

Construction, rehabilitation and sustainable management of rural
water supply systems in Rwanda; a background document.

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1. Introduction

1.1 Background and purpose

In 1995 the Minister of the "Ministere des Travaux Publiques" (Minitrape) requested the Dutch NGO Disaster Relief Agency (DRA) for assistance with the production of a project proposal for the reinforcement of its 'Section Mobilisation Sociale'.

This work was done by a DRA consultant from mid January to the end of February 1996 together with the team of this Section. They executed the following activities:

- A literature study of relevant documents.
- A ZOPP problem analysis together with the people from the Section Mobilisation Sociale (an explanation of this methodology and a presentation of the results of the analysis are presented in Appendix 1).
- Field visits during 6 days to 8 communes divided over 6 Prefectures (a report of these visits is presented in Appendix 4).
- Meetings and discussions with staff from almost all International Agencies involved in rural water supply in the country as well as with key persons within Minitrape.
- An analysis of tasks that need to be executed in order to solve the problems determined during the assessment.
- Production of a project proposal and a background document.

Already during the ZOPP analysis it was found that not only the Section Mobilisation Sociale, but also other Sections within the Division l'Hydraulique Rurale needed to be reinforced. Therefore it was decided to take a broader approach and focuss on the role of the government as a whole. Another conclusion was that water should not be dealt with as a seperate aspect, but as a part of environmental hygiene, thus in conjunction with sanitation and hygiene education aspects.

This background report reviews the investigations executed, the information obtained and the analyses made (as well as the methodologies used) which have formed the basis for the project proposal. It contains important information for those who have to decide over the project proposal, for the staff who will be involved in the execution of the project and for the people involved in the debate about the national policy and the (possible) restructuring of Minitrape.

Remark: for editorial reasons in this report the word 'Agencies' is used as an overall term to indicate national and international NGO's and other international Agencies.

1.2 Management of rural water supply systems

By far the most complicated aspect of rural water supply systems is to find a solution for their sustained management. Also Rwanda has struggled with efforts to introduce sustainable social infrastructure for the management of rural water supply systems. In 1991 all the experiences gained were analyzed and used to produce a guideline for 'self-management of water systems in

rural areas' [1]. This guideline contains the "national policy concerning social infrastructure for management of rural water supply systems" (in this report hereafter referred to as 'the national policy') and information on how to implement this policy and calculate the management costs.

The basis of the national policy is that management of water systems is organized at communal, or, in case water systems pass through more than 1 commune, at inter-communal level. In principle the people in the communes can choose between management of the water systems by the local authorities, by a professional organization, by themselves, or by a combination of these. In practise people always choose for management by themselves, sometimes in combination with a professional organization taking care of more complicated parts of the system (e.g. large pumping stations). The basis of the self-management structure is the 'Water Association', an organization which is completely responsible for the management of the water systems in its area. The users of the systems are organized in water point committees and are represented in regularly held Water Association meetings by their chosen water point representatives. The Water Association has an executive board with a President, Vice-President and Treasurer. They are chosen (and controlled) by the water point committee representatives (or by the Secteur Water Committee representatives in case of large water systems). Operation and maintenance costs are largely financed with the water fees (paid per time unit or per volume of water consumed) paid by the users of the systems. The execution of O&M is done partly by the users themselves and by craftsmen (fontainiers), employed by the Water Association or by the Commune(s) in which the Water Association is working.

Reasons to take the existing national policy as a basis for the management of rural water supply systems in the Rwanda of today are:

- In many communes piped water systems exist which need a management structure at a higher level than the water point level.
- The self-management structures have been relatively succesful before the war in a number of communes although most of them started to disintegrate at some point.
- The self-management structure which is usually chosen by the beneficiaries gives them a large influence in the management of their own water systems and increases their betrokkenheid with water and water hygiene related issues.
- In a large number of communes Water Associations are still completely or partly in place (and functioning to a certain degree) only in need of some external support.
- It is widely accepted that the national policy forms a good basis to build on and continue with.
- In the national policy people are given a choice to the management structure they prefer, i.e. self-management, management by governmental structures, or management by a professional organization.

Some remarks have to made though:

- 1) There are questions to what extent management structures are really necessary in a relatively complex system at commune or even inter-communal level as described in the national policy. This question can especially be raised if in a commune water can largely be provided through springs and/or handpumps. In these cases it is argued, management structures at the water point level would suffice. Also where water is or should be

provided through piped systems it can be questioned if it would not be better to implement management structures per water system instead of a management structure at communal or inter-communal level covering usually more than one system.

- 2) As discussed before the current national policy is only based on drinking water supply while it should be based on environmental hygiene which includes, besides drinking water, aspects such as sanitation and hygiene education.
- 3) Tarification is a subject which needs more attention. It should be based on one side on a calculation of the real costs of the systems (see document [1] for an example on how to make such a calculation) and on the other side on what people can and want to pay. Methodologies are needed to determine the second side and strategies should be developed for what to do in case of large discrepancies between the two sides
- 4) A thorough investigation of mistakes made before the war should be carried out to assess whether other changes are needed as well to prevent the mistakes which have led to the failure of Water Associations during these times.
- 5) Before starting any initiatives in communes a study should be made of the environmental aspects as well, that is the improvements in the environmental hygiene that can be expected as a result of the interventions and the possible negative impact the interventions can have on the environment.

2. Self-management of drinking water systems according to the national policy

2.1 Introduction

In this Chapter a description is given of the self-management structure as it is formulated in the national policy. This is done per level, working the way up from the lowest to the highest level.

2.2 Water point level

The lowest organizational level of the social infrastructure proposed is the water point level. The people using the water from one water point choose a water point committee (comité du point d'eau), consisting of a representative (responsible for the contacts with higher levels and representation in the water committee), a money collector (collecting the water fees from the users once a year to give them to the water committee treasurer; another system is where people pay a price per volume of water to water vendors who have to pay part of that money to the Water Association) and a surveillant who keeps an eye on the water point, makes sure that it is kept clean, that no animals can come near etc., executes very small repairs and warns the fontainier in case larger repairs are needed. For any other kind of problems with the water point the representative can contact the fontainier or the executive board of the water committee (in some communes also an animator is in function who can be approached in case of problems). The members of the water point committee are not paid.

2.3 Secteur level

In case the amount of water points is very large (>50), secteur committees are formed by the representatives of the water point committees. The representatives of the Secteur Committees then represent their Secteurs in the meeting of the Commune Water Association instead of the representatives of the water point committees (this to prevent that too many people will attend the meeting of the Water Association).

2.4 Commune level

All water systems in a commune are managed by the Commune Water Association, 'La Régie Associative'. In case a water system covers more than one commune an 'Inter-communal Water Association' may be formed. The Water Association is completely responsible for the management and all the important decisions to be taken, such as:

- method of tarification (payment per jerrycan, payment per family per month/year)
- amounts to be paid (this should be based on a calculation of all costs involved on one side and on an assessment of what people can or are willing to pay on the other side; during the field investigations in January 1996 it was found that people were ready to pay 3 to 6 FRW per jerrycan or 100 (usually for springs/poor families) to 600 (for some pumped schemes/rich families) FRW/family/year; this was found by using a discussing technique

at some water points, called the 'Bidding Game', and by discussing the matter with fontainiers, animators and local authorities)

- regularity of meetings by representants of water point committees
- salaries of fontainiers, animateurs and pompistes (sometimes paid with contributions from NGO's; often fontainiers are paid by the commune, sometimes also with contributions from NGO's)
- the question if members of the Board get a prime or salary and if so how high this will be
- voluntary work by beneficiaries.
- how to deal with problems which can not be solved by the Water Association (options: request assistance from Agencies or from the government, or hire experts/private companies)

(Largely, though not completely, in line with the national policy as described in document [1]).

The large decisions are usually taken by the meeting of the Water Association while daily management is under the responsibility of the Board members (see further on).

The main costs to be paid by the Water Association are:

- the salaries/primes of fontainiers, animators, pompistes (for small pumped schemes), and possibly of members of the Board and salaries of water vendors, etc.
- costs of materials needed for the management, such as notebooks, receipt books, table and chairs for in the office, etc. (often with support from NGO's)
- materials for the staff in function (rain coats, rubber boots; often with support from International Agencies).
- maintenance of office building (often with support from International Agencies).
- costs of transport means, carburant (if needed) and their maintenance
- costs of operation and maintenance of the systems, including all repairs, carburant and lubricants (if needed)
- in case of large pumped and/or treatment schemes: contribution to the organization responsible for pumping and/or treatment.

The main income sources of the Water Associations are the water fees paid by the users of the systems, and contributions from the Commune(s), International Agencies, the national support fund (which already existed before the war, although probably more in theory than in practise) and others.

The Water Association is formed by the representatives of all the water point committees or by the representatives of the Secteur Committees. Together the representatives are responsible for the proper management of their water systems. The representatives of the water point committees (or Secteur Committees) come together regularly to discuss matters related to the water systems and take decisions. The Water Association has an executive Board (le Bureau de la Régie) consisting of a president, a vice-president and a treasurer, who are chosen by the representants of the water point committees/Secteur committees. The Bourgmestre of the commune is the 'president de l'honneur' of the Water Association. He can overtake/intervene in the decisions of the Water Association if he finds this necessary (in case of dispute between the Association and the Bourgmestre the Prefet can be asked to mediate). Usually one fontanier is employed, either by the Water Asscoiation or by the Commune, for the execution of repairs which the water point committees can't execute themselves. In case of pumped water schemes a pompiste is employed as well (in case of large pumped or treatment schemes an independent organization is responsible

for management of the pump station/treatment facilities and gets paid for its services by the Water Association, usually with external financial support). Animators play an important role during the implementation of the Water Association (increasing motivation of people, assistance with formation of water point committees and Water Association). After the Water Association has been established the work of the animators is officially finished (although in some communes the Water Association has kept an animator in function to assist the water point committees with their problems, motivate the people, advise the Board etc.). Animators are often chosen as members of the Board of the Water Association and/or in the Secteur Committees and continue their motivating/sensitizing activities within those functions.

3. Implementation of self-management structures according to the national policy

3.1 Introduction

In this Chapter an overview is given of how self-management structures are currently implemented in a number of water supply projects and the implementation strategy as it was formulated before the war in document [1].

Unfortunately the experiences with the implementation of self-management structures for rural water supply systems after the war are limited. Most Agencies involved in water supply projects after the war have mainly concentrated on the technical inputs for rehabilitation or new construction of water systems without paying much attention to the management of these systems. The Agencies who are currently involved in the implementation of self-management structures for rural water systems collaborate in most cases with the Section Mobilisation Sociale. Their collaborate experiences have been included in this Chapter.

Before the war infrastructure for management of rural water supply systems was in place in most communes, but was usually in a state of collapse or functioning inadequately. What was still left of the infrastructure just before the war totally collapsed during the war. However, the experience obtained with implementation of social infrastructure in the years before 1991 was used to form an strategy for the implementation of social infrastructure. This strategy has been included in document [1] and a resumé of it is also included in this Chapter.

3.2 The experiences of International Agencies

The general process followed by most Agencies involved in establishing social infrastructure for management of rural water supply systems is:

- **Initial survey on social aspects, project proposal and non-formal agreement with Minitrape**
- **Discussions with the Bourgmestre(s), RHP and Conseillers** (many RHP's and Bourgmestres, with exception of the very new ones, have been extensively informed about the national policy during courses, workshops etc.) about the need and possibilities to establish social infrastructure for management of the water systems in their commune(s). Also the Conseillers of the Secteurs are usually contacted and sensibilized.
- **Selection of one or a number of animators per commune** (it is not completely clear on what criteria the numbers are based and which amount works best, what is the best solution for sustainability (pay them or not, and how much etc.); this probably differs for each commune). Up to the formation of the Water Association the tasks of the animators are:
 - * to educate the people on water hygiene aspects
 - * to discuss/explain the need of social infrastructure for self-management of the

- rural water systems
- * to discuss/explain the need for payment by the people for the maintenance of the water systems
 - * the creation of water point committees by the users and training of the committee members.
 - * the establishment of the Water Association by the representatives of the water point committees and training (together with people from the Section Mobilisation Sociale and the RHP) of the members of the Board.

The quality of the work of animators is crucial for the proper implementation and functioning of the Water Association. Animators should therefore be very well selected, trained and supported during their work. During the field investigations it was observed and heard that this is often not very well done!

During the field investigations and the discussions with different people the following selection procedures for animators (already in use or proposed to Minitrape) were determined:

- 1) Pre-discussion and agreement on the criteria for selection of animators by a panel of the Bourgmestre, Minitrape and the Agency and may be even the fontainier (facilitated by the Section Mobilisation Sociale of Minitrape). Conseillers are then asked to each pre-select a minimum of 3 persons in their Secteur who would like to work as an animator during a period of 3 months (the period estimated to be needed to implement the Water Association). The pre-selected persons go through a test (in writing and speaking) after which a final selection is made yielding one animateur per Secteur. In each commune also a co-ordinator is appointed for the animateurs who is selected from among the candidates. The selected persons are given a training by Minitrape in which they are prepared for their tasks (especially participation techniques/how to sensitize people are important). They are not paid, although they usually receive a small prime, an official declaration that they have successfully completed the animators' training, and an identity card from the commune. (see further document [2]).
- 2) Animators are selected by an Agency, often without using a clear defined set of criteria. Usually one animator per commune is appointed. They are paid by the Agency. Training and support are often poor.
- 3) Animators of CCDFP, who have often been active in the communes in general development issues before the war, are selected by an Agency in cooperation with CCDFP and Minitrape. They are given a training by Minitrape and are paid by the Agency.
- 4) Under discussion also is the following possibility:
Selection of volunteers among the Rwandan Red Cross, who would be trained by

IFRC and Minitrape. They are not paid for their work, live in the sectors where they work and can do follow-up while supported on a sustainable basis by the Rwandan Red Cross.

- **Official creation of the Water Association.** When at all the water points a water point committee is installed (and in large communes Secteur Water Committees) a meeting with all the representatives of the water point committees (or the Secteur Water Committees) is held in which the Water Association is officially established and the members of the executive Board (President, Vice-President and Treasurer) are chosen.

In areas where it is more difficult to sensitize the water users, prior to the above described process of sensibilisation by animators theatre performances can be organized which show, in a humoristic way, the importance of taking care of the water systems and the necessity to pay for the water in order to secure that people will always have clean water. Experience with such theatre in a number of communes has been very positive (see further document [2]). Other possibilities to further sensitize/motivate people are: intensified meetings at the water points with and by the staff of the involved agencies and/or by the local authorities, etc.

Once the Water Association is in function the above described tasks of the animator officially come to an end. It was found/told however, that often animators are chosen as President or Vice-President of the Water Association or as members of the Secteur Committees and in those functions usually continue their sensibilisation and motivational activities. In other areas the Water Association decided to keep one animator in function (usually only possible where external funding for his salary and transport was found) fulfilling an important role in solving problems, executing control tasks etc.

3.3 A resumé of the strategy for implementation of social infrastructure as was formulated before the war

Still to be done.

4. The tasks for proper construction/rehabilitation and sustained management of rural water supply systems.

In order to be able to determine which tasks are to be fulfilled for proper construction/rehabilitation and sustained management of rural water supply systems it is necessary to define the objectives of the sector. As argued in the Introduction to this report the Sector does should not only comprise water but also other environmental hygiene aspects, such as sanitation and hygiene education. Therefore objectives have been formulated which are based on water, sanitation and hygiene.

The overall objective of the Sector can be formulated as follows:

Secure a sustained drinking water supply of sufficient quality and quantity as well as sustainable sanitation for each rural household in Rwanda and secure optimal hygiene behaviour.

This objective can be subdivided in the following specific Sector objectives:

- 1) **Rehabilitate, construct and/or upgrade rural drinking water supply and sanitation systems where needed.**
- 2) **Improve the quality of rehabilitation, construction and upgrading of rural drinking water supply and sanitation systems.**
- 3) **Secure proper and sustained management of all operative rural drinking water supply and sanitation systems in line with the national policy.**

To define who is responsible for the tasks it is necessary to define the roles of the different parties. The definition of these roles was based on the following elements:

- The (improved version of the) national policy concerning social infrastructure for management of rural water systems.
- The impression that the government of Rwanda currently (and very likely in the near future) does not have the capacity to finance and execute rehabilitation/construction/upgrading works in rural water supply and sanitation itself nor finance the implementation of social infrastructure for its management. This should be the role of Agencies while the role of the government should be to facilitate and support the work of these Agencies where and when needed.
- The assumption/indication that the presence and support of most Agencies after the completion of these works will not be sustained over prolonged periods of time and that all support to management structures should thus be provided by the government.
- The assumption that the main reasons for the disintegration of water systems before the war was that the social infrastructure for management of the systems was not implemented correctly in that time and/or that when Water Associations were faced with technical, financial or social problems they could not solve themselves there was insufficient external support to put them back on track again. The government will thus have to make sure that the creation of social infrastructure is done correctly and that good support is given to Water Associations.

The role of the government can thus be summarized as follows:

The role of the government in rural water supply and sanitation

- 1) Training of several of the actors involved in implementation and management of rural water supply and sanitation systems.
- 2) Development, production and distribution of guidelines for the actors involved in implementation and management of rural water supply and sanitation systems.
- 3) Guidance to implementing Agencies on how to develop and implement rural water and sanitation projects in line with the (improved version of the) national policy.
- 4) Monitoring, evaluation and control of the works executed by implementing Agencies.
- 5) Monitoring and evaluation of the performance of management structures and support where and when needed.
- 6) Coordination and information.

A schematic presentation of the roles of the different parties:

Tasks that need to be carried out at the National level.

Task	Who should coordinate?	Who should be involved in its execution?	Is this task fulfilled at this moment?
Monitoring and evaluation of lower levels and remedial action where needed	Minitrape, Div. H. R., Section Entretien et Exploitation	Minitrape, Div. H. R., Sections: 1) Entretien et Exploitation 2) Mobilisation Sociale 3) Encadrement des RHP	Function: to check and improve performances of RHP's, management structures and implementing Agencies, and the functioning of water systems. Not sufficiently done yet (only RHP reports and information from sporadic visits; hardly any remedial action). For this purpose, among others a national monitoring team will be established. The team will consist of members of the Sections E&E and M.S. who will join the team in turns. In the first few months of its functioning the team will usually be joined by one of the expatriates, after that regularly joined by one of the expatriates. Sometimes one person may be sent in the field by motor bike for specific observations/ assistance with problem solving.
Data base	Minitrape, Div. H. R., Section Entretien et Exploitation, and Div. Études, Programm. et Documentation	Minitrape, Div. H. R. all Sections, and Div. Études, Programmation et Documentation	Reports are put in archives, but it should be assessed whether the information is easily accessible (per commune or per water system), whether all data are stored together (technical and social information, information from before, during and after implementation of the projects) and whether it is useful/feasible to develop a computerized data base. The information available (mainly reports sent monthly by all RHP's and field visit reports of national level staff) should be intensively used by the monitoring and evaluation team as a preparation to their work in the field. A work schedule for this should be developed. It is also important that all information available with International Agencies is entered in the archives. The data base should also be used to assess what training has been given in communes etc.
Training of fontainiers	Minitrape, Div. H. R., Section Mobilisation Sociale	Minitrape, Div. H. R., Section Mobilisation Sociale, UNICEF (until the Div. Mob. Sociale of Minitrape can do it itself completely)	Yes, financed by UNICEF, executed by UNICEF together with the Section Mobilisation Sociale (?). It should be assessed to what extent the Direction Mob. Sociale can execute/finance this task completely itself. The training mostly concentrates on construction and maintenance of protected springs. It should be assessed if also training is needed on other aspects (esp. O&M of piped water systems).
Training of members of the Boards of Water Associations	Minitrape, Div. H. R., Section Mobilisation Sociale	Minitrape, Div. H. R., Section Mobilisation Sociale, with financial and logistical support from implementing International Agencies	To a certain extent. The Section Mob. Sociale gives such training in the communes where Int. Agencies are implementing rural water supply projects. They are usually invited by these Int. Agencies who usually also provide them with the means needed to give the training (transport, some materials, payment of DSA etc.). The training seems to concentrate largely on explanation of the national policy though, while other issues, such as bookkeeping, teaching and motivation skills, participation skills, management skills etc. are not given attention. It should be further assessed what the training needs are and to what extent they are covered with the current training provided. A complete training programme should then be developed.
Training of animators	Minitrape, Div. H. R., Section Mobilisation Sociale	Minitrape, Div. H. R., Section Mobilisation Sociale, with financial and logistical support from implementing International Agencies	See above. Some International Agencies train animators themselves, but the quality of such training is usually bad.
Training of pump stations staff	Private sector (technical schools) / Electrogaz	Private sector (technical schools) / Electrogaz	Unknown, should be investigated
Training of RHP's	Minitrape, Section Encadrement des RHP's	Minitrape, Div. H. R., Sections: 1) Encadrement des RHP's 2) Mobilisation Sociale	Some training is given, but it should be assessed if this is sufficient and how it can be improved. Most RHP's need additional training on: 1) motivation and participation techniques for their task to support animators and Water Association Board members. 2) What, how and when to monitor regarding the performance of implementing International Agencies, animators, Water Associations, and the water systems themselves. Remark valid for all training packages to be developed: Training packages should be such that newcomers at the Section Mob. Sociale can easily work themselves into the job (with some support from colleagues). They should be formed based on experiences of RHP's and they should be field tested before the final versions are produced.
Training of	Minitrape, Int.	Expatriate staff, local	Train national staff in Kigali and send some national staff members to international courses.

Workshops for RHP's	Minitrape, Section Encadrement des RHP's	Minitrape, Div. H.R., Sections: 1) Mobilisation Sociale 2) Encadrement des RHP	Not yet done. Such workshops aim to increase motivation of RHP's, increase their knowledge/information through discussions with their colleagues and staff involved in the organization of the workshops. Also talks on certain subjects can be organized, to be executed by organizing staff or invited speakers. On the other hand through such workshops a lot of feed-back can be obtained from the RHP's which can be used to improve the support to them and improve other things coming forward.
Support to RHP's to organize workshops or other support activities	Minitrape, Section Encadrement des RHP's	Minitrape, Div. H.R., Sections: 1) Mobilisation Sociale 2) Encadrement des RHP	The RHP should organize such activities from time to time for animators, Bourgmestres and Conseillers, Water Association Board members, and fontainiers/pompistes. Not yet done.
Administration and payment of National and Prefecture level staff of Minitrape	Minitrape, Division Affaires Administratives et Financieres	Minitrape, Division Affaires Administratives et Financieres	Yes. (What about stories that RHP's have to come to Kigali to collect their salaries??)
Logistical support	Governmental Bodies (is there a central unit for this??), National and International Agencies	Governmental Bodies (is there a central unit for this??), National and International Agencies	Logistical support can include: purchase, maintenance and planning of availability of transport means at National level, financing and organizing purchase of office requirements etc. (About logistical support to RHP's: how is this organized, through the Prefecture, or through the National Government??). Most transport means available at the national level are donated by International Agencies/bilateral aid etc. But not enough transport means for the Sections E&E, MS and EdRHP, and insufficient carburant and lubricants available to enable them to perform their tasks properly. (What about stories that RHP's have to come to Kigali to get their carburant ???). Who pays for and organizes the office requirements of the National Governmental Bodies and the RHP's? Who will be responsible for giving bicycles to new fontainiers in the future (now being done by UNICEF, but how long will they continue with that?) (If a fontainier leaves, does he have to give his bike to his successor? What if a bicycle needs to be replaced? What about transport needs of animators and their coordinators?). RHP's should have access to a typewriter or computer and to sufficient fuel and lubricants needed for their transport.
Coordination between all involved national governmental bodies and International Agencies.	Minireiso (HACU meeting)	Minireiso, Minitrape Div. H.R., all involved NGO's	To a certain extent. The HACU meeting is a very official meeting with upto now not so much power. Informal, day to day coordination and collaboration is very much needed however (of special importance is that everybody is informed and motivated about subjects concerning them).
Internal coordination of Div. H.R. and coordination with Minister and Director	Chef de Division de l'Hydraulique Rurale Expatriate advisors	All staff of Div. H.R., Director and Minister	Internal coordination needs much more attention. Often things are done/decided of which other persons within the Division have no knowledge. This causes confusion, double or contradictory decisions etc. Communication is a major problem. Also the fact that the Division, Director and Minister are spread over different buildings far away from each other complicates coordination.
Production of guidelines	Minitrape, Div. H.R., Section Mobilisation Sociale	Minitrape, Div. H.R., Sections: 1) Entretien et Exploitation 2) Mobilisation Sociale 3) Encadrement des RHP	A GTZ manual with technical guideline for RHP's exists as well as the guidelines for International Agencies on how to implement rural water supply projects as produced in this document. It should be assessed however what other guidelines exist, if and how they need to be adapted and what other guidelines are needed. Some ideas for guidelines to be produced (they should preferably be written in Kinyarwanda; assess first if such guidelines already exist and if yes if they are of sufficient quality and contain information on all issues that should be included): <ul style="list-style-type: none"> • Guidelines for RHP's for their monitoring, evaluation and reporting tasks. • Simple guidelines on the national policy (with drawings and simple text) for use by Bourgmestres, Conseillers, Fontainiers, RHP's, Board members, the population etc. (also for training purposes of these groups) • Simple guidelines with many drawings for fontainiers (many of them can't read!). • Guidelines for the tasks of the board members of Water and Sanitation Associations. • Guidelines for animators. • Guidelines for the national M&E team. • Guidelines for Organizations on how to develop and implement rural water supply and sanitation projects in line with the national policy. The guidelines should be based on the experiences of the target groups, and the staff of governmental bodies and implementing International Agencies involved in the work of the target groups!

Technical construction and/or rehabilitation of large water systems	International Agencies, Minitrape, Electrogaz, Minireiso	International Agencies, Minitrape, Electrogaz, Minireiso	Yes, but much work is still to be done. Financing almost exclusively by international bodies. This task can also be executed by organizations active at the Prefecture level.
Logistics, administration, financing, human resources etc. for implementation	International Agencies	International Agencies	Yes (this basically encompasses all activities of the offices of International Agencies in Kigali and excludes the support activities in implementation works which are/should be fulfilled by the Government of Rwanda). Not further worked out here, as not included in the project proposal.
Financial or material support to Water Associations (including stocks of materials if needed?)	Minitrape, Div. H.R., Section ???	Minitrape, Div. H.R., Section ??? and Division Affaires Administratives et Financieres.	UNICEF is currently developing stocks at the Prefectural levels with spare parts for water systems. It should be assessed however whether this function is necessary or whether all spare parts should as much as possible be bought on the local markets (which includes Kigali). Water Associations should pay for the spare parts they need as much as possible themselves. Only when they really can't they should get externally funded financial support to buy the spare parts. Mechanisms/procedures for such financial support to management structures should be developed including criteria for the provision of funding. It should also be assessed who will manage the fund and at what level it is managed. Does each management structure get a certain amount which it can use when it feels it needs it, does the RHP get a fund available which he can use for financial support to the management structures in his Prefecture, or will there be a fund at national level for which management structures have to apply and for which the decisions are taken at the national level?
Study of feasibility of projects (technical)	Minitrape, Div. H.R., Section Études et Inspection des projets, and National and International implementing agencies	Minitrape, Div. H.R., Section Études et Inspection des projets, and National and International implementing agencies	Currently mainly done by International Agencies. They should provide their reports to the Section Études et Inspection des Projets though, and this Section should develop a proper data base for all the studies done (this should be the same data base as discussed earlier; thus this data base will contain all information from water systems, both technical and social, both before, during and after implementation).
Study of feasibility of projects (social)	Minitrape, Div. H.R., Section Mobilisation Sociale, and National and International implementing agencies	Minitrape, Div. H.R., Section Mobilisation Sociale, and National and International implementing agencies	Currently mainly done by International Agencies, but they should work much more with the Section Mob. Sociale who should basically do the study for them. International Agencies should provide their reports to the Section Mob. Sociale, and this Section should develop a proper data base for all the studies done (see data base task).
Approval of project proposals for rehabilitation or construction of rural drinking water systems	Minister of Minitrape (+ Minister of Minireiso???)	Minister of Minitrape (+ Minister of Minireiso???) + the Sections Mob. Sociale and Études et Inspection des Projets	There is no clear procedure yet for the approval of project proposals; therefore in this document this aspect is taken up in the proposed guidelines for Agencies on how to implement a water supply project. This guideline should be approved by the involved Minister(s) and an internal procedure for the approval of project proposals should be developed (who within the involved Ministries should look at it, who enters the information in the data base, in which cases a team will go into the field to check things out, etc. before it goes to the Minister(s) for the final approval).
Further development/adaptation of National Strategies	Minitrape: Minister, Director, chefs des Divisions, chefs des Sections. Minireiso (???)	All Divisions and Sections of Minitrape (and Minireiso?) in collaboration with involved National and International Agencies	A new National Policy, based on document [1] should be written. This document however should be based on environmental hygiene and not on water only. It should also include the possibility for other management structures, for instance management at the water point level only. The National Policy should go together with guidelines on how to implement it, how to determine the best management structure for a given situation, and how to determine the most suitable method and height of tariffication.

Tasks that need to be carried out at the Prefectural level.

Task	Who should coordinate?	Who should be involved in its execution?	Is this task fulfilled at this moment?
Office for Prefectural Water Department			

Storage and delivery of spare parts to commune level			
Monitoring and evaluation of lower levels (technical, finances, social such as problems in organizational structures etc.)			
(Training of presidents, vice-presidents, fontainiers, animators, commune bookkeepers)			

Tasks that need to be carried out at the Sous-Prefectural level.

Task	Who should coordinate?	Who should be involved in its execution?	Is this task fulfilled at this moment?

Tasks that need to be carried out at the Commune level.

Task	Who should coordinate?	Who should be involved in its execution?	Is this task fulfilled at this moment?
Office for commune water committee (with one president, one vice-president and one treasurer for all water systems in the commune)			
Storage of spare parts for all water systems in commune for repairs to be executed by fontainiers			
Administration of finances and materials for all water systems in commune			
Monitoring and evaluation of all (parts of) water systems and water points in commune and commune water finances			
Rehabilitation/construction of simple water systems.???????????????? Repairs????????????????			
In case inter communal committee having office in commune: Office for inter communal water committee (preferably in same office as commune water committee)			
Storage of spare parts for repairs that fall under the responsibility of the inter communal water committee			

Tasks that need to be carried out at the Secteur level.

Task	Who should coordinate?	Who should be involved in its execution?	Is this task fulfilled at this moment?
Motivation, training, sensitizing and monitoring of water points and water point committees	Secteur Water Committee	All members of the Secteur Water Committee	Only where Water Associations and Secteur Water Committees are in place
Representation in the meeting of the Water Association	Secteur Water Committee	Representative of Secteur Water Committee	Only where Water Associations and Secteur Water Committees are in place

Tasks that need to be carried out at the Water Point level.

Task	Who should coordinate?	Who should be involved in its execution?	Is this task fulfilled at this moment?
warning of appropriate authorities in case of problems with water point or the pipes between the water points	President of the Water Point Committee	any member of the Water Point Committee or users of the water point	Where Water Associations are in place yes, but often not sufficiently, too late etc. More sensitizing/motivation needed.
organizing (or executing) the cleaning of the water point			
simple maintenance (or should this better be done by the fontainier???)			
representation in Water Association or Secteur Water Committee.			
Collection and payment (to treasurer of the Water Associatin) of water fees			

Tasks that need to be carried out at the User level.

Task	Who should coordinate?	Who should be involved in its execution?	Is this task fulfilled at this moment?
collection of water at water point			
hygienic use of water			
warning of water point committee or other appropriate authorities in case of problems with water point or the pipes between the water points			
cleaning of water point (in case asked by water point committee)			
payment to collecteur of water fees (in case of payment per time unit)			

5. A proposal for guidelines on how to develop and implement rural water and sanitation projects.

Introduction

During field investigations in January and February 1996 local authorities in a number of communes and staff working in water systems in those communes were asked about the performance of Agencies working in rural water supply in their area. Although the work done by Agencies was usually much appreciated some points giving scope for improvement were mentioned as well:

- Agencies often do not properly investigate the complete situation and the problems related to the water situation before they start with the work (both social and technical). Because of this, work done by them often fails, and people participating in the execution of the work get tired because their efforts do not (or hardly) lead to improved water supply.
- Many Agencies do not work together sufficiently with local authorities, staff and local populations.
- Agencies tend to concentrate too much on rehab/construction works and forget about management structures for the systems (one reason for this as mentioned by an International Agency is that often Agencies don't have social/community workers in their expat teams).
- The quality of rehab/construction work is sometimes poor
- The rehab/construction works are often carried out only in parts of the communes.
- Many Agencies tend to promise too much as they try to do too many things in too many communes at the same time.

In several occasions this has caused a lot of friction, demotivation and pessimism among local authorities and the local population, and failure of projects.

On the other hand many Agencies are confused and frustrated because:

- The government doesn't make clear how rural water supply projects are to be proposed to and approved by Minitrape and/or Minireiso, and there is no guidance on where and how such projects are to be implemented.
- Often new conditions are demanded by the local or national authorities after projects have been accepted and started, which increases the costs and can not be foreseen.
- Agreements made between certain involved authorities are sometimes not accepted by other authorities, especially if they have not been put on paper.

To prevent these problems the below proposed guidelines have been developed. These guidelines are the result of intensive consultation with local authorities, staff working in water systems, staff from Minitrape and Agencies involved in the implementation of rural water supply projects. As it became clear that any initiative should be based on environmental hygiene and not on water supply only, sanitation and hygiene education aspects have been included as well. The aim is to give guidance to Agencies on how they can develop and implement rural water and sanitation projects in Rwanda. To further develop these guidelines they will be field-tested and the results will be discussed and the guidelines be adapted accordingly on a very regular basis by and between all involved parties.

The idea/request

An Agency either receives a request, for instance from a bourgmestre, Prefet, RHP, or Minitrape, or it develops an idea for a rural water and sanitation programme itself, for instance when it is active in an area or visits an area and observes that there is a need for rehabilitation, new construction or upgrading of water and/or sanitation systems or that hygiene education needs more attention.

How to start?

In both cases (own idea or request) the start should be made by contacting representatives of the local population, the Bourgmestre(s) of the involved commune(s) or their representatives, Water Association board members, fontainiers and animators (if in function), the RHP and other Agencies active in rural water supply in the area. The aim is to assess through discussion with these parties:

- Possible interference with other initiatives, planned or already existing in the area. The main question is: would a new water and sanitation project according to the idea/request cross these initiatives? (The aim of Minitrape is to have one Agency per commune, or even one Agency per Prefecture).
- The technical aspects: discuss with all parties the large lines of what according to them has to be repaired, constructed, upgraded, how, where, etc.
- The social aspects: discuss with all parties whether the local population is really motivated to improve its water and sanitation situation, whether it is aware of the relations between hygiene and diseases, whether people want to pay for the water and sanitation systems, whether people are ready to participate in planning and execution of the works (see in more detail below); ask all parties how the systems should be managed/maintained once they are constructed/rehabilitated/upgraded and if people are ready to manage the systems themselves; explain the (improved version of the) national policy on this aspect if the discussion partners are not familiar with it.
- Participation by the people: ask all parties what can be expected from the local people, if they will be ready to work voluntarily before the water and/or sanitation systems are in function.

Listen carefully to the involved parties; they usually know exactly what the circumstances, possibilities and problems are! Go in the field for an initial inspection with the RHP, possibly the Bourgmestre himself or someone representing him, any staff involved, e.g. fontainiers, animators etc. At this point it would be good if the authorities already contact the population to ask their opinion about the need for construction/rehabilitation/upgrading of water and sanitation systems in their area, what they think about participation in planning, but also in the execution of the work to be done, and if they are ready to pay for the water in the future. **But as the project is not official at all yet, be extremely careful not to raise false expectations with local population or local authorities! So explain this carefully to all you have discussions with!** It is even advisable to explain in an official letter to the local authorities that your visit only encompasses an initial assessment which should not raise any expectations and that the Agency does not commit itself to anything.

It should be possible to finalize these initial discussions and field visit within two to three days!

WHY PARTICIPATION?

Participation increases people's sense of ownership and motivation to pay water fees and decreases vandalism. If people have participated in the construction or rehabilitation of a water system, they will regard it as their water system and will be ready to take care of it.

If the discussions and field visit turn out positively, then explain to the involved parties what process will be followed. A summary of all the steps in this process is given below. In the next sections of these guidelines these steps will be elaborated.

- 1) **Obtain permission from Minitrape to prepare a project proposal.** The Agency will contact Minitrape in Kigali to discuss the possibility of a water and sanitation project in the area and to get permission to go ahead with the preparations for it. If this permission is obtained (if not, the involved parties will be informed about that by the Agency, and the project will be off), then
- 2) **Investigation and planning of the project.** An investigation will be started by the Agency together with the involved parties. In case the investigation turns out positive, it is followed by planning of the project.
- 3) **The project proposal and its official approval.** The result of the investigation and the project planning will be a project proposal which will be forwarded for approval to the Minister of Minitrape (and Minireiso??). The proposal includes a general introduction to the project proposed and a proposal for a contract, comprising Terms of Reference, a Bill of Quantities, and an Agreement in which the responsibilities of all involved parties are described. The proposed contract is signed for approval by the involved parties in order to let the Minister know that they all agree from their side with the proposed project and the contract. The Minister of Minitrape decides over the approval of the project. If he signs for approval, the project can go ahead according to the proposal and the contract will be valid as the final and signed contract between all parties involved. If he does not sign for approval he will indicate why and the project proposal should then be adapted according to the Minister's comments (and signed for approval again by all involved parties) or the project should be called off.
- 4) **The implementation.** The implementation comprises the construction, rehabilitation and/or upgrading works as well as hygiene education and implementation of the social infrastructure for management of the water systems, according to the Terms of Reference in the project contract.
- 5) **Support activities after the implementation.** After the implementation has been completed the Agency will continue to give support for some time in order to discover any technical problems due to wrong construction/rehabilitation and solve these and to support the newly formed management structures upto the point where they can function on their own.

Obtain permission from Minitrape to prepare a project proposal

If the result of the initial assessment is positive the next step is to contact Minitrape in Kigali to discuss the possibility of a water and sanitation project in the area. The aim is to find out if Minitrape (in principle) agrees and to get its opinion on how this should be done. The Ministry should also check in its files if no other party is planning to initiate a water and sanitation project

already in that area (as it is possible that at the local and RHP level people were not informed about that). If Minitrape is positive about it and no other party is planning similar activities, then it should be agreed with Minitrape that the Agency will initiate a more detailed investigation together with local authorities, RHP and other involved people at local level and that they will make up a draft agreement between the involved parties (see below), which will be part of the project proposal that will be forwarded to the Minister of Minitrape for approval.

Investigation and planning of the project

The investigation should include a thorough assessment of all technical aspects of the situation and the technical problems encountered. This should be done as much as possible together with the RHP and fontainiers (the local authorities should be asked which other people should take part in the investigation as well). A plan should be formed as much as possible by all who have participated in the investigation together.

More information will be needed as well on the social/economical aspects: what can and what are people willing to pay, are people aware of hygiene aspects in relation to diseases, are people ready to participate (if not, the project should first concentrate on improving the motivation or the project should move to another area where people are motivated), what can they do, what social infrastructure exists or did exist for management of the water and sanitation systems, what previous experiences have the population had with self-management and payment of their systems, are there skilled and motivated people in the area who can execute maintenance functions, what are the training needs etc.

The project proposal and its official approval

The result of the investigation and the project planning is a project proposal which is drawn up by the Agency in collaboration with all involved parties. The proposal must include the following:

- A general introduction to the project proposed (background, general description, objectives etc.).
- A proposed contract which includes:
 - * Terms of Reference with:
 - 1) an overview of the technical aspects of the rehab/construction/upgrading works to be done with as much detail as possible (e.g. quality of pipes to be used, concrete mixture to be used, etc; this will enable the RHP to better monitor and control if the works are actually done according to the quality standards agreed upon), and
 - 2) a plan for implementation of management structure(s) for the rehabilitated, newly constructed and/or upgraded systems which is in line with the (improved version of the) national policy.
 - * A Bill of Quantities in which all materials needed for the project are specified
 - * An Agreement with a description of the responsibilities of all involved parties during implementation and after completion of the project. The involved parties are: the Agency, Bourgmestre(s), RHP, local population, staff (fontainiers, animators) and the people active in the management structures.

RECOMMENDATIONS

The work should be stopped immediately as soon as one of the partners fails to fulfill its tasks as described in the agreement (and this should be described as such in the agreement). It is extremely important that the Agency fulfills its tasks properly and according to the descriptions in the agreement and that unforeseen problems are solved. Better even is to prevent unforeseen problems by proper investigations before the project starts. Avoid promising too much. Build in flexibility in the technical specifications in the agreement. Implementation will always throw up surprises and delays, including stoppages when partners fail to fulfil their duties as argued above. Thus long time lines are necessary. On the other hand be aware that escape clauses are not relevant or acceptable for users.

The over-riding priority/need is to secure regular & continuous follow-up & communication with all players at all levels. Put in a lot of energy and build a trust relation with all involved parties!

The proposed contract should be signed by the involved Bourgmestre(s), the RHP and the representative of the Agency to let the Minister of Minitrape (and of Minireiso???) know that all involved parties at the local and Préfectoral levels agree with the project proposal.

The project proposal should be forwarded to Minitrape for approval by the Minister (and to Minireiso???)! The project is approved when the Minister has signed for its approval. In this case the proposed contract will be valid as the final contract between all involved parties. When the Minister does not approve, the proposal will have to be adapted. It may then be necessary to also adapt the contract between the involved parties and have it signed again by them. After the adapted project proposal has been agreed upon at the local and RHP level it will then have to be forwarded again for approval to the Minister.

If the proposal also includes activities in other sectors, it will be necessary to forward the complete proposal to Minireiso with a comment that the part of the proposal concerning rural water and sanitation has been forwarded for approval to Minitrape as well. The part of the proposal concerning rural water and sanitation should thus be forwarded to Minitrape for approval as well, with a comment that it concerns a part of a bigger proposal which has been forwarded for approval to Minireiso. The part of the project proposal concerning rural water and sanitation is then only considered approved if the Ministers of both Ministries have signed for approval!

Remark: *In a next version of these proposed guidelines and after consolidation with all involved parties an example of a project proposal as discussed here will be included.*

The implementation

During the implementation close cooperation with the local population, local authorities and RHP will be necessary on a continuous basis. The RHP is a central figure with an important role. His main tasks during implementation are:

- Monitor and evaluate the work, report about progress and problems to the national level of Minitrape and request for assistance from that level if he believes that is necessary. This includes activities such as monitoring if all involved parties (local authorities, local population, Agency etc.) keep to their obligations as described in the agreement, and controlling the quality of the work.
- Facilitate good communication and coordinate regular meetings between all involved parties.
- Advise on technicalities/protocol.
- Assist in resolving problems between the involved parties.
- Together with national level staff of Minitrape the RHP is also involved in training of Bourgmestres and Conseillers, Water and Sanitation Association Board members, animators, fontainiers etc.

The Agency should try as much as possible to facilitate the work of the RHP, i.e. assist him with transport to and from the site(s) of work and inform him about all details. The implementation of the management structure(s) should preferably be done in the same time as the construction/rehab/upgrading works. If these works are planned to be done per area, it is probably best to start mobilising people for participation and implementation of the management structure(s) first in the areas where executional works will soon start and wait with the other areas till construction/rehab/upgrading works will soon start there. National staff of Minitrape is involved in monitoring the performance of RHP's and implementing Agencies. Both the Agency and the involved RHP will report to Minitrape about the progress made.

Support activities after the implementation has been completed

When the rehab/construction/upgrading works are completed the Agency should continue to execute follow-up activities for a period of 3 months minimum to monitor if the quality of the work is satisfactory (and assist the commune(s) to repair/mend poor construction and solve all technical problems).

When the management structures are in place the Agency should continue to execute follow-up activities for a period of 3 months minimum to support these structures with solving the problems encountered (especially during the time between the start of the management structures and the first payment for the water and sanitation (?) by the people these structures need support as they have no financial resources yet during this period and the people responsible for the management are usually still inexperienced).

All follow-up and support should be done in close consultation with Minitrape who will be responsible for the follow-up and support after the Agency has left (Minitrape is usually heavily involved in the implementation of the management structures from the start any way, or has even accepted full responsibility for it, for instance when the Agency is prepared to bear all the costs made for this purpose by Minitrape).

Some experiences with participation in rural water supply projects in Rwanda

As a result of the field investigations done for this report, and discussions with people who had been involved in water supply projects before the war, the following problems with participation were determined:

- 1) Projects had been planned without consultation of the people. Once the works started the people were told they had to do all kinds of work. The people hadn't counted on that and thought that the NGO would pay them for the work. It is extremely important to include people in the planning and discuss their contribution with them before the work starts. Make clear that the project will only go ahead if they are ready to participate in execution of the work and also that if they have agreed on that and don't do it, the work will be stopped.
- 2) In some projects people contributed in labour, but their water and/or sanitation situation did not improve, because during the work the project encountered problems the NGO had not foreseen as it had not executed a proper investigation before starting with the works. Because there were no improvements despite all the hard work done by the people, they got demotivated and started to refuse to work or ask payment for it. **Make sure that where works are done, especially where people participate in the works through hard labour, this will really result in a visible improvement of their water and sanitation systems. Make sure you investigate and plan well in advance!** Also only ask people to do their part of the work just before and during the construction/rehab/upgrading works and not long in advance! If necessary break up the project in parts.
- 3) In two projects clear agreements were made between the involved NGO's and the local populations about their responsibilities. In both projects the people had agreed to dig all the trenches for the pipes to be laid before the NGO would start its work. But when the NGO's came to look on the date the trenches were supposed to be ready they discovered that nothing had been done. The NGO involved in the first project panicked because it had all these expensive expatriates and a whole technical team sitting around and if they would not start now, the expenses would increase without being able to report any results to the head office, and they had no other projects to work on. So they decided to start digging the trenches with paid labour and forget about participation. The result was that the population was now convinced that if they did nothing sooner or later the NGO would come to do it for them. So when the NGO tried to motivate people to organize themselves for the management of the systems the people said yes but did no, as they were convinced that also maintenance and repairs would be done by this NGO. The NGO finally left and after half a year the first problems started. After a year most of the system was out of order.

Also the NGO involved in the second project was faced with the fact that people did not execute the work as was agreed with them. And also this NGO had expensive expatriates, technicians etc. waiting to start and a pressure from their head office for results. But they knew the population was just trying them out and they didn't give in. They told the Bourgmestre and several representants of the people that they would come back once again in two weeks time and that if the trenches would not be ready by then, the project would be called off and they would start a project in another commune where people were ready to participate. And guess what, after two weeks all the trenches were nicely dug and during the rest of the project the people participated exactly as was agreed. They also actively took responsibility for maintenance of the system after completion of the works and after 5 years the water system was still functioning as it should. It should be mentioned that this NGO, after discovering that people had not executed their tasks paid a lot of attention to the mobilisation of the people by intensively having meetings between the local population, the local authorities and the project staff. NGO staff really went themselves intensively in the field during the two weeks given to the community for digging the trenches to talk to people and mobilize them.

If an Agency believes it can't initiate a proper participation process (e.g. because it can't afford to stop works when people don't fulfill their tasks or when it believes it doesn't have enough skilled people to initiate participation properly) it should:

- Develop the project together with an organization who is more experienced in the social side (but still be ready then to stop the works if necessary),
- Implement the project without participation (except from planning the project together with the local authorities). So pay people (preferably the people living in the area) to do the work. Afterwards it should then be tried through intensive motivation campaigns to convince people that they should pay for the water and take up the responsibility for the management of the water systems implemented. This process may be much harder though and is not preferred, but is better than initiating participation in the wrong way as this will almost definitely lead to frustrations, demotivated local populations and often to failure of water systems in the long run! or
- Don't do the project, instead of messing up!

**Appendix 1 : ZOPP problem analysis as executed with the Section
Mobilisation Sociale, Division l'Hydraulique Rurale,
Minitrape.**

Appendix 2 : Administrative levels in Rwanda in relation to rural water supply

National level

At the national level the main actors involved in rural water supply and sanitation are:

Minitrape: Ministère des Travaux Publiques. Within this Ministry the Direction Eau et Assainissement is the major actor in rural water supply and sanitation issues. This Direction is divided in the Division Hydraulique Rurale (subdivided in the Sections Encadrement des RHP, Mobilisation Sociale, Entretien et Exploitation, and Etudes et Inspection des Projets), the Division Hydraulique Urbaine et Assainissement and the Division Hydraulique et Gestion des Ressources en Eau.

Minireiso: the ministry for rehabilitation.

Prefecture level

In Rwanda there are 10 (?) Prefectures. In each Prefecture an RHP (Responsable Hydraulique de la Prefecture) is responsible for all rural water and sanitation activities in his Prefecture.

Sous-Prefecture level

It is not clear which functions in relation to rural water supply and sanitation are executed at this level.

Commune level

A Prefecture is divided in communes. In Rwanda there are about 140 communes. Water systems in communes may include protected wells, handpumps and piped systems, usually gravity fed, but sometimes also with pumped systems. Some piped water systems are very large, sometimes even more than 50 km long and covering more than one commune. Sanitation systems usually consist of locally made simple pit latrines with wooden slabs and very poor superstructures. Open defecation is also practised by many people. Villages in the communes are often rather small centres with houses everywhere along the roads to the other villages. The population is very much spread out over the land. The head of the commune is the Bourgmestre.

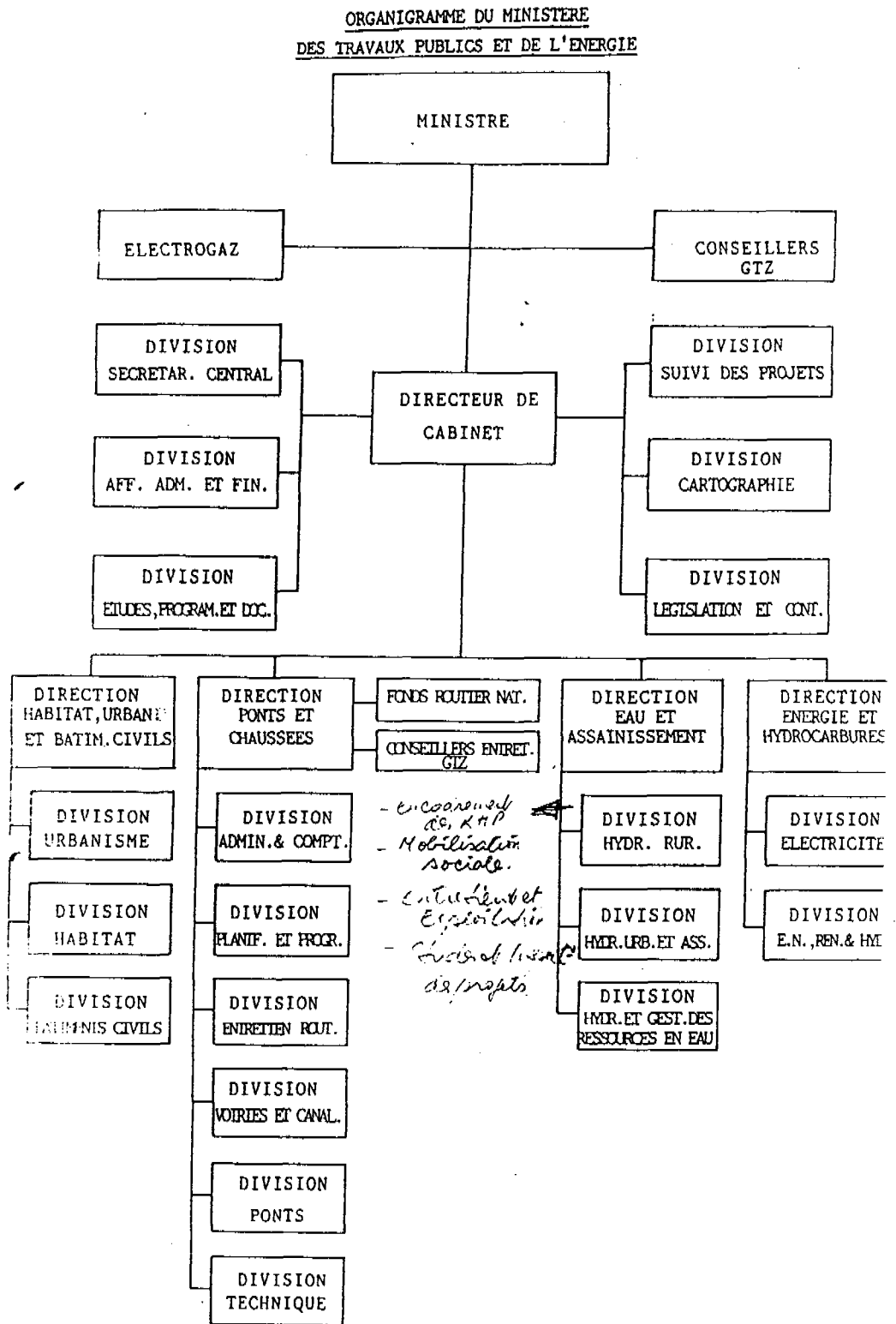
Secteur level

The head of a secteur is the Conseiller.

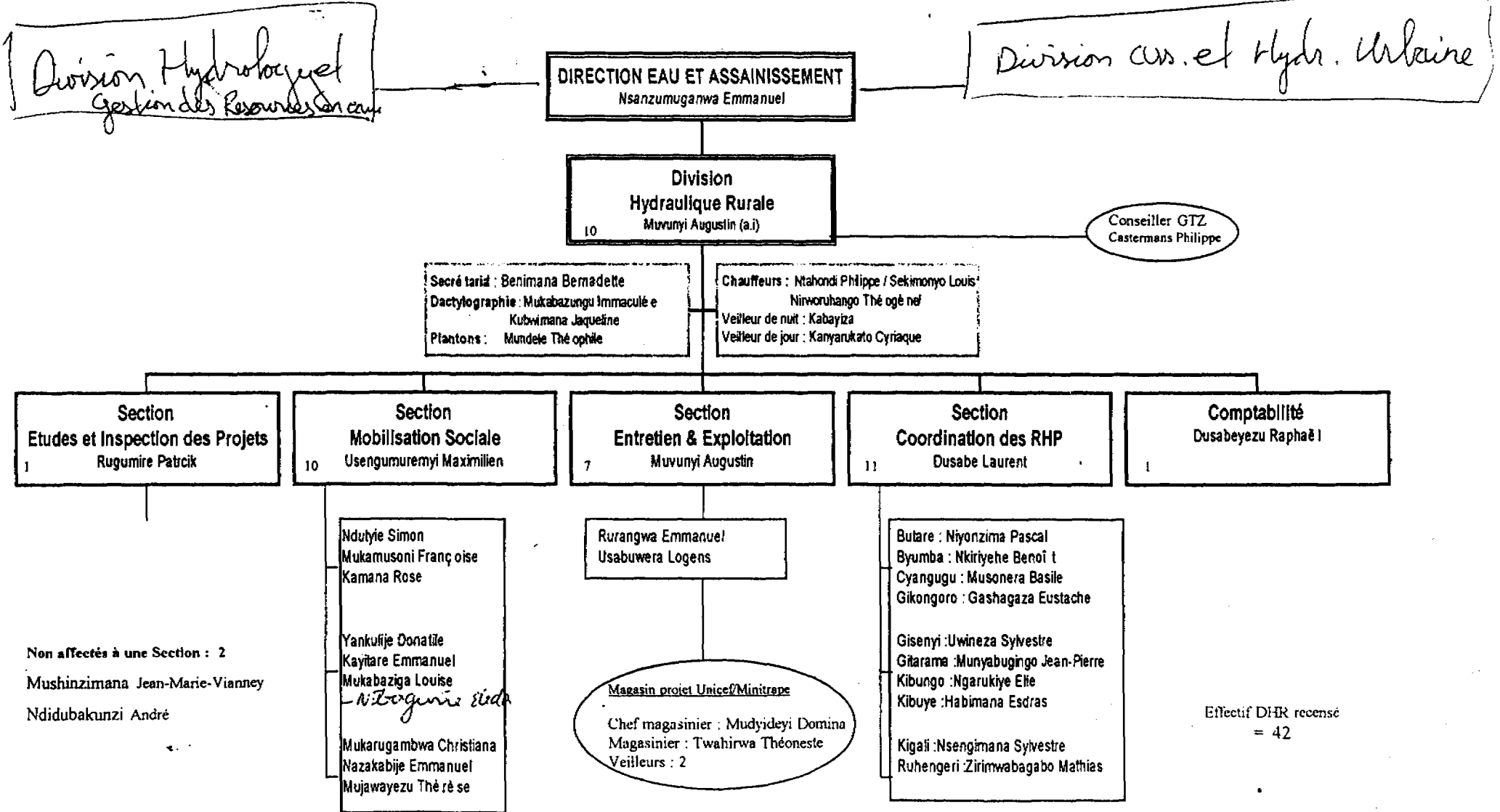
Cellule

A cellule consists of a number of households, usually about 20 (???). Does usually each cellule have its own 'point d'eau'?

Appendix 3: Organogrammes of Minitrape and of the Division Hydraulique Rurale



MINITRAPE - DIRECTION EAU et ASSAINISSEMENT
 DIVISION HYDRAULIQUE RURALE



*Division Hydrologique
Gestion des Ressources en eau*

Division ass. et hydr. Urbaine

Non affectés à une Section : 2
 Mushinzimana Jean-Marie-Vianney
 Ndidubakunzi André

Effectif DHR recensé
 = 42

Appendix 4: Report of the field visits

During the field visits the following programme was followed:

Date	Prefecture	Comments
29-01	Butare	Meetings with RHP, AICF and OXFAM-UK in Butare town.
30-01	Gikongoro	Visit to Karama Commune, meetings with Bourmestre, animator, fontainier, vice-president of Water Association, pompiste and local population.
30-01	Butare	Visit to Maraba Commune, meetings with Bourgmestre, animator, and local population.
1-02	Byumba	Visit to Murambe Commune, meetings with Bourgmestre, RHP, fontainier, local population.
1-02	Byumba	Visit to Kayonza Commune, meeting with vice-Bourgmestre.
1-02	Kibungo	Meeting with IRC in Kibungo town
2-02	Kibungo	Meeting with RHP in Kibungo town
2-02	Kibungo	Visit to Sake Commune, meetings with vice-Bourgmestre and fontainier.
6-07	Ruhengeri	Meeting with RHP in Ruhengeri town
6-07	Ruhengeri	Visit to Kinigi Commune, meetings with Bourgmestre, animators, fontainier and local population
6-07	Ruhengeri	Visit to Nkumba Commune, meetings with assistant-Bourgmestre and local population.
6-07	Ruhengeri	Meeting with ICRC in Ruhengeri town.
7-07	Gisenyi	Visit to Kanama Commune, meetings with Bourgmestre, vice-president of the Water Association, animator and fontainier.
7-07	Gisenyi	Meeting with ICRC in Gisenyi town.

Notes of all these visits and meeting are available with the author in hand writing.

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