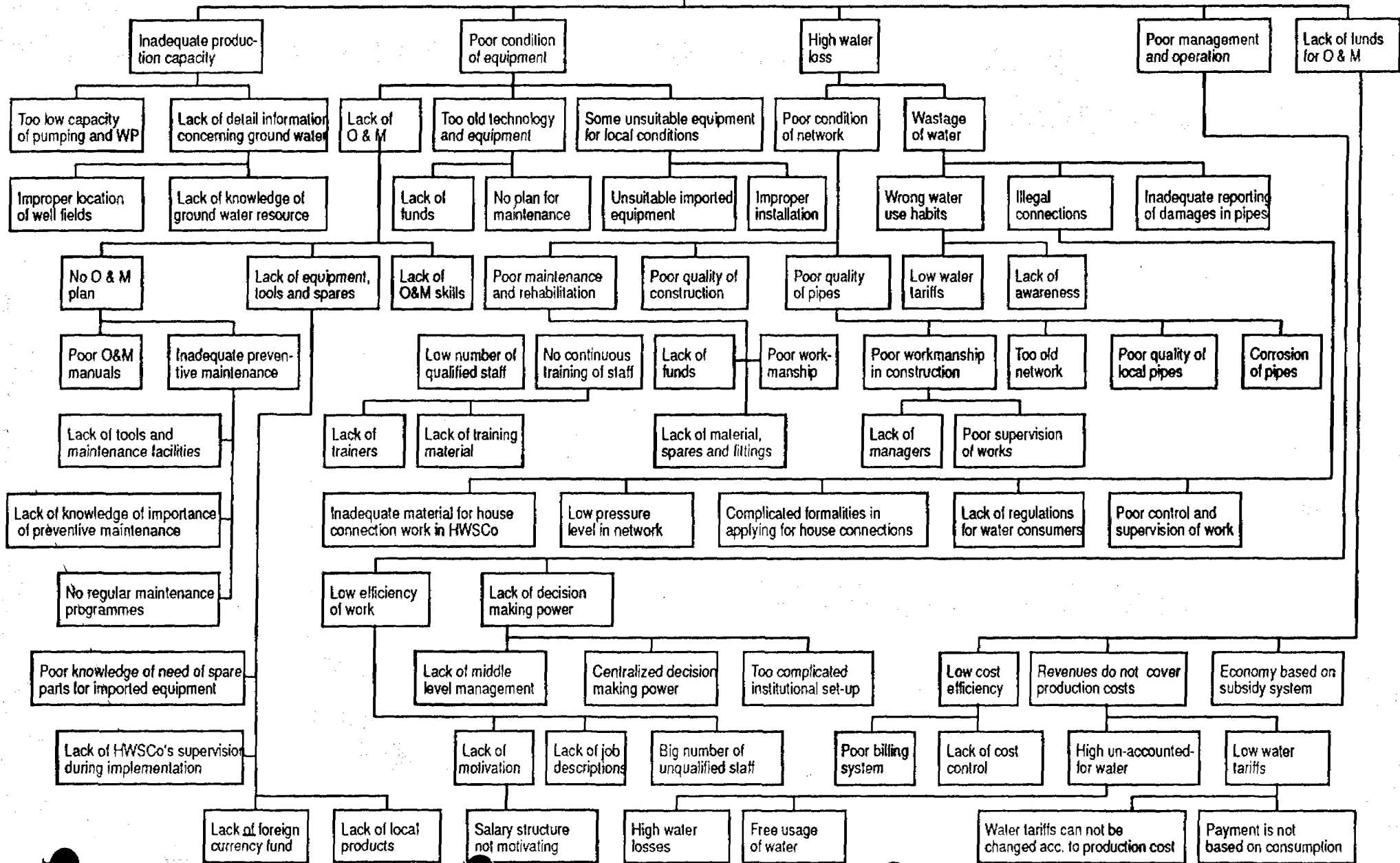**Note:** 1. Word problems as negative conditions.

2. One problem per card.

3. Identify existing problems, not possible, imagined or future ones.

4. A problem is not the absence of a solution, but an existing negative state.

No pesticides available	Harvest is infested by pests
WRONG	RIGHT
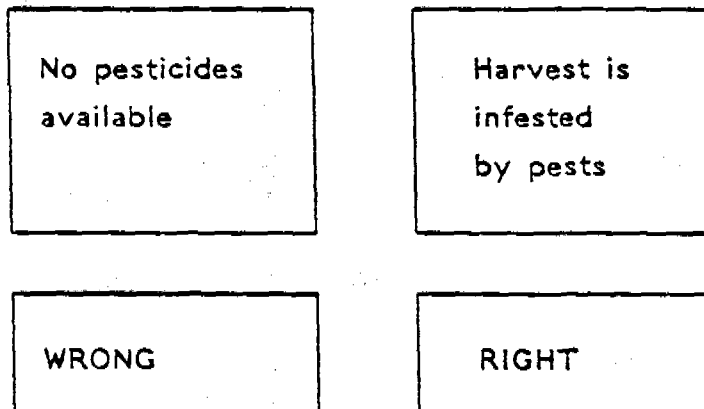
5. The position on the problem tree does not indicate the importance of a problem.

INADEQUATE SERVICE LEVEL
* quantity does not meet demand
* quality does not meet criteria
* reliability of supply is poor
* low pressure level

- Inadequate production capacity
- Poor condition of equipment
- High water loss
- Poor management and operation
- Lack of funds for O & M

- Too low capacity of pumping and WP
- Lack of detail information concerning ground water
- Lack of O & M
- Too old technology and equipment
- Some unsuitable equipment for local conditions
- Poor condition of network
- Wastage of water

- Improper location of well fields
- Lack of knowledge of ground water resource
- Lack of funds
- No plan for maintenance
- Unsuitable imported equipment
- Improper installation
- Wrong water use habits
- Illegal connections
- Inadequate reporting of damages in pipes

- No O & M plan
- Lack of equipment, tools and spares
- Lack of O&M skills
- Poor maintenance and rehabilitation
- Poor quality of construction
- Poor quality of pipes
- Low water tariffs
- Lack of awareness

- Poor O&M manuals
- Inadequate preventive maintenance
- Low number of qualified staff
- No continuous training of staff
- Lack of funds
- Poor workmanship
- Poor workmanship in construction
- Too old network
- Poor quality of local pipes
- Corrosion of pipes

- Lack of tools and maintenance facilities
- Lack of trainers
- Lack of training material
- Lack of material, spares and fittings
- Lack of managers
- Poor supervision of works

- Lack of knowledge of importance of preventive maintenance
- Inadequate material for house connection work in HWSCo
- Low pressure level in network
- Complicated formalities in applying for house connections
- Lack of regulations for water consumers
- Poor control and supervision of work

- No regular maintenance programmes
- Low efficiency of work
- Lack of decision making power

- Poor knowledge of need of spare parts for imported equipment
- Lack of middle level management
- Centralized decision making power
- Too complicated institutional set-up
- Low cost efficiency
- Revenues do not cover production costs
- Economy based on subsidy system

- Lack of HWSCo's supervision during implementation
- Lack of motivation
- Lack of job descriptions
- Big number of unqualified staff
- Poor billing system
- Lack of cost control
- High un-accounted-for water
- Low water tariffs

- Lack of foreign currency fund
- Lack of local products
- Salary structure not motivating
- High water losses
- Free usage of water
- Water tariffs can not be changed acc. to production cost
- Payment is not based on consumption

Session outline: 1.6

Subject: Presentation and summary of key issues: main
                 strategies.

Timing: 15.30 - 17.00

Course staff: Course coordinators, interested lecturing staff

Objectives: To gain common understanding of the main
                 strategies focussing on key problems and causes in
                 relation with local conditions and needs.

The course coordinators will use the results of the earlier
sessions to present the main strategies to meet the challenges
identified. Participants will be asked to comment on this and
give examples of how such strategies could be implemented in
their own situation.

Background information: library

Block 2:   Management of community water supply and
environmental sanitation services for urban
low-income areas.

Session outline   2.1

Subject: Institutional and financial issues of water supply
                  and sanitation management

Timing: 9.00 - 10.30

Course staff: Lecturer IHS

Objectives: Identify institutional and financial constraints
                  to be addressed and provide examples on how to do
                  it.

Most urban institutions are faced with high O&M costs. Earlier
investments did not take into account the life-time costs and the
replicability of the investment. There has been priority for new
investments over maintaining the existing ones. Different
institutions are responsible for different elements of
infrastructure. Financial arrangements are often complicated. The
lecture will conclude by presenting conceptual improvements for
discussion.

Background information: Hand-out, article

Session outline: 2.2

Subject: Presentation of case studies concerning the
                management of urban water supply and sanitation
                sytems

Timing: 11.00 - 12.30

Course staff: Lecturer IHS

Objectives: To compare experiences in promoting institutional
                changes and improved financial systems to serve
                urban low-income areas and to show the
                implications for management of urban institutions.

The participants will be introduced to several cases where
institutions have made an effort to address the needs of low-
income communities. The case presentations will include audio-
visual illustration.

Background information: Reports and articles relating to the
                          cases, library.

Session outline   2.3

Subject: Workshop on institutional development and
                financial strategies for water supply and
                sanitation

Timing: 13.30 - 15.00 and 15.30 - 17.00

Course staff: Course coordinator IHS and lecturer IHS (part)

Objectives: Exchange experiences and develop feasible concepts
                or strategies to increase institutional and
                financial capacities to serve low-income urban
                communities and ensure long term viability of
                systems

Main discussion topics will be presented by the course
coordinator. The participants will be working in two groups and
will prepare a presentation. The composition of the groups and
their assignments will be discussed in a plenary session. The
groups will follow an agreed outline and prepare three or four
flip-overs sheets which summarize the results of the groupwork.

Background information: The papers presented by the participants
during the first day of the course, library, articles.

"Yesca" sanctary improvemet

Project ↓ stages. → Agencies	City Govt	Public Enterpr	Reg. Govt	Nat. Insht.	CODE... ado.body	CBHAP
Planning	A	A	G	G	A	GR
Design	A	R	G	G	A	R
Implementation	R^F FM	R	G$^{(F)}$	G^F	F FM	
O&M	A$_{(F)}$	R$_{FM}$	—	G	G	—

A = Approval
G = Guidance
R = Responsible
P = particip.
F = Financial Control
FM = Financial Management
— = no involvemet

Integrated Urban Development Management

Definition of Integration

The term "integration" has been most commonly linked to development when referring to "Integrated rural development".In such situations, it usually refers to the plan/project/programme combining the social and financial aspects with the agricultural, looking not only at the best crops to be grown, but also at the marketing policy that will be used to sell the product, the method of transportation, the source of labour, the social welfare needs of the workers and such like. The question is how can it be achieved for urban development.

The concept of integration can be considered in terms of processes and elements.

Integration as a Process

The development process involves policies, programmes, projects and the implementation and management and maintenance of the completed projects. Integration as a process can be seen in various ways:

The integration of planning and implementation. Planning as an expression of a desired end product
Implementation as expressed in terms of mechanisms, support, institutional arrangements for achieving and maintaining end product. i.e. making sure that planning is not simply a paper exercise and is implemented. To achieve this requires a change in the form of planning which takes into account the resources (eg. financial capacity) of the planning agency and its power of enforcement. It can also require planning agencies to step outside their normal activities and consider the need to market or sell the product (eg extension of water supply ineffective unless potential beneficiaries are willing to "buy" the water, by paying for individual connections or paying the price charged.).

The integration of policy and programmes
The connection between programmes as "created" by international lending agencies with the responsible departments or by the government departments themselves and official government policy. Motivation of bureaucrats to have an internationally funded project/programme for their department may be for reasons of status, financial kick-back potential or national need for hard currency.

Intersectoral Integration
Sectoral policies may not always be complementary Intersectoral referring to policies, plans and practices of different agencies concerned with the delivery of various services to a specific

locality.eg. roads, water, drainage, sanitation
may be the responsibility of different agencies.

Organisational Integration
Horizontal and Vertical integration within
departments
Horizontal; between different departments within
one ministry. eg. A national department may have
responsibility for roads, water, sanitation,
drainage, housing etc. The development of a
housing area requires the development of
associated infrastructure. This horizontal
coordination is commonly found in housing
projects, especially low cost ones with the
development of 'complementary' socio-economic
support programmes.
Vertical; between the 'levels' of government,
ie.central, provincial and local.

The majority of the above forms of integration have been concerned with
coordination, the sort of coordination that ensures that you don't dig up the
road twice. The objective of such "integration" is to improve the efficient use
of resources, to minimise the negative effects of uncoordinated planning and
development. The key aspects of this are TIME and OBJECTIVES.

An alternative way of looking at integration is to treat integration as being
concerned with its EFFECTS. This can be seen in negative terms, namely:
ensuring that development or improvement of one item or aspect does not result
in overload for another. eg. improvement of access to low density housing area
where groundwater used as source of water results in increased density of
development and pollution of water supply.
Alternatively, it can be seen in positive terms, namely: the means whereby the
beneficial effects of the integrated development of different sectors/areas etc
produce greater benefits in total than would have the sum of the individual
constituent parts. This is what might be called the synergetic or ecological
approach. The nearest 'pure' ecological examples of development are found in
places where there is no government intervention but that development is left
to market forces alone. However, consequences of such not always desirable.
Intervention is desirable to protect against the harmful effects. The problem
is to find the balance between intervention that protects against the worst
excesses of the free market (ie survival - mastery - of the fittest -by the
strongest over the weakest) and yet avoids the stifling of initiative. The
ecological or synergetic approach to integrated urban development, therefore,
is concerned with providing a package of stimuli and controls that both
stimulates the development and ensures that the effects of that development
remain within acceptable limits. The objective of this approach is therefore to
be a catalyst for development.

Examples:
a)most common examples in rural development,e.g. the duck - fish combination.
b)road network development accompanied by identification of key plots for
supporting social facility development. Size of roads and plots inter-related
so as to ensure access to land market by variety of income groups. Minimal
direct intervention in land market.(basis for guided land development).

Elements of Integration

Alternative way of considering integration is to develop a typology which considers the main elements. These elements are not exclusive and true integration may involve several elements.

Geographical - qualitative/quantitative imbalances;eg, population, industry, infrastructure. example: Indonesia or India

Resources - sources: coordinating funding from different sources for multi-sector uses.

- sources and uses: coordinating funds available with projects/programmes proposed or use of limited staff available.

- relationship between capital development and maintenance (staff/finance)

- competing use of limited resources,eg. land, finance, staff etc

- ecological relationship: urban expansion vs conservation of countryside, productivity vs waste/pollution, water/power needs and land loss (due to flooding by dam or erosion).

Technical - integrating provision of services, integrating mainlines & local distribution

Organisational - Vertically, between levels of government and horizontally within agencies/departments,

- between public and private sector,

- Requires agreement on goals, procedures and timing,and should take account of political requirements (length of tenure in office) and budget cycles.

Information - Common data base. This means that common definitions are used, that there are common assumptions/goals and that all sectoral information is available (ie., no protective use of data - for power purposes).

- updating present situation, avoiding repeating error

- common understanding of the processes involved and acceptance of defined areas of responsibility achieved through training and well established information communication system.

Cultural - Religious
- Language

The IUIDP illustrates various elements of integration: integration of resources (eg the integration of finance from different sources, the integration of sources of finance [and amounts] with expenditure); organisational integration (ie between levels of government, between departments and between sectors and between the public and private sectors); geographical integration (ie a nationwide programme for improving urban areas); integration of information (ie developing a common process), technical integration (ie integrationof technical solutions affecting specified localities).

Suggested Reading

- Michael Lindfield (1987), "Integrated urban projects", paper to Integrated Urban Development Seminar organised by AIT,IHS and NHA,Thailand in Bangkok,May 1987.

- Apolo Jucaban (1987), "The Integrated Urban Development: The Philippine Experience", paper to Integrated Urban Development Seminar organised by AIT,IHS and NHA, Thailand, in Bangkok, May 1987.

- Milton J Esman (1987), Methodologies for Planning and Managing Social Development Activities, Regional Development Dialogue, Vol 8, No2,1987.

Session outline: 2.4

Subject: Community-managed infrastructure: Case
                presentation

Timing: 9.00 - 10.30

Course staff: (guest-) lecturer IHS

Objectives: Introduce the participants to experience regarding
                community-managed infrastructure and identify
                possible roles and interests.

A practical case will be presented by a guest lecturer who has
been involved in the project concerned. On the basis of this
presentation the course coordinator of IHS will summarize roles,
interests, and options for community management.

Background information: Hand-out: selected pages from relvant
                          literature

HYDERABAD SLUM IMPROVEMENT

		Responsible / Execution		Approval		Participation		Guidance		Funding / Finance	
		Project	Post-pr.	Project	Post-pr.	Project	Post-pr.	Project	Post-pr.	Project	Post-pr.
Housing	past	—	—	—	—	—	—			—	—
	now	1a,3	3	1a,2,3		—	—	1a	1a	3,6	3
Socio-econ. programmes	past	1a,2,3	1a,3	1a,2,3	1a	3	3	1a	1a	1a,2,5a 3	1a,3,5a
	now	1a,2,3	1a,3	1a,2,3	1a	3	3	1a	1a	id.	id.
Infrastruct. Water S.	past	1b,3	1b,3	1b,3	—	1a,3	1a,3	1a	1a	1,4,2	1,3
	now	1a/b,3	1b,3	1a/b,2	1b	1a,3	1a,3	1a	1a	1b,2,5b	1b,3
Sanitat. communal	past	1b,3	1b,3	1a,2	—	1a,3	1a/b,3	1a/b	—	1,2,4	1b,3
	now	1a/b	1b,3	1a/b	—	1a,3	1a/b,3	1a/b	—	2,5b	1b,3
Drainage	past										
	now										
Roads/Pav.	past										
	now										
Street light	past										
	now										
Sewerage	past										
	now										
Sanitation individual	past	—	—	—		—	—	—	—	—	—
	now	1a,3	3	1a,3,5a		1a,3,5a	3	1a,5a	1a	1a,2,6,5b	3

1/ Mun. Corp
  a. Comm. Dev.
  b. Sect. Dep.

2/ State Govt   3/ Communikation   4/ National Govt   5/ Foreign Donors
  a UNICEF
  b ODA

6/ HUDCO (Housing Urban Dev. Corp); national.

Session: 2.4 and 2.5

Topic: Community-based management approaches for urban water supply
and sanitation

READING MATERIAL

Inside:

Decision Making by Communities of the Poor

Participation in Urban Development

The Inter-American Foundation, a U.S. government agency long in the forefront of advocating grassroots organization, has framed the discussion of participation in a recent report:

"Poor people know what they require to satisfy their interest, meet their needs, and solve their problems. This does not mean that they know all the obstacles that are likely to emerge, have full information about alternative approaches, or will avoid serious mistakes and pitfalls. It does mean that projects work best when the intended beneficiaries are listened to and their ideas respected, and, indeed, when the projects are initiated, designed, and managed by the beneficiaries themselves."

As an ideal, community participation has enjoyed nearly universal acceptance; yet perhaps no other development topic suffers from such a vast disparity of understanding and practice in actual development projects.

Opposing participation is like opposing the idea of democracy. Politically, it is lauded by those on the right as developing entrepreneurship and self-reliance, and by leftists as a process of consciousness-raising and mobilization. Between the two positions

is the view that enhanced communication through carefully circumscribed participatory mechanisms will lead to better-designed, more cost-effective projects.

In development projects involving human shelter and urban planning, participation is a relevant issue at nearly every level and in every kind of project, whether multimillion dollar slum-upgrading funded by international agencies or block improvement involving only city agencies and neighborhood dwellers.

Last November, a major U.N.-

sponsored conference on "popular participation in local planning for social integration in urban areas," held in Vienna, Austria, attempted to advance the debate on the topic among development professionals. Most of the conference papers focused on shelter programs in developing countries.

The conference secretariat provided a working definition of participation by combining elements most often stressed by its advocates:

"First, participation is participation in decision-making processes,
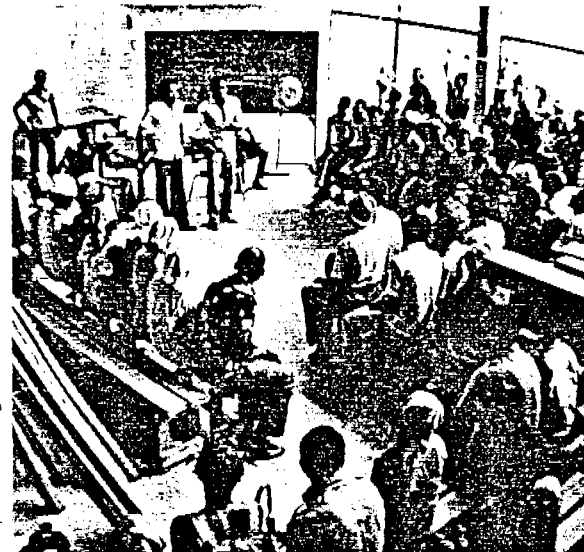
A community meeting in St. Martin's, an impoverished area in the heart of Port-au-Prince, the capital of Haiti. Such meetings were held during an upgrading and sites and services project to secure community support, obtain resident feedback, and encourage cooperative efforts at self-help in housing construction.

whenever they take place. Second, such participation has the objective of improving the economic and social condition of the participants. Third, since in most, if not in all countries, there are already some who participate in the decision-making processes disproportionately. it is the hitherto-excluded who have to increase their participation. Fourth, in order to achieve this increase in participation and improved access. the hitherto-excluded have seldom any other way than to organize themselves. Mobilization—in the sense of spontaneous political activism—is an important component of participation."

Obstacles to participation

Local government structures in many developing countries are not conducive to citizen participation. "Local authorities are seldom elected. In addition, they are generally weak in comparison to the central government." the secretariat wrote. "Even for what concerns limited urban development programs, few cities have tried to involve the population in formulating them. When they did, it was often under the insistence of funding agencies, which made their contribution conditional upon the involvement of the citizen in the planning process."

Remedying the lack of participatory channels is not just a matter of discovering appropriate structures and methodologies, however. "The most crucial reason for the absence of participation in planning is the lack of political will. . . . Participatory programs are launched for the political dividends expected from them, but few go beyond the stage of promotion," the report said. The fate of participatory plans and programs is often sealed before they even begin by the suspicion of policy makers that participatory planning may get going a process of social transformation which is disadvantageous to themselves or to the social groups which they represent. . . . Participation re-

quires planners to be firmly committed to changing the distribution of power and resources."

At the most basic level, participation is the process by which areas and people cut off from city services and political structure are made recipients of services and brought into the revenue-generating base of the city.

Another obstacle is easier to overcome. Planners and architects are not taught the complex social skills they need to act as intermediaries between people and government. Instead, there is often an ingrained prejudice against involving poor people in planning decisions.

"One of the difficulties is that planners don't trust the community. They assume that if you haven't been to university, you won't understand about things like budgets. There is a fundamental elitism involved [in gov-

ernment agencies]. whether you are talking about a rightwing or a socialist-leaning government," says Michael Bamberger, an urban sociologist at the World Bank. "And that strikes me as odd, because it there is one thing the poor understand it is financial constraints," he adds.

Control vs empowerment

In no area is there greater divergence of opinion than in the question of the purpose of participation. It is often argued, particularly in Latin America, that community participation is an end in itself, overriding even the objectives of a particular project in which it is carried out.

In this view, held by many nongovernmental organizations. community organization is part of a process of political empowerment of the poor.

Participatory Research

Fred Golladay of the World Bank attended the Vienna conference on participation and wrote a brief report, from which the following is taken:

The workshop devoted relatively little attention to the promotion of participation. From the perspective of operational programs, the central issue is how to promote participation, and clearly the answer to that question will require research that encompasses failures as well as successes.

Advocates of participation-as-enfranchisement argued for participatory research as a strategy for involving people in programs. For these purposes, participatory research is defined as studies undertaken by the community itself to inventory its needs. resources, and options. This process is not research in the conventional sense, but rather corresponds to the studies that are

conducted by consultants as part of the identification and preparation of conventional projects. Outside agents help community members formulate questionnaires and interview guides and devise schemes for data collection. These promoters then assist community members—typically led by a formal leader—in evaluating and interpreting the information. The conclusions of the research are then presented to an open meeting of the community, first in order to sensitize people to their collective perception of needs and opportunities, and second to encourage the community to adopt a program of action to deal with a few of its needs. Advocates of participatory research report particular success in getting slum dwellers and villagers to organize and carry out local improvement programs. ⬛

Residents of Old Naledi, a squatter settlement in Gaborone, Botswana, meeting with members of the Town Council and staff of the Self Help Housing Agency to discuss community improvements. The staff helped new neighbors, created by a sites and services project, organize into elected wards committees and form a development committee.

allowing them to face and increasingly overcome the uneven balance of power between themselves and the rich, who are seen as being allied with the established government. The process of creating community organization is seen as having such long-term benefits that short-term economic inefficiencies, such as construction delays caused by community decision-making, are justified.

Interestingly, in one highly participatory shelter project in El Salvador in the mid-1970s, where participation was identified as the primary goal, it was found that in practice the participatory elements actually enhanced the economic efficiency of the project.

A second view is reflected in the hesitation of many governments to encourage independent centers of power that may be responsive to the political opposition. They have therefore sought to develop officially controlled neighborhood structures. Participation in this case is seen as an extension of the governing political apparatus or party, and is secondary to both the purposes of a particular project and to general government goals.

Participatory organizations are in effect "co-opted" by government affiliation. From the point of view of the poor, the situation is a trade-off in which the popular organization gains access to government benefits in exchange for renouncing an independent or opposition political program.

Under Latin American democratic governments in the 1960s and early 1970s, such officially sponsored organizations, often known as *juntas de vecinos* (neighborhood associations) played major roles in urbanization and shelter programs. Where military regimes subsequently took power, however, these organizations languished.

London University sociologists Alan Gilbert and Peter Ward, who conducted a series of studies of low-income settlements in Mexico City; Bogota, Colombia; and Valencia, Venezuela, reach what they call a "discouraging" conclusion that formal channels of participation set up with government sponsorship "have served the interests of the state more than those of the communities." While the organizations were successful in pressuring to obtain improved services for their neighborhoods, "there is certainly little sign of participation in the sense of growing control by poor people over the resources and institutions that determine their quality of life," they say.

Pragmatic view

A third view of participation in urban projects can be described as functional or pragmatic and is generally the attitude of the World Bank and other major international development agencies. This view stresses the flow of information through appropriate channels of communication

to ensure that projects are designed according to the needs and preferences of potential beneficiaries. Participatory components in shelter projects are intended, therefore, to make projects more efficient.

In addition to community input in project design, contacts with community beneficiaries and leaders are fostered to elicit active community support and cooperation in implementing the project. Self-help schemes, in which beneficiaries contribute labor to the project, are given a high priority.

Since, in this type of participation, the physical objectives of providing housing and neighborhood improvements are of primary importance, participatory schemes are limited according to their utility to the project rather than to community development as such.

In the World Bank-funded upgrading project in the Tondo Foreshore area of Manila, the Philippines, for example, residents were consulted about very detailed "reblocking" plans, which involved decisions about the location of streets and the retention or destruction of existing structures. Residents voted to choose among three options.

In a later project in Manila, however, planners eliminated the reblocking vote after deciding that it was too detailed technically and had taken too long, although some elements of participation were retained. ▨

Participation: Three Country Studies

El Salvador

A project to provide 7,000 serviced plots to low-income people in El Salvador, begun in 1974 with World Bank financing, is a participation success story, despite the subsequent upheavals that have engulfed the country. The project was executed by the Salvadoran Foundation for Low Cost Housing, a nongovernmental organization that had developed, through several years of experience in small projects, a method to foster community development and self-help construction. It was one of the few cases in which the Bank worked with a nongovernment organization as executing agency.

"We saw the project as a means to induce participation and self-reliance. Usually it's the other way around. People see participation as a way to improve housing," says Alberto Harth Deneke, a former manager of the Salvadoran foundation and now a World Bank official. The foundation sought to overcome the difficulty in sites and services projects of helping organize applicant families into communities that are not fully formed until the project is completed.

Beneficiaries were required to agree to participate in meetings and contribute labor on a regular schedule as a condition for involvement in the project. Their labor substituted for a downpayment on the house. The foundation divided beneficiaries into groups of about 60 heads of households who would be future neighbors.

These groups met with social workers approximately nine times before construction was begun to plan work

activity, future community organization, payment conditions, and other community concerns. The larger groups were then subdivided into work groups of 20-25 heads of household responsible for specific tasks on the construction site.

Each beneficiary was required to work on the site one and a half days per week during three to six months, although a substitute could be hired

Further reading:

Michael Bamberger, Edgardo Gonzalez-Polio, and Umnuay Sae-Hau, *Evaluation of Sites and Services Projects: The Evidence from El Salvador*, World Bank Staff Working Paper No. 549, 1982, $10.

Michael Bamberger, Bishwapriya Sanyal, Nelson Valverde, *Evaluation of Sites and Services Projects: The Experience from Lusaka, Zambia*, World Bank Staff Working Paper No. 548, 1982. $10.

Michael M. Cernea, *A Social Methodology for Community Participation in Local Investments: The Experience of Mexico's PIDER Program*, World Bank Staff Working Paper No. 598, $5.

Community Participation for Improving Human Settlements: A Reader Composed of Papers Presented to the Workshop on Community Participation 17 September to 1 October 1982, 1983. U.N. Centre for Human Settlements (Habitat), P.O. Box 30030, Nairobi, Kenya.

Mansion in the Sky: A Lesson in Self-Help Housing from Gaborone, Botswana, 1983, Free. Cooperative Housing Foundation, 2501 M St. NW, Suite 450, Washington, D.C. 20037, U.S.A.

Patricia A. Martin, *Community Participation in Primary Health Care: Primary Health Care Issues Series 1, No. 5*, American Public Health Association, 1015 15th St. N.W., Washington, D.C. 20005, U.S.A. An analysis of participation in 35 health projects in developing countries.

Papers presented at the expert group meeting on Popular Participation in Local Planning for Social Integration in Urban Affairs, Vienna, 7-11 October, 1983. United Nations, Centre for Social Development and Humanitarian Affairs, P.O. Box 500, A-1400 Vienna, Austria. The documents include: the Centre secretariat report, a study based on the experience of 13 urban projects on "basic notions on how to promote" participation; and case studies of urban projects in Bolivia, Sri Lanka, Zambia, and Kenya. The documents provided on request.

to do the work. Most of the work w; done before beneficiaries had bee allotted specific sites for their ow houses. The group also met regular with social workers to discuss prol lems and to plan future activities.

Thus, when beneficiaries move into the site, they had formed th basis of a community. Food-buyin and credit cooperatives as well ¿ other kinds of community organiz; tions were then created to continu the process of consolidating the ne' neighborhood in physical as well a organizational terms.

The results, as measured in a evaluation survey conducted in 198C were impressive. Seventy-five pe: cent of residents in the project neigh borhoods belonged to community or ganizations, compared with less tha 10 percent in other low-incom neighborhoods. The evaluatiol found that the project provided hous ing for people as far down the incom scale as the 20th percentile.

One of the most significan achievements was in cost recovery Late payments—arrearage—oc curred in only 2.3 percent of loans compared with as much as 80 percen in some public housing projects in E Salvador. It was "one of the best loar repayment records of any Worlc Bank shelter program," according tc the evaluation. The evaluation traced the good performance to community participation components combined with efficient collection procedures.

"The use of mutual help construc-tion and the substantial investment in resources in developing community institutions are probably major factors in debt repayment. The communities have a very high degree of social responsibility," the evaluators concluded.

The evaluation also pointed out significant problems. The requirement that beneficiaries contribute labor on a particular day, Sunday, was found to discourage those, especially female heads of households, who had to work on that day. The evaluation

recommended that greater flexibility be introduced into the participation requirement.

The project implementers also faced the problem of scale: they feared that their labor-intensive method—with such close contact between social workers, planners, and beneficiaries—might not be workable after projects reached a certain size, say over 1,500 families per site, unless the project was divided into settlements of that size.

Finally, the foundation made it clear it did not consider its method a panacea for El Salvador's social ills. Rather, it saw its approach as demonstrating that through self-reliance, community participation, and careful tailoring of the design and credit to the needs of low-income families, a large portion of the urban poor can help themselves.

Botswana

Gaborone, the capital of Botswana, carried out a shelter program, with a Community Development component, administered by the Self Help Housing Agency of the city government. "One of the main motives in setting up the Community Development section was, frankly, to get and keep plotholders in the mood to pay their service charges and loans," the Cooperative Housing Foundation wrote in a report on the project, to which it lent technical assistance.

The community development staff helped the new neighborhoods created by the sites and services projects to organize politically into elected ward committees and to form a development committee. It mediated rivalries that arose in the new settlements between previously constituted groups. How-to manuals explained the workings of the housing agency and the residents' relationship and responsibilities to it. Among its important community development functions, the agency received and processed complaints related not

only to its own activities, but also to the Town Council.

Problems arose between the Town Council and the housing agency, which had grown large and influential. There was particular resistance to the Community Development section, on the grounds that its functions overlapped with the Town Council's own social welfare unit. The community development staff was also required to step in to extract payments from residents who had fallen into default. The collection function created resentment and worked against the agency's desire to build trust.

Nicaragua

The Bank provided a $16 million loan in 1981, among other things, to assist the government of Managua, Nicaragua, in upgrading basic infrastructure in 26 low-income neighborhoods. A major element was installation of a storm drainage system to eliminate damage from annual flooding and allow residents to make permanent improvements in their homes. Other improvements included paving of streets, gutters, and walkways and installation of public lighting. About 220,000 people, 36 percent of the population of Managua, live in the affected areas.

According to Edward Echeverría, who supervised the project for the Bank, the project owed much of its efficient performance to the participation in planning and implementation of neighborhood organizations called Sandinista Defense Commit-

tees. "The project electrified and revitalized the community. It was completed [in April] ahead of schedule —as with all Nicaragua projects," Echeverría says.

The neighborhood committees' primary role was to help the implementing agency decide which streets would be paved, since the project covered up to one third of the streets of Managua. As a result of the communication between the committees and the city agencies, a number of revisions were made in the original project plan.

In one example of self-help, the city was saved the work of planting trees and shrubs along the completed streets. The plants were distributed to the committees, which organized the planting by residents on their own streets.

"You can ask, 'why did it work so well?' It is because the Sandinista committees were already organized and had access to the junta [the municipal authority]. Lots of issues were raised, and most were resolved by the second meeting," Echeverría says.

The Sandinista committees are examples of government-sponsored— as contrasted to independent or spontaneous—neighborhood organizations. "They are political instruments," Echeverría says, "but they perform the purpose for which they were established, to transmit the needs of the people to the government. This kind of participation is fundamental to democracy in development." UE

UPGRADING SLUM INFRASTRUCTURE

Divergent Objectives in Search of a Consensus*

by SHLOMO ANGEL

Professor of Human Settlements Planning, Asian Institute of Technology, Bangkok, Thailand

A discussion of the objectives for infrastructure improvements in slums and squatter settlements runs a serious risk of degenerating into a boring list of worn out clichés ranging from the eradication of urban poverty to the enhancement of the quality of life. Such lists are already available in numerous publications and are usually not regarded seriously. They are usually too general, being the lowest common denominator among a variety of conflicting interests. When they are more specific, they usually promise something for everyone, meaning different things to different people. Yet infrastructure programmes are being pursued in many developing countries and we should be able to understand the underlying motives for pursuing them.

To do so, instead of asking 'What are the objectives for the improvement of infrastructure in low-income settlements?' we must first ask ourselves, 'whose objectives?' There is no a priori reason to assume that all the participants in the slum and squatter upgrading process share the same objectives. Indeed, we must carefully examine the differences between these objectives. Why?

The success of infrastructure programmes in low-income settlements depends, to a major extent, on generating sufficient common interest among the various participants. This makes it all the more important to search for a clear understanding of the objectives they are pursuing. Anyone involved in the planning and implementation of infrastructure programmes in slums and squatter settlements will come to realise, sooner or later, that his or her understanding of the objectives of the various participants in the process has both predictive and strategic value. Such an understanding is crucial for mobilising the support of potential partners, as well as for circumventing opposition.

The aim of this paper is to lay the foundation for a more systematic study of the objectives, interests, preferences, and motives of the key parties involved in the provision of infrastructure services to slums and squatter areas. As such, it can only provide a general framework for analysis, using the existing body of information on the subject. The real objectives of the various participants in the process are not easily observed, nor are they necessarily spoken about or articulated properly. This paper must, therefore, remain largely speculative in nature.

We have identified six groups of participants in the slum and squatter upgrading process:

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1. The 'Housers', who are mainly interested in self-help housing improvement and see slum infrastructure programmes as means for increasing land tenure security, thus directing more of the people's savings toward building their own houses.
2. The 'Municipal Engineers', who are primarily interested in public health, and see such programmes as means of removing serious health hazards through the provision of clean water, through the collection of refuse and sewage, and through increased public safety.
3. The 'Community Builders', who are mainly concerned with community organisation and development, and see infrastructure improvements as issues of common interest around which slum dwellers can organise effectively.
4. The 'Politicians', who are mainly concerned with extending and consolidating their ability to rule and perceive slum infrastructure programmes as an effective way to assist the poor visibly without incurring vast public expenditures, and without unnecessarily alienating the support of the middle class or the land-owning groups.
5. The 'International Funders', who are primarily concerned with disbursing capital for development projects, and see such programmes as a means of providing a form of international assistance which can reach the poor. For them such programmes are appealing because of their low levels of per capita expenditures, because they do not distract attention from rural development efforts, and because they can be justified economically as generating increased property values in improved areas, over and beyond the initial capital investment in infrastructure, which should, in their view, be recovered from the slum dwellers themselves.
6. The 'Slum Dwellers', who are primarily interested in not getting hurt by heavy-handed government intervention and see infrastructure programmes as an effective means of getting 'something' from the government, which is clearly better than 'nothing', but falls short of what they can see as possible to have.

These six groups share many objectives. To the extent that sufficient consensus has been generated among a number of these groups, not necessarily all of them, progress has been registered in infrastructure programmes in slums and squatter areas during the last decade. To the extent that key participants in the process have refused to cooperate, or have cooperated only reluctantly, upgrading programmes have been either impossible to launch altogether, have made little or negligible progress so far, or have deteriorated prematurely.

   In the following sections we shall discuss in greater detail the various objectives of these six groups, the extent to which they have been consciously articulated or pursued, and the extent to which they have been achieved.[1]

The Housers: Slum Infrastructure for the
Gradual Improvement of Housing

The housers are primarily interested in housing the poor. Although professionally they may have been trained as architects, they see the efforts to construct public housing for poor families as basically hopeless, in view of past performance, and in the face of impossible financial requirements which are never likely to be made available.

   Their fundamental contention is that as government has failed in providing adequate

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TABLE 1 *The relationship between the condition of houses and government intervention in 250 squatter areas in Karachi, 1975* [3]

Index measuring condition of houses in the area	Presence of key security-giving items in the area*				
	0	1	2	3	4
above 100	—	—	—	2	26
51 to 100	—	—	2	6	17
0 to 50	1	8	16	12	21
0 to −50	—	19	11	7	4
−51 to −100	6	27	8	2	2
below −100	16	28	5	2	—

* Key security-giving items were found to be water supply, electricity, a sewage system and the collection of taxes.

housing for the urban masses, it must assist the people in their own housing efforts by removing obstacles and constraints and by providing essential public services wherever they are needed. Given the freedom and the opportunity, the people can and do mobilise their own resources to house themselves.

The basic objective of the housers is, therefore, improving the housing conditions in slums and squatter settlements as well as creating new housing through the mobilisation of the people's own resources. The provision of infrastructure by the responsible government authorities is seen by the housers as an important act of 'recognition' of slum and squatter communities by the authorities. This recognition is an important factor in reducing the threat of eviction by government, leading to a corresponding increase in tenure security, and consequently to higher levels of investment in house improvements by the residents.

Indeed, the provision of infrastructure services in slum areas increases the hope for land tenure among slum dwellers, and where tenure is sufficiently secure and the people willing and able to improve their shelter, it does encourage increased construction activity. A study conducted in Karachi in 1975 found hope for secure tenure to be strongly related to government actions, particularly in the area of infrastructure development.[2] The four most important hope-giving items were found to be the presence of water supply, electricity, a sewage system, and the collection of taxes by the government officials. The condition of houses in 250 squatter settlements were measured against the presence of these four hope-giving items in the settlements. It was found that the more hope-giving items were present in the area, the better was the condition of the houses. This is clearly demonstrated in Table 1.

This need not necessarily mean that the provision of infrastructure, in and of itself, does naturally lead to increased construction activity. For infrastructure to contribute to shelter improvement, two other conditions must also be present: (i) there must be a perceivable improvement in land tenure; and (ii) the people must be willing and able to improve their houses. An infrastructure programme cannot, therefore, be considered a housing programme unless these two other conditions are fulfilled. The Kampung Improvement Programme in Jakarta, for example, is not a housing programme. A recent study of 140 low-income settlements in Jakarta compared kampungs where infrastructure improvements have taken

place with unimproved kampungs. The study inquired whether households had initiated improvements and repairs on their houses during the three years prior to the survey. No significant differences between improved kampungs were found. The average percentage of houses that were recently improved was 22.8 in improved kampungs, compared with 19.9 in kampungs to be improved, and 28.3 in kampungs never to be improved. These differences were found to be statistically insignificant.[4]

A considerably more comprehensive gradual housing programme in Port Moresby, the Migrant Settlements Improvement Programme, inititated in 1973, has also failed to generate indigenous housing activity in a number of settlements. This was largely due to the level of poverty of the migrants, their lack of interest in spending their savings on housing improvements because of their cultural traditions, and their lack of commitment to stay in the urban area.[5] In this case, neither tenure nor infrastructure, loans, technical assistance and community organisation were sufficient conditions for generating indigenous shelter improvements.

The housers are currently facing the task of creating self-help housing improvement programmes that work. On the one hand, the concept of public housing for the poor has been undermined consistently and systematically as unrealistic, and on the other hand no workable self-help housing programme has emerged. Slum upgrading and the creation of serviced sites seem to be the only alternatives. The housers, particularly after a decade of consolidation of new housing authorities, are not likely to abandon the search for effective upgrading programmes in slums and squatter areas. From their point of view, if public construction is abandoned, it is their responsibility to develop expertise, procedures, techniques and financial mechanisms for effective upgrading of slums and squatter settlements.

To conclude, as far as housers are concerned, infrastructure improvement programmes in slums and squatter settlements are an essential component of integrated housing programmes which should, in principle as well as in practice, support and complement the efforts of the people themselves in the gradual development of habitable human settlements over time.

The Municipal Engineers: Slum Infrastructure for Public Health

From the point of view of the municipal engineers, whether infrastructure improvement programmes do or do not lead to improved shelter through self help is completely immaterial. They can point out, for example, that the Kampung Improvement Programme, in fact, does not pretend to be a housing programme, but is fundamentally a public health programme and a public works programme. According to the World Bank, which is providing financing for the programme:

> 'The proposed project . . . will have two principal objectives . . . First, it is designed . . . to provide essential services in low-income neighbourhoods . . . Second, the scope of the project would be expanded to include investments aimed at improving general public health. The project will address critical short to medium-term problems of solid waste management . . . and drainage . . . both of which will have an important bearing on public health.'[6]

TABLE 2 *Infrastructure components in selected slum improvement programmes and projects*[7]

Project/programme	1. water supply	2. roads and walkways	3. drainage	4. electricity	5. human waste disposal	6. solid waste disposal	7. fire protection
1. Slum Upgrading Programme, Bangkok	•	•	•	•		•	•
2. Environmental Improvement of Slum Areas, India	•	•	•	•	•		
3. Kampung Improvement Programme, Jakarta and Surabaya, Indonesia	•	•	•			•	•
4. Slum Improvement and Resettlement Programme, Philippines	•	•	•	•			
5. Squatter Upgrading Project, Kingston, Jamaica	•	•	•	•			
6. Squatter Upgrading Project, Dar es Salaam, Tanzania	•	•	•	•			
7. Migrant Settlements Improvement Programme, Papua New Guinea	•	•	•		•		
8. Squatter Settlements Upgrading, Rangoon, Burma	•	•	•		•		
9. Improvement of Substandard Urban Areas, Karachi, Pakistan	•	•				•	•
10. Squatter Upgrading Project, Lusaka, Zambia	•	•		•			

The municipal engineers' basic objective of providing improved infrastructure services in slums and squatter settlements is in no way different from their overall objective of providing basic public services throughout the city. The city must gradually develop connected infrastructure networks: a water supply system, a road and transport system, a drainage system, a sewerage system, an electrical network, a garbage disposal system, and a fire and police protection system. These systems will cover the entire city, including the slums and the squatter areas. The municipal engineers have the same duty and responsibility toward all residents of the city. From their point of view, the extension of services to slum areas is a natural extension of the existing networks.

Since this is an equitable and just distribution of public funds, it should not require any special treatment, beyond the need for an expanded budget for increased levels of operation. Indeed, from the technical point of view, improvement of infrastructure in slums and squatter areas does not present a special challenge. Most slum upgrading programmes provide the same basic infrastructure elements, as can be clearly seen in Table 2.

These infrastructure components are, in fact, the same as those commonly provided on a city-wide basis, and for which considerable expertise, experience and well-tested procedures already exist. From the municipal engineers' point of view, slum infrastructure is of such a low level of complexity that it fails to provide a real intellectual challenge.

Over and above the feeling among municipal engineers that working with slum infrastructure has no class, they are reluctant to involve their agencies in slum and squatter upgrading for three important reasons. They see upgrading programmes engage in temporary improvements, adopting lower standards, and pursuing a 'project' approach, all of which are fundamentally unacceptable to them.

For the municipal engineers, the provision of temporary infrastructure improvements is highly problematic. They cannot be expected to develop infrastructure systems only to see them destroyed through eviction at a later date. This is not uncommon, and has been documented by Das, who reported that the Janata Colony in Bombay was evicted in 1976, after three successive stages of environmental improvements in 1958, 1969 and 1972.[8] From the municipal engineers' point of view, such behaviour on the part of the authorities is a flagrant waste of public resources. As they see it, the public authorities should acquire jurisdiction over the lands needed for public infrastructure improvements, and these should not be subject to dismantling.

Second, the municipal engineers prefer high infrastructure standards, even though they may imply considerable initial costs. Higher infrastructure standards mean lower risk of failure and less potential embarassment. Low standard infrastructure, on the other hand, cannot produce effective results. The Kampung Improvement Programme, for example, being a low-standard programme, is still failing seriously to affect health levels in the kampungs as most health hazards are not completely eradicated.[9] Low standards also mean higher maintenance costs in the future. Moreover, there is no reason why standards should be lower in slums and squatter areas. From the municipal engineers' point of view, identical standards throughout the city mean equal treatment of all people in the city. It also means that planning, execution and maintenance could be streamlined and efficient.

Third, the municipal engineers fail to see the value of the 'project' approach to infrastructure development. For them, infrastructure systems are not restricted to any particular area but to the city as a whole. The essence of a successful infrastructure programme is in its long-term systematic planning and gradual execution, followed by regular maintenance. The 'project' approach tends to introduce many discontinuities. It upsets agreed upon schedules and usually does not allow sufficient time for proper planning. They can see why politicians are excited by special projects but for them projects are just another manifestation of the 'shotgun' approach, and thus lack seriousness.

Beyond these fundamental disagreements with politicians on the merits of temporary improvements, lower standards and special projects, the municipal engineers disagree with the housers regarding the merits of the integrated approach to human settlements development, and with the community builders regarding the merits of people's participation.

For the municipal engineers, the integrated approach suffers from drawbacks similar to those of the project approach as it does not offer a realistic model for management. In practice, different infrastructure components are the responsibility of different government agencies, each of which must proceed to develop its own programme throughout the city and

sometimes throughout the nation. While the need for cooperation is clear, every agency must know exactly what it is responsible for and must be allowed to proceed independently of others in the planning and execution of its responsibilities. Hence, while the municipal engineers realise the importance of coordination, they prefer to agree initially on the allocation of responsibilities and then proceed on their own.

While the community builders stress community participation in decision-making, the municipal engineers are generally against it. They are professionals who are happy to discuss problems of mutual concern with fellow professionals—architects, engineers, lawyers, contractors, and even social workers. They cannot see the value of meeting the people, especially if this may involve confrontation. As far as they are concerned, the provision of infrastructure is a technical problem, which leaves little room for people's participation in decision-making. In practice, the bulk of expenditures in slum infrastructure programmes is on roads, walkways and drainage; and there is little left for any other improvements. This has been pointed out in general terms by Caminos and Goethert,[10] but is more clearly demonstrated in Table 3. It means that the choice of technologies is rather limited and that the issue is one of efficiency and cost reduction, both being subjects on which the municipal engineers consider themselves to be experts.

To conclude, the municipal engineers see the improvements of infrastructure in slums and squatter settlements as a problem lying entirely in their domain, which is made difficult by the various other participants. As far as they can see all that is required is a mandate to proceed, an adequate budget, and a proper mechanism for acquiring the necessary land. The rest is best left for them to worry about.

The Community Builders: Slum Infrastructure for Community Organisation

The community builders are mainly interested in getting poor people to act together for their common benefit. For them the key questions regarding the provision of infrastructure in slums and squatter settlements are not 'what is to be built?' but rather 'how is it to be built?' or, more fundamentally, 'how can the people participate in determining what is to be built and how it is to be built?'

The community builders point to the lack of adequate services in slums and squatter settlements as a clear sign of neglect by the authorities, a lack of concern among those in power. The quest for slum infrastructure is for them a struggle for more effective participation of the poor in important decisions that affect the allocation of urban resources. They see the poor as lacking access to these resources, mainly because they lack the power to obtain them. The people's voices are weak and cannot be heard. The government does not respond because it cannot hear or will not listen.

In the community builders' view, while individual slum dwellers can accomplish nothing in this respect, an organised community can. Together, slum people can draw attention to their needs. Since infrastructure services are a common need, the struggle for obtaining them is seen as an important struggle that can unite the community around a common goal. The struggle for infrastructure, by uniting slum communities, is only a means to two higher goals. For the more radical community builders, the goal is 'people power', the power that is necessary to transform society into a just and caring society. For the more moderate, the goal

is the building of a strong community to replace the role of the traditional village as a social unit capable of effectively handling community affairs.

Ultimately, for the community builders it is spiritual and not material values that count. Improved physical infrastructure means considerably less than the enhancement of human dignity and self reliance, the reduction of exploitation, and the development of a caring society. In planning and in execution, technical considerations must be subject to social considerations. As far as they are concerned, it is an error to conceive of slum improvement programmes as having a physical, a social and an economic component, all basically independent of one another:

> 'If physical improvements in the Kampungs have been carried out in ways that fail socially because people do not care for what is done; or if they fail economically because the works are improperly used or poorly maintained, then these failures cannot be put right by adding "social" or "economic" projects or programmes ... The misconception at the root of these failures is the idea that "social", "economic" and "physical" are categories of things or actions. In reality they are no more than conceptual aspects of any particular thing or action. Anything involving action by the people, in any way or by any means, affects interpersonal relationships, for better or worse; any action is also bound to use energy and so it will affect the economy; and any action and its product takes place in particular surroundings and will therefore effect some change in the environment, however small. So, by this definition, everything and every action is social, economic and physical.'[12]

Properly considered, this conception leads to a different form of organisation for the implementation of infrastructure programmes. In Hyderabad, for example, the improvement of slums and squatter areas rests with the Urban Community Development Programme (UCD) of the Hyderabad Municipal Corporation. Before any improvements are contemplated, community organisers are sent into the slum communities to discuss development and assistance issues. The people are urged to organise along democratic lines and to elect leaders. The UCD, in turn, recognises the community organisation and its elected officers, and requests for government assistance are henceforth issued in the name of the community.

Community members then discuss plans for the reconstruction of their neighbourhood. People agree on a new layout plan with UCD technicians and sign agreements for loans and land titles. The slum is then dismantled and the community is moved to a temporary site. People then build their own houses, while the Metropolitan Corporation provides medium-standard infrastructure free of charge, which is then connected to the adjoining urban networks.[13] By early 1981, the Habitat Hyderabad programme completed 3210 units in 29 slum areas. By the end of 1982, 3218 additional units will be completed in 25 new slums currently undergoing reconstruction. It is interesting to note that the staff of the UCD which is in charge of the planning and implementation of the slum reconstruction programme is made up largely of social workers and administrators. Of a total of 100 staff members, there are only eight planners and eight engineers.[14]

In Hyderabad, while infrastructure services are provided by the Municipal Corporation, the participation of the people in decisions on layout makes it possible to clear the land necessary for infrastructure improvements. Since the provision of infrastructure in densely

TABLE 3 *Cost allocations for slum infrastructure improvements in selected projects, 1978–1981*[11]

TABLE 3 Cost allocations for slum infrastructure improvements in selected projects, 1978–1981[11]

Infrastructure component	Jakarta, Indonesia 1978	Surabaya, Indonesia 1979	Secondary cities, the Philippines 1981	Bangkok, Thailand 1981	Unweighted average
1. Roads and walkways	72.2%	54.2%	69.0%	73.6%	67.3%
2. Drainage	12.7	21.2	13.3	23.7	17.7
3. Water supply	13.4	15.8	17.4	—	11.7
4. Solid waste disposal	0.2	3.0	—	1.8	1.2
5. Human waste disposal	1.5	5.8	—	—	1.8
6. Electricity	—	—	0.3	—	0.1
7. Fire protection	—	—	—	0.9	0.2
Total	100.0	100.0	100.0	100.0	100.0

TABLE 4 First priorities for improvement of low-income residential communities in six Asian cities, 1977[22]

Type of low-income settlement	Bombay	Colombo	Dacca	Jakarta	Manila	Taipei
1. Squatter settlements	toilet facilities	water supply	water supply	roads & walkways	water supply	roads & walkways
2. slums on rented or free land	toilet facilities	water supply	water supply	roads & walkways	water supply	roads & walkways
3. private housing (both owned and rented) in low-income use	water supply	electricity	sewage & garbage collection	roads & walkways	water supply	roads & walkways
4. peripheral commuter villages and towns	transport facilities	water supply	sewage & garbage collection	roads & walkways	water supply	playgrounds
5. employees' housing (on-and off-site)	water supply	electricity	water supply	sewage & garbage collection	—	roads & walkways
6. publicly constructed houses and flats	water supply	water supply	sewage & garbage collection	water supply	sewerage facilities	garbage collection
7. government-assisted squatter and private housing schemes	water supply	water supply	sewage & garbage collection	electricity	water supply	roads & walkways

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inhabited settlements requires the cooperation of those households which would have to clear the way for roads and footpaths, the participation of the community in infrastructure planning is essential.

Needless to say, the argument for participation in decision making on infrastructure goes well beyond the need to clear the path for roads and walkways. People have a right to participate in important decisions that affect their lives. Beyond that, people are experts on the subject of their community and possess valuable and useful knowledge that could contribute substantially to good decision making on infrastructure. From their point of view, the provision of infrastructure is not a very complicated matter. It is a subject that, with little technical assistance, they could easily handle. They are the ones who know what infrastructure services are really needed in their community. In the long run, they have to participate in using and caring for the services. The more they feel that these facilities are really theirs to care for, the more careful and responsible they are likely to be.

The community builders also stress participation of the people in paying for infrastructure improvements, subject to their limited ability to pay. Such participation is beneficial for the development of self reliance and community autonomy. It has a corrective effect on the statement of needs and priorities, helps in generating ideas about economy and the reduction of waste, and creates an atmosphere of real participation among equals rather than a confirmation of the donor-recipient relationship.

A simple experiment in the community building approach to the development of slum infrastructure was conducted in Bangkok by the Human Settlements Division of the Asian Institute of Technology in 1977. Members of the Division approached an urban slum, referred to as Jerusalem Village by its Muslim residents, to discuss priorities for infrastructure development. Residents indicated that road access would be the highest priority, as they had to climb a wall to enter their community. Further investigations made it clear that road access involved complicated land disputes and was not possible at that stage. The second priority identified by the slum dwellers was fire protection, not an uncommon priority in the densely populated slums in Bangkok which can and are occasionally destroyed by fire in a matter of hours.

The community builders then proposed to obtain outside financial support for the community subject to an understanding that: (i) the community will create a committee to organise people's participation in the project; (ii) the people will participate in planning; (iii) they will finance the project on a parity basis, raising one-third of the required budget by themselves; (iv) they will themselves construct the fire fighting system; (v) they will train as fire fighters and organise an official fire brigade; and (vi) they will take charge of maintaining the fire fighting equipment and the fire brigade.

With minimal technical assistance, the people designed and built a fire pump using a rebuilt car engine, and completed the layout of pipes and hydrants and the training of the brigade with the Fire Department within three months. Their experience in organising later enabled them to approach the authorities for an access to their community, which resulted in the construction of a long bridge along the canal leading to their community.[15]

To conclude, from the community builders' point of view, the development of infrastructure in slums and squatter areas is an important issue around which the community can be organised and strengthed. The quest for improved infrastructure is a quest for social justice, and working together on the execution of an infrastructure programme is a quest for

the revival of a village community spirit in an urban setting. Both quests involve the organisation of the people around the common issue of essential public services.

The Politicians: Slum Infrastructure as an Effective
Measure for Mobilising Urban Support

Politicians, in the context of this paper, refer mainly to the members of the political élite governing the country. In general, these politicians rarely see eye to eye with the community builders, particularly the radical ones, and have occasionally taken to imprisoning them when the latter's idea of 'people power' ran counter to their own ideas about where power should reside.

From the politicians' point of view, the development of infrastructure in slums and squatter settlements is a realistic social welfare programme with mild political goals. Their interest in slum improvement is similar to their earlier interest in supporting government housing programmes. In general terms, they are concerned with the display of governmental responsibility for the urban poor, and with their ability to handle any potential crises that may arise from the neglect of large segments of the urban population. This neglect can and has been the cause of massive demonstrations of public discontent and poses a serious threat to the security of people and property as well as to the stability of the government.

The political élite's reaction to the continuing existence of unacceptable slums and squatter areas in the city is particularly crucial because the slums are a visible proof of their incompetence in handling social problems and because the squatters continue to defy the laws of the land without incurring any punishment. This situation is a blemish on the prestige and performance of those in power. Their growing interest in slum improvement programmes has developed hand in hand with the historical failure of large-scale construction programmes on the one hand, and the high political costs of slum clearance on the other. They are gradually beginning to see the value of supporting slum improvement programmes as effective mechanisms for gaining popular support in low-income areas. They can also see that the per family (or per vote) expenditure on slum infrastructure is rather low, in comparison with earlier housing programmes.

A relationship of mutual dependence between people and government and the reliance of the people on the continuation of improvement programmes in the slum areas over time is seen by the politicians as more important in generating loyalty and stability than the self reliance advocated by the community builders. Politicians can also see the importance of infrastructure in general and roads in particular, in providing the authorities with access to the inner reaches of slums and squatter areas, thus increasing the control of the security forces over potentially volatile situations which may develop there.

In all but very few cases such as Pakistan, where government owns most slum land and does not need it for other uses, politicians fall short of desiring to become involved in the land tenure issue and, as such, differ from the housers. They are wary of the possible consequences of granting land tenure to squatters, both in terms of alienating land owners and in terms of encouraging further squatting. Since, from their point of view, a realistic solution to the low-income housing problem has yet to emerge, they prefer slum upgrading to be a harmless programme, not requiring a serious reorientation of government priorities for development and not requiring substantial new legislation. While the future remains unclear, they prefer

programmes which do not unnecessarily waste resources or upset the status quo, and are willing to accept lower standards in spite of the objections of municipal engineers that such standards are too low to have meaningful and measurable impacts.

For the politicians, the determination of standards for infrastructure development in slum areas is largely a question of sufficient visible impact, sufficient proof that the government is doing 'something' for the people on a large scale. Thus in Jakarta, for example, where in 1968 only 27 per cent of the houses had individual water connection, five per cent treated sewage, and 34 per cent access to vehicle roads, expenditures of US $17 per capita on kampung improvement were considered adequate to generate visible improvements. In Bangkok, where 87 per cent of slum residents had access to piped water and almost 100 per cent had access to electricity, visible improvements required a higher budgetary commitment of US $43 per capita. In Manila, where the Zonal Improvement Programme aimed to demonstrate that slum communities can be 'integrated' into the modern city, budgetary commitments were as high as US $188 per capita. Finally, in Port Moresby migrant settlements were provided with lots of 450m² and infrastructure equivalent to the rest of the city at the cost of US $250 per capita to underline the government's commitment to treat the migrants as respectable and equal citizens of a newly-born state.[16]

Unwillingly, politicians have had to resign themselves gradually to the cancellation of public construction programmes and to the development of slum upgrading and sites-and-services programmes in their stead. They can see the value of supporting slum upgrading, but prefer to see temporary low-standard improvements to permanent high-standard ones. Given the difficulty in handling the land issue, they prefer programmes that do not fundamentally change the status quo. They see the political benefits from involvement in slum infrastructure programmes as short-term popular support in return for minor improvements in living conditions. But while they perceive slum upgrading to be both realistic and fashionable, it fails to excite them as it clearly lacks the lustre and the substantial personal and political benefits that accrue from massive construction projects.

The International Funders: Slum Infrastructure
as an Economical Attack on Global Poverty

The international funders are the members of financial institutions interested in funding slum and squatter upgrading schemes, notably the World Bank, the bilateral aid agencies of the developed countries, the various United Nations programmes and a large number of international charitable organisations. Their individual objectives cannot be articulated here as they pertain to the particular character of each and every organisation. We shall limit ourselves to a broad characterisation of the objectives of international funders for purposes of contrast with the objectives and perceptions of the other participants in the upgrading process, based largely, however, on the observations of the World Bank, which has been instrumental in promoting slum upgrading in many countries.

For the international funders, the upgrading of slums is a visible means of directing international financial resources to real needs in the developing countries. Although the programmes benefit the urban areas, their relatively small scale and the relatively low financial outlays involved are acceptable to them as not detracting from their main objective

of assisting rural development, and slowing down migration to urban areas.[17]

Most international funders see themselves in a missionary role of spreading the new international paradigm for dealing with the problem of slums and squatter settlements through their acceptance and gradual consolidation into decent human settlements. In practice, they promote the spread of information on slum upgrading experiences throughout the world, most of which contain very similar programme components, as mentioned earlier (Table 2). Since the politicians are in fact subject to influence in international circles, and since they are attracted by the promise of international funds on preferential terms, the international funders exert positive pressure for the acceptance of the new paradigm.

The international funders, like the housers, share the conviction that highly subsidised housing programmes cannot be a realistic alternative to slums and squatter settlements and that the answer lies in the gradual development of self-help housing. Of the two schemes preferred by the international funders, the sites-and-services approach and the slum upgrading approach, the latter is more efficient from the point of view of the number of families affected per unit expenditure.[18]

Most programmes supported by the international funders, since they require the active cooperation of governments, must be tailored to the existing levels of political will. In this sense, the international funders must respect the preference of the politicians for programmes which are temporary in nature, do not challenge traditional housing and land markets, and are carried out with modest financial outlays. Hence, when it comes to detailed programme components of slum upgrading programmes, the international funders are not completely clear on the issue of whether slum upgrading is to be considered a housing scheme or an environmental improvement scheme with no lasting effects on the improvement and maintenance of the housing stock. While they would prefer to perceive it as a housing scheme, they are usually not willing or able to go beyond the provision of basic infrastructure which, as indicated earlier (p. 7), is not a sufficient condition for generating shelter improvements.

From the economic point of view, they argue, investments in slum infrastructure are fully justified because they yield acceptable internal rates of return on investments. The bulk of the benefits that accrue from upgrading slum infrastructure are due to the substantial increases in property values in upgraded areas:

> 'Of the 15 Bank-sponsored projects, 14 had an internal rate of return varying from 10 per cent to 50 per cent. This calculation does, however, appear to indicate that the projects with large squatter area upgrading components have higher rates of return. In one project, almost completely squatter area upgrading, the rate of return was 50 per cent in one city and 100 per cent in the other. In one Asian project the rate of return on the squatter area upgrading component was 26 per cent, on the sites-and-services component, 13 per cent. The calculation of value added due to increased market value of property in the main accounted for high rates.'[19]

The international funders thus see slum improvement as potentially bringing slum property into the formal housing market, encouraging property ownership and strengthening the market mechanism.

Stressing the economic justification for investments in slum infrastructure, they insist on a radical reduction of subsidies to low-income people, and put a heavy emphasis on cost recovery from beneficiaries. Since they perceive of their involvement in the upgrading

process as temporary and exemplary, and plan on eventually withdrawing from operational programmes, cost recovery features as a prominent goal for the attainment of 'replicability' of programmes on a sufficiently large scale. Programmes cannot be replicable, they argue, if cost recovery is not achieved.

This is quite an extreme position, considering that among the sixty or more slum upgrading and sites-and-services projects undertaken with support from the World Bank, for example, not one has yet achieved full cost recovery.[20] The emphasis on cost recovery from beneficiaries does, however, have a serious impact on decisions on standards. If the people are to pay for the services and, if their ability or willingness to pay is low, standards for infrastructure must be low as well.

To conclude, from the international funders' point of view, the provision of infrastructure in slums and squatter areas is a key component of the new international paradigm for low-cost human settlements development in the cities of the developing countries. Their involvement in this activity directs limited international financial resources towards the urban poor, without unnecessarily compromising their rural counterparts. It is economically justifiable as having positive effects on urban land values and it should be pursued on the economic principle of cost recovery from beneficiaries.

The Slum Dwellers: Infrastructure as a Means of Getting 'Something' from Government

From the slum dwellers' point of view, cost recovery from beneficiaries, i.e. paying for the installation of infrastructure, does not make sense at all. They can see that government installs considerable infrastructure free of charge in new suburban areas, exclusively for the benefit of the rich, and fail to understand why they are asked to pay. As far as they are concerned, basic infrastructure must be provided free of charge and then people can be asked to pay monthly charges on water and electricity, knowing that they can be cut off if they fail to pay.

The slum dwellers also fail to appreciate the argument for community self-reliance, sometimes advanced by the community builders, if it means paying for the installation of infrastructure. They prefer the cost of installing infrastructure to be financed from the payment of taxes, as it already is in the rest of the city. In practice, it has been impossible to recover infrastructure installation costs from beneficiaries anyway. Most slum upgrading programmes, notably in Jakarta, Bangkok, Hyderabad and Port Moresby, provide slum infrastructure free of charge.

The people have two primary objectives in slum improvement—one is to avoid being hurt and the other is to benefit from the programme.

First, to the extent that slum upgrading in some locations legitimises and paves the way for eviction in other locations, and to the extent that it draws attention away from these evictions, it is seen as harmful. Conversely, to the extent that it reduces the threat of eviction it is seen as beneficial.

Second, environmental improvements in slum areas, more specifically roads, particularly if they are carried out at high standards, required the displacement of a large segment of the slum population. Hence, while high standard infrastructure is, in principle, welcomed by the people, it is harmful to those who stand in the way of the roads. Unless adjacent land is available for the overspill of population, these people stand to get hurt by the upgrading programme.

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Third, slum and squatter areas are the only places in the city where poor people can afford to live. They can continue to live there because the area is not attractive to higher income groups. If the neighbourhood is improved, or even if there is speculation that the neighbourhood will be improved, the value of houses increases. While for the international funders this may mean high internal rates of return, for the tenants of slum houses, the poorest segment of the slum population, it may mean eviction and having to move to a farther location. Many slum dwellers may be enticed to sell their houses and move away as well, not always making the correct economic trade-off calculations. Invasion by higher income groups may further lead to increased speculation, increased turnover of houses, and reduced social cohesion of the neighbourhood.

Fourth, the people may be forced to provide their labour free of charge for infrastructure construction. They may also be forced to pay for services which they either did not ask for or are not able to pay for. For the poorest, this may mean higher expenditure on utilities and a consequent reduction in expenditures on essential items such as food and medicine.

Fifth, infrastructure improvements, while having the potential of reducing exploitation in the slums, may create opportunities for new forms of exploitation. Slum people tend to pay more for water when it is not regularly supplied; they pay more for electricity when it is illegal; they pay for permits; they pay for protection; they pay to get on the list of slums to be improved. They stand clearly to benefit from the provision of legitimate services, identical to those given to other urban dwellers, and they would prefer to be charged fairly. To the extent that those managing the infrastructure programme are aware of the new possibilities of exploitation, and are willing to curtail them, to that extent the people can benefit from the programme.

Beyond the reduction of potential harm, three important types of benefits can be generated: (i) improved health and comfort; (ii) economic gain; and (iii) improved land tenure security and community organisation. The third type of benefit has been sufficiently explained earlier. The second type of benefit, direct economic gain, can occur in a variety of ways: payment for labour during the construction of public works, profits from the sale of houses after the infrastructure programme is completed, and savings on cheaper rates for services. Finally, and perhaps most clearly, slum dwellers can benefit from the increased health and comfort associated with improved infrastructure. People clearly appreciate improved access to clean water, not having to walk through mud or floods, not being subject to bothersome flies and mosquitoes, not having their children wade through sewage and garbage, not being threatened by fire, and having their evening social lives enriched through the provision of electricity.

A study of the low-income housing delivery system in Asia, conducted in 1977, identified the priorities for improvement in 523 low-income residential communities in six Asian cities: Bombay, Colombo, Dacca, Jakarta, Manila and Taipei.[21] The various types of low-income communities were aggregated into seven classes of settlements. Table 4 provides an overview of the first priorities for improvement in each class of settlements in the above-mentioned cities. As can be seen from the table, the most frequently mentioned first priority is water supply, followed by roads and walkways, and human and solid waste disposal.

To conclude, the slum dwellers' objectives for infrastructure development depend to a great extent on their expectation of what they can get from the programme. At one extreme, they expect nothing, and anything they can get as a result of the programme is already 'something'. As more is given, people learn to expect more. Toward the other extreme, they

can expect land tenure and maybe proper land titles. Beyond that, they may expect a strong organisation which may be able completely to change the system of distribution of urban resources in their favour. At this point, however, the slum dwellers still remain on the receiving end of government charity, and fall short of becoming fully responsible participants in the process of resource allocation. Not being full participants, they fail to see the need for economy, for conservation of resources, or for doing with less while everyone around them is squandering resources and asking for more.

Conclusion

Each one of the six protagonists portrayed in this paper has a valid world view, a world view which can be defended and justified in its own terms. We can all empathise, at least to some degree, with the arguments advanced by these protagonists. Very few of us consider ourselves, however, to be pure housers, pure community builders, or pure politicians. We all claim to have wider, more comprehensive views that contain all other views, and we legitimately refuse to be labelled. Indeed, each one of us already possesses the seeds of all these views and it is usually our vantage point, our position in the scheme of things, which largely determines our posture on these issues. An individual born and raised in the slums, spending his student days as a community organiser, getting a job in the City Engineer's Office, transferring during his civil service career to the Housing Commission, becoming a politician and finally obtaining a senior position in an international organisation could possibly, however unlikely, move through the entire spectrum of these world views within one lifetime, provided, of course, that he remained impressionable enough.

In any given historical situation, however, believing that the key participants in the slum upgrading process share a common set of objectives is, unfortunately, only wishful thinking. Their divergent positions dispose them to the pursuit of different interests and divergent objectives.

To suggest that all these objectives be pursued at the same time is generous but unfortunately unrealistic, as the pursuit of some seriously compromises the pursuit of others, particularly where resources are severely limited. Yet, all the participants have important views, useful skills and, to the extent that they wield any power and influence, they must be brought into the decision-making process.

For the time being, as the level of consensus among the different participants appears to be rather low, the pragmatic objectives of any particular slum upgrading project will have to emerge as a result of negotiations, whether explicit or implicit, among the different participants. Given this premise, the aim of this paper was to articulate the views of the different participants for the benefit of the other participants, who may not be aware of their views and may need to come into contact with them in the process of planning and executing slum and squatter infrastructure projects. It should be easier to identify areas of common interest and areas of possible reciprocal exchange, once the positions of the different participants are clearly understood.

The participants in the development of infrastructure in slums and squatter areas do not all have to agree and can, as they sometimes do, form coalitions that can proceed with the work without consulting or accomodating the others. The results of their work may be of considerable value, judged in terms of their common self interest. They may be of low, or

even negative value, judged in terms of the self interest of those who were left out.

The limited success with infrastructure improvement in slums and squatter areas reflects the pursuit of limited objectives by limited coalitions. These limited successes clearly fall far short of the gradual transformation of slums and squatter areas into habitable and respectable human settlements. The slums simply refuse to disappear and will continue, for a long time to come, to present a great challenge to urban society. This challenge may require a consensus of a different kind, not one based on temporary coalitions of common self interest, but one based on real mutual interest. Such a consensus is yet to emerge.

NOTES AND REFERENCES

1 Two groups which play a significant role in specific situations have been excluded from this analysis for purposes of clarity. They are the 'land use planners' and the 'slum entrepreneurs'. The land use planners find it difficult to acknowledge that slums and squatter settlements house significant numbers of low-income people and, in the absence of a real alternative, form a legitimate use of urban land. The fact that low-income people do have to occupy land somewhere in the city rarely comes into their land use plans. In their view, the slums and squatter settlements should make way for more permanent, more orderly and more modern urban development. As such, these areas should not be improved, and if they are to be assisted at all, improvements should be of a temporary nature. The slum entrepreneurs are those involved in identifying and negotiating for new land for illegal subdivisions, usually government land. Once land is identified and subdivided, these entrepreneurs have a keen interest in representing their newly-born communities, lobbying the authorities for infrastructure services which have the effect of increasing property values in their subdivisions. The interests and activities of these entrepreneurs have been described by Yap, Kioe Sheng, 'Some reflections on the regularization of katchi abadis', unpublished note, Karachi, 1978, and recently by van der Linden, Jan, 'Actors in squatment upgrading', *Open House*, Vol. 6, No. 1 (1981)

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   22 Source: Angel, S. et. al., ibid., table 2, p. 1209. Only settlements in which the majority of people were in the lower 40 per cent of the urban income distribution were surveyed. The survey included a total of 2681 households in 523 communities

A. MALLAREDDY

SLUM IMPROVEMENT: THE HYDERABAD EXPERIENCE

A high priority is being accorded to slum improvement in India's national development policy. The achievements that have been made in this respect in the country in general and in the specific case of Hyderabad are highlighted below. The author is Research Officer, Regional Centre for Urban and Environmental Studies at Osmania University.

INTRODUCTION

In India, slum improvement is implemented through various environmental improvement schemes. The approach adopted in Hyderabad is unique in many ways, notably in respect of attempts to develop the community as a whole through social, economic and physical improvements – an approach that has earned widespread recognition.

Since independence urbanisation has been extremely rapid, as a consequence of advances in the areas of trade, commerce, industry, communications and education. Whereas there has been a large-scale increase in infrastructure facilities and new employment opportunities, especially as regards construction and industrial activity, the same cannot be said of rural areas. The total population as per the 1981 census was 697 million, of which the urban population was 159.7 million, or 23.73%.[1]

During the last decade, the annual growth rate of the urban population was 3.86% as against 1.75% for the rural population. One of the main reasons for the high urban rate is migration from rural areas; the differential has certainly given rise to a significant state of imbalance.

The Indian urban scene is characterized by several critical problems, i.e. high growth rate, overcrowding, high density, rapid proliferation of slums and a pronounced lag in ameliorating the housing shortage, providing civic amenities, improving local government finances and regulating land prices. The problem is more severe in the metropolitan centres than in the smaller urban areas.

Rural labour, which on the whole is economically weak, comes to depend on the unskilled and semi-skilled employment opportunities in the urban informal sector. In turn, the city uses this cheap labour, often at low returns. Having migrated to the cities, the rural migrants settle in areas where shelter is cheap or squat on vacant land. Often they themselves construct their shelter with available resources; as this lacks even basic amenities, such settlements gradually degenerate into slums. There is an urgent need to improve these areas so as to make them more habitable.

In India, as in other countries, slums have become a glaring characteristic of urban areas, the main difference being one of scale. Basically, slums are a multifaceted problem which reflects a combination of social, economic and educational backwardness, even though they may appear to be primarily a physical problem. Slums literally do not generate any revenue for the local body; on the contrary, they clamour for either new services or for better maintenance of existing ones.

CHARACTERISTIC AND MAGNITUDE OF SLUMS

Slums/squatter settlements are the products of poverty and social injustice. In physical terms, they symbolise overcrowding, lack of sanitation and civic amenities, dilapidated structures and a haphazard arrangement of buildings and streets. The dwellings lack ventilation, light, open space and recreational facilities, and violate every norm of planned urban growth. In most cases the dwellers are encroachers and not owners of the land. The polluted environment in the slum causes numerous health hazards. The social profile of slum dwellers is one of backwardness, poverty, malnutrition and a sense of hopelessness. They feel that they are social cast offs and live with friction, drunkenness and other deviant habits.

In 1983, it was estimated that the slum population in India was between 32 and 40 million, which it is estimated will rise to 52 crore 100 million by 1990, and will have doubled by the year 2000. The number of urban settlements in the country is approximately 3200, with the slum population reported to be very high in metropolitan and other large settlements. There are 12 metropolitan cities having a population level of 12 million and above, and they account for 40% of the total estimated slum population. There are about 150 Class I cities and towns with a population of one lakh and above, which account for 29-31% of the total slum population. The balance lives in around 3000 towns with smaller populations.

GOVERNMENT INTERVENTION

Any government wedded to the concept of welfare and socialist principles considers it to be mandatory to uplift the weaker sections of the society. The Government of India, under Directive Principles of State Policy Article 47, 48 (A) recognised the need for providing a better environment and public health care. Accordingly the problem of the slum dwellers has been engaging the atten-

tion of governments at all levels – central, state and local. The slum clearance scheme introduced in 1956 by the Government of India envisaged evicting and rehousing the slum families in tenements constructed by government agencies on available land within the respective municipal areas. Though commendable, this scheme did not make much headway, faced as it was with serious constraints of funds and opposition by the slum dwellers. The costs per unit which were initially estimated to be between Rs. 3,000/– and Rs. 4,000/– had increased to Rs. 17,000/– per unit by the year 1983-84. With the rising costs of building material and construction charges, the government could not provide an individual tenement to each and every slum dweller. On the other hand, the older slums continued to grow at a much more rapid rate, attracting the immediate attention of the government. In the year 1972 the Government of India made a policy shift from slum clearance/improvement to environmental improvement of urban slums (EIUS) which facilitated a broader coverage of the slum population. The plan was to improve the environment of urban slums on a large scale within the ambit of scarce resources. EIUS was a package of services aimed at removing the existing unhealthy living conditions in slum areas, and the programme has been generally successful in its aims throughout the country.

Initially EIUS was implemented in 20 cities, one of which was Hyderabad. In 1974 the scheme was extended to all cities with a population of 3 lakhs (300,000) and above; implementation was entrusted to local bodies or special boards created for the purpose. In the subsequent year EIUS was extended to all the urban centres in India. The scheme was based on a per capita expenditure for the identified slum population as per stated norms.[3] Initially this was Rs. 120/- per capita which was raised to Rs. 150/- in 1978 due to escalation of the cost of material and service charges.

Under the Fifth Five Year Plan approximately

6.8 million slum dwellers had been covered under the scheme by the year 1979-80. The balance of slum population requiring attention was determined to be 26.3 million. The Sixth Five Year Plan aimed at covering 10 million slum dwellers between 1980 and 1985, and the balance was to be in the next plan period.[4] By March, 1985 it was reported that 9.4 million slum dwellers had been covered with an actual expenditure of Rs. 186 crores against estimates of 151 crores. The per capita cost of services was further revised to Rs. 250 as from April, 1984.

In the Seventh Five Year Plan (1985-89) EIUS is being taken up with greater vigour and emphasis. It aims at covering a slum population of 9 million and a sum of Rs. 295 crores has been allocated to meet the expenditure. The objectives of the plan are to provide infrastructure in urban centres in order to arrest further degeneration of slum areas, and to secure tenurial rights for slum dwellers so that they also can contribute to the improvement of their living conditions. The per capita cost was further increased to Rs. 300 during 1985-86.[5]

HYDERABAD EXPERIENCE

Hyderabad is a fast growing city, the sixth largest city in India. Its history goes back 500 years, to when it was the capital of the Qutub Shahi and Nizam Dynasties. In 1956 when Andhra Pradesh, one of the largest states in India, was formed Hyderabad became its capital. The Hyderabad conglomeration comprises two cities i.e., Hyderabad and Secunderabad. Its population at the 1981 census was 22.60 lakhs spread over an area of 192 sq.km., with a density of 11,771 persons per sq.km. In the year 1962 there were 106 slums; by the year 1972 this figure had risen to 283, and comprised 19% of the city's population. As per the 1981 survey the number of slums in the city was 470, with a population of 5.4 lakhs occupying an area of 4.05 sq.km., constituting less than 5% of the total city area, and 23.89% of the total population. The average family income is

estimated at Rs. 350/– per month.[6] Over 70% of the slums are on private lands, the rest are spread over central government, semi-government and municipal lands. A large number of slums have been in existence for more than 20 years and some of them for 40 to 50 years. It has been estimated that the city population by 1990 would reach 37.07 lakhs, at which time the slum population is expected to reach 11.12 lakhs.

Elsewhere in the state and the country slum improvement is implemented by local bodies and slum improvement boards. In Hyderabad it is carried out through the Urban Community Development Department. A few other centres in India also have this type of arrangement, but they have not proved to be as effective as in Hyderabad. The strategy aims at bringing qualitative improvement in existing social, economic and environmental conditions. The process involves a combination of the efforts of the people themselves with those of the government, with the people's participation being highly encouraged.

A unique feature of the Hyderabad experience has been the shift in emphasis over time. Prior to 1967 the local body concentrated on slum clearance i.e., demolishing the existing slums and rehousing the slum dwellers in small units with adequate basic amenities constructed elsewhere. The allotment of these new tenements was based on subsidised rentals. In Hyderabad approximately 2000 such tenements were constructed at various places, but mostly this housing has gotten into the hands of unintended beneficiaries.

From 1967 onwards, the emphasis shifted to slum improvement through the urban community development programme (UCD). Initially the programme was undertaken in only one of the 38 wards of the twin cities, which had a large number of slum dwellers, and was sponsored by the Government of India but was later transferred to the state government. Later on, the scheme was ex-

tended to two more wards in Hyderabad Division and two in Secunderabad Division. The state government, being satisfied with the useful service rendered to the weaker section by the UCD, agreed to expand the programme, and in 1977 with the assistance of UNICEF, it was extended to the entire slum population of the twin cities with greater vigour and emphasis. The manner in which the programme has been developed is unique to the entire country. Mainly, it envisaged people's participation in the development process, integrating the socio-economic and civic infrastructure and environmental services. The felt needs are provided under the general heading of Human Development with the active participation of the slum communities. The concept of convergence of services at the slum level is emphasised.

The project level organization's role was to motivate the community to collective action, to help and guide the local bodies in identifying training needs, and to help the community to locate services — municipal, state and others — from where technical and other services would be available. The emphasis was on self-help and community action, linking the Municipal Corporation of Hyderabad, the state government and various voluntary organizations.

During the first decade, 1967-76, the programme aimed at establishing credibility. It conducted surveys, established rapport with dwellers, organized neighbourhood welfare committees and introduced social inputs. Education of the slum community was emphasised along with provision of sewing centres, pre-school facilities, supplementary meals to school children and immunisation drives. All the project activities are undertaken on the basis of actual needs, by means of matching contributions either in cash, kind or labour by the target beneficiaries. They have acted as a catalyst in identifying the real slum dweller and have recommended that land titles be conferred where

the land concerned belongs to the government or to semi-government bodies.

According to a baseline survey carried out in 1972, approximately 57.49% of households resided in huts, and the rest in shacks; 72.73% of the slums were unorganized; 83.64% were unsanitary; more than 50% did not have sufficient street lighting, sewers, drainage or proper approach roads; and about 87% did not have any medical facility.[7] From then on, more emphasis was given to improving the slum environment by providing civic amenities on a felt need basis to improve the living conditions, using standard norms fixed by the Government of India as a base. From 1976 onwards the habitat improvement programme was undertaken, and the government has awarded tenurial rights for the land they had been squatting to 13,000 families in 86 slums.

At this stage the programme has three objectives; housing, environmental improvement and socio-economic development. To begin with, slums on public lands and slum dwellers having tenurial rights are being improved. Those slums on private lands were notified and acquired under the Slum Act to facilitate improvement. The Department is managed by a Director assisted by a Project Officer, Community Organizers, a Town Planning Wing and an Engineering Wing with the necessary assisting staff under each section.

In the initial stages the cost of the project was nominal, and was met by a matching grant for staffing and activities. By the year 1983, an amount of Rs. 30 lakhs was incurred annually, against which the state government supplied Rs. 7 lakhs, a UNICEF grant Rs. 7.8 lakhs, with the balance being met by the Municipal Corporation of Hyderabad.[8] In later years the UNICEF assistance was phased out, and costs are now totally borne by the municipal corporation and the state government.

At present, a two-fold implementation strat-

egy is being followed, namely slum upgradation and slum improvement. As the differences in the implementation processes are only marginal, both categories may even be undertaken simultaneously. Under the slum upgradation programme, the UCD identified those slums in need of immediate reorganization, and 210 slums predominantly inhabited by the scheduled caste and scheduled tribes, who belong to the weaker section of society, were accorded high priority for implementation schemes. These started with education on the need for a better environment for effecting change in the slum structure and with associating the people involved in planning for change.

In those areas where the dwellers had tenurial rights, the idea of community was first projected through the provision of new housing colonies. The physical plans to rebuild entirely a given slum into a new colony are prepared in consultation with the community. The UCD in consultation with slum leaders identifies resources for investment and where necessary arranges soft loans with low interest rates. The slum leaders are guided to approach financial institutions in order to secure loans. The tenurial rights issued by the central government and registered documents are mortgaged to obtain the necessary loan, with the UCD providing security for reconstructing the existing huts into planned housing tenements with the necessary infrastructure.

As far as the benificiary's share is concerned, the dwellers are given the option of contributing either in cash or in kind. Mostly the dwellers have chosen to contribute by way of labour. Thus, they demolish the prevailing unplanned huts and kutcha houses and erect temporary shelters near the sites, while the UCD technical wing undertakes construction and supervision of the new houses, with the participation of the beneficiaries — no middle men are involved in the construction. Skilled masons are engaged in the building with active technical supervision by the technical wing of the UCD. The required materials, such as stones, bricks, cement

and steel, are also procured by the UCD at concessional rates. The sanctioned loan is released on an instalment basis, matching the progress of the work at foundation level, lintal level, roof level and at the final stage supported with an utilisation certificate from the UCD Engineer. Thus the construction work is completed in three or four months, and the loan can be repaid in easy monthly instalments. The UCD has also made arrangements to collect from the dwellers and remit to the financing agency.

The strategy has revealed that the beneficiaries develop pride in constructing their own house and develop a close attachment to it, thus generating a new way of life in the slum community. Having been involved in the process of development they develop confidence in attaining other desirable improvements. The M.C.H. has provided the necessary infrastructure and physical amenities for these new colonies free of charge with the slum community being expected to maintain the newly created services through community efforts. From 1975 to 1980-81, 2973 houses were completed in 31 slums with loan assistance from banks, the loan component being Rs. 4,000 out of an estimated amount of Rs. 6,000 for each house. During 1981-85 another 6210 houses in 61 slums were completed with loan assistance from the Housing and Urban Development Corporation, New Delhi (HUDCO). By that time the cost of each house had risen to Rs. 9,000, of which loan assistance accounted for Rs. 6,000, a government subsidy for Rs. 1,000, with the balance Rs. 2,000 being the beneficiary's contribution.[9]

In 1986, the UCD proposed through the Andhra Pradesh State Housing Corporation to HUDCO, that housing units be constructed in 21 slums at an estimated cost of Rs. 317.88 lakhs, with a loan component of Rs. 272.54 lakhs, and the rest to be borne by the beneficiaries. In 1987, which was observed as the International Year for Shelter for the Homeless, special emphasis was given to housing, and construction work was

begun on 1616 housing units in 10 slums.[10]

Under the second option, where the emphasis is on slum improvement, the UCD staff visit the identified slums, and the dwellers therein are organized into voluntary associations. The representatives of these associations lead the slum improvement movement, while the UCD staff undertakes to educate the dwellers in improving their own localities and in the purpose of community action so as to gain their participation. In earlier years, slum improvement activities used to take place as and when the felt needs were expressed to the M.C.H., which extended amenities to the respective slum areas free of cost. By the year 1978 under the Environmental Improvement Scheme nearly Rs. 4 crores had been allocated by way of state and central government grants. In due course, a few slums were improved to expected standards and others were partially improved. The government has suggested a comprehensive programme of physical improvements along with socio-economic activities.

SLUM IMPROVEMENT PROGRAMME MASTER PLAN I

A Physical Improvement Plan for 228 slums was proposed, at a cost of Rs. 493.68 lakhs, to be financed with the aid of municipal corporation and state government grants. In the years 1981-82 and 1982-83, betterment programmes covering 157 slums, with an expenditure of Rs. 198.2 lakhs, and comprising 1.32 lakhs of slum population were executed. An additional expenditure of Rs. 100.00 lakhs was made on water supply in the slums by the Hyderabad Metro Water Works.

The following amenities were provided in the selected slum areas under these programmes: asphalt roads, storm water drains, sewer lines, public latrines, water supply and street lights, on the basis of established norms. The slums were selected for improvement by UCD on the basis of intensity of need.

Basically this programme has been financed by the Overseas Development Administration of the United Kingdom. Initially the state was required to provide financing and the Government of India reimbursed the state government up to 70% of the expenditure from the O.D.A. funds. The programme was estimated to cover 207 slums. A survey was conducted to ascertain the felt needs, on the basis of which a comprehensive plan was prepared at a total cost of Rs. 887.06 lakhs. The programme was implemented over a four-year period in a phased manner from 1983-84 to 1987. It was planned to benefit a population of 2.64 lakhs slum dwellers in selected slums.[11] As mentioned earlier, during this period sanctioned housing units were constructed, and proposals for the sanction of new housing colonies apart from the master plan programme were made.

Works carried out under this programme were civic infrastructure, health and nutrition (preventive health), pre-school education in selected slums and economic support programmes. Under the civic infrastructure was included necessary roads, storm water drains, sewer lines, flooring, community halls, street lights and water supply, all in selected slum areas. By the end of 1986, the M.C.H. had received Rs. 745.03 lakhs as against an expenditure of Rs. 566.16 lakhs.[12] Works were initiated in all the proposed slums, pre-school centres were established in all the slums to cater to children up to the age of 6 years and in a majority of the slums sewing centres were started. The programme laid special emphasis on health aspects of the slum dwellers, and 20 teams of doctors with assisting staff were engaged to cover the proposed slum areas and a special immunisation programme was carried out in all the slum areas. Training programmes were undertaken on a wide scale to improve maintain and look after the assets created under the programme. Orientation training programmes were organized to improve

skills, especially in the area of economic generation activities.

SOCIO-ECONOMIC ACTIVITIES

Apart from physical improvements in the slum areas efforts were made to improve the socio-economic conditions of slum dwellers. Under this caption numerous activities were introduced, but not all activities were introduced in all slums. Rather, activities were initiated on the basis of felt needs of local people. These activities can be classified into the following:

Child Welfare: Balwadies (pre-primary school) i.e., integrated child care services, primary schools, medical checkups, nutrition programme and physical education training.

Women's Welfare: mahila mandals (women's centres), sewing centres, vocational training centres and nutrition demonstration.

Economic Generation Programmes: loans were arranged for the most needy, to meet domestic needs. Various types of training programmes were undertaken, such as garment manufacturing, fabric painting, lizzat papad (a food stuff), catering, card board manufacturing, t.v. & transistor mechanisms, typewriting and short hand, auto rickshaw and motor driving training, photography training, air condition and refrigeration training, brick manufacturing etc. These were provided in various slum areas at various times as and when people come forward to identify what they wanted.

Youth Welfare: gymnasiums, sports clubs, and physical training.

Other Activities: community halls, cultural gatherings, adult education centres, medical and health checkups, immunisation programme, coaching centres for school dropouts, library and reading rooms, dispensaries, study tours, first aid training, youth clubs, family welfare planning, sanitation

drives, get together exhibitions, film shows etc.

All together, 159 types of activities are being carried out at different times in different slums based on demand. Largely these are welfare oriented activities to meet the deficiencies in the slum dwellers' lives as mentioned in the section on characteristics of the slums.

Added to the above programmes, a low-cost sanitation programme was initiated in 1986 to provide individual latrines to the slum dwellers where needed and to replace the existing dry type of latrines by water sealed closets. Under this programme 900 individual latrines were converted into water closets, with UNICEF assistance. In addition to these latrines, new individual latrines were proposed throughout the city. Based on a survey demand, 20,000 water sealed individual household latrines were proposed at a cost of Rs. 1630 per latrine, for a total cost of Rs. 3.26 crores. As per the agreement, the cost was to be shared among three agencies - the Government of India, M.C.H. plus Quli Qutub Shah Urban Development Authority, and the beneficiary, at the ratio of 5:3:2. So far, 8400 water sealed latrines have been planned for slum areas, of which 3500 have been completed and the remaining are in progress.[13] Proposals have been finalised for the remaining latrines, and beneficiaries have been coming forward to provide individual latrines.

The UCD, however, has not been able to cover all the slum areas in the twin cities equally. Some of the slums have received more attention than others, depending on the response and the prevailing conditions. But where all the activities were carried out as envisaged, there has been a total transformation into planned housing colonies with physical infrastructure and social inputs.

This is a unique achievement, thanks to this process. Around 125 slums have received all types of facilities, whereby the three-fold ob-

jectives envisaged for the programme have been totally achieved. These are no longer slum areas; they look like any other planned colony in the city. Around 250 slums have been supplied with better environmental conditions and amenities, thus removing previous health hazards. The remaining 100 slums are in the process of being improved, but this process has been delayed for various reasons, which can be classified as slowness in declaring the area to be a slum, lack of local initiatives, vested interests coming in the way of improvements, conflict between the land owner and slum dwellers, etc. Most of these improvements were initiated in the last year of Master Plan II, i.e. in 1987.

CONCLUSION

Today eradication of slums is not an accepted strategy, and therefore slums are being improved to make them more livable. In Hyderabad, the municipal corporation, through the UCD, has made a considerable effort to improve slum areas, to reach out to the urban poor and to teach slum dwellers how they can live better. This has built up tremendous confidence in the slum dwellers that they can transform their lives by participating in socio-economic and physical improvement activities. The social inputs introduced through the slum improvement programme have enriched the dwellers' lives in many ways: change of behaviour, greater civic consciousness and a desire to use properly the amenities provided under the scheme.

In Hyderabad, it has been proved that strengthening social movement is a key to the mounting urban problems. In the process, a hut with no amenities is transformed into a planned tenement with amenities by means of limited resources. Thus the aim of bringing about a qualitative change in the socio-economic and environmental condition of slum dwellers has been fulfilled and the foundation has been laid for the total human development as envisaged in the plan. The value of services rendered in the

slum areas cannot be measured in terms of investments made; there is also the value of major changes brought about by education and guidance. For the success of the programme in Hyderabad three factors have played a major role: tenurial rights granted to slum dwellers; the assistance of UNICEF and ODA in strengthening the development process and creating confidence; and active participation of the people in the process of rebuilding their own slum areas.

Finally, credit for the achievements of the slum improvement programme goes to the committed officers of UCD who have successfully helped to educate and motivate the slum people to participate in the development of their localities. As a result of this exercise, new local leadership has been developed, who are capable of managing their own affairs in future. Further, the scheme has received the constant support and appreciation of the state government, and the Task Force on Shelter for the Urban Poor and Slum Improvement appointed by the Planning Commission of the Government of India in 1983 to evaluate slum improvement programmes has recommended this approach as a model for all the developing communities throughout the country.

Meanwhile new slums have emerged. The MCH identified 386 such new slums in the year 1986-87 and is in the process of notification under the Slum Act to facilitate improvement works. Similar experience is being faced elsewhere in the country; as old slums are improved, new slums are erupting. Central and state governments have felt the need to check the proliferation of new slums by strengthening small-size towns, so that migrants from rural areas do not converge on big cities. In the period 1980-85, the Government of India selected 231 small medium towns all over the country to be developed as counter magnets to the bigger cities, so as to decrease the latter's rate of growth and to avoid the formation of slums on a large scale. Further, in the Seventh Five Year Plan period (1985-89), an amount of

Rs. 295 crores has been marked for the provision of infrastructure to avoid formation of slums. Also, a new system of approach, sponsored by the central and state governments along with UNICEF and called Urban Basic Service Scheme, is being introduced in this same period in 200 selected towns with previous slum improvement experience. This process emphasises a low-cost strategy with systematic community involvement. A Neighbourhood Development approach is being encouraged to enable dwellers to improve in their own way, with guidance and finances being supplied.

In the present situation, we cannot totally stop the growth of new slums in urban areas, since the rural areas need reorganization in order to sustain the growing population. Finally, today slums are not considered to be a problem, but rather to be a solution to the problem of the urban poor. What is needed is an overall national urban and rural policy, so that one area does not grow at the cost of the other.

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RESEARCH ON COMMUNITY BASED

PUBLIC-PRIVATE PARTNERSHIP IN THE

URBAN MANAGEMENT OF INFRASTRUCTURE

Preliminary Findings - April 20th, 1989

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1. BACKGROUND

The Human Settlement Management Institute, New Delhi, in collaboration with the Institute for Housing Studies, the Netherlands has launched a research programme that focusses upon the changing relations between the actors involved in infrastructure provision and management. The outcome should contribute to a better understanding and improvement of urban management.

The initial focus is upon the partnership between public bodies and community-based organisation in the management of infrastructure in two projects:
- Bombay (Maharashtra), the World Bank assisted Slum Upgradation Programme under MHADA;
- Visakhapatnam (Andhra Pradesh), the British O.D.A. assisted Slum Improvement Programme under the Municipal Corporation.

The main objective of this research is to gain a better understanding of the potential role of community based organisations in the management of provided infrastructure facilities.

2. DESCRIPTION OF RESEARCH LOCATIONS

Slum Upgradation Project, Bombay:
1. Since 1981 the World Bank is supporting the Bombay Urban Development Project BUDP. The BUDP is coordinated by and the Bombay Metropolitan and Regional Development Authority BMRDA and is being executed by the Maharashtra Housing and Area Development Authority MHADA, the Bombay Municipal Corporation BMC and City Industrial and Development Corporation CIDCO.
2. The BUDP comprises of:
- Land Infrastructure Servicing Programme LISP;
- Slum Upgradation Programme SUP;
- Local Government Finance, Administration and Services; and
- Technical Assistance, Training and Equipment.

3. MHADA is involved in the LISP and SUP components of this Project. It has established a separate division for the SUP, with a separate Director, engineering, community, estate management and accounts departments.

4. The basic elements of the SUP are:
- leasehold rights for the occupied land;
- basic infrastructure facilities;
- full cost recovery (installation and maintenance) on basis of equity and affordibility, ranging from Rs.30 to Rs.95 per month per household. The rate is determined by the location and the size of the plots;
- State Government loans for the improvement of dwellings at a 12% interest rate over 20 years; and
- the establishment of Cooperative Societies under the Societies Registration Act, to be responsible for the maintenance of the infrastructure facilities, payments of leasehold, service charges and maintenance contribution;
- an Agreement of Lease signed between the MHADA and the cooperative societies, which confirms the transfer of property and duties regarding the provided infrastructure.

5. The SUP is scheduled to benefit approximately 80,000 households. At present approximately 6,000 households have been covered by the project components. In total 67 societies are registered, of which 2 have signed the Agreement of Lease.

6. The target is not expected to be reached by 1990.

7. The total project cost under MHADA is approximately Rs.30 crores (including 20,000 households under BMC totals to Rs 37.40 crores).

Slum Improvement Project, Visakhapatnam:

1. Since 1988 the British Overseas Development Authority, O.D.A. is supporting the Visakhapatnam Slum Improvement Project. The SIP is being undertaken by the Municipal Corporation of Visakhapatnam (MCV).

3. MCV has established the Urban Community Development Department that implements the VSIP. The UCD has a separate Director, and engineering, planning, community organisation, and accounts sections.

4. The basic elements of the VSIP are:
- leasehold rights for the occupied land;
- basic infrastructure facilities;
- the establishment of Neighbourhood Committees under the Societies Registration Act;
- a Declaration signed by the neighbourhood committee's officials, which agrees with the responsibilities towards the maintenance of physical, social and economic infrastructure and programmes provided under the VSIP;
- cost recovery for minor maintenance of infrastructure;
- housing supported by loans through HUDCO and a subsidy from the A.P. State Government;
- provision of health education and income generating programmes;
- provision of community centres, health clinics, balwadis, adult education centres.

5. The VSIP is scheduled to benefit approximately 170 notified slums and approx. 35,000 households (191,000 inhabitants). The project has been divided into three phases (88-89, 89-90, 90-91). At present approximately 10,000 households have been covered by Phase I (88-89) of the project. In total 45 societies are registered, of which the majority has signed the Declaration.

6. The total project cost are estimated at Rs 20.70 crores.

3. MAJOR FINDINGS AND CONCLUSIONS

A research report is being produced that will become available by early May 1989. The research has resulted in the following preliminary findings:

Slum Upgradation Programme, Bombay:

1. The organisational set-up of this project is complex with involvement of MHADA, BMRDA, BMC and is further confusing due to similar SUP-programmes of BMC and the Prime Minister's Grant Project. It provides long decision making procedures, troublesome coordination, delays in implementation and confusing communication channels for the slum dwellers.

2. The slum dwellers are much pre-occupied with the tenure component of the SUP, that will give opportunity to re-development, re-construction or housing improvement. The provision of infrastructure is of secondary importance to the beneficiaries.

3. Due to the clear geographical and jurisdictional demarcation between Cooperative Society land and governmental or municipal land, the households as well as the Cooperative Societies are well aware of the post-project responsibility and implications. However societies areas are part of larger slum areas. In practice it is very difficult to exclude non-members from using society facilities such as public tapstands and public latrines, and even more difficult to charge them.

4. The standards for providing infrastructure to societies have been applied in a rigid manner. Flexibility in respect of site-specific conditions or needs does not exist. Therefore in quite a number of areas where the slum has benefitted from the earlier Slum Improvement Programme, the visual impact of SUP has been very limited or cosmetically, leaving the society members disappointed.

5. The performance of the Cooperative Societies in maintaining infrastructure does effect directly the level of infrastructure services to adjacent areas. Therefore it is the interest of the Municipal Corporation to ensure proper maintenance inside the societies' areas. BMC or MHADA have not taken up any action that supports, stimulates or will enforce the Cooperative Societies to maintain the provided infrastructure. There is little interest among MHADA and BMC to enhance proper preventive and corrective maintenance by the Cooperative Societies.

7. The **Cooperative** Societies correctly consider themselves as buyers and the MHADA/BMC as the suppliers. However the latter have a top-down, donor attitude. The implementing agencies lack a client-oriented attitude.

8. Repayment amounts for infrastructure installation are not related to the actual capital costs. They are related to location (city, suburb or extended suburb) and plot size. This is, or soon will be, considered an injustice and scope to political opportunism.

9. The stakes of this new and challenging SUP-concept are high. However there is a lack of dedication and conviction on the part of implementing officials. The promotion of the concept lacks the incorporation of information campaigns, publications, seminars, etc. Thus the risk of failure of the project in the long run is increased.

Slum Improvement Project, Visakhapatnam:

1. A great achievement of the Visakhapatnam Slum Improvement Project is the integrated efforts in housing, basic infrastructure provision and socio-economic and health programmes.

2. The second achievement of the VSIP is the fact that all three components are coordinated and/or implemented by the Urban Community Development Department of the Municipal Corporation. This provides simple decision making procedures, swift implementation and simple communication channels for the slum dwellers.

3. The slum dwellers are very pre-occupied with the housing-cum-tenure component of the SIP. The provision of infrastructure is of secondary importance to the beneficiaries.

4. The households are not aware of their responsibilities towards management of the infrastructure. The Neighbourhood Committees are only to a limited extent knowledgeable about their post-project responsibility.

5. The signed Declaration only reaches its goal as a reference and legal document that obliges the NC to fulfill a number of tasks. However, the Municipal Corporation is not committed by this document to fulfill their specified duties, nor to support, stimulate or enforce the NC's, as no municipal officer has countersigned the Declaration.

6. The UCD community organisation wing is very pre-occupied with the implementation of the broad socio-economic and health programmes which to a large extent benefits the women and children of the SIP areas. The post-project issues of infrastructure management have received little attention so far.

7. One can not expect the community organisers and social workers to be knowledgeable about these post-project maintenance, without adequate engineering input and support, which is not given.

8. The fact that Neighbourhood Committees are linked with Mahila Mandals is most appropriate for the implementation and sustenance of socio-economic and health programmes. However this might prove inadequate in respect of post-project management of infrastructure.

9. Although there exist good intentions among the UCD-engineers to enhance post-project maintenance this has not materialized due to the present preoccupation with the implementation of the project.

10. There is lack of understanding among the staff about the appropriate sanitation technologies.

11. The UCD functions very much as a separate entity in the Municipal Corporation. This benefits the integration of the different project components, as well as implementation progress. However, the dissemination of the SIP approach and experiences to other MC Departments is not sufficiently established, as the other Departments are not involved on a day-to-day basis. This is considered crucial in respect of the sustenance of community based management of physical, social and economic infrastructure and programmes.

COMMUNITY PARTICIPATION IN IUIDP

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Jakarta, August 1989

The individual family and the local community have been acknowledged under
Repelita V as major actors in the development of infrastructure facilities and
in the provision of services. Local development is being recognized as the
shared responsibility of Local Government and communities, with the Central
and Provincial Governments in the role of 'supporters and enablers'.
Consequently, 'Community Participation' must be an important ingredient of the
Integrated Urban Development Programme, which took off already during
Repelita IV. And indeed, Community Participation is advocated strongly in the
context of IUIDP:

> '....more bottom up planning is needed, which will encompass local
> priorities and demands and should lead to better use of urban investments
> and national resources....'
> (Ir. Parulian Sidabutar, 1988)

> '....IUIDP provides a method for preparation of an integrated programme,
> covering a variety of Public Works urban infrastructure development
> programmes and projects, specifically those which are implemented by
> Central Government, Local Government, and by the community.' (Bina
> Program, IUIDP guidelines 1988-1989).

However, sofar, the details of Community Participation in the framework of
IUIDP have not yet been fully developed. What sort of ingredient will it be?
Will it be an added ingredient, like salt at the dinner table? Or will it be what
it is intended to be: a major input to urban development; an integrated
ingredient. This paper is intended to provide background material for the
report of the Research Project 'Community Participation and IUIDP' of the
Proyek Latihan P3KT; to be used as discussion material in IUIDP training, and;
to contribute to the thinking about further operationalization of policy and
programme intentions regarding Community Participation in the framework of
IUIDP. The paper presupposes the reader's familiarity with The Integrated
Urban Infrastructure Development Programme (IUIDP or P3KT), its objectives
and approach.
After an introduction of the concept of Community Participation, and an
overview of the forms that it can take, the reasons for adopting participatory
approaches to development and planning will be dealt with. Subsequently, the
specific Indonesian situation influencing issues of Community Participation will
be summarized. Finally, the focus of attention will move to IUIDP: to what
degree, and how, is Community Participation already integrated in the IUIDP
approach and activities; and what would be possibilities for further integrating
Community Participation in IUIDP in the (near) future.

1. Community participation in (urban) development; what is it, what forms
   can it take?

Generally, when dealing with a subject, a definition of the term used to
indicate the subject is given at the introduction, in order to create a common
starting point, delineating the scope of the subject.

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Unfortunately, defining the term 'Community Participation' is not all that easy. Various authors have tried, and the definitions vary from very general statements embracing almost every form of human activity, to simple statements about the cooperation of Government agencies and communities in projects. It is important to note that all definitions are indeed 'statements', and not 'definitions' in the sense of describing the concept once and for all. They are statements which imply views, judgements and ideas on society, on development, on democracy. The reader may not even find his or her own definition (or, rather, view) in the following list (which is in no speficic order).

* Community participation is the involvement of the local population actively in the decisionmaking concerning development projects, or in their implementation (A. White, 1981)

* Community participation is effective grass-roots policy making, with the community controlling the use of funds and eventually able to hire its own experts (Mary Racelis, 1976)

* Community participation: the involvement of people in their own affairs (A. Gilbert, 1987)

* Popular participation in development should be broadly understood as the active involvement of people in the making and implementation of decisions at all levels and in all forms of political and socioeconomic activities (Lisk, quoted by Gilbert, 1987)

* Community Participation means readiness of both the Government and the community to accept certain responsibilities and activities. It also means that the value of each group's contribution is seen, appreciated and used (E. Ramos and A.A. Roman, quoted by H. Siagian and M.A. Subardono, 1989)

* Participation: public support for the implementation of (Government) plans and programs (Administrators' point of view, according to S. Wirosardjono, 1986)

* Basically, participation means to release people from being the subject of development and make them agents of modernization and change (F.E.S., quoted by S. Wirosardjono, 1986)

* Community Participation is often seen as an invitation to the community to take part in the development process of the environment, particularly in the implementation stage, or the operation and maintenance stage.

Rather than adapting any of these 'definitions' as the one and only one, one could try to find out what sorts of activities are actually taking place under the common denominator of 'Community Participation', in the context of human settlement development, or more specifically, urban development. For that purpose, firstly, the word 'community' could be looked at seperately.

At a national scale, the 'urban community' would mean all the citizens of all cities, small, medium-size, large and metropolitan.
At the scale of a particular city, the 'urban community' could mean all the citizens of the administrative urban area; all citizens in this case can be

looked at in two ways: firstly, as citizens in their role of 'residents' only (people who 'reside' in the city, occupy houses/land and need/use urban sevices), secondly as citizens in their role of residents and people active in the urban economy. In the second case, also the 'private commercial sector' (both formal and informal) would be included. The 'urban community' could also mean all those who somehow play a role in the economy/activities of the city: that would include seasonal or even daily workers from outside, it would include private sector institutions from outside the city (banks, developers, contractors).

At the scale of particular areas within cities 'the community' would be the residents of one or more of those smaller units; in Indonesia: kecamatan, kelurahan, RW, RT.

'Community' can also refer to the residents of a particular project-area, which may or maynot coincide with administrative boundaries.

Other words used instead of 'community' are 'the people', or 'the popular sector', as opposed to the 'public' (Government) sector. It is interesting to note that all Government employees, in their roles of economically active residents, are as much part of the 'community' (in any of the meanings listed above) as anybody else.

For each of the above mentioned different 'territorial scales' of communities, there are two distinct ways to look at the concept of community: first as a number of seperate individuals, each with their own needs, resources, ideas; second as a group of people, who have something in common; common problems, common interests, common socio/economic status, common background, common 'gender' (women, men), etc. In Indonesia, with the State ideology of Pancasila, the interest of the 'group', the community, the society, comes before the interest of the individual.
One 'group' of people deserves special attention when dealing with Community Participation in development. This group is formed by the female part of the community, the women. The actual and potential role of women in development, including urban infrastructure development, is often overlooked by planners and decisionmakers. Therefore, any emphasis on Community Participation should encompass an integrated, additional emphasis: Women's Participation. This emphasis is, like the importance of Community Participation in general, advocated strongly in Indonesian Government Policy, as spelled out in the GBHN and Repelita V:

> ' ... women will be involved more actively in development, not only as 'targets' of development, but also as actors and beneficiaries....'
> '....the capacity and opportunity for women to play a more pronounced role as decisionmakers, planners and beneficiaries of development, will be improved and increased....' (Repelita V; policy regarding the role of women in nation building)

Several meanings of the word 'community' were given above. It could be concluded that, even if 'participation' were to have one meaning only, there would already be various possibilities for the meaning of the term 'Community Participation', just taking into account those different meanings of the word 'community'. But for the word participation the situation is even more complex. Based on personal or group opinions and convictions, the term 'Community Participation' can be used, and is in fact used, for each of the following activities, and for any conceivable combination:

*   people <u>vote</u>;

*   people <u>participate all the time</u> in urban development and in urban management: they build and repair houses, dig wells, sweep and pave footpaths, burn or bury garbage, etcetera;

*   people <u>are informed</u> about Government activities, policies, programmes, projects; through newspapers and other mass media, through meetings, posters and billboards;

*   people <u>give their opinions</u>, through newspapers and other mass media, through meetings, etc.;

*   people <u>are represented</u>, through their Kepala RT, Kepala RW, Local Council;

*   people <u>contribute voluntarily their resources</u> (money, labour, skills, knowledge) towards urban development and management of their neighborhood (gotong royong: the interest of the community, of the group, comes before the individual interest);

*   people <u>follow instructions</u> to engage themselves in implementation of Government projects towards development and neighborhood maintenance (often also called gotong royong, but in fact 'kerja bakti');

*   people <u>pay</u> for services rendered to them;

*   people <u>benefit</u> from Government activities geared to their well being and development;

*   people <u>are consulted</u>, their opinions are sought, before Government decisions are taken;

*   people <u>can choose</u>, from two or three alternative plans prepared for them;

*   people <u>are actively involved in decisionmaking</u>; Government and Community are partners in decisionmaking;

*   people <u>take initiative</u>, and request for Government support for their ideas; Government participation, Government support for Community projects;

The reader who, for one or some of the activities, exclaims: 'ah, but that is not <u>real</u> Community Participation!' could realize that another reader might think exactly the opposite.

However, both internationally (as can be judged from the 'definitions' given at the beginning of this chapter) and in Indonesia, '<u>Real Community Participation</u>' is understood to encompass some sort of active, direct involvement in decisionmaking on matters that concern the community and the individual. This is well illustrated and summarized by Article 6 (1), of the Law No. 4 of 1982 on the Environment (Undang-undang Pokok Lingkungan Hidup, UU No. 4). The article states that: 'everybody has the <u>right</u> and <u>obligation</u> to participate in environmental management' (which of course includes infrastructure provision and infrastructure operation and maintenance). The explanation of the article clarifies that the <u>right</u> and <u>obligation</u> of everybody to participate in environmental management cover the planning stage as well as the

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implementation and evaluation stages. This article clearly forms a legal basis
for 'real' Community Participation; Community Participation in decisionmaking.
Though good and successful examples of 'real' Community Participation exist in
Indonesia, the general tendency is, to concentrate on 'obligations' rather than
on 'rights', and on implementation and maintenance, rather than on planning
and its preceding activities; goal and objective formulation, priority setting.
The prevailing emphasis on implementation does not require further elaboration;
many Indonesian urban citizens, including civil servants, have first hand
experience regarding strong requests, not to say instructions, from Lurah,
Kepala RW and/or project staff, regarding financial, land or labour
contributions towards implementation of, for instance, KIP projects.
The same can be said for keeping residential areas clean, operation,
maintenance and repair. This emphasis on Community Participation in operation
and maintenance can be further illustrated by the (draft) Policies for City
Infrastructure Operation and Maintenance in Indonesia, of the TKPP. Policy 2
of the proposed 'Technical Codes of Practice' reads as follows:
    'In order to optimize the use of community resources, the Local
    Government with Central Governments' guidance and support, will
    implement standardized procedures for community participation in O&M.'
Also donor agencies sometimes tend to emphasize post implementation
Community Participation:
    'The public information/education campaign will focus on the proper use
    of facilities provided and on encouraging active Community Participation
    (including payment of fees and charges and assistance in the maintenance
    of public facilities)' (ADB, Project Formulation Memorandum for the Small
    Cities Urban Development Project, West Java and Sumatera).
Of course, the 'public information/education campaign' could also be designed
with an objective to encourage active Community Participation in needs and
resource assessment, planning and decisionmaking, and implementation.

These examples show that ideas about operationalizing Community Participation
in IUIDP are already being developed. However, before continuing with the
subject of operationalizing and even institutionalizing 'real' Community
Participation, specifically in IUIDP, as advocated in the environmental law and
other Indonesian policy documents, it may be useful to concentrate on a
number of basic questions: why is 'real' Community Participation considered
necessary, complementary to community support for implementation of
Government plans and programmes; what are the circumstances and conditions
that form the basis for and affect Community Participation in Indonesia; and
to what degree and in what way has Community Participation already been
operationalized and institutionalized in the framework of IUIDP.

2.   Real Community Participation; why?

The reasons for participatory approaches to urban development planning and
management can be roughly divided into two major groups.
Firstly, there are reasons that refer to people's rights. People, men and women
alike, have a right to be involved in affairs related to their own lives, they
have a right to be involved in decisions that affect their day to day existence
and their future. Most governments, both in the developing and the developed
world, recognize these rights. The article in the Indonesian Law on the
Environment mentioned earlier, is an example of this recognition in Indonesia.
Also the special attention and emphasis regarding the participation of women
in development is partly based on reasons related to their rights in society.

Generally, non-governmental organizations (NGOs) emphasize this first group of 'reasons for real Community Participation'.

A second group of reasons is related to _effectivity and efficiency_. If the community is actually given the opportunity (and its _right_, see above), to actively participate in urban development, this development is assumed to take place more effectively and efficiently. What does that mean: 'effectively and efficiently'? It means that objectives (for instance, better health, good quality and well used and maintained infrastructure and housing) are actually achieved. It means that no resources (money, material, knowledge, skills) are wasted, or left un(der)utilized. From a Government's point of view, it basically means that 'things should be done in the cheapest way possible', so that the limited financial resources available can be used for the benefit of as many people as possible.

The 'effectivity and efficiency reasons' for 'real' Community Participation can be summarized as follows:

- Community Participation contributes to achieving the best use of limited financial resources;

- Community Participation creates a possibility for decisions to be based on peoples' needs, priorities and affordability; this may result in better and more realistic plans, programmes, policies. Moreover, it may increase the chance that people are willing and able to contribute their resources such as money and labour towards implementation and operation and maintenance;

- Community Participation ensures that peoples' knowledge, creativity and skills (all valuable resources) are recognized and used; again, this may result in better and more realistic designs, plans, programmes, policies;

- Community Participation ensures a greater acceptance and appreciation of whatever is created (infrastructure, houses, community buildings); this may result in better care, better maintenance and even pride;

- Community Participation builds up the self enabling and cooperative spirit of people; it will increase the peoples' self reliance, which in turn will decrease the need for Government resource input.

The reader could go through the points listed above once more, while replacing the words 'community' and 'people' with the word 'women'. This would emphasize and illustrate that, also for reasons of efficiency and effectivity, specific attention for the role of women in development is warranted; their needs, potential resource contributions and opinions may differ from those of men. And attention for these differences is all the more important when dealing with basic infrastructure, such as watersupply, solid waste management and sanitation: after all it is the women who are generaly the 'managers' of water and waste in the house and in the settlement.

The danger of an emphasis on 'efficiency and effectivity' is, that it might create a perception of Community Participation as contribution of resources of the 'visible' and measurable kind only: money, land, labour. There is a risk of forgetting the more 'invisible' resources which also lead to greater effectivity and efficiency, but which are not so easily measured. Examples of such 'invisible' resources are _knowledge_ (about the community's resources, needs, priorities and about the community's area), _creativity_, _skills_, _organization_. If

there is no opportunity for people to contribute these 'invisible' resources, they may lack the motivation, willingness and enthusiasm to contribute the other, visible and measurable resources. In such cases, Community Participation in implementation and O&M will have to depend on 'instructions', rather than on guided, but voluntary contributions of land, labour and money.
Another danger of a sole emphasis on efficiency and effectivity is the risk that the right of men and women to take, or be involved in decisions that affect their lives might be forgotten.

An example may serve to illustrate the importance of linking Community Participation in needs/resource assessment, planning and decisionmaking on the one hand, with any type of desired Community Participation in the post implementation stage of Operation and Maintenance and cost recovery on the other.
A watersupply project 'without Community Participation' could be based on standards (such as 60 liters per day per head of population), and on affordibility assumptions (such as 'households can afford 2 - 4% of their income on water'). Such a project could appear financially feasible, and therefore 'efficient', because the community is expected to pay. But will people pay, if they have a satisfactory well water supply? Will they pay, if they are indeed willing and able to spend 4% of their income on water, but cannot possibly afford the connection? Will they use, take good care of and pay for the use of a public standpost if it is located at an inconvenient spot?
Another example will illustrate the need of linking specific Women's Participation in needs/resource assessment, planning and decisionmaking on the one hand, with the expectations of good use, good maintenance and cost recovery in the Operation and Maintenance stage on the other. The example is taken from a Community Survey report of the Small Towns Sanitation Report in Aceh:
> 'Needs priorities for men: drainage, toilet facilities, solid waste collection; needs priorities for women: solid waste collection and toilet facilities, drainage.
> ...Women gave more adequate answers to questions related to solid waste collection than men (because they are the main 'waste collectors' at household level). They formulated practical ideas on waste collection management at household and community level. Women were more prepared than men to pay for collection fees. In general, the women were more interested than men in improvement of solid waste disposal.'
> (Oomen, 1989).

Not involving potential users (often more women than men, in case of watersupply, sanitation, and solid waste disposal) in all stages of decisionmaking, has often resulted in actual waste of resources; ineffective and inefficient. 'In every city examples can be found of improvements demolished by community members, because they had not been heard, had not been involved in the project, until the contractor stepped on their land and started digging' (Gaymans, Bogor, 1982).

It could be concluded that, when looking at effectivity and efficiency, Community Participation in implementation, and operation and maintenance cannot be seen, and advocated, in isolation from 'real' Community Participation (with special attention to Women's Participation). And 'real' Community Participation includes involvement in needs assessment, prioritization and planning. This conclusion is certainly not new Indonesia. Various KIP programmes (for instance, in Surabaya, Bogor and Bandung since the 'early

days' of KIP, in DKI Jakarta more recently, and in Magelang very soon), and numerous NGO activities and community initiated activities are based on it.

The above relates mainly to the need of Community Participation in programme and project formulation, both important aspects of IUIDP. However, there is another type of Community Participation that requires equal attention. This type of Community Participation was already mentioned earlier:

'people participate all the time in urban development and in urban management: they build and repair houses, dig wells, sweep and pave footpaths, burn or bury garbage, etc.'

This type of peoples' activities takes place individually, and in groups; communities organize their solid waste disposal, housing arisans, cleaning of drains, building of footpaths and roads, sometimes building up urban neighborhoods 'from scratch'. An example of an 'infrastructure arisan':

'... Some [local women's organizations] are more active implementing projects that are directly improving their environment. An example was the creative effort, facilitated by the Yayasan Indonesia Sejahtera, an NGO active in community development, done by women in the villages at Banjarnegara in West Java and Surakarta in Central Java. They improve their environment through their traditional 'arisan', a monthly meeting by members usually to save money together, which they take in turn in utilizing it. These women used the funds collected every month to take turns in building latrines, which were used jointly by several families. These facilities were not available before. It was then imitated by other groups.' (from 'The Women of Indonesia', Department of Information, 1985).

For the case of activities initiated by communities, the question is not so much 'why this type of Community Participation?'. The question is, how to support, increase and spread nationwide this type of self initiated Community Participation.

For both Community Participation in Programmes and Projects, and Self initiated Community Participation, the challenge is in achieving 'a blend, a combination of Government plans and plans of the people, the community' (Hassan Poerbo, 1987).

There are examples of such 'blends' in Indonesia. The following experience of Surabaya, where the community decides on priorities and preferences within projects' budgets and components, illustrates perfectly the reasons for genuine participatory urban development approaches:

'Kampung Kebalen, which has been honoured with the Aga Khan Award for Architecture in 1986, had been improved five years before it was judged on site by the team of the Master Jury. This only proved that local people have kept it in perfect condition, due to the fact that they donot regard it as Government Project, but as theirs. Beside that, community health, economic status, community cohesiveness and way of life have also increased significantly. The problem of scaling up and replicability is determined by the ability of local bureaucrats not to conceive it as a Public Works project, but rather as part of the community building process, consisting of community organization, resource generation, and management.' (Silas, 1987).

It should be emphasized that integrating Community Participation into the IUIDP approach, for reasons explained and illustrated in this section, is not a matter of introducing new concepts. It is a matter of replicating approaches already known and implemented in Indonesia on a wider scale, and, especially,

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of creating an institutional framework and general atmosphere conducive to the operationalization in the framework of IUIDP of this aspect of Indonesian Government policy.

3.   Key issues affecting the scope for Community Participation in Indonesia in general, and for IUIDP specifically.

One of the 'definitions' of Community Participation given at the beginning of this paper mentions 'readiness' as a prerequisite for Community Participation:
> 'Community Participation means readiness of both the Government and the community to accept certain responsibilities and activities. It also means that the value of each group's contribution is seen, appreciated and used' (E. Ramos and A.A. Roman, quoted by H. Siagian and M.A. Subardono, 1989).

How 'ready' are Government and communities in Indonesia? In other words, what is the general national/political/ cultural framework for Community Participation in Indonesia, and what are the potentials and constraints for genuine Community Participation.

The national policies, as stated in the GBHN and Repelita V, based on the State ideology of Pancacila, are without any doubt conducive to genuine Community Participation. So is the prevalent way of group-decisionmaking, a pillar of Pancacila, and traditional to a major part of Indonesia; musyarawah (discussion) and mufakat (unanimous agreement arising out of discussion). 'The basic assumption [behind this type of decisionmaking] is that there is a common interest in society (rather than competing interests) which all sides will learn to recognize through discussion' (M.G. Logsdon, 1976). The musharawah/mufakat is 'the Indonesian way', and there is little point in discussing here whether other modes of decisionmaking would be more suitable to problems relating to urban areas and neighborhoods, which generally are quite heterogeneous, and in which there _are_ competing interests and potential conflicts present. As long as people are well informed about the issues at stake, and as long as all views are represented and can be expressed openly in musharawah meetings, the musharawah/mufakat process or system is a good basis for Community Participation. But the system, as any other system, stands or falls depending on the _people_ who are inolved.

Taking the musharawah/mufakat as a basic principle, the Peraturan Menteri Dalam Negeri No. 9 was issued in 1982, with the aim to increase the effectiveness of development by emphasising the importance of a bottom up planning approach. According to this approach, the development aspirations of the community are meant to be identified and to be taken into account in the proposals of programmes and projects to be financed through the National Budget, the Provincial Budget, the Local Budget, and through loans and private sector and community resources. This Community Paticipation starts with the Musyarawah Pembangunan Tingkat Kelurahan ('Musbangdes'), and the information and proposals are channeled 'upwards' through similar meetings at higher levels: Tamu Karya (Kecamatan level), Rakorbang II (Local level), Rakorbang I (Provincial level), and, finally, Rakornas at the National level. This is a process that is repeated yearly, for the finalization of the Annual Budget.

When placed in the context of IUIDP, the Permendagri 9/1982 process poses two main problems. Firstly, the lowest level of decisionmaking is at Kelurahan

Level, with the lurah and the LKMD (local development council) as the main actors in the Musbangdes. The lurah is not a representative of the community, but a Government appointed leader; moreover, a Kelurahan is a quite large area, especially when dealing with an issue such as basic infrastructure, which is in a literal sense so close to the homes of people. Both these conditions are not conducive to genuine Community Participation, even though the LKMD includes the Kepala RW. But the Kepala RW again are not representatives of the Community. They are elected by the Kepala RT, with scope for the lurah to influence the election, or to suggest candidates. The only truly elected (mostly through musyarawah) representatives of the community are the Kepala RT and they are generally considered as such by the community (Logsdon). The solution for Community Participation in the framework of IUIDP would be to somehow involve the Kepala RT and possibly other leaders at RT or RW level in IUIDP programming, while at the same time making use of the framework of Kepala RW, LKMD and the Lurah and staff.

A second difficulty of the Permendagri 9/1982 is that its procedure for bottom up planning is geared to the Annual Budget preparation only. Once a IUIDP mid term programme is available, from which proposals for the Annual Budget can be derived, the Musbangdes meeting can be utilized for consultation. However, the Musbangdes meeting is not meant, and not geared to discuss mid term programmes, such as the IUIDP-PJMs. Another way must be found to ensure that community needs and resources and ideas/suggestions are taken into account in the preparation of IUIDP programmes and projects. Suggestions at the end of his paper include those for a more pronounced role of the Kepala RT.

Also the 'bottom up' planning procedure, which already has its shortcomings, mainly relating to the 'distance' between the community and its Kepala RT and other informal leaders on the one hand, and the Kelurahan authorities and LKMD on the other, stands or falls depending on the people. There are examples of active lurahs/LKMD, sensitive to the needs and wishes of their constituency, there are examples of the opposite. In some cases 'training' may be the answer.

Sofar, the context, potentials and constraints for Community Participation dealt with, are typical for the situation in Indonesia. There are also constraints that are common to many countries, including Indonesia, and in fact including many developed countries. These constraints relate to the community on the one hand, and planners, technicians, civil servants on the other. Starting with the latter; the field of urban planning and management in general, and the professional field of infrastructure in particular, is dominated by technically trained professionals. Often curricula of technical courses at universities and technical highschools, do not contain anything on socio/economic issues; the subject of Community Participation is 'alien' to many technicians. Moreover, for many professionals and bureaucrats, it is difficult to acknowledge that people who have had no professional training, that poor, and poorly educated men and women can actualy contribute to the quality (in terms of effectivity and efficiency) of plans and projects, and can even plan, implement and manage projects without or with very little assistance of 'the experts'. This results in a 'top down' approach to planning and decisionmaking. A change of attitude is required, and fortunately, there are many cases in Indonesia that can serve as examples in infocom and training activities geared to achieve this change.

The constraints for Community Participation are not limited to the Government side only. Many communities are 'not ready' for genuine Community Participation. There are reasons: poverty (no time, no energy to attend meetings, to care for the environment); poor knowledge about, for instance,

the need for basic infrastructure; lack of effective, inspiring leadership at neighborhood level; no strong 'community feeling' (especially when a settlement is relatively young); lack of enthusiasm for Community Participation because of earlier disappointing experiences; differences of interest; reluctance or shyness to voice opinions; lack of realization of the community's and the individual's right to participate, etc. Where communities are 'not ready', the Government and/or Non Governmental Organizations could take the initiative to try to eliminate the constraints that inhibit their involvement in development (see also the suggestions in section 5).

4.   Present 'state of affairs' regarding institutionalization and operationalization of Community Participation in the framework of IUIDP.

IUIDP is basically a decentralization programme. It places responsibilities for planning, implementation and resource mobilization at the local level. It brings decisionmaking closer to the people, the residents of cities.
For this simple reason, the IUIDP-concept, much more than earlier centralized and sectoral development approaches, provides a basis for Community Participation in Urban Infrastructure Development. But is this opportunity really made use of in IUIDP? The 'bottom', or lowest level of decisionmaking, in the framework of the 'Bottom-up Planning Approach' of the Permendagri No. 9/1982, is the Musbangdes, as mentioned in the previous section. But in the IUIDP decentralization terminology, the 'bottom' is often understood as being the Tinkat II authorities and agencies. So, the first step down, for IUIDP to really involve the community in programming and planning, would be towards Musbangdes/LKMD level. Next steps down would be towards the level of RW, and finally, RT; the Kepala RT is the only elected representative of the people, the community, at its own level. If IUIDP is to include 'real' Community Participation, the Kepala RT must somehow be involved, or at least represented. Involved in what? In earlier sections, the need for 'real' Community Participation, starting with participation in needs/resource assessment and prioritization, was explained. The 'IUIDP-product' of local needs/resource assessment, local prioritization and planning is the local PJM, including the LIDAP and RIAP. If Community Participation is to be integrated in the IUIDP approach, it must be integrated in these documents. Therefore, a good way to find out the state of affairs regarding Community Participation and IUIDP, is to look at PJMs, LIDAPs and RIAPs. Since PJMs are produced on the basis of the 'Guidelines for Integrated Urban Infrastructure Development Programme Preparation', issued by the Directorate Bina Program of the Ministry of Public Works, a close look at these guidelines would be a sensible first step. New guidelines are being drafted at this moment (August 1989), but these are not yet available. Therefore, the 1988 – 1989 guidelines are used here, to get an impression of how Community Participation is presently integrated in IUIDP.

The IUIDP Guidelines 1988 – 1989 and Community Participation.
The first time Community Participation is implied in the Guidelines is in the first chapter, under the heading 'IUIDP Principles' (this sentence was also quoted at the beginning of this paper):
    '....IUIDP provides a method for preparation of an integrated programme covering a variety of Public Works urban infrastructure development programmes and projects, specifically those which are implemented by Central Government, Local Government, and by the community'.
The second time, under the same heading:

'Funding for IUIDP infrastructure projects can be obtained from the following sources: Tk II; Tk I; Central Government; domestic and/or foreign loans; the community'.

Concluding: the 'IUIDP principles' as described in the guidelines do not include any statements on Community Participation or involvement in decisionmaking. The emphasis is on implementation and funding.

Under the heading 'Public Works IUIDP Financing Mechanisms', Community Participation in resource contribution (labour and money) is mentioned explicitely.
A degree of Community Participation in decisionmaking, through representation, is implied under the heading 'IUIDP Public Works Preparation Procedures'. Here it is mentioned that PJMs and project proposals should (among others) consider the 'results of subdistrict-level development workshops' (Kecamatan level). Unfortunately, no reference is made to this statement in the rest of the guidelines, and no suggestions as to how to 'operationalize' this suggestion are given. On the contrary. Appendix 1., the 'Guidelines for preparation of spatial and medium-term programme plans for IUIDP implementation' mentions only the Dinas PU, the Sectoral Agencies and the Pemda, as sources for information to determine the demand for infrastructure. Moreover, in appendix 6, 'Data for preparing and evaluating PJMs', nowhere in the lists of information required for (integrated) sectoral planning is there any mentioning of 'needs/ideas expressed by the community', not even for the sector KIP. For KIP, as for other sectors, the emphasis is only on Community Participation in implementation and operation and management. For KIP, according to these guidelines, 'analysis of priorities for particular kampungs [are to be] based on the patterns of income distribution within population density classes' (and apparently not on needs, wishes and priorities of the communities themselves, which could be expressed through the 'subdistrict-level development workshops', mentioned in the first chapter of the guidelines).
In the chapter on IUIDP Programming guidelines, there is no mention of Community Participation, no mention of needs and priorities as perceived by the community, with an exeption for the subject 'Human Waste Disposal': here it is explicitely stated that 'application of human waste technology should be adapted to local conditions'.

It could be concluded that, in the their operational suggestions, the guidelines suffer from the 'delinkage' of Community Participation in implementation and operation & maintenance on the one hand, and Community Participation in needs assessment, prioritization and planning on the other. This 'delinking', as was explained earlier, is certainly not conducive to achieving efficiency and effectivity.
The drafting of new guidelines provides an opportunity to integrate Community Participation and Women's Participation into IUIDP, in line with statements made in Repelita V. However, since communities in Indonesia, and even within cities, differ immensely, the guidelines should try to avoid prescribing detailed 'standard procedures' for Community Participation. In the last part of this paper, suggestions will be given, some of which may provide ideas for new versions of the guidelines, if not those for 1990 - 1991, then those for 1991 - 1992.

IUIDP Mid-term Urban Development Proposals and Community Participation.
As may be clear from the above, strictly adhering to the IUIDP-Guidelines will not result in PJMs that are at least partly based on community needs and preferences. However, fortunately, Local and Provincial IUIDP teams, assisted

by consultants, sometimes appear to follow the 'spirit' of IUIDP and the
Guidelines, rather than the 'letter'. This has resulted in commendable
initiatives regarding the operationalization of Community Participation in, for
instance, needs and resource assessment.
An example is the so called 'ALOS', or 'Assessment of Level of Service
Survey', which is an integral part of PJM preparation in West Java. The survey
includes interviews with all kepala RW, about the quality and quantity of
infrastructure in the RW, and about the RWs suggestions for the various IUIDP
infrastructure sectors. These RW interviews are followed by field checks; per
RT, three households are interviewed, to check wether the ideas put forward
by the Kepala RW indeed represent the community's opinion and priorities.
Such an approach, which as it is, already provides an example that could be
implemented in other provinces, could be further improved by ensuring that the
point of view and ideas of women are represented during the 'field checks'.
This could be done by interviewing the women, rather than the male heads of
households, in 50% of the households selected for the 'field check interview'.

Also in East Java, the first steps of PJM/LIDAP/RIAP preparation include
surveys and reviews of community infrastructure needs, and institutional and
financial capacity of the urban community.

It should be noted that for PJM/LIDAP/RIAP preparation, the scope for
Community Participation is indeed mostly in need/resource assessment, and feed
back of ideas developed on the basis of the assessment, before final decisions
are taken. The time for intensive Community Participation in planning, design,
and determination of implementation and O&M procedures, will come once the
programme will be translated into detailed project designs for, especially, KIP,
MIIP, and for the other sectors, where these directly affect the community.

Other indicators

The Guidelines and PJMs are not the only documents that give an indication of
the state of affairs regarding IUIDP and Community Participation. Firstly,
there are also the 'Policies for City Infrastructure Operation and Maintenance
in Indonesia (Draft)', prepared by the TKPP, already quoted earlier. The
objective, 'to enhance Community Participation in the operation and
maintenance of city infrastructure', is a commendable one, and understandable
in view of the difficulties, both financial and institutional, of local
governments to fully carry the burden of O&M. But, again, for reasons of
efficiency and effectivity, the 'standardized procedures for Community
Participation in O&M' to be developed, must be coupled with procedures for
Community Participation in earlier project stages, and/or (in case of already
existing infrastructure), the O&M procedures need to be at least discussed with
the community or its representatives, to check their suitability.
A second (draft) document that gives an indication of ideas developing, are the
'Draft Appraisal Guidelines'. This draft is more specific than the Programming
Guidelines, and is in fact based on the expectation, that the new version of
these Programming Guidelines will contain clear directions for integration of
Community Participation in IUIDP. To quote the Appraisal Guidelines:
    'A PJM should include a definite policy, and at least a broad programme
    ... developing community consultative and implementation participation.'
Thirdly, the importance attached to 'Infocom' (Information and Communication)
in the framework of IUIDP (infocom pilot projects in Medan and Yogyakarta),
is another sign of integration of participatory approaches in IUIDP, especially
since the concept of 'infocom' is based on the perception of communication as
a two-way process, a two-way flow of information; from Government to
Community, and the other way around.

The last 'indicator' is the inclusion of the subject of Community Participation in IUIDP training activities. In fact, the subject is mentioned in the curriculum of the PCC (Project Cycle Course), the courses for Tk II staff on the preparation of PJM/LIDAP/RIAP. Presently, the details of this aspect of the courses are being developed. One of the objectives of the 'Community Participation Research Project' of the IUIDP Training Project, executed in Jakarta, Bogor, Bandung, Semarang and Surabaya, is to provide training material to support IUIDP courses.

Concluding: 'real' Community Participation is recognized as an important element and issue in IUIDP; there are indications of the operationalization of Community Participation in IUIDP, but a clear operational policy, shared by all those involved in guiding and implementing the IUIDP approach is still lacking. This rudimentary state of affairs has one great advantage: it creates the opportunity to integrate the special attention for women, as advocated in Repelita V, almost right from the start.

5. **Some ideas for institutionalizing, operationalizing and 'aiming at success' for Community Participation in IUIDP.**

The following suggestions are meant as discussion material for those involved in IUIDP development, and as points of debate or discussion in IUIDP training courses. All of the suggestions take into account what has been discussed in the previous sections. Few of the suggestions offer anything 'new': most of them have been or are being carried out or tested in Indonesia, in or outside the framework of IUIDP. In a way, the suggestions are in anticipation of the results of the Community Participation Research of the IUIDP Training Project. It is expected that those results will reinforce these suggestions, and possibly increase their number.

The suggestions are grouped under four main headings:

1. suggestions affecting IUIDP programming (PJM/LIDAP/RIAP preparation);
2. suggestions regarding IUIDP project formulation;
3. suggestions for IUIDP training;
4. misscellaneous suggestions.

The suggestions under 1. are given in the following way:
   - first, the suggestion is given, and elaborated with a number of possibilities for its implementation;
   - second, the consequences of the suggestion for IUIDP are indicated: the IUIDP procedures or documents which would be affected are mentioned;
   - third, the actual occurrance or implementation of the suggestion (or of elements of it) in Indonesia is indicated, by mentioning the programme/project/location.

1. <u>Suggestions regarding IUIDP programming.</u>

1.1. Involve the community, through their representatives, from the very early stages of decisionmaking; needs and resource assessment and priority setting.

   Possibilities on how to do this:
      ¬ ask Kepala RT, directly, or through Kepala RW and/or Lurah and/or LKMD, to describe existing situation, to list urgent problems in

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order of priority, and to list suggestions for solutions, for each of the P3KT-sectors;

- ask the Kepala RT, directly, or through Kepala RW and/or Lurah, and/or LKMD, to give an indication of the community's contributions to community infrastructure provision and management, during the past year (both in the framework of Government projects, and for community-initiated activities); descriptions of the activities including community's contributions in time/labour, and in money (Kepala RW/RT generally keep records of community activities and contributions);

- find out, from Kepala RT, directly, or through Kepala RW and/or Lurah, and/or LKMD, which community organizations exist in the area/neighborhood, with a short description of their activities. This would include both organizations guided by the Government (LKMD, PKK) and other types of organizations, such as, cooperatives, arisans, reading/discussion groups, religious groups, etc. The names of the 'leaders' of these organizations should be included in the information;

- carry out a field check among community members, to find out whether the information obtained represents views of the community; for instance 4 interviews per RT, two with men, two with women; these 'check-interviews' could be directed to 'informal leaders', such as religious leaders, active women, etc.;

- before finalizing the programme (PJM), the same people/organizations should be approached for consultation regarding the tentative programming decisions that were taken for their area/neighborhood.

NB: these activities, especially when carried out city-wide, will require considerable time and may require training of staff who will carry out the survey. If the survey is to be carried out by a consultant, it will cost money as well as time. Moreover, respondents (Kepala RT/RW, Lurah, LKMD) must be informed about the background, reasons and procedure for the survey and the 'feedback'; an infocom activity. Such activities cannot be carried out without a budget and without staff being made available!

CONSEQUENCES OF 1.1. FOR IUIDP DOCUMENTS AND PROCEDURES:

The consequences of suggestion 1.1.:
* inclusion in the BP PROGRAMMING GUIDELINES (however, without rigid prescription of procedures or questionnaires to be used);
* inclusion in IUIDP TRAINING PROGRAMMES
* inclusion of institutional consequences of the suggestion in LIDAP (determination of dinas/sections responsible and involved, assignment of staff, etc);
* inclusion in APPRAISAL GUIDELINES;
* the survey will provide input for LIDAP and RIAP

EXAMPLES OF (ELEMENTS OF) THE SUGGESTION ALREADY IMPLEMENTED:

* ALOS (Assessment of Level of Services Survey), West Java (see section 4);
* Needs/resource assessment survey, for Small Towns Sanitation Programme, Aceh (in this survey, the special attention for the role of women in Sanitation and Solid Waste Disposal, was integrated).

1.2. Support communities that are 'weak', in terms of key-prerequisites for Community Participation, in the development of motivated and effective leadership, and in organization of the community, geared to infrastructure development and strongly related issues, such as health and housing.

Possibilities on how to do this:
- Infocom;
- Employ 'Development Consultants' (NGO entering in a contract with the Tk II authorities), to help the community to increase leadership skills, degree of organization, and understanding about the importance of good basic infrastructure;
- Work together with NGOs, for instance, voluntary organizations
- Involve students of Universities, Social Academies, SMA;
- Leadership training (directed at Kepala RT/RW, LKMD and PKK members and others, including women).

Any strategy to be adopted should include special attention for female leadership and women's organizations, or women in 'mixed' organizations. NB: Often the community's priority needs in poor settlements of this kind are not primarily in the field of infrastructure. For underemployed, low income urban citizens, employement and income are the first priorities, both for men and women. Though one of the objectives of IUIDP is the improvement of the urban economy through strategic infrastructure provision, the direct creation of employment opportunities for men and women fall outside its scope (with perhaps an exception for employment in infrastructure implementation and maintenance). Employment and income are issues that should be kept in mind though, and already in the programming stage, links may be established with agencies, organizations and programmmes that address the employment issue specifically.

It should be noted that, even though 'infocom' is mentioned seperately from the other possibilities on how to implement the suggestion, these are all in a sense 'infocom strategies'; they are all ways to improve the flow of information, both 'bottom up' and 'top down'.

CONSEQUENCES OF 1.2. FOR IUIDP DOCUMENTS AND PROCEDURES:

* inclusion in Central or Provincial LIDAP Guidelines;
* inclusion in LIDAP;
* inclusion in BP PROGRAMMING GUIDELINES;
* inclusion in PJM, where COST are involved; for instance, the involvement of paid Development Consultants, and Infocom activities, should receive a budget line in the 'software' expenditure included in the PJM (which is now generally used only for items such as 'drainage studies', 'preparation/revision of Masterplan', etc.);
* inclusion in IUIDP TRAINING PROGRAMMES
* inclusion in APPRAISAL GUIDELINES.

EXAMPLES OF (ELEMENTS OF) THE SUGGESTION ALREADY
IMPLEMENTED:

* Development Consultants: KIP/MHT, DKI Jakarta (in Jakarta the
  employment/income issue is addressed in the framework of the KIP
  programme);
* Students and voluntary organizations: KIP Surabaya, Bandung;
* Voluntary Agencies/NGOs: Squatter Setlement Improvement
  Yogyakarta;
* Leadership training in matters related to health, infrastructure and
  housing: Puslitbangkim, Bandung; training programmes of the
  Ministry of Health, through LKMD/PKK; 'Training of Trainers
  Programme' on Women, Water and Sanitation, PKK, NTT, 1986.

1.3. Support, and remove obstacles (if any) for community initiatives regarding
urban infrastructure provision and maintenance, in communities that
already have relative strong and effective leadership and a relatively high
degree of organization.

Possibilities on how to do this:
   - Infocom;
   - 'Advanced' leadership training (see 1.2);
   - Technical advice (for instance, technical advisory service, at Tk II
     or Kecamatan level; for instance, how to construct an MCK);
   - Organizational advice (for instance, how to organize and run an
     infrastructure arisan; how to establish an infrastructure or multi
     purpose cooperative; how to organize the construction of
     infrastructure, how to manage its operation and maintenance);
   - Institutional advice (for instance, which agencies, departments, Non
     Government Organizations can be approached for loans, advice, and
     support for community based infrastructure provision and
     maintenance)
   - Technical 'hardware' assistance (for instance, possibilities to borrow
     or hire equipment for construction of footpaths and drains)

CONSEQUENCES OF 1.3. FOR IUIDP DOCUMENTS AND PROCEDURES:

* Mainly: consequences for LIDAP, LIDAP Guidelines, LIDAP Appraisal
  Guidelines;
* Where cost other than 'routine budget cost' are involved (for
  instance for Infocom, and for 'hardware assistance'): consequences
  for PJM, BP Programming and Appraisal Guidelines, see also 1.2.
* IUIDP TRAINING

EXAMPLES OF (ELEMENTS OF) THE SUGGESTION ALREADY
IMPLEMENTED:

* Leadership training (see 1.2)
* Project 'Intensifikasi Penyuluhan Perumahan (IPP)', DI Yogyakarta
  (Support and advice on Self Help Housing);
* (at Provincial level) Building Information Centres.

It may very well be, that urban Community Participation strategies of the kind
suggested under 1.2. and 1.3., are the most important ones to consider and to

try out and implement. They are support strategies rather than project strategies. The consequences, as can be seen from the above mentioned consequences of the suggestions, lie mainly in the fields of infocom, instititionalization and training. Results of these support strategies (for instance, in terms of plans that are better suited to community needs and resources, and increased financial and other resource contributions from the community towards infrastructure development) will be very difficult to estimate or quantify. Perhaps it is advisable not to even try at this point, but to try out the strategies in the framework of IUIDP, while closely monitoring their results.

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2.   Suggestions regarding IUIDP project formulation.

Most of the suggestions given under 1. for programming are also valid for more detailed IUIDP project formulation, for IUIDP sectors like KIP and MIIP, and for projects of the other sectors where these affect the community directly. The basic difference is, that contacts with the community, its Kepala RT and other leaders and its organizations will be much more intensive and frequent. The community, and especially the future users of the facilities to be provided (often more women than men) need to be involved in all stages of the project: detailed needs/resource assessment; planning and decisionmaking (on designs, implementation and O&M procedures); implementation, and; the post implementation stage of evaluation and O&M. There are good examples of this type of project approach in Indonesia, and the main suggestion for IUIDP project formulation can be simple:

2.1.   The KIP approach as followed in Surabaya could be taken as a'model' for IUIDP project formulation where it concerns the basic principles (see section 2), but with sufficient flexibility to make amendments and adaptations for local circumstances that differ from those of Surabaya.

2.2.   Especially in the case of communities that are 'weak' in the prerequisites for Community Participation (leadership, degree of organization), projects could start with a pilot stage of limited scope; limited in the sense of geographical area, degree of complication and resource input from both Government and community. This will allow both the community and the Governement and/or Non Government Organizations to get used to each other, and to the participatory approach, and to develop experience to be used in later projects.

3.   Suggestions for IUIDP training.

3.1.   Specific subjects for inclusion in IUIDP training programmes were already identified above; they relate to the suggestions for programming and project formulation. However, additionally to, or rather, preceding those specific subjects, Community Participation, and the special attention for Women's Participation, need to be integrated in all IUIDP training courses as one of the introductory themes. This could take place in the framework of modules or lectures on the principles of the IUIDP approach, or on IUIDP in the framework of Government Policy as stated in GBHN, Repelita V and the Environmental Law of 1982. The contents of this, paper could form a basis for such training about IUIDP and Community Participation. The main objectives of this training would be,

to create a real understanding of the actual and potential roles of the community (men and women) in Urban Infrastructure Development, and to achieve an attitudinal change, from the 'top down' perception and emphasis on Community Participation in implementation and maintenance, to a perception of the community and the Government working together as 'partners in development', through a continuous dialogue.

4. Miscellaneous suggestions.

4.1. The subject of Community Participation needs to be included in some detail in the Terms of Reference of foreign and local consultants involved in IUIDP policy development, programming and implementation. Full time and/or short time input of Community Participation experts and consultants experienced in the field of 'Women and Development' would be desirable.

4.2. When selecting staff for IUIDP-training and for IUIDP-teams, such as Satgas, Steering Committees, Project Management Units and Technical Teams, an active search for female candidates could take place.

4.3. A final suggestion, related to the so much desired Community Participation in Operation and Maintenance:
Do not attempt to develop 'standard procedures' for Community Participation in Operation and Maintenance; instead, appraisal criteria could be developed, which reward programmes and projects that include well formulated local proposals for Community participation in needs/resource assessment, planning and decisionmaking and Operation and Maintenance.

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MOST OF THESE REFERENCES ARE AVAILABLE IN THE LIBRARY OF THE PROYEK LATIHAN P3KT, Direktorat Bina Program, Direktorat Jenderal Cipta Karya, Departemen P.U.

Session outline: 2.5

Subject: Role play concerning community-based management of
                low-cost infrastructure

Timing: 11.00-12.30

Course staff: Lecturer/course coordinator IHS

Objectives: To give the participants the opportunity to get a
                feel for the practical problems to be dealt with
                in promoting community management.

The role play will concentrate on legal, financial and
organizational aspects. The main question to be solved is how to
ensure that the roles of the urban institutions and the community
organizations are compatible and feasible. Management water
supply and sanitation systems requires that responsibilities are
clear, agreed upon, formalized and actually assumed by all
parties.

Background information: Hand-out: description of role play.

IRC - IHS

SHORT TRAINING COURSE

░░

COMMUNITY WATER SUPPLY & ENVIRONMENTAL SANITATION

FOR LOW-INCOME URBAN COMMUNITIES

░░

EXERCISE	:	Role-play for the implementation of an urban upgrading project.
DATE	:	August 30, 1990

DESCRIPTION	:	As preparation to this exercise the participants should closely read Shlomo Angel, Upgrading Slum Infrastructure; Divergent Objectives in Search of a Consensus, Third World Planning Review, Vol.5, No.1, February 1983, pp.5-22.

Participants are requested to simulate a meeting during the feasibility stage of an urban upgrading project. In the Annex the neighborhood that has been selected for an upgrading project. The project comprises of the following:
1. More public tapstands (low income households).
2. Private connections (middle and high income households).
3. VIP-programme (low-income households).
4. Septic tanks upgrading programme (middle and high income households).

In a general meeting the project proposal will be discussed by 5 parties. Each party will try to defend its interests as described by the descriptions of actors, handed out to every actor (not shown to others of course). The 5 parties are
1. LBD Ltd. representatives, who have been involved in drafting project proposals. In Angel's terms they are the "housers".
2. Municipal engineers of the Municipal Water Corporation and Health departments.
3. Politicians, who are active in this period of forthcoming elections.
4. International donors.
5. The slum dwellers.
A chairman should be chosen (participant, or Course Coordinator). The chairman will take minutes of the meeting for the exercise report.

The participants should use the objectives and arguments given in Angel's article and add their own arguments to prepare themselves for the

meeting. One should distinguish what to demand and what to offer (compromise) in respect of
- physical implementation;
- (social) organization;
- financial contribution.
Those main points should be written down and handed over to the chairman at the end of the exercise for the report.

It is recommended to appoint a spokesman/women for every party. It is the right of the other group members to interrupt the discussions to correct or replace the spokesman/women, when he/she is e.g. too compromising.

It is recommended to have two rounds. Before the first round (approx. 20 minutes) the groups should have time to lobby (10-20 minutes). The first meeting starts and the groups will try to compromise as little as possible. After 20 minutes. There will be opportunity to consult the other group members and to lobby again with the other parties (20 minutes). Then the second meeting starts and the chairman will try to come to some conclusion (which is not the same as a compromise!).

The chairman will collect the main points of the parties and write out the minutes.

The exercise will be evaluated and conclusions drawn in respect of its relevance and level of reality.

REFERENCE MATERIAL:	Shlomo Angel, Upgrading Slum Infrastructure; Divergent Objectives in Search of a Consensus, Third World Planning Review, Vol.5, No.1, February 1983, pp.5-22.

ROLE DESCRIPTIONS EXERCISE P-2 ACCORDING TO S.ANGEL (Each description to be handed out to each party).

1. THE HOUSERS; LBD LTD. CONSULTANTS:

- have a different professional backgrounds (social workers, health officers, architects and engineers);
- government fails to solve problems of housing and infrastructure;
- infrastructure plays an important role, gives aspiration for slum improvements, but is no guarantee for tenure security;
- assist and mobilize people for self-help improvements; and
- remove obstacles and constraints for this process.

2. MUNICIPAL ENGINEERS:

- are professionals with engineering background;
- infrastructure serves health improvement;
- infrastructure is a technical problem;
- high standards and full coverage (= all components)
- low standards disapproved for its low quality. low status and high (expected) maintenance costs;
- standardization;
- low standard infrastructure is a temporary measure, preceding upgrading or clearance;
- sectoral approach, no integrated approach;
- community participation is troublesome, causing delays, they lack professional judgement, not effective;
- integrated approach not required; and
- due to favorable location, middle and high income housing is planned for in the long run.

3. POLITICIANS:

- belonging to national elite;
- casual contact with the poor;
- support to poor opportunistic; serves political goals;
- slums are sore in the eye, affects political prestige (competence);
- loyalty and political stability main focus;
- improvement should serve visible improvement and gaining support of electorate;
- community involvement is not main focus;
- lower standards allowed as it serves goals; and
- slum upgrading is fashionable issue (publicity).

4. INTERNATIONAL DONORS:

- Objective: economic development of the country;
- Rural development has main focus (less politicized), as well as industrialization;
- urban slum upgrading only side objective;
- missionaries of international paradigms's;
- financial resources is their main pressure instrument;
- tailoring towards political circumstances;
- infrastructure has high rate of return;
- through slum upgrading slums are integrated in the formal housing market;
- cost recovery has highest priority for sake of replicability; and
- lowering standards is acceptable.

5. SLUM DWELLERS:

- installation of infrastructure should be free of charge, as in other well-off residential areas;
- installation of infrastructure should be financed from general means;
- avoid eviction by government;
- secure cheap location to live;
- avoid labour input without payment;
- avoid payment for low priority services;
- government should provide;
- distrust of any government action (new exploitation, eviction); and
- hoping for economic and health benefits, as well as land tenure. Infrastructure only side objective, except for water.

Session outline   2.6

Subject: Organizing communities and training: human
                resource development

Timing: 13.30 - 15.00

Course staff: Lecturer IHS

Objectives: Identify training needs, target groups, and
                training methods

Community organizations need to be strengthened by training
community members for the tasks identified. The process of
developing community organizations takes much time and special
skills. For this staff in urban institutions needs to be trained
as trainers and motivators and their role needs to be
institutionalized. Examples will be presented concerning the
development of human resources at both the institutional and the
community level.

Background information: Hand-out, article
                          Course material IHS

Session: 2.7

Topic: Human resource development for community-based approaches
              for urban water supply and sanitation.

READING MATERIAL

Inside:

Training Is a Must in Growing Cities

Human Resources: A Vital Urban Investment

Improving municipal management, institutional strengthening, manpower development—all these buzzwords relate to one basic theme: the need for training. Cities in developing countries require growing numbers of skilled people capable of managing physical assets and financial resources and efficiently providing urban services to rapidly growing populations.

Computerizing city agencies will not improve efficiency if staff are not trained to make effective use of computers. Purchasing new buses cannot improve transport systems unless employees are trained to operate the buses properly and to carry out maintenance and repair. Writing recently about the need for training in Asia, Serge Domicelj, Professor of Town Planning at the University of Sydney in Australia, commented: "The development priorities of urban communities are not too hard to ascertain; more complex is the restructuring of procedures and institutions to cope with and support them. Human resource development...should be considered the ultimate aim of international assistance...."

In countries where decentralization is occurring, the need for skilled local administrators and technicians is all the more pressing. As more responsi-bility for managing urban affairs devolves to local governments and fewer funds are available through central government grants, cities' ability to function effectively will depend on making efficient use of resources, which, in turn, depends on improved performance by local authorities. Investing in the training of local government employees, as any other investment, can yield important returns.

Effective training programs are difficult to develop and administer; many plans that appear good on paper do not work in practice. Sometimes. too many central government agencies or local governments are involved to permit an accurate assessment of needs and the development of adequate training courses. Sometimes, large expenditures are made on foreign consultants who prove unable to translate their knowledge into training programs appropriate to the country that hired them. When individuals are permitted to identify their own training needs, their choices may not coincide with the needs of their employers.

The Botswana government and the World Bank have developed a training project for local government employees covering administration, finance, technical operations, and community development. Here, a housing technician trained as part of the project explains elements of building design to a community worker.

Cooperative Housing Foundation

However, training programs can be effective, with proper planning, adequate resources, and commitment by top authorities.

Botswana: pilot project pays off

A successful experiment in training has been taking place in Botswana since 1985, when a pilot effort was initiated in conjunction with an urban housing project. In 1978, Francistown and Selebi-Phikwe, respectively Botswana's second and third largest urban centers, were selected to have sites serviced and settlements upgraded due to the rapid growth they were experiencing. Schools, health posts and clinics, roads, potable water supply, lighting, sanitation, and community centers were all to be provided under the project.

The overall project fell under the responsibility of the Ministry of Local Government and Lands (MLGL). An MLGL department, the Unified Local Government Service (ULGS), was responsible for assuring that town council personnel from the two municipalities were trained to fulfill their role in the project.

As the project got under way, it became clear that two types of training were needed. On the one hand, there was a need for long-term training of skilled professionals, such as engineers. "On the other," observes Jeffrey Racki, World Bank project officer for Botswana, "the local authorities required help in carrying out day-to-day tasks. Even when people had undergone some kind of training to perform a given job, that training often did not prepare them to utilize their skill within the context of a local government. So, the pilot project was designed to focus on the day-to-day matters, to ensure that people knew what their job was and how to do it."

The pilot project, sponsored by the ULGS and financed by the World Bank, was developed in conjunction with outside consulting firms to meet the needs of urban and district council throughout Botswana that faced

problems similar to those encountered in Francistown and Selebi-Phikwe. During 1985, 200 Francistown, Selebi-Phikwe, and district council employees were trained in four main areas: administration, finance, technical operations, and social welfare and community development.

Working together, the ULGS and the consultants devised courses centered around a series of teaching modules for each of the four areas. Prior to developing the modules, the consultants and their counterparts spent four months talking with town council officials and supervisors about local training requirements and examining existing ULGS training materials. The new courses, they felt, should be presented in a way familiar to the personnel to be trained, without repeating information offered in existing training programs.

Each consultant worked closely with a counterpart, so as to develop skilled trainers within Botswana. Once the experimental classroom modules were complete, local staff selected by their supervisors attended courses related to their own jobs. By the fourth month, the consultants and their counterparts began on-the-job training. Discussions were held with the employees' supervisors to get an idea of the tasks they needed to perform, and with the employees, to further gauge the type of on-the-job training required. As the on-site training proceeded, and the trainers and their counterparts obtained a better idea of the concrete, day-to-day problems faced by town council employees, they revised the classroom modules to respond better to local needs. As they were prepared, the modules were reviewed by staff of the ULGS.

The pilot project was unusually successful. Newly trained personnel were evaluated positively by their supervisors, and many were given new tasks commensurate with the skills they had acquired. "Demand for the program has been tremendous," says Mr. Racki. Within a year of the comple-

tion of the pilot project, in 1986, the MLGL developed a new, $3.6 million project in which staff from all 14 town and district councils in the country, including the capital city of Gabarone, would receive training along the lines of the pilot project. Some 2,000 local government employees will receive training in all.

The same four areas—administration, financial services, technical operations, and community development—are being covered, and the methodology of short, mostly on-the-job, training sessions is being employed. Foreign consultants are working closely with local counterparts; within four years, it is expected that 12-14 fulltime local training officers will be prepared to work within the ULGS to help that agency provide ongoing training support and advisory services to all local authorities. In addition, a consultant has been hired to devise a means of evaluating the effectiveness of the training.

Training for urban transport

Urban transport systems, vital to the overall productivity of cities, generally face several bottlenecks that could be removed through effective training programs. Low-cost measures such as traffic management and enforcement, as well as improved planning, operations, and management, can successfully improve the quality and efficiency of transport systems—but few developing countries have enough experienced professionals to be able to introduce these measures. Such training is usually not available locally, and the cost of overseas training is high.

Such was the case in Indonesia until recently. In the early 1980s, transport was the second fastest-growing sector of the Indonesian economy. Yet there was a near-total scarcity of skilled professionals capable of managing and controlling the rapid expansion of road transport. As a result, traffic became congested in the cities, controls on parking were nonexistent, bus

routes were inefficient, and delays were increasing. Investment decisions reflected the lack of planning; for example, in Jakarta, buses carried over 50 percent of public transport passengers but received only about 8 percent of investments.

In 1980, the Ministry of Communications established the Road Transportation and Traffic College at Bekasi; in 1983, with assistance from the World Bank, which was providing a $30 million loan for public works manpower development, a team of consultants from the University College London (UCL) arrived in Indonesia to assess needs and devise a curriculum capable of developing a generation of professional traffic planners and engineers. The UCL and other consultants worked closely with Indonesian counterparts to design courses that responded to local needs. One goal was to prepare the local counterparts to take on all teaching tasks by the end of the project period.

By the fourth year, a series of teaching and training programs was well established. The most important was, and is, a three-year course, known as Diploma III, specializing in land transport issues. Along with the standard college-level curriculum taught by local professors, the Diploma III program offers courses such as "Development and Transport Plan-

ning Theory," "Traffic Engineering," "Public Transport," and "Quantitative Techniques." One semester consists entirely of field work, during which students are assigned to a town in which they carry out urban transport studies and surveys. By 1987, some 40 students a year were graduating with specialized technical training in road transport.

In addition, the College introduced short, in-service courses for senior staff of the government's various road transport agencies. Finally, the consultants and their counterparts designed an advanced Diploma IV course to enable technical professionals to advance and to provide a nucleus of potential teachers at the Bekasi campus.

The training program has been so successful that the government has included a significant training component in a larger urban development project planned for the capital city of Jakarta and three surrounding municipalities, known as the Jabotabek region. The overall project aims at improving infrastructure, especially transport infrastructure, in Jabotabek through a combination of physical works and strengthening the planning and policymaking capabilities of national and local officials.

The current project, now at the final planning stage, would expand the fa-

cilities at Bekasi to permit 100 students to graduate each year. Eight graduates will attend M.Sc. courses overseas while the expansion is taking place so that, upon their return, they can participate in teaching the D-III courses. In addition, the advanced, four-year course at Bekasi will be initiated.

Another part of the training program in the Jabotabek project calls for developing intensive in-service courses for staff of local government transport agencies in transport planning, traffic engineering, and public transport control and planning. In addition, there are plans to develop a separate curriculum in the area of public transport operations and management, beginning with short, in-service courses and later moving toward the establishment of a three-year public transport diploma course.

Finally, the Indonesian project singles out traffic police for special training. The goal is to expand the curriculum of the National Traffic Police Training College to include courses in traffic law enforcement, road safety, and traffic management.

Reorganization aids effectiveness

Brazil is now in the process of implementing a fourth World Bank-assisted urban transport project. The first, begun in 1978, focused on improvements in five metropolitan regions, and included training for local government personnel. The second project covered a suburban rail system. By the time a third urban transport project had been conceived, it had become clear that changes were needed in Brazil's national transport agency, EBTU, created in 1976. In particular, it was noted that EBTU staff were playing only a minor role in appraising and monitoring transport projects financed by their own agency in Brazil's cities. Because human and financial resources were limited, EBTU was simply acting as a funding channel.

Thus, the third urban transport

World Bank Seeks Data on Urban Transport Training

The World Bank is gathering information about training opportunities in the urban transport sector. Of particular interest are training curricula that cater to personnel and students from developing countries. Training topics for which information is sought include urban transport, traffic management and engineering, public transport (bus, rail, etc.), traffic en-

forcement, road safety, road construction, and road maintenance.

If your organization provides training in these areas and has not responded to earlier requests, please write for a questionnaire to: Mr. Richard Barrett, The World Bank, 1818 H St., N.W., Room F-8013, Washington, D.C., 20433, U.S.A.

project involved reorganizing and then retraining EBTU staff to appraise, monitor, and evaluate, as well as to implement physical works projects in 14 medium-sized cities. The latter was achieved through a "training by doing" approach: EBTU staff, given responsibility for planning and executing low-cost traffic improvements in the 14 cities, were provided the opportunity to put their training to practical use. At the same time, the physical goals of the project were advanced. World Bank staff, meanwhile, r●wed EBTU's performance in the areas where the agency was traditionally weak to ensure that the roadwork, traffic planning, and traffic management subprojects were being undertaken properly.

Because EBTU has control over investment funds for transport, the agency was able to insist that local authorities participate in training programs. Traffic management units were organized in each of the project areas, and local personnel received training in how to manage transport investments, which, according to project officer John Flora of the World Bank, has been one of the most successful aspects of the project. In addition, thousands of bus drivers and conduct●were trained in bus operations and proper treatment of passengers.

In mid-1987, Brazil and the World Bank agreed on plans for a fourth urban transport project, in which $52.2 million has been designated for training and technical assistance. Building on previous success, the new project will provide training for transportation system staff in Brazil's nine largest cities to improve their technical, operational, and administrative skills. The training will be carried out through lecture courses, short-term overseas scholarships, technical visits and presentations, and a series of seminars. In all, nearly 1,600 professional-level staff are to receive training. A se●d part of the program is aimed at dr●rs and conductors of public and private bus companies. Some 185,000

persons are targeted for training over four years.

As part of the fourth project, data will be gathered in order to assess the quantitative improvements wrought by the earlier projects. Along with more efficient bus operations, reduced congestion, and other project goals, Mr. Flora points out that one measure of success will be the number of trained people who have remained on the job, or who are at least working in the country in the same field. Mr. Flora attributes much of the success of the series of transport projects to the Brazilian government's commitment as part of its overall goal of decentralization, to strengthening the ability of local governments to handle transport problems. The existence of a national agency, the EBTU, capable of benefitting from training and then implementing relevant training programs at the local government level has also contributed to project success.

In Turkey: a new training center

Improving local government capabilities as part of a process of decentralization is also the motive behind a training program begun recently in the Cukurova region of Turkey. In this area, which includes five large municipalities, the Turkish government is attempting to strengthen the ability of local government to provide municipal services through a program involving investment in infrastructure. The institutional development portion of the project is aimed at helping the five cities to plan and implement investment programs, operate and maintain existing facilities, and manage their finances.

The municipal governments, which through decentralization have taken on increased responsibilities and been given more revenue-raising powers, are now undergoing a large-scale reorganization into functional departments dealing with water and sanitation, urban planning, upgrading and housing management, solid waste management, and road construction

and maintenance. An independent study of municipal staffs, however, found that many employees lacked the skills and motivation required to fulfill the new tasks. As a result, each municipality is establishing a manpower development and training department to recruit new staff and develop training programs for current staff. Financial management and operation and maintenance of engineering services are areas upon which special attention will be focused.

To assist in the training process, the project provides for the establishment of a regional training center, the Cukurova Municipalities Training Association (CMTA), for municipal staff. CMTA policies and operations will be developed and overseen by representatives from the five municipalities. Eight staff members will be hired and then trained in overseas institutions to undertake the training of 4,800 municipal staff. One goal of the training project is to develop programs that will be replicable in other Turkish municipalities.

Common threads

These four projects have some common threads that may be instructive to local governments in need of training programs. The need for improved local government efficiency as a result of decentralization motivated the projects in Brazil and Turkey, while in Indonesia and Botswana, it was the demands arising from rapid urban growth that underlined the need for an intensified process of manpower development.

Three of the training projects evolved out of needs identified over the course of several years. Speaking of the program in Botswana, Judith Hermanson of the Cooperative Housing Foundation notes that although part of its success is due to its highly practical approach, the time spent developing appropriate programs was also vital. "Too often," she says, "such programs are thrown together by out-

Training for Third World Urban Officials

The following is a list of educational and training institutions in developing countries that offer programs of interest to those specializing in some aspect of urban development. A list of such institutions in developed countries was published in 1987. (See Urban Edge, Vol. 11, No. 2.) Other training information as it becomes known will be included as usual in each issue of Urban Edge.

This list is partial, as it is based on responses received from institutions surveyed by our staff. We welcome additional entries. The list is composed primarily of institutions that are open to foreign nationals, although some established national training schools are included to promote an exchange of information and experience. Unless otherwise noted, courses are given in the principal language of the country listed.

Africa

BOTSWANA

Institute of Development Management, P.O. Box 1357, Gaborone, Botswana:

Established in 1974, the Institute helps meet training and research needs of mid-career and senior managers in Botswana, Lesotho, and Swaziland. Offers courses in areas such as public administration/management, local government, and development planning.

CAMEROON

Ecole Nationale Superieure des Travaux Publics (ENSTP), B.P. 510, Yaounde, Cameroon:

Funded by the Cameroonian government, the ENSTP offers a two-year course in Urban Planning for technicians and advanced technicians. Two-year programs in civil engineering and surveying are also offered.

Panafrican Institute for Development-West Africa, P.O. Box 133, Buea, Cameroon:

Conducts research and training on the issue of rural-urban migration and urban growth within a program largely dedicated to rural development issues.

ETHIOPIA

Faculty of Technology, Addis Ababa University, P.O. Box 518, Addis Ababa, Ethiopia:

The Department of Architecture and Town Planning offers undergraduate courses focusing on architecture and urban planning issues. Courses are offered in English, and some scholarships are available for foreign nationals.

GHANA

University of Ghana, School of Administration, P.O. Box 78, Legon, Ghana:

Offers diploma courses in accounting and public administration and B.Sc. courses in accounting, private and public sector management, personnel management, and health services administration. M.B.A. programs in Management and Public Administration are also taught.

University of Science and Technology (UST), Department of Housing and Planning Research, Kumasi, Ghana:

Has a longstanding program of training for community planners, providing courses on planning, architecture, engineering, and economics.

The Department of Sanitary Engineering has a combined research and training program in low-cost sanitation and waste disposal, which concentrates on training foremen employed by city governments to build sanitary facilities.

KENYA

Kenyan Institute of Administration, P.O. Box 23030, Lower Kabete Road, Nairobi, Kenya:

The Department of Regional and Urban Studies offers a variety of urban-related courses, including local government, urban management, and project development and management.

Other departments offer courses in administration and management, accounting and business studies, social development, and communication. The Audio-Visual Aids Centre produces training aids and offers seminars on the training of trainers.

University of Nairobi, Department of Land Development, P.O. Box 30197, Nairobi, Kenya:

Offers B.A. programs in Building Economics (dealing with problems of building and built environment in urban areas with special emphasis on the costing of buildings and infrastructure) and Land Economics (focusing on land and estate management with special emphasis on real estate appraisal, housing, and urban and regional planning). Two-year M.A. programs are available in Building Management and Housing Administration, along with a Ph.D. program in Land and Building Economics.

Course work in urban housing and community development is offered by the Departments of Architecture and Urban and Regional Planning, with the participation of the Housing Research and Development Unit (HRDU), a research institute within the university.

LESOTHO

Lesotho Institute of Public Administration, P.O. Box MX1507, Maseru, Lesotho:

Conducts a number of short, in-service training courses for managers in the public and private sector. Courses cover the preparation, appraisal, implementation, and

evaluation of projects and budgeting systems. Works in close cooperation with the Economic Commission for Africa.

NIGERIA

Administrative Staff College, PMB 1004, Topo, Badagry, Lagos, Nigeria:

Offers six-week intensive programs and a six-month certificate program in Public Administration for Nigerian public servants.

Ahmadu Bello University, Department of Urban and Regional Planning, Faculty of Environmental Design, Zaria, Nigeria:

Offers postgraduate programs in Urban and Regional Planning. Courses are directed toward design-oriented physical planners in policy and development implementation.

Kaduna Polytechnic, College of Environmental Studies, P.M.B. 2026, Kaduna South, Nigeria:

The Department of Urban and Regional Planning offers diploma courses in Town Planning; the Department of Building has diploma courses in Building and in Quantity Surveying; and the Department of Architecture offers diploma courses in Architecture.

Nigerian Institute of Management, No. 7 Alhaji Murtala Animashann Close, P.O. Box 2557, Lagos, Nigeria:

Sponsors short courses annually for practicing managers of urban governments as well as private businessmen. Established in 1961, the Institute has linkages with a number of foreign organizations, including the British Institute of Management and the American Management Association.

University of Ife, Ile-Ife, Nigeria:

The Department of Public Administration offers a Master's-level degree with specializations in local government and management of urbanization and rural development. M.A. and Ph.D. programs in Public Administration also are offered. The Faculty of Environmental Design and Management conducts undergraduate and graduate programs in Architecture, Building, Estate Management, Quantity Surveying, and Urban and Regional Planning.

University of Lagos, Faculty of Environmental Design, Lagos, Nigeria:

Offers two-year postgraduate courses in

City Planning and in Architecture with an urban design option.

SENEGAL

International Association for Environment and Development in the Third World (ENDA), B.P. 3370, Dakar, Senegal:

Conducts seminars and short training courses for development officials in cooperation with other African governments, UNICEF, and UNESCO. Training and seminars focus on environmental improvement and urban development, with an emphasis on improving conditions for low-income families in urban and rural areas.

Ministère de la Culture, Ecole d'Architecture et d'Urbanisme (EAU), B.P. 11046, Dakar, Senegal:

EAU consists of a Department of Architecture and Urban Studies, offering a six-year course of study towards a diploma, and a Department of Graduate Technology, offering a two-year course in which students may specialize either in architecture or urban studies.

The school has heavy enrollment from neighboring francophone countries; students are generally sponsored by their government or by nongovernmental development agencies.

SUDAN

Department of Architecture, University of Khartoum, P.O. Box 321, Khartoum, Sudan:

Offers degree programs in Architecture and has collaborated with UNESCO on workshops aimed at training managers in the human settlements field.

TANZANIA

Ardhi Institute, Department of Urban and Rural Planning, P.O. Box 35176, Dar es Salaam, Tanzania:

Offers a three-year advanced diploma program in Urban and Rural Planning. Areas covered include: setting and outlining of national physical development goals and policies; formulation of physical plans for villages, towns, and districts; and ensuring the availability of financial, manpower, and material resources for project implementation.

The Institute also organizes seminars related to urban planning for professionals in East, Central, and Southern Africa, and offers certificate courses in Housing Studies.

Centre for Housing Studies, P.O. Box 35124, Dar es Salaam, Tanzania:

A joint project of the Ardhi Institute and the Institute for Housing Studies in the Netherlands. Provides training courses for mid- and high-level personnel dealing with planning, development, and management of human settlements.

TOGO

Ecole Africaine et Mauriciènne d'Architecture et d'Urbanisme, B.P. 2067, Lome, Togo:

Offers five-year diploma courses in Architecture and Urban Planning to students from member countries of the Organisation Commune Africaine et Mauricienne (OCAM).

TUNISIA

Institut Technologique d'Art, d'Architecture et d'Urbanisme, Route de l'Armée Nationale, Tunis, Tunisia:

Part of the University of Tunisia, this Institute offers course work on "Cities and Development" to aid future urban planners and architects in gaining a broad view of urban development.

ZAMBIA

University of Zambia at Ndola, School of Environmental Studies, P.O. Box 21692, Kitwe, Zambia:

Offers degree programs in Architecture, Building Economics, Urban and Regional Planning, and Land Economics.

Zambia Institute of Technology, Department of Technical Education and Vocational Training, P.O. Box 21993, Kitwe, Zambia:

Offers a diploma course in Town and Country Planning with an emphasis on industry and construction technology. Courses also are offered in accounting, management, architecture, civil engineering, land surveying, and water engineering.

ZIMBABWE

**University of Zimbabwe, P.O. Box MP 167, Mount Pleasant, Harare, Zimbabwe:**

The Department of Rural and Urban Planning offers a four-year B.Sc. program in Regional and Urban Planning. Course work includes planning, administration, land surveying, architecture and building technology, estate management, and public finance.

A one-year M.Sc. program in Regional and Urban Planning is also offered, as well

as a one-year diploma course for college graduates from other fields who work in the area of regional and urban planning.

The Department of Civil Engineering offers a number of courses relevant to urban development, low-cost housing, and transportation systems and structures.
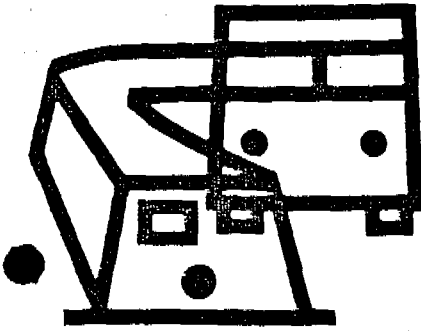
Asia & the Pacific

BANGLADESH

Bangladesh University of Engineering and Technology, Dhaka-2, Bangladesh:

The Department of Urban and Regional Planning and the Department of Architecture both offer postgraduate degree programs. Courses are taught in English.

Department of Geography, University of Dhaka, Dhaka, Bangladesh:.

The Centre for Urban Studies is a research and training institute offering seminars and workshops on urban and regional issues, sometimes in collaboration with international agencies.

CHINA

Shanghai Institute of International Economic Management, 369 North Zhung-Shan Road 1, Shanghai, China:

Conducts courses for senior and mid-level officials in the Shanghai government and in Chinese banks. It functions as a training partner of the World Bank's Economic Development Institute.

South China Institute of Technology, Department of Architecture, Guangzhou, China:

Offers city planning and urban design courses that focus on group housing design, planning theories and design stan-

dards, and planning and design of small and medium-sized Chinese cities.

HONG KONG

Hong Kong Polytechnic, Department of Building and Surveying, Hung Hom, Kowloon, Hong Kong:

Offers a three-year, full-time course leading to a diploma in Urban Land Economy/Estate Management and a three-year evening course with a certificate in Valuation/Property Management aimed at upgrading professional skills.

University of Hong Kong, Centre of Urban Studies and Urban Planning, Pokfulam Road, Hong Kong:

Offers postgraduate programs leading to a Master of Social Sciences in Urban Studies and an M.Sc. in Urban Planning. Both programs are offered on a one-year, full-time and a two-year, part-time basis.

INDIA

All-India Institute of Local Self-Government, Sthanikraj Bhawan, C.D. Barfiwala Marg, Andheri (West), Bombay-400 058, India:

The Institute provides specialized administrative training related to urban development issues, designed for local government officials. Courses are offered annually on a variety of relevant subjects. The Regional Centre for Urban and Environmental Planning offers specialized courses within the Institute. Upon request, courses can be designed for urban managers in other developing countries; foreign nationals also participate in standard courses.

Centre for Environmental Planning and Technology (CEPT), University Road, Navrangpura, Ahmedabad-380 009, India:

The School of Planning offers two 18-month postgraduate degree programs, one in Urban and Regional Planning and one in Environmental Planning. Courses on urban subsystems, including housing and transportation, are offered as part of the Urban and Regional Planning program. In 1986, the Center initiated a Unit for Housing Studies, which features training and workshops aimed at bringing issues such as finance, pricing policies, and land management into planning strategies for urban housing.

Centre for Human Settlements, India, 25-

27, Netaji Subhas Road, Calcutta-700 001, India:

The Center offers courses in urban development and sponsors international conferences on shelter issues. In March, the Centre is holding a six-week course for urban planners, managers, and social workers involved in shelter programs. A second short course on "Finance for Housing and Infrastructure Development" will be held later in the year. In addition, the Centre will sponsor an international conference on "The Role of Land and Finance in Housing and Urban Development in the Third World" in December.

Human Settlement Management Institute, 212 Asian Games Village Complex, Siri Fort Area, Khelgaon Marg, New Delhi-110 049, India:

Created by the Indian Housing and Urban Development Corporation (HUDCO) to undertake training activities in the field of low-cost housing. In cooperation with the Institute for Housing Studies in the Netherlands, the Institute holds three-week workshops for mid-level officials, as well as shorter policy seminars for executives and managers. In 1987, the Institute sponsored international meetings on "Income and Housing" and "Human Settlements," as well as an international seminar on "Income and Housing in Third World Urban Development."

Indian Institute of Remote Sensing, 4 Kalidas Road, Post Box 135, Dehra Dun-248 001, India:

Offers a 10-month postgraduate course in Human Settlement Analysis (beginning each March) in collaboration with the International Institute of Aerial Survey and Earth Sciences in the Netherlands. Designed for administrators, architects, economists, and planners, the course gives practical training in the interpretation of aerial photographs, data analysis, and the use of data for urban planning and management. The Institute also offers a training course for mid-level officials on human settlement planning.

Institute for Habitat and Environment, Centre for Development Studies and Activities, School of Development Planning, P.B. 843, Deccan Gymkhana, Pune-411 004, Maharashtra, India:

A research and training institute specializing in micro-level planning with empha-

sis on poverty alleviation. The Centre offers a two-year postgraduate diploma course in Development Planning in conjunction with the University of Poona. The Institute conducts one- and four-week training workshops for senior officials in housing, urban development, financial management, and urban planning. Some financial aid is available.

Structural Engineering Research Centre, Council for Scientific and Industrial Research Campus, Taramani, Madras-600 113, India:

Conducts research and development in all areas of structural engineering, including the analysis, design, and construction of shell roofs, prefabricated building systems, microwave towers, and machine foundations. Conducts advanced training courses for senior engineers from India and other countries.

INDONESIA

Institute of Technology, Bandung, Department of Regional and City Planning, Jalan Ganesha 10, Bandung, Indonesia:

Offers a four-year undergraduate program and a postgraduate degree program in Urban and Regional Planning. Provides research and practical assistance to local, regional, and central governments in city planning.

MALAYSIA

National Institute of Administration, Bukit Kiara, P.O. Box 1154, Jalan Pantai Baru, Kuala Lumpur 22-11, Malaysia:

Offers training courses in English on urban and regional administration, planning and management of public housing, structural and local planning, and training methodologies at three campuses in the East Asia region.

Universiti Sains Malaysia, School of Housing, Building, and Planning, Minden, Penang, Malaysia:

Offers a two-year M.Sc. degree program in Planning. Courses are open to foreign nationals, who must be fluent in Bahasa Malaysia.

PHILIPPINES

University of Life, Meralco Avenue, Pasig, Metro Manila, Philippines:

Offers courses on the management and development of shelter systems, including project organization and management,

community organization, and construction management.

University of the Philippines, Diliman, Quezon City, Metro Manila 3004, Philippines:

The School of Urban and Regional Planning offers M.Sc. and Ph.D. programs in Urban and Regional Planning. The M.Sc. program includes specializations in urban, regional, estate, and public works planning. Special nondegree courses are taught in urban and regional development, and short courses are offered in areas such as land-use planning, zoning ordinances, and the management of human settlements. Courses are in English.

At the College of Public Administration, students may pursue an M.Sc. degree in Public Administration or a Doctor of Public Administration degree. One section of the degree programs is devoted to Local Government and Regional Administration.

The Transport Training Center offers courses on transportation planning and traffic engineering and management with a focus on urban road transport. Provides training for professionals from East and Southeast Asia.

The College of Architecture conducts diploma programs in Architectural Drafting and in Building Technology and offers a B.S. in Architecture and a Master of Architecture program.

The Institute of Environmental Planning provides short (three- and four-month) courses for public officials in urban and regional planning and management of urban settlements.

THAILAND

Asian Institute of Technology, P.O. Box 2754, Bangkok, Thailand:

An international postgraduate technological institution, AIT offers 12-month diploma, 20-month M.A., and 36-month Ph.D. programs for students from South and Southeast Asia and the Pacific.

The Division of Human Settlements Development has a Master's program in Human Settlements Planning with an emphasis on urban areas that includes land and housing, urban planning, and social planning. A doctoral program in Technical Science in Human Settlements Planning was initiated in 1987. Graduate degrees are also offered from the Division of Urban Planning and the Division of Housing and Land Development. Other divisions offer

programs in structural engineering and construction, computer applications, and environmental engineering. AIT also organizes an annual international seminar on low-income housing.

The Interdisciplinary Natural Resources Development and Management Program at AIT was established to transfer remote sensing technology to developing countries in Asia.

Launched in late 1986, the Asian Disaster Preparedness Center forms another part of AIT. In cooperation with international organizations, the Center offers a six-week "Disaster Management" course twice a year for participants from Asia and the Pacific and carries out other related activities.
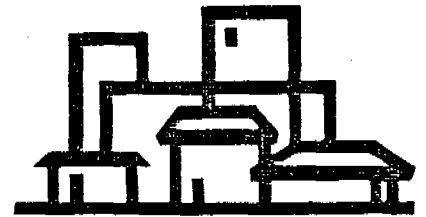
Latin America

ARGENTINA

Universidad Catolica de Cordoba, Obispo Trejo 323, 5000 Cordoba, Argentina:

The Institute of Planning of the Faculty of Architecture offers undergraduate courses in urban and regional planning, leading to a degree in Architecture. The Institute holds two annual nine-week courses: "Urban and Architectural Typologies" and "Urban Planning and Simulation Games."

Universidad Catolica de Santa Fe, Calle Echague 7151, 3000 Santa Fe, Argentina:

The Faculty of Architecture offers a postgraduate course in "Urban Training," designed for professionals active in municipal administration, focusing on urban design and management and technical questions. It is a one-semester certificate program.

BRAZIL

Escola de Administracao de Empresas de Sao Paulo, Av. 9 de Julho, 2.029, CEP 01313, São Paulo, S.P., Brazil:

Offers a postgraduate program in Public Administration, with an option to concentrate on Urban Planning and Administration. A four-year undergraduate degree in public administration may also be pursued.

Instituto Brasileiro de Administracao Municipal (IBAM), Largo IBAM, No. 1, Rio de Janeiro 22282, RJ, Brazil:

A well-established private institution, IBAM provides practical training for municipal officials. Eight-month courses are offered annually in three areas: urban and municipal planning methodology and projects, municipal administration, and urban engineering systems. Short courses are also held each year on a wide variety of subjects relevant to urban officials. Courses are conducted in Portuguese and are directed to Brazilian officials and officials from Latin American and Portuguese-speaking African countries. Scholarships are available from the Brazilian government.

IBAM also conducts policy seminars and publishes how-to manuals on property tax collection, cadastral methodology, traffic management, municipal organization, and shelter programs. The organization provides technical assistance to other developing countries in the field of municipal administration.

Universidade de Sao Paulo, Faculdade de Arquitectura e Urbanismo, Caixa Postal 3225, Sao Paulo 01000, Brazil:

Offers undergraduate and graduate programs related to architecture and urban planning, including courses in landscape design, industrial design, and visual communication. Offers Master's and Doctoral programs in Urban Environmental Structures.

CHILE

Oficina Internacional del Trabajo, Programa Regional del Empleo para America Latina y el Caribe (PREALC), Av. Alonso de Cordova 4212, Casilla 618, Santiago, Chile:

This program, sponsored jointly by the International Labour Organisation and UNDP, provides training in employment issues for national and municipal staffs through a series of six-week courses held every two years. PREALC also provides technical assistance to governments on employment matters and has available a list of publications in the field.

Pontifica Universidad Catolica de Chile, Instituto de Estudios Urbanos, Casilla 16002, Correo 9-Providencia, Santiago, Chile:

In 1987, the Institute began a new Master's-level course in "Human Settlements and Environment." Also offered is a Master's program in Urban Development that includes courses in development and spatial structure, urban research, and theories and methods of planning. Some scholarships are available for foreign students.

Short courses for high-level officials in "Taxation and Construction" and "Business Administration and the Environment" and a certificate program in "Real Estate Management" are also given.

Universidad de Chile, Marcoleta No. 250, Casilla 3387, Santiago, Chile:

A new "Master's in Urbanism" degree program was initiated in April, 1987, by the Faculty of Architecture and Urbanism. It is a two-year program, requiring completion of a thesis. The basic areas covered are planning and urban design, organization of urban space, and planning and urban development. Scholarships for foreign students may be available through intergovernmental accords or foreign institutions.

COLOMBIA

Faculdad de Arquitectura, Universidad Nacional de Colombia, Seccional de Medellin, Apto. Aereo 568, Medellin, Colombia:

Has a two-year Master in Urban Planning program covering areas such as space and design, housing, urban infrastructure, and urban ecology.

The Architecture Department sponsors a series of workshops and international seminars as part of the Latin American Program for Housing Studies (PEVAL), with support from the Institute of Housing Studies in the Netherlands. Attendance is open to students from throughout Latin America; PEVAL programs are designed for practicing professionals in the field of low-income settlements.

COSTA RICA

Instituto Centroamericano de Administracion Publica (ICAP), Edificio Schyfter, Ave. Central y Calle 2, Apartado 10.025, San Jose, Costa Rica:

Created and supported by the governments of Central America to train public sector personnel in the region. Offers a two-year postgraduate course in Public Administration, open to students from Central America and Panama. ICAP also provides training sessions for mid- and high-level government personnel, sponsors seminars and conferences on themes related to public administration in cooperation with regional and international organizations, and undertakes research on topics such as urbanization and urban housing problems in Central America.

ECUADOR

Centro Latinoamericano de Capacitacion y Desarrollo de los Gobiernos Locales (CELCADEL)/International Union of Local Authorities (IULA), Casilla 1109, Correo Central, Quito, Ecuador:

Established in 1982 as the nucleus of a network of local government associations and training institutions, the IULA center offers seminars and courses related to problems of local government. Workshops offered in 1987 included "Administration of Local Development Projects," held in Colombia, and "Administration of Public Municipal Services," held in Brazil.

JAMAICA

College of Arts, Science and Technology (CAST), Building Department, 237 Old Hope Road, Kingston 6, Jamaica:

Sponsors a series of training activities related to urban development that are open to trainees from other Caribbean nations. Offers three-year diploma courses in Architectural Technology and Physical Planning Technology for secondary school graduates; course work is oriented toward land development problems and planning in the Caribbean. Among agencies providing tuition assistance are CIDA in Canada, the UNDP, and the Caribbean Fund for Technical Cooperation.

CAST also sponsors short courses, workshops, and seminars for officials and professionals in the urban development field. In July 1987, CAST sponsored a weeklong Summer Institute on "Financing and the Development Process."

Construction Resource & Development Centre, 166 1/2 Old Hope Road, Kingston 6, Jamaica:.

Offers training in utilizing the Bertaud computer model for housing, as well as practical programs on topics such as maintenance of buildings and electrical, plumbing, and drainage systems.

MEXICO

El Colegio de Mexico, Centro de Estudios Demograficos y de Desarrollo Urbano, Camino al Ajusco 20, Apdo. Postal 20671, 01000 Mexico, D.F.:

Offers a two-year Master's degree program in Urban Development. The program is preceded by a three-month preparatory course to orient students who come from a variety of other disciplines. The next Master's program begins in June, 1989. Foreign students.are not eligible for scholarships.

Instituto Mexicano de Administracion Publica, Calle 19, No. 102-5, Colonia San Pedro, C. Postal 03800, Mexico, D.F., Mexico:.

A nonprofit organization that provides training, in the form of courses and seminars, for municipal officials and others involved in the field.of municipal administration.

Universidad Iberoamericana/Mexico, Departamento de Arquitectura y Urbanismo, Av. Cerro de las Torres 395, Mexico 04200, D.F.:

Offers a two-year postgraduate program in Architecture with a focus on urban design.

Middle East

EGYPT

Development Research and Technological Planning Center, Cairo University, P.O. Box 38, Giza, Egypt:

Offers short courses and workshops to support the training of research personnel at universities and government ministries and holds an Annual Technical Conference, where research is presented.

ISRAEL

Mount Carmel International Training Center for Community Development, University of Haifa, 12 David Pinsky St., Haifa 34351, Israel:

Founded in response to the needs of women from developing countries, the center now is open to male participants, as well. Training sessions have included English and Spanish courses in "Community Development and Promotion of Income-Generating Projects." Courses are sometimes conducted in developing countries, and the Center sponsors a biennial international seminar involving participants from developing and developed countries.

Settlement Study Centre/Centro de Estudios Regionales Urbano-Rurales (CERUR), P.O.B. 2355, Rehovot 76120, Israel:

Provides training for officials who work in public institutions or are involved in development activities in the developing world. The Center has a methodology for "integrated rural-urban development," aimed at successfully absorbing rural migrants into cities. The methodology is taught during a seven-month postgraduate course offered twice each year and a six-month course on planning and implementation of regional projects held annually in Brazil's northeast (in Portuguese). The Center also holds short courses for top-level officials from African, Asian, and Latin American countries. In 1987, the

Center conducted an International Course on Planning of Micro-Regions and New Settlement Areas.

JORDAN

Arab Organization of Administrative Sciences (AOAS), Dahiat El-Hussein, P.O. Box 17159, Amman, Jordan:

Established in 1969 to improve administrative sciences and update administrative systems in Arab states. Training is a major component of the AOAS program and is provided largely for executives from government agencies. Training is undertaken at the request of an Arab state or at AOAS initiative.

SAUDI ARABIA

Arab Urban Development Institute (AUDI), P.O. Box 6892, Riyadh/11452, Saudi Arabia:

Established in 1980 to support the Arab Towns Organization in training. research, consultancy, and documentation services to improve the Arab city and maintain its character and Islamic cultural heritage. AUDI organizes conferences. seminars, and short courses on topics such as waste management, urban renewal, management of medium-sized cities, and town planning. AUDI also organizes symposia on specific urban issues in developing and developed countries in cooperation with regional and international organizations.

TURKEY

Orta Dogu Teknik Universities (Middle East Technical University), Department of City and Regional Planning, Inonu Bulvari, Ankara, Turkey:

Offers an undergraduate program in City Planning and a graduate program in City and Regional Planning. Courses are offered in English; numerous students from Middle Eastern, African, and Asian countries attend. Scholarships are not available through the university.

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siders who fly in and out without taking the time to find out what is really going on locally."

Three out of the four governments involved concluded that the establishment of specialized training institutions was the best way to improve the

quality of local government. In the fourth country, Brazil, an entire government agency was reorganized to enable it to assist in producing improvements at the municipal level. In all four countries, commitment at the top levels of government was vital to the establishment of effective training

programs.

Finally, in Botswana and Indonesia, considerable emphasis is being placed upon the training of local trainers in order to ensure the continuity of training programs, while in Turkey, the development of replicable training programs is a key goal.   ⬛

PROJECT NOTES

Turkey: water supply and sewerage.
Residents of Istanbul will benefit from
the results of a $218 million project
designed to increase water supply and
sewerage connections, reduce levels of
unaccounted-for water, and dispose of
the city's sewerage in an environmen-
tally sound manner.

Istanbul is the gateway to Turkey
and a major tourism and commercial
center; it is also home to some 6 mil-
lion people. However, water supply
and sewerage systems are antiquated
and incomplete; most low-income
areas are not connected to the sewer-
age system, and effluents have danger-
ously polluted the Sea of Marmara.
About 30 percent of the water pro-
duced never reaches consumers, due
to leaks in the water supply network.

Through the construction of new
pumping stations, collectors, and
treatment plants, the city's water sup-
ply and sewerage authority (ISKI) in-
tends to redirect much of the sewerage
now deposited in Turkey's coastal wa-
ters. Submarine outfalls will be used to
carry treated effluent to a point at
which the current of the Bosporus is
expected to carry it to the Black Sea,
where it will be dispersed and treated
naturally.

The construction of 2,500 km. of
street sewers and the installation of
over 300,000 customer service connec-
tions, meanwhile, will extend sewerage
service to 70 percent of Istanbul's pop-
ulation over the next five years. ISKI
staff will also be trained in leak detec-
tion, system mapping, and other tech-
niques for reducing unaccounted-for
water, and old and defective water
pipes will be replaced at the same time
pumping stations are rehabilitated.

RESOURCES

UNCHS/Habitat, *A Systematic As-
sessment of Training Needs in Human*
Settlement Organizations, P.O. Box
30030, Nairobi, Kenya, 1988.

Before embarking on a major train-
ing program, it is important to pin-
point the training needs of the orga-
nization, agency, or individuals in-
volved. UNCHS/HABITAT has de-
veloped a new, cost-effective training
needs assessment (TNA) methodology
that has been tried with success in two
Arab nations.

A manual describing the methodol-
ogy has just been published. One of
the manual's authors, Nicholas You,
stresses that TNA can be effective in
situations where top-level manage-
ment is willing to implement needed
organizational changes and where per-
formance targets can be identified ac-
cording to objective criteria—as op-
posed to agencies mainly involved
with policy matters.

Once management commitment has
been ensured, training needs asses-
sors—who would be trained in use of
the TNA methodology by UNCHS
staff—begin a four-step process that
includes (1) scanning the work envi-
ronment (through observation, ques-
tioning of employees, and studying
relevant records); (2) focusing on the
problems or discrepancies that have
been identified by management or em-
ployees and determining which prob-
lems might be resolved through train-
ing and which require organizational
changes; (3) planning strategies and
priorities for training programs; and
(4) alerting management to the find-
ings so that training and subsequent
evaluation can be undertaken.

Peter Oberlander, *Barefoot Plan-
ners: Training Activities in Developing
Countries*, Occasional Paper No. 40,
The Center for Human Settlements,
University of British Columbia, Van-
couver, B.C. V6T 1W5, Canada,
1987, $8.

This 88-page study, arguing in favor
of training members of the local com-
munity to handle most problems re-
lated to human settlements, suggests
methodologies and guidelines for the
training of "habitat workers" and pro-
vides a comparative analysis of train-
ing programs that have attempted to
put the methodology into practice.

The use of trained local manpower,
Oberlander states, can "achieve a sub-
stantial improvement of the urban en-
vironment through and with the local
community, while recruiting and mob-
ilizing readily available local manpow-
er and thereby initiating the essential
process of self-development and eco-
nomic growth."

*City Food: Crop Selection in Third
World Cities*, Urban Resource Sys-
tems, Inc., 783 Buena Vista West, San
Francisco, CA, 94117, U.S.A., 1987.

Food shortages and malnutrition
are common problems throughout the
cities of the developing world. This
volume tells how nutritious food can
be produced in urban areas, increasing
food security, providing employment,
and even reducing the cost of import-
ed foodstuffs.

The 54-page manual is largely tech-
nical, describing soil and other condi-
tions required for urban agriculture
and suggesting techniques for inten-
sive production, as well as providing
nutritional and other criteria for the
selection of crops to be planted. In-
cluded is a bibliography of over 100
references on urban agriculture.

TRAINING

*Development Planning Unit, University
College London, 9 Endsleigh Gardens,
London WC1H 0ED, U.K.*

Short courses planned for early
1988 include: "Planning with Women
for Development: Strategies for Low-
Income Households," "Urban Land
Policy and Management," "Sites and
Services Project Design and Evalua-
tion," "Housing Policy Formulation
and Implementation," and "Urban
Traffic and Transport: Policy and
Planning." All courses will be held

Apr. 11-July 1 and have been designed for practicing professionals from developing countries.

Oxford Programme of Development Workshops, Continuing Education Unit, Oxford Polytechnic, Headington, Oxford OX3 0BP, U.K.

A series of short courses on disaster management is being offered between May 1 and July 22. "Disaster Management I" focuses on relief management and preparedness planning; "Disaster Management II" will offer training in risk reduction and recovery planning. Within each course are shorter modules that can be taken separately; senior officials responsible for disaster management can take the entire course as an integrated program, lasting 12 weeks.

Early application is suggested.

Registrar, Institute for Housing Studies (IHS), P.O. Box 20718, 3001 JA Rotterdam, The Netherlands.

The IHS 52nd International Course on Housing, Planning, and Building will take place in Rotterdam for five months, beginning in August. Workshops are planned in "Appraisal and Design Procedures," "Settlement Planning," "Housing Construction Process and Management," "Low-Cost Infrastructure," and "Integrated Urban Development Management." The course is designed for professionals from developing countries. Information on financial assistance is available through IHS.

School of Planning, University of Cincinnati, Cincinnati, OH 45221-0016, U.S.A.

The School of Planning is seeking applicants for its Master's degree program in International Development Planning, which is tailored to the needs of students from developing countries seeking careers in international development.

The two-year program consists of a group of core courses and electives, including "Planning Issues in Developing Countries," "Methods in International Development Planning," and "Economics of Development."

Applications for September entry must be completed by May 1.

Water, Engineering and Development Centre (WEDC), (Attn. B. Reed), Loughborough University of Technology, Loughborough, LE11 3TU, U.K.

Applications are being accepted for the WEDC course in "Urban Engineering for Developing Countries." This year-long program begins in October and is designed to assist engineers working in towns and small cities in developing countries to carry out their responsibilities more effectively. The course utilizes classroom and practical, project-related methods.

CONFERENCES

"Ten years After Alma Ata: Health Progress, Problems, and Future Priorities" is the theme of the 15th Annual International Health Conference, May 19-22 in Washington, D.C. Further information may be obtained from the National Council for International Health, Suite 605, 1101 Connecticut Ave., N.W., Washington, D.C. 20036, U.S.A.

The Society for International Development will hold its nineteenth world conference, "Poverty, Development and Collective Survival: Public and Private Responsibilities," March 25-28 in New Delhi, India.

For information, contact: S.P. Ahuja / B. Murali, Flat 16, No. 10, Hailey Rd., New Delhi 110 001, India.

Table 5: Major Steps in Course Design

```
┌─────────────────────────────┐        ┌─────────────────────────────┐
│ Recruit training core group;│───────▶│ Identification of training  │
│ establishment of an opera-  │        │ resources. Review available │
│ tional unit                 │        │ institutional, infrastruc-  │
└─────────────────────────────┘        │ tural and financial support │
                                       └─────────────────────────────┘
┌─────────────────────────────┐
│ BASIC DECISIONS             │
│ - Review course context and │
│   define policy priorities  │        ┌─────────────────┐
│ - Decide course duration    │        │ Begin selection │
│ - Formulate training        │───────▶│ participants    │
│   objectives                │        └─────────────────┘
│ - Define participant        │
│   profiles                  │
└─────────────────────────────┘

┌─────────────────────────────┐
│ PROVISIONAL COURSE DESIGN   │
│ - Definition of main        │
│   substantive problem areas │
│   to be addressed by course │
│ - Selection of specific and │        ┌─────────────────────────────┐
│   methodological components │        │ Review teaching, infrastruc-│
│ - Specification and         │───────▶│ ture and information require-│
│   selection of course       │        │ ments; make provisional     │
│   elements                  │        │ course cost estimates.      │
│ - Identification of teaching│        │ Review possible             │
│   procedures and pedagogical│        │ contributions from UN       │
│   tools for elements        │        │ agencies                    │
│   selected:                 │        └─────────────────────────────┘
│   . definition of learning  │
│     levels                  │
│   . statement on duplication│
│     or discovery processes  │
│   . selection of the most   │
│     appropriate teaching    │
│     response                │
└─────────────────────────────┘

┌─────────────────────────────┐        ┌─────────────────────┐
│ ELABORATION OF TEACHING     │        │ Existing knowledge  │
│ PROCEDURES AND MATERIALS    │◀───────│ level of partici-   │
│ - Develop case study(studies)│       │ pants selected      │
│ - Develop gaming simulation │        └─────────────────────┘
│   using 'General Systems    │
│   Game Kit'                 │        ┌─────────────────────────────┐
│ - Preparation of lecture and│        │ Recruit teaching staff,     │
│   seminar materials         │        │ seminar and discussion      │
│ - Preparation of audio-     │        │ leaders; collect information│
│   visuals                   │        │ required for teaching       │
└─────────────────────────────┘        │ materials; arrange field    │
                                       │ visits and excursions;      │
┌─────────────────────────────┐        │ order audio-visuals         │
│ EVALUATION                  │        │ required; make necessary    │
│ - Evaluate teaching         │        │ arrangements for the        │
│   procedures and materials  │◀───────│ provision of teaching       │
│   against training objectives│       │ infrastructure; detail cost │
│   and logistic constraints  │        │ estimates                   │
│ - Test game(s) developed for│        └─────────────────────────────┘
│   course                    │
│ - If necessary, reformulate │
│   training objectives and   │
│   formulate course          │
│   evaluation criteria       │
└─────────────────────────────┘

┌─────────────────────────────┐
│ Detailed course programming │
└─────────────────────────────┘        ┌─────────────────────────────┐
                                       │ Make specific organizational│
                                       │ arrangements                │
                                       └─────────────────────────────┘
```

IRC

TRAINING COURSE

EVALUATING
WATER SUPPLY AND
SANITATION PROJECTS

GUIDE FOR
COURSE MODERATORS

Chapter 1 | Course overview

Course objective

The course aims at improving the knowledge and skills of the participants in organizing and conducting evaluations of water supply and sanitation projects. In the course, evaluation is not dealt with as an academic topic but as an effective management tool to improve the performance of ongoing and new water supply and sanitation projects. Therefore, the course consists mainly of working sessions to allow participants to develop their own evaluation skills through practical experience.

Course participants

The course is intended primarily for government officials and project staff who are responsible for planning, management and evaluation of water supply, sanitation and hygiene education projects and components of projects. Thus, participants may be planners, directors, deputy directors, assistant directors, project managers, and heads of sections.

Course duration

When travel to and from the training centre is included but excluding a free day, the course will last for eight days. In this way, if it is held from Sunday to Sunday or from Friday to Friday, participants will require only one week's leave from their work. The length of the course may be varied to suit local circumstances or the needs and preferences of the participants.

Course structure

The course begins with a general introduction, followed by a discussion on the importance and main features of evaluation. Subsequently, participants are taken step by step through the evaluation process from the initiation of an evaluation to the implementation of recommendations. Throughout the course, attention is given to the close relationship between evaluation and monitoring.

Each day is divided into four sessions, each session dealing with one particular aspect of the evaluation process. A session generally comprises a short introduction to the topic, followed by group activities and plenary discussions. A set of modules has been prepared setting out the basic information to be dealt with in each session.

Group activities have been selected in such a way that participants carry out an evaluation exercise during the course. A one-day field trip has been included in the course to give participants an opportunity to practice data collection methods in

a real situation. On the last day of the course, the participants will prepare a basic outline for an evaluation to be conducted within their own work area.

The course has been structured to allow for changes and adaptations to meet the specific needs and interests of participants. A suggested timetable of activities is presented at the end of this chapter (Example 1).

Course achievements

When the course has been completed, the participants should have:
- the basic know-how to evaluate water supply and sanitation projects;
- confidence to carry out such an evaluation;
- a basic outline for an evaluation within their own work area.

Achievements of the course will be assessed by:
- a written evaluation of the course to be completed individually by each participant;
- a group discussion to exchange experiences and to put forward suggestions.

Number of participants

Both in terms of cost and learning opportunities, the total number of participants should be between 22 and 24. This number allows for four working groups of six to seven including key participants and future course moderators.

Key participants

Each course will be supported by one or two outsiders who are experienced in evaluation. These key participants will act as course facilitators. They will aim at maximizing the course output in terms of evaluation skills acquired by the course participants.

Course moderators

The course will be run by two moderators who have overall responsibility for its organization and management. They are responsible for preparation, implementation, and if necessary, the adaptation of the course programme. Their tasks include:
- liaison with course organizers
- preparation and guidance of course sessions
- calling on participants and key participants to provide specific inputs
- co-ordination of activities and tasks.

4

Future course moderators

Two to four people from another region or country could be invited to attend the course so that they may learn to act as moderators in evaluation courses in their own geographical area. These people should preferably have some experience in water supply, sanitation, evaluation and/or training.

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EXAMPLE 1   COURSE TIMETABLE

Time Day	MORNING SESSION 1	MORNING SESSION 2	AFTERNOON SESSION 3	AFTERNOON SESSION 4	EVENING
Day 1	Travel	Travel registration of participants	Introduction	Reasons for evaluation (module 1)	Optional programme
Day 2	Main phases of evaluation (module 2)	Initiation of evaluation (module 3)	Evaluation objectives (module 4)	Evaluation criteria (module 5) and Terms of Reference (module 6)	Optional programme
Day 3	Preliminary investigation (module 7)	Group work	Selection of questions (module 8)	Observation method (module 9)	Optional programme
Day 4	Interview method (module 10)	Questionnaire survey (module 11)	Selection of methods and sampling (module 12)	Group work/ Free time	Optional programme
Day 5	Field trip	Field trip	Field trip	Plenary session	Optional programme
Day 6	Analysis of data (module 13)	Analysis of data (module 13)	Formulation of recommendations (module 13)	Report writing (module 14)	Implementation of recommendations (module 15)
Day 7	Preparation of evaluation outline	Preparation of evaluation outline	Preparation of evaluation outline	Plenary session	Farewell party
Day 8	Evaluation of the course	Closing ceremony	Travel	Travel	

Chapter 2 | Initial preparation

This chapter aims at providing an overview of the main tasks in planning and organizing the course. Checklists and examples are included for easy reference and adaptation.

Organization

Start early!

It takes time to organize a training course. As a considerable amount of preparatory work is required, the date of the course should be fixed well in advance to allow all those involved to fit the course into their own work schedule. Course preparation should begin, preferably, six months beforehand.

Course organizers

It is assumed that the agency/department requesting the course will also be responsible for organizing it. Therefore course moderators should liaise with the course organizers at an early stage to brief them on the objectives and structure of the course and the preparations required.

It is a good idea to give one person overall responsibility for course organization. This person should have a good knowledge of the government structure and of water supply and sanitation projects. They should also have the authority to make the day-to-day decisions necessary for the organization of the course.

Course dates

One of the first tasks is to fix the dates of the course. The duration of the course will depend on:
- the length of time participants can be released from their work;
- needs and interests of participants;
- religious obligations of participants.

In setting the dates of the course account has to be taken of:
- public and religious holidays;
- important meetings or events that participants are obliged to attend.

Secretarial support

Secretarial support greatly facilitates course organization. A well-ordered file containing all information and correspondence about the planning, running and evaluation of the course is essential.

During the course itself it will be necessary to have the support of two full-time secretaries to type the

work produced by the participants and moderators. A general support person will also be needed for activities, such as last minute arrangements, supply of materials, and photocopying during the course.

Location

The course should be held in a place where a one-day field visit can be relatively easily organized. To ensure full-time attendance, the course location should be far enough away from where most of the participants live and work.

Accommodation

The accommodation should include:
- a meeting room large enough for plenary sessions – make sure that this room is not noisy, has adequate ventilation and light, and that there is sufficient space and sufficient power points to use overhead, slides, and film projector. Preferably the meeting room should be available 24 hours a day throughout the course;
- separate rooms for each of the four working groups;
- each group will need a quiet place with a table and chairs. The meeting room may be used to house two or more groups provided it is big enough to allow groups to work without disturbing one another;
- temporary office with room for two typewriters, stencil or photocopying machine, chairs and a work table. The office should be close to the meeting room, but not so close that office activities disturb or interrupt the proceedings;
- food and drinks – coffee and tea will be required between sessions and arrangements have to be made for breakfast, lunch and dinner;
- sufficient number of bedrooms – cost, privacy and other considerations will determine whether the participants are prepared to share a room or not.

Do not forget to check whether there are any rules or regulations that have to be taken into account and what kind of facilities (shopping, telephone, bank) are available in the immediate surroundings.

Field-work

The field-work is an integral part of the course and therefore requires careful preparation (see also Chapter 1: Course overview). It is an opportunity to try out the various data collection methods in the field. During the field trip participants will work in four groups. Each will collect data on a particular problem or issue. Participants may wish to interview regional officers, project workers and health staff. They may also wish to visit a workshop and repair division, a field office, a central store, a health centre, a primary school, a training institute or another organization. In addition, each

group will visit at least two communities to see projects in operation and to meet the local people. These requirements should be taken into account in selecting a suitable area for field-work.

A suitable area for the field trip should be selected in close co-operation with project staff and local authorities. A number of project sites should be visited to determine their suitability for field-work. Permission and co-operation of the community leaders and local people should also be obtained.

During field-work preparations a record should be kept of:
- names of people met and of those to be informed and involved at a later stage;
- main characteristics and problems of the project;
- types of project sites.

At the same time, maps, data and relevant project documents should be collected on the area selected. This material may be used for the final preparation of the course and organization of the field visit. In addition it may be used as background information for the participants in their own preparations for the field-work.

Remember:

The area selected for the field visit should provide sufficient opportunities in data collection for all four groups. Therefore, the final decision on the location of the course can only be made after a suitable area has been found for the field-work.

Involvement of government officials

A courtesy visit to the government officials in the area in which the course is to be held would be a good idea. The visit may be used to invite them to be guests of honour at the closing ceremony of the course.

Transport

Transport must be available before, during and after the course. A passenger car is needed for:
- preparation of the course, especially the field visit;
- transport of equipment and materials to and from the training centre;
- messages during the course itself.

A large bus or several passenger cars will be needed to transport participants and their baggage to and from the training centre. A sufficient number of cars will also be needed to transport each of the four

groups to their field-work locations. Every effort should be made to ensure that suitable vehicles in good working order are available and that there are sufficient drivers.

Participants and moderators

Selection of participants

The course is designed for professional staff working in water supply, sanitation and/or hygiene education. The group of course participants should comprise preferabbly:
- professional staff from various organizational backgrounds, for example project staff, central, regional, provincial and local government staff, donor/international agency staff, non-goverment agency staff;
- professional staff with various educational and professional backgrounds, for example administrators, hydrologists, sanitary engineers, economists, environmental health engineers, public health educators, sociologists, statisticians, community mobilizers;
- men and women;
- those with and without practical experience in evaluation;
- implementation and policy staff.

All candidates should be presently working in water supply, sanitation and/or hygiene education and have a desire to develop their evaluation skills. They may not necessarily intend to carry out an evaluation themselves but may wish to know more about project evaluation, what it implies, what it costs, what inputs are needed, and what can be expected from the results.

Consideration may need to be given to the general cohesiveness of the group. Therefore, in the selection of participants, attention may need to be given to their background, professional status and proficiency in the course working language.

Remember

The course is intended for national staff. Attendance of expatriate staff should be kept to a minimum.

Invitation of participants

Participants should be invited through the appropriate channels. The invitation should include clear statements of the course objectives, structure and duration, the importance of full-time attendance, accommodation and transport arrangements, and costs/daily subsistence allowance. This information

is best set out in a brochure accompanying the invitation letter. An example letter and brochure are included at the end of this chapter (Example 3).

About two weeks before the start of the course the participants will receive the booklet "Evaluation of water supply and sanitation projects; your questions answered". The covering letter may provide additional information on the organization of the course (for example the time the bus will leave from a particular place) and include a request to bring along relevant project reports or other documents from the participants own work, for use during the course.

Selection and invitation of key participants

As stated in the course overview (Chapter 1) one or two people experienced in carrying out evaluations should be invited to provide course back-up. Their main task is to share their knowledge and provide practical information, examples, and suggestions. In the invitation letter to key participants their role should be clearly stated (see examples at the end of this chapter).

Key participants should be invited well in advance of the course to increase the chance of their acceptance. Suitable key participants may be suggested by UNICEF Headquarters, IRC, WHO, and universities with experience in evaluation of water supply and sanitation projects.

Key participants should be provided with the course modules and moderators' guide, preferably two months beforehand in order to prepare themselves for their task. Ideally, they should arrive one or two days before the start of the course so that detailed discussions with the course moderators and organizers can take place.

Selection and invitation of future course moderators

To increase the number of suitable national moderators, two to four people from other regions or countries may be invited to participate in the course. They can be trained as potential future moderators (see Example 6 and Chapter 1: Course overview). The organization intending to hold a similar course in the future may provide names of suitable candidates.

In selecting course moderators, preference should be given to people who:
- have experience in evaluation of water supply and sanitation projects;
- are interested in transfer of know-how. It would be an advantage if they have experience in participatory teaching/learning methods;
- are good communicators;

- are able and willing to free themselves from other
  duties for a proper preparation, implementation and
  follow-up of the course.
The professional background of the moderator, whether
social, technical or medical, is deemed of less
importance for the successful guidance of the course.

Future course moderators will need to receive a full
set of the course modules and the moderators' guide,
preferably two months beforehand so that they can
acquaint themselves with the material. Ideally, they
should arrive four days before the actual start of
the course for a thorough briefing by the course
moderators and organizers.

Material and cost

Course material

A sufficient number of the following documents should
be ordered or duplicated well in advance for all
participants, key participants and future moderators:
- Training course: Evaluating water supply and
  sanitation projects: course modules. (1987).
  UNICEF/IRC, The Hague, The Netherlands.
- Evaluation of water supply and sanitation projects:
  Your questions answered. (1985). International
  Drinking Water Supply and Sanitation Decade,
  Publication no. 6, WHO, Geneva, Switzerland (free
  of charge).
- Minimum evaluation procedure for water supply and
  sanitation projects. (1983). WHO, Geneva,
  Switzerland (available from WHO, Geneva).

For the key participants and future course
moderators, the following document should be ordered
or duplicated:
- Training course evaluating water supply and
  sanitation projects: guide for course moderators.
  (1987). UNICEF/IRC, The Hague, The Netherlands.

A few copies of the following documents may be
ordered for consultation during the course:
- Cairncross, Sandy et al. (1984). Evaluation for
  village water supply planning (Technical Paper
  No.15). IRC, The Hague, The Netherlands.
- Simpson-Hébart, Mayling (1983). Methods for
  gathering socio-cultural data for water supply and
  sanitation projects. USA, UNDP. (TAG Technical note
  No.1), UNDP, Washington D.C.; USA (free of charge).
- Perrett, Heli E. (1984). Monitoring and evaluation
  of communication support activities in low-cost
  sanitation projects. (TAG Technical note no. 11),
  UNDP, Washington, D.C., USA (free of charge).

The addresses of the various organizations are:
- UNICEF
  Programme Development and Planning Division
  866, United Nations Plaza
  New York, N.Y. 10017
  USA
  (Only course modules and course moderators' guide)

- IRC
  P.O. Box 93190,
  2509 AD The Hague
  The Netherlands

- WHO Geneva
  27, Avenue Appia
  1211 Geneva 27
  Switzerland

- World Bank
  1818 H. Street, N.W.
  Washington, D.C. 20433
  USA

Collection of background material

In addition to the collection of background material from the field work area, relevant background material from the country itself should be collected for use during the course. This material may include evaluation reports, project summaries, monitoring reports, annual reports, feasibility studies, maps, figures, outline of training activities, case studies, plan of activities, and budgets. Some selected material could possibly be provided by the course participants.

Teaching aids, equipment and stationery

All teaching aids, equipment and stationery should be ordered well in advance of the course. This may include: blackboard, flipchart, overhead projector, slide projector, typewriters, photocopy machine/duplicator, and stationery (see checklist at the end of the chapter).

Certificate

A certificate may be prepared to hand out to all participants at the closing ceremony. An example certificate has been included at the end of this chapter. Use of coloured paper would increase the attractiveness of the certificate.

Cost estimate

The total cost of the course may vary considerably depending on such factors as:
- the type of accommodation;
- whether lodging and food have to be paid, or whether a daily subsistence allowance is required;
- whether or not consultancy fees are required;
- the number of documents ordered or duplicated.

A provisional list of cost items has been included as example 8 at the end of this chapter.

ARRANGEMENTS

☐ Secretarial support

    ☐ two typists

    ☐ one support person

☐ Accommodation (see detailed checklist)

    ☐ meeting room

    ☐ work-group rooms

    ☐ temporary office

    ☐ tea, coffee, refreshments

    ☐ meals (breakfast, lunch, dinner)

    ☐ bedrooms

    ☐ special facilities

    ☐ rules or regulations

☐ Field-work

    ☐ suitable area found

    ☐ project staff and local government officials informed and involved

    ☐ communities/local leaders informed and involved

    ☐ detailed lists completed
      - people
      - project characteristics
      - project sites

    ☐ project material collected

☐ Transport

    ☐ one car for before, during and after the course

    ☐ a bus or several cars to transport participants and their baggage during the course

    ☐ sufficient vehicles for the field trip

    ☐ sufficient drivers

INVITATIONS

Have participants been selected and invited?

☐ list of potential candidates prepared

☐ list of selected candidates prepared

☐ invitation letter prepared (see example)

☐ brochure prepared (see example)

☐ participants data form prepared (see example)

☐ invitation letter, brochure and participants data form dispatched

☐ reactions received and substitute candidates found where necessary

☐ participants data form filed

☐ two weeks before the course: "Your questions answered" and covering letter dispatched

Have key participants been selected and invited?

☐ inquiries made about suitable candidates

☐ suitable candidates selected

☐ invitation letter prepared (see example)

☐ invitation letter and brochure dispatched

☐ reactions received and substitute candidates found where necessary

☐ course modules, moderators' guide and "Your questions answered" dispatched

☐ arrival date fixed

☐ travel and accommodation arrangements made

Have future course moderators been selected and invited?

☐ inquiries made about possible future course moderators

☐ future course moderators selected

☐ invitation letter prepared

☐ invitation letter and brochure dispatched

☐ reaction received and substitute candidates selected where necessary

☐ course modules, moderators' guide and "Your questions answered" dispatched

☐ arrival date fixed

☐ travel and accommodation arrangements made

Have government officials in the area where the course is to be held been informed and invited for the closing ceremony?

☐ informed

☐ invited

☐ reactions received

MATERIAL AND EQUIPMENT

Is equipment available and in good working order?

Avail- able	Working order	
☐	☐	overhead projector
☐	☐	slide projector
☐	☐	film projector
☐	☐	spare projector lamps
☐	☐	projection screen or white wall
☐	☐	electric extension flex
☐	☐	110/220 V transformer
☐	☐	two typewriters
☐	☐	duplicator or photocopying machine

Have the following documents been ordered and received?

Ordered	Received	
☐	☐	... course modules
☐	☐	... moderators' guide
☐	☐	... "Your questions answered"
☐	☐	... Minimum evaluation procedures
☐	☐	... Evaluation for village water supply planning
☐	☐	... Methods for gathering socio-cultural data ...
☐	☐	... Monitoring and evaluation ...

Has background material been collected?

- ☐ project summaries
- ☐ studies
- ☐ progress reports
- ☐ plan of activities
- ☐ budgets
- ☐ maps, figures, outlines

Have teaching aids been ordered and received?

Ordered Received

Ordered	Received	
☐	☐	blackboard or, preferably, large flip-chart
☐	☐	chalk or felt markers
☐	☐	transparent cellulose sheets for overhead projector
☐	☐	marker crayons for overhead projector/board
☐	☐	slides
☐	☐	film(s)

Have writing materials been ordered and received?

Ordered Received

Ordered	Received	
☐	☐	... note pads
☐	☐	... pencils/pens
☐	☐	... rubbers/erasers
☐	☐	... pencil sharpeners
☐	☐	... adhesive tape
☐	☐	... staplers

☐ ☐ ... perforators

☐ ☐ ... paper for typing and duplication

☐ ☐ ... coloured paper for **examples and**
         activity sheets (see Chapter 3)

☐ ☐ ... stencils (**if** needed)

☐ ☐ ... **correcting fluid**

☐ ☐ ... correction tape

Are certificates required and have they been
produced?

☐ **Yes/No**

DETAILED LIST : ACCOMMODATION

Has accommodation been organized?

☐ meeting room

    ☐ ... chairs

    ☐ ... tables which can be moved for special
        arrangements

    ☐ large enough

    ☐ no noise

    ☐ adequate ventilation

    ☐ adequate light

    ☐ space for projector/screen facilities

    ☐ power points

    ☐ available 24 hours per day

☐ group-work rooms

    ☐ four quiet places

    ☐ four tables

    ☐ ... chairs

    ☐ adequate light

    ☐ adequate ventilation

☐ temporary office

    ☐ two tables for typists

    ☐ one table for duplicator or
        photocopy machine

    ☐ one work table

    ☐ ... chairs

- [ ] power points
- [ ] adequate light
- [ ] adequate ventilation

- [ ] food and drinks
  - [ ] coffee and tea between sessions
  - [ ] breakfast
  - [ ] lunch
  - [ ] dinner

- [ ] bedrooms
  - [ ] rooms
  - [ ] beds
  - [ ] toilets
  - [ ] showers/bathrooms

- [ ] special facilities
  - [ ] notice board
  - [ ] shops
  - [ ] stamps
  - [ ] telephone
  - [ ] bar
  - [ ] bank

- [ ] special rules or regulations

EXAMPLE 2

BROCHURE

23

■ Course Dates

■ Location

■ Food and Lodging

■ Transportation

■ Costs / Allowances

■ Organisation

■ Full Address

Training Course

Evaluating
Water Supply and
Sanitation Projects

Dates

Place

Country

Have you ever been involved in evaluation ?

With more and more money and
manpower being allocated to
water supply and sanitation,
it is becoming increasingly
important to maximize the
benefits of these inputs.
Successful technical devices,
project procedures and
workable solutions to problems
are worth replicating and
developing further.
Solutions need to be found to
problems hampering project
output. Evaluation is a
management tool which aims to
determine what works well
in order to replicate, and to
find solutions for what does
not work.

The course

The course aims to improve
knowledge and skills to
organize and conduct
evaluations of water supply
and sanitation projects. It
is designed primarily for
government officials and
project staff responsible
for project planning,
management and evaluation.

The course will be run by
two moderators, supported by
two evaluation experts who
will share their knowledge
and experiences.

High participant involvement
is expected on the course.
Work will be done together
in small groups. During the
course an evaluation exercise
will be carried out. This will
include a one-day field-trip.

Throughout the course the
emphasis will be on how to
carry out an effective
evaluation. A set of modules
of the basic information to
be dealt with on the course
has also been prepared.

Course duration

The duration of the course
will be eight working days,
including travel to and from
the training centre.

EXAMPLE 3   INVITATION LETTER TO PARTICIPANTS

Subject: Course on Evaluating of Water Supply and Sanitation Projects

Dear........

Our organization in co-operation with UNICEF Headquarters and the
International Reference Centre for Community Water Supply and
Sanitation (IRC) is preparing a national training course on evaluating
water supply and sanitation projects. The course is intended primarily
for government officials and project staff responsible for project
planning, implementation and evaluation. It deals with evaluation as a
management tool which can improve current activities and direct new
activities in water supply and sanitation. A course brochure has been
enclosed with this letter.

As you are involved professionally in the water supply and/or
sanitation sector, we have pleasure in inviting you to participate in
in our course to be held at...... from .... to ....
We would appreciate it if you would let us know as soon as possible
whether you will be able to attend the course. Would you please
complete the attached form and return it to the above address.

Two weeks before the course begins, you will receive further
information on the course organization and programme. Meanwhile, if
you require further information, please do not hesitate to contact us.

                                        Yours sincerely,

EXAMPLE 4   PARTICIPANTS FORM

Name: Position:

Home address: Office address:

Education and professional background:

State briefly your experience in water supply and sanitation
(including evaluation, if any)

Why are you interested in participating in this course?

Do you intend to carry out an evaluation in the near future?

Do you require any special arrangements with regard to your
accommodation (e.g., diet, single room)?

EXAMPLE 5   INVITATION LETTER TO KEY-PARTICIPANTS

Subject: Course on Evaluating of Water Supply and Sanitation Projects.

Dear ....../

Our organization is preparing a training course on evaluating water
supply and sanitation projects. This course has been developed jointly
by UNICEF Headquarters and the International Reference Centre for
Community Water Supply and Sanitation (IRC). The course is primarily
intended for government officials and project staff responsible for
planning, management and evaluation. The course deals with evaluation
as a management tool to improve current activities and to direct new
activities in water supply and sanitation. A course brochure has been
enclosed with this letter.

In order to allow participants to develop their own skills in
evaluation, the course is based on high participant involvement and
includes many working sessions in small groups. The course will be
guided by two moderators with support from two key participants,
expert in evaluation. The key participants will not lecture. They will
participate in the course by providing practical information, examples
and suggestions.

Because of your experience in evaluating water supply and sanitation
projects, we would like to invite you to be a key participant in our
course to be held at ......between ...... and .... It would be
necessary for you to arrive two days beforehand to liaise with course
moderators about final preparations of the course including a division
of tasks. We will be able to pay for your travel from.....to the
course location and also to pay a daily allowance of ....

A set of course modules each covering one particular aspect of the
evaluation process has been prepared. A moderators' guide has also
been prepared which gives suggestions on how to run and organize the
course. About two months before the course we will send you copies of
these documents.

We hope that you will be able to accept our invitation and we look
forward to hearing from you at your earliest convenience but if
possible not later than.....................

                              Yours sincerely,

EXAMPLE 6   INVITATION LETTER FUTURE COURSE MODERATORS

Subject: Course of Evaluating Water Supply and Sanitation Projects

Dear ....,

Our organization is preparing a training course on evaluating water
supply and sanitation projects. This course has been developed jointly
by UNICEF Headquarters and the International Reference Centre for
Community Water Supply and Sanitation (IRC). The course is primarily
intended for government officials and project staff responsible for
project planning, management and evaluation. The course deals with
evaluation as a management tool which can improve work in process and
which can be used to direct new activities in water supply and
sanitation. A course brochure has been enclosed with this letter.

In order to allow participants to develop their own skills in
evaluation, the course is based on high participant involvement and
includes several working sessions in small groups. Two course
moderators with support from key participants, experts in evaluation
of water supply and sanitation projects, will guide the course and be
available to give advice.

We understand that your organization is planning a similar course in
the foreseeable future. We also understand that you may be interested
in attending our course to learn about the role of course moderators
with the view to conducting an evaluation course yourself in the
future. Therefore we have pleasure in inviting you to attend our
course.

The course will be held at ..... between ..... and ...... It would be
necessary for you to arrive four days beforehand to be briefed on the
course and to contribute to the final preparation of the programme. We
will be able to pay for your travel from ..... to the course location
and also to pay a daily allowance of ....

A set of course modules each covering one particular aspect of the
evaluation process has been prepared. A moderators' guide has also
been prepared which gives suggestions on how to run and organize the
course. About two months prior to the start of the course we will send
you copies of these documents.

We hope that you will be able to accept our invitation and we look
forward to hearing from you at your earliest convenience, if possible
not later than ....

                                        Yours sincerely,

EXAMPLE 7

CERTIFICATE

IRC

This is to certify that

....

has completed a special   course on

EVALUATING   WATER   SUPPLY   AND   SANITATION   PROJECTS

held in...
from.................. to ....

This course has been organized by UNICEF, United Nations
Children's Fund, in collaboration with IRC, International
Reference Centre for Community Water Supply and Sanitation.

Signed and delivered this .... at ....

Representative
UNICEF

Representative
IRC

EXAMPLE 8

ITEMS COST ESTIMATE

Dependent on the decision made in planning and organizing the course, the following items may be considered:

☐ fees for course moderators, key participants, and future course moderators

☐ travel costs for course moderators, key participants and future course moderators

☐ accommodation costs: meeting room, extra rooms and tea and coffee during breaks

☐ daily subsistance allowance or food and lodging for participants

☐ secretariat expenses

☐ communication and telephone costs

☐ postage costs

☐ transportation costs

☐ rental fee for equipment and teaching aids

☐ costs course documents

☐ costs writing materials

Chapter 3 | Final preparation

Final preparation begins one week before the first
course day and includes:
- final organization of the course;
- preparation of the final course programme;
- briefing of key participants and support staff.

**Check initial
arrangements**

All arrangements made so far need to be checked and
revised where necessary. The checklists included in
the previous chapter will be useful for this purpose.

**Revisit area of
field work**

It is strongly recommended that the area for the
field trip be revisited; firstly to confirm the
selection of villages/communities to be visited by
the four evaluation groups. Secondly, it is important
to make sure that local government representatives,
project staff and community representatives are well
informed and will be available for interviews on the
day of the field trip. (See checklist for initial
preparations).

In meeting government and community representatives,
point out that it would be preferable not to make
special arrangements for the participants because
they will gain far more from the everyday life
situation. Also, ask them to inform the course
organizer of any last minute changes in the
availability of people and the suitability of
selected communities. This will allow adaptations to
field-trip arrangements if required.

Other issues which may require further attention in
preparing the field trip include:
- translation services for participants who do not
  speak the language of the communities to be
  visited;
- arrangements for meals for participants during the
  field trip.

**Finalization of
course programme**

Course moderators and future course moderators will
need two to three full working days to finalize the
course programme. Decisions need to be made about
the time schedule, examples and exercises to be used
and the division of tasks. Chapter 4 covers the
finalization of the course programme.

Timetable

After the course programme has been finalized, the
timetable for participants (see Chapter 1, Example 1)
and the time schedule for key participants and

moderators (see Chapter 4, Example 9) can be typed
and duplicated.

Key participants and course moderators will need to
receive their time schedule at least the day before
the course begins. The timetable for participants
will be distributed during the first session.

Activity sheets

The activity sheets, prepared by the moderators for
each group exercise during the course will also have
to be typed and duplicated before the course begins.
These will be **distributed** during the relevant
sessions.

Briefing key
participants

Key participants should be briefed on their specific
tasks and inputs using the detailed course schedule
and the activity sheets. It is advisable to begin
with a meeting of all moderators and key participants
in order to go through the programme step by step.
Experience indicates that such a meeting may take
about three hours. Then the individual tasks and
inputs can be worked out in more detail by the course
moderator with the relevant key participant (see
Chapter 4 for further information).

Briefing support
staff

Support staff also need to be briefed on their
respective tasks during the course. Both secretaries
will have to be available throughout the course for
typing and duplicating material. It may even be
necessary to do some of this work in the evening. The
general support person will also need to be available
throughout the course. In addition to looking after
all material and equipment, he/she may be called upon
for a variety of other tasks.

Background
documents

Moderators and key participants together may select
the background material for use in the course,
notably for the evaluation exercise which will be
carried out during the course. This material may then
be duplicated and stapled. As participants will only
have limited reading time, the number of pages to be
duplicated should be limited to 20. This material
will be handed out during the course.

List of participants

A full list of participants including name, position,
and office address needs to be prepared from the
participants forms. The names and addresses of key
participants and moderators should also be added to
the list. This can then be duplicated and distributed
to all participants during the first session.

Name plates/ badges

Name plates and badges will help the participants learn each other's names and the names of key participants and moderators. The name plates should be large enough to be read easily from a distance of five metres.

FINAL PREPARATION

Initial preparations checked and reviewed:

☐ secretarial support

☐ accommodation

☐ field visit

☐ transportation

☐ invitation of participants

☐ invitation of key participants

☐ invitation of potential future course moderators

☐ invitation of government officials for closing
   ceremony

☐ evaluation of course documents

☐ project/background documents

☐ equipment

☐ teaching aids

☐ writing material

☐ course certificate

☐ financial arrangements

Additional preparations made:

☐ course programme finalized

☐ key-participants briefed

☐ support staff briefed

☐ list of participants typed and duplicated

☐ timetable for participants typed and duplicated

☐ time schedule for moderators and key participants
   typed and duplicated

☐ activity sheets typed and duplicated

☐ selected background documents duplicated

☐ name plates and badges prepared

HUMAN RESOURCE DEVELOPMENT

EVALUATION

IMPLEMEN-
TATION

PROVISION
MODEL

ACTORS

DECISION
MAKING
PROCESS
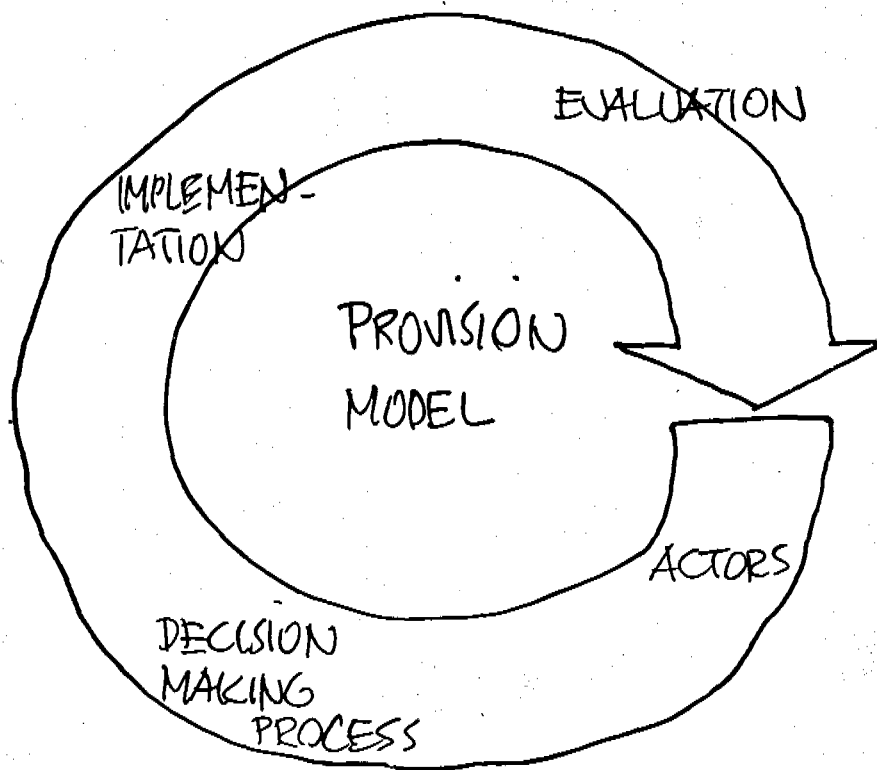
<u>the fuel of this model are</u>:

   1. Financial Resources

   2. Material Resources

   3. Human Resources
       └ people
       └ organisations
       └ institutions

*   all three are expected to give an <u>optimal contri-
bution</u> to this provision process

*   Hence, also for the human resources a positive
contribution is expected.

* Where this contribution is <u>negative</u> (not optimal) there can be several interlinked <u>reasons</u> :

- <u>intended</u> negative attitude/awareness   −

- <u>unintended</u> negative attitude/awareness   ±

- insufficient tapped <u>potentials</u>   ±

- lacking <u>experience</u>   ±

- lacking <u>skills</u> (technical, intellectual & social)   +

- lacking <u>knowledge</u>   +

Where does <u>human resource development</u> (in the sense of training) have potential to change a negative contribution into a positive one ?

* What tools are available to achieve this ?

- information supply ; campaigns, verbally, visually

- on-the-job- training

- special training sessions "focuss"

    l.e.   FORMAL LECTURES
            GROUP DISCUSSIONS
            SEMINARS
            TUTORIALS
            GAMING
            PROGRAMMED LEARNING
            CASE STUDY
            PRACTICAL WORK
            SLIDES / TAPES
            FILMS

- UNDERSTANDING THE PROCESS OF TRAINING, i.e. "learning"

  - 5 levels of learning ☐◡ p. 18

  - 2 processes ☐◡ p. 19

  - interlinked visualization ; location of pedagogical tools

    ☐◡ p. 20

  - discussing the applicability of pedagogical tools

    ☐◡ p. 22-24

    description
    logistics
    application
    training
    advantages / disadvantages

    applicability for 5 levels & 2 processes

5 levels of learning:

(i)   <u>Factual information</u>: the acquisition of ob-
jective information (that which can be verified).
This level is basic to all processes of learning.
The courses will seek to transmit 'hard' infor-
mation to participants resulting in an increase
in their stock of useable knowledge.

(ii)   <u>Technical and intellectual skills</u>: the effective
shaping of materials into a product or perfor-
mance. Intellectual skills can be seen as special
kinds of technical skills, the 'material' involved
being symbolic (e.g. words or numbers) rather than
physical. The courses will seek to enlarge the
capacity of participants to identify and analyse
problems and to generate solutions to these prob-
lems through the application of methods and tech-
niques.

(iii)   <u>Social skills</u>: the establishment, maintenance and
development of effective relationships with others,
guided by social rules. The courses will seek to
enlarge the capacity of participants to creatively
participate in group work and in multi-, inter-,
and transdisciplinary teams through the promotion
of the skills which facilitate effective inter-
personal relationships.

(iv)   <u>Personal understandings</u>: the experience of meaning-
ful and satisfying relationships with others, in
one's own right, and not guided by established
social rules. The courses will seek to enlarge the
capacity of participants to adapt to changing and
possibly unstable situations in the course of their
work through fostering their ability to deal with
inter-personal relations on an unstructured and in-
formal basis.

(v)   <u>Self-insight</u>: an understanding of essential aspects
of one's self. The courses will seek to encourage
the participant to become more open to his expe-
rience and to more effectively utilize his own re-
sources.

2 processes of learning:

Cutting across the five levels of learning are two
interlinked processes; those of duplication and dis-
covery.

(i) <u>Duplication</u>: the imitation or reproduction of
something to be learned. Emphasizing product
rather than process, duplication is concerned
with the rapid acquisition of knowledge or skill
rather than with the development of insight or
understanding.

(ii) <u>Discovery</u>: concerned with the ways in which
knowledge or skills are acquired and emphasizing
process rather than product.
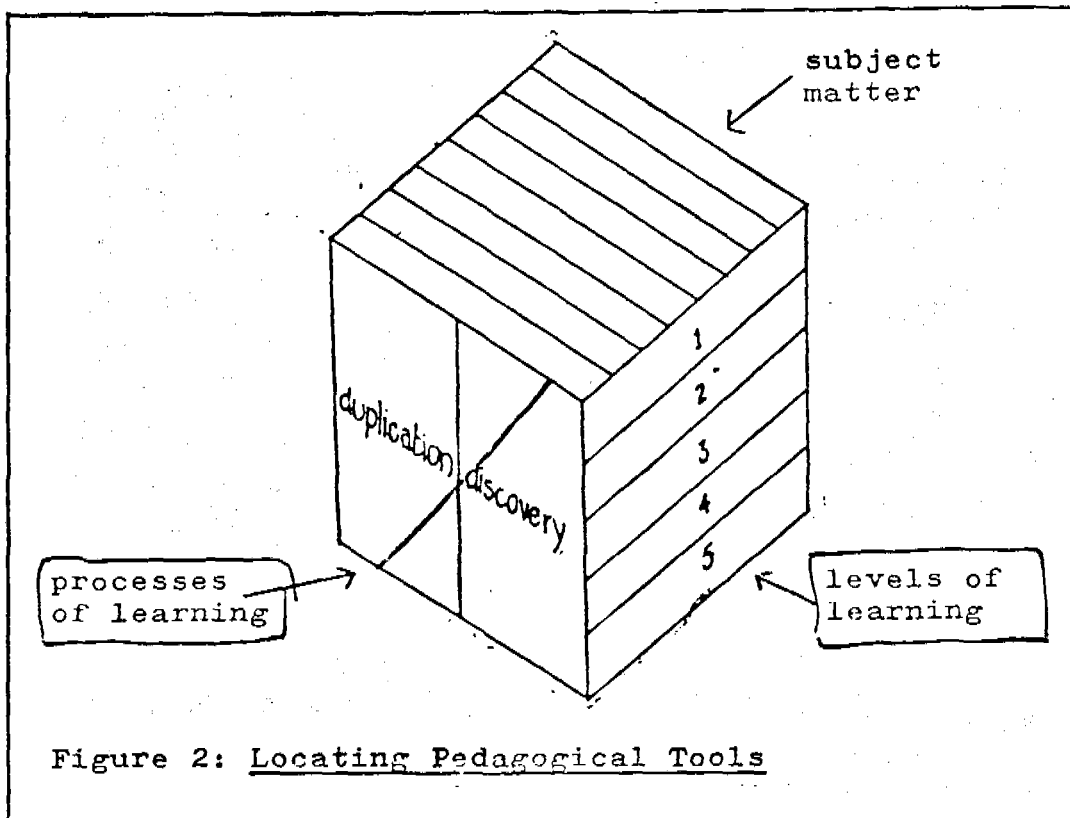
processes vs. levels of learning:

Figure 2: Locating Pedagogical Tools

Table 2: Advantages and Disadvantages of Different Teaching Methods

Teaching Method	Advantages	Disadvantages
Formal Lecture	- Coverage of fundamental points. - Economical, planned and directed. - Provides a general framework.	- Does not necessarily engage attention of participants. - When books available, constitutes inefficient and uneconomic use of time. - Not adapted to individual needs of student.
Group Discussion	- Develops a sense of discipline and responsibility in the student group. - Provides opportunity for genuine discussion, discovery and development. - Enables teacher to effectively get to know student.	- Can serve more as an emotional release rather than a teaching method. - Can become undirected and undisciplined - Can become irrelevant to teacher's objectives.
Seminar	- Allows everyone to benefit from others' experience in a systematic framework. - Participants are able to think about their own particular problems and to present the results. - Gives different participants the opportunity to lead in a prepared situation.	- Students may have insufficient knowledge to effectively contribute. - Can be jeopardized by a poor chairman or discussion leader. - Some participants may 'sit back' or withdraw when their own interests have been covered.
Group Tutorial	- The interplay of minds stimulates thought. - Combines economy of time and direction of effort with two-way communication. - Permits freedom to pursue interests in depth.	- May sometimes appear undirected, more therapeutic rather than creative. - Diffident, shy participants may not participate. - Tends to move slowly over ground to be covered and coverage may be inadequate.

Table 2: Advantages and Disadvantages of Different Teaching Methods (cont'd)

Teaching Method	Advantages	Disadvantages
Gaming	- Helps to promote self-expression, lucidity and quick-thinking. - Participants encouraged to feel as well as to think about different people. - It can be enjoyable and serve to improve inter-personal relations.	- 'Artificiality' can result when 'leader' or 'performers' are poor. - Certain key characteristics of decision-making processes such as stress cannot be simulated. - Some participants may start by being too self-conscious and the sophisticated student may find it difficult to co-operate.
Learning Programmes	- Presents information logically and in its proper sequence. - Can be individually adjusted to the 'learning speed' of the user (self-pacing) who can monitor his own performance. - Emphasis on organized nature of knowledge; communication and evaluation.	- Unable to respond to hypotheses not envisaged by the programmer. - Ignores group social and individual personality factors. - No face-to-face communication between teacher and student.
Case Study	- Draws students into group inter-action and uses their own experiences. - Provides framework for realistic discussion of principles in specific situations. - Provides for emotional development ('insights') as well as for cognitive understanding.	- Irrelevant material might be remembered. - When abstracted from context can result in over-simplification. - Depends on understanding leadership.
Practical Work	- Personal involvement and commitment in depth gives more thorough knowledge. - Students must utilize own resources. - Demonstrates a number of different approaches to a single problem.	- Time-consuming. - Needs careful organization and direction otherwise little may be achieved. - May impose strain on the student if task is too complex.

23.

Table 3: Teaching Methods, 'Levels' of Learning and Learning Processes

Levels of Learning	Duplication	Discovery
A. IMPERSONAL		
1. Factual Information (acquisition of objective information)	- formal lecture - programmed learning - film - slide-tape presentation - case study	- group discussion - seminar - (group) tutorial (work centered) - case study - practical work
2. Technical and Intellectual Skills (effective shaping of materials into a product or performance)	- formal lecture - programmed learning - film - slide-tape presentation - case study - practical work	- group discussion - seminar - case study - practical work
B. PERSONAL		
3. Social Skills (development and maintenance of effective relationships with others, guided by social rules)	- formal lecture - programmed learning - slide-tape presentation - case study - film	- group discussion - gaming (centred on social competence) - case study - (group) tutorial
4. Personal Understanding (development and maintenance of satisfying relationships with others, not guided by social rules)	} cannot be developed by methods of duplication	- group discussion - tutorial (person-centred) - gaming - group dynamics
5. Self-insight (understanding of essential aspects of one's self)		- gaming (person-centred: psychodrama) - group dynamics

After J.F. Morris: 'New Teaching Methods in Architecture', Journal of the Royal Institute of British Architects, June 1966.

THE ELEMENTS OF TRAINING (Checklist)

- Objectives
- Participants : profile and selection
- Duration & dates
- Structure & schedule
- Training methods
- Coordinator, moderator
- Secretarial Support
- Location
- Accomodation
- Guest-lecturers
- Involved Organisations
- Transport
- Invitations
- Course material
- Teaching aids, equipment, stationary
- Certificates
- Costs (lodging, foods, accod., transp., fees,...) K-M ▢⌟
- Evaluation

Case : Training Course for "Evaluating Water Supply
and Sanitation Projects" IRC Training Series No. 2

Examples of Costs Training:
Project Kanpur- Mirzapur, India

Subject:	level:	no. part.	duration:	per day US $ p.p.
Workshop "Polluters Pay"-principle	policy	20	2 days	200
Sewage treatment plant O&M.	manage-ment	20	5 days	95
Pumping stations O&M	technical	20	10 days	40
Public Latrines O&M	technical	40	10 days	10
Pump attendants (= handpump)	technical	44	10 days	10
Financial manage-ment of non-profit organisations	manage-ment	15-20	2 days	90
ICHPB low cost infrastructure	M/T	9	150 days	125

SET-UP OF HUMAN RESOURCE DEVELOPMENT

■ Single or Repeated event depends on:

- Project Approach : Kanpur- Mirzapur, India

- Programme Approach : IUIDP, Indonesia

- Institutionalized Approach: HSMI, India (HUDCO)
  CHS, Tanzania
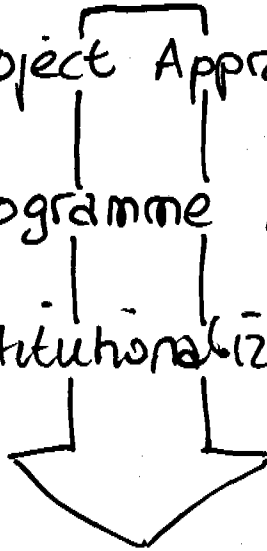
Implications for

- Staffing
- Accomodation
- Budgeting
- Type of training & development
- Feedback & improvements
- Training material development

<u>Session outline</u>:   2.7

Subject: Workshop on human resource development to enhance
                the role of low-icome urban communities in the
                provision and management of water supply and
                sanitation facilities in their areas.

Timing: 15.30 - 17.00

Course staff: Course coordinator IHS, interested lecturer

Objectives: Exchange experience and ideas between participants
                concerning this subject.

Participants will define training needs and methods at two
levels. They will divide themselves in two groups. Each group
will present the results for discussion.

<u>Background information</u>:   Hand-out

SHORT TRAINING COURSE

COMMUNITY WATER SUPPLY & ENVIRONMENTAL SANITATION

FOR LOW-INCOME URBAN COMMUNITIES

EXERCISE   :   DEVELOPMENT OF TRAINING CURRICULUM FOR URBAN UPGRADING PROJECT.

DATE   :   August 30, 1990

DESCRIPTION   :   The exercise is preceded by a lecture that deals with human resource development, and programming of training.

An urban upgrading project is taken as a case, for which a training curriculum needs to be developed. Participants (5-8) are requested to develop training curriculums for:
1. locally selected inhabitants for the minor maintenance of public tapstands that do not have any technical skills.
2. Project team of engineers, architects, planners and social and health workers to get introduced to community-based integrated projects procedures and decision-making that did not work in such projects.

Groups prepare the curriculums in about one session and present and discuss the outcome. A Report is submitted.

REFERENCE MATERIAL: - Handbook World Bank Module 2.2.
- UNESCO/UNEP, Handbook for the Organization and Design of Courses, Volume 1, July 1977, Table 5: Major Steps in Course Design, page 60.
- IRC, Training Course "Evaluating Water Supply and Sanitation Projects"; Guide for Course Moderators, Training Series No.2, Chapters 1-3, pp. 3-34.

Session outline   2.8

Subject: Monitoring programme implementation and local
                 management

Timing: 9.00 - -10.30 and 11.00 - 12.30

Course staff: Lecturer IHS

Objectives: Determine the purpose of monitoring and define
                 information requirements. Provide practical
                 examples.

During the first part of the session, the purpose of monitoring
will be discussed. Moniutoring may concern the performance of
projects, departments or staffmembers. It may also concern the
cost effectiveness of organizations and systems. Monitoring often
relates to the management of a process of planning and
implementation. Recently much emphasis is being put on the
functioning, use and impact of systems after the implmentation
phase. Impact may concern living conditions, health, community
development.

Cases will be presented in the second part.

Background information: Hand-outs
                          Minimum evaluation procedure
                          IRC publications

Short Training Course

Community Water Supply & Environmental Sanitation for

Low-Income Urban Communities

IRC

Session: 2.8

Topic: .   Evaluation and monitoring issues of programme implementation
               and local government

READING MATERIAL & HANDOUT

I.H.S. - I.R.C.

SHORT COURSE ON

COMMUNITY WATER SUPPLY AND ENVIRONMENTAL SANITATION

FOR LOW-INCOME COMMUNITIES

August-September 1990

SUMMARY NOTES ON "EVALUATION"

by Doug McCallum (I.H.S.)

GENERAL

What is Evaluation???

Evaluation is the process of assessing something - looking at an activity (or project or programme...), analyzing it, trying to find out what its consequences have been (or will be), why it is working out that way, etc.

Evaluation is fundamentally concerned with INFORMATION.

The basic purpose of Evaluation is to provide information of use for management and planning.
- Evaluation is not done for its own sake
- evaluation is not an end in itself, but instead exists in order to feed information into planning and management decisions.

THE POLICY-PROGRAMME-PROJECT SYSTEM

In our context (Housing & Urban Development), Evaluation can be discussed in relation to the Policy-Programme-Project system.

If we separate our housing and urban development activities
into the three levels of Policy-Programme-Project, each level
has its own characteristics. We can then relate Evaluation as
information flows to those various stages and levels.   .

It becomes clear in this context that Evaluation activities can
(or should) take place at all different levels and stages,
deriving information at different points and feeding
information into different points.

For example, evaluation of a single project can yield
information which is useful - and can be applied - in a number
of ways:
1. to modify the implementation of related projects while
    in progress in order to improve their chances of
    success
2. to modify the design of additional projects (within the
    same programme) to make them more succesful
3. to suggest possible changes at the programme level, such
    as modifications in the project guidelines or in the
    finance or in the organization, etc.
4. perhaps even to suggest changes in policies, because of
    evidence about the effectiveness of alternative
    strategies.

This approach emphasises some of the essential aspects of
Evaluation which we should keep in mind:
- Evaluation as Information System, not a personnel control
    or checking activity
- Evaluation as a Process, not a product
- Evaluation as a Management and Decision-Making Tool, not
    simply as a "technical" exercise.

TYPES OF EVALUATION

There are three main categories of Evaluation, defined by the
stage at which they occur (which also defines the type of
information which is available for analysis):
(1) Ex-Ante Evaluation ("Evaluation of Alternatives"),
    which takes place before an activity is initiated;
    proposals are evaluated on the basis of assumed or
    projected outcomes.
(2) Process Evaluation ("Monitoring"), which takes place
    while an activity is underway; something is evaluated
    ·in relation to 'progress to date' and in relation to
    planned or programmed progress.
(3) Ex-Post Evaluation ("Output Evaluation"), which takes
    · place after an activity is completed; something is
    evaluated after it is finished and in operation.

Each "type" of evaluation has its appropriate place within an over-all <u>System of Evaluation</u>. Evaluation activities at different stages, and of different types, inter-relate within the broader planning and management system.

Methodologies of evaluation (such as financial appraisal, social cost-benefit analysis, impact studies, cost-effectiveness analysis, etc.) can be chosen to fit the needs of evaluation of different types and stages. [These are discussed further in a later section.]

HISTORY & PRACTICE

In practice, evaluation studies done in our field have tended to be of the following types (related to this 3-way typology):
1. Some Ex-Ante "Evaluation of Alternatives" (usually in urban and regional planning exercises, to help choose among alternative plans or designs).
2. Some Ex-Ante Financial Appraisal of project proposals (individual projects or alternative projects)
3. Routine Monitoring (normally very narrow in focus and concerned with contract administration)
4. Ex-Post Analysis of individual projects (esp. economic studies, almost always <u>ad hoc</u>).

Why has there been relatively little systematic development of Evaluation in the field of housing and urban development in developing nations ??

One reason is that the bulk of theoretical and practical development of Evaluation as an academic and professional discipline or field has been:
- in the USA (and to some extent in Europe):
- concentrated on programmes in education, health, crime
- heavily quantitative, especialy economic-based.

Being developed in the USA/Europe has meant that technical development has taken place in a very particular context:
- stable political/institutional environment, hence less fear of consequences, less personalization
- slow, deliberate explicit consultative decision-making, hence more agreement and consensus on procedure, on sharing mistakes
- incremental policies and programmes
- technical resources (money, skills, data base).

In the Third World, the context is usually very <u>different, with few of these conditions being met.</u>

A Second reason is that evaluation in the Housing/Urban Development field tends to be more complicated and difficult than in some other fields, because in our field the activities tend to be:
- multi-sectoral
- long-term
- embedded in a complex changing community context
- conceptually complex, quantitatively and qualitatively.

A Third reason is that the idea of Evaluation has been little known or appreciated among professionals and decision-makers in most developing countries - and also little understood by the 'expert' advisors who have trained and/or assisted them!

Thus, because of these particular historical aspects, experience of evaluation in our field is limited:
- formal evaluation only began in the 1970s and 1980s
- most has been done by World Bank, USAID, ODA.
- little has been institutionalized in the Third World.
- most was "ad hoc" and isolated.

PROBLEMS OF APPLICATION

To look at some of the same issues, but in a somewhat different way, consider some of the problems and difficulties which have been faced in the past. For example, we know that evaluation has been relatively little used. Why is this?? What are the typical complaints which have been made about evaluations??
>> take too long, produce results when it is too late to be useful;
>> too expensive, too demanding of scarce manpower, money;
>> too dependent upon extensive and reliable statistical data, which probably doesn't exist and is difficult to obtain;
>> too esoteric or abstract, too oriented toward complex quantitative analysis which is difficult to understand;
>> too threatening, politically or socially;
>> too specifically tailored to the requirements of external sponsors;
>> do not produce outputs which are oriented towards the needs of the programme/project managers and planners.

Some of these complaints may be based on mis-understandings; but nonetheless, they represent barriers to the application of Evaluation and so must be addressed clearly.

Hence, we must try to understand how best to approach Evaluation, in the real-world conditions of planning and decision-making in developing countries. There are no "simple" answers. But a number of issues must be taken up, to overcome the problems of applying Evaluation in practice:
- = realistically tailoring the evaluation designs to the resources likely to be available;
- = working out a balance between "local knowledge" and external 'objectivity';
- = developing an institutional basis for incorporating Evaluation as a continuing process;
- = achieving a balance between speed of results (needed for timely application) and throroughness of work (needed for reliability);
- = winning political and professional support for the Evaluation activity;
- = training and developing **capabilities of local staff.**

DOING AN EVALUATION

How does one go about doing an evaluation???
- there are many different starting points, approaches.
- no "single best" way of going about it
- design of evaluation is always influenced by its context;
- you do not start with methodology or design or technique, but with context and purpose;
- the "software" is more important than the "hardware".

There are, however, some general and fundamental concepts about evaluation which must be kept in mind:
   (1) You must always be comparing "With-Activity" against "Without-Activity" - you do not compare "Before" and "After"
   (2) In examining consequences, always avoid the "Post-Hoc-Ergo-Propter-Hoc" logical fallacy.

We can begin, then, by posing a number of Questions about the evaluation being undertaken:
   (1) What is the PURPOSE of the Evaluation?
   (2) For WHOM is the Evaluation information intended?
   (3) WHAT is to be evaluated?
   (4) By WHOM is the Evaluation to be done?
   (5) What RESOURCES are available for the Evaluation?
   (6) What TECHNIQUE or APPROACH will be used?

For one example of a general formulation of how to go about
doing an evaluation, look at the table "Phases and Steps in an
Evaluation Process" from Freeman, Rossi & Wright (1978) (handed
out):

    I.   Specify the Evaluation Topic

    II.   Design the Evaluation Procedure

    III. Implement the Evaluation

As emphasised already, you do **not** start with questions of
methodology and technique; instead, you start by answering all
the more general questions, such as why, how, by whom, etc.

Only then can you proceed to questions of technique and
methodology.

DESIGN OF EVALUATION: METHODOLOGIES

(1) EX-ANTE EVALUATIONS

First: the design is influenced (as discussed above) by the
type of evaluation, the specification of constraints and
resources, the purposes and uses of the evaluation, etc.

    - for example, different approaches are appropriate for
"Process Evaluation" (Monitoring) and for "Ex-Post Evaluation"

    - different techniques are suitable for different levels of
resource availability (manpower, money, time, data).

For "Ex-Ante" Evaluations, project or activity outcomes are
projected on the basis of assumptions. Based on general
knowledge about the behaviour of the important variables (for
instance, willingness to pay), consequences are estimated, and
then evaluated.

The most common purpose of this type of evaluation is to assess
individual project proposals before decisions are made, and
especially to comparatively assess a number of proposed
projects, in order to choose the best one.

Very often, at this stage, Financial Appraisal is applied, to
test the degree to which the proposed activity is financially
feasible, in terms of money expenditures and money revenues.

It is also possible at this stage to apply **Social Cost-Benefit
Analysis.** In social cost-benefit analysis, the whole range of
costs and benefits to society are estimated - not only direct
expenditures but also other non-money costs and benefits.

This technique is much more complicated that Financial Appraisal. But it gives a much wider measure of the "worth" of a proposed activity. This is particularly true of many projects in our field, in which all of the costs are not directly recovered from beneficiaries.

There are variations on this technique, such as Cost-Effectiveness Analysis. The cost-effectiveness analysis is designed to deal with situations in which it proves too difficult to measure and quantify and value the various benefits of the activity.

Typically, there is a sense of urgency in selecting projects at the beginning of a programme, and hence the choice of evaluation technique is often influenced most strongly by the need for a quick analysis. (This means, for example, that Social Cost-Benefit Analysis is seldom done at this stage.)

PROCESS EVALUATIONS

Process Evaluations encompass more than just routine Monitoring, although routine monitoring is certainly the most common form of process evaluation.

Monitoring is normally interpreted to mean a simple check of physical and/or financial progress against the schedules agreed in the project contracts. Such monitoring is indeed an essential tool of good management, and it deserves to be done more thoroughly and systematically than is normal practice.
   - for example, simple periodic progress reports from contractors and/or project offices are not sufficient for anything but the most crude checking.

However, process evaluation could - and should - also include other forms of evaluation. Many of these are related to the techniques discussed below (under the heading Ex-Post Evaluation) and so need not be treated separately here.

Process Evaluation should include additional information which is useful for planning and management. For instance, a periodic process evaluation study, done during the implementation of a project, should focus on the attainment of utilmate objectives - for example, the degree to which the intended target group is becoming (or staying) the beneficiary of the first stages completed.

And remember, evaluation is done not only to find out <u>what</u> is happening, but more importantly, to try to find out <u>why</u> things are happening (especially if they are not going according to plan). Thus, the analysis aspect of evaluation is needed, if the routine information of monitoring is to become really useful for management not only of that one individual project, but of other related projects (and programmes).

EX-POST EVALUATIONS

It is with respect to Ex-Post Evaluations - those done after a project or activity is completed - that the greatest amount of evaluation work has been done.

Some Ex-Post Evaluations are narrowly viewed, only looking at the project's achievement of its immediate direct targets. More usefully, Ex-Post Evaluation should examine the project or activity's impact in a broader sense - its contribution to the achievement of over-all social and policy objectives.

The design of evaluation methodology and technique at this stage is complicated, but much work has in fact been done. The approaches which have been used - in developing countries in the field of housing and urban development - can be described first in terms of their general conceptual approach.

At least in theory, the most desirable (most "scientific") approach is to estimate the net impact under the "with-activity" compared to "without-activity" approach, using a Randomized Experimental Design.
    - this requires the full "laboratory" method of control
        populations, control over exogenous variables, etc.

But, this approach is expensive, lengthy, complex, - and very often quite impossible with the type of projects/programmes we find in the housing and urban development sector.

One response was to develop the so-called Quasi-Experimental Design, in which the "random" and "control" elements of the full scientific laboratory model cannot realistically be fulfilled.
    - this included methods of "comparison" groups or
        neighborhoods for which the full randomization is not
        achieved;
    - it also accepted the inability to control (or measure)
        all of the relevant variables.

But, there were also problems with this approach. For example, the evaluation studies did not seem to help managers improve their projects or programmes. Also, these studies were generally lengthy and time-consuming. Finally, the statistical results were themselves sometimes open to serious doubt and challenge (precisely because of the failure to meet rigorous "laboratory" conditions).

There was thus an effort to incorporate **Qualitative** techniques, such as the ethnographic study methods such as <u>participant observer</u>. These studies were said to be much quicker, more able to produce timely results, better related to the perceptions of the target populations and neighborhoods, and more well suited to politically or socially delicate issues.

But, many of the qualitative approaches also revealed limitations. For example, it become difficult to generalize from the particular qualitative observations of one case study. Lacking a visibly "solid" basis of information, such qualitative approaches also had difficulty gaining credibility among professionals and decision-makers.

Another approach, developed in response to the difficulties of applying the full, formal "scientific" system to Third World housing and urban development activities, was the Rapid Impact or Rapid Reconnaisance study.

USAID was one of the main originators of this approach. It combines a variety of methods, each conducted swiftly and with limited scope:
- Interviews, with households and "leaders"
- Direct Observation, especially of physical manifestations
- Secondary Data, drawn from a variety of available sources
- Participant Observation, with someone placed locally
- Small-quota sample surveys.

But, the Rapid approach shares many of the drawbacks of the Qualitative techniques - especially the lack of statistical depth, the difficulty of generalizing, and the danger of misinterpretation.

In many cases, elements of these different approaches are combined together, to produce a "mixed-technique" approach, sometimes known as Triangulation.

In this approach, the elements are mixed in order to combine the best feasible accuracy and reliability of results within the constraints of time, project purposes, user needs, etc.

However, it is extremely important that any "mixed-technique" approach (such as triangulation) is designed very carefully! One cannot simply throw together a little bit of this and a little bit of that!

For example, it is vital to design a "Triangulation" evaluation so that different measures can cross-check each other, to verify the consistency of results. This helps reduce the danger of misinterpretation based on single (and highly fallible) measures.

If you are not careful with your design, a number of problems can result, any or all of which can undermine the credibility (and usefulness) of your evaluation results. For example:
- bad sample design (whether large or small) = bad statistical results
- internal validity problems and the likelihood of spurious correlations (the "post hoc ergo propter hoc fallacy)
- conflicting indicators and difficulties of interpretation
- lack of generalizability
- difficulty to project forward in time.

One simple reminder: whether you have a formal Quasi-Experimental design, or a highly simplified design, it is important to try to build in - from the beginning - a process for obtaining Base Line Information.

Ideally, this should be for the project area and for some "control" area(s) and should be:
- built in the data-gathering from the very beginning
- and continued periodically, through (and after) the project.

At the level of Ex-Post Evaluations, the Social Cost-Benefit Analysis is one particularly good approach.

Such studies can often be lengthy and expensive, but they produce very good and very useful information. Work done by the World Bank in the 1970s, for example, has been crucial in orienting policies toward the more effective forms of intervention for the urban poor.

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Session: 2.8

Topic: Evaluation and monitoring issues of programme implementation
                and local government

READING MATERIAL & HANDOUT

WHAT IS EVALUATION ??

EVALUATION IS CONCERNED WITH INFORMATION.

ALL OF THE DIFFERENT TYPES OF EVALUATION ACTIVITY

SHOULD BE SEEN AS PART OF AN INFORMATION PROCESS

WHICH IS CONNECTED TO PLANNING & DECISION-MAKING

THE BASIC PURPOSE OF EVALUATION

IS TO PROVIDE FEED-BACK INFORMATION

FOR MANAGEMENT AND PLANNING

[DMcC:May/1990]

THE BASIC APPROACH OF EVALUATION:

-to examine how / in what ways / how much has the activity (the project or programme) affected outcomes for the targer area / population??

-to explain why these effects have / have not occurred;

-to identify and understand broader ("unanticipated")effects;

-to "draw lessons"and produce information relevant for "feed-back" to the rest of the system.

EVALUATION INFORMATION FROM A SINGLE PROJECT:

EXAMPLES OF USES OF INFORMATION

(1) To modify the implementation of similar or related projects while in progress.

(2) To modify the design of additional or subsequent projects within the same programme

(3) To suggest changes at the programme level, such as modifications in project formulation guidelines or in the financial limits or in the allocation rules.

(4) To suggest changes in policies, because of evidence about the effectiveness of alternative strategies.

[DMcC:Aug.1990]

SOME CHARACTERISTICS OF EVALUATION:

(1) EVALUATION IS AN INFORMATION SYSTEM

NOT A PERSONNEL CONTROL SYSTEM.

(2) EVALUATION IS A PROCESS

NOT A PRODUCT

(3) EVALUATION IS A CORE MANAGEMENT AND PLANNING ACTIVITY

NOT A "TECHNICAL" EXERCISE

[DMcC:Aug.1990]

BASIC CATEGORIES OF EVALUATION:

(1) EX-ANTE EVALUATION

Evaluation done before the activity begins.

("Evaluation of Alternatives"

(2) PROCESS EVALUATION

Evaluation done during the activity.

("Monitoring")

(3) EX-POST EVALUATION

Evaluation done after the activity is completed.

("Output Evaluation" "Impact Study")

[DMcC: Aug/1990]

EVALUATION IS TO COMPARE

"WITH-ACTIVITY"AGAINST "WITHOUT-ACTIVITY"

EVALUATION IS NOT (REPEAT, NOT) SIMPLY TO COMPARE

"BEFORE" AND "AFTER"!!!

EVALUATION IS DONE TO UNDERSTAND THE EFFECTS
OF THE ACTIVITY BEING EVALUATED. A SIMPLE "BEFORE"
AND "AFTER" EXAMINATION MIXES UP ALL DIFFERENT
INFLUENCES AND CAUSES – NOT JUST THOSE OF THE
ACTIVITY ITSELF.

[Eval:03]

THE "POST HOC ERGO PROPTER HOC" LOGICAL FALLACY

1. EVERY MORNING WHEN IT IS DARK, I GET UP AND SHOUT FROM MY WINDOW: "SUN – GET UP!"

2. EVERY MORNING, SHORTLY AFTER I SHOUT, THEN THE SUN REALLY DOES COME UP.

3. THEREFORE, I MAKE THE SUN COME UP!

THE "POST HOC ERGO PROPTER HOC" LOGICAL FALLACY:

AN EXAMPLE FROM EVALUATION:

EVALUATE THE IMPACT ON CHILDREN'S GROWTH OF GIVING THEM FROGS TO EAT:

(1) STARTING FROM AGE 10, THE CHILDREN ARE FED ONE FROG PER DAY TO EAT.

(2) AT AGE 14, THE CHILDREN ARE ON AVERAGE 16 CMS TALLER THAN AT AGE 10.

(3) THEREFORE, EATING A FROG A DAY CAUSES GROWTH IN CHILDREN OF 4 CMS PER YEAR.

(4) EVALUATION CONCLUSION: RECOMMEND NEW PUBLIC HEALTH PROGRAMME OF FEEDING FROGS TO ALL CHILDREN, TO ENSURE HEALTHY GROWTH.

(5) FINAL RESULT: EVALUATOR LOSES JOB!

[eval:05]

TYPICAL "COMPLAINTS" ABOUT EVALUATION:

—takes too long, produces results too late to be useful

—too expensive, too demanding of scarce manpower, money

—too dependent upon extensive and reliable statistical dataf

—too abstract, too theoretical, too much oriented toward
complex (often quantitative) analysis

—threatening, with dangerous potential for political and/or
social embarrassment

—too closely tailored to requirements of external sponsors

—does not produce outputs which are clearly tailored to the
needs of the managers and planners

[DMcC:Aug.1990]

QUESTIONS TO BE POSED
WHEN UNDERTAKING AN EVALUATION:

(1) What is the PURPOSE of the Evaluation??

(2) For WHOM is the Evaluation Information intended??

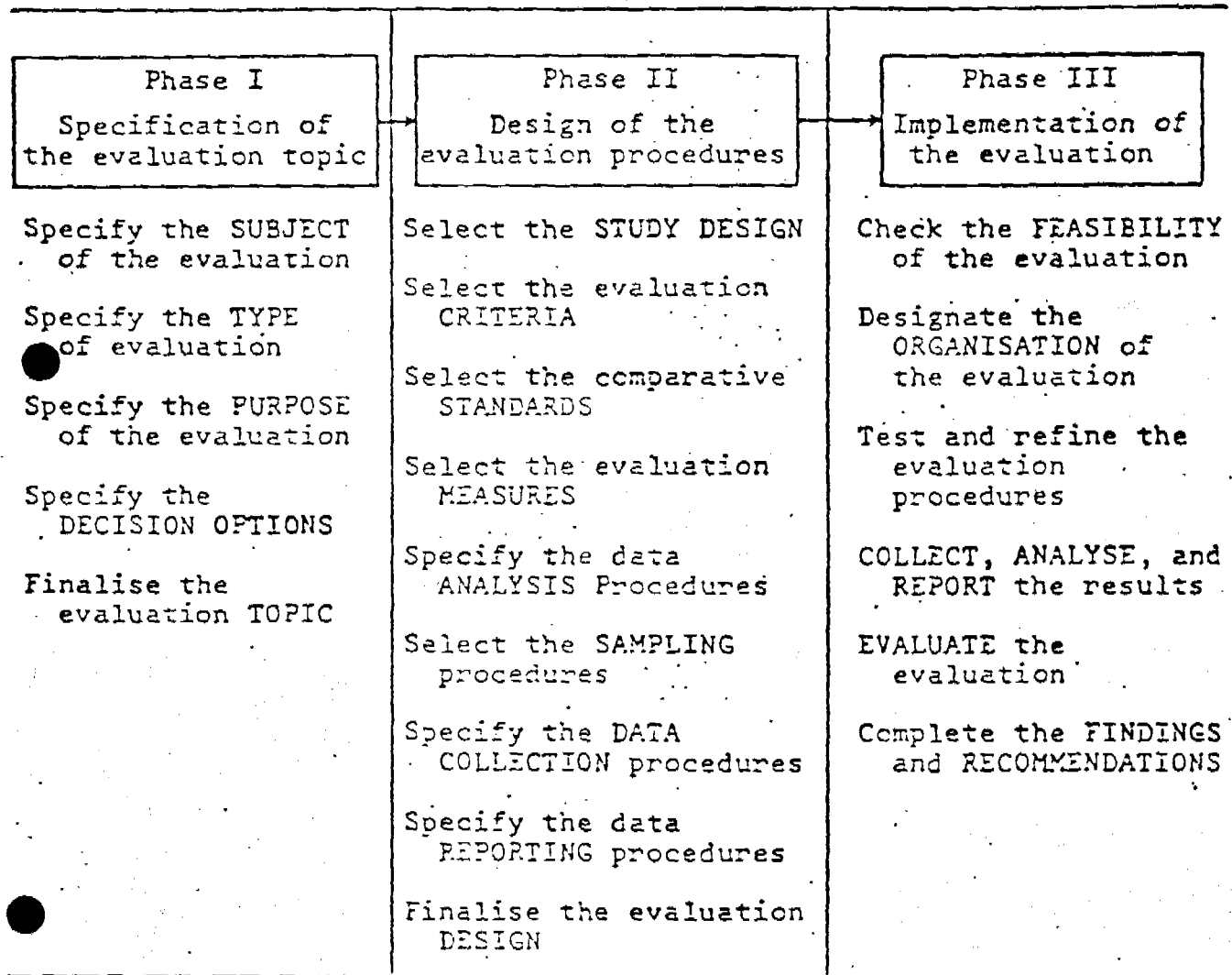(3) WHAT is to be evaluated??

(4) By WHOM is the Evaluation to be done??

(5) What RESOURCES are available for the Evaluation??

(6) What TECHNIQUE or APPROACH will be used??
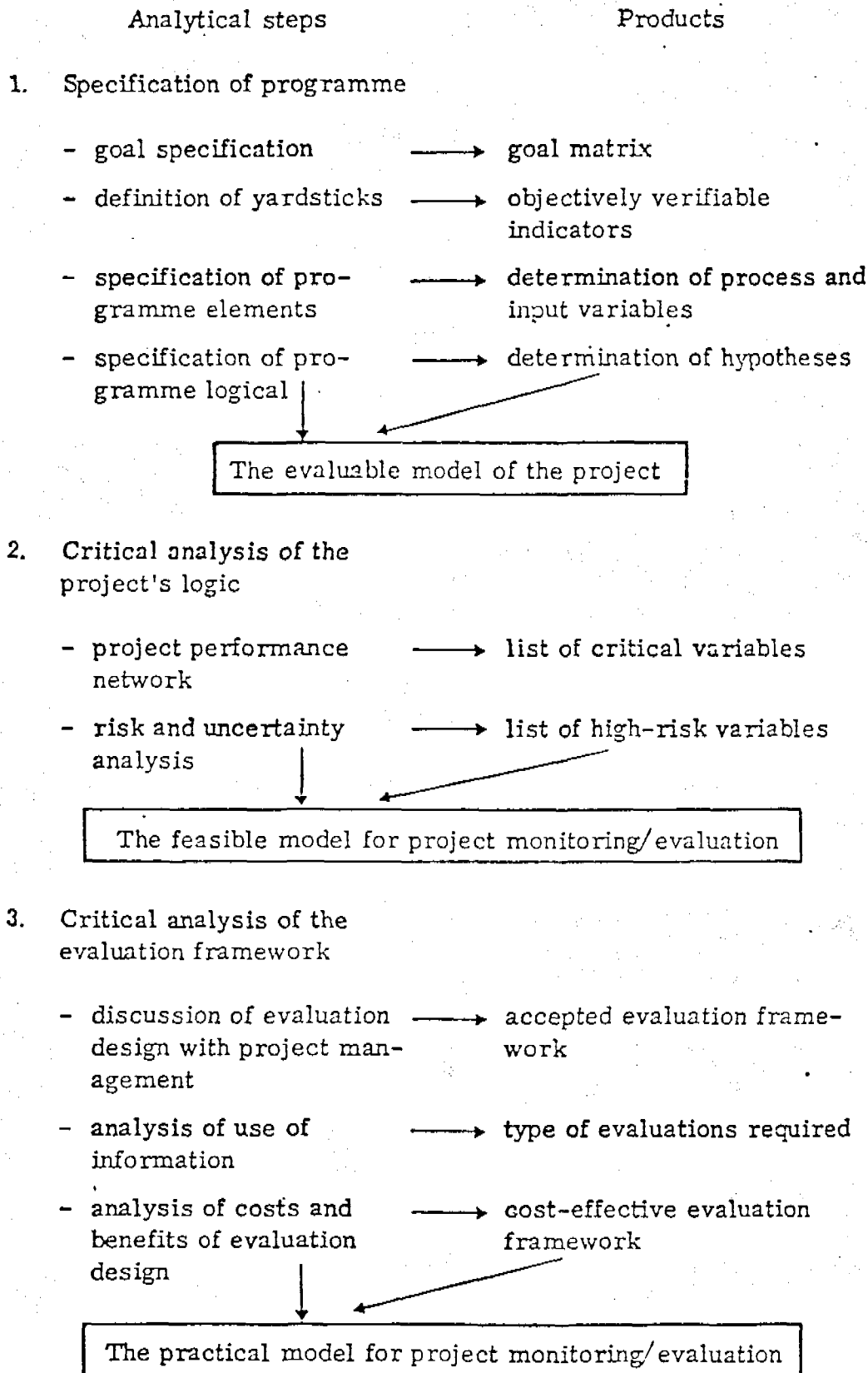

[DMcC:Aug.1990]

PHASES AND STEPS IN THE EVALUATION PROCESS:

Phase I Specification of the evaluation topic	Phase II Design of the evaluation procedures	Phase III Implementation of the evaluation
Specify the SUBJECT of the evaluation Specify the TYPE of evaluation Specify the PURPOSE of the evaluation Specify the DECISION OPTIONS Finalise the evaluation TOPIC	Select the STUDY DESIGN Select the evaluation CRITERIA Select the comparative STANDARDS Select the evaluation MEASURES Specify the data ANALYSIS Procedures Select the SAMPLING procedures Specify the DATA COLLECTION procedures Specify the data REPORTING procedures Finalise the evaluation DESIGN	Check the FEASIBILITY of the evaluation Designate the ORGANISATION of the evaluation Test and refine the evaluation procedures COLLECT, ANALYSE, and REPORT the results EVALUATE the evaluation Complete the FINDINGS and RECOMMENDATIONS

[from Freeman, Rossi & Wright, 1978]   [DMcC:Aug.1990]

Figure XV. SETTING UP A MONITORING/EVALUATION
SYSTEM FOR A SPECIFIC PROGRAMME OR PROJECT

Analytical steps   Products

1. Specification of programme

   - goal specification   ⟶   goal matrix

   - definition of yardsticks ⟶   objectively verifiable
                                   indicators

   - specification of pro-   ⟶   determination of process and
     gramme elements   input variables

   - specification of pro-   ⟶   determination of hypotheses
     gramme logical │

     ┌───┐
     │ The evaluable model of the project   │
     └───┘

2. Critical analysis of the
   project's logic

   - project performance   ⟶   list of critical variables
     network

   - risk and uncertainty   ⟶   list of high-risk variables
     analysis   │

     ┌───┐
     │ The feasible model for project monitoring/evaluation │
     └───┘

3. Critical analysis of the
   evaluation framework

   - discussion of evaluation ⟶   accepted evaluation frame-
     design with project man-   work
     agement

   - analysis of use of   ⟶   type of evaluations required
     information

   - analysis of costs and   ⟶   cost-effective evaluation
     benefits of evaluation   framework
     design   │

     ┌───┐
     │ The practical model for project monitoring/evaluation │
     └───┘

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Session outline   2.9

Subject: Developing parameters for management information
                  systems: Workshop

Timing: 13.30 - 15.00 and 15.30 - 17.00

Course staff: Course coordinator IHS (Attendance course
                  coordinator IRC)

Objectives: To develop parameters relating to physical
                  progress and costs, institutional development,
                  community organization and finance relating to
                  programme objectives.

Participants will identify main project or institutional
development objectives which could relate to their own working
environment. The period to reach these objectives will be
discussed. Parameters to monitor progress will be listed and
means of verification discussed. What are the financial and
organizational implications of effectively putting in place a
management information systems using the parameters identified by
the participants, and what is the role of the communities?

Background information: See above for literature. Handout:
                          Format to list parameters.

Session outline: 2.10

Subject: Individual work in IHS library

Timing: 9.00 - 12.30

Course staff: Library staff IHS

Objectives: Review documentation in support of the document
                and presentation to be prepared as part of the
                individual assignment.

The participants will use the time to review documents in the IHS
library, to complete their notes on earlier sessions, to work on
an outline for their document and presentation and to read
handouts as required.

Background information: Course manual, course material.

<u>Session outline</u>   2.10 bis

Subject: Excursion

Timing: Immediately following session 2.10

Course staff: Interested staff involved in the course

Objectives: Touristic/informal

Participants will be picked up from the IHS.

<u>Background information</u>: ---

Block 3:   Community-based approaches

Session outline   3.1

Subject: Welcome and introduction to IRC

Timing: 9.00 - 10.30

Course staff: Course coordinator IRC, Senior documentalist,
                Interested lecturing staff IRC

Objective: Introduce IRC's role, resources and approach in
                the sector. Introduce the programme in relation
                with the earlier parts at IHS.

The role, resources and approach of IRC will be introduced
against the background on intewrnational events at the end of the
international drinking water supply and sanitation decade.

The programmes will be discussed and participants will be asked
to express their opinions about the progress made sofar in the
programme of the course. Are their expectations being met?

They will also express their information needs regarding
community-based water supply and sanitation in urban low-income
areas. The senior documentalist will explain how to use the
library.

Background information: IRC's annual report, interwater
                          thesaurus

Session outline   3.2

Subject: Factors affecting success or failure of community
                  water supply and sanitation provision for low-
                  income urban areas.

Timing: 11.00 - 12.30

Course staff: Course coordinator IRC and resource person

Objective: To define success or failure and to identify main
                  influencing factors.

Success can be defined in terms of coverage, replicability,
sustainability and impact. Success of drinking water supply and
sanitation programmes can not be achieved in isolation. Low-
income urban communities and individual community members have
other needs and interests.

Main factors will be identified on the basis of the Baldia case
and other examples in Pakistan and elsewhere. Inputs from
participants will be asked to identify the main steps or phases
which could be required to develop a successful programme.

Background information: Case material from Baldia project, hand-
                           out, article.

Hand-out for session 3.2

- Key note for discussions

- Article (Source waterlines)

- Information on Baldia and Orangi projects
  (source World Bank)

Session 3.2

Factors affecting success or failure of community water supply
and sanitation provision for urban low-income areas: Key note for
discussions

There is a wealth of literature describing community
participation approaches for rural water supply and to a lesser
extend sanitation. In the past many projects did not
systematically consider the communities or the users as partners
in the process. As a result projects lacked success.

Over the past years much experience has been gained in involving
communities in rural water supply and sanitation. Recently much
attention is being paid to monitoring and evaluation to determine
the success of the new concepts being applied.

There is much less reliable information concerning community-
based approaches applied in water supply and sanitation
programmes for urban low-income communities. Most examples relate
to the planning stages of projects. The assumption seems to be
that success will be achieved because communities were or are
being involved. In fact, there are various factors which affect
success relating to the project or programme itself, the
institutional environment, the communities themselves and the
technical solutions envisaged. These factors are often not
systematically considered. Also, it is often not fully clear how
success is defined and at which point of time (during
implementation, after completetion, after 10 years or in the far
future?).

This is illustrated by the attached article and information
concerning two projects in Pakistan. The article by Chandler
shows way to achieve success implicitely defined as functioning
and use of the planned facilities shortly after completion. It
suggests a follow-up survey to determine if facilities are being
used as intended. In short, the article suggest how to establish
conditions for possible success, but also makes clear that it is
not at all sure that success will be achieved.

The examples from Pakistan show that the original objective of programmes (reduce mortality rates, provide social benefits, raise health awareness, strengthen managerial and organizational skills among residents) could not be achieved solely on the basis of the planned activities. Succes is therefore defined in terms of physical achievements (number of latrines), efficiency (cost reduction), technical quality (standards) rather than impact. Present problems are mostly of technical nature, and not directly related to lack of success in achieving the original objectives.

In conclusion, it is essential to define the objectives in such a way that these can effectively be achieved through the project or programme, and to identify which conditions have to be fullfilled to achieve the planned result. It is also essential to clearly distinguish the objectives from the means. Successful involvement of user communities as a means to implement a project does not necessarily make the project successful. If the project is meant to determine how communities can effectively work in partnership with institutions, then successful involvement of user communities is a key indicator of success.

Achieving success in community water supply and sanitation projects

by Charles Chandler*

Development projects to do with water supply and sanitation are often unsuccessful. Charles Chandler analyses some of the reasons for their failure, and outlines methods to assure success.

THERE is no shortage of literature on what to do to provide water supply and sanitation in developing countries. Less in evidence is how to accomplish this aim in the real world, where social, political and environmental systems are complex, and problems abound.

Project planners are faced with the task of designing projects that are not only technically correct and feasible, but that continue to function for long periods of time, often under difficult conditions. Facilities may break down after a short time because of poor maintenance, and even those in good repair may be under-utilized if the people do not like the technology, or not utilized at all by people who believe that traditional alternatives are more convenient. In rural communities of developing countries, examples of past project failures are common: pumps in disrepair, taps broken or left unfitted, public latrines abandoned to nature, pipes and other materials damaged or diverted to unplanned uses.

If field results have been poor, current programmes must be held responsible; but why have they not always been effective? Three major problems are apparent:

- the conceptual gap between people and planners;
- the emphasis on coverage rather than on the continued functioning and utilization of facilities; and
- the lack of effective back-up support to communities, particularly after completion of the project.

In order to overcome these problems,

projects must follow a well-designed procedure, involving people and planners in a joint search for the proper mix of hardware and software to meet community needs. The six-step procedure presented here has been designed to accomplish this end.

Step 1 Preparation

Step 1 involves the completion of two basic activities by the planner: selecting and using criteria to determine which communities to serve first, and recruiting and training project facilitators. Taking the first point, examples of criteria that might be applied include:

- poor/disadvantaged communities, for example those with a per capita income of less than the poverty level (as determined locally);
- communities where facilities are in need of rehabilitation;

- communities where traditional sources are highly polluted, such as village ponds where their farm animals also drink and wade;
- communities where the incidence of diarrhoeal disease in children is expected to be high, for example, mortality in infants less than one year of age greater than 50 per 1,000;
- communities where water is scarce, with an availability of less than 20 litres per person, per day;
- communities where bucket latrines are in use; and
- communities where safe water is more than a 15-minute walk from most households.

Once measurable criteria have been established, communities can be ranked into high-priority and low-priority groups, with the former selected for initial action.

Project facilitators may be chosen from primary health-care workers, teachers or other community-based workers. An approximately equal number of male and female facilitators will be required. Once chosen, facilitators are trained to observe the habits of the community in relation to water supply and sanitation, and to collect and analyse data. Interview techniques are emphasized during training, as well as methods for carrying
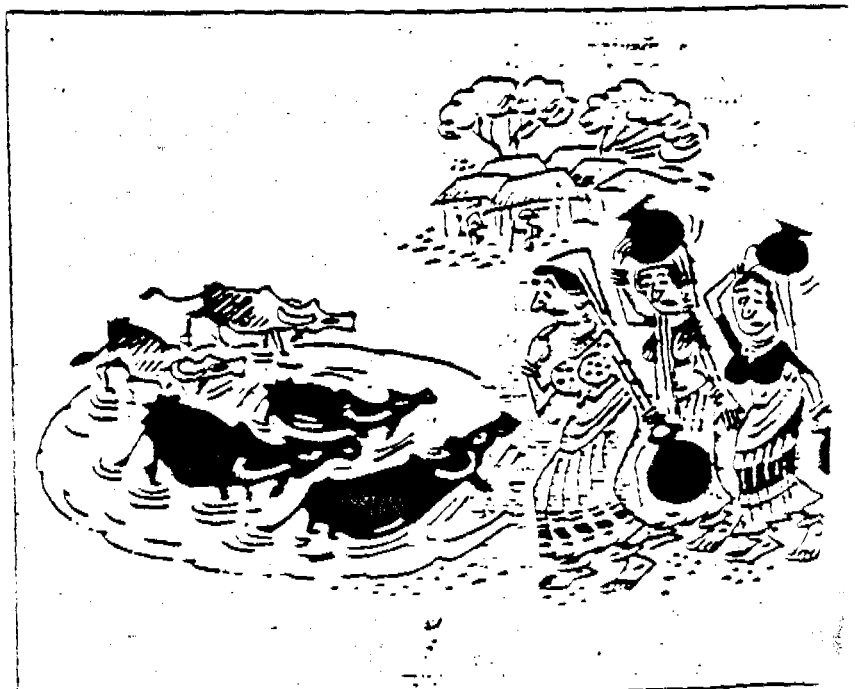
Communities where traditional sources are polluted can be given priority for service.
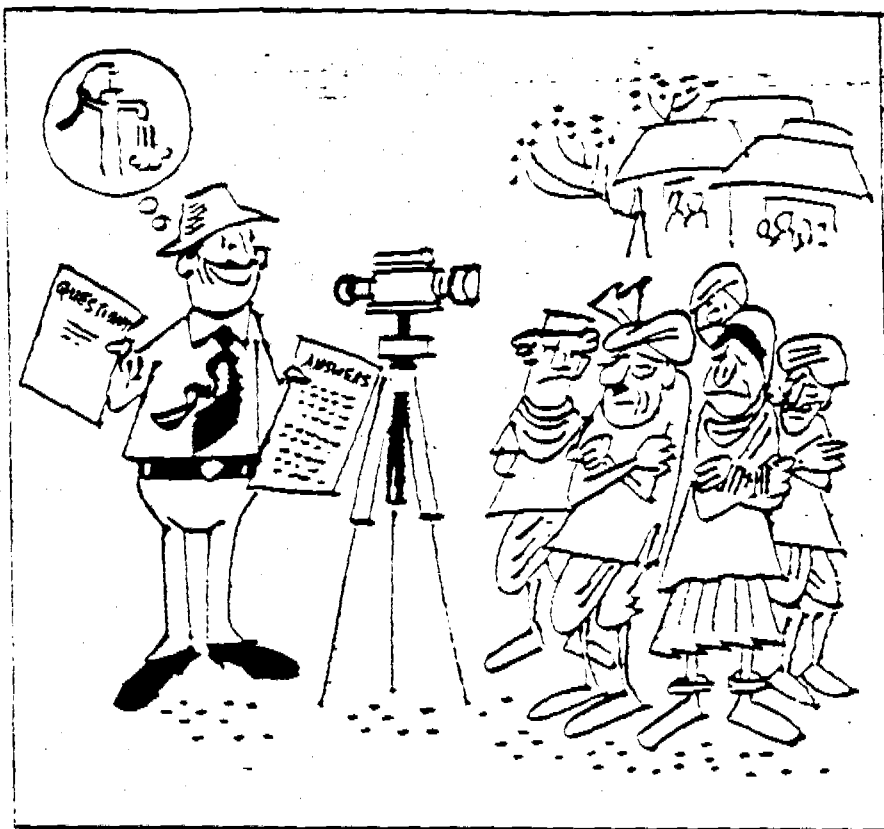
The views of the community must be solicited and acted upon. In token efforts, people are given no real choices, only standard designs that they must accept.

activities in the community. A particularly important aspect of training is how to communicate with the disadvantaged groups through small group meetings.

Step 2 The community

Community education and participation (CEP) helps to overcome any gap that may exist between people and planners as a result of their different perceptions of community needs. The objective of CEP is to improve communications so that planners can come to understand community problems, and people can participate in decisions regarding how to meet community needs through development projects.

The first step is to meet the community, for a number of reasons. First, contact must be established with village leaders and existing institutions, to inform them of the need for a base-line survey to verify the relevance of water supply and sanitation improvements to overall community concerns. The permission of community leaders must be obtained prior to the design and construction of a water supply and sanitation project. Next, arrangements must be made for the facilitators to carry out the base-line survey in the community over a period of a few weeks (facilitators should live in the community throughout this period). The objectives of the survey are twofold:

▢ to determine the priority given to water supply and sanitation improvement in relation to other priority needs within the community; and

▢ to collect sufficient data to determine the existing habits of the community regarding water supply and waste disposal.

An important contribution of the base-line survey is a set of maps showing the existing sources of water supply for each household and the defecation sites in use (Figure 1). When the survey has been completed, a community meeting is held to discuss the results. If the community agrees that water supply and/or sanitation is a high priority need, the next step is to present the project resources that are available to meet these needs, the requirements to be met by the project and the responsibilities of the community during the process.
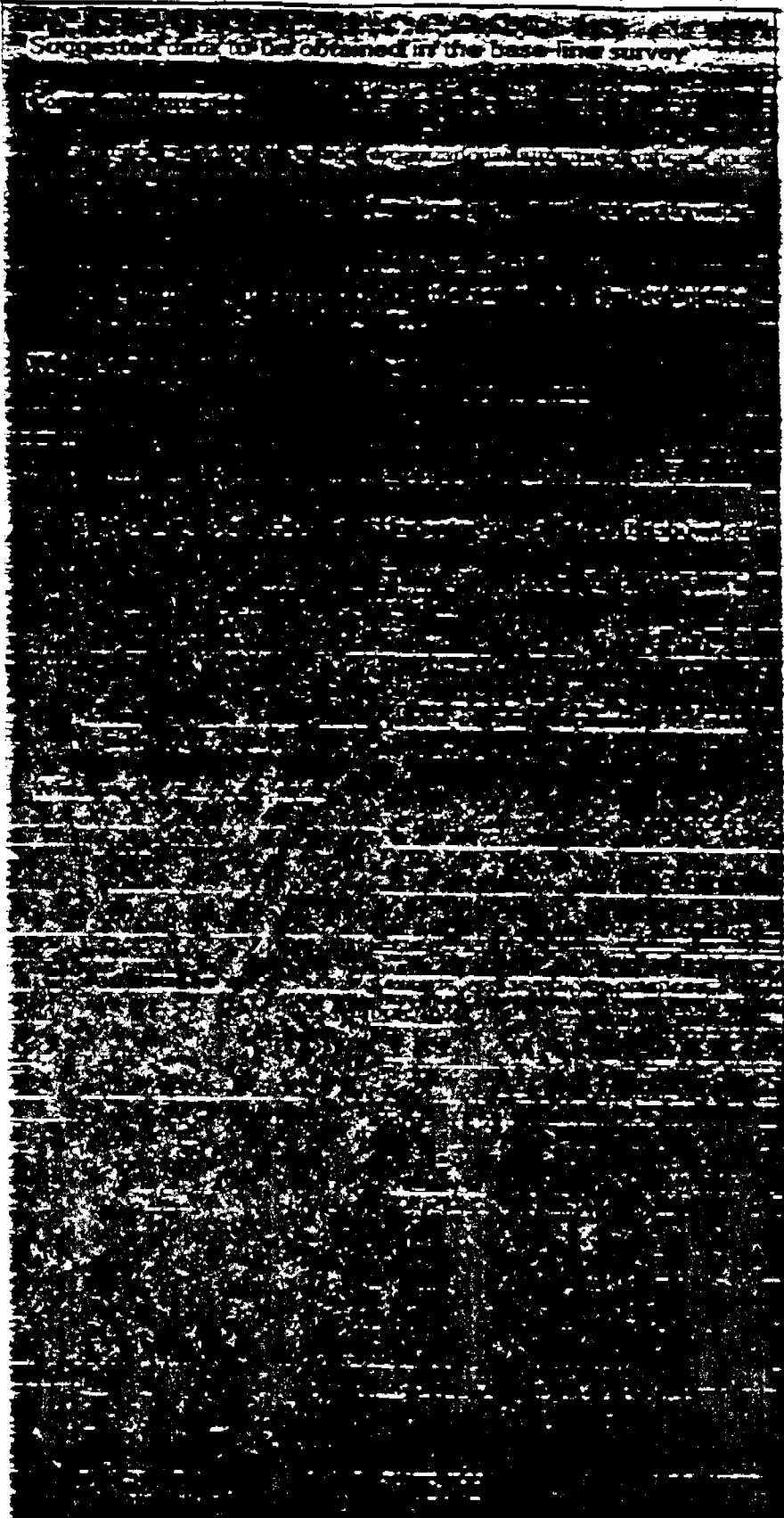
Step 3 Software and hardware

The planner's role in determining the most appropriate hardware/software mix to be used in the project is to work closely with the community, with the help of the facilitators, to develop alternative designs. Each alternative considered will have both hardware (appropriate technology) and software (human resources and institutional development) components. Not all the alternatives will be practical, feasible or even desirable. The challenge will be to find the proper mix of hardware and software that will meet community needs and that will continue to function and be used within the existing social and economic environment.

Unless all the facilities to be constructed are to be owned by individual households, a local institution must take on the responsibility for the system's management, future operation and maintenance. This role might be designated to an existing institution such as a village council; alternatively,
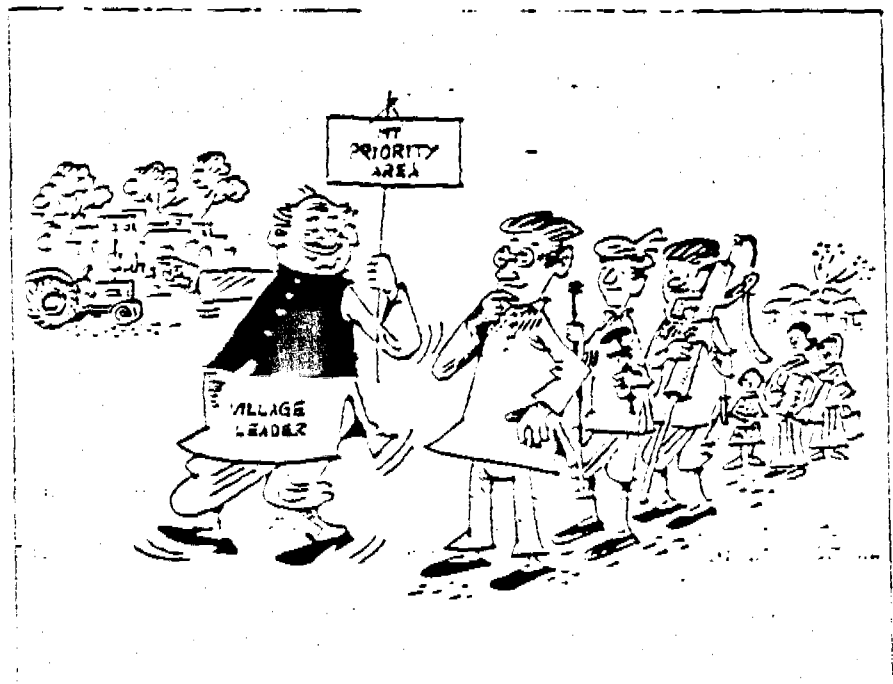
Village leaders may have priorities of their own that are considerably different from those of other members of the community.

3

not be feasible. The local institution is acting as a facilitator to elicit different viewpoints, and to be sure that they are considered as a part of the planning process.

The next stage is to judge the feasibility of the alternatives listed. Only options that can be supported with spare parts, supplies and other necessary back-up through existing programme support networks should be considered. Where such networks do not exist, projects should be as self-sufficient as possible, with no spare parts required other than those that can be purchased in the local market or made from indigenous materials using local skills.

At this stage, staffing patterns and the user fees required for each alternative are estimated. User fees will normally be less than 5 per cent of the income of the heads of rural households. Where possible, consideration should be given to maximizing the benefits to the community by choosing technologies and methods of implementation that are labour-intensive rather than capital-intensive.

A plan is then drawn up for presentation to the community in general, and to the disadvantaged groups in particular. The latter should be approached individually by the local institution, and small group meetings held where required to review the proposed plan and the method of implementation. If the disadvantaged groups are not satisfied, the local institution must work closely with the planners to incorporate the concerns expressed, where feasible.

Step 4 Involving all

The purpose of step 4 is to develop a consensus and commitment within

Pumps must survive heavy use.
Photo: WHO/A.S. Kocha

a new institution will have to be established. Institution leaders must then be selected and trained. Following training, their first job is to assist planners and people to draw up and consider a list of technological options.

Working closely with the people, the leaders must begin to formulate alternatives based upon suggestions received from the community. The planners' knowledge of technology and materials can be utilized in con-

structing and adapting new plans based on the ideas expressed in group meetings. Some alternatives may simply reflect the planners' own preferences, those of government officials, or those adopted in other programmes. The emphasis must be on selecting alternatives that reflect all of the diverse ideas of the community members. No effort is made at this point to eliminate or combine alternatives, or to show way they may

Representatives of the institution will find that a flexible attitude will help in developing a consensus, and that modifications to the plan should be made as desired by the community, where feasible.

the community regarding the planned project. After an agreement has been reached with the disadvantaged groups, the planners and the local institution present the plan to a meeting of the entire community for discussion. The community will then have the opportunity to introduce modifications to

the plan as desired and where possible.

It is necessary that the community should demonstrate its commitment before construction starts. For example, the local institution may require a legal title to the land where facilities are to be constructed, or the community may first need to protect a

spring catchment area. Users may be required to join a users' association, paying membership fees and additional monthly fees to make the system self-supporting as regards operation and maintenance. Construction should be delayed, if necessary, until these steps have been taken.
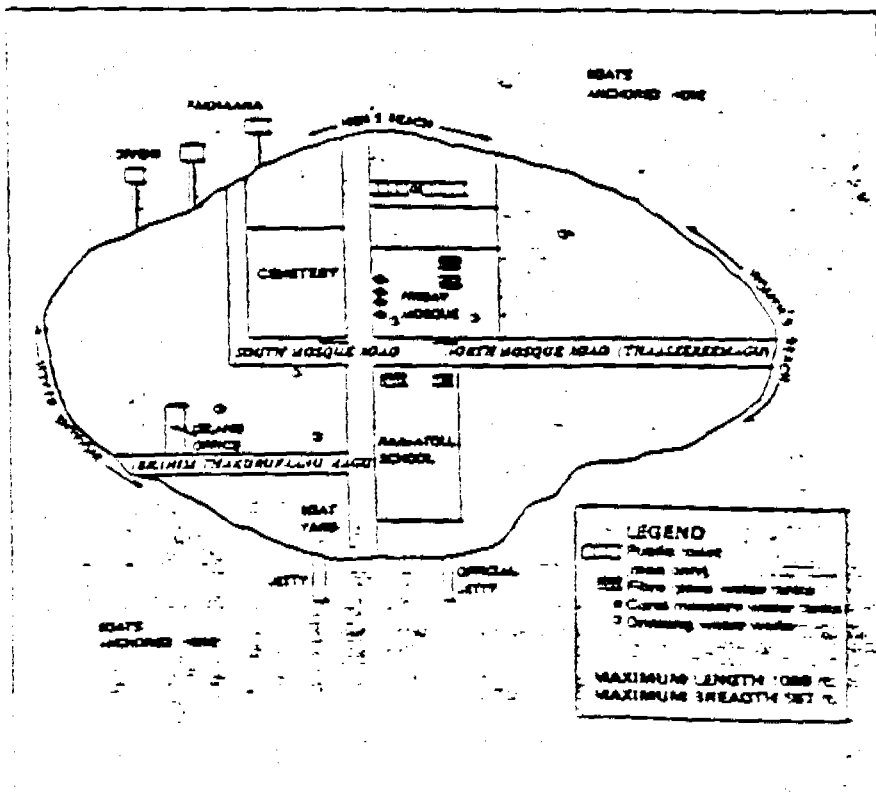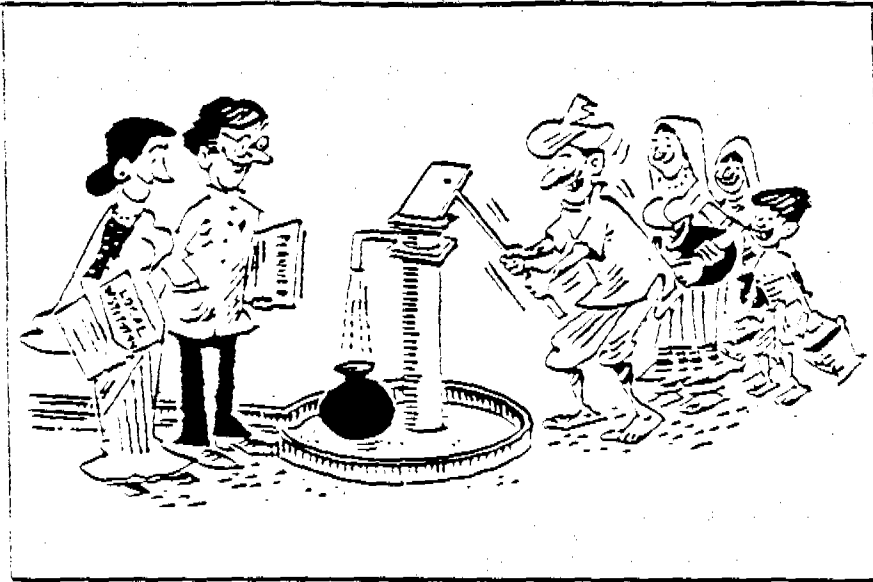
Step 5 Implementation

To implement the planned project, as agreed with the community, planners oversee project inputs and supervise construction while the local institution organizes community inputs of cash, manpower, and materials. The decisions remaining for individual users can be taken at this time, including the type of construction materials that will be used to ensure privacy in individual household latrine units.

The on-the-job training of personnel for operation and maintenance should begin as soon as possible; some elements of this training can start before construction is completed. Some of the personnel of the local institution can assist in the construction process itself.

A follow-up survey should be carried out after construction is completed to determine whether the facilities have been completed as planned and are functioning and being used as intended. People's habits after the completion of the project are compared with habits observed during the base-line survey.

Figure 1. A community base-line survey can map traditional defecation areas and show which people are using them.

The selection of the proper hardware/software mix can ensure that facilities will continue to function and be used for a long time, even under difficult conditions.

Health education efforts can be targeted to effect a change in those households that continue to use the traditional water sources and defecation sites. This may be done in co-operation with primary health-care workers where appropriate. Training programmes may be planned through a programme support network, to teach the staff of the local institution how to carry out health education activities.

Step 6 Back-up

Step 6 is the establishment of links with a programme support network to ensure back-up assistance, where necessary. The role of the programme support network is to provide back-up to the communities and their institutions on request. Such support will require the provision of additional funds and manpower. Back-up support may be provided in conjunction with other programmes, such as hygiene education, which may be supported through primary health-care units.

Facilities may be required to train management or maintenance personnel under the supervision of the local institutions. Specific training needs should be identified and training curricula developed, such as curricula aimed at training accountants to serve the needs of local institutions. The programme support network may also include a unit to evaluate projects. This will make it possible to learn from past mistakes, and thus influence the procedures used in future projects.

Summary

The procedural guide-lines described in this article were developed as the result of case studies carried out by local institutions in nine developing countries of the Asia and the Pacific Region (of the United Nations Development Programme) under the IDWSS Decade Advisory Service Project. The procedure uses community education and participation as a vehicle in the search for a proper mix of software and hardware to meet community needs. It makes use of the assistance of local project facilitators to mobilize the effort. The establishment of a local institution for the future management, operation and maintenance of facilities ensures their optimal functioning and use in most situations. Planners are asked to change their style, to go out of their way to identify and listen to disadvantaged groups, including women and children. They are cautioned not to promote a specific technology, but to find an appropriate technology through the use of procedures involving community involvement the demonstration of community consensus and commitment are viewed as indicators of the project's success.
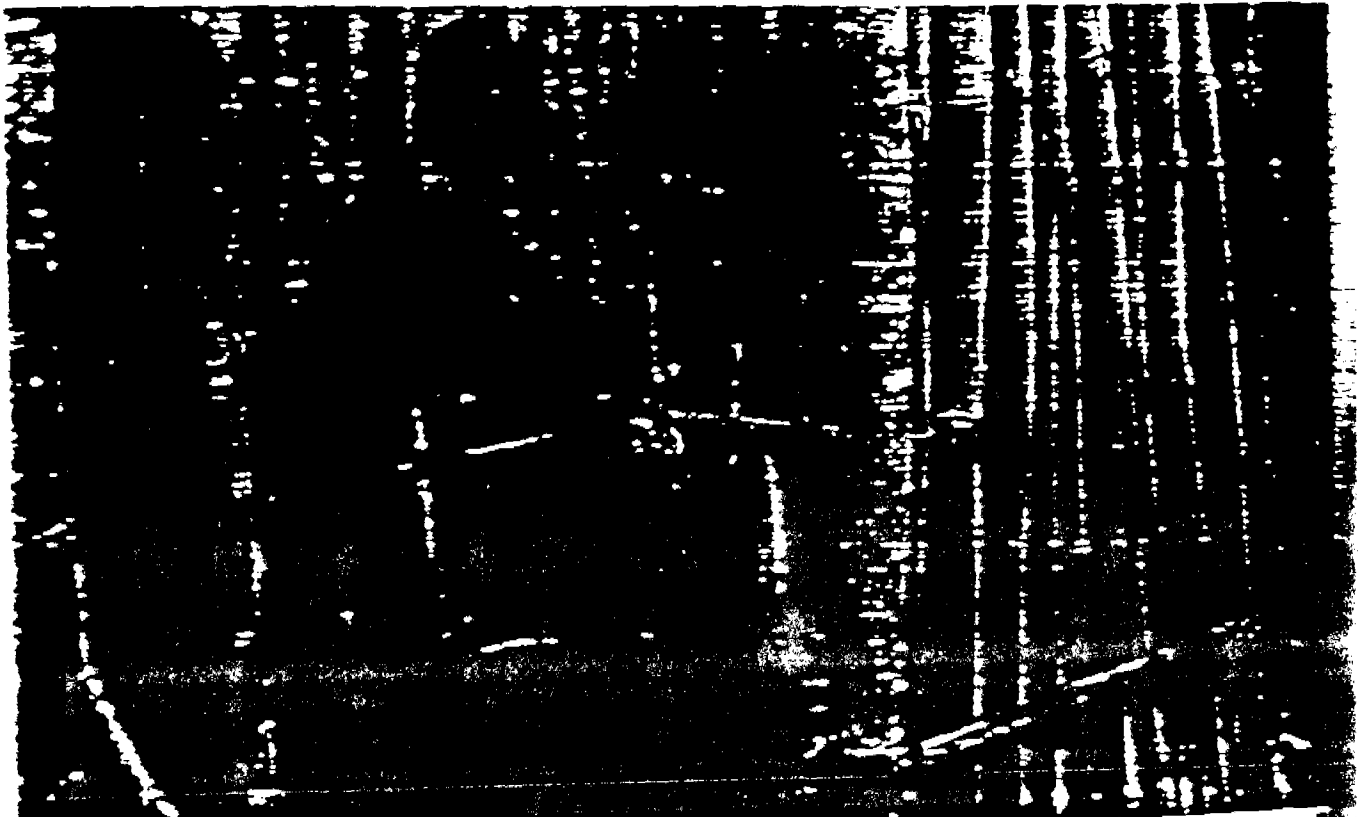
The choice of technology must take into account the needs of children.

Photo: WHO/P. Alma

Rural Water Supply and Sanitation in Pakistan

Lessons from Experience

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BALDIA - THE BUSTI PROGRAMME

THIS project was designed to reduce the infant mortality rate and provide social benefits for children. It set out to encourage the construction of soakpits.

BALDIA - BUSTI

BACKGROUND: The Baldia Township is located in north-west Karachi and covers 1,060 acres. The current population is about 271,000, with an average population density of 150 persons per acre.

Baldia's population is made up of a wide variety of ethnic groups which have migrated from surrounding areas. Almost 42 percent of the people have come from India, 21 percent from the North West Frontier Province, 17 percent from Baluchistan, 9 percent from Sind and 3 percent from Punjab. Despite the cultural differences, there is a high level of interaction between people from different mohallas and a good community spirit prevails.

Karachi and the Sind Industrial Trading Estate (SITE) are within easy reach of Baldia by road and rail, and this has improved employment opportunities.

In summer, the climate is hot and humid but the winters are mild. There is an average annual rainfall of 7 in. The water table lies between 3 and 12 ft. below the surface, in sandy-clay soils, but has been rising gradually since water supplies were introduced.

THE ORIGIN OF THE PROGRAMME

Ten years ago, Baldia faced a major water supply shortage. In some areas, the public standposts were providing less than five gallons per person per day. This prompted the Karachi Water and Sewerage Board (KWSB) to install one standpost per street which would serve, on average, 20 houses.

Baldia's sanitation system was also inadequate in 1979. About 30 percent of houses had bucket latrines and excreta was dumped in the lanes throughout the township. This caused extreme health hazards and the area became a breeding ground for flies, mosquitos and other vectors. Children and women were particularly at risk. The Karachi Metropolitan Council (KMC) selected Baldia Township as a *katchi abadi* in need of upgrading and UNICEF proposed the Baldia Soakpit Pilot Project (BSPP).

Although the project had KMC's blessing, it was not popular among the local community or politicians who did not want soakpit technology.

THE PROJECT ORGANISATION

UNICEF initiated, organised and sponsored the Baldia Soakpit Pilot Project (BSPP) in 1979. Pakistan's Jaycees (Junior Chamber of Commerce) and the University of Karachi's Social Work Department also collaborated in the project. In its initial planning phase, the project was assisted by the Dutch Advisory Mission (DAM) which had been examining sanitation projects for the area. KMC provided the administration umbrella.

The overall responsibility for project implementation was in the hands of the Project Team which initially consisted of a community organiser from Karachi University and an engineer from the Jaycees. This was later strengthened to include two Social Organisers, also provided by the University.

The BSPP brought together people from different disciplines without specifying a clear-cut line of action. This flexible approach had great benefits. It allowed the experiences of different disciplines to be combined, making the team responsive to new ideas and enabling it to respond to

success and failure. The BSPP team had no formal hierarchy, but strong leadership was provided by Dr. Quratul Ain Bakhteari.

At the community level, organisations such as mosque committees, sports clubs and soakpit committees were in charge of project implementation. Altogether there were about 47 community-based organisations in the Baldia area of which 75 percent were registered.

All the members of these organisations were nominated by the local people. Every committee was keen on development, technically inclined and receptive to new ideas. They also helped the Social Organisers to motivate the community and aided the engineers with installation work.

Mosque committees provided religious education for children and managed the mosque. They also stored and distributed water to the communities and helped to solve day-to-day problems.

Some of the other organisations were initially set up to lobby the local authorities for services. Others carried out charity work and provided social services such as burials. Some committees became powerful. For example, the Turk Colony's organisation managed to secure water supply, electricity and land titles for its inhabitants.

Recently, a new women's organisation - the Home School Teachers Welfare Organisation - has emerged out of the BSPP and has registered with the Directorate of Social Welfare.

Who provided the money?

UNICEF provided most of the money for the pilot and second phase of the BSPP. The availability of funds for the full or partial subsidy of demonstration projects was of key importance to the programme. In the second phase of the programme, the BSPP was changed into a non-governmental organisation (NGO) called the Basic Urban Services for Katchi Abadis (BUSTI). A major feature of BUSTI was the creation of a revolving credit scheme, in place of subsidies, for beneficiaries.

The overall cost of the Baldia project was about $482,000 for the six years between 1981 and 1987. About $318,000 was spent on sanitation.

Demonstration projects of the BSPP cost $87,000. About five percent of the area's 25,000 houses had demonstration latrines installed. A quarter of these

re paid for by UNICEF, while 58 percent were
ilt using free material, some of which was pro-
ied by UNICEF.

The community donated approximately $413,000
the scheme in the form of superstructure con-
·uction, labour and leadership.

PROJECT IDENTIFICATION

Several criteria were used for project selection.
·st, the poorest should benefit. As a result, dem-
istration schemes were aimed at the most pov-
ty-stricken areas. Second, there should be no
·isting sanitation and, third, the community should
- receptive to the ideas. Fourth, the communities
·ould be willing to contribute to the installation of
soakpit.

PROJECT
IMPLEMENTATION

When the project began, about one-fifth of the
·uses had soakpits. The rest used bucket latrines
it were ·een to upgrade their sanitation system.
·wever, most people wanted a sewerage system
·d did not welcome soakpit technology. The poor
·inion of soakpits had been brought about by the
·isting soakpits in the area, which tended to be
·ostandard, expensive and difficult to maintain.

This meant that an education programme was
·cessary to overcome the communities' negative
·elings about soakpits. This was carried out by the
·cial/Community Organisers in a two-part plan.
·rst, the existing community leaders were ap-
·coached and told about the merits of the new
·chnology. Next, the target group and households
·ere visited and the technology was discussed
·sing slide and sound shows, posters and the like.

ommunity education and training

The BSPP had no formal training component
·hen it began but 50 masons and 100 families were
·ained in the construction, use and maintenance
f soakpits through practical demonstration and

*Trained local masons were essential to the rapid spread
of pour-flush latrines in Baldia.*

discussions. Pits were opened in front of the com-
munities so people could see how they were work-
ing - a demonstration that proved to be particularly
valuable.

It soon became clear that the soakpits would
only be used properly and maintained if children
and women were taught how to use them. In 1981,
two girls from the community were trained to give
primary health education to children in their homes.
This was the start of the Home Schools Project.
Now there are 120 Home Schools operating in
Baldia, covering 4,000 children.

The Home School teachers have been trained as
Public Health Care Workers (PHC). The first group
of teachers took a month-long training course on
growth monitoring, nutrition, breast feeding, ORS
therapy and immunisation. An additional 30 girls
went on a six-week training course run in collabo-
ration with the Civil Hospital and EPP departments.
A female doctor now supervises the PHC workers.

The role of women

Most of the BSPP and subsequent health and education programmes were run by women for women. Half of the project team members were women who were able to enter homes and motivate other local women who in turn convinced the men to build soakpits - and often helped with the installation work.

Contracts

Formal written agreements or contracts were not issued at any stage during the installation of soakpits. However, there was a verbal understanding between the project team and soakpit committees which carried out the installations. The introduction of the revolving credit schemes, as part of the BUSTI plan, meant that written agreements became a necessary part of the development plan. A written application form, an accounts submission form and a loan recovery card were used to record transactions.

Loans given under the revolving fund scheme were Rs. 950 per household. By December 1987, Rs. 120,000 had been disbursed; loan recovery was poor, with only about 30 percent of payments due repaid on time. Financial reporting and financial discipline generally were poor, and in 1988 no new loans were made.

Since the soakpits were installed inside the houses, they became the property of the houseowner who now has the responsibility for desludging. However, KMC currently provides desludging facilities on demand.

Was the technology appropriate?

Soakpit technology was the most appropriate choice in 1979 when there was a low water table, a water shortage and no drains. However, KMC originally insisted that the soakpits had to be installed within houses and this discouraged people from using them. After much effort, the project team persuaded the people to accept the idea of soakpits inside homes.

Since most homes now have direct access to water supply, and public receptivity to sewerage systems is good, greater responsiveness by the project to the expressed wishes of the community for sewers might have been appropriate.

Between 1979 and 1985, the soakpit design was changed five times. The first change introduced a second pit into the design. Pits were then changed from circular to square and reduced in depth. As a result, the desludging operation is now carried out every 5 years instead of 20 years. However, these design changes have reduced the price of soakpits from Rs. 2,000 in 1979 to Rs. 800 in 1985.

Operation and maintenance

The higher frequency of desludging has increased the maintenance problem for households. Officially, KMC should desludge the pits free of charge, but the service is poor and most people have resorted to employing scavengers or making unofficial payments to KMC staff. People now want the pits connected to open drains.

The water table in Baldia is rising and this may require some of the soakpits to be converted to septic tanks in the near future. Technical support will be needed to bring about the change.

Spin-offs

The BSPP stimulated the creation of the PHC programme which successfully trained the community in health and hygiene matters. While the Home Schools Programme was set up because of the need to train people to use latrines, these schools have also been instrumental in awakening the community to the benefits of formal education. A primary school has since been set up by the Baldia community and this is creating interest outside the area. The Home Schools have won places in Government primary schools for some of the Baldia children.

One of the most important contributions has been to provide girls with access to schools. Without this programme, most girls would remain illiterate. By training women as teachers and workers, the Home Schools have managed to raise average household income levels by 25 percent.

THE OUTCOME

SUCCESSES

■ Between 1979 and 1985, 1,065 demonstration latrines were installed.

■ By 1985, half of Baldia's houses, or over 14,000 households, had soakpit latrines. This indicated a demonstration-to-household installation ratio of 1:13.

■ Unit latrine cost has been progressively reduced. This cost is even lower if the dissemination of the technology outside of Baldia is taken into account.

KEYS TO SUCCESS

■ The community wanted some form of sanitation and 20 percent of the houses already had soakpits.

■ Women played a major role.

■ The past problems with bucket latrines encouraged people to pay for better forms of sanitation.

PROBLEMS

■ The soakpit design was inflexible. It could not be changed to cope with local conditions, such as rising water tables.

■ A household loan system was introduced but was difficult to maintain.

■ Recently, increased water supply in the area has raised the groundwater table which has interfered with pit operation. Many families are connecting their pits to the open drains and operating them as septic tanks.

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ORANGI

'an's largest squatter settlements (katchi abadi) with a population of about
achi on gently undulating rocky desert with numerous creeks and gullies. Most
0,400). which are organised in 6,200 carefully-planned lanes. A piped water
st seven years and many homes have electricity.

ety of backgrounds. Over 200,000 refugees from East Pakistan (now
in the 1970s. Other residents have left impoverished rural or urban
etter life in a new environment. The monthly household incomes vary from Rs.
verage income of Rs. 2,500.

ve been forced to live outside Karachi by the soaring price of land. Clerks,
mployees as well as unskilled workers live in Orangi.

ie settlement. There is an informal property market and this has spawned a
in Orangi which has given the residents a considerable feeling of security and

THE ORIGIN OF THE PROJECT

Ten years ago, the people of Orangi realised that a sewerage system was the only answer to their sanitation problems. Until then, three main forms of excreta disposal had been used. Most people used bucket latrines which were emptied by scavengers every fourth or fifth day for a fee of Rs. 15 per month. However, the scavengers frequently emptied the buckets into the unpaved streets, causing a health hazard. More affluent households had soakpits but these filled up after a few years and were not seen as a long-term sanitation solution. Some people had laid sewerage pipes from their houses to the nearest creek or *nullah* in a haphazard way and, although not ideal, the system kept excreta out of the lanes.

WHO ORGANISED THE ORANGI PROJECT?

Agha Hasan Abedi, President of the Bank of Credit and Commerce International, wanted to help the people of Orangi and demonstrate to others that communities could help themselves with development projects. He encouraged Dr. Akhtar Hamed Khan, an eminent Pakistani social scientist, to help him organise and manage the Orangi Pilot Project (OPP). The scheme was seen as a prototype which might be copied by the 35 percent of Karachi's population who live in squatter settlements.

The initial OPP research identified several problems in providing sewerage for squatter settlements. Before setting up community organisations, the OPP investigated the feasibility of installing sewerage. For example, Orangi's inhabitants thought the local authority should build the system. But the local authority said that it could not afford to do so and had a rule that only open drains could be built in squatter settlements.

International loans might have been raised for one or two small sanitation projects. However, it would be impossible to borrow or repay the money needed to provide sewerage for all the squatter settlements in the area.

The OPP research also indicated that in the sewerage systems built by the local authorities, only one-fifth of the total construction costs arose from

Before and after sewer construction in Orangi; the improvement speaks for itself.

labour and materials costs. The remainder was accounted for by administrative overheads, contractors' profits and the like. Khan and Abedi, therefore, decided to encourage the Orangi community to build its own sewerage system.

The first step was to create community organisations which were associated with lanes in the town. Each lane had 20 to 30 houses whose inhabitants knew and trusted each other. OPP arranged for one of its Social Organisers to meet with the residents of the lane, discuss the sewerage plans and encourage them to form a lane committee and elect a manager.

Once the committee had been established, a member of the OPP technical staff surveyed the lane, set up benchmarks and prepared plans and cost estimates for sewerage work. Lane managers then had the task of collecting money for the scheme from the residents.

Who provided the money?

All the community investment in sanitation was collected, managed and spent by the lane organisations. Accounting methods were rudimentary and no bookkeeping was carried out. In many cases one of the older women acted as the treasurer and provided money for the lane manager. Total investment by the community up to December 1987 was approximately Rs. 10 million. Each household spent about Rs. 500 for the shared facility of primary and secondary drains.

The OPP has spent about Rs. 1.5 million on research and extension (about 15 percent of community investment). In addition, OPP invested about Rs. 200,000 in tools and equipment which were borrowed by the community to implement schemes.

The OPP claims that this community-based approach reduced sewerage costs by 80 percent compared with official costs.

PROJECT IMPLEMENTATION

In the first part of the scheme, no supervision of construction was provided and the workmanship was poor. By 1982, OPP realised that the technological standards had to be improved or else people would lose confidence in the scheme and no new lane committees would be formed. OPP carried out research which enabled it to simplify the engineering design standards and, through a large number of meetings, explained how the pipes should be laid to avoid technical problems. Where lanes were located at long distances from nullans (natural creeks), the OPP suggested that secondary drains should be installed.

The OPP also trained private sector contractors in the construction of sewers and gave their addresses to lane committees.

Operation and maintenance

The lane organisations were responsible for O & M of the sewerage system and it was their job to clean and repair manholes and sewers. Most sewer blockages occurred when manhole covers were broken and the manhole turned into a rubbish dump. The OPP is now planning to make strong and inexpensive precast concrete manhole covers which will eliminate many of these problems. Money for maintenance work was collected from the residents by an individual involved in the original project construction. Most people were anxious to protect their investment, and there have been no problems so far with community maintenance.

The OPP has found that maintenance costs were directly related to the quality of the original construction. As construction methods have improved, the maintenance cost per lane per month has been reduced substantially and is well below that of schemes administered by formal water/sewerage authorities.

THE OUTCOME

SUCCESSES

■ Since July 1981, 2,230 primary drains have been installed.

■ By the end of December, 147 secondary drains had been installed by the residents. In addition, OPP supervised the construction of 26 secondary drains which were paid for by KMC councillors.

■ The OPP has shown that it is possible for small groups of people to build a sewerage system based on lanes.

■ The completed sewerage systems are often finished to a higher standard that those built by the KMC.

■ The lane organisations and the OPP are now important new groups working for community development

■ Construction of the sanitation system brought people together for a common purpose. Now, they are capable of undertaking other joint tasks.

■ Using sanitation as its entry point, the OPP has started a low-cost housing programme and a Women's Welfare Programme to promote health and hygiene education, immunisation, family planning and the provision of seeds for kitchen gardens. Nine Women's Work Centres have provided jobs for 600 women.

■ KMC's policy that only open drains could be built in squatter settlements has been revoked and the Council is now funding sewerage projects.

■ The OPP has also managed to stimulate the private sector.

PROBLEMS

■ There is no treatment of the wastewater which is discharged into nullahs and this may pose a health hazard. The nullahs have already started to silt up as a result of the sanitation programme.

■ The locally-manufactured sewer pipes are inferior to those made by KMC and will have a shorter life.

■ The original manhole cover design was inappropriate as it could be removed easily. This enabled people to use the manhole as a refuse pit.

Session outline   3.3

Subject: Community self-improvement in low-income urban
                  water supply and sanitation

Timing: 13.30 - 15.00

Course staff: Lecturer IRC

Objectives: To define levels of community participation and to
                  provide examples of community initiatives to
                  improve water and sanitation facilities.

There are different reasons to promote increased community
involvement. These reasons are often not explicitly given. The
degree or level of control by the communities is mostly limited.
The vested interests of the urban institutions limit the
opportunities to work from within these. In some cases
communities take initiatives to improve their own situation,
sometimes assisted by non-governmental organizations. Such
examples are important to show the potential of community
management, but the replicability of the examples given needs to
be ensured.

Background information: Occasional paper IRC, Articles, Short
case descriptions in hand-out.

Session outline   3.3

Subject: Community self-improvement in low-income urban
                water supply and sanitation

Timing: 13.30 - 15.00

Course staff: Lecturer IRC

Objectives: To define levels of community participation and to
                provide examples of community initiatives to
                improve water and sanitation facilities.

There are different reasons to promote increase community
involvement. These reasons are often not explicitly given. The
degree or level of control by the communities is mostly limited.
The vested interests of the urban institutions limit the
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managment, but the replicability of the examples given needs to
be ensured.

Background information: Occasional paper IRC. Articles. Short
case descriptions in Hand-out.

HANDOUT FOR SESSION 3.3

- Community participation

- Working with community organizations

COMMUNITY PARTICIPATION

What is community participation?

First of all it has to be clear what is understood by the word 'community'. In relation to development planning , it is generally regarded as both a geographic entity (i.e. a group of people living near one another and sharing a teriitory) and a social entity (a group of people who have economic and social interest in common). Together, these two are taken to imply that such units of people will operate communally for the good of the group and to further their own individual well being at the same time. It has become common to contrast rural villages, with their assumed strong sense of the communal good, with urban areas in which group identity becomes lost in individuals struggles for survival and advanvcement and high population mobility.
However, in rural areas, the community is often not that homogeneous (landlords, farmers, landless agricultural labourers, caste, tribal groups and other (religious) minorities) and in urban areas it is often found that people from the same province and ethnic/religous background are living together, forming a homogeneous group. This implies, that a community often can not be considered as a whole and that different (target) groups need to be identified.
Participation means joining with others to do something, which can be done in many different ways, varying from being informed about developments to actively taking part in developments.
Community participation is the organized involvement of a community in a development effort.

Forms of community participation

Since organized community participation can assume many different forms, there is a need to distinguish broad categories for analysis and generalization of experiences. A key element in categorization concerns influence and control. The degree of community influence and control will depend on a number of factors including: type of technology and level of local development; willingness to give communities not only responsibility but also rights; sufficient information and extension services fro communities to make proper choices; and the development of institutional capacities at all levels to deal with a more participatory system of community water supply and sanitation improvements.

The degree of community involvement can vary from low (number
1 below) to high (number 7):
1) Community is being informed and asked for their opinion
2) Community is asked to contribute labour, locally available
material, land for wells etc and/or money
3) Agency delegates certain management and bookkeeping
responsibilities and/or trains community members for basic
maintenace and repairs
4) Community is involved in discussing various options during
each phase of the project, but final decision-making power
remains with the agency
5) Options are discussed and decisions made jointly.
Compromises help to adjust project to realities of both agency
and community.
6) Final authority and decision-making rest with community.
Agency technical support and advice is provided on request of
community organization
7) Community itself initiates and implements project with or
without help from outside.

Reasons for community participation

Reasons to have community participation are different for the
different actors involved i.e. the different groups that make
up the community, the government (local and national),
politicians, NGO's or other local organizations. What may be a
positive aspect of community participation for one group may
not be so for another.
Ten reasons advanced for community participation are:
1) With participation more will be accomplished
2) With participation, services can be provided more cheaply
3) Participation has intrinsic value for participants
4) Participation is a catalyst for further development
5) Participation encourages a sense of responsibility
6) Participation guarantees that a felt need is involved
7) Participation ensures things are done the right way
8) Participation uses valuable indigenous knowledge
9) Participation frees people from dependence on others'
skills
10) Participation makes people more conscious of the causes of
their poverty and what they can do about it

Community participation at different stages

Communities can and should be involved at different stages in the project cycle. Activities will differ in each stage, both for the communities and for the agency involved.

1) **Pre-planning stage**
2) Planning
   - data collection, needs assessment
   - identification of technical options
   - community organization
   - selection of goals, systems, technology
   - decisions on timetable
   - assessment of manpower needs and resources
   - identifiaction of local hygiene education needs and strategies
3) Implemetation
   - designs
   - construction
   - information, education, communication
4) Maintenance
5) Evaluation

WORKING WITH COMMUNITY ORGANIZATIONS: OBSTACLES AND RESOURCES

Obstacles	and	Resources

Obstacles

1. Uninterested members

2. Unskilled members

3. Uninterested officers

4. Unskilled officers

5. Organization has no authority to make decisions for community

6. Other community groups do not want organization to do its job

7. Community does not respect or want organization

8. Organization does not represent the entire community

9. Community is not interested in development in general or this program in particular

10. Arguments and lack of cooperation among organization members

11. No local leadership of organization

12. Members of organization not used to working together

13. Organization and/or community expects to the program to do everything for it

14. Other obstacles

Resources

A. Highly motivated community

B. Community members with experience of successful development efforts

C. Leadership of community supports organization and development effort

D. Existing organization with successful experience working together *(...)*

E. Strong leadership in community and/or organization

F. Highly motivated organization members and officials

G. Organization members and officials willing to learn new skills

H. Organization given authority to make decisions by community

I. Organization and community share development goals

J. Community and/or organization members with variety of skills (such as leading an organization, literacy, keeping books and records, etc.)

K. Other resources

HANDOUT FOR SESSION 3.4

-Case

Case

Imagine: an urban fringe area, densely populated, with about 50% small stone houses and 50% wooden shacks. The area is divided in wards of about 15 stone houses and 15 shacks each. There are about 20 wards.

Overall income is low; people who live in stone houses generally have a little more money. Health and hygiene situation is generally bad.

For   their water supply the people use now a   river   at approximately half a kilometre from the area and some shallow wells.

There is an official council for the area, with a representative in the City Council. In principle all wards have a representative in the Area Council, but most of them are not active members. There are no women representatives.

A non-governmental women's organisation is active in the area. It runs a small health centre and has some courses and a credit fund for income generating activities for women.

The City Council, with the support of a national donor-funded water supply programme, is defining a project to build communal water taps, with water meters, one for each ward. Operation and maintenance of the tap points (after the meter) should become the responsibility of the wards. Each user-household is expected to contribute to the monthly water charges, which should be collected by one of the users and paid regularly to the Water Board of the City Council.

You are requested to present a plan for the organisation of community participation in this water supply project, to the effect that each ward is indeed willing and able to be responsible for operation and maintenance of the water points and for revenue collection and payment.

Special points to consider in your plan are:

- women's participation
- health and hygiene education
- long term sustainability of the whole scheme

Session 3.4

Typed copy of flip overs
(Community self improvement/community involvement

PARTICIPATION: WORKING FOR THE COMMON INTEREST

- INVOLVEMENT TO REACH SAME GOAL

- TO REACH DECISION MAKING

1.

- POPULATION
- URBAN/HUMAN RIGHTS
- (URBAN) POLICIES
- LEVEL OF WS&S
- ENVIRONMENTAL SITUATION
- TYPES OF ILLNESSES

3.

- LEADERSHIP STRUCTURE
- REASONS BEHIND PRACTICES
- RELIGIOUS BELIEFS
- PRACTICES TO STRENGTHEN
  COMMUNITY FEELING
- ORGANIZATION
- UNDERSTANDING FATE
- SUPERSTITION
- MOTIVATION
- ENVIRONMENTAL KNOWLEDGE

2. OUTSIDER

- AVAILABLE BUDGET
- IDEAS ON COMMUNITIES NEED
- TECHNICAL OPTIONS
- STANDARDS
- STAFF
- VIEW OF THE COMMUNITY
  AND ITS PRACTICES
- TECHNOCRAT FEELS
  ABOVE COMMUNITY

4.

- KNOWLEDGE OF DEVELOPMENT
  PLAN

HOW GETS INFORMATION FROM 2 TO 3 AND V.V.

- SOCIAL SURVEY
- OFFICIAL INSTRUCTION   2 → 3
- MOTHER/CHILD/FATHERS GROUP MEETINGS   2 ↔ 3
- ESTABLISHING REPORT WITH COMMUNITY

	INFORMAL MEETING	2 ↔ 3
	HOME VISIT	2 ↔ 3
AUDIO/VISUAL	TV, RADIO	2 ↔ 3
	COLOMBIA	2 ↔ 3

- S.A. ALMOST 100%   TELEPHONE ANSWER/TO RADIO
- STORIES WITH A GAP
- WOMEN GROUP SESSIONS
- FOR A WEEK TOPICS MULTI CHANNEL CAMPAIGNS 2 ↔ 3

3 ↔ 2 - DEMONSTRATIONS
        - WRITING COMPLAINTS
        - PETITION
        - CONTACT WITH AUTHORITY

1. PRE-PLANNING STAGE:

- LEGAL FRAMEWORK, POLITICAL CLIMATE
- LEVEL OF SOCIAL READINESS/MOTIVATION/WILLINGNESS
- WHAT GOVT/NON GOVT INSTITUTIONS ARE INVOLVED IN WS&S IN THE
  AREA
- WHO CAN ASSIST IN PRELIMINARY DESIGN
- HOW MANY (TARGET) GROUPS
- IDENTIFICATION OF LEADERS (GOOD OR NOT?)
- NUMBER OF PEOPLE PARTICIPATING IN DIFFERENT ORGANIZATIONS

2. PLANNING

- BASIC/SOCIAL SURVEY
- WOMEN HAVE TO BE INVOLVED
- SPECIAL STEPS TO INVOLVE MINORITIES
- IDENTIFICATION OF TARGET GROUPS LAND/POLITICAL
- RANGE OF TECHNICAL OPTIONS/SERVICE LEVELS
- SET UP OF LOCAL ORGANIZATION (ALL TARGET GROUPS
  REPRESENTED)
- DETAILED PLANNING, SELECTION OF SYSTEM
- FINANCIAL SET-UP WHO PAYS WHAT, THEM HOW
  GRANTS/SUBSIDIES/LOANS/PAY BACK
- TIMING
- MANPOWER RESOURCES
- HYGIENE EDUCATION PROGRAMME
- DESIGN MONITORING

3. IMPLEMENTATION

- BUILD DEMONSTRATION UNITS/MODEL
- DESIGN
- CONSTRUCTION   - NO FREE RIDERS
                                  - SANCTIONS DISCUSSED
                                  - GOVT READY
- ORGANIZATION OF CONSTRUCTION + PAYMENT FOR
- EDUCATION SHOULD BE BASED ON EXISTING LEVEL OF KNOWLEDGE,
  NEEDS, PRIORITIES
- COMMUNICATION
- TIME SCHEDULING/SEASONS

4. <u>MAINTENANCE</u>

- RESPONSIBILITY SHOULD BE CLEAR COMMUNITY/AGENCY/GOVERNMENT
  - FINANCIAL
  - REPAIR WISE
  - WORK DONE

- INVOLVEMENT OF WOMEN
- TRAINING
  - HOW TO REPAIR
  - BOOKKEEPING
- SETTING UP OF MAINTENANCE FUNDS
  - ORGANIZATION/MONITORING

5. <u>EVALUATION</u>

- TIME SCHEDULING
- TRAINING
  WHO DOES WHAT

Session outline: 3.5

Subject: Improving water supply and environmental
                 sanitation: Technology choice and service levels

Timing: 9.00 - 10.30

Course staff: Lecturer IRC

Objectives: Present overview of service options in urban low-
                 income areas and introduce the concept of system
                 improvement based on effective demand.

Drinking water supply and sanitation in low-income urban areas
need to be compatible. An integrated approach is needed at the
level of the areas to be served. Water supply, drainage and
sewerage, disposal of human and household waste cannot be solved
in isolation. Economic activities in residential areas may
require additional attention. Costs considerations may lead to
evolutionary systems with low tariffs for the initial stages. The
systems which exist at the municipal level greatly determine the
choice of technology. Therefore savings can be achieved by
appropriate design criteria, service levels and by minimizing
maintenance costs. Flexibility of design is another consideration
when the population growth is high. Howver, the additional
investment costs need to be covered. Viable solutions which meet
effective demand need to be developed with the users and
community-based or local management seems essential today.

Background information: Hand-out, overview service options,
                          articles.

Session handout: 3.5

Subject: Improving Water Supply and Environmental Sanitation: Technology Choice and Service Levels

Timing: 9.00 -10.30

Course Staff: Mr Jo Smet, IRC

Subject: **IMPROVING WATER SUPPLY AND ENVIRONMENTAL SANITATION:**

TECHNOLOGY CHOICE AND SERVICE LEVELS

by: Jo Smet, IRC International Water and Sanitation
           Centre

PROBLEM

A.o. the great imbalance in development between rural and
urban areas causes the magnetic action of urban centres in
terms of migration = urbanization from rural areas.

Often the growth rate of such urban centres reaches figures of
10% per year, even in countries with well-planned development
strategy and a strong focus on rural development such as
Tanzania. As a matter of fact the urban growth rate in the
squatter settlements/slums is the taking most of the annual
growth. 50 to 80 percent of the total urban population may
belong to the urban poor category.

This growth outpaced the capacity of the municipalities to
plan and implement for new residential areas and
infrastructural services like roads, housing and basic
services including water supply, sanitation and electricity.

These often illegal settlements are politically accepted but
create infrastructurally and hygienically a difficult
situation. Before any planning for upgrading takes place, the
area should be characterized using certain parameters:

> 1. demographic factors: population density, housing
> (household) density, unequal population growth caused by
> in-migration (squatter areas grow in population and not
> in size);
>
> 2. socio-economic factors: high proportion of young
> people, high mothers employment rate, high un-employment
> rate, mixed nature of people (socially heterogeneous)
> causes differences in interest and capacities
> (finance/organization etc)
>
> 3. physical and institutional factors: poor access to
> water and sanitation facilities, poor housing, and
> general lack of other services.
>
> People coming from rural areas behave as in their
> previous setting where solid waste and sullage disposal
> was not a problem (low housing density), excreta disposal
> options were cheaper simple pit latrine which could shift
> after pit was full) and water supply from surface waters
> and/or shallow wells was perhaps quantitatively and
> qualitatively acceptable). Behaviour and possibilities
> causes now health risks and stress.

PLANNING OPTIONS

A walk through any squatter or slum will show us that a lot of mistakes have been made. Water taps are not functioning, are broken down, long queues of waiting women for water tap, installed conventional sewerage is blocked, open storm water drains are blocked, latrines or septic tanks are overflowing etc. Often the technology selection and/or the organization of O&M was lacking or was poorly done.

In general planning may follow one of the two approaches:

RESOURCE DRIVEN APPROACH or **DEMAND DRIVEN APPROACH**

(which are extremes and intermediate planning exists)
The correct approach depends on political and infrastructural situation.

A. Resource Driven Approach implies that the municipality often with support from an external donor has allocated a certain amount of money for a certain area and time period. The to be applied technologies may be decided at national or municipal level including donor policies and/or preferences in urban water supply and sanitation. Some countries make their aid tied to supply of equipment and materials and assistance by consultants from their own country. This is negotiated in the government/municipality - donor negotiations. National governments often go for standardization.

The selected communities or areas have to be made prepared to receive the project, including the approach, technology selected, O&M system and finance system chosen. Community organization is to be arranged and the project has decided what the beneficiaries should contribute. The technology is often already selected to allow for standardization. One standard service levels for all: e.g. public standposts.

The Resource driven approach may not recognize the heterogeneity of poor urban communities and its implications n functioning, use and effect. Community members differ in education, occupation, income or facties are based language, tribe, religion or caste. The "stronger" part of the community is usually a easy discussion partner and they may take control over the project and take extra benefits, overlooking (un)intentionally the poorer "weaker" part.

This approach has obviously implications on sustainability of the project, particularly in terms of expected financial and technical support from beneficiaries in O&M phase.

B. **Demand Driven Approach**: the need for environmental
sanitation improvement is identified by the community, and
they approach the municipality.

Another option is the **participatory community diagnosis**
initiated by the municipality on "felt need" indications from
the community.
This diagnosis leads to an understanding of the poor people's
felt needs and of particular conditions of the most vulnerable
groups which are usually left out in programme designs. The
different groups within the community will give information on
"life conditions" and on "specific sectoral conditions and
needs". Most of the diagnosis can be done by themselves, as
they are "experts in their own reality". Certain technical
information (e.g. geo-hydrological data) are to be collected
by the technical departments.

The diagnosis **results are then used for further programming** by
the municipal departments, and the community has to be
informed on possible technical options and their technical/
financial/ operational implications in the O&M phase. The
final decision on the technology to be applied and the service
levels to be set is made by the beneficiaries.

Aspects: - in start-up of project more support on community
            organization and community management;
            - training of "key role persons": community
            caretakers, masons, mechanics, bookkeepers, etc. is
            important;
            - afterwards technical backstopping may be important
            and community should know what their
            responsibilities and rights are, and which support
            to expect from where.
            - the private sector (mechanics, spare parts supply,
            etc) may come in O&M phase.
            - more attention to long term objectives: hygiene
            education, operation and care are better looked
            after.
            - ownership is clear and community-based finance
            management is easier.

ENVIRONMENTAL SANITATION

Rural technologies cannot be boldly copied to urban areas as
conditions differ greatly:
- high population and housing density;
- higher groundwater pollution risk due to septic tanks and
soakaways;
- adequate standard of public health needs piped water supply
(population/housing density);
- slums/squatter areas of cities often located at difficult
geographical locations:

ports -> urban poor often in coastal plains; expansion
areas vulnerable to flooding, difficulties in
construction/operation and maintenance;
hilly/mountainous areas -> erosion, construction and O&M
difficult;

Major areas of environmental sanitation:

* water supply
* rainwater drainage
* solid waste disposal
* sullage disposal
* excreta disposal

WATER SUPPLY

problems encountered by urban poor:
- costs: * from vendor water may cost ten times as much as
           from private metered connection; contrast urban poor
           and wealthier people;
           * monthly water costs may rise to four day wages!

- time waste by queuing at public taps;
- surface water heavily polluted: drinking, washing and
bathing health risks;

Objectives: provide also peri urban areas with:
            - good access to water supply
            - adequate quantity
            - reasonable convenience
            - affordable price
            - adequate quality

Technical options:

a.   piped water supply
a.1. sufficient public taps: who cares, who pays?
a.2   neighbourhood taps: limited number of users plus kind of
      coherence between users, users committee, ownership can
      be defined, metering possible;
a.3   private yard connection, single tap, (not-) metered,
      ownership clear
a.4   private multiple tap connection, ownership clear,
      expensive, need for proper sullage disposal

      remarks: consumption and health effects do not change
                 significantly when upgrading from public to
                 neighbourhood taps, only when to yard or house
                 connection

                 existing water plants (intake, treatment,
                 pumping, distribution) do often not allow for
                 increase in consumption; if so increase results
                 in intermittent supply. New squatter areas may

look for own small water works and network with
local water source such as spring, borehole or
well. This can be privately or public owned,
and operates independent or interconnected to
big network.
(e.g. Cali, Colombia)

b.   rainwater collection

To be seen as an intermediate solution until water works
has increased capacity or as a supplementary system to
piped water supply to allow for increase in consumption.

In peri-urban areas in S.E. Asia very common solution
particularly for drinking water.

c.   local or family wells

- ownership and O&M clear;
- need for good quality of well design/construction and
direct environment are protected against pollution risks;
- supplementary to piped water supply

Metering and charging real production plus distribution costs
may reduce per capita consumption by reduction of water waste
and conservation.
Some cities face a leakage percentage up to 50% of produced
water. Adequate leakage control and repair may reduce
production and treatment costs tremendously, and through
increased heads will provide better service levels (more
pressure and direct supply to higher flats possible, e.g. 25
m.w.c.) and more water.
Illegal connections (often improper causing leakage and
pressure drop) should be controlled and minimized. Zone
responsibility with zone metering or block metering may
provide social control on illegal connections.
Billing has to be discussed and agreed upon by users within
zone or block. The billing may be on basis of real consumption
if metered or on no. of taps or no. of users or economic
activity for which water is used.
Obviously, old water supply networks need rehabilitation up to
present standards to allow for sufficient pressures and to
prevent leakages.

RAINWATER DRAINAGE

Management of stormwater (for flood control) is a prerequisite
for good other sanitary improvements. In areas vulnerable to
flooding the rainwater drainage is often given the highest
priority.   example: Guayaquil, Ecuador

Problems in implementing rainwater drainage:
- lack of suitable technical information
- division of responsibility for drainage between bodies in city (development dept. Public Works etc.)
- but support from the vulnerable communities is always possible.

Rainwater drains can also be used for sullage disposal. Blockage should be prevented by small grids to trap debris and/or sedimentation chambers per household. Mosquito breeding in stagnant dirty water (Culex quinquefaciatus -> bancroftian filariasis). Awareness and responsibility raising among households is important. Proper refuse disposal and collection system is crucial. People should be involved in planning, implementation and will therefore better motivated to take up responsibilities for keeping channels free of debris and other blocking material.

Technical options:

- Open channels:
    if proper constructed, children will not play in it;
    certain sections could be covered for safety; cheap and
    easy to clean but likely to be filled up with refuse if
    no proper collection system;
    materials: concrete, concrete plates, masonry, natural
    rocks well-plastered.

- sewer pipes:
    costly, more difficult to clean but refuse blockage will
    be less;

- small bore sewers:
    - 100-125 mm diameter;
    - only for liquid components; need for separation box at
    plots, e.g. septic tank
    - less expensive;

REFUSE DISPOSAL AND COLLECTION

Management of solid waste collection system is most crucial aspects. Collection system is most expensive part of problem; the capital investment is limited, which is often borne by external aid, but daily recurrent costs are high.

Because of nature of solid waste, i.e. mainly vegetable refuse, and warm climate, collection from daily to three times a week is needed for public health reasons (fly breeding).

Technical options for refuse storage:
- storage within premises: house to house collection; storage in private bins
- communal storage: enclosures, mechanically-emptied containers, interchangeable containers

Criteria: public health considerations, municipal capacity, cost etc.

Technology options for collection:

- motorized vehicles: includes compacter, standard tipper, container and hoist, tractor and trailer; tendency of cities in DCs to prefer these over handcarts or tricycles which often suffice in certain parts of city.
        problem: fuel, spare parts, no alternative if vehicles break down, good central organization;

- handcarts, tricycles
        - possible where trucks cannot come;
        - solid waste in squatter areas has different composition: more vegetable waste so more dense; no need for compaction;
        - possible for zonal collection to zonal dumpsite;
        - cheaper, less foreign currency,
        - informal sector employment
        - organization at neighbourhood or ward level increases awareness and preparedness to sweep yard and streets
        - recycling solid waste easier at that level: composting, other materials

SULLAGE DISPOSAL

Bathing, washing, washing-up water.

To be properly discharged as dense population;

If limited infiltration capacity of soil on-site sullage and sanitation systems are not feasible.

Technical options: open drains, sewers, small bore sewers.

This system will also receive overflows (liquid component) of septic tanks.

EXCRETA DISPOSAL

technical options:

1. Conventional water-borne system:
        - very expensive
        - installation in narrow winding streets or unsurveyed areas difficult
        - need for reliable constant water supply (not intermittent)
        - high consumption of water

- frequent problem in environmental pollution: sewage
  discharges in surface water without any treatment;
- not possible when traditional anal cleansing materials
  are used: blockage.

2. On-site sanitation systems:

* pit latrines, Ventilated Improved Pit latrine:
          - individual family use
          - could be emptied by suction truck (as double vault
          or septic tank) or by handcart pumping (Dar es
          Salaam)

* composting latrine:
          - good attention needed; example: East Africa,
          Tanzania, Vietnam
          - value of manure (decomposed material) should be
          appreciated; religious/cultural taboos

* double vault latrine:
          - use of decomposed material: see above
          - could be upgraded to pour flush

* pour flush:
          U pipe with water seal with either septic tank or
          alternating soakpits to be emptied

* septic tank:
          - more expensive, concrete box
          - separation and digestion of solid matter
          - effluent flows in soakaway/sewerage/ small bore
          sewerage
          - periodically sludge removal needed
          - full reliable water supply

3. Off-site sanitation systems

* see 1.

* vault and carriage system;
          - water tight box receives all excreta/urine and
          flush water, which will be collected
          -in Far East
          - tankers required

* bucket latrines:
          - unhygienic

4. Communal toilets:

     - need for proper care: paid attendant to keep clean
          e.g. in Patna (India) small usage
          charge,distribution of a little soap

PLANNING

financing: not priority for politicians

role of municipality:
rainwater drainage, land tenure arrangement, provide key
building materials for cost price and/or prefabrication of
specific components (slabs, squatting pans for pour flush).

Table 9.1 Comparison of Several Types of Sanitation System

Sanitation system	Rural application	Urban application	Construction cost	Operating cost	Ease of construction	Water requirement	Soil conditions required
Pit latrines	Suitable	Not in high-density areas	Low	Low	Very easy except in wet or rocky ground	None	Stable permeable soil; water table >1 m deep
Pour-flush toilets	Suitable	Not in high-density areas	Medium	Low	Requires builder	Water near toilet	Permeable soil; water table > 1 m deep
Sewered pour-flush toilets	Not suitable	Suitable	High	Medium	Requires engineer	Water piped to house	Preferably stable soil; no rock
Vault toilets and vacuum trucks	Not suitable	Suitable where vehicle access and maintenance available	Medium	Very high	Requires builder	None	None
Septic tanks and soakaways	Suitable	Suitable in low-density areas	High	High	Requires builder	Water piped to toilet	Permeable soil; water table > 1 m deep
Conventional sewerage	Not suitable	Suitable where affordable	Very high	High	Requires engineer	Water piped to toilet	Preferably stable soil; no rock

from: Cairncross, S. , Environmental Health Engineering = the Tropics

Planning a Sanitation Programme

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Toilet type	Level of water supply		
	Hand carried	Yard tap	In-house connections
VIP	● →	●	×
Pour flush	[●] →	● →	●
Sewered pour flush	×	● →	●
Vault	×	● →	●
Conventional sewerage or septic tank	×	×	·※·

× Combination unlikely

·※· No upgrading required

[ ] Feasible only if sufficient pour-flush water carried home

Figure 9.5 Potential sanitation upgrading sequences
Source: From Kalbermatten *et al*. (1982)

from: Cairncross, S. , Environmental Health Engineering in the tropics

Session outline   3.6

Subject: Improving water supply and environmental
                 sanitation: technology and service levels
                 (groupwork)

Timing: 11.00 - 12.30

Course staff: Lecturer IRC

Objective: **To apply the concept of systems improvement based
                 on effective demand**

The participants will work in groups. Each group will work out a
proposal for a case. Next each group will criticize the proposal
using assessment criteria which will be discussed in advance.

Background information: Individual work from earlier sessions,
                          case descriptions, assessment criteria

Session outline: 3.7

Subject: Community-based financial management

Timing: 13.30 - 15.00 and 15.30 - 17.00

Course staff: Lecturer IRC

Objectives: Review experience and present overview of
                practical solutions.

Community-based or user-based financial management relates to
user responsiblities for their drinking water supply and
sanitation systems. This role needs to be placed against the
background of a community development process in which women have
a vital role. Water supply and sanitation systems can generate
revenues, but innovative solutions are needed because of the low
socio-economic status and irregular income of low-income groups.

Background information: What price water, artivcle, hand-out
                         presenting possible options for low-
                         income urban areas

Session outline: 3.8

Subject: Community-based financial management (workshop)

Timing: 15.30 - 17.00

Course staff: Lecturer IRC

Objectives: To discuss constraints and possible solutions
                referring to institutions, programmes and urban
                areas participants are familiar with.

The various options presented earlier will be passed in review by
participants. They will use examples from their own experience.
The workshop will result in the formulation of key conditions for
successful community-based financial management.

Background information: see earlier session

Session outline   3.9

Subject: Environmental sanitation: Socio-economic and
                  cultural factors affecting technology choice.

Timing: 9.00 - 10.30

Course staff: Lecturer IRC

Objective: Introduce a systematical and multi-disciplinary
                  concept of environmental sanitation and hygiene
                  education

Using experience in Thailand and Indonesia socio-economic and
cultural factors determining the feasibility of improved hygiene
and environmental sanitation will be identified. In the recent
past low-cost sanitation systems have been implemented without
due consideration for these factors. A recent study in India
shows that systems are not maintained sufficiently. Environmental
sanitation requires attention over long period and improvements
take place gradually provided there is institutional support over
longer periods even if initially the population gives low
priority. How to gain support for this type of programme?

Background information: Extracts from IRC occasional paper
                           (draft)
                           Case material
                           Hand-out

Session outline   3.9

Subject: Environmental sanitation: Socio-economic and
                cultural factors affecting technology choice.

Timing: 9.00 - 10.30

Course staff: Lecturer IRC

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                concept of environmental sanitation and hygiene
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cultural factors determining the feasibility of improved hygiene
and environmental sanitation will be identified. In the recent
past low-cost sanitation systems have been implemented without
due consideration for these factors. A recent study in India
shows that systems are not maintained sufficiently. Environmental
sanitation requires attention over long period and improvements
take place gradually provided there is institutional support over
longer periods even if initially the population gives low
priority. How to gain support for this type of programme?

Background information: Extracts from IRC occasional paper
                           (draft)
                           Case material
                           Hand-out

HANDOUT FOR SESSION 3.9

-Sanitation Development

- The importance of different interventions for
  sanitation-related diseases

- Checklist on environmental cleanliness and sanitation
  facilities

- Cultural variations in defaecation practices

- Elements of a good hygiene education programme

Sanitation Development:

Sanitation development has lagged behind developments in water supply because it is as yet not considered a priority by either governments or communities. Many sanitation projects have failed because recipient communities did not see the need for sanitation and because they were not motivated to participate in planning and implementation. Usually sanitation projects are introducing new systems, but it will not always be necessary to plan for new facilities. In every community there are bound to be traditional sanitation facilities and practices. These reflect local social and cultural preferences and are, moreover an investment in monetary terms by the people who built them. Not all of these might be good from a hygienic point of view, but instead of promoting another technology, it may be possible to upgrade the existing facility to become more sanitary and safer to use. This is cheaper for the people and also values the effort they already have made for sanitation.

Before planning for improved sanitation can start, an assessment of local needs and priorities has to be made. If it turns out that sanitation has a very low priority, it is useless to impose new sanitary facilities. It is much better to only start with hygiene education. First of all because it will make people more aware of the implications of their daily behaviour for their health and secondly because it may induce people to think about sanitation in a way they have not done before and could prepare people to participate in planning for improved sanitation,

If the community is interested in new sanitation systems it is essential to plan the improvements together. Like other human activities, sanitation behaviour is culture bound: different societies have different ways of disposing of human waste. These ways are determined by traditional notions, religious beliefs and environmental factors. The community knows all these factors and is able to take these into account when planning for sanitation improvements.

Social factors are for instance the level of social organization; homogeneity of heterogeneity of the population; willingness and ability to contribute labour, materials or money towards sanitation; the ability of women to participate and experience with other development efforts.
Cultural factors are for instance religion, ideas association with defaecation, preferred posture while defaecating, preferred times of defaecation, anal cleansing habits and the attitude to human faeces.
Environmental factors are for instance availability of water, soil condition, groundwater depth and population densities,

When the community is sufficiently involved in planning and implementation, they will feel more responsible for the product

of joint efforts and will therefore be more motivated to properly use and maintain the sanitation facility. Here again it is important that hygiene education forms an integral of the project to make people understand how the facilities should be used and maintained.

Because sanitation development has lagged behind water supply, it should be possible to avoid making the same mistakes as in water supply with respect to allocations of time, money, and effort for monitoring and evaluation and to cover recurrent costs.
In (peri)-urban areas environmental sanitation is becoming a major problem. Even more than in rural areas, water supply and sanitation are interlinked and people tend to forget that the cost of getting rid of water is much higher than to supply it. Improvement of water supply may in some cases even lead to deterioration of health conditions, especially where densities are high.
Low cost on site sanitation may not always be a possible option in urban areas, yet sewerage is too costly for people in low income areas. As yet there has not been much experience recorded with low cost sanitation options in urban areas. But it is already clear that only integration of water supply and environmental sanitation will lead to the health improvement which are the goal for both.

Sanitation Development:

1. Why Sanitation

   - health   faecal. oral transmission routes
                    local health knowledge
   - to sustain   improved water supply
                    more water, more waste water
                    couple sell with water and hygiene education

2. Importance of different interventions for sanitation related
   diseases

3. Difficulty in sanitation is low priority

4. Reasons for an upgrading approach
   - reflect social, cultural preferences
   - values effort taken
   - cost efficiency
   - cost effectiveness
   - affordability

5. Assessing the local situation, find suitable informants, walk
   - sanitation practices [inventorization of risk factors and]
   - sanitation facilities problems
   - local priorities
   - local needs
   - economic capacity
   - major social grouping
   - formal - informal organizations
   - different target groups

6. Classification (for instance 4 possibilities)

7. Background information needed for programme development
   - cultural/social factors
   - social structure
   - status of women
   - religion
   - table on cultural variations
   - Motivating factors - convenience, privacy, status
   - social organization - sanitation committee

   Environmental condition
   - water availability
   - soil conditions
   - groundwater depth
   - densities
   - availability of building materials

   Design preferences
   location
   substructure(handling faeces, water or not)
   floor slab
   superstructure

8. Upgrading
   Hygiene education seeks to change or reinforce
   - knowledge (know)
   - attitudes (feel)
   - behaviour (to)
   - identification current hygiene practices + problems
     (link to inventorization of risk factors + prevalent
     diseases)
   - priorities
   - target groups
   - table on element of a good h.e. programme
   - methods of he. - objectives clear, specific, measurable,
     achievable
     - mass media (radio, to, film, newspaper, posters)
     - demonstration (yesterday I saw your child doing ....)
     - audio visual aids - give information
                         - effective learning only by doing
                         - no impact if no discussion afterward
                         - visual aids may not be understood
     - chalkboard   - songs
     - flannel board   - drama/puppet show
     - flash cards
     - (picture) stories)
     - cassette

9. Criteria for upgrading
   - remaining useful life of latrine pit
   - present structural soundness (stability pit, condition
                                        slab)
   - acceptance in the community
   - pollution potential

10. Option for improvements
    - floor slab
    - fly + odour control
    - superstructure

11. New systems
    Dry: . Basic improved traditional latrine
         - hygiene self draining floor with tight fitting lid
         - adequate foundation of substructure
         . Bored hole latrine
         . VIP - vent pipe
         . alternating twin pit VIP latrines
    Wet: Pour flush latrine
          septic tank
          aqua privy

Table 1: The importance of different interventions for sanitation related diseases

INFECTIONS	Water quality	Water availability	Excreta disposal	Excreta treatment	Personal and domestic cleanliness	Waste water disposal	Food hygiene
Diarrhoeal diseases							
Viral agents	2	3	2	2	3	0	2
Bacterial agents	3	3	2	2	3	0	3
Protozoal agents	1	3	2	2	3	0	2
Worms with no intermediate host							
Ascaris and Trichuris	1	1	3	3	1	1	2
Hookworm	1	1	3	3	1	0	0
Enterobius	1	3	2	2	3	0	1
Worms with an aquatic intermediate host							
Schistosomiasis	1	1	3	2	1	0	0
Worms with an animal intermediate host							
Beef and pork tapeworms	0	1	3	3	1	0	3
Insect transmitted diseases							
Bancroftian filariasis	0	0	3	0	0	3	0
Total	10	16	23	19	16	4	13

0 = no importance
1 = little importance
2 = moderate importance
3 = great importance

Adapted from Richard G. Feachem. Infections related to water and excreta: the health dimension of the decade, 1980?
Water quality

Possible checklist on the state of environmental cleanliness

(If the answer to any question is 'yes', this indicates a
possible health hazard, requiring some form of action)

1. Is faeces lying around in places where people walk or
    children play?
2. If children defaecate anywhere near their homes, is the
    faeces left lying around?
3. Are water sources polluted directly by faeces?
4. Can water sources get polluted indirectly by excreta
    being washed into it? (due to rain or seepage)
5. Are there any specific defaecation areas?
6. Are the sources of drinking water unprotected
    (e.g. rivers, streams, uncovered wells)?
7. Are sources of drinking water accessible for animals?
8. Is there stagnant water anywhere? (indicating low
    seepage and lack of drainage)
9. Is solid waste left lying around in the compound or the
    street?

Possible checklist for sanitation facilities
(If the answer to any question is 'no', this indicates a
health hazard)

1. Is the latrine and area around it clean?
2. Is the latrine and area around it free from fly
    nuisance?
3. Is there a cover or other means to keep the flies out?
4. Is the latrine and the area around it free from odours?
5. Is the area around the latrine free from stagnant
    water?
6. Is the latrine slab smooth and easy to clean?
7. Is the latrine slab strong and without any cracks?

8. Are possible water sources (spring, well) more than 10
    meters away?
9. Do all adults of the households who have a latrine
    always use it when they are around?
10. Do the children of the households who have a latrine
    always use it when they are around?
11. Are handwashing facilities available in or near the
    latrine?

TABLE 2
Cultural Variations in Defaecation Practices

Aspects	Cultural variations	

1. Choice of preferred site
   a) location
 	
   b) visibility of
      (intention of) use
	Open field
	Near or in water
	Within the house
	Socially prescribed
	Allowed
		- Where cover
		- No water contact
		- Away from the house
		- Individually selected
		- Not allowed

2. Preferred posture	Squatting Ritually prescribed	- Sitting - individually preferred
3. Preferred times of defaecation	Sunrise or Sunset	- Whenever the need arises
4. Daily frequency of defaecation	Once or less	- more than four times

5. Aral cleansing
   materials
	Only water used	- Paper, leaves, sticks,
		  corncobs, stones etc. used

6. Cleansing after defaecation	No cleansing	- (ritual) bathing
7. Social organization of defaecation	Strict male/female separation Communal defaecation accepted Avoidance rules within family	- less strict - not tolerated - no avoidance rules

8. Attitude to human
   faeces
	Cannot be handled
	
	Children faeces con-
	sidered harmless
		- Seen as useful resource:
		  Used in composting or
		  feeding animals
		- Children faeces considered
		  harmful

Adapted from: Piers Cross, Social Aspects of Sanitation Programmes: Issues,
methods and Implementation Procedures, 1982.

Quick Reference:

ELEMENTS OF A GOOD HYGIENE EDUCATION PROGRAM

1. It is active rather than passive.

2. It has legitimacy in the eyes of the community.

3. It brings about sustainable change.

4. It weaves a net of messages into which nearly everyone in the community is caught.

5. Community hygiene education "teachers" have very simple and very clear roles to play.

6. It is positive rather than negative in what it asks people to do.

7. It asks people to do things they can afford or reasonably expect to do given their circumstances.

8. It is flexible and always being evaluated; new things are tried, and methods that don't work are discarded.

9. It does not depend upon people's ability to read or give public lectures.

10. It is easy to evaluate using community members or health workers to carry out the evaluation.

11. It has a good system for reporting results.

12. It provides tangible rewards for short-term and long-term community progress toward change.

Session outline   3.10

Subject: Environmental sanitation (workshop)

Timing: 11.00 - 12.30

Course staff: Lecturer IRC

Objectives: To develop approach to **assess environmental
                 sanitation** needs in low-income urban areas and to
                 define possible stages in a process of
                 improvement.

The workshop will make use of existing material. Participants
will be provided with a format indicating possible main stages
and a short checklist to assess environmental sanitation needs.
They will comment on this referring to their own area and list
activities to be carried out. The group will discuss the
feasibility of the approach.

Background information: Handout.

HANDOUT FOR SESSION 3.10

- CASE

CASE STUDY

Lack of sanitation in the country's low-income settlements has resulted in a high infant mortality rate due to diarrhoea and other intestinal problems. About 40 per cent of the people have latrines. Only a third of these are properly used and maintained. About 60 percent of the people defaecate in the field or in the river.

The Government has designated the coming year as the Year of the Latrine. Latrine building has been given high priority and one million units are scheduled to be built and installed in low-income settlements all over the country. Community participation is considered important for succesful programme implementation. All settlements have been ordered to organize latrine building cooperatives.

To build a latrine, each household will contribute half of the unit cost to its building cooperative, and the Government will contribute the other half of the unit cost as soon as the substructure is completed.

Radio ownership is common in most parts of the country and radio programmes are scheduled to promote and support building cooperatives. The radio programmes will stress the advantages of latrines in reducing gastro-intestinal infections.

The Government estimates that it will have reduced infant mortality due to diarrhoea and other intestinal disorders by 30 per cent at the end of the Year of the Latrine.

ASSIGNMENT

Make an assessment whether the Year of the Latrine has a good chance to succeed or not.
- What would you consider a success?
- Reasons for success or failure have to be clearly stated.
- Recommendations for improvement, if any, have to be made.

Community Participation at different stages

	COMMUNITY	AGENCY
① Pre-planning		
② Planning		
③ Implementation		
④ Operation & Maintenance		
⑤ Evaluation		

● A) Roles of each
B) Activities of each
C) Resources from each

CHANNELS, TECHNIQUES & 'TOOLS' FOR COMMUNICATION (→ represents flow of information)

	① COMMUNITY ←→ COMMUNITY	② COMMUNITY → AGENCY	③ AGENCY → COMMUNITY	④ COMMUNITY → GOVERNMENT	⑤ GOVERNMENT → COMMUNITY
CHANNELS	• informal social networks: – exchange of information and gossip, 'spreading rumours at public places (taps, shops, market, bar) – networks of friends, relatives, groups (women, men, children, ethnic groups etc) • informal & formal gatherings – meetings, religious gatherings, festivals • traditional and/or formalized networks of, f.i. leaders and subleaders • <u>via</u> mass-media	• (in)formal face to face contacts residents – agency staff • appointments • postal / telephone service • meetings with agency – representative(s) of community (leader(s), delegation) – community association/committee – community at large • political network / hierarchy • intermediary (NGO or persons) • newspaper (via journalist, editor)	• see column ② • PR - department in agency • newspaper & other mass-media (f.i. for announcement advertisements) • visits to area • site office in project area • social events NB: AN AGENCY OR NGO COULD TRY TO MAKE USE OF EXISTING COMM↔COMM. AND GOVT↔COMM CHANNELS FOR EXCHANGE OF INFO.	• see column ② • via mass media • elections / parliament • govt. officials/politicians present at community meetings, festivals	• through mass media • through administrative hierarchy, system • through specialised dept. (PR, • through political system int • through army / police • through agencies • rallies, election campaigns • through educational system • through health/medical system • see also column ③
TECHNIQUES	• verbal communication – 'spreading the word' – speeches; discussions; door to door visits • 'village shouters' • gestures, codes, symbols • smoke signals • written / illustrated comm. – at meetings; on walls; pasted / written at public places (pamphlets, posters); door to door delivery. • drama • 'audio' (see tools) • recording & broadcasting	• verbal communication – appeal; discussion; dialogue; interview; speeches; brainstorming. • written: – letters; petitions; protest; memoranda; open letter. • surveys (initiated by comm. or agency, executed by agency or community; 'self description') • consultation	• field work • public address • workshop / seminar • demonstration (exhibition; models; visits to other areas) • written / illustrated comm. – letters; reports; brochures; pamphlets; bulletins; posters • training – courses; manuals; on the job • audio-visual (see tools)	• verbal / written requests, appeals, complaints, proposals • demonstration, boycott, strike, grafiti, petition, protest march, mass actions/ campaigns • consultation initiated by govt. • spying	• instruction • persuasion • coercion • education • legislation • repression (repressive actions carry a message!) • "give aways" (!) • see also column ③
'TOOLS'	• speech! • notice boards, blackboards • paper / pen / typewriter / printing, copying equipment • paint & brush • drum/gong/bell/bamboo (f.i. to announce meeting) • (car/cart with) speaker • radio /TV equipment		• film • slides • video • TV • radio • exhibition material • maps / plans / models • aerial photographs	• placards, streamers (?) banners • see also column ①	• mass media • laws / acts of parliament / regulation • books • aeroplane with banner carrying message • see also columns ③ & ①

CHANNELS, TECHNIQUES & 'TOOLS' FOR COMMUNICATION (→ represents flow of information)

	① COMMUNITY ⟷ COMMUNITY	② COMMUNITY → AGENCY	③ AGENCY → COMMUNITY	④ COMMUNITY → GOVERNMENT	⑤ GOVERNMENT → COMMUNITY
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'TOOLS'	• speech! • notice boards, blackboards • paper /pen /typewriter/ printing, copying equipment • paint & brush • drum/gong/bell/bamboo (f.i. to announce meeting) • (car/cart with) speaker • radio /TV equipment		• film • slides • video • TV • radio • exhibition material • maps /plans/models • aerial photographs	• placards, streamers (?) banners • see also column ①	• mass media • laws /acts of parliament/ regulation • books • aeroplane with 'banner' carrying message • see also columns ③ & ①

Examples of Information Needs in Evaluating Community Potential for Participation[a]

Capacity to pay cash
Amount and reliability of cash income
Required and optional cash expenditures
Seasonality of income
Variability between households in income and expenditure
Credit availability within and beyond community

Capacity to contribute labor
Health status and numbers of able people
Seasonal migrations
Other demands on labor (e.g., harvest time)
Religious ceremonies and social obligations
Effect of fasting on ability to work
Distance of work site from homes

Capacity to organize themselves
Settlement pattern: nucleated or dispersed; permanent or nomadic
Existing local organizations, committees, associations
How is their membership and leadership chosen?
Responsibilities successfully carried out and those that failed
How far is the whole community involved?
Cultural homogenity and social harmony
Traditional self-help and social support networks

Capacity to change attitudes and behavior
Degree of education
Experience of other projects, educational campaigns
Presence of suitable leaders, change agents
Positive initial response, especially from women

[a]Source: Whyte, 1982.

Session outline   3.10

Subject: Environmental sanitation (workshop)

Timing: 11.00 - 12.30

Course staff: Lecturer IRC

Objectives: To develop approach to assess environmental
                  sanitation needs in low-income urban areas and to
                  define possible stages in a process of
                  improvement.

The workshop will make use of existing material. Participants
will be provided with a format indicating possible main stages
and a short checklist to assess environmental sanitation needs.
They will comment on this referring to their own area and list
activities to be carried out. The group will discuss the
feasibility of the approach.

Background information: Handout.

Session outline: 3.11

Subject: Sustainability of community water supply and
                environmental sanitation in low-income urban
                areas.

Timing: 13.30 - 15.00

Course staff: Course coordinators IHS and IRC

Objectives: To summarize course content sofar and discuss the
                issues of sustainability and replicability in
                order to define possible priorities in developing
                a strategy.

The sesssion will start with a short presentation and summary
referring to the first block of the course. Participants will be
asked to react. Sustainability and replicability are necessary
prerequisites for increased coverage of the growing urban low-
income population. In a strategy aimed to achieve coverage there
must be a balance between the development of institutions,
extension of appropriate services following effective demand and
development of grass roots or local organizations. The financial
viability of the institutions and the investments must be
ensured.

Background information: Earlier course material, hand-out.

Session 3.11

Hand-out:

Defining Sustainability
Checklist for sustainability assessment
Matrix for assessment of sustainability

DEFINING SUSTAINABILITY

Introduction

Sustainability is a term being used increaingly in various
sectors of development. The Brundtland report (Our common
future on the state of the world environement relates the need to
improve the life of the people with the capacity of the
environment, and stresses the need for 'sustainable development'.

Meeting both short term needs and at the same time establishing
conditions for future in order not to loose what has been gained
is now recognized as a main challenge for the present and for
future generations. It is also the main challenge for managers of
water and sanitation institutions and projects.

Lessons have been learned over the last decade and before. It is
clear that it is not sufficient to construct water and sanitation
systems. All through the process of planning and implementation,
and also in the management of systems, future use, functioning,
and impact of the improved systems needs to be a main criterion
in defining priorities and taking decisions concerning the
allocation of resources. For instance, there is now more emphasis
on lifetime costs and recurrent costs, where earlier only
investments were taken into account in the planning of water
suppl and sanitation programmes.

2. Aspects of sustainability.

When assessing existing programmes and institutions on
sustainability, it is often found that the management and senior
staff working there are not confident about the long-term result
of their work. They know the problems, but lack the tools,
knowledge or experience to draw up a strategy or action plan for
improvement. Sometimes they know what to do, but do not have a
policy to refer to, and have no information concerning the way
other projects and institutions have tackled the problems.

The following questions are frequently brought up:

- How to make sure that water supply and sanitation systems
  will continue to function after the programme comes to a
  halt.
- How can the impact of the facilities be ensured, i.e. will
  the people use them corectly and be motivated to do
  something to keep them running.
- How can we ensure that institutions responsible for the
  provision of more facilities, for the management of the

systems . or for support to local maintenance and operation
become viable.
-      How can we generate the resources to extend and replace
       systems, or to improve the serive to higher levels.
-      Will water resources sufficient, and their the quality
       ensured in the future.

These simple questions cover a world of complicated issues to be
addressed during the course, and there is a need to identify
these issues on the basis of experience of participants.

The question of sustainability is to a large extend a question of
striking a balance between short-term and long-term objectives,
and of defining how resources can best be used for now and in the

future. In the session on 'elements for sustainability' the
concept of resource coverage will be introduced.

3. How to approach the main question of sustainability.

Achieving sustainability is not easy, because there is much
history in projects and programmes. There are existing practices
and often rights of comsumers have been form.ally established
under different circumstances. A large consensus needs to be
established to be in a position to really give more priority to
long term aspects of water supply and sanitation provision.
Realistic assessment of the questions of sustainability is
gradually leading to coordination at the international level.
National policies are slowly evolving, but need to be based on
experiences in the field. Consequently the role of managers in
rural and peri-urban water suppl and sanitation programmes,
regional water supply ionstitutions, and municipal departments is
crucial.

Cooperation Agency.Interlaken,Switzerland.
13-16 October 1987
- Cost recovery in community water supply and
sanitation, report of the fourth consultation
21-25 November 1988
(Volume II: Principles and models to achieve
sustainable community water supply and extend
household sanitation)

Hand-out: Checklist for assessment of projects and
programmes on sustainability.

Checklist for sustainability assessment in Water Supply and
Sanitation Programmes

Key considerations	Key issues
1. Technology choice	
Technology selection must be primarily based on identified maintenance requirements and local resources. Users involvement in technology choice and selection of service level increases the possibility of adequate maintenance and better use of the facilities.	Service level, technology type, maintenance tasks, caretaker training, community organization, finance, control.
Technology has to be affordable, which means, that maintenance and possibly construction costs can be paid for by the users. Alternatively a system of cross subsidies must be adopted.	Total annual costs, per capita costs, annual maintenance costs, cross-subsidies, service level, technology level, willingness to pay, control of funds.
Technology must be technically feasible which means that the quality of the system must be acceptable and suit the local conditions	Level of available expertise, quality of systems and components, availability of spare parts, tools and materials, environmental and geo-hydrological conditions.
Standardization of technology simplifies maintenance. It facilitates developing national and regional capacities for maintenance, and the introduction of quality standards.	Choice of suppliers, manpower development & training, local production of spare parts, workshop management, price control, quality control.
2. Institutional arrangements and legislation	
The maintenance system needs to be formalized. Tasks, responsibilities and rights of all parties have to be clearly identified, agreed upon and authorized	Task analysis, control powers, sanctions, legislation, contracts, overall management, preventive maintenance, repairs, spare parts supply, revenue collection, personnel management & training, monitoring.
3. Logistics	
The supply and distribution of spare parts should be guaranteed and organized before project implementation starts. Short term solutions do not suffice.	Import regulations, local production, distribution system, prices, competition, role of private sector, quality control, stock keeping, monitoring, standardization.

Key considerations	Key topics
Immediate repair of facilities is essential. In case local conditions prevent maintenance teams to travel, alternatives are required such as VLOM options or installing additional facilities.	Access roads, transport (regional and local), transport costs, local storage of spares, caretaker selection & training, community organization.
Replacement of system components combined with repair in well equipped workshops, will allow for better quality control and improve reliability of repairs.	System components, workshop equipment manpower, transport quality control.

4. Financial viability

Financial assessment should include all costs, and all available revenues, including taxation by local governments.	Direct maintenance costs, total system costs, depreciation, revenues, service level, subsidies.
Revenue collection mechanisms need to be developed and agreed upon prior to construction.	Tariffs, community based financial management, budgetting for maintenance, control, training, bookkeeping.

5. Manpower development and training

Training efforts need to be based on careful assessment of required skills and long term manpower requirements. Acquired knowledge should also be applied.	Task analysis, manpower planning (decentralized) training, selection of trainees formal status, operational working relations.
Job satisfaction is very important to keep staff and villagers motivated. This requires flexible organizations and personnel management.	Salary, income generation personnel management, career planning, job rotation fringe benefits, side jobs, accountability, sanctions.

6. Monitoring and control

Monitoring on the basis of selected information is a basic requirement for management of available resources.	Monitoring criteria, indicators, procedures, data collection, records, standards (number of users, waterconsumption, breakdowns, costs), user satisfaction feed-back, corrective measures.
Control of the quality of equipment that installed and spare parts that are provided is needed and should meet agreed standards.	Standards, legislation, local manufacture, sanctions, quality codes.

PROJECT RESULTS	NEED TO BE SUSTAINED ?	WHICH ORGANISATION(S) RESPONSIBLE?	ORGANISATIONAL STRUCTURE?	CAN THEY MOBILIZE RESOURCES?	PROJECT TAKEN CARE OF STRENGTHENING ORG.?	ORG. INVOLVED IN PLANNING?	PROPER HANDING OVER?	LOCAL FUNDS RESERVED?

Session outline: 3.12

Subject: Sustainability and replicability (individual
                assignment and final discussion)

Timing: 15.30 - -17.00

Course staff: Coordinators IRC and IHS

Objectives: To review the results of earlier workshops and
                assignments to assess the replicability and the
                sustainability of the approaches discussed

Each participant will propose several topics which needs to be
further studied. The idea of pilot or demonstration projects will
be discussed as well as the possibility to organize workshops
locally to discuss the issues.

At the end of the session the participants will be given
additional guidance concerning their main assignment for the next
two days.

Background information: Earlier course material and hand-outs
                          Notes made by the participants

Block 4:   Developing a strategy.

Session outline   4.1

Subject: Individual consultations

Timing: 9.00 - 10.30   (about 15 minutes per participant)

Course staff: Course coordinators and lecturing staff IHS and
                  IRC

Objectives: To discuss progress made in preparing a paper and
                  presentation and to identify knowledge or
                  information gaps.

Participants will show what they have prepared and will be given
advise and support.

Background information: Outline for paper

Session outline   4.2

Subject: Instruction concerning individual presentations

Timing: 11.00 - -12.30

Course staff: Coordinator IRC/IHS

Objectives: Make sure that there is a common understanding of
                the purpose, nature, contents and length of the
                presentations.

A typical outline for a presentation will be given. participants
will ask questions which will be discussed in the full group.
Next, participant will receive additional individual support if
required.

Background information: Hand-out providing guidance for the
                          presentation.

Session outline   4.3

Subject: Individual work and consultations

Timing: 13.30 - -17.30

Course staff: Course coordinators, resource persons, library
                staff

Objectives: To prepare final papers and documentation on an
                individual basis.

Participants will work in meeting rooms, library and receive
support as required in consultation with the coordinators.

Background information: --

Session outline: 4.4

Subject: Presentations by participants

Timing: 9.00 - 12.30

Course staff: Coordinators, interested lecturing staff, others

Objectives: To present results of the course and receive feed-
                 back from fellow participants and course staff.

Each participant will present during about 20 minutes using flip
overs and/or overhead sheets. next there will be about 20 minutes
for discussion.

Background information: hand-outs prepared by participants

Session outline: 4.5

Subject: Evaluation of the course

Timing: 13.30 - 14.30

Course staff: Staff member who did not contribute to the course
                and course coordinators.

Objectives: To identify opportunities for improvement
                To agree on follow-up contacts if necessary.

The evaluation session will be presided by a staff member who was
not involved in the course.

Background information: Questionnaire.

Session outline   4.6

Subject: Closing ceremony

Timing: 16.00

Course staff: n.a.

Objective: Formal end of the course

Certificates will be issued by directors IRC and/or IHS or their representatives.

The ceremony will be followed by an informal gathering.

Background information: --

Short Training Course

Community Water Supply & Environmental Sanitation for Low-Income Urban Communities

IRC

Individual paper and collected documentation