PROBLEMSOLVING AND DECISIONMAKING
By community participation

Irene Dijsselbloem

Preface

As a student at the department of " Ecology of Habitat"
at the Agricultural University of Wageningen, the Netherlands,
I performed my practical period at the Institute of Human
Settlements (IHS, Puslitbang Pemiukiman) in Bandung,
Indonesia from june until december 1986.
There I was supervised by Mr. Parwoto and at his request
I joined the PSWS project and made a study about problem
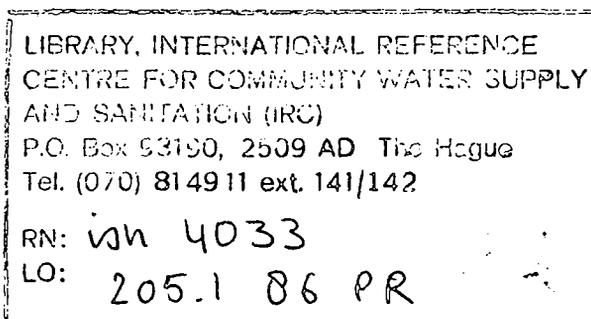solving- and decisionmaking processes.
It was sometimes quite hard for me to get the right information
and find some good literature, which could be helpful in making
this report. Therefore I decided to do some extra literature
study when I return to the Netherlands. This report, thus is
not the defenite version. The defenite version I will send
by post from the Netherlands to Indonesia.
I enjoyed my practical period at the IHS very much. I got
quite a good view on how the Indonesian people approach housing
problems, especially the ones related to water supply and sani-
tation.
Especially I want to thank Mr. Parwoto for supporting me
and discussing my work together. Also I want to thank all
the other people at the IHS with whom I had many nice talks
and discussions.

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Irene Dijsselbloem

4 december 1986

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CONTENTS

1.1 Indonesia

Indonesia is one of the biggest countries in the world.
It covers an area of nearly 5 million sq. km , of which
2 million sq. km are land. Indonesia consists of 13,677
islands of which only 3992 are permanently settled and
some 6000 are named.
This means a diversity of et
in Indonesia. About 250 different languages are spoken.
Indonesia has the 5th largest poulation in the world- over
162 million people- and its growth is enormously. Between
1930 and 1984 the growth on Jawa was from 11 million people
to 28.5 million people. Especcially in the cities this
growth is causing many problems.
Although in Indonesia live such a diversity of
cultures and religions, also relations between these dif-
ferent groups can be noticed, of which some are thousands
of years old. For example, all over Indonesia animism- the
belief that every object has a hidden power, influences the
doing and thinking of the people, no matter what their
professed religion.
Also, of the many religions that have come to these islands,
almost 90 % of the people are moslims.
Several events have also made the Indonesian population
into a unity. One of the most important contribution to
this was their constant struggle for independence from
Portugese, English, Dutch and Japanese colonial rule. Beside
this, the anti-imperialistic period of Soekerno in which the
militaristic coup, led by Soekarno, was prevented, stimu-
lated the unation of the Indonesian people.
After the declaration of independence from colonial rule
in 1945, the unity of the Indonesian people was stressed
by government politics by the promotion cf the Pancasila,
a weapen which expresses the 5 principles put forth by
the state as a foundation of political and social rule.
It gives an answer to the most urgent questions a new state
is confrontated with, on the subjects of religion, relations
with other states, national unity, government and sharing
prosperity. (See next page).
The 5 principles are:
1. Believe in a god (symbol: star):
   One must believe in a god.
2. Nationalism (symbol: head of a wild buffalo):
   All ethnic groups must unite and prosper

3. Indonesian democracy (symbol: banyan tree):
   Indonesia is built on democracy on all levels
4. Humanitarism (symbol: chain)
   Unbroken unity of mankind.
5. Social justice (symbol: sprays of rice and cotton):
   A just and prosperous society that will give adequate
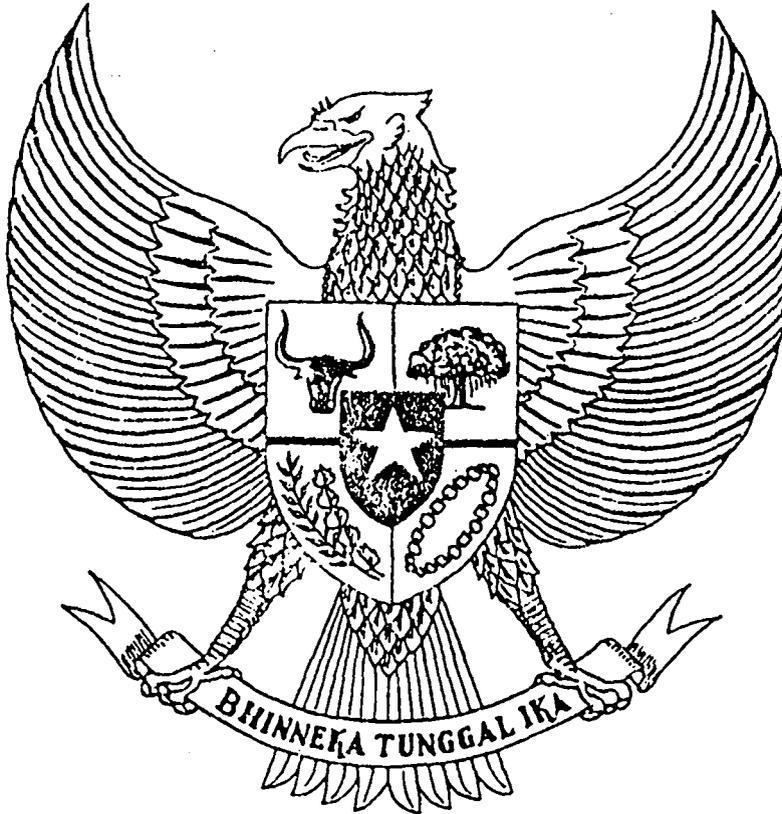   supplies of food and clothing for all.

Figure   : The Pancasila

Indonesia is confronted with many problems. It is still
a develpoing country; the national income is very low and
the mortality rate quite high comparing with other
developing countries in south-east Asia.
One of the biggest problems is the enormous growth of the
poulation in a short time. This has also caused a huge
urbanisation problem. Between 1971 and 1981 the urban
population increased with some 4-5%. This growth is twice
as much as the growth in rural areas.
Also the migration from the other islands to Jawa has become
almost a disaster. For instance on West Jawa (4686000 hec-
tares; 2,3% of the total area of Indonesia) 28.5 million
people (18% of the total poulation) live. The distinction
between rural and urban areas is becoming less and less
clear.

The urbanisation process is caused by the decrease of
labour in the agricultural sector, attention and investments
of the government   concentrated on industries and other
modern sectors around the cities, and the development of
the infra structure.
The enormous growth of the population has also caused many
problems in rural and urban areas of health, housing, hygiene,
water supply and sanitation. In 1982 only 40% of the urban
population was provided with good water supply facilities
and 20% had access to sanitary facilities. In the rural areas
only 18% was provided with good water supply facilities and
24% had access to sanitary facilities.
Until 1979, the period of RepelitaI and Repelita II, attention
was almost only paid to water supply in some of the bigger
cities in which more than 100000 people lived. After 1979
also attention was paid to smaller cities: The Ibu Kota Keca-
matans (IKK) in which 3000-2000 people live .This resulted
in an ambitious project in which an integrated approach to
improve living conditions was made . (more about the IKK
project: see chapter "The PSWS project")
In rural areas the improvement of housing conditions have
been neglected for a long time. In the rural areas the people
were thought to be able to help themselves. The last few
years it has become clear that the growth of the population
in rural is becoming a big problem too. Now also many projects
are started to improve the rural living environment as well.

Decision making in Indonesia

To get a better understanding of the governmental organization
in Indonesia, you will find a model of the several levels
of decisionmaking from national level to village level, on
the next page. Three important priciples of the indonesian
way of life which influence their ways of decision making
will be explained:

Gotong royong*:
Gotong royong means the joint responsibility and mutual coop
cooperation of the whole community to each of its members,
all working together to achieve common end. Having its origins
in earlier tunes, gotong royong is an all-important principle
in Indonesian life. Indonesia is made up of thousands of
villages and the tradition of gotong royong is the real grass-
root basis of political rule. Each village has a headman
(lurah or kepala desa), who coordinates gotong royong

* .. Indonesia Handbook by Bill D Iton

programs and carries out government policies.
The lurah rule by assigning friends and assistents to tasks,
a sort of administration by friendship. Loyalties to family,
village and friends are more important than self-advancement.

Musjawarah and Mufakat*

These political processes are built on very ancient customs
of Javanese origins. Musjawarah (deliberation) and Mufakat
(agreement) are methods of resolving political policy and
personal differences by prolongued discussion ending in una
unanimous decision. These methods are used both in the highest
legislative body in the state and at the humblest village
meetings. Indonesian people do not believe in the western
style democracy where the majority of 50-percent-plus-one-
or-more gets its way. They believe this system is not fair
to the remaining 49%-or-less of the voters. The will of the
minority is fully as important as thet of the majority (or
at least it should be), so the people talk themselves out until
until all parties come to some accord. It is each person's
responsibility to state his feelings, and to take part in all
negotiations. This technique goes very slowly, but all points
of view are brought together in one compromise agreement.

Elective assembly	Level	executive head
- Parliament	central government	president
-People's assembly (DPRD I)	27 provinces	guernùr (gouverner)
-People's assembly (DPRD II)	249 Kabupaten (counties)	bupati (regent)
	41 Kotamadja (cities)	walikota (mayor)
-	Kecamatan (subdistricts)	kepala desa (village headman)
-Village social institution (LSD or LKPMDR/ LKMD)	Desa (rural villages)	
	Kelurahan (urban villages)	lurah (village head)
	Rukun Warga (= RW) (neighbourhoods unit)	RW head (un- paid)
	Rukun Tetangga (= RT) (communities unit)	RT head (un- paid)

model: governamental
organization

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General approach

During the United Nations Water Conference (1971) the world attention was concentrated on the urgent problems of water supply,and as a result the UN declared the decade 1981 to 1990 to be the International Water Supply and Sanitation Decade (IDWSSD).
A study on Public Standpost Water Supply Systems was carried out for the World Bank by the International Reference Centre (IRC) in the Hague in 1969 and resulted in a publication of series of technical papers.
When world-wide problems were recognized associated with this type of water supply and many requests for more information were made, this led to the planning of a multi country demonstration project.
The PSWS project aims to develop appropriate methods for the planning, implementation and management of community water supply systems which include a number of public standposts.
Public standposts are build to serve the community with public taps, on their own or in combination with house connections. This is often the most appropriate mean of water supply, especially for the poorest people in rural areas.
The approach of the PSWS project is to integrate the essential technology in a wider community based framework which includes practical finance, administration and participation. The project is designed especially to benefit the poorer sections of the communities in rural and urban areas.
The project will be made up by 4 linked activities:
- Demonstration projects in four countries: Malawi, Zambia, Sri Lanka, Indonesia.
- Preparation of manuals and guidelines on aspects of Public Standpost Watersupply Systems.
- Ongoing evaluation and "lesson learning".
- Transfer and application of knowledge generated both in-country and internationally.

In the planning, implementation and management of the project, various organizational, economic, socio cultural and technical componente should be brought together and considered jointly
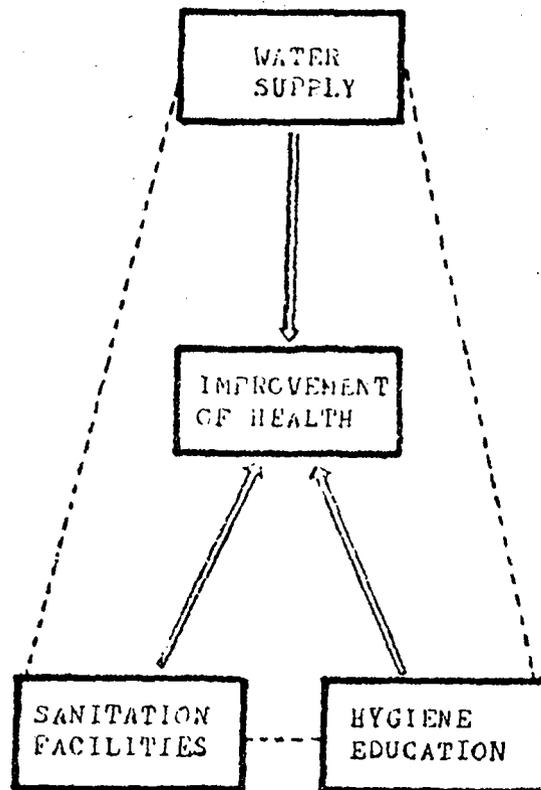
Each participating country will develop and improve the
approach to the Public Standpost Watersupplies through
study, demonstrations of better methods and sharing
of experience.

In the demonstration scheme project the community is
able to participate in all activities, for example:

1. Participation in design and construction.

2. In financial and maintenance organization.

3. In implementing hygiene education levels.

4. In planning service levels.

5. In ongoing evaluation.

6. In management of the system.

The project approach of promoting community participation
at every stage, use of integrated approaches and develop-
ment of project activities by nationals, has been well
adopted by all participating countries. Still, the imple-
mentation of the project and the results have varied
considerably from country to country.

In general considerable progress has been made in most
of the countries in terms of development of ideas and
understanding of improved approaches to standpost systems.

In the current government strategy on watersupply in
Indonesia, a clear distinction is made between the supply
of clear water for urban areas and that for rural areas.
Following the pattern inherited from the colonial period
before World War II, the two main agencies dealing with
the provision of water supply are presently the Ministery
of Public Work for the urban areas, and the Ministery of
Health for the rural areas.
Recently a new strategy for the current Repelita IV (Fourth
Five Year Development Plan 1984-1989) was adopted in which
the Ministery of Public Works became responsible for rural
water supply which formerly was taken care of by the .
Ministery of Health.
Cooperation and synchronization between the two ministeries
mentioned have always been close, and in fact a third
agency, the Ministery of International Affairs is also
linked to the cooperation. The tripartite connection is
clearly reflected in the National Board for the International
Drinking Water Supply and Sanitation Decade (IDWSSD) as
well as in the executing levels of water supply projects;
nationally, provincially and at village level.

Regarding the targets on water supply set in the National
Development Plan, the emphasis on water supply distri-
bution systems is to reach 70% urban coverage with
60 litres/capita/day (lcd) (60% coverage in rural areas),
with minimum 30 cld. It includes the installation of
water supply distribution systems in 2000 small towns or
capitals of districts, popularly known as IKK Water Supply.
IKK Water Supply was started in early 1982, and was con-
sidered to be an ambitious national project. It launched
standardized water supply package plans, in which the
distribution network and the construction of public standpost
form part. The IKK Water Supply project has attracted great
interest in the international community, including the IRC
in Den Haag, which expressed its interest in ooperating
in action research on Public Standpost Water Supplies (PSWS).
One of the objectives of cooperation is to evaluate the
perceptions of such projects in general, and a community
based approach to water supply planning in particular. Also
"demonstratio projects" should be established, which could
be replicated later on.

A main aim of this demonstration project is to seek proper development strategy to establish , and manage community water supply through standposts with intensive popular/community participation as a catalyst to generate broader development activities.

Since the fund, provided by the Netherlands Government throu through IRC to support this demonstration project, is only covering the software sides of the project, then for the hardware sides it is financed through various existing development projects , such as Capital of District Water Supply Projects, INPRES (Presidential Instruction Projects) for water supply, other projects within the Directorate of Water Supply- Ministery of Public Works, and community self-relience projects, etc. etc.

Among others, the main objectives of these demonstration projects are:

a. To develop a model of standard procedure for establishing a participatory project which provides room for bottom up planning.

b. To develop an integrated planning of community water standposts, covering all vertical stages of one project from the initial stage to operation and maintenance stage, and related horizontal aspects of water supply such as health, education and sanitation.

To carry out this project at national level, a Project Management Committee (PMC) is established to provide support and ensure the coordination of approaches, strategies, objectives and programmes oamong ministries involved, and to provide guidelines for planning and implementation of the project.

The Institute of Human Settlements in Bandung, is then appointed as Project Coordinating Institution to execute and coordinate various participating institutions involved.

The locations for demonstration projects were to be selected on the basis of:

1. Geography : Different geographical set up has to be covered.

2. Socio economic factors : Different types of communities.

3. Mode of water supply : Different types of water supply systems.

4. Distance : The distance to the demonstration project has to be managable from the Directorate of Building Research office, not too far and easy access.

TABLE I: Information on Demonstration Schemes   (Taken from : Interim Evaluation, IRC)

|	District	Name of Village (Kampong)	Nature of Area	Socio-economic position	No. of facili-ties	Popula-lation	No. of stand-posts	Type of System	Authority	Present stage	Remarks
1.	Astanajakura	Gumulung Tonggoh	hilly	Rural agricultural community	184	482	4	Gravity		Completed and is being used	Bathing and washing facilities were provided along with drinking water. Community constructed with material and skilled labour support. Rp 100 per family for O and M.
2.	Cikijing	Jagasari	hilly	Rural mixed community	73	361	3 1 for mosque	Gravity		In planning stage - Health education and community participation being done	Planning stage materials found at site for construction Expected to complete by December, 1985 Rp 100 per family for O and M.
3.	Cirebon Selatan	Karya Mulia	flat	Urban/mixed community	80	320	4	Extention from PDAM supply	PDAM	In planning stage	Project taken up in June 1985 and is in planning stage.
4.	Babakan	Playangan	flat	Urban mixed (majority fishing) community		2900	under consid-eration	under consid-eration		In planning	Technological feasi-bility has to be decided. Different technical options are under study.

A national workshop was held to discuss the preliminaries
and objectives of the IRC collaborated projects in the light
of the country's objectives and national priorities in
water supply and sanitation. Based on the criteria of
selection mentioned above, the municipality of Cirebon,
Regency of Cirebon and Regency of Majalengka were selected.
These Regencies were requested to select districts and
villages for the project and thus also the villages
Gumulung Tonggoh and Playangan were selected in the Regency
of Cirebon.

Trainers were selected from different institutions to assure
the integrated approach (see next page). They were trained
for participatory project planning and later became the
development cadre to carry out the training programme for
the cadre of the villages, sponsored by the project.
Consultations with the village heads and selected communities
were held. Local teams (cadres) were established to take
care of the project.

The cadres were formed to condition the community and
carry out the participatory project planning. This planning
was made after organizing Community Self Surveys (a way
to identify problems, obstacles and potentials of a commu-
nity):

At Community Level

(Taken from : A model for community based management project
by Parwoto)
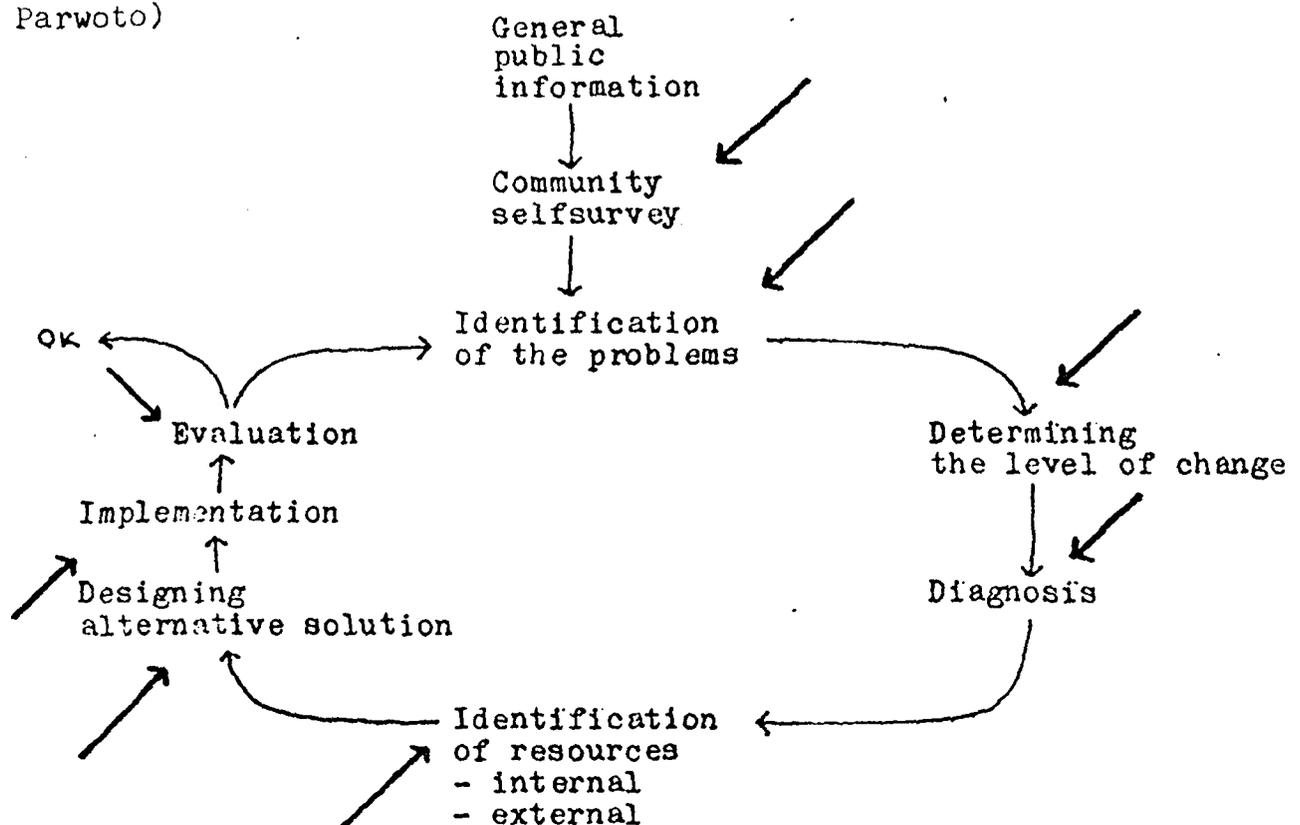
Guided Process for Participatory Planning

After the planning, the implementation took place, conducted
by the cadre and supervised by the PSWS-IRC team, to prevent
deviation from the project.

More detailed information of the implementation of the PSWS
project in the villages Gumulung Tonggoh and Playangan
can be found in the interim reports written by Yvette
van Dok, added as supplements to this report.

(Taken from : A model for community based management project
by Parwoto)

Profesional   Activity   Community

Programme ─────────────── Consultation and
holder   orientation with
  ┆   local authorities
  ┆
  ┆   Profesional
  ┆   survey
  ┆
The trainers   ◄─────── Training
consist of re-   the trainers
presentatives
of related
sectors

                              Training ──────────► Development
                              the caders   caders

                              Public
                              information

                              Com.
                              self
                              survey

                              Participatory
                              planning

                              O - M - R
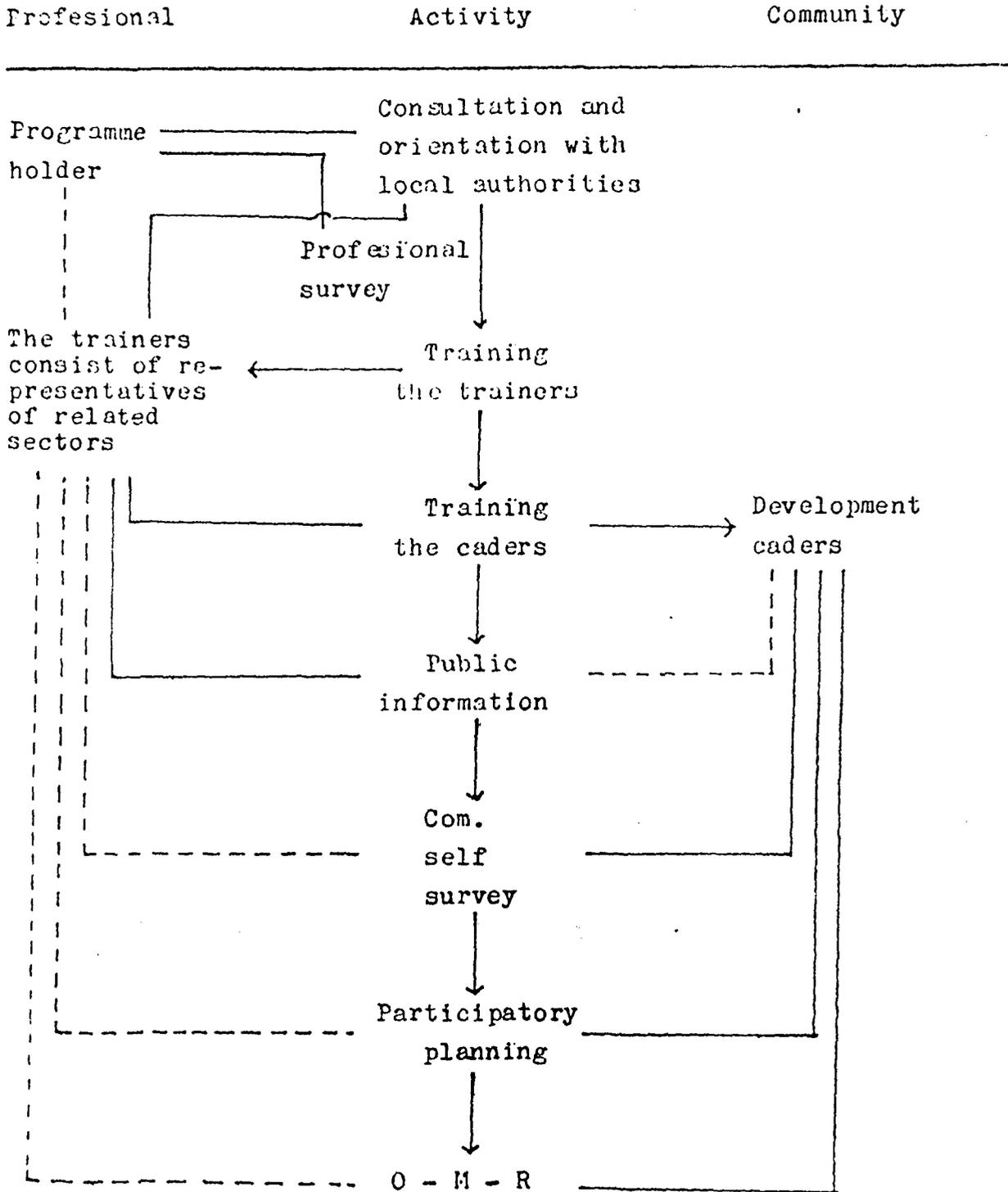
General Development Framework

INTRODUCTION

This report is written to give the Puslitbang Pemukiman
a theoretical framework of ways how to organize meetings
and discussions about solving problems in a community.
As a part of the Public Standpost Water Supply project,
training about these subjects will be given to the members
of the cadres of the project villages Gumulung Tonggoh and
Playangan. After this training the cadre will bring the
information to the community. The community will be guided
by the cadre to organize discussions to solve their problems,
to be able to do this on their own in a later stage.
To reach this stage the community will receive education
and will educate themselves. Several methods are available
to stimulate people to solve their own problems.
Therefore I will give several alternative approaches of
ways to discuss problems, with their possibilies and their
restrictions. The people themselves can choose the most
suitable one for them.
The meetings   will be organized to discuss all kind
of problems related to the watersupply project. This report
will not give solutions to certain problems, but only give
guidelines and advises on hów to look for solutions.
The community should formulate their goals about the PSWS
project. This should be done in the beginning of the project:
'What should be the situation after the implementation of
the project?' These goals may concern the health situation
but also the convenience that should improve, the amount of
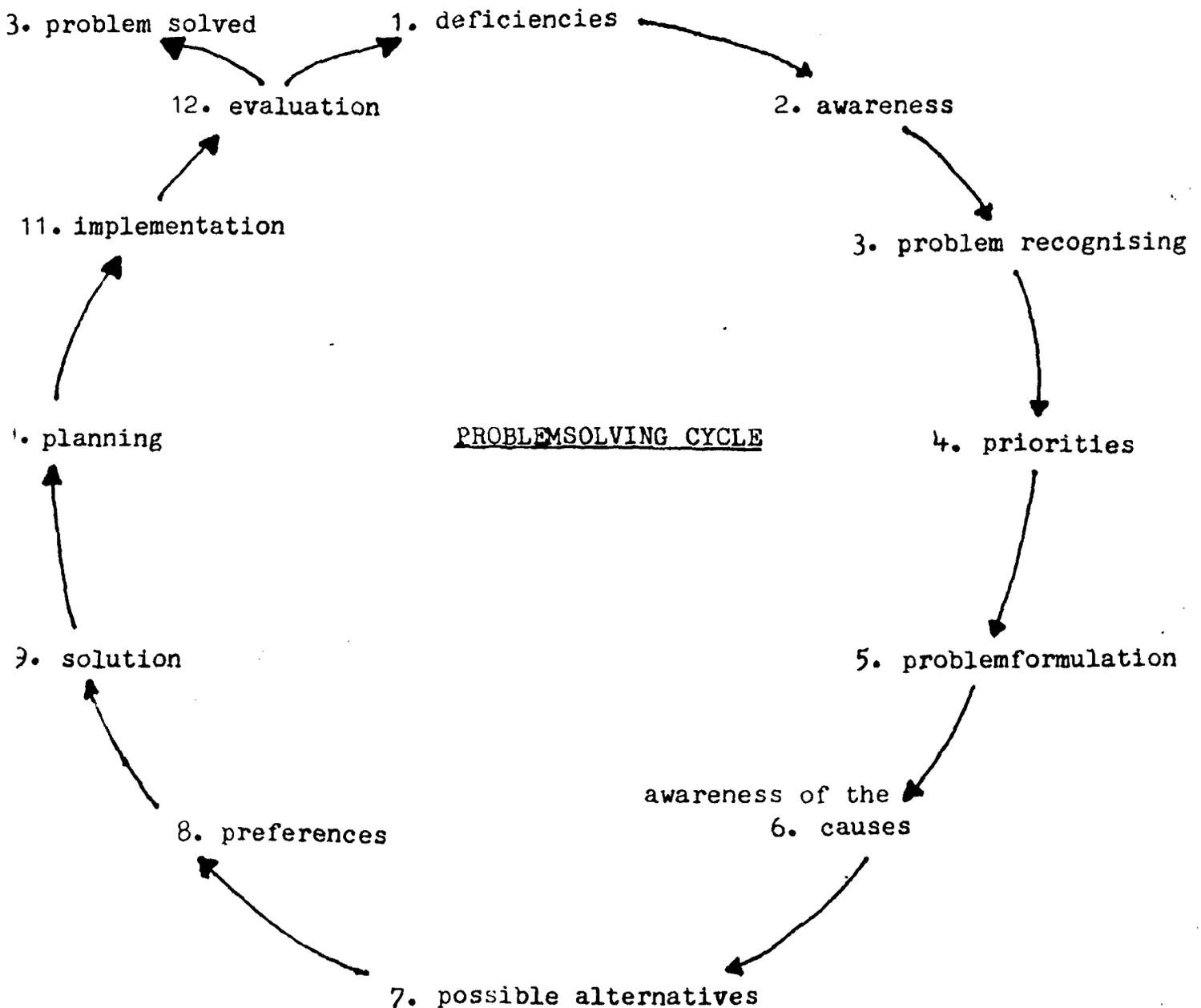water that should be available, etc.
In this report a problem will be seen as a factor causing
an undesired situation in comparance with the goals of a
community. To solve this problem the situation has to be
changed until the goals will be reached. These goals might
be fixed goals but can also be adapted to changed wishes
of the people.
To solve problems, people have to go through a problemsolving-
process: a sequence of steps that have to be taken before
coming to a suitable solution.
Here I will give a description of such a process . It can
be used as a guideline in solving problems. When going
through the steps described, all people will have the chance
to participate in the discussion and all alternative
solutions will be considered. The ways these steps are
taken may differ. Several methods will be given of ways
how to discuss and go through these step.

The intentions of the process described are;
- Stimulate the communities to solve their own
  problems by regular discussions.
- Motivating people to improve situations caused
  by problems
- Organising a well structured discussionsystem
  in the villages
- Stimulating inventiveness to find possible solutions
  to problem
- Making a well considered decision to which all
  participants can agree.
- Introducing a control system, by which problems
  will be recognised in earlier stages
- All people will be able to give their opinion

3. problem solved   1. deficiencies

        12. evaluation   2. awareness

11. implementation   3. problem recognising

'. planning   PROBLEMSOLVING CYCLE   4. priorities

9. solution   5. problemformulation

                                    awareness of the
        8. preferences   6. causes

                7. possible alternatives

In the problemsolvingprocess, many decisions have to be made by the group. They should come to decisions as a unity .

All participants should agree to the decisions made.
To come to such decisions the discussions should be well organized. Therefore a special chapter is written about the organization of meetings.

As already mentioned, Iwill also give some discussionmethods that can be used in problemsolvingdiscussions. These methods can be used to stimulate the discussion, to improve the participation of the people and to improve the organization of the discussion.

At last I will give some practical advises for the cases of Gumulung Tonggoh and Playangan about ways how they can organize their problemsolving related to the PSWS project, And the role of the cadre in this organization.

In this chapter a problemsolvingprocess will be
described. It consists of several stages (steps),
and can be used in meetings concerning decisionma-
king.Taking all steps will improve the chance of
making a well considered decision.Of course it is
not a guarantee of making the right decision.
Using this method implies taking care all steps
in the problemsolvingprocess have been considered,
discussed, evaluated and reported.By reporting all
results in the discussion, it will always be possible
to   look up which decisions already have been
made and what was the motivation to decide.By doing
this it will be easier to find mistakes made in the
problemsolvingprocess, during the evaluation step.

 On the next pages I will give a description of each
step made in this process and their stimulating con-
ditions.During several meetings the members of the
community will go through this process.On the next
page you can see the"problemsolvingcycle" and its
division in steps.

The situation

The following premises are made for implementing
the process in practical situations:
- Community participation is possible
- People are motivated to participate in the meetings
  organised
- People are willing to improve their discussionmethod
- Discussions will take place in small groups
- The people are supported and guided by someone
  who had training. and has knowledge about how to
  introduce the methods.

When these conditions are fulfilled, the methods can
be tried out. Normally, people unconciously also
go through several stages when they make decisions.
But the problemsolvingprocess described intends
to give a systematic description of all stages, so
no step will be forgotten.

1. Deficiencies

A problemsolvingprocess often starts when an unnoticed
undesired situatian is coming up. In this first step
the people are not yet aware of this because the si-
is not too bad and not yet visible or noticable.

2. Awareness of the deficiencies

The time this situation stays unnoticed, can vary
from a few seconds to several years. People will
only become aware of the situation when the situation
worsens and the limit is reached above which the
deficiencies can no longer stay unnoticed, because
it has become visible or felt in one way or another.
Deficiencies can be noticed by members of the community
or by external organizations. These organizations may
make the community aware of the deficiencies, show them
that this is a problem and stimulate them to solve it.
Step 1 and 2 are no steps that can be taken inten-
tionally. They just happen. Only after these steps
have taken place, the process of problemsolving can
be started. Of course it would be better when the
start of this process is not necessary at all, and
the worsening situation is noticed in an earlier
stage so that becoming a problem can be prevented.
This can be done for example, by regular control
and regular evaluations.

3. Problemrecognizing

In the former stage the people came aware of the
situation, but did not yet realize the consequences
of the ongoing of the situation.They only noticed
something was going wrong.
Comparing this situation with the goals formulated
in the beginning of the project (And if not yet
formulated, they should be formulated as soon as
possible), the people will realize that the
situation is in contrast with their goals and see

that this is a problem that should be solved.
When they realize the consequences of the ongoing
of the situation, they also realize why the problem
is a problem.
In this report I will only discuss problems concer-
ning more people in a community and no individual
problems.It is important all undesired situations
are given notice to the rest of the community.Only
then, individual people might notice they are not
the only one who feel a certain undesired situation
coming up,and their problem can become a joint pro-
blem that can be solved by all people together.
For ·   recognizing community problems,it is important
a good communicationsystem is available.People should
know where to go with their problems and how to
give notice when they have a problem. Also, there
has to be someone responsible for organizing meetings
and regular discussions,to discuss the situations.
Of course, there is; always more than one problem,
that has to be solved.Therefore a list has to be
made of all problems or undesired situations that
have been given notice about.Like this no people
will be forgotten during the discussions of the
problems and all problems will be taken seriously.

4. Selection

Because it will be impossible to solve all problems
at once , people have to choose which problem they
want to solve first. An analysis of the list of pro-
blems has to be made and discussed in a group of
members of the community.
The advantage of making categories of problems con-
cerning the same subject,is that it will sometimes
be possible to solve more problems at a time, because
a relation between   two or more problems is clear.
After making the categu; s the people have t
de which categorie is cont. .ing problems that hav.
to be discussed and solved first.Herefore it is im-
portant that everybody joining the meeting can give
her/his opinion and takes part is the final decision-
making about which problem is chosen to be solved.

For example the decision can be taken by voting,
making compromises, or by a special committee after
hearing all opinions.
When the decision is made,it should be clear to all
which decision has been made : Which problem(s) from which
category are going to be solved.
To make the decision easier one can make a list of
advantages and disadvantages of solving each problem.
then it will become clearer which problem is the
major one.

5. Problemformulation

After having decided which problem is going to be
solved , the people who are going try to solve it
should first make a clear formulation of the problem.
This is important because it will be usefull to keep
the total problemsolvingprocess under control.Regu-
larly looking back at your basic point ,the problem-
formulation, takes care people will stick to the
right problem.The formulation should be written down
and given to all participants in the discussion.
Beside a formulation of the problem people should
also make a list of all characteristics of the pro-
blem.This can later be used as a checklist after
implementing a certain solution, to see to it also
all characteristics have disappeared together with the
problem.
Making the formulation can be done by one or two per-
son after a discussion with the total group. The list
of characteristics of the problem can be made by the
group.After discussing the formulation made, all
participants should agree to it.

6. Awareness of the ca...

Now that it has become clear to all participants
what they are going to talk about, they have to
look for the causes of the problem.

To come to a well motivated and realistic solution to solve
the problem , the relation between the problem
and its causes have to be clear.
There are many ways to identify the causes.Sometimes,
when the people become aware of the deficiency the
causes are immediately clear to everyone.But it is
also possible one doesn't know where to start looking
for them,
Problems concerning more people should be discussed
within a group. Let everybody give his/her opinion
on the problem and its possible causes and discuss
all possibilities. By making a list of the most rea-
sonable possibilities (in case it is not yet clear
which are the causes)they should check them all .This
can be done for example by observation, testing and
control. If it's not possible to check them, they
should choose the most reasonable one and try to solve
the problem by removing this cause.Later in the pro-
cess, when evaluating the total process, it will
become clear whether this assumption was right or not.
If this was a wrong assumption, they can start the
process   again .
The conditions necessary in this stage are a clear
formulation of the problem, well motivated parti-
cipants of the discussion, a skilled discussionlea-
der, good reporting of the matters discussed and
(often) some knowledge about the subject.
Especially the motivation of the participants can
be of great influence on the results coming out of
the discussion.When all are very concerned about
the problem, they will all be motivated to take
part in the discussion and will seriously think of
and check all possible causes.

7. Looking for alternatives

After checking all possibilities for causes of the
problem or choosing the most reasonable one , the
participants know the causes of the problem and
have to try to remove them, to solve the problem.
In this step , the participants will think about alternative
ways to remove the causes,
All alternives and ideas of people to remove the causes are
welcome. Selection will be made later.
First people should make a list of the resources
available like labour, money , time, materials ,etc..
When looking for alternatives they should take
care the alternatives will also be realistic and
the community will be able to use them as a so-
lution of their problem.
In the discussion all people are asked to give their
opinion on possible solutions.After this, all sugges-
tions will be discussed and the most reasonable al-
ternatives will be chosen to be put on a list.These
alternatives can be called "possible solutions".
Often, only by removing the causes the problem is
solved.But not always!Sometimes the situation will
only improve by removing the causes but the desired
situation will not be reachedand the problem will not be solved
For this reason we should not only think of removing
causes of a problem, but also think of the conse-
quences this will have for the situation   .Maybe
also other activities are necessary to accompany
the implementation of a certain solution, like
education, extension or training.
Removing the causes might not always be possible
or the most succesfull solution.Sometimes comple-
tely different ways of solving a problem might
give a more convenient solution.This is often a
matter of imagination and inventiveness.
For example: When a community agrees to the fact
                that they have to pay 100 rp for
                using a new watersupply system, because
                they think it will be enough for main-
                tenance,and later they notice it was
                not enough after all, they will have
                to look for the cause of this problem.

How is it possible that 100 rp appears not to
enough after all?Then they notice that
about 80 people never paid at all be-
cause they were too poor.
One approach is to remove the cause and
force the people to pay after all.
The alternative approach is
not to let them pay with money , but
for instance with labour by cleaning the
system or other tasks benefitting the
community.

People should be aware of the resources available in
the communities.Like this it can be checked wether the
alternative mentioned is a realistic one or not .

There are several ways to come to a list of alterna-
tives: (also see discussionmethods discussed later)
- After asking everyone's opinion discuss the possi-
  bilities of all the alternatives mentioned.The
  realistic ones will be written down to make a choice
  later.(see discussicnmethod:brainstorming)
- Ask assistence of specialist from outside the vil-
  lages and discuss their suggestion with the group.
  It would be better if this specialist is also pre-
  sent at this meeting to give an explanation on the
  advices given and to answer questions.
- Let the most skilled people of the village (2 or 3
  people maximum) think of some alternatives and
  discuss these in the group. This will cost less
  time.

8. Weighing one alternative against another

Now thatthey have made a list of possible alternati-
ves of how to solve the problem,theyshould choose
the one which has the biggest chance to be succesfull
from all points of view. In this choice all aspects
have to be considered.

Besides considering the fact whether the problem will
be removed or not , the participants should also
consider whether people will be able to cooperate to
the solution chosen, the time it will take to imple-
ment the solution etc, etc.
For example there might be an alternative which is
likely to be very successful but the time it will
take to become successful will be more than one year.
When the problem has become very urgent it will be
better to implement an alternative which is maybe
less likely to be successful, but might become a
success in a few weeks.

- Make a list of demands concerning the definite
  solution and its implementation.Comparing this
  with the list of alternatives ,the participants
  will be able to make a sequence of preferences
  of the alternatives.
- Discuss advantages and disadvantages of all alter-
  natives after discussion, make a sequence of
  preferences of the group.

When making a sequence of preferences of the group,
everybody should get the chance to give his/her
opinion of which alternative will have the biggest
chance to be successful and to give an argumentation.
This can be done in small groups or with the whole
group.When this discussion is made in smaller groups,
all groups have to make a report of their discussion.
In this report the preferences of the small group
are included .After this the reports of all groups
will be discussed with the whole group. The dis-
cussionleader will summarize the matters discussed
in the small groups and a representative of each group
can discuss their arguments for this preference
When all arguments   are heard they can be dis-
cussed by the whole group. Now they will have to
make the decision and indicate their sequence of
preferences as a unity.
Therefore . the procedure how to make the final de-
cision as a group, should be clear to all partici-
pants before starting the discussion.Like this no

problems will come up about the procedure after making
the decision.
To prevent problems coming up later about the deci-
sions made earlier, and to be able to make a good eva-
luation afterwards, reporting of this step is very
important. Somebody should write down all the matters
discussed, the procedure should be described and all
decisions made during this step should be written
down. (More about the procedure of the discussion
you will find in the chapter" Organizing discussions").

9. Choice of the solution

This step is just a formal procedure and concerning
the definite decision as a group to implement the
best alternative as a solution to solve the problem.
Still this is quite an important step.Making the
decision means everyone agrees to it and will
cooperate to solve the problem with the solution
chosen.
It is also possible to make compromises and decide
to implement more solutions at once, if possible

After having made the final decision, it should be
clearly reported, published and extended to the commu-
nity.Everybody will   get the opportunity to
know what their representatives have decided.

10. Making a planning

Now that we have come to the stage of planning, how
are we going to implement the solution to solve the
problem?
This is mostly an organisational question.Which steps
have to be taken in this step?Who is responsible
for what?Which resources are necessary?What about
timeplanning? How to stimulate the community to
mentation?Where to go when problems come up during the imple-
this stage? How to control the process?
The planning should be made by a smaller group of
skilled people with experience in organising.This because
many less important decisions have to be made.It would take
too much time to make all these decisions by the whole group.

When the program is made, a new meeting has to be organized
to discuss this program. The group can change it
when they want to .When the group agreeswith the
program , the will have to decide about the respon-
sibilities of people and who will have to control
the process.The candidates should be well motivated
volunteers, but also be skilled, have time , feel
responsible for their taskand have good contacts with the
It should be clear to everyone who is responsible   people.
for what, and where to go in case of problems.Clear
information about these subjects should be given to
all members of the community.
Whenextra knowledge is necessary,an extension program should
be started as soon as possible.
This may be education for many people, like health
education,or special training for a few people
chosen by the community, for instance about technical
maintenance of the standposts.
When assistance from outside the villages is neces-
sary, appointments should be made in an early stage
to adapt the timeplanning to them.It is always better
to ask the assistence of local specialists and local
organisations, because the community knows and trusts
them.
Local authorities should support the program.They have a highei
status and can stimulate the people to cooperate.Also
becauseof their knowledge of the local situation,they may
know how to motivate them and their opinion will be
taken seriously by the people.
After finishing the planning there will be a detailed
program   including timeplanning activity planning,
inventarisation of resources necessary, responsibili-
ties, controlsystem, financial planning, etc.etc.
Of course the type of program   will depend on the
kind of problem and its outcoming solution.

11. Implementation

According to the program   the people will try to solve
the problem by implementation of the planning.Therefore
regular control and interim evaluation is necessary.

The success of the implementation largely depends on
the motivation of the people who have to cooperate.
The motivation can be stimulated by regular visits,
of authorities to the location in case of a techni-
cal problem , regular discussions about the pro-
cessing of the implementation.The advantages
the community after implementation should be
stressed.To keep the process under controle, it is
important everybody immediately gives notice when
things are not working the way they should.
Only in an early stage it is possible to change the
program   or to adapt it to the circumstances.Some-
body therefore has to see to it that the program-
me is strictly followed out.Therefore regular mee-
tings should be organized for interim evaluations.
Sometimes people suddenly don't want to cooperate.The rea-
son for this should be heard.Maybe it is possi-
ble to make some kind of an agreement or to moti-
vate them in another way.But if they don't want
to cooperate at all maybe it is necessary to force
them.

12. Evaluation of the problemsolvingprocess.

The main question in this step is: Is the problem
solved and has the situation improved?
In fact they now look at the results of the imple-
mentation and compare them with the desired situa-
tion mentioned in step 3: problemreckognizing.
To investigate whether the situation has improved
or not, they can look at several items, depending
on the kind of problem that had to be solved.
In case of a technical problem they can make obser-
vations, tests and take monsters. Regular control
will also provide the participants with results
to discuss during an evaluation.
Evaluation should take place in smaller groups
of people.During meetings the results of the
implementation should be discussed .Everybody can
give his/her opinion and make remarks about the
results and the total procedure and participation-
process.

During this step it becomes clear whether the solution was sufficient to solve the problem or not.
During the meeting the groups make this conclusion and make decisions . what to do next.
In case there still are some little problems left they might decide to solve them and the whole procedure starts all over again.
In case the solution has been successful , still a report should be made of all the opinions , remarks and conclusions that have been made about the process.Also suggestions can be made about how to improve the process in the future.Also these should be carefully reported.They can be very usefull to improve the communicationsystem in the village.
During these meetings the discussionleader has an important task.He has to see to it that everybody is free to give his/her opinion without being interrupted by others.More about the role of the discussionleader you can find in the next chapter.

In the process of problemsolving, meetings will
be organized. The success of the meeting depends
on many factors concerning the organization of the
discussion, the willingness of the people to
cooperate, the amount of people taking part in the
discussion , the qualities of the discussionleader ,
etc., etc.
In this chapter I will discuss these, and other
factors influencing the success of a meeting, especially:

1. organizing discussions
2. the position of the participants
3. groupprocesses

Organizing discussions

When people become aware of certain deficiencies,they
should know where to go to report them.One person should
be responsible for collecting the complaints of the
people.This should be a key person of the community,
someone who is trusted by everybody and having
organizing qualities.This is important because he/she
will also be the one who organizes a meeting when
complaints become serious.
Not all problems are worth a special meeting and thus
should be discussed first within a smaller group
of persons having knowledge about the situation in the
village, for example members of the cadre or the
village head.
When regular meetings are already taking place, the
reported problems can also be discussed during these
meetings (step 1,2,3 in the problemsolving cycle)
before deciding to organize special meetings to
solve the problem.
When no regular organization of meetings exists, the
keyperson mentioned should determine the date, time
and place where the discussion will take place.He
should give notice to the people of the community

and also, when necessary, make appointments with
people from local organisations , because sometimes it
can be usefull they attend the meetings concerning
their own workingfield.
Early anouncement of the time the meeting takes place,
gives the participants the time to prepare themselves
on the subjects to discuss.
As already mentioned, the organizer should receive all
complaints of the community.. Giving notice ·can be done
in writing or by talking.When fixing a date, time
and place for the meeting to take place, he/she should
be aware:
- The people should be able to prepare themselves
- People have to work during daytime
- Some times people are more busy than other times
- The place should be large enough for all parti-
  cipants to sit down, and not causing conflicts.
- the meeting may not take too long and people
  may be very tired after working time.
Besides making an anouncement of the time and place
the meeting will take place, all participants of the
discussion should get the agenda, the program   of
the meeting.
To be able to choose a time of the day the meeting should
be organized, a study   can   be made about the activities
of the inhabitants of the village. The study should be
about the different activities of the people, the time
spent on these activities and the taskdivision between
men and women.Results of this study should be obtained
by observation and measuring time, and by interviewing.
From the results one can learn which times of the day
the people are most occupied and how much time they
spend on which activity.
Also the differences can be seen between the kind of
activities the men and women perform and tne amount
of time they are occupied by them.Often we see that women
besides their daily tasks of working in the field, also
have to take care of domestic tasks and the children.
Because of this difference in taskdivision between
men and women, one should be aware,when choosing a time
of the day for organizing a meeting, the time chosen
suits both men and women.
Still there will be the children who have to be taken
care of,in case their mothers will attend the meetings.
Tis should be considered when choosing a place where

the meeting will be taking place.Maybe other women are
willing to take care of their children, but if this is
not possible the female participants should be able to
watch their children from the meeting place. Thus, it
might be better to organize the meeting near to their
houses.

Another way to choose a time of the day is to ask the
people themselves which time of the day suits them
best.This might be easier than the observationmethod
but ^not always give better results.The observationmethod
will be more objective and accurate for choosing a
time of the day. The researchers maybe able to consider
more influencing factors, especially when they observe
the activities in the village in different seasons.
Of course it should not be worth all the trouble if
the results of the study were only to be used for
choosing a time of the day a meeting should be orga-
nized. The most important reason to make a study about
the activities and taskdivision of the inhabitants,
is to get an idea of who are the users of the water,
what is the water used for and how is it used.The
result can for example be used to choose the partici-
pants of the meetings.

The organizer of the meetings should make an agenda,
including:
- Time and place the meeting will take place
- Length of time the meeting will take
- Name of the discussionleader and name of the reporter
- Names of all participants
- Items to be discussed and a short introduction of
  these items
- Procedure of the meeting given by the anouncement of
  the several stages of the discussion, for example:
    - Opening of the meeting
    - Discussion of the report of the former meeting
    - Discussion of the rules of the meeting
    - Introduction of the first item ⎫
    - Discussion of the first item ⎪ For instance:
    - Decisionmaking/ conclusion   ⎬ problemsolvingcycle
    - Introduction of the next subject ⎭   step 4-13
    - ect.
    - Evaluation of the discussion
    - Appointments for the next meeting

Not all these steps have to be taken during one meeting.It can be decided to postpone the subject to another time.
The importance of making an agenda and providing all participants with one, is that no subjects will be forgotten , everybody is able to prepare themselves before the meeting starts and the procedure is already clear to them.
Though the procedure given above is just an example,many agendas look like this one. Therefore I will discuss the most impostant stages mentioned:

1. Opening of the meeting:
   The discussionleader will open the meeting by making clear to all participants they will now only discuss the subjects mentioned in the agenda. It also means from now on the discussionleader will lead the discussion and has the right to interfere and tell people to shut up.
2. Report of the former meeting:
   Because everybody has to agree to the way the the former meeting is reported, this report should be discussed briefly. When people object the report can be changed.
   The importance of discussing the report of the former meeting , is that it prevents misunderstandings in an early stage. One of the problems when making a report , is that often the reporter writes down his/her own opinion instead of the opinion of the group.
3. Rules of discussion:
   The participants have to make appointments about the ways how to discuss the subjects and how to make decisions.Also matters like the size of the groups in which all subjects will be discussed and whether the majority or all people have to agree to the final decision, will have to be discussed amd written down in advance.
   Another important matter to make appointments about is the task of the discussionleader: Will he only lead the discussion or also join it? When will he interfere in the discussion? Other rules of discussion will depend on the preferences of the participants.

4. Introduction of the first subject:
   The introduction will be given by the organizer
   of the meeting because he knows all about it
   and received the message from the person who
   gave notice of the subject to discuss.
   The introduction at least will consist of:
   - description of the problem/subject
   - reasons for for bringing it under attention
5. Discussion/ decisionmaking/conclusionmaking/evaluation
   This will be done according to the problemsolving
   cycle from step 3 until step 13.
6. Eventually the same procedure from stage 4, for
   the second or third subject.
7. Appointments :
   The last thing to discuss is when the next meeting
   will take place, who will be the discussionleader
   and who will be the reporter? Also everybody should
   know when they will receive the report of this
   meeting and the agenda of the next meeting.
   Making appointments about this will improve the
   chance the report and agenda will really be there
   on that dare.Also appointments about further acti-
   vities can be made in this stage.

Who are taking part in the meetings?

The amount of people taking part in the meetings depends
on the kind of problems to be discussed. In this case
the problems concern the public standposts and are con-
cerning all users of the system. Therefore the community
should be divided in groups of users of one and the same
standpost, and they should discuss the problems about
their own standpost and their wateruse. The discussion
can be done in a big or in some smaller groups, but
the maximum of people discussing the problems of the
users of one standpost , should not be more than about
fifteen people.
These people will be representatives of the users of each
standpost. They will be chosen by the users of the system.
There are several criteria possible to choose the partici-
pants of the meetings. Here some criteria will be given
with some of their (dis)advantages:

1. Income:
   People having more income , also have more status
   and thus will often be the ones to be chosen to
   make the decisions.Poorer people often think them-
   selves not important enough to make decisions
   concerning other people and therefore will choose the
   the richer ones to make the decisions.
   The advantage of richer people taking part in meetings
   is that they are able to spend more time on commu-
   nity affairs without getting into financial troubles.
   Also because of their higher status they might be
   able to motivate the community to cooperate to the
   decisions made.
   Disadvantages are that the richer people are no real
   representatives of the community and thus will not
   be able to give the opion of them.
   Another disadvantage will be that because of their
   higher status people are a bit afraid to go to them
   with their problems or to give their own opinion
   when talking with them.

2. Education:
   People are selected to take part in the discussions
   because of certain skills they have.
   The criteria can be : they should be able to read
   and write. But also people having more knowledge
   about certain aspects of the watersupply, can be
   chosen. For instance these can be people working
   at local organizations like the health department
   or people who had special training during the
   project.
   The advantage of choosing skilled people is that
   the chance will be bigger the right decisions are
   taken and the solutions might be found easilier.
   Also it might be easier to organize meetings and
   discussions for people who can read and write,
   because they can read the reports and the agendas
   of the meetings.
   A disadvantage is that these people will not be
   able to be good representatives of the users of
   the system, because of their professional view
   on the subject.

3. Age:
   Older people are considered to be more experienced

the ones to take the decisions. Their long experience gives them more status.

The advantage is that because of their higher status they might be able to motivate the people to cooperate. Also their advises will be easier accepted. A disadvantage will be that it is absolutely *no* criteria to choose representatives of a new water-supply system.

4. Time:

People having more time available than others might be chosen to represent the users of the standpost. To know the advantages and the disadvantages, one should first know the reasons for having so much time.

5. Sex:

Often women are not allowed to take decisions concerning the community, and thus will not be able to join the meetings, or will not be heard.

"Advantages":

When women do not get the chance to give their opinion they had better do their daily work or use their time for other purposes than being neglected during a meeting they have to attend.

The disadvantage of not including women in the decisionmaking is that they are the ones who use the water by collecting it, cooking meals, cooking drinkingwater, cleaning and washing and thus are most experienced.With the help of the time- and activity study mentioned in the former paragraph, it can be proved the women play such an important role in the use of the system. With these results the men may get convinced of the importance of having the women represented in the discussions as well.

6. Confidence:

People are chosen as representatives because other people trust them. They have confidence in them because of their personal interest in people, kindness, feelings of responsibility for the commun community or other personal skills.

Advantages are that they will be good representatives because the people have chosen them because they trust them.Now, they people will feel free to tell the representatives their opinion on a

subject. Also people will go to them when they have
a problem.
Disadvantages may be , for example when the person
chosen doesn't have communicative skills.

Groupprocesses

When meetings are organized, several people will take
part in it to discuss and make decisions.These de-
cisions should be made by the group as   uniform
decisions.
According to the definition given by Marvin E. Shaw
(1976) " A group are two or more persons who are
interacting with one another in such manner that each
person influences and is influenced by each other
person".
From this definition one can learn that people being
a part of a group are interacting.This means they
communicate and thus are having contact with each other.
Contact means they react to each others sayings by
listening and considering.It also means they influence
each other and get emotionally involved by feeling
some kind of relationship with the other members of
the group.By communication between members of the group,
indivudual's opinion and behaviour will be influenced.
The   strength   of this influence will depend on
the characters of the members of the group.
This influence can have negative and positive
consequences on the results of the meeting.For example
the fact that people personally knew each other very
well before the meeting was organized, possibly means
they feel more at ease from the beginning. But it is
also possible this may prevent them from openly
giving their opinion on certain subjects .Even worse
it is possible that some members of the group have
personal conflicts with each other, influencing
        the way the group discusses in a negative
way.   People always adapt their behaviour,and thus
their way of communication,to the group they are a
part of.
To prevent these factors having too much negative
influence on the way the people cooperate and thus on

the outcoming results of the meeting, certain rules
have to be made about the way the discussion will
take place and the ways the participants should
behave. Their position as a representative of other
members of the community should be stressed . The
community will only be served by cooperation of
all members of the group. The cooperation will be
optimal when the group tries to solve the problems
as a unity, and thus personal conflicts may not
be of any influence on the quality of cooperation.
The rules introduced will give the discussionleader the
the right to interfere when people do not stick to
them.For example these rules can be:
- All members of the group are equal
- All members can openly give their opinion
- One is not allowed to interrupt someone who is talking,
  exept for the discussionleader.
- Decisions will be made after compromising.
- All participants should agree with the decision taken.
- Common interest should come in the first place
- Members should stick to the point.
- The procedure of discussing will be according to
  the agenda made.
- Ect. ect.
It is a human   that some people are more dominate
in groups than others. There are always people who like
to hear their own voice as much as possible and do
not listen to things other people say.As long as this
is not preventing other people from giving their own
opinion,the discussionleader should talk with this
person in private and ask him to stick to the rules.
When it is irritating more people the position of
the dominate person had better be discussed within the
group.By discussing it openly, serious conflicts
within the group can be prevented.
To improve the relations between the members of the group
and the ways they change, some of the discussion-
methods given later can be tried out as an experiment.
The unity of the group will be stronger when they have
a clear goal to work for. This will motivate them to
work together and improve the quality of the discussion.
Being familiar with each other and having something
in common will also strengthen the unity. Therefore it

could be wise to organise some activities they will
do together like a training (for example the discussion-
methods training) or an excursion.
Beside the processes mentioned , which are sometimes
taking place in groups, many other processes can take
place depending on the situation and the participants
in the group

Chapter 4 : Discussion methods

In this chapter I will give some methods that can be
used in discussions, to improve discussions.Distinction
should be made between methods used in experimental
situations and methods which can be used in real dis-
cussions.

In this report I will only give the methods and explain
them. Also I will make some suggestions how to imple-
ment them in practical situations. When people use these
methods, they first have to adapt them to local circum-
stances.The methods are not fixed and can be changed,
extended or combined with other methods.

You will find the methods divided in two parts:

1. Stimulators
2. Discussiontechniques.

The stimulators are methods to stimulate people to
join the discussion.They make the people become
emotionally involved and sometimes force the participants
in one way or another, to take part in the discussion.
People thus are stimulated to give their opinion. stimulators
serve as a sort of "starter"before the real discussion
takes place.

The discussiontechnique methods are   ways to
organize the procedure of the discussion to improve
the quality of the discussions and its outcoming
solutions.

The methods given are taken from the non-formal eduction
strategy. This means that learningprocesses take place
outside official schools or courses. The participants
are learning by actively taking part in groupdiscussions.
By groupdiscussions they will teach themselves.

The influence of the teacher will be reduced guiding the
participants to conscientization: the participants
should arrive at a new awareness of their own selfhood
(and thus also of that of their community), and become
able to look critically at their own situation.

By interaction and implementation of the methods the
participants will learn about themselves and their
problems, causes and possible solutions.

In the PSWS project the teachers should be members of
the cadre who had training in guiding groups during
problemsolvingprocesses and in using the methods given.

Using them, will give them ideas about improving the
participation of the community in discussions and
problemsolving.As already mentioned, they should not
be dominating the discussion. They should behave like
guides providing the participants whith all information
needed about the procedure of the methods and stimulate
their imagination in finding solutions.

My opinion is that it is better to try out several methods
in experimental discussions before choosing amethod to
use in real meetings. By doing this the participants
can compare the results and choose the method they think
most successful.

Therefore the experiments should be evaluated afterwards.
The participants should discuss questions like: Did
you have the chance to give your own opinion during the
discussion? Were all participants equally taking part
in it? What do we think of the leading capacities of
the discussionleader? What was good and what was wrong
about the ways we discussed? What kind of improvements
should be made next time?

On the next pages you will find the methods described,
accompanied by a short introduction. Careful preparations
should be made before starting the experiments.

Some of the methods can also be used in real discussion
making. Therefore I will indicate in which steps of
the problemsolving cycle they can be used.

1.Discussionstimulators

The following methods can be used in experiments and trainings in discussionmaking. They are meant to stimulate people to reflect the present situation in their village and help them to become aware of the problems in the community.
An important goal of these stimulating methods is to make people think about their own opinion on a subject and take position when discussing it in the group.Another goal is to make the participants in a discussion familiar with each other and with joining a discussiongroup.Infamiliarity with the other participants can be a constraint for people to speak up freely. Therefore some games can be played to make the people well known with each other , so they will feel more at ease.
Before explaining the rules of each method or game, the purpose of trying it out should be made clear to the participants.When they know why they are using this method the chance it will be successful   is bigger.
The methods given can be used alone or in combination with each other. Also they should be adapted to local circumstances, especially the materials used.
There should be at least one person guiding a group of people.These guides should get special training on the subject of problemsolving, discussions and decisionmaking.
Before explaining it and trying it out with the groups, they should be familiar with the methods themselves.
Special attention will be paid to methods which can be used in situations in which the behaviour of people should be changed in order to solve their problems (especially health problems). These methods intend to make people aware of the problematic situation and its causes. Health problems will thus be solved by the people educating themselves trough interaction and discussion.
The methods will be discussed here by first giving a short explanation of the intentions of the method and then giving the procedure of the method. When necessary the role of the"guide" or "teacher" and the role of the discussionleader will also be discussed seperately.

1. Letterwriting

To stimulare the people to formulate their own opinion
on a subject this method can be helpful. Also it might
make the participants getting used to each other and to
discussionmaking in groups.
A condition for using this method is that each participant
is able to read and write.
A subject to discuss should be chosen in advance, and had
better be taken from one of their own daily life experiences.
Besides using this method in experimental situations, it
can also be used as a starter to stimulate the discussion
about a real problem that has to be solved.
To discuss a subject , the teacher should make a thesis
about **this** subject in advance which the participants should
comment.

Procedure:

1. Groups of about 5 persons should be made. One person
   of each group should be chosen as the discussionleader.
2. All participants get a piece of paper on which they can
   read the thesis they should comment.
3. The first participant writes down his opinion on the
   thesis , including a short motivation.To do this he/she
   gets 5 minutes.
4. Then the paper is given to the next participant who
   gives his/her reaction to the comment of the former
   participant, also including the motivation.
5. The note is given to the third, fourth and fifth
   participant all reacting to each others opinions.
6. The discussionleader reads all the writings aloud.
7. All participants may now react to the comments of the
   others and ask them questions.
8. The discussion can start.

Tasks of the teacher:
- Explain the method
- Formulate a confrontating thesis
- Give a short introduction on the subject to discuss

Fishbowl discussion *

This discussionmethod stresses the importance of peerl
peerlearning. The group will make an analysis of its
own experience of interaction. After the discussion
they wil' analyze how they discussed the topic, what
happened in the discussion, why it happened and how
they could change it by modifying their action.
This method is thus especially useful in experimental
situations to exercise ways to discuss a subject and
to make the participants aware of their position in
a group. It will stimulate them to improve their behaviour
and thus their position in the group.
Procedure:
1. The participants are divided into groups: an inner
    group which discusses a specific topic,and an outer
    "listening group".
    For example, the inner group maybe a planning and
    evaluationteam and the outer group is a steering
    committee which listens, analyzes and translates into
    action. The inner group together has to make a planning.
2. Couples are made: one participant from the inner
    group is assisted by someone from the outer group.
    Together they will decide which strategy to use
    in the discussion and which arguments and motivation
    the partner from the inner group will use in the
    discussion to convince the others.
3. The discussion takes place in the inner group.The
    people from the inner group try to discuss according
    to the stategy they agreed with their partners from
    the outer group.
    The people from the outer group will make observations
    and analyze the behaviour of their partners from
    the inner group, and watch the effect of the used
    strategy on the development of the discussion.
4. After 10 minutes the discussion is stopped and the
    people from the outergroup tell the people from
    the innergroup about their experiences. They make su
    suggestions about how to change the behaviour of
    their partner if necessary and together they decide
    how to continue their strategy or how to change it
    in the next 10 minutes.
5. The discussion is continued for another 10 minutes.

6. After 10 minutes both partners come together. They again discuss the proceeding of the discussion and decide which position they will take when the final groupdecision is made.

7. Final discussion. All participants from the inner group together should come to an agreement on which solution shall be implemented.

Task of the teacher:
- Explain the method
- Explain the purpose of this experiment
- See to it the method is implemented in the right way

Picture discussion

This method can be used to make people aware of the problems in their community, especially health problems, and stimulate them to think about alternative solutions to solve them. It can be used in experimental , as well as in real groupdiscussions.

Procedure:

1. Provocative pictures are shown to the people. On the pictures they can see a certain problem and its co consequences, with a few keywords as its caption.

2. All participants at a time gets the opportunity to tell what they see on the picture. All visions are written down and shown in front of the group.

3. All participants explain why they have this opinion.

4. Through questioning the teacher tries to fiend out if they really have understood the message of the picture.

5. If they really have understood the message shown by the pictures it should not be difficult for them to find solutions to solve the problem.

An example of implementation of this method is taken from the "Thai khit-pen" concept introduced in Thailand 1970:

many children   *many expenses*

Rationale

Normally, families with low incomes have many problems to deal with; one of the most serious problems is the cost of living. If they were also to have many children, their already serious problems might even get worse. The whole family might suffer additional hardships and this would result in the deterioration of the family's health both physically and mentally.

Objectives

To encourage the learners to consider the advantages and disadvantages of having children under each individuals own circumstances.

Topics to be discussed

Do you agree with the saying that "a family with many children will be poor?"

Why?

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Mass media

Mass media like films, video, radio and slight might
be used for diffusion of information on large scale,
but also be used to stimulate people to reflect and
discuss about the present situation in their village.
By looking at examples of other villages or projects,
the awareness of their own living conditions will be
created.
Therefore it should be looked after that the right
medium is chosen for the right targetgroup. This may
depend on their educationlevel, activities and local
characteristics.
Also the message and the method of discussion should
be adapted to these characteristics of the targetgroup.
When using mass media, one should be aware they are not
widening the gap between lower and higher educated groups.
One often easily adapts the message to the ones who
easily adopt the message. This may cause serious problems
within the community. It is often more important to reach
the lower educated groups than the higher ones. The last
group is normally able to rational thinking themselves.
But the so-called "late adopters" are the ones that should
be reached by the media , by understanding the message
well.
Besides adaption to the education level, also the amount
of information given at a time , should be restricted.
People are not able to remember a lot of new information
when it is given to them in a short amount of time.
Especially people who are not used to learning,and
listening for a long time will have difficulties to
pick up the message.
To prevent people from missing certain topics discussed
in the material, the program should be repeated at least
once.This also because the first time the people might
be more interested in the audio vidual itself than in the
message given.
To see to it the message is well understood, an intro-
duction should be given before starting the program.Also
the public should be able to ask questions at any time,
and the program should be followed by a discussion.
By questioning the teacher should find out whether the
message is well understood or not. The questions should
be answered by the people themselves, by creative thinking
and interaction. The influence of the teacher should

be minimalized. In no way he /she should give the answers
themselves if people don't know them.

Another important condition to make the use of audio
visuals successful, is that the material shown is ,
interesting to the public.They should be able to recognize
the situations shown and see the relation with their own
situation. Also there should be variation and humor in
it.

Before using an audio visual it should be tried out to
learn their possibilities and limitations. The try out
of the material should be done in front of a few people
from different backgrounds and educationlevels, taken
from the targetgroup.

Procedure:

1. The teacher introduces the program by telling about the
   its subject and its background and the time and place
   it was recorded.Also he /she may indicate what
   things the public should especially look for.
   Eventually the message of the program can be told in
   advance. The advantage of doing this, is that the
   public will look more critically at the material.
   A disadvantage is that a lot of information will not
   be heard or seen as important. Another disadvantage
   of telling the message in advance is that people
   will react less spontaneous in the discussion after-
   wards.

2. The program is shown for the first time.

3. Questions can be asked before showing it a second
   time and should be answered by the people themselves.

4. The program is repeated and may be interrupted by
   stopping it for asking questions or making special
   remarks.

5. The teacher asks certain people to give their opinion
   on the program shown. This person can give his/her
   spontaneous reactions on what they felt when watching
   it, what impressed them most and what they think is
   the message of the program.

6. By discussion the people themselves find out which
   was the purpose of the makers of the program. The
   teacher will learn from this discussion whether
   the message is understood or not. When he notices
   they did not understand it at all, he is allowed
   to intervene and try to lead them on to the right
   conclusions again.

7. The people compare the situation shown with their

own situation and try to find out which was the purpose of showing them this program.When they see the relation between the program and their own village, , it should not be difficult to discuss how to translate the message given in the program into a message given to themselves.

8. Discuss how to use this message to solve their problem.

Story telling *

As a discussion stimulator, this method can be used to promote creative problemsolving. The participants them- selves will teach each other by using their knowledge to come to certain conclusions and solutions. Critical incidents, based on the participants their own experiences, will be made into stories. The stories contain a poignant problem and leaves it unresolved, so that the participants can give their own interpretation of outcome. Each story presents enough controversy to stimulate the discussion. Each one covers a short period of time, focusses on one major point and contains characters that are believably human so that there can be reasons for siding with one of the characters. Because it is very difficult to make good stories, they should be well prepared in advance. For certain kind of problems already made up stories are available. Procedure:

1. The teacher tells the story and leaves the solution open.

2. One person at a time finishes the story by using his/her imagination. After finishing the story, they explain the reasons for finishing the story the way they did.

3. Discuss which would be the most satisfying ending of the story providing the best solution to solve the problem.

Serialized posters*

The purpose of this communication tool is to demonstrate
to the group that different people can perceive the
same things very differently and also that each of these
perceptions has its own validity. The tool incidentally
gives participants, particularly the more timid or
reserved ones, an opportunity to make their viewpoints
heard. The fact that interpretations are somewhat
different makes the exercise interesting, yet the diffe-
rences are seldom so great as to make any one participant
fearful of being way off the mark. This is a"safe" exercise
in that respect. It should be seen however, as only a small
step towards more open, creative involvement.
Sets of posters are prepared ahead of time, each set
consisting of four scenes which can be mixed and put
in any order to tell a story. To change the story one has
only to change the order and to interpret the scenes
frome one's own personal viewpoint. The group needs to
be assured that there is no "right" story. If participants
are encouraged to use their imagination freely and not
restrict their thinking just to what is in the poster
set, the stories can be quite lively. If not, monotony
is likely to set in after the third or fourth story-
interpretation.
The scenes in the posters should come from village
situations themselves or from the environment with which
the participants are familiar. This may require observation
interviews or other preparations.
Comment:
There are any number of variations which can be introduced
into this exercise. For example, if the set contains
some "given" pictures for everyone to use and some
"options" from which to choose, the participants have more
leeway to be creative. One such variation is to give
three pictures (to be mixed up and arranged but all
three must be used) for illustrating a problem situation
for which a decision must be made. Three other pictures
are given as optimal courses of action. The story teller
has freedom to choose one of the three options as a m ans
of continuing his story beyond the decision point. If
participants are also allowed to improve "conclusions"
or "outcomes" of the decisions made, the story endings can
often be hilarious.

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Entering your own space *

The purpose of this exercise was to help the participant
first of all to assess his/her present life situation
as well as possible by spontaneously listing his thoughts
about good or poor aspects of his/her life just as they
occured to him/her. In the second square or "Space"
he/she would then list his/her aspirations for a better
life. By not disclosing ahead of time what the parti-
cipant was to do with space two, a significant discussion
may be expected of the differences in aspiration levels
revealed by a simple (and subjective) comparison of the
two spaces, after they have both been completed.

Procedure:

1. Participants are given the following instructions:
    "On a sheet of paper draw two squares of the same
    size. In the fist square put down as many phrases
    as you wish that best describe your current situation
    in life. These can include professional, personal,
    or economic characteristics- anything you choose
    to describe your current position in life."

2. After a few minutes, the paticipants are told:
    "In the second square, write down phrases to descibe
    how you would like to be five years from now. What
    situation would you like to be in five years from
    now?"

3. Again , after a few minutes, participants are
    instructed:
    "Now look at both squares. Try to imagine yourself
    in the situation you described in the second square.
    Can you really visualize yourself being in that
    situation? Is it difficult to imagine? Was there a
    big difference between your current situation and
    the aspirations you described in the second square?"

4. Reactions to this exercise can be left for discussions
    within   smaller groups.

Broken squares

This game was designed to demonstrate the importance of
cooperation in achieving a group goal. Participants
try to form six-inch squares by combining their squares as
as a group goal. Smaller squares can be made by com-
bining other pieces but this does not contribute to the
group goal. Cooperation is only attained when each
member of the group tries to understand the other member's
needs and recognizes each one's potential contributions
to the realization of the group goal.
In a cooperative group all members are actively engaged
in mentally putting the pieces together and are sensitive
to the needs of others. Each member is willing to give
parts of his/her own square to help others. In this way
a group can quickly realize the goal of the group as a
whole. If, on the other hand, participants are more
interested in forming their own squares, the goal will
be more slowly attained.
The observer notes who is willing to give away pieces,
who seems to divorce himself from the struggles of the
rest of the group, how many people are actively engaged
in mentally putting the pieces together, and other
characteristics of group behaviour.
Group discussion analyzes the effect of cooperation on
problemsolving and shares group feelings about the game.
Procedure:
1. Participants are devided into groups of six: five
    game participants and an observer/judge.
2. Each game participant is given a set of Broken Square
    cards, each card an irregular shaped part of square.
3. Squares are formed by putting the cards together.
    The observer makes notes.
4. To evaluate the process of cooperation they make
    a discussion afterwards.

2. Discussiontechniques

The following methods are examples of several discussion-
techniques :ways to discuss a subject. The methods given
can be used when solving problems.
Discussionmaking will be seen as a learningprocess in
these methods. Guided by a "teacher" who had special
training concerning discussions and problemsolving
processes, the participants will become aware of their
own position in a group and learn how to take part in
a groupdiscussion. This might improve their self-
confidence.
Another important goal of these methods , is to stimulate
the participant's creativity in finding solutions to
solve their problems.

<u>Brainstorming</u>* (can be used in the problemsolvingprocess
step 6,7,8,9)

Brainstorming helps to convince the participants, in a
direct and often quite dramatic way, of the value of the
whole group in the generation of ideas.
The more diverse the membership of the group, the more
wide-ranging are likely to be the ideas contributed for
problemsolution, provided the basic brainstorming rules
are observed . The basic guidelines are simple:

1. All members of the group are encouraged to contribute
   ideas.
2. All ideas are accepted immediately without criticism
   or evaluation. This is vital to encouraging parti-
   cipation.
3. Contributions are recorded for all to see. This helps
   to establish what each member is thinking, feeling
   and perceiving, and it also convinces the individual
   of the worth attached to his/her contribution.
4. A large number of contributions is encouraged. Group
   members are asked to share all ideas that come to
   mind regardless of how appropriate they may seem.The
   assumption is that the more ideas spontaneously shared
   in the shortest possible time, the more likely is the
   group to arrive at a potentially useful idea to resolve
   the problem at hand.
5. Criticism or judgement is deferred until the group has
   practicilly exhausted itself of ideas. Then judgement
   and selectivity are exercised in a way that does not
   discourage any member from future participation in
   brainstorming(note: This can for example be done
   by first discussing the positive sides of a certain
   idea and then the negative sides. The one who shared
   the idea will be able to clearify the idea. When
   rejecting a certain idea the motivation for doing
   this should be clear. It is important that the
   participants see why certain ideas can be useful to sol
   solve their problems and others not.).
6. Participation is rewarded by recognizing that the final
   solution is the result of the entire brainstorming
   process in which all contributions have played a part.

Role of the discussionleader: -See to it no criticism is
                                given during the discussion

Role of the teacher:

-Lead the discussion and selection of all ideas and let everybody explain his/her contributions.
-Explain the method.
-Stress the importance of not being afraid to give spontaneous ideas.

This technique is especially useful when discussing a subject
with people coming from several positions in a community.
It helps to remove constraints the lower educated
participants may feel when discussing with people for
instance being representatives of local authorities or
organizations.
To make everybody feel at ease, all participants should be
introduced to each other in advance. Also some of the
discussionstimulating methods can be used to make the
participants know each other.
In this method the participants are representatives of
certain members of the community, for example represen-
tatives of the users of the standposts, representatives
of the PKK, representatives of the LKMD and members of
the cadre. These groups act as one party in the discussion.
Procedure:

1. Each group writes te down their problems related
   to the watersystem (This as an example of a subject
   to discuss) on a piece of paper.

2. Each group gives a presentation of their problems.
   The participants will thus become aware of the
   different problems related to the water use.

3. After hearing all problems and explanations, together
   they will recognize a common problem they will discuss.

4. Each group writes down its opinion on the problem on
   a piece of cardboard.These cards will be shown in front
   of all participants. Thus all groups are forced to give
   their opinion and to show it to the other groups.
   They now don't have to be shy because there will be
   no names on the cardboards, and the opinions will be
   anonymus.

5. All opinions are grouped according to common features
   after discussing the opinions.

6. When a certain opinion is not clear, the group who
   gave this opinion should give an explanation, and
   the participants later decide how to group it with
   the other opinions.
   By grouping the opinions, the participants will get
   a clearer view on the problems and it will be easier
   for them to find solutions.

7. Together they discuss a way to solve the problem.

Role playing

This is a method to make people look at a problem from
different points of view. The participants will be devided
in different groups eache playing the role of representatives
of a party in the community, having different interests in
solving a problem.
Sometimes they should play a representative of a party
having an opinion to which they themselves do not agree
at all.Therefore it should be stressed that they are only
playing roles and the things they say will not be taken
as their own opinions.
Thus this method will make the participants get more under-
standing for people who have a different opinion on a
subject and it will make them aware of the advantages and
disadvantages a certain solution can have for the different
parties.The participants may realize the importance of
making compromizing solutions sometimes.
This method may be used as a training in discussionmaking
and creative problemsolving. The advantage of playing roles
and not being themselves is that they now will be able to
react more spontaneously and be more creative in using
argumentations.

Procedure:

1. The group will be devided in two groups and each group
   will be given a description of a made up situation, in
   which they represent a party having a certain interest
   in implementing a certain solution. In the description
   the details will be given.
   Besides the two groups, a neutral chairman should be
   chosen.

2. The two groups seperate and each groupsdiscusses their
   strategy and arguments they later will use in the
   discussion, to convince the other party.

3. The groups sit opposite to each other. The chairman
   gives each party 10 minutes to give their opinion
   on the problem.

4. After both parties have given their presentation,
   Each party at a time gets the opportunity to ask
   questions to the other party.

5. All parties seperate to discuss how they should come
   to a satisfying solution in cooperation with the other
   party, on which points they are willing to give in
   and on which absolutely not.

6. The discussion is continued and the parties should
   try to come to a solution to which they both can agree.
   They will get 30 minutes to do this.
7. The chairman summarizes the final decisions made and
   asks both parties if they agree to it.
8. Evaluation!

Role of the teacher: - Make up a conflict between two parties
                       concerning a situation /problem
                       well known to the participants, and
                       describe it. Each group should be give
                       given a note describing the situation,
                       which party they represent and which
                       opinion they have.

Role of the chairman:- Lead the discussion .
                      - Mind the procedure
                      - See to it no one is interrupted
                      - Mind the time given

Improvements for Gumulung Tonggo and Playangan

At last I will give some practical advises which might be
useful to consider when organizing meetings in the PSWS project
villages Gumulung Tonggo (GT) and Playangan (PL). These
advises are based on the content of the former chapters.
Because I was only able to visit the villages a few times, I
fully depended on the information gathered during these visits,
information from reports of other people involved in the
project and discussions I had with them. For this reason the
matters discussed will only be general advises. A selection
of the useful ones should be made by the members of the cadres
or by the people of the Institute of Human Settlements
(IHS or: Puslitbang Pemukiman), the members of the PSWS
team.
First I will give a short description of each village,
especially concerning the involvement of the community in
the decision making and implementation concerning the project.
Also some characteristics of the village and its inhabitants,
important to consider when organizing discussions , will be
discussed.
After considering the present situation, I will be able to
give some practical advises. These concern the involvement
of the inhabitants in decision making and problem solving
and the organization of the discussions. Special attention
will be paid to the roles of the cadre and the women during
the discussions . The cadre has to play an important role
in the organization of the meetings, discussion groups and
introduction of the new discussion methods. They should join
a training program in which they learn about problem solving
processes and discussion making and also get familiar with
all kinds of discussion methods.
Until now, the women are neglected in the decision making
concerning the water supply project. Their opinion might
only be heard through their husbands, but they themselves
did not get much opportunity to join the discussions and
give their opinions themselves. In this chapter the importance
of involving them , will be stressed.
To make the discussions successful, the people should be
motivated to cooperate . How to convince them of the use of
the participation in discussion making and problem solving,
is a question also to be answered in this chapter.
By giving this information I hope it can be used to improve
the problem solving processes in the villages. Though it will

be difficult to reach the ideal situation, attempts should
be made to introduce some organizational changes and try out
some of the discussion methods given.

Hopefully these attempts will be successful and lead to
further improvements.

Playangan (See appendix ..)

Desa Playangan
Kecamatan Babaken
Kabupaten Cirebon

Population:

	RT1	RT 13,14	Total
inhabitants	210	256	466
families	39	52	91
households	31	37	68
average family size	5,38	4,92	5,12
average household size	6,77	6,92	6,85

The village Playangan is devided in several RTs headed by
the heads of the RTs. Three of these RTs are provided with
two Public Standposts: RT1, RT13 and RT14.
The people of these three RTs are poor and low educated. They
live in houses of poor quality which stand very close to
one another. There are no toilets and everybody goes to the
field to defaecate. Before implementation of the PSWS project
there was no good water resources available, exept for some
wells.
The PSWS project was for a great deal initiated and organized
by the Institute of Human Settlements . Also a very important
role was played by the cadre, who organized and coordinated
the implementation of the standposts (See chapter: Back
ground).
The cadre (11 persons:9 nen, 2 women) was selected by the
village head and the secretary of the village. The criteria
for selection was income: people who had enough income and
thus were able to spend some time on extra activities.
Unfortunately no members of the cadre live in the RTs where
the Public Standposts are built.
The following activities have taken place since the start of
the project:

- The cadre was trained by trainers from Kecamatan level.
  The program consisted mainly of health education on
  health problems related to water, and the intentions of
  the project.
- The cadre informed the inhabitants about the project.
  Health education was given to the inharitants on occasions
  they come together to collect the water from the Water

resources present. This health education program has not
been very successful when looking at the the amount of
deseases and the kind of deseases present in the village
after the implementation of the project. This may be caused
by the ways the health education was given to the people,
the contents of the messages, non-cooperation of the people,
or other causes. Still until now the results of the health
education given, are not sufficient.
- The village head chose the RTs which would be provided by
  a Public Standpost. The cadre determined the location on
  which the standpost should be built.
- The men of the cadre organized the technical and practical
  work that had to be done. The women of the cadre were
  active in admimistrative tasks. After the implementation,
  the women should take care of organizing health education
  programs.
The members of the cadre felt quite responsible for their
tasks. There was a clear division of tasks related to their
education level. The people of the RTs themselves were not
involved in the planning. But they were involved in the stage
of implementation by helping to dig the canal. After receiving
the information about the project from the head of the RT,
who got the information from the members of the cadre at his
turn, they knew their tasks and where to go in case they
needed information or assistence.
It seemed that the motivation of the peopl to cooperate was
only to have a nearer tap providing them with more water,
instead of being motivated to improve their health conditions.
Contacts between the members of the cadre and the inhabitants
of the three RTs are not so good. The members of the cadre do
not live in the RTs and they transfer the information about
the decisions they make via the head of the RT. Also there
have been some incidents between members of the cadre and the
inhabitants.
Also the head of the village does not keep regular contacts
with the heads of the project-RTs. HIs tasks in the project
were attending the official procedures and choosing the members
members of the cadre and the RTs in which the standposts
should be built.
Decisions related to the project are made by the members of
the cadre. Sometimes advises are given by the people of
the FSWS team from the IHS. Because the inhabitants are not
involved in the decision making, this sometimes gives problems
because cadre and inhabitants have different ideas about the
project. Between the members of the cadre also some problems

exist. Some of the members are rather own-minded .Especially
the chairman does everything on his own.
Another problem is that their tasks and influences are not
equally devided. For instance the influence of the women in
making important decisions has been very small. The opinions
of the women living in the RTs of the project are not heard
at all. Until now, the influence of the women has only been
restricted to the influence the two female members of the
cadre had, which was very little .
All these factors and may be some others, prevent the cadre
to form a unity. Still they worked quite hard to implement the
the project and felt responsible for it.

Things to improve :
- Participation in decision making of the useres of the
  standposts.
- Functioning of the cadre.
- Involvement of the women
- Health education.

Gumulung Tonggoh   (See appendix ..)

Desa Gumulung Tonggoh
Kecamatan Astanajapura
Kabupaten Daerah Tingkat II Cirebon

Population:

Desa GT	men	2374	
	women	2283	
	total	4657	
	families	1219	(average family size 4,03)
	households	834	(average household 5,71)
Block Kaliwon	men	252	
	women	234	
	total	486	
	families	121	
	households	85	

(march 1986)

The village GT is divided in 4 blocks. In one of the blocks,
named Kaliwon, the PSWS project is implemented.
In GT 60% of the working population is working outside the
village, in Jakarta or another city. This means most of the
time these people do not live in the village.
The main resource of income for the village is agriculture.

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The village Gumulung Tonggoh is not as poor as Playangan.Many women do not work and many households keep their own fruit gardens. Most of the houses are built of bricks. In some of the houses are toilets , but most of the people go to the fish ponds (panciligan) to defaecate. In some cases the people defaecate in their gardens.
Before the PSWS project was started, the people were already improving their water supply system, stimulated and organized by the village head.
When the village head heard about the PSWS project and the possibility to get it to his own village, he made a request to the government of Cirebon, for improving their own built spring capping. The motivation of the inhabitants was so strong that they did not want to wait for official permission. The project was organized by the village head, and a technician of the IHS supervised the technical implementation. This was possible because the money had already arrived.
In the case of GT the cadre was formed after the implementation of the project instead of before, like the intention of the PSWS project originally was.
Though the village head does not live in the block, his contacts with the inhabitants are good. He visits them often and is interested in the processing.
The people were very motivated to work on improving their water supply system. They worked hard on the implementation and feel responsible for the maintenance. They also had a voice in the decision making by attending discussion groups organized by the village head. After these discussions the location of the standposts were chosen. Since the cadre was not yet chosen, themembers of the later cadre were just one of he community, working hard in the stage of implementation. The cadre was chosen by the village head and consists of 6 persons, all men.Three of them live in Kaliwon. The members were very active in the process of planninr and implementation and most of them are a member of the LKMD. The village head is the head of the cadre.
Because the cadre was formed afterwards, they do not form such a tight group as was planned by the project. Now, they take care of the control of the system. A maintainer, living near the tap, is responsible for the maintainance.
Decisions related to the project are taken by the cadre and the village head. During the discussions the village head seems very dominate. Not all members of the cadre are equally taking part in the discussions. The village head has great

influence on them when decisions are made.

Things to improve:
- Influence of the inhabitants in the decision making and
  problem solving
- Functioning of the cadre
- Influence of the women in the decision making.

Organizing meetings in GT and PL

Organizing regular meetings to discuss problems and community
matters by participation of the people, is a go d way to
prevent conflicts and recognize problems in an early stage.
Depending on the amount of time available to join meetings,
discussion groups should be formed to discuss problems. These
groups can be specially formed to discuss problems related
to the water supply , or they can be formed to discuss all .
kinds of problems.
For GT and PL I suggest to form one discussion group for
each RT in which a Public Standpost is built. Selection of
the participants should depend on local possibilities. People
can be chosen by the other people, can be asked by the head
of the RT or the cadre , but they should be volunteers and
motivated and not being forced to join the groups. When
standposts are used by more than one RT, each RT should first
discuss the problem with their own group and afterwards
organize a meeting in which both RTs take part. Together
they should come to a final solution.
The meetings should be organized every few weeks. When only
discussing about the water supply, once in three or four weeks
will be enough. But when organizing discussions concerning
all kinds of community affairs, they should take place once
a week or once in two weeks.
The meetings should be organized by the head of the RT, who
should also be a member of the cadre. He should fix the time
and place the meeting will take place.Because the head of
the RT is trusted by the people and well known with all
inhabitants and the local problems, he will be able to collect
the complaints and problems of the people and consider whether
they should be discussed in the group or not.
It is important the head of the RT is also a member of the
cadre because only then two-way communication is possible
between the members of the cadre and the inhabitants.
People should give notice of their problems or complaints,
for instance by writing a note and putting them in a complaint
" problem-or-complaint-box" which should be put beside the
standpost. Putting a note in a box will give the people
the opportunity to stay anonimous when they want to give
notice about their dissatisfaction about certain aspects
in the community. This may also improve the chance women will
use it, especially when the box is placed near the tap where
they collect their water each day.
Because not all paople are able to read and write in PL and

GT, people may also directly go to the head of the RT when
they want to give notice of some problem which they want
to be discussed during a meeting.
To stimulate the people to give notice of their problems or
of their dissatisfactions in an early stage, the use of the
"complaint-box" should be promoted by the cadre. This can
be done for example by hanging posters on central places in
the RTs, making announcements of placing the box near each
standpost during a meeting or via local organizations like
PKK and the Puskesmas.
As already mentioned, the head of the RT will make a selection
of problems which will be discussed during the meetings. This
can also be done after discussing them with the other members
of the group, but this will cost more time. Problems which
are not selected to discuss in the group, should be solved
by personal assistence of the head of the RT or by assistence
of a local organization.
After selection the head of the RT should make the agenda of
the meeting and all paricipants should receive one. The time
of the day the meetings are taking place should be carefully
chosen by the head of the RT. Therefore he should be well
aware of all activities the inhabitants are involved with.
At the time of day the people are least occupied, the meeting
should take place. Often this will be in the early evenings.
The people are often not used to sit down, listen and concen-
trate for a long time, especially after a whole day of hard
working. Therefore a strict agenda should be made indicating
the time available to discuss a subject. Also not too many
subjects should be discussed at one meeting.
The participants themselves should decide who should become
the discussion leader and whether he/she will stay the
discussion leader for only once or for more meetings.

Participation of the users of the water supply system

In both villages the influence of the users on the final
decisions made seem s to be very small. The important
decisions are made by the members of the cadre and/or
the village head.
To change this situation, the importancy of participation
of the people in meetings should be stressed. The cadre as
well as the users should be convinced of the advantages of
involving the users themselves in discussing their problems.

Many arguments can be used:
- The people are the users of the water and thus much concerned with the well functioning of the water supply system.
- The users are the ones who first notice deficiencies
- The users have much practical knowledge about the system
- The users pay for the system
- The users are the ones to implement the solution to solve the problem.

To convince the people of the importancy of taking part in the discussions, these arguments can be used by the members of the cadre when promoting the discussion groups. For instance they can make posters and spread them through the village. Also the kepala desa or the members of the cadre can have informal talks with the people in which they try to convince them to take part in the discussions. Maybe the cadre can also organize some demonstrations of the functioning of discussion groups for example by showing drama, wajang, or using mass media like video or films in which the message is: " Together we should solve our problems by discussing them. Together we are able to do this." The participation of the users should be as well in the discussion- and decision making as in the organization and implementation of the solution found.

Who should participate?

When organizing discussions between members of a community, a selection of representatives has to be made, otherwise the group of participants will be too big. In PL and GT for instance, one discussion group can be made for each RT in which a standpost is built. Each group may consist of about 10 people living in the RT. How the selection is made depends on local circumstances, but the participants should be well motivated volunteers. Motivation is a nasty thing to check but at least the representatives should be willing to spend extra time on improving their village and see the importance of regular discussions about village life. Motives like " enlarging status" and "an opportunity to become more powerful" are obviously not the right ones to assure the participation to be successful.
After the selection, the following conditions should be fulfilled:
- The representatives are volunteers
- The volunteers are willing and able to spend some extra time on the discussions
- The representatives have good contacts with the other peopleliving in the RT

The most ideal situation of selecting the participants would
be by voting. All grown up people in the RT should vote
and thus participate in the selection of their representatives.
The people chosen often will be the informal leaders of the
community and are trusted by them.

Sometimes voting will not work, because people think it is
the task of the head of the village or the head of the RT to
indicate the representatives. The confidence of the people
in their knowledge might be so great, that the people are
convinced they will be able to choose the right persons to
perform this task.

But for the case of GT I think it will be possible the repre-
sentatives are chosen by the people themselves. After having
promoted the participation of the community in solving
their own problems, names of volunteers should be put on a
list and the community can give their votes. The voting should
be organized by the cadre.

Representatives are often seen as people taken like a sort
of "bulk monster" from a bigger group, representing the
average village people. In developing countries this is often
not possible because of traditional customs and norms. One
of the reasons the average village people are not chosen, is
that the lower status people are not represented. They often
think they themselves are not skilled to discuss difficult
problems and to think of possible solutions. They therefore
will not report themselves as volunteers to join the groups.
Another reason for this can be financial constraints.
Especially in PL very poor people are living who will not be
able to spend much time on discussions, because time is money.
Maybe this constraint can be overcome by a compensative bonus
like Gotong Royong, for example : other people will give a
small contribution to the representatives, like fish, rice or
labour.

A third reason for the lower status not joining the meetings,
might be because they often have had lower education and ther
therefore do not see the use of " all the talking".

Thus, special attention should be paid to this group when
promoting the discussion groups. The personal approach
possibly will be most successful, because many people are not
able to read or write. By personal confrontation they also
easier get interested in the subject they are talking about,
than when someone is talking in front of a group.

When it just doesn't work out and the lower status people
will not join the groups, it will be very important they at

least will be able to choose their representatives.

Women

Another problem when choosing representatives, is that often only men are chosen. This might be caused by traditional norms and role patterns.

Because the women are the ones who collect the water, and thus use the public standpost most, they are the experts of the water use in the RT. Also they are the ones who store the water, cook , wash, and take care of the children. Thus they are able to recognize problems in an early stage.

For these reasons I will stress the importance of hearing the opinions of the women as well. The optimal situation would be that they also are chosen as representatives and are able to give their opinions in the discussions as well as the men. Maybe because of traditional norms this will sometimes not be possible and sometimes women are chosen but still not dare to join in the discussion or not taken seriously when discussing with men.

An alternative to the women joining the discussion groups together with men, is to organize special women discussion groups in which they discuss the same items, and give their opinion. The results of these discussions should be considered by the men when they make decisions and choose a final solution. When organizing special women discussion groups, this can be done in cooperation with the PKK. This organization is well known by the women and might be able to convince them to join the discussions, stressing the importance of the women in problemsolving anddecision making concerning water supply and other community affairs.

Cadre

During the start of this new organization of discussions, the members of the cadre should attend the discussions to support the people in their ways of discussing and organizing meetings. The support can be given by organizing non-formal education on probl msolving processes (see chapter : Discussion methods). For example they can try out some of the exercises given. The sequence in which the exercises are given is very important. First I suggest the methods to improve the familiarity of the participants with each other and with the discussion making (discussion stimulating methods) will be tried out.

The members of the cadre (one or two for each discussion group), might be the "teachers" in a nonformal way. This sort of training will be based on peer learning. The " teachers " will only guide the participants in this learning process. To make the members of the cadre able to be "teachers" in

this learning process of discussion- and problem solving
techniques, they should get special training in which they
become familiar with all kinds of approaches to problem
solving processes, discussions and with several methods/
exercises they can intrдduce in their own community discussion
groups.

This requires special skills of the members of the cadre and
especially motivation and the convincement of the importancy
of good discussions between the people.

In the present situation especially the cadre of PL does not
function the way it should. This is caused by many factors,
especially a lack of motivation and internal conflicts.

In my opinion a cadre should be a unity when they want to
improve their village.

Another negative factor in the functioning of the cadre of PL
is that they are not living in the RTs which are provided with
the standposts. Because of this the contacts between the people
and the members of the cadre are very poor . It might be wise
to add at least one inhabitant of each RT to the cadre. In
my opinion it would be best the heads of the RTs join the cadre.
It might be wise to reconsider the functioning of all members
of the cadre and eventually decide to form a new cadre, more
skilled to perform their tasks and having better contacts with
the people.

If this is not possible, I suggest a special group of
" participation workers " is made who will receive the
training on discusions and problem solving processes, instead
of the members of the cadre. After receiving the training,
they will be the ones to guide the non-formal education of
the participants of the discussion groups. It would be wise
these people are taken from local organizations like school
teachers, health workers and other people who are used to work
with people.

Another possibility is to ask people from outside the village,
specialized in non-formal education methods,to assist the
community for a short period in coming to good discussions.

A disadvantage of this last possibility is that later the
people should be able to help themselves and then, no one
in the village has special knowledge on this subject, because
they did not receive the training themselves.

Local organizations

Another party which may join the groups, are representatives
of he local organizations like the Puskesmas, LKMD, PKK,
schools, etc. Thus, they may not be chosen by the people of
the RT but attending the meetings to use their knowledge in
the discussions,or to enlarge their knowledge on local problems

from the discussions.

Still, it would be better when these people live in the RT itself, because this means they are familiar with the people and the situation in the RT, and they are easier trusted by other inhabitants.

Of course, it is also possible that the members of local organizations just happen to be chosen by the other people, and then they will be bóth representatives of the RT ánd representatives of the local organization.

As already mentioned, local organization could also have the important task to organize the non-formal education for the discussion groups after receiving training. People joining these trainings should be used to work with people and interested in the subject of communication.

The discussions

When discussions about problems are made, the problemsolving
cycle can be used as a guideline to check if all steps, nece
necessary to come to a good solution, are taken.
Because the situation in the villages are so diverse and many
types of problems may be ther, I can only give some examples
of how these problemsolving processes may look like:

. problem solved   1. deficiencies

12. evaluation   2. awareness

11. implementation   3. problem recognising

                    PROBLEMSOLVING CYCLE   4. priorities

'. planning

4. solution   5. problemformulation

5. preferences   6. causes awareness of the

        7. possible alternatives

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1.-Other deficiencies
-Children feel sick
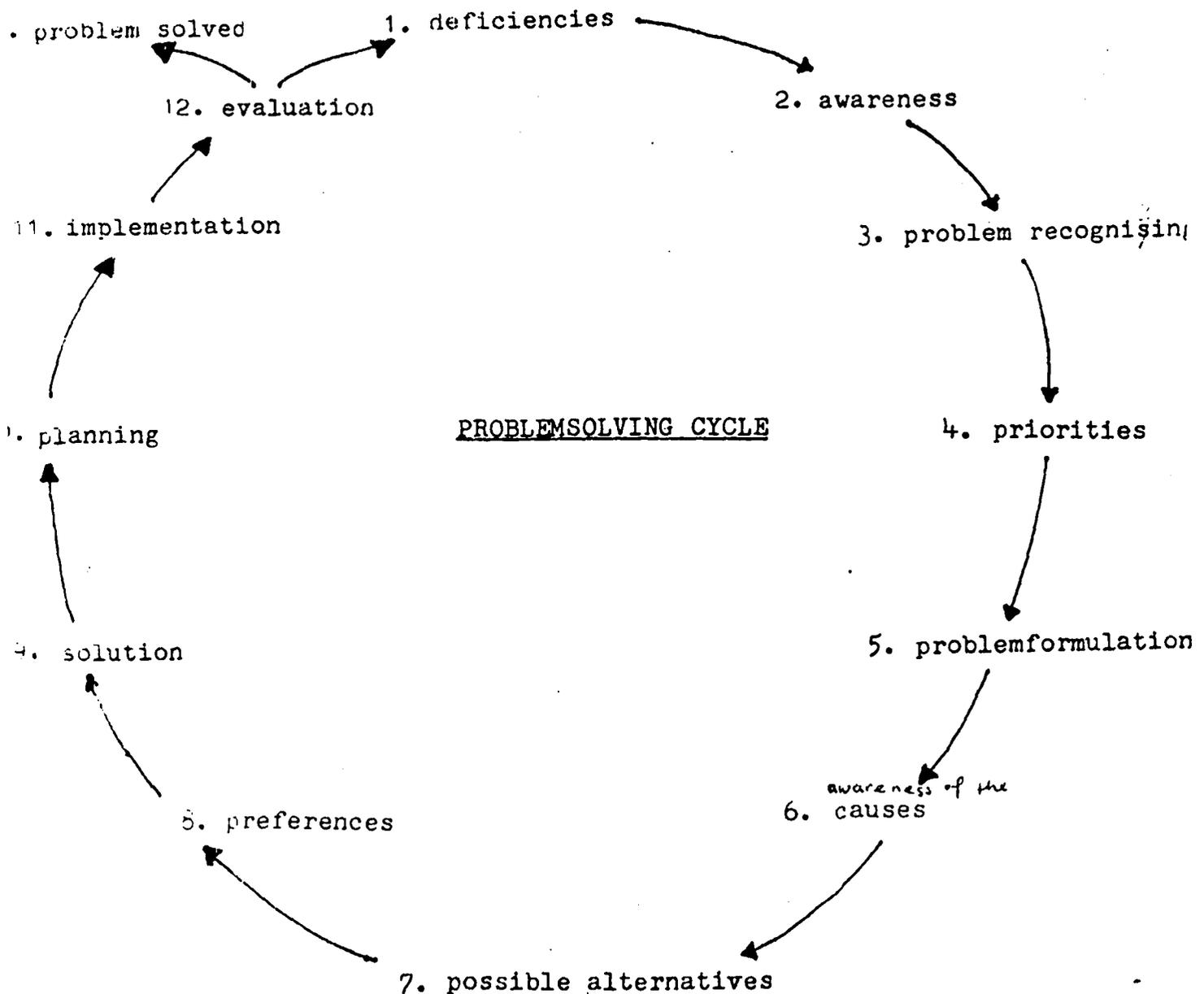
13. health
    improved

    12. evaluate whether
        the health of the
        children has impro-
        ved

2.-Other deficiencies
-Mothers notice the
chidren do not feel
well

11. The play ground is
    made

3.- Other problems
    - mother realizes
    children are
    ill, puts note
    in the box

10. Plan to clear up a piece
    of land: - who takes care
             - who maintains
             - who pays
             - when
9. Look for another
   play ground

4. meeting is orga-
   nized. After dis
   cussion the ill-
   ness gets prio-
   rity

8. According to the
   most likely causes:
   b
   a
   c
   c (or all at once)

5. The children suffer
   from diarrhea and
   have pain in their
   stomachs

7. a give children
     medicine
   b look for another
     playground
   c tell the chil-
     dren not to drink
     unboiled water
   d Be more careful
     with food prepa-
     ration
   e give the children
     medicin

6. After talking with the mo-
   thers they notice the chil
   dren often play in the
   fields where many people
   defaecate. With the assis-
   tence of the local health-
   organization they under-
   stand the transmissioncy-
   cle of worms.Another cause
   may be they drunk water
   from the river or ate some
   thing wrong

1.-Other deficiencies
-Pump rusts

13. Pump easy to handle

12. Evaluate:
   - Is the pump easier to handle?
   - After a few months: is the paint
     lasting and the pump not rusting?

11. Contributions are collected
    paint is bought
    pump is painted again

10. Plan: - who will control?
          - who collects the money?
          - who will buy the paint?
          - when should this be done?

9. Control the contri-
   butions and buy other
   paint and paint the pump

8. -combination of a and b
   - a
   - c
   - b
   - f
   - d
   - e

2. -Other deficiencies
   -User notices it is
    getting hard to han-
    dle

3.-Other defi -
   ciencies
   -User realizes
    system will
    break down,
    puts note in
    box

4. Rusting pump
   gets priority

5. Pump is rusting and
   getting more diffi-
   cult to handle for
   the women

6.The pump is not well
  maintained:
   - The paint is no good
   - There is no money
   - The material of the
     pump is hard to paint
   - Maintainer is too lazy

7. $\underline{a}$ Use other paint
   $\underline{b}$ Control the contributions
     of the users
   $\underline{c}$ Stimulate the maintainer
     by giving him some money to
     perform his task
   $\underline{d}$ choose another maintainer
   $\underline{e}$ Change the pump for another one
   $\underline{f}$ Let the men collect the water (!)

13. Money is enough

1.-Other deficiencies
-Little money is collected
for the maintanance of the
system

12. evaluate: Is the money
collected enough and are
the people sattisfied?

2.- Other deficiencies
- Money collecter noti-
ces a lack of money

11. poor people get jobs, earn
some money and pay the **contribution**

3.-Other deficiencies
-He realizes the
consequences of a
lack of money and
puts a note in box

10. plan:-what kind of jobs?
-who will get these jobs
-what wage will they receive
-when will the job start

4. During a meeting
people decide to
solve the moneypro-
blem

9. Give the people the
opportunity to earn some
extra money

5. The money collectec
is not enough to
maintain the systen
and the system will
break down.

6. - Not all people have
paid their contribu-
tion
- The costs of main-
tainance are very
high

8. After discussion:
- d
- b
- c
- a

7. a-Force the people to pay
b-Let them pay by means of other
resources
c-Reduce the maintainance costs
d-Try to give the people some small
job by which they can earn some
extra money

How to continue in the future?

Because this report is written to stress the importance of a
community to solve its own problems with a minimum of help
from outsiders, there also has to be thought of ways to sti-
mulate the continuity.
As already mentioned, a most important role will be played
or should be played, by the members of the cadres in motivating
and stimulating people to solve their problems. To continue
the involvement of the inhabitants, the members of the cadre
thus should stay devoted to their tasks.
For this this reason I suggest to pay the cadre a certain fee
for being active in community work. This can be money, but also
be food or labour paid by the inhabitants of the village.
Even better it would be when the cadre gets a kind of satis-
faction from performing their tasks and therefore will stay
devoted to their tasks. For instance, when giving them regular
trainings (for example twice a year), from which they receive
a lot of knowledge in which they are interested in and which
they can also use for their work as a member of the cadre.
Also,by paying them some kind of fee, their task will be seen
as something important and they will become more devoted to it.
Of course not only the cadre should stay motivated to continue
the participation of the people. Also the people themselves
should be willing to continue. This will only be possible when
they see the use of joining the discussions, see the results
of them and thus get some kind of profit from it.
It will be the task of the cadre to promote the discussion
groups and organize a promotion campaign. Good contacts between
the cadre and the people is one of the most important conditions
to make the discussion groups a continous success.

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