IRC International Water and Sanitation Centre

Towards an Enhanced Role of Resource Centres In Capacity Building

14 – 18 June, 1999, Delft, The Netherlands

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VISION 21.

A SHARED VISION FOR WATER SUPPLY AND SANITATION

(This paper is largely drawn from the VISION 21 process document prepared by Hans Van Damme and Ashoke Chatterjee.)

VISION 21 is part of a larger process under the World Water Council to guide the development of a long term vision on water, life and the environment for the 21st century – known as the World Water Vision.

What Is a Vision?

Discussion of this topic reveals a range of opinions, particularly in relation to how firmly visions needed to be anchored in current realities. The vision developed by the Collaborative Council and stated in the VISION 21 Process Document comes closest to gaining consensus:

"A vision is a picture of the future we wish to create. It is seeing a future that can be achieved and is worth achieving."

World Water Vision

The development of the World Water Vision is along the lines shown in Figure 1 and the process by which it will be achieved is shown in Figure 2.

The World Vision for Water will be based on knowledge of what is happening in the world of water regionally and globally and trends outside the water sector. The consensus vision based on this knowledge will act as a focal point for raising awareness among the general population and decision makers in order to foster the political will and leadership to achieve the vision through a Framework for Action developed by the Global Water Partnership.

VISION 21

At its Fourth Global Forum at Manila, 3-7 November 1997, the Water Supply and Sanitation Collaborative Council, received endorsement to undertake, in close collaboration between its members, a Vision for water supply and sanitation for the 21st century ("VISION 21") including the goals and strategies to make that vision a reality. It was further decided to seek collaboration in this effort with the World Water Council in its preparation of a "Vision for Water, Life and the Environment", mandated to it at the First World Water Forum in Marrakech, March 1997. This has resulted in the agreement that VISION 21 will provide the water supply and sanitation component of the larger World Water Vision.

VISION 21 will be one of three components in an overall vision for the management of the world's water resources in the 21st century. This broad *Vision for Water, Life and the Environment will* have elements addressing the issues of *Water for Food* and *Water for Nature, and Water for People.* The Water Supply and Sanitation Collaborative Council has been given the responsibility to prepare the vision on Water for People and this has been called VISION 21.

The VISION 21 initiative has been designed to put an end, through shared efforts, to the backlog in universal access to water supply and sanitation, while recognising the needs of other water stakeholders. VISION 21 will draw a practical picture of the water supply and sanitation future that we collectively seek to create. It will outline the ways to get us closer to that future. It will focus on the question of what changes in attitudes and approaches are needed to make that future possible and the steps that are required to realise these changes. The vision itself is therefore not an end but the beginning of an intensified period of activity with a focus of where we would like to be at the end of the process.

vision > changes > goals > strategies > plans > action

Thus, a statement of VISION 21 will show what we need to do to-day, against a background of visionary and long-term thinking, to reach a future that we all desire.

A Participatory Process

In order to bring about common ownership and shared commitment to the vision, the process must be a people's process:

- a process that is directed to dialogue among affected and involved partners to find the right solution, with due attention to local situations and local opportunities;
- a process that stresses investment in capacities of people, so that they themselves can initiate and guide investments in material structures and equipment, where these are not available.

The generation of commitment and capacity will be of crucial importance. The **process** of VISION 21 is therefore its essence. The building stones of that process are collaboration and matching bottom-up approaches with top-down ones, supplemented with learning from past lessons and add innovative thinking to conventional wisdom. If on that basis the right process in terms of people's participation and broad collaboration can be started up through VISION 21, then the harnessing of the people's own vast resources will enable the implementation and upkeep of safe water supply and sanitation by and for all people, with due regard to water as a precious resource.

next century. It will refine and further detail the preliminary outcome of 2000, and further adapt it to regional, national or local circumstances.

What is different this time?

Richard Jolly, the chairman of the Collaborative Council spoke at the last meeting in Manila of the scandalous situation where in this modern day where millions are without access to basic services. He has also emphasised the importance of bringing basic human needs and concerns back to the forefront in a society more concerned with the global economy.

What distinguishes VISION 21 from many earlier – usually unsuccessful – attempts to set Goals of universal coverage? The scale of the participatory process gives VISION 21 a number of distinct advantages.

- The social mobilisation will help to establish people's ownership of the vision and then extend that ownership up through the local, regional and national decision makers, endeavouring to involve all stakeholders groups.
- The fundamental question "what can we do for ourselves?" reinforces the ownership and established new roles for the different parties, a rationale for setting priorities and new mechanisms for articulating choices.

A corollary of the ownership is that the VISION 21 process will build expectations among participating communities and must be able to deliver matching actions. There is a feeling that some countries are already seeing some positive impacts on the planning process as a result of the initial social mobilisation activities.

There is no doubt a major new commitment emerging at international level to addressing the needs of the unserved. It is up to us from developing countries, and our partner institutions, to make use of that commitment. We should take the opportunity presented, not to respond to the international agenda, but to develop our own visions and plans of action and carry these forward locally, regionally and internationally.

Towards an Enhanced Role of Resource Centres in Capacity Building

14 – 18 June, 1999, Delft, The Netherlands

Summary	*Explore capacity building & RC concept, bring participants up to date on the Stream Project, share different experiences and getting to know each other.*	*Present synthesis of literature studies and identify issues and challenges for resource centres and capacity building.*	*Working groups analyze thematic issues, and develop action plans and next steps. Poster session for participating institutions to share experiences.*	*To formulate action plans and further research activities in countries and regions*	*Presentations concerning resource centre concepts from different perspectives. Validation of workshop results through panel discussion and discussion with a wider group of participants.*
	Monday 14	**Tuesday 15**	**Wednesday 16**	**Thursday 17**	**Friday 18**
Morning **(9h00 – 12h30)**	• Opening ceremony • Keynote address Director IRC • Introductions and expectations of participants • Sector issues for the coming decades: The vision process • Objectives & status of the Stream	• Key issues & challenges for resource centres and capacity building: Concept paper. • Key issues for the STREAM project • Identifying main themes for working groups.	• Working groups prepare presentations on thematic issues. • Working group presentations	• Working groups action develop plans and strategic orientations • Presentations by working groups • Plenary discussion • Evaluation of results.	• Overview of the STREAM project implementation process and tentative workshop results • Presentations of research results by selected research partners. • Summary of recommendations and follow-up
Afternoon **(14h00 – 17h30)**	• Synthesis of case studies presentation. • Panel discussion with research partners • Plenary discussion concerning case studies	• 5 thematic working groups discuss key issues and constraints.	• New working groups formed to identify strategies and actions for the regions • Working groups start	• Excursion/ special interest programme • Reporters, resource persons & working group representatives prepare draft workshop report.	• Panel discussion • Discussion and exchange of information (second poster session • Closure
Evening **19h00 – 21h30**	• Getting to know each other : Outdoor event	• Working groups continue.	• Poster Session for participating institutions.	• Cocktails	

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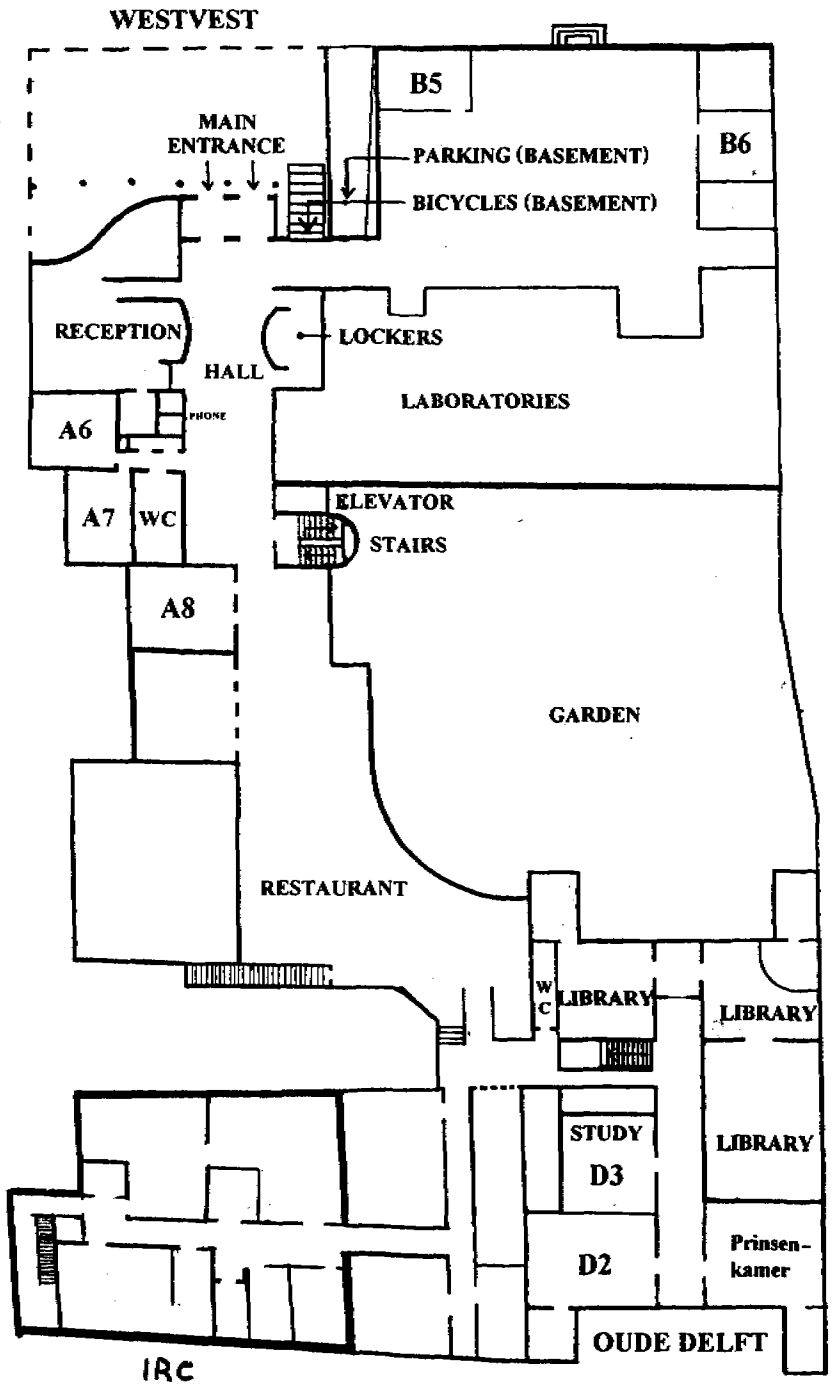

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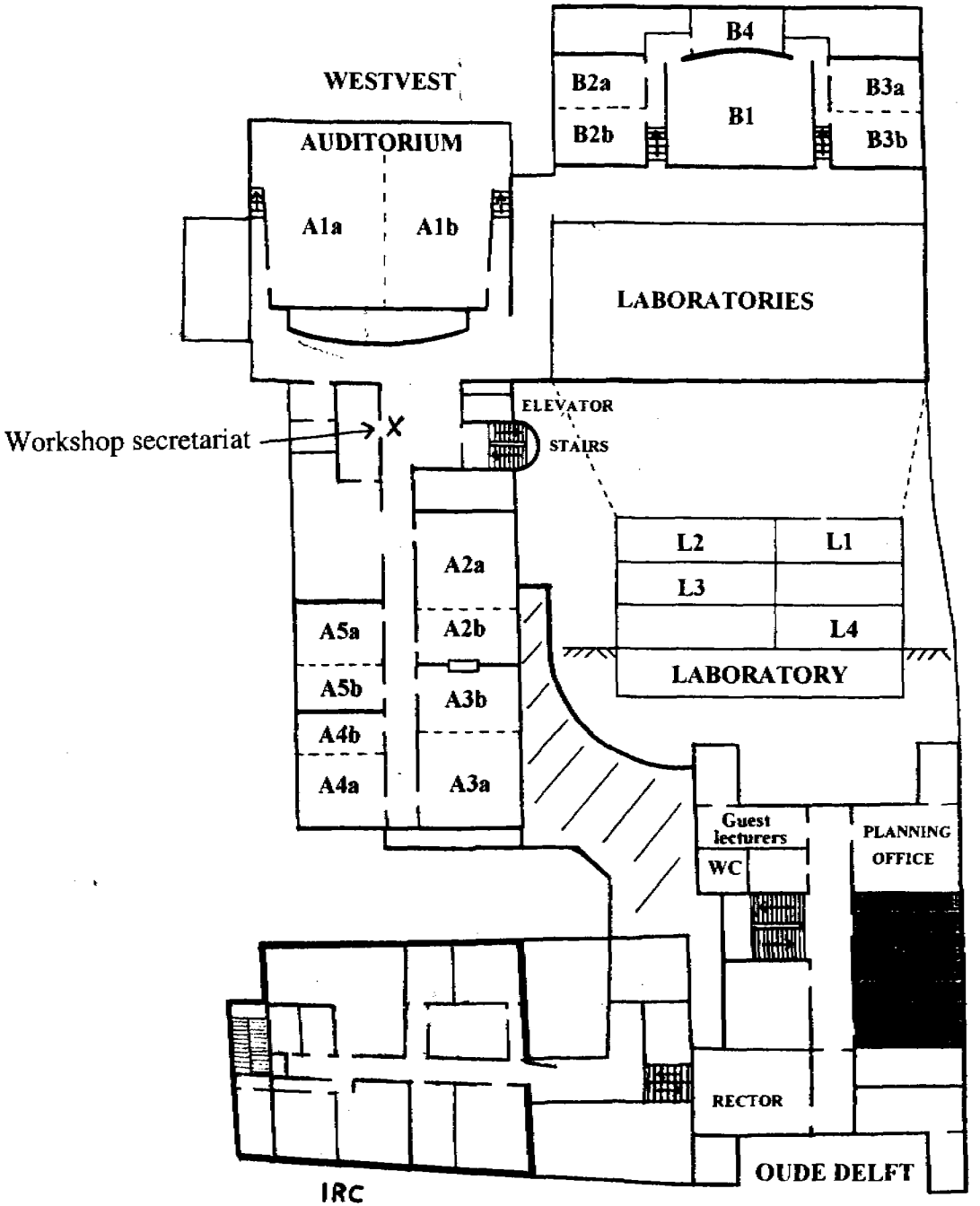


Capacity Building and the role of Resource Centres in the Drinking Water Supply and Sanitation Sector: Objectives and status of the STREAM project.

Paper presented on the occasion of the International Workshop "Towards an enhanced role of resource centres in capacity development" June 14th to 18th 1999.

Teun Bastemeijer[1]

1. Introduction

The Stream project is a research for action project that was initially proposed to concentrate on case studies of resource centre development. The basic idea was that by documenting processes and experiences opportunities would be identified to strengthen resource centres to become more effective in their support role to the water supply and sanitation sector. The project was approved in 1997, and effectively started in the course of 1998.

The STREAM project was proposed against the background of changing institutional settings and the need to develop sector support capacity through resource centres as recommended during the Ministerial Conference on Drinking Water and Environmental Sanitation (Noordwijk 1994).

Considerable changes are becoming apparent in the sector since the development of the project proposal. In November 1997, the WSSC Council met in Manila and agreed on regionalization; placing greater emphasis on information sharing and capacity building. This offers important challenges for sector resource centres, also, because the use of the "Web" as an information exchange tool and for inter-net conferences is quickly increasing. These new tools can also be used in strengthening the dialogue on resource centre networks.

The context of decentralisation and privatisation increases the potential role of resource centres with a cross sectoral function which are also active in the drinking water and sanitation sector or in relevant subject areas such as water resources management. These cross-sectoral developments and inherent need for capacity development need due attention in the STREAM project.

Finally, there is a gradual shift from project support to sector programmes whereby national governments and sector institutions exert direct control on funds. Autonomous public and private service providers for urban water supply and sanitation are gaining importance. These tendencies imply that resource centres have to position themselves strongly in their own markets. In an environment where information and research do not yet have high priority, this presents a considerable challenge for resource centres, both in terms of innovation and marketing of their products and services, and of diversifying their sources of revenue. At the same time, this is not just a matter of adapting to a market. Resource centres are also expected to be at the cutting edge of developments or look ahead more strategically on the basis of their up to date knowledge and information, and initiate processes of change. This involves research, advocacy and promotion of innovative technologies, methods and approaches, activities which cannot be "sold" on the market, because they are intended to create a market.

The project period for the first phase will end mid 2001. Through the combined efforts of the participating organisations it will by then hopefully have succeeded to achieve the results that were initially planned and more. One of the ambitions expressed by Sounding Board Group

[1] Senior Programme Officer at IRC and Project Manager of the STREAM project.

members[2] is that the Stream project could help to establish favourable conditions for an enhanced role of resource centres to play their sector support role in a sustainable way. This could help to optimise their contributions to achieving the goals set by the Minister's conference in March 2000 and to delivering the services that are needed to help the different actors play their role in an increasingly complicated institutional landscape. In the course of this year a draft framework for action is being developed through the vision process. The implementation of it will be co-ordinated by the Global Water Partnership. The Collaborative Council -whatever shape it may take in the future- is likely to continue to play an important and articulating role. We don't know the framework for action yet, but we can anticipate that there will be changes in the type of capacity needed.

This project can be taken as an opportunity to conceptualise thinking about resource centres on the basis of the case studies mentioned above. This will hopefully help us to determine the best ways to forge more effective co-operation between our institutions at the global and at the regional level. Through this, the Stream project can also be instrumental in establishing or organising sector support capacities to implement certain parts of the framework of action.

2. Why IRC is involved in enhancing the role of resource centres

The Stream project reflects the main principle that underlies IRC's work in that we act as a facilitator in support of others that contribute to sustainable improvements (or sometimes work on minimising the degradation) of the water and sanitation conditions in the developing world. Whenever we can, we work in partnership with individuals and institutions which share our vision and motivations. We believe that it is through shared learning processes that we can develop awareness, knowledge and capacities and increase the impact of our own work as well as the work of our partners.

So, in our work we aim to apply the following principles:

- ***Acting as facilitators***
- ***Working with partners on an equal basis***
- ***Stimulating dialogue***
- ***Establishing a learning environment***

In terms of impact, shared learning processes involving different institutions and individuals can contribute to awareness, knowledge and capacities to carry through the major policy reforms and sector strategies for sustainability that are urgently needed. IRC's strives to support three key conditions for sustainability by:

- ***Encouraging informed decision-making*** implying that all stakeholders, communities, government, NGO's and private sector get equal access to information and can take part in a dialogue to orient decision-making.

[2] The Sounding Board Group is a small group of directors of resource persons playing a role in orienting or reorienting the Stream project

- ***Promoting a learning perspective in capacity building and technology sharing;*** This is needed as blue print approaches do not work.

- ***Acting as process facilitator and information provider*** that can guide and stimulate the change that is needed and support sector institutions including resource centres to better implement their social mission (Which does not have to conflict with their orientation to marketing services as well)

Access to unbiased information about technologies, methods and approaches is one of the most crucial ingredients to enable informed decision making about strategies, innovations, institutional change, strengthening organisations and investment in suitable technology for sustained development. This information has to be available to organisations and individuals that are working in the countries. It has to be close to the users and users need to be assisted to ensure that they can access the information they really need without going through a lot of documents and papers. Furthermore they need access to new information, may require advice and support on how to use this information, and may need some training to be able to apply the knowledge they acquire. From this train of thoughts a picture emerge of what we call a Sector Resource Centre that operates in a network of centres thus having access to a broad range of specialised information.

IRC thus would like to support the development and become part of a high performing network of independent resource centres. It is to a degree aware of its own weaknesses and strengths and those of other institutions. However, we are convinced that much can be achieved by more intensive co-operation and building on our strengths. The Stream project provides an opportunity to find common ground.

3 The project objective and gradual clarification of expected results

The Stream Project aims to contribute to enhancing the role of resource centres by:

- Strengthening a core group resource centres that are operating as capacity builders in the water supply and sanitation sector.,
- More effective networking and mutual support between resource centres at global and regional levels

An important element of the project is to gain insight in the processes and experiences regarding the institutional development of resource centres in different continents with a view to apply lessons learnt to effectively support capacity development processes in the future. The project offers the opportunity for resource centres to learn from each other and so identify ways to initiate viable activities and strengthen their networks.

According to the project document, the project is expected to result in:

- case studies,
- general and region specific (Africa, Asia, Europe and Latin America) recommen-dations for sustainable development of resource centres,
- strategies and action plans for eight individual organisations.

The first Sounding Board Group meeting in November 1998 confirmed the importance of these outputs whilst stressing that results could even be more tangible if the project would emphasise activities in the regions at an early stage. It also proposed to organise this workshop and involve a larger number of resource centres and stakeholders in the process.

It further concluded that the following results could specifically be aimed at:

- Clarification of the resource centre concept based on case studies of 11 centres prepared by research partners during the initial stage of the project and on literature studies carried out by these partners and IRC itself
- Development of a set of management and resource centre development tools.
- Establishment of a core group of a network of resource centres for the water and sanitation sector
- A favourable policy environment and improvement of conditions for financial viability of the individual centres and the network
- Strengthening of at least 8 but if possible more than 10 resource centres.

4. Current status of the project

The current status of the project can best be described by summarising what has been done so far.

Identifying research partners

IRC' s project team travelled to visit potential research partners in Africa, Latin America and Europe. In total some 16 institutes were visited. A preliminary assessment of their history, status and mode of operation was made with a view to selecting those organisations presenting interesting cases of established sectoral resource centres. A general definition used was that a sectoral resource centre focuses on the collection and dissemination of relevant national and international knowledge and experiences that can be of use for and contribute to the strengthening of capacities in the water supply and sanitation sector.

Based on this preliminary assessment, it became clear that there are many interesting cases. Some were sectoral, others cover several sectors or are oriented towards integrated development. There were institutions focusing on the urban context, while others had a rural bias.

At the end identified eleven research partners. It was agreed that these would contribute to developing an initial information base to identify areas for further study. This information base was needed, because there was little systematic knowledge about the development and the management of resource centres, and about their present activities, plans, and perspectives.

During the second half of 1998, agreements were signed to this end with the following organisations prepared case studies, did literature reviews and engaged in identifying other resource centres: CINARA(Colombia), ITN Philippines, NETWAS(Kenya), IWEE (Tampere University of Technology), SKAT (Switzerland), PSEAU(France), IPD-AOS (Burkina Faso), SEUF (India), CFPAS(Mozambique), IWSD (Zimbabwe). .

After the initial activities and the sounding board group meeting, it was clear that many more organisations would be interested in the results of the project and quite a few have actually expressed an interest to be closely associated with the Stream project. This concerns for instance

various other ITN centres and organisations co-operating with IRC in other research projects. It also concerns organisations from outside our sector which face similar questions about the role of resource centres.

It is possible that the Stream research partners are not necessarily the best possible cross section of resource centres, because the criteria for selection were based on IRC's own understanding of the resource centre concept. Hopefully we are getting closer now to clarifying the concept jointly and will develop ideas on how to involve other organisations in the process.

Only one resource centre from Latin America was invited to participate in the initial stage of the project, because we did not know the institutional landscape of resource centres well enough, and perceived a constraint in that Spanish and Portuguese are the predominant languages there. This could cause a communication problem. We therefore decided that it would be better to concentrate on CINARA, an organisation IRC works with since many years. The idea was that CINARA could act as our focal point and facilitate the research process on behalf of IRC in Latin America. The idea is that several institutes in that region will be associated in the process based on preliminary studies being carried out by CINARA.

Case study write-ups and synthesis

The above organisations as well as IRC itself prepared a case study write-up on the basis of an outline provided by IRC. This outline was developed on the basis of an analysis of the preliminary information (Evaluation reports, travel reports etc) available about a number of resource centres. These case study write-ups are of varying quality in that not all organisations could provide all the information needed. There are indications that this in itself has triggered a process of management improvement in some of the organisations concerned.

The combined case study write-ups provide good information that has been used in two ways:
- Preparing and synthesis (Paper prepared by Said Allaoui)
- Developing an initial database on resource centres

Concept papers and literature reviews

Seven partners prepared concept papers or literature reviews under the same agreements mentioned above. The contents of these papers focused on clarifying the resource centre concept from different organisational points of view, and on either develop views on networking, or describing the institutional landscape around the resource centres concerned. In some of the documents, there are descriptions of other resource centres and networks illustrating that there are different perceptions of the resource centre concept.

These various documents have been used to prepare a concept paper that Liqa Rashid will present during this workshop.

Networking and partnership development

Networking involves making contacts and encouraging reciprocal information exchange. There are many different networks. A network is characterised by membership criteria, geographical scope, purpose and over-all objectives, and network management. An important condition for success is the existence of a committed core group of active members who will take initiatives

and be responsible for co-ordination, management, and logistics. Based on the inputs from research partners and literature study, Maria Lucia Borba of IRC prepared discussion paper that she will present during this workshop. In this paper she proposes the development of a network as one of the outputs of the Stream project.

Data base development and creating an inter-net site or sites

Based on the information we have now, it can justifiably be stated that the information about many resource centres is insufficient. This information is important to allow clients and stakeholders to make informed decisions about making use of the services of resource centres. It is also important with a view to developing high performing networks or alliances whereby it is important to have a realistic picture of the organisations that could be involved.

IRC has started to develop an information base that could be expanded in the future if there is an interest from other resource centres and other stakeholders. Whereas the information presented is based on the case study write-ups, this could also imply that more resource centres would prepare case study write-ups.

In the same line of thinking, we started the development of an inter-net page on the Stream project. It will be increasingly important that resource centres present themselves and their network through this medium. In doing so we normally are also forced to clarify and to simplify. This in turn helps us in our marketing efforts using other communication means.

During the poster session, Harry Oosterveen will be happy to explain progress being made in this area.

Testing a management assessment tool

During the past months IRC developed and tested a management assessment tool with the help of an external facilitator, Mr. Frank Little. It is hoped that this, and possibly some other tools could be tested and adapted to the needs of other organisations during the coming year. The tool as it has been developed now, and the results of the internal workshop at IRC can be discussed in the working groups. Hans Nederlof, controller of IRC will be available to provide some additional views on this tools development process during part of the workshop.

Mainstreaming gender

Mainstreaming gender is high on the international agenda, and is coming out as a high priority in the ongoing vision process. From the case studies it would seem that most of the research partners do not systematically deal with gender issues within their own organisation. So, internal work legs behind the promotion of gender sensitivity with communities and sector agencies. Though it is likely that all our partners would confirm that they perceive gender as a good idea, they do not take it on board more explicitly in their policies and strategies. It is therefore very unlikely that gender will easily be fully integrated into structures and practice. This could hamper the resource centres in their efforts to enhance their role in capacity development. The members of the sounding board group did not propose gender issues explicitly as a key issue. However, the prominent place this subject has in the vision process and the accumulated evidence in the literature[3] indicate that strengthening resource centres and resource centre networks should link

[3] Macdonald, Mandy et al (1997). Gender and organizational change; bridging the gap between policy and practice. Amsterdam, The Netherlands, Royal Tropical Institute, KIT Press

up gender and organisational change. To integrate gender in the process of developing and testing management and development tools for resource centres is an option that I think could be considered by the participants of the working groups dealing with this subject.

Regional action plans and proposals

Several research partners prepared draft regional action plans for discussion during this workshop.

5. The follow-up of this workshop

The purpose of the workshop is to build on the initial results mentioned above. We now would like to determine how to set out a process of strengthening resource centres or resource centre networks. The aim is to improve internal and external conditions allowing them to better play their role in support of the water supply and sanitation sector. We would like to orient our discussions towards answering how resource centres can best contribute to building the capacities needed to meet the challenges during the coming decades.

We therefore hope the participants of the workshop will:

- review research results concerning resource centre development processes and experiences,
- discuss the resource centre concept from different angles,
- analyse key issues and constraints affecting the performance, the development and sustainability of resource centres,
- identify priorities for action in the various regions,
- draw conclusions concerning the potential role of resource centres and ways to promote that role at various levels by involving their stakeholders.

The follow-up of the workshop will largely depend on the outcome of the discussions. At this stage, taking into account the results of the sounding board group meeting in November 1998, the following could be part of the follow-up:

- Elaborating outlines of development and management tools for further development and testing,
- finalising planning of activities regions and action research by individual research partners
- initiating actions resulting from the international workshop
- preparing a draft publication on resource centre development

With a view to one of the planned project results formulated by the Sounding Board Group, it is important that the project contributes to a favourable policy environment and improvement of conditions for financial viability of individual resource centres and their networks. During the remainder of 1999 an additional activity will therefore probably be to explore if and how the resource centre roles can be considered in the framework for action mentioned in the introduction.

6. Outlook for 2000 and 2001

In accordance with the project concept each phase is defined in further detail on the basis of the results of the preceding phase. The Sounding Board Group recommended that after the

International Workshop emphasis be put on activities in the regions and that research partners be involved concretely in these activities.

In the project document activities in the regions concerned the organisation of regional meetings to present results of earlier project phases. It is now proposed that an additional activity will be the development and testing of management and development tools for resource centres. Additional research to identify how resource centres can position themselves individually and as members of a network in a dynamic sector policy and institutional environment is another possible component of regional action plans. This relates to the fourth result of the project as formulated by the Sounding Board Group (Favourable policy environment and improvement of conditions for financial viability of individual centres and the network). Other activities may concern the implementation of specific plans to strengthen resource centres in accordance with the results of this workshop. This could for instance concern supporting the development of plans and strategies for individual centres or facilitating the development or improvement of specific products or services.

During the second half of 2000, attention will be given to finalising the various project outputs with a view to wider dissemination. At that stage we hope to have a clearer idea about the follow-up of the current phase of the Stream project. This follow-up will hopefully not be dependent on project funding from NEDA only. I understand several related initiatives are envisaged in countries and regions, and that some participants have come to learn more about how such initiatives can successfully be launched.

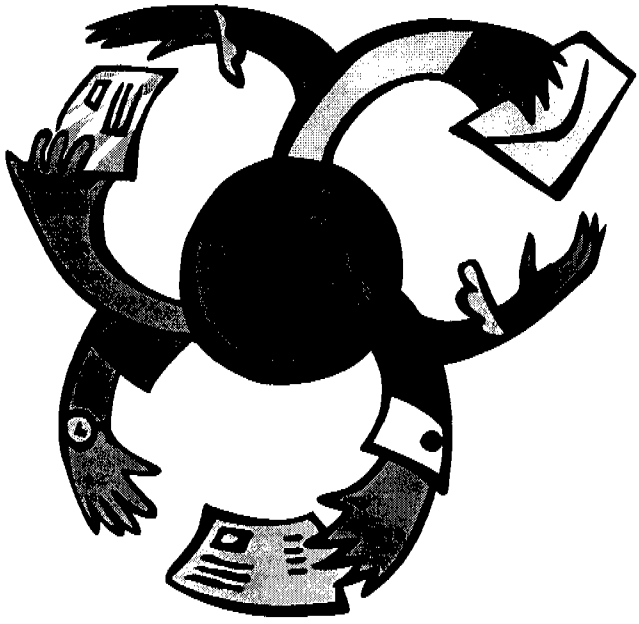
Dissemination of project results and efforts to ensure a logical follow-up of the project at international and at regional levels are expected to continue during the first half of 2001, together with final reporting to NEDA.

7. Final remarks

The Stream project is provides an opportunity to learn and initiate actions. It should be realised however that it is just a project, and that lasting results can only be achieved through the efforts of the participating organisations themselves. It is hoped that through their efforts, present and prospective stakeholders and clients will better understand the process resource centres are going through and support the ones with good potential in realising their role as cpacity builders in the sector. Now that there is a global recognition of the need to address sector constraints in a long-term perspective, I would like to propose the idea (not necessarily innovative but non the less relevant) that funding of resource centres is also considered in this same perspective. If dialogue is engaged based on the research findings of the Stream project, this might help the managers of resource centres to give the necessary attention and time to building their organisation's internal strength. This could help organisations that are currently faced with sudden changes in funding pattern and level to mobilise their potential as resource centres instead of simply going where the money is to survive.

NETWORKING TO SERVE RESOURCE CENTRES

a discussion paper[1]



by Maria-Lúcia Borba

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Delft, The Netherlands
June 1999

[1] Paper presented at the International Workshop : Resource Centre Development Processes and Experiences STREAM PROJECT. June 14-18, 1999. Delft, The Netherlands. IRC International Water and Sanitation Centre

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Introduction

This discussion paper is meant specially for those who are involved in the process of implementing **STREAM - STudy on REsources and Management - a project aiming at strengthening water and sanitation resource centres. The main purpose of this paper is to contribute to the discussion on how to strengthen resource centres and how these could jointly meet capacity development needs in the sector.

When trying to answer these questions, it became clear that sharing --on a regular basis-- information, experiences, products and skills will greatly contribute to capacity building. **Networking** is an important mechanism to facilitate this sharing process.

The paper reviews ideas brought up by some authors and the experiences of resource centres which can help raise concrete questions on networking and clarify the key issues it involves. It tries to map-out the actual contribution that networking can offer to strengthen water supply and sanitation resource centres and to come-up with recommendations for networking among resource centres, as a concrete result of the STREAM project. I hope that this paper will be used as a basis for discussions on networking at the 'International Workshop Resource Centre Development, Processes and Experiences', and will eventually lead to the institutionalisation of present relationships between the centres through a new specialised network.

It is divided into four main parts. Part 1 gives insight into the reasons and how development institutions relate to one another and the role of networking in establishing a relationship. Part 2 describes the nature of existing networks. Part 3 gives examples of problems networks may face and the solutions they might implement. Part 4 offers examples of water supply and sanitation sector networks, their target groups, structure, functions and goals. The topics raised in Parts 1, 2, 3 and 4, provide the basis for Part 5, which focuses on ideas for networking among resource centres. Here, key issues relate to the purpose of networking: the topics which could be dealt with by the networking activity; how to get resource centres and other stakeholders interested in networking and maintaining their interest; the organisational structure of a resource centre network; their means of communication, sources of information and funding. This leads to the conclusions and recommendations in Part 6. The literature reviewed and for further reading is indicated at the end.

1. Institutions and their relations to one another

Centres, organisations, institutions and/or individuals active in the same field try to relate to one another to optimise their efforts in accomplishing their mission and goals, and to raise their effectiveness. In their effort to achieve this objective, centres relate to one another in order to reduce their isolation, share resources, reduce costs, raise their profile and stimulate innovation.

Subsequently, relationships may be established not only among centres of the same nature, but also with a variety of other stakeholders: funders, governments and target-groups.

Funders make an effort to establish relations to disseminate information and to learn from others with regard to their policies, strategies and projects implemented, to get new ideas and achieve cost efficiency and effectiveness. Governments seek toto network for purposes of policy- and/or decision-making and cost efficiency. Professionals network to escape from isolation and advance in their field of work. Target-groups establish networks to strengthen their power of negotiation, for example.

But what does 'networking' actually mean? Professional circles or others engaged in social, not-work related activities, ascribe different meanings to it, ranging from a 'formal and regular exchange of information among members working in an specific field and using specific media' to an 'exchange of visiting cards' and 'contacting people in social gatherings'.

2. Networks and their nature

Among professionals working in the 'development world', different authors give different meaning to the concept of 'network'. A few are mentioned below.

According to Alan Fowler, NGDOs - non-governmental development organisations - use various ways for relating to one another. They may establish partnerships for specific activities, for the implementation of their programme and/or for their development as institutions; they may look for alliances to combine efforts and resources; they may form coalitions when two centres form an organisation; they may co-ordinate their work under a collective body or an umbrella organisation to minimise duplication of work and wastage of efforts; finally, they may also establish networks. In Fowler's classification, a network is the loosest form of collaboration as it functions primarily on the basis of information exchanged between organisations, this being its primary benefit. Network members can be quite dissimilar and the autonomy of the institutions networking may be very high as their relation is only on the basis of the information exchanged. In this case, costs may exceed benefits (Fowler, 1998). What he calls 'co-ordination', on the contrary, may bring the highest benefits in terms of space, recognition and collective legitimacy but also implies the lowest degree of autonomy.

Darren Saywell, of WEDC, has a different view. For him, 'collaboration', 'consultation' and 'information exchange' are networking activities, not as in Fowler's case, different levels of interaction. **Information exchange**' is a passive sharing of information--when a co-ordinator distributes information to all network members without minimal communication between them-- or an active sharing of information--when there is an attempt to collate comprehensive information from members and encourage frequent communication between members and co-ordination; '**consultation**' relates to the periodically organised face to face meetings and workshops, which help to share information and ideas while escaping from the bureaucracy and formalities that may exist in a regular information exchange network; and '**collaboration**' refers to the mechanism which helps institutions to share resources and conduct activities jointly planned and implemented. The latter will greatly contribute to the development of human resources research capacities, says Saywell. "Networking is a recent term that describes an age old activity: people meeting to exchange information, knowledge and skills which are of mutual benefit" (Saywell, 1996)

Paul Starkey defines networks as 'any group of individuals or organisations who, on a voluntary basis, **exchange information** or undertake **joint activities** and who organise themselves in such a way that their individual autonomy remains intact'. Therefore, networking is not seen as a mechanism for the exchange of information only. It can also be a means of developing joint activities like training, research and marketing, where the aim is the cost-effective delivery of services. An example of the latter is the networking activity among water vendors in West Africa. In any case, networking will not affect the autonomy and independence of its members (Starkey, 1997).

At this point, my conclusion is that although concepts and definitions of a network vary, its purpose is one only: getting a benefit out of it. In fact, all definitions of network underline the

organised interaction between members
with a common interest and
who look for an added value to their activities.

To enable eventual members to get the most out of it, the network should offer them a clear idea of its nature and the possibilities it offers to meet their needs. Also, the structure, organisation, mode of operation and the means used by a network, should be adequate to reach the membership as its target group with appropriate, timely and updated products and services.

Another prerequisite for getting the most out of networking is to have a clear idea with whom to network. In making this choice, not only a common field of interest plays an important role. Relating to equal partners and developing with them a relationship based on mutual interest,

trust, collaboration and a common agenda will help obtain the benefits aimed at. Here, collaboration is a key element: on the one hand, benefiting from membership to a network is an intrinsic right of members; on the other hand, membership also implies collaboration and contribution. Fulfilling these prerequisites fulfils the interest for networking, more than what any formal contractual agreements could achieve.

Networking may become more complicated when it involves partners of a different nature: resource centres, external support agencies, central government, local associations, private sector companies and community based organisations. Although active in the same field, these organisations have different roles and different interests. To achieve the benefits one expects, networking among such different entities may require more than the conditions mentioned above. It will require different strategies and different levels of communication; openness for different 'cultures', and transparency in the definition of aspirations, priorities and goals.

Structure of a network

Also the structure of a network varies. One common feature of most of them is the existence of a secretariat, a managing or facilitating body. The following examples of different structures are extracted from Starkey (1997):

- the central secretariat communicates periodically with the various members and there is no lateral exchange of information. It is a one-way flow. The central body dominates and there are no direct contacts and communication among the various members. This is considered a highly centralised structure, where decisions (regarding e.g. type of information to be disseminated and type of activity to be undertaken) end up being taken by the central body. This can be an example of the passive information exchange network described by Saywell;

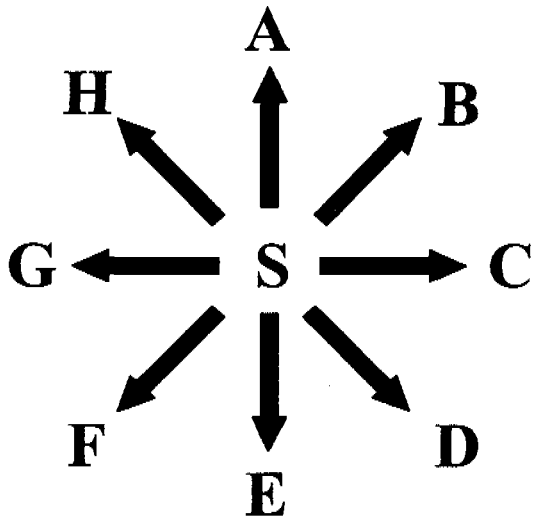


FIGURE 1

- information and communication flow from the central secretariat to the members and members contribute information and/or react to the secretariat. Also here there is no communication among the members themselves, but only between members and co-ordinating body.

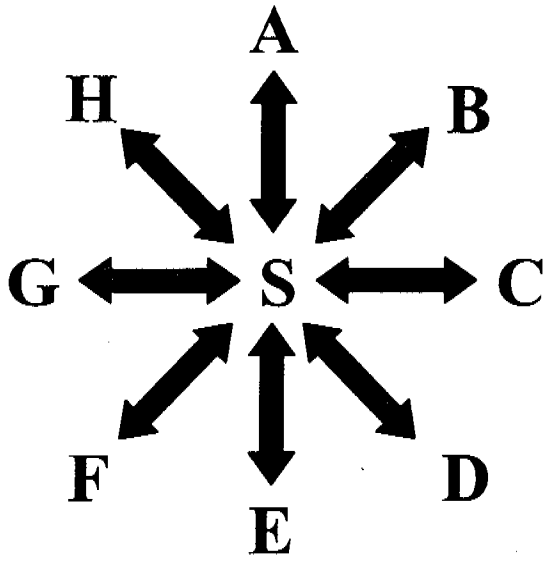


FIGURE 2

These two types of networks are considered to have centralised structures.

- In another kind of network structure, the role of the secretariat is rather to facilitate the linkages among members, who communicate with each other and with the secretariat and vice-versa. This is a more decentralised and informal structure. It would be the active type described by Saywell.

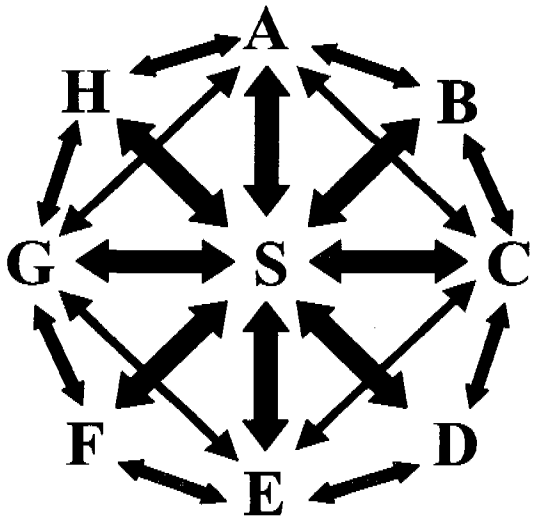


FIGURE 3

- There could also be a decentralisation of the secretariat's activities to some members of the network, e.g. one member per different region, which would then establish their own regional sub-networks. This is a highly decentralised network structure which greatly contributes to the interest of member-centres of different regions, not only because of regional interests and common features, but also due to compatibility of languages.

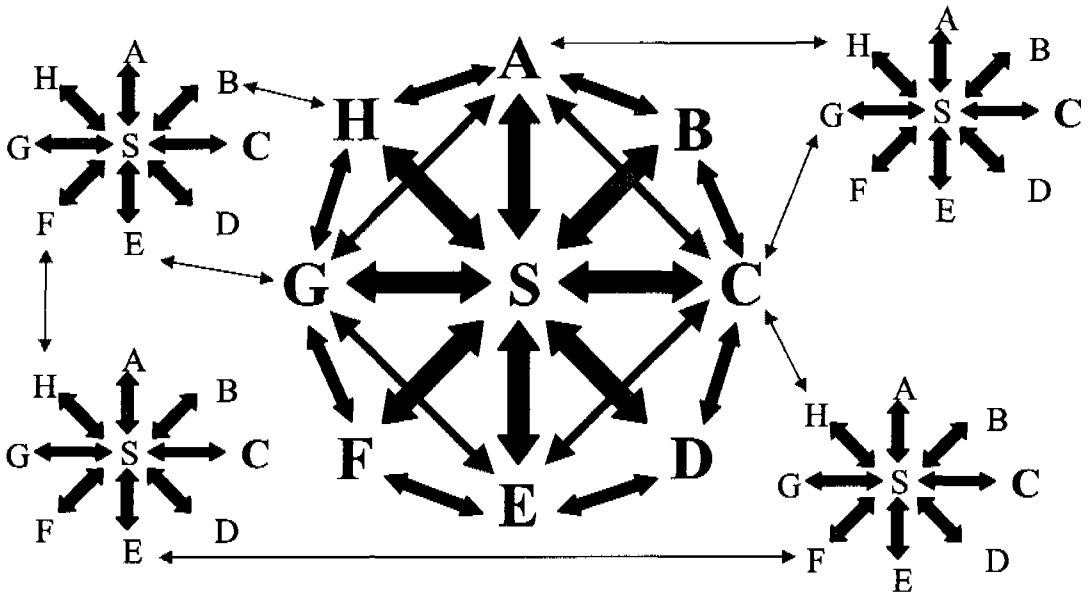


FIGURE 4

Finding an optimal balance between the performance of the secretariat or facilitating body and the participation of the network members constitutes one of the main challenges of networks. The roles and activities to be performed should be clear and accepted. Being a member, for example, does not automatically lead to active participation, and the core body has an important role to play in getting members to do so. Decentralisation in sub-networks contributes to maintaining members' interest in participating.

The means used by a network

Irrespective of its structure, the sharing of information, knowledge, skills, material and/or media that may result from the network, can be handled through the mail, in meetings, workshops, publications and periodicals and/or through joint activities. However, with the new information technologies, **electronic networks** occupy an increasingly relevant space. Information is disseminated and exchanged through electronic means. Correspondence through e-mail is the most frequent but not the only one. Other mechanisms like electronic conferences or electronic discussions on specific subjects are also being used as a tool to facilitate networking, when a secretariat plays a facilitating role and participants interact with a high level of autonomy. Autonomy here means that when someone agrees to participate in an electronic conference, s/he will introduce her/himself to all other members, participates when willing to do so or when asked for a specific contribution, I informs the others when participation will be interrupted due to other activities or absence for some time, and disconnects from the conference when s/he finds it appropriate to do so. An electronic conference can go on for weeks and months.

Public discussions or bilateral dialogues are possible in such a setting. When distances allow, participants combine electronic communication with face to face meetings and workshops.

The possibilities of having access to these different means of communication influences the success and effectiveness of the network. In a context of a great variety of sources of information, the challenge will be to find the most appropriate one(s) to best serve the

demands of the various users. Lack of clarity regarding needs and appropriate means to access information, is often one of the main problems faced by resource centres. These and other of those problems are listed below.

3. Experiences in networking

From the literature reviewed, my own experience and observations, I would conclude that centres, organisations and individuals are fascinated by the possibilities of engaging in networking activities, yet that these might be rarely useful. There can be many reasons for this. One of these is simply that the co-ordinating body considers a large membership only for the sake of raising its profile in some sector. The members, in turn, may see networking simply as a means to be noticed as an existing organism, accumulate information (even though it may not be used) and to add it as an asset to its own (institutional) curriculum vitae.

However, besides such these 'functional' and less straightforward motives for networking, there are many well-intentioned organisations, which initiate a network, and well-intentioned members who joined it, only to fail in their interaction. Below, I will list some causes of failure of networks, and provide some suggestions on how such problems could be overcome; this list is derived from the literature reviewed and from several concrete experiences.

Problems faced by networks:

- lack of clear objectives
- membership disparity and conflicts of interests
- domination by some members
- only some members contribute ('some people do the netting and others do the working', Marta Arengo (Fowler, 1998)
- centralisation and bureaucracy
- separate realities
- lack of resources
- manipulation of resources
- misinformation in networks, or dubious information being shared
- competition and overlapping agendas
- donor interference
- lack of sustainability when donor withdraws support
- lack of monitoring and evaluation of networks
- political constraints
- high costs in accessing information
- network language not adapted to regions
- access to the technology used by the network restricted to only a few centres
- access to the technology used by the network restricted to only a few individuals in a centre
- decisions concerning goals, structure, means of communication, working plan and further actions are taken by only a few and the majority of members do not have the feeling of ownership vis-à-vis the network.

Some solutions:

- needs for networking are clear
- clear understanding of benefits, objectives, activities and members
- initiate concrete beneficial activities
- establish a core of active members who will take initiatives and be responsible for co-ordination, management and logistics
- delegation of responsibilities to avoid domination, isolation and passive membership
- avoid being mere information dissemination services and/or outreach departments
- allow members to feel they can influence events by taking decisions
- welcome influential members
- adopt a flexible and not threatening structure for exchange and discussion
- plan for the needed funds
- have a structure for fund managing
- get support and trust of the members
- establish links and be complementary to other networks to enhance information exchange, collaboration, to avoid competition, reduce duplications of services, improve the targeting of network benefits, allow maximum benefits to be drawn from the different comparative advantages
- use monitoring and evaluation to assess progress and achievements
- have skilled and interested networking management
- members contribute their views and experiences

Sometimes methods and/or members' interest are only effective for a period. Networks try, however, to maintain the interest of their members alive. A concrete example which helps us understand how centres get involved in networking and maintain their interest is given by Nigel Browne of IRC. In March 1999, Nigel visited the IIED, the International Institute for Environment and Development, and the Healthlink Worldwide (formerly AHRTAG) in London, UK. The purpose of the visit was to exchange experiences and ideas with these international networking organisations, on the problems of developing and maintaining a specialised information network, as envisaged in the "Manage Dissemination Information Focal Point (IFP)' project, co-ordinated by IRC. Below some of the key points, which emerged during the discussions, based on these two centres' concrete experiences with networking. Although the focus is directly related to organising IFPs, the example serves our purpose of trying to identify elements which could help to get network functioning:

- "Financial sustainability is less of a problem if you can demonstrate that a resource centre which is to be an information focal point (IFP), is being used as part of a dynamic (wider) development process within a community.

- Maintenance of IFPs will depend partly – as they may have other sustaining activities e.g. training, network co-ordination etc.-- upon them being able to provide good, up to date sources of information on their chosen speciality. In this context it is important that partner organisations are able to obtain original documents themselves, independent of supporting agencies such as IRC : our role should be that of providing pointers to useful information sources – not to provide them. In some cases we will also provide unique documentation to other IFPs but we do try to encourage the other member IFPs with a regular copu of our updated database.

- (Information) needs-assessments is crucial for defining the audience at which a resource centre may target its services.

- As a project-based organisation / programme dependent on projectised funding, the IIED resource centre feels the strain of not having the benefit of a longer term subsidy to provide more continuity to their operation. They have done pioneering work in supporting the Resource Centres for Participatory Learning and Action (RCPLA) network. They are now in the process of trying to decentralise this network, but appear to have problems of getting their partner organisations to take on that responsibility.... There is a sense of ownership of the network but it is still a large shift for some organisations with a national mandate to widen their mandate to the regional/international level. For IIED, the key point was how to keep the network active. One sustaining activity proposed by the whole network was an experience with an e-mail based newsletter. By adopting a mobile newsletter (i.e. each partner responsible for an agreed (number) of issues), it was hoped that partner organisations would acquire a greater sense of ownership for the network. But it seems that such a mobile newsletter is difficult to realise in such a decentralised form. There is a need to closely monitor how to make use of e-mail newsletters as effective communication tools for the network. Recently the network has decided to revert to the centralised form produced by IIED but the development of a moderated listserv has somewhat bridged the gap between the felt need of the Southern members to decentralise network communication management from Europe and the need for regular communication.

- The central body of the network should take on a purely supportive role and not come up with pre-defined solutions; it may provide some tools and pointers, but needs to guard against becoming too paternalistic." (extracts from Browne, 1999).

Paternalism is indeed not desirable. What is desirable is an enthusiastic and active secretariat, willing to take the lead, much involved with the subject area and yet responsive to the members' needs and suggestions. This will help ensure the network's performance. The efficiency and effectiveness of a network will greatly depend on its management or secretariat's management skills and flexibility. Covering costs of the central secretariat by the network members is also important for the sustainability of the network. Networks may disappear when members do not contribute financially and the main donor shifts its priorities

for funding. "Less formal or decentralised networks operating as webs and cluster of interactions between interested parties - orchestrated but not resourced by a focal point - are more likely to be viable when donor interest inevitably moves on" (Fowler, 1998)

4. Networks in water supply and sanitation

In the water and sanitation sector, there are already different networks and of different types, using different means of communication and exchange. Networking in the water and sanitation sector gained momentum and a great impulse during the International Water and Sanitation Decade. Some of the most important networks where started during that period, like the ITN International Training Network and GARNET. Many others now exist, and, although they can all be considered 'networks', their nature and activities differ considerably.

Without having the ambitious to be complete and giving full information, the following is a list of some examples of networks operating in the water and sanitation sector.

AGUASAN is a water and sanitation network. Their main activity is a biannual workshop.

> AGUASAN is an interdisciplinary workgroup for water and sanitation development. "Individual members belong to several Swiss development and development research organisations, including the Swiss Agency for Development and Cooperation (SDC), Water and Sanitation in Developing Countries (SANDEC), HELVETAS and SKAT. Since its formation in 1984, AGUASAN has held annual summer workshops in Switzerland, bringing together project field staff, desk officers, researchers, experts and consultants for a week of exchange and reflection on selected development issues. As per tradition of the AGUASAN Workshops, the fostering of a mutual learning experience was clearly the main intention, sensitising technicians on non-technical aspects of water and sanitation development. Besides this major goal, the workshops also aim at utilising the broad and multi-faceted knowledge and experience available within the team, by mutually elaborating strategies and conception tools which will be of practical use in development cooperation" (Extracted from the literature review by SKAT prepared for STREAM).

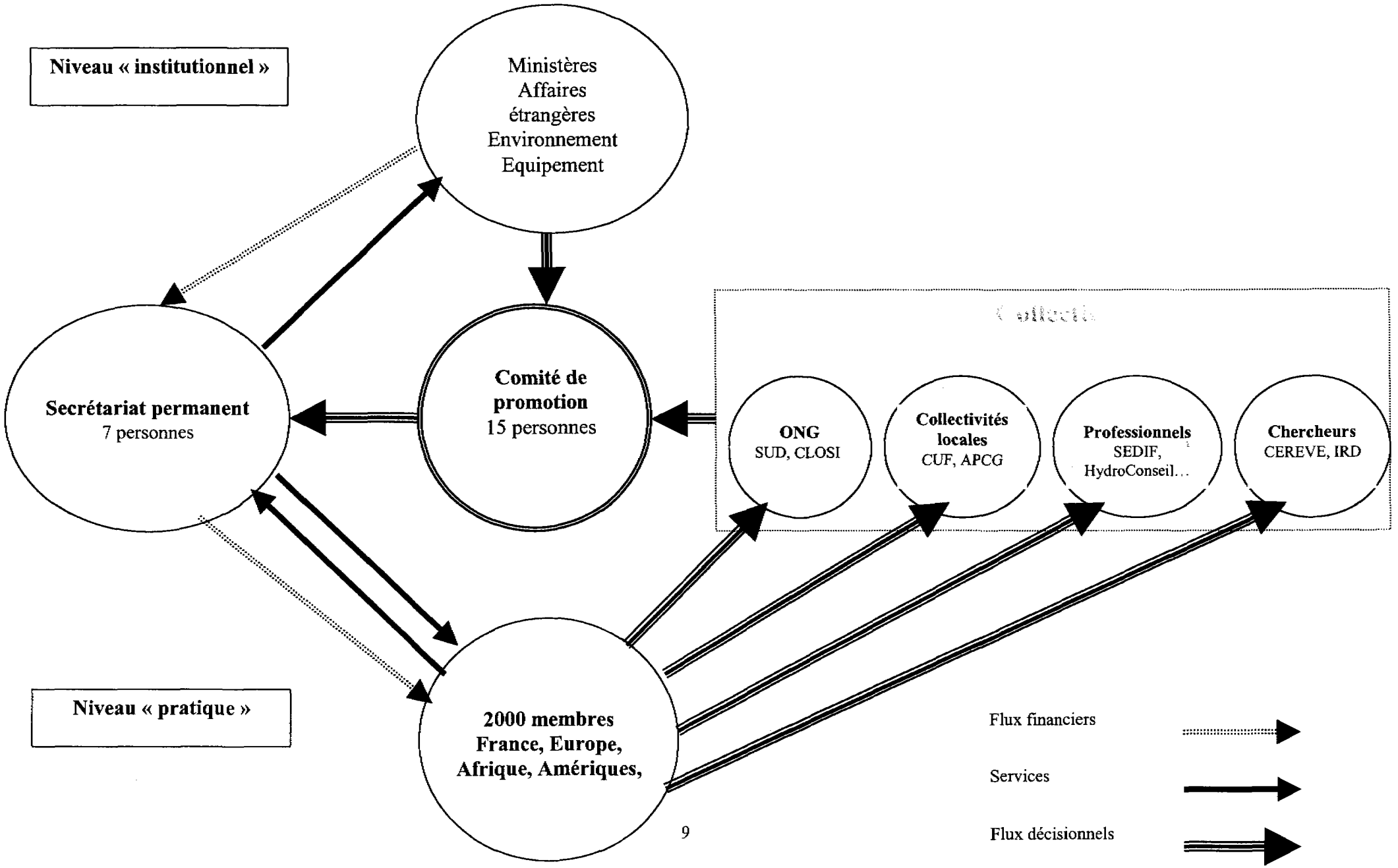
The **Programme Solidarité Eau (pS-Eau),** one of the resource centres engaged in the implementation of the project STREAM, operates as a network. The pS-Eau is actually a permanent secretariat acting as a facilitator of the French international Co-operation local initiatives at various levels. It facilitates the collaboration and exchange of experiences and information among municipalities, professional groups, local elected bodies, water organisations, solidarity associations, immigrant groups, local associations that aim at the international solidarity, research institutions, public authorities, other resource centres and donors. The Ps-Eau networking contributes to a coherent international co-operation in the field of water supply and sanitation mainly for West African countries.

The next three pages show the structure used by the pS-Eau for its operation as a network. In fact, the pS-Eau maintain at least three different network structures, revealing how they operate:

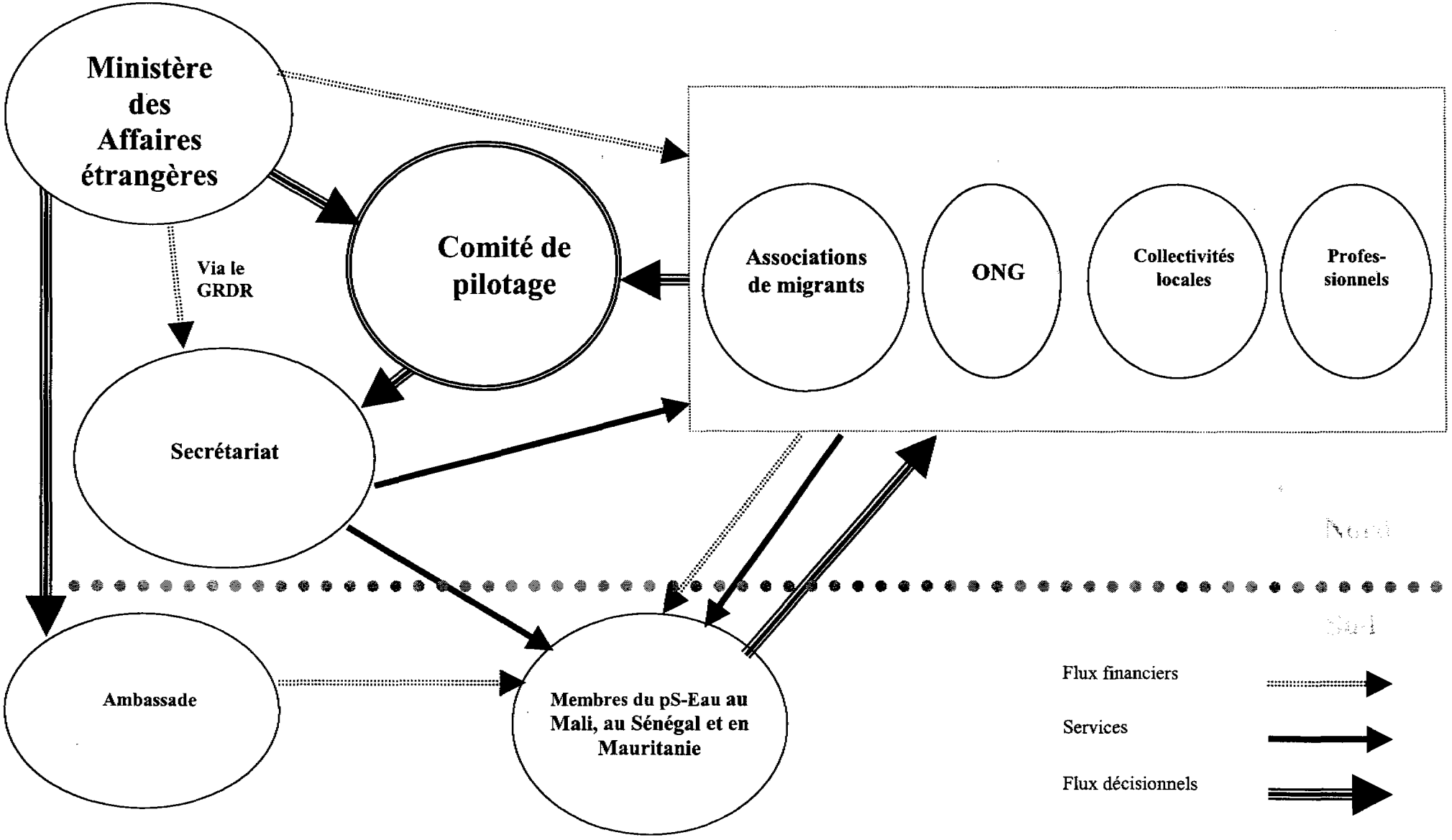
- A structure for the general operation of pS-Eau, as the secretariat of a network of organisations and professionals who exchange experiences and information on relevant topics: water and health, drinking water treatment systems, water service financing, the involvement of men and women in development activities, etc. Members are organisations at the institutional level (Ministries) and at the practical level (research, training, political organisationas and professionals in France and other European countries, Africa, Americas and Asia) The flow of funding, services and decisions are clear from figure 5-A.
- A network structure for the Senegal River Basin sub-programme, figure 5-B
- A network structure for the Water Supply and Sanitation for peri-urban areas and small centres in Africa sub-programme, figure 5-C

The figures depicting these structures are self-explanatory. They reveal the complex web of relationships developed by one organisation, for each of its different programmes.

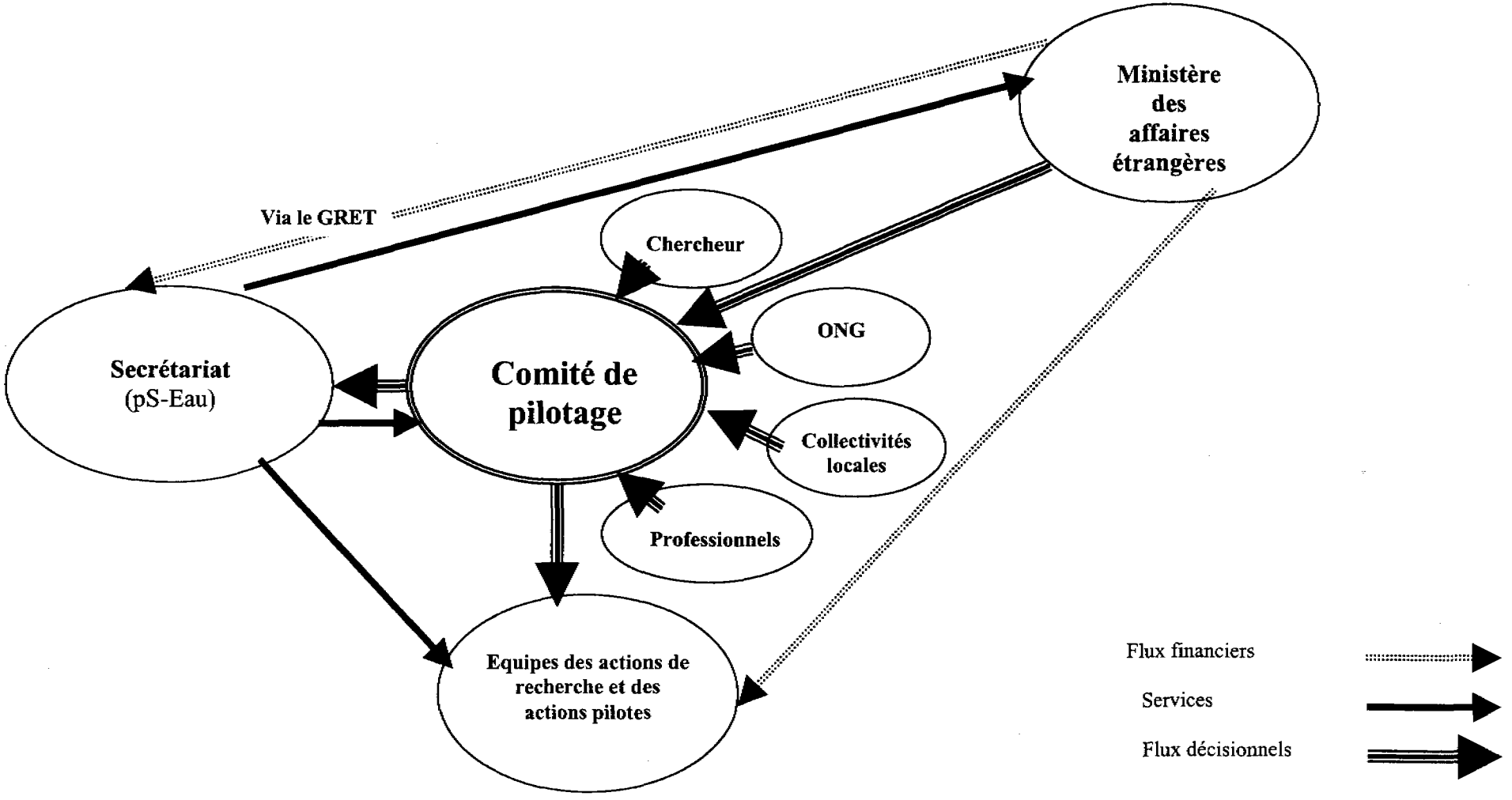
Structuration du secrétariat général du pS-Eau



Structuration du sous-programme «Bassin du fleuve Sénégal» (pS-Eau)



Structuration du sous programme « Eau potable et assainissement » (pS-Eau)



INTERWATER was an attempt to establish a Gateway to Water and Sanitation sources of information on the Internet and to bring together partner organisations to provide mutual links among relevant sites. It was initiated by IRC under the auspices of the WSSCC but finally the end result was the creation of the Interwater Guide to sector information, which is now operational.

WSSCC, the Water supply and Sanitation Collaborative Council provides an important platform that brings together NGOs, donor agencies, professional institutes and others. Uses email, the Internet, meetings, fax correspondence. It provides networking among water and sanitation centres, organisations and institutions.

GARNET - the Global Applied Research Network was the Collaborative Council's first network and it now has 16 separate topic networks through which participants can share information on applied research. There are no charges involved and network members have regular contact with specialists from all over the world who share their interests. GARNET is a network of researchers, academic and field workers interested in promoting current and proposed applied research in the water supply and sanitation sector. This is achieved through informal, low-cost and decentralised networking links. In the last years GARNET started to geographically decentralise its activities through CINARA (Latin America), CREPA (West Africa) and CDDRB (South Asia). GARNET is also a forum for topic-networking activities.

The lessons learned by GARNET (Saywell, 1996) are interesting for the purposes of this paper:

- Network members should be involved in the planning, goals setting and work plan for networks. A sense of ownership is crucial to be vibrant, dynamic and meet the needs of its members;
- Membership is not participation: a small core group maybe driving and shaping the network's agenda and if they are removed the network may flounder. Comprehensive participation and providing a sufficient incentive for participation is a major (and problematic task) of any network;
- Networks need to be user driven and arise from a felt need with the sector;
- Networks should not restrict membership only to those who are *perceived* as its natural target audience;
- Evaluation and feedback from network members needs to be constantly sought and incorporated into network activities and terms of reference.
- Clearly stated problem or subject will help define the network's purpose and objectives.
- Networks should be able to operate *multi-lingualy*;
- Funding is a crucial part of enabling the work of co-ordinators. Networks, which rely on voluntary work, will suffer;
- Flexibility and openness to new ideas is crucial to adapt to change;
- Communication channels should be appropriate to members.

GARNET's operation as network can be presented in this simplified structure:

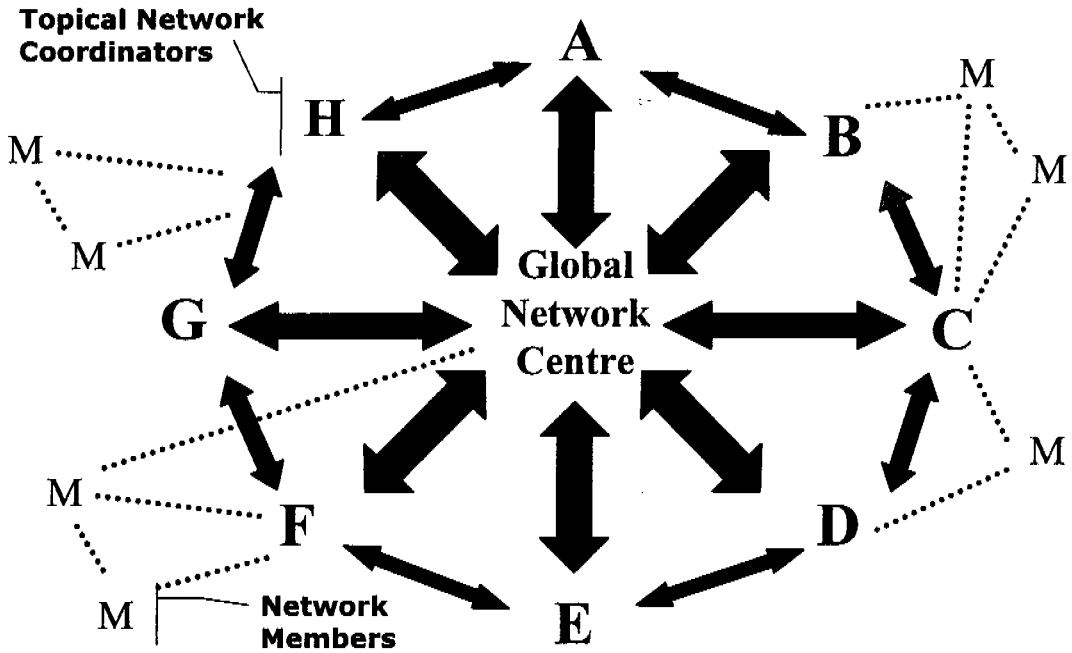


FIGURE 6

GARNET research topic-networks are: institutional development, hygiene behaviour, participatory approaches, gender, urban environmental health, rainwater harvesting, groundwater development, water quality monitoring, solar distillation and solar water disinfection, iron and manganese removal, handpump technology, solar water pumping, pit latrines, nightsoil/faecal sludge treatment, low cost sewerage and solid waste management recycling (has been using electronic conference. Some of these topic sub-networks have become active and formal networks as handpumps and gender issues.

The **Handpump Technology Network (HTN)** is one of the Topical Networks for handpump research within GARNET. It is co-ordinated by SKAT and consists of organisations and individuals in the fields of handpump promotion, research and development, manufacture, inspection, and project implementation. The scope of HTN is wider than research and development work. It also provides technical back-up for the formulation of sector policy, institutional capacity building and training, choice of technology, operation and maintenance, cost recovery, strengthening local production capacity, quality control and quality assurance and dissemination of information.

HTN is open to all organisations and individuals that are active in the field of handpump development and/or promotion, and to agencies RWSS projects. Around 200 individuals or organisations are members of HTN, including multilateral and bilateral agencies, governmental organisations, Egos, private sector handpump manufacturers, R&D groups, inspection agencies, and individuals. Membership in the network is free. HTN has been functional since 1993 and on a small budget, funded largely by SDC. Prominence of technology in HTN's name belies the network's wider brief – it promotes low-cost technologies and community managed concepts. It addresses a wide range of issues in the context of improving the capacity to implement sustainable strategies that are institutionally sound, technically realistic, and meet identified needs of users. To achieve tangible results, water supply technologies must be sustainable, not only in terms of hardware, but also in terms of supporting software".

HTN provides demand-based support within the framework of HTN partners (Governments, Egos, Donors and Private Sector). HTN helps to document experience and make knowledge accessible to all.

GEN NET, the Gender Issues Network, is another topic-networking activity. It started in 1996 as a mandated activity of the WSSCC The objective of GEN NET was to share experiences and latest developments on gender in water supply and sanitation through a newsletter. It uses mainly fax and the email to contact members and publish the newsletter. Members are mostly professionals who have an interest and experience in activities where a gender approach is an important element. They contributed information to the newsletter issues already distributed. Important activities by the co-ordination of GEN NET, which received special funding, were the publication *of Gender in Water Resources Management, Water Supply and Sanitation: roles and realities revisited*, and the report *Gender in Education and Training for Water Supply and Sanitation.* The co-ordination of the network is done by IRC on its own costs as there were no subsidies nor fees by members. To be able to continue its activities, the co-ordination of GEN NET, via the WSSCC, requested donors for funding and no positive reaction has yet been given and this has contributed to the interruption of GEN NET's newsletter. At the same time, donors made funding available for other global projects on gender, and activity of the co-ordination body shifted its focus to these, more pressing new projects, paid for and which required much time.

The **ITN** International Training Network for Water and Waste Management was established in 1984 as a joint initiative of UNDP, the World Bank, and a number of bilateral donors in support of the International Drinking Water Supply and Sanitation Decade. The objective was to establish specialised centres in selected countries and regions for training, research, and information dissemination on appropriate water supply and sanitation technologies suitable for low-income population groups in rural and urban fringe areas of developing countries. The centres should not function as isolated entities in their countries and regions, but as a global network for exchange of information and experiences and mutual collaboration with support from the UNDP-World Bank Program in Washington and regional field teams (RWSGs) in Africa and Asia.

The **ITN centre in the Philippines** is a network of resource centres, bringing together 18 institutions involved in the water sector including government agencies, academic institutions and non-governmental organisations. Not only the ITN centre in the Philippines but also the **IWSD in Zimbabwe** and **NETWAS in Kenya** started within the ITN UNDP-World Bank Programme. A description of these three resource centres is to be found in Allaoui (1999). Other ITN centres in Africa are the NCWSTI National Community Water and Sanitation Training Centre in South Africa, TREND in Ghana and CREPA in Burkina Faso.

The three **NETWAS** Programmes Training Services (TRS), the Community Support and Research (CSR) and Networking and Information Services (NIS) are to contribute toward the increased sustainability of community-based water supply and sanitation programmes through consultancy, applied research, training, information dissemination, networking and backstopping.

PALNET is the **Participatory Learning Network**, a Kenyan association of sector organisations aiming at the promotion and advancement of participatory methodologies in the sector. Its members are drawn from Ministries of Water and Health, sector NGOs, training institutions and sector ESAs. The secretariat of PALNET is provided by NETWAS.

The NIS Programme is charged with the task:

- to establish the information exchange mechanism,
- to provide the necessary infrastructure and know-how for knowledge transfer,
- to process and disseminate relevant information,
- strengthen and promote networking mechanisms in the region.

The three NETWAS Programmes work together on the tasks of:

- creation, elaboration and aggregation of knowledge, facts and data,
- their assessment and appraisal,
- the processing of the know-how into proficient information,
- the publication of the findings,
- enhancement of networking activities in the region,

To reach the targets it is essential that all NETWAS staff members and Programmes have a clear common understanding of the duties and benefits deriving from the mandate. The NIS concept has the objective to meet this requirement. All Programmes concerned need to constantly interact in a regulated, responsible way. To accomplish an on-going co-operation, it is necessary to clearly define the roles and responsibilities and the interfaces between the Programmes.

WIN is the Water Information Network, an association of public offices of the water sector agencies, which enables access to important data and information relevant to ITN's work. The ITN centre in the Philippines is a member of WIN.

One branch of WIN is **MEWIN,** the Middle East Water Information Network. It's purpose is to improve the management and conservation of water resources in the Middle East, to promote the peaceful co-operative use of water, to motivate sound environmental planning in the region, and to encourage the sharing and exchange of information and data which is deemed essential to the achievement of all of MEWIN's goals.

Global Water Partnership (GWP) is an international network open to all involved in water resources management. Its secretariat is located at Sida Headquarters in Stockholm, Sweden. It supports GWP activities, provides back-stopping services to its technical advisory Committee, prepares meetings and disseminates information. The **Netherlands Water Partnership** is the Dutch focal point of the GWP.

CAPNET, the International Network for Water Sector Capacity Building, is a multi-country, multi-donor programme, associated with the GWP. Its purpose is to assist countries and regions in their efforts to build up their capacity for integrated water resources management through human resources development. CAPNET envisages the provision of technical support, applied research and stimulates networking. This should be CAPNET main modus operandi: a global network for the creation or strengthening of regional and national networks and links with other existing networks. Members would be those involved in integrated water resources management mainly in universities but also in professionals associations. CAPNET organisational phase should start in the first semester of 1999 followed by a full project for the following four years. CAPNET secretariat is located in the IHE.

CAPNET is in the process of developing its strategy and workplan and it seems to be taking a regional approach. Some workshops have already been held, and CINARA seemed to suggest certain links between the STREAM project and the development of CAPNET. It is good to note that CAPNET has only funding for a preparatory phase until the end of this year. They have to prepare a proposal for the coming four years. The knowledge accumulated as a result of the STREAM project might be very useful for them in developing the proposal. Further, their efforts seem to concentrate, for the time being, on certain institutes which are also active in STREAM, for instance IWSD and CINARA. In the letter of intend (1997) on co-operation between IRC and IHE, resource centre development is mentioned as one of the areas of collaboration. As it now seems that IHE and IRC (sitting in one building) are both undertaking major projects relating to capacity development, it would seem logic that we mutually try to involve the other organisation to see if synergies can be created. (Teun Bastemeijer, personal communication)

GESI, the Global Environmental Sanitation Initiative is becoming a network among sector professionals. IRC maintains its website.

CEPIS/REPIDISCA, the Red Panamericana de Información y Documentación en Ingeniería Sanitaria y Ciencias del Ambiente which disseminates information on sanitary engineering and environmental sciences in Latin America and the Caribbean.

IPTRID Network is part of the **IPTRID** programme and aims at improving the exchange and flow of technical information and research results in the irrigation and drainage sector. It gives direct access to many of the network services that contain information about irrigation and drainage

There are many other networks focusing on water supply and environmental sanitation related sectors. Some of them are described in Browne (1993): *A Guide to Secondary Source of Information on low-cost rural and urban water supply and sanitation for developing countries.* It gives an idea, if not of the present situation of these networks, at least of their existence and their thrust to improve sector performance:

CEHANET the Regional Environmental Health Information Network, which areas of interest include community water supply and sanitation.

DIVINER, a computer based information system on water supply and sanitation that caters to the needs of Asian NGOs.

ENSICNET, a regional network dealing with environmental management and pollution control, water supply and sanitation.

IDRC Global Handpump Network, established in 1988 to undertake ongoing research and development in handpumps and other water delivery systems at the Research and Training Centre of the University of Malaysia.

INFOTERRA, established as early as 1977 to facilitate the exchange of environmental information within and between nations.

PERIURBAN NETWORK, aiming at improving the communication and dissemination of information to researchers and practitioners involved in water and sanitation in periurban areas.

THE AFRICAN WATER NETWORK, aiming at improving NGO effectiveness by ensuring speedy exchange of ideas, documentation on successful approaches to sustainable water development, co-ordination of activities in order to avoid duplication of efforts, improved communication with international and donor agencies and personnel training programmes. Publishes DROPLETS.

RHIC Network Rainwater Harvesting Information Centre, aiming at the dissemination of information on rainwater harvesting activities ranging from rural and urban community projects to university based research. Publishes RAINDROP.

WASIN, the Water and Sanitation Information Network acts as an information network in water supply and sanitation in Indonesia.

With the advent of Internet and electronic means in general, has produced an enormous amount of informatino and further networks, and has lead to over-communication making sometimes more difficult to retrieve what people are looking for.

The purpose of providing this listing is not to give exhaustive information on the networks. Rather, it wants to call the attention to the large number of such activities initiated with a view of establishing organised and regular exchange of information among centres in the water and (environmental) sanitation, water resources and related sectors. It also shows the difference in structure, ways of interacting, interests and purposes. Many more networks pop-up at regional or country levels. This indicates that there is a demand from the side of the resource centres themselves. They have engaged in networking for receiving and disseminating information on new findings, learning from experiences and new developments, contributing to innovations, disseminating new material, advocating for specific topics in sector improvement. But it can also be that it is a means of belonging to a circle, just for the sake of 'netting', overlooking the 'working' part.

How to make networking in water supply and sanitation a relevant activity, where products and services generate real benefits? Understanding the linkage between these products and services, and the benefits they can generate, from the perspective of the specific functions which a resource centre is supposed to perform, will help. Networking can help diversify the number of relevant information sources and update documentation; networking helps a center to enhance its own efficiency and effectiveness, benefitting from the comparative experiences of other countries, both North and South; networking can enrich research by providing a broader and better (even comparative) data base; networking helps to upgrade and update training in content and approach; networking can help and stimulate the generation of new knowledge and innovation, which feed sector publications; networking helps improve the effectiveness of advisory services, both of an ad-hoc nature but also in developing sector-specific advise on policies, methodology and technologies. Also 'mainstreaming' network topics in the centre's regular activities appears 'to be an important role of a network, providing

continuous benefits to its members. When the latters' expectations are fulfilled, members will gladly contribute to the funding of the network's activities.

5. Networking among resource centres as a result of the STREAM project

STREAM is a project and as such has a lifetime limited to the period of its implementation. What I am proposing here is that one of the outcomes of the STREAM project will be that it generates a network among resource centres that extrapolates the lifetime of the project itself. It will be a 'STREAM Network', which will have a longer life and be sustainable. Its main purpose will be to strengthen the sector's resource centres in their internal organisation, capacity, dynamics and in their relationship with their environment. It will help the resource centres in their "micro-development", defined by Fowler (1998) as the acquisition of "additional learning, increased organisational capacity and greater intrinsic power to deal with the wider world"; it will, in short, contribute to improvements in water and sanitation.

> The STREAM Network will be the regular and organised exchange of information, knowledge, materials and tools, aiming at resource centres capacity building. While enhancing the members' internal capacity, it will raise their profile in the sector, in the various regions and will become a mechanism for their participation in the provision of services for sector improvement.

Already 11 resource centres are participating in the implementation of the STREAM project: CINARA in Colombia, SKAT in Switzerland, ITN in the Philippines, pS-Eau in France, NETWAS in Kenya, IWSD in Zimbabwe, CFPAS in Mozambique, IPD-AOS in Burkina Faso, SEUF in India, IRC in the Netherlands, IWEE/Tampere University of Technology in Finland. These centres produced papers on their development as resource centres, their policies, strategies, ways of operating, functions and experiences. A description of the 11 STREAM partner organisations is given by Said Allaoui in his 'Resource Centre Development Processes and Experiences (STREAM project) - Synthesis of case studies on 11 centres" .

These resource centres are already engaged in networking activities. Some examples are given below:

- The ITN centres mentioned above participate in African and Asian regional networks. Also in the Philippines networking with ITN is the CODE-NGO
- The pS-Eau programme, (besides being the secretariat of) a network in itself, participates in a series of regional networks -- SIE, REDES, ALMAE, RADI, RIOB, INTERDEV in France, -- for the exchange of information on water supply and sanitation in peri-urban areas and small centres. Its members are researchers, practitioners and institutions. Another network brings together various actors in the Senegal River basin, including organisations in Mali, Mauritania and Senegal. The pS-Eau is an active member of AGUASAN.
- IRC participates in AGUASAN, GEN NET, INTERWATER, the WSSCC, GARNET, GWP, GESI, NWP
- the IWEE participates in the WSSCC, GARNET and IMO
- CINARA participates in the WSSCC, GARNET, GESI, GWP and REPIDISCA. Its documentation unit is the information focal point for the MANAGE project, co-ordinated by IRC.
- The ITN centre in the Philippines is a member of WIN
- NETWAS participates in HTN and PALNET
- SKAT is the secretariat of the HTN, participates in AGUASAN and WASTE

The media and communication tools used by the different networks vary: electronic mail, websites, databases, newsletters, folders disseminating activities and publications, electronic and face-to-face workshops and conferences.

Topics for the STREAM Network

Defining the subject area of a network will contribute to clarify its objectives, promote the participation of its members and maintain their interest. Likewise, it is essential to define which topics will feed the STREAM Network. In principle, the STREAM Network will be a forum for the discussion of key issues regarding resource centre development, the main general goal of STREAM project.
Using the STREAM project objectives as a basis and identifying its more specific objectives may help identify the subject fields for the exchange of information, tools, materials, knowledge among partners and other stakeholders.

The STREAM project' objectives are

- to contribute to **capacity development** through the strengthening of a number of **resource centres;**
- to gain insight into the **process of resource centres institutional development;**
- to document and apply the **lessons learned to support capacity building** of other resource centres in the future;
- to learn from **each other's experiences** to improve the **centres' efficiency and effectiveness** and contribute to **improving sector performance.**

The identification of topics in the light of this definition guides STREAM Network to focus on enhancing knowledge on 'resource centres', 'capacity development', 'institutional building processes and experiences', 'resource centres management for efficiency and effectiveness' and 'improved sector performance'. Although these are quite general topics, they can already delineate the scope of the subjects and more specific topics to be dealt with by the STREAM Network. Moreover, cross-cutting topics dealt with regularly by the resource centres contributing to better management, capacity building and institutional development – such as gender, decentralisation, public private partnership, utilities management, low-cost and community management approaches – will certainly come often as key topics.

STREAM Network could primarily deal with these topics related to the fields of water supply and sanitation and integrated water resources management. However, also important can be information from other fields if considered related to the relevant topics of the STREAM Network.

A challenge will be to be dynamic and flexible enough to remain open to new topics, subjects and new trends, developments and innovations concerning the resource centre's capacity building. Another challenge will be to disseminate a common discourse and terminology that sets the basis for mutual understanding and interpretation of analytical frameworks and information, for reacting on a common ground, accumulating findings and contributing to innovation.

Defining these topics leads the way to start clarifying the objectives of the STREAM Network. It will also help to have some idea of the products and services it could offer.

Products and services expected from the STREAM Network and the benefits these generate

Exchanging information, knowledge and experiences will contribute to enhance relationships that allow key issues to be discussed and helps lobbying and advocating for sector improvements. It will also contribute to the sustainability of the resource centres, and to make them more effective and cost-efficient.

In this process of networking, a larger number of organisations, eventually the other stakeholders, will be encouraged to become sector resource centres.

Specific and direct services and products to be offered by the STREAM Network are:

- a channel to exchange information on the relevant topics
- a means of making use of available resources or personnel in partner centres for services sharing and initiating collaborative arrangements (e.g. joint advisory on the networks relevant topics, on other services as training, development of tools and joint publications)
- information for decision making inside a resource centre and in its external environment
- a validating tool for resource centres development
- a common database with links to partners documentation units
- a common website and a common bulletin
- a channel for tapping demand for services from national centres in the regions
- a space for mutual support for fund raising.

The benefits expected from the STREAM Network products and services are that they will

- help resource centres to learn from other centres on institutional processes and experiences
- put resource centres in touch with new ideas, new trends and developments, new experiences, new knowledge which will enhance their capacity to respond to change
- facilitate the access to other capacities and skills not available within their own organisation
- stimulate innovation
- help minimise the duplication of efforts and achieve economies of scale
- help to raise resource centres profile in the sector at various levels: local, national and international
- contribute to enhance the capacities at regional and local level for further sector improvements.

The organisational structure of the STREAM network

The STREAM Network being proposed here could have one co-ordinating body formed by a few resource centres interested in taking up this role. One of these will provide a central secretariat, which is responsible for giving support to the management of the network. The idea is that the secretariat will orchestrate the network always in consultation with the co-ordinating body. Other resource centres will participate in the network and will be responsible for its decentralisation in regional sub-networks. Together, these will operate and maintain the network, will contribute to its effectiveness and sustainability and will be the core of the network.

The network can be opened later for other members or secondary stakeholders who have an interest. The idea is that they participate as clients receiving information of the Network activites and eventually newsletters. These are the bilateral and multilateral donors, particularly funders and supporters; technical support agencies and organisations; other research and training bodies with whom the resource centres in the core of the network maintain a partnership; community groups; central and local government agencies; national and international NGOs; and private sector organisations.

The structure of the STREAM Network should be commonly decided by the co-ordinating body. A suggestion:

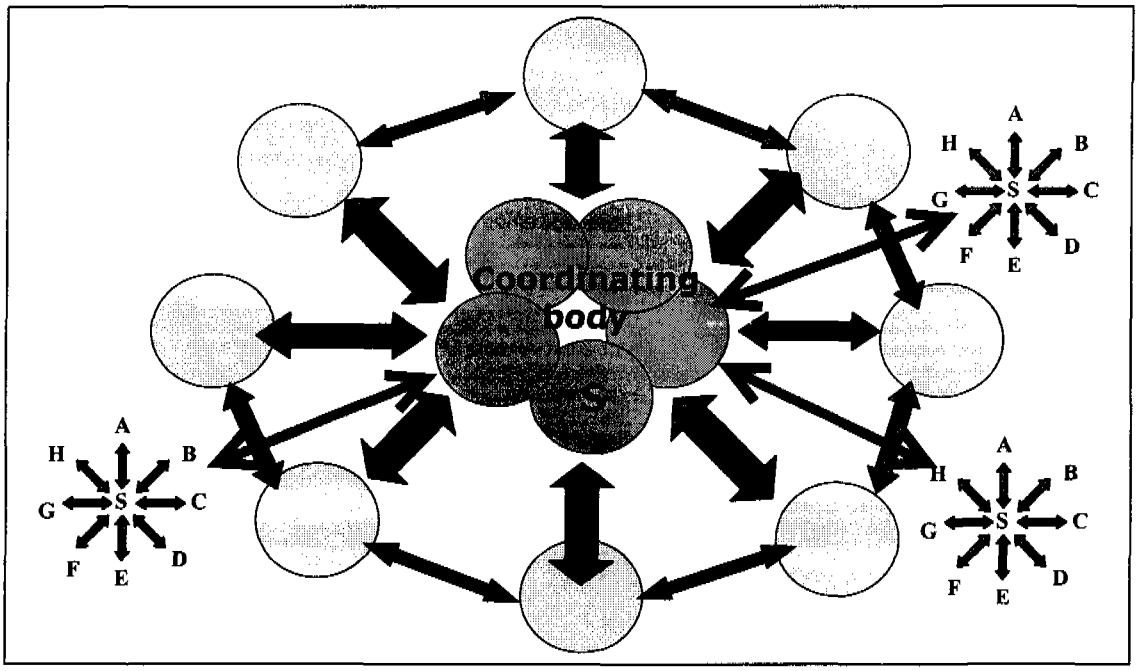


FIGURE 7 : THE STREAM NETWORK

The STREAM Network vehicles of communication

The network communication means should be appropriate, easy to access to all the core member resource centres. Among these vehicles are the e-mail, World Wide Web, Discussion Lists, News groups, Electronic conferences, bulletins, periodicals, telephone and fax. The minimum timing and periodicity of communication should also be established and clear to all.

A combination of these vehicles with the organisation of informal or organised meetings for the exchange of information and experiences, with presentation of works by members and discussions offers an important forum for networking.

The tasks of the STREAM Network central secretariat and co-ordinating body

The suggested tasks for the central secretariat are to:

- organise and maintain the network communication channels and vehicles
- support members in their processes of communication
- collect among members relevant sources of the information to be disseminated to network members
- organise, implement and maintain the STREAM database
- disseminate information (through the Internet, through bulletins) to the network members
- promote feedback among network members
- organise reactions and respond to the feed-back of members
- update STREAM website
- receive proposals to and support the co-ordinating body in the organisation of meetings or any other kind of face-to-face gatherings for communication and/or exchange of information and experiences
- facilitate organisational structure in agreement to what the members would like to have and share
- ensure that the structure is flexible enough to be adapted to circumstances and allow processes of decentralisation.

- seek always mutually agreed performance criteria as a prerequisite for effective management
- define the activities needed to implement these tasks.

The co-ordinating body resource centres tasks would be to
- contribute to the strengthening of the network with relevant topic information, suggestions, tools, innovations
- contribute to the establishment of regional networks in their area of work
- propose regional or global meetings and support their organisation, including search for funding (one meeting organised by each co-ordinating body member)
- being in charge of rotating the production of network products as periodical bulletins
- take-up initiatives for securing the resources needed for the good functioning of the network.
- rotate in housing the central secretariat by some time, to be decided in agreement between all members of the co-ordinating body

Besides these, the co-ordinating body would, together with the other member resource centres:
- contribute a fee to the sustainability of the network
- organise the centres information on their own institutional processes, experiences and lessons learnt by systematically packing it for further dissemination through the network
- elaborate on new concepts to enrich the state of the art on capacity building and institutional development
- contribute information for the central database
- facilitate the linking of their documentation units among all partners
- contribute ideas to the strengthening of the STREAM Network organisation

The criteria for membership

The resource centres, which form the co-ordinating body, should
- meet the characteristics of a water supply and sanitation resource centre (as defined by Allaoui,1999)
- show an interest to be a member of the co-ordinating body
- have the infrastructure necessary to do it, in terms of availability of personnel, time, electronic means
- have experience in active networking activities
- be representative of a geographic region, where sub-networks could be established.

The central secretariat would rotate among these centres.

All member resource centres should
- be committed to the objectives of their network
- state clearly what are their needs for networking and how to get the most out of it
- allocate a staff member to be the interface with the network
- have other staff members aware of the network's way of operating
- make a commitment that relevant staff will rotate in participating in networking activities
- be able to start regional sub-networks and commit to promote links between South-North, North-South and South-South depending on their location
- dispose of infrastructure, skills, personnel, financial resources and time-availability[2]

[2] Infrastructure needed: access to telephone, fax, mail, e-mail and preferably full access to the Internet.
Skills needed: on how to operate these means of communication, how to extract lessons from experiences; analyse and write experiences to disseminate information; how to translate experiences from other resource centres to your own situation.
Costs: during the organisation of the Network, ensure subsidy from the STREAM project. During the operation, provide for logistics in general and for meetings, funds for maintenance activities.
Time needed: relevant staff from the co-ordinating body would need approximately 2 hours per week. Time of member resource centres will depend on how active they are.

- contribute an agreed fee for the functioning of the Network

It is better to decide criteria among the eventual members in the organisation phase of the Network. In this phase, it is important that criteria are clear to all.

Source of funding for the day-to-day activities should be the members once the Network is implemented. In the organisational phase, subsidy from the STREAM project will be used.

Getting members interested in maintaining the STREAM Network

Besides the criteria to engage in the network, what would be necessary to maintain members interested in continuing in the activity?

STREAM Network will aim at strengthening the members' capacity as a resource centre and to better equip them to face the challenges of improved water supply and sanitation. Their interest to maintain a network has a greater chance to be achieved when the members have a clear view of the concrete benefits they can receive. It is important that they have a choice of the topics dealt with; the structure of the network and the communication vehicles, the time they will spend on this activity and the resources they will need.

It is important that STREAM Network member resource centres have a vision of what they are doing and where they are going, what achievements and impact they are looking for. They must have a minimum competence and resources to maintain the network and personnel to access the network (one person in the organisation being responsible for translating the network's benefits to the others and motivate others to contribute).

To maintain their interest, networking benefits and costs should be discussed and clear for all those who initiate the network. Members that contribute towards a network are likely to be committed to its success. The more a network can be user-supported, the stronger it will be. When the financial contribution to the network has been discussed and accepted as a step for entering the network, interest in maintaining this contribution have a greater change to continue.

Not only clarity about costs is important. Also clarity on the time needed to properly operate and participate in the network and the assignment of responsibilities will help in deciding whether or not to participate in the network. A suggestion concerning personnel is that in the resource centres themselves more than one staff is at least knowledgeable about the network's developments and not one person only. In case this person leaves the organisation, the activity will be left unattended.

As mentioned above, resource centres participate already in quite a number of networks. This might result in low benefits for the institutions themselves and for the sustainability of the networks. This calculation of time, costs and personnel needed will help the choice of the type and number of networks each centre would be willing to become a member of. The increase in network by sector leading members will stimulate the interest of others.

However, it would very important to maintain a balance between the integration of new members and keeping a number which will contribute to the sustainability of the network. The co-ordinating body should not exceed 4 or maximum 5 members and the active member resource centres should not exceed 20 members. Keeping a low number of active members may contribute to an active networking activity.

The secondary stakeholders participating somehow in the network will eventually enter and leave the network as beneficiaries of the information produced. Of those, some resource centres will however maintain a permanent interest when realising the benefits gained and may eventually become active members.

A most important requirement for the sustainability of the network, as noted, is that members participate from the beginning in the planning of the network, in deciding the topics to be dealt with, the structure, the possibilities of expansion, the products, contributions, etc., all

decisions concerning contents and organisation. Especially the co-ordinating body resource centres will have a crucial role in contributing to this and in being open to the other member resource centres to discuss their views. The feeling that the STREAM Network was planned and established by the members will give them a sense of commitment and engagement..

The combination of electronic means of communication with the organisation of face-to-face meetings for the exchange of information and for discussions will sustain members' interest. Interest will also be maintained by other informal (or formal) ways of relating than through the network.

6. Conclusions and Recommendations

Some general conclusions come forth:

- Networks are essential for the strengthening of resource centres and their survival
- Networking is intrinsic to resource centres: they do not exist without networking
- Networking fulfils the function of resource centres
- Strengthening of networking comes as a result of effectively providing services and products.

From this, the first obvious recommendation is that the STREAM Network should be one concrete result the STREAM project.

Some recommendations for the organisation of the STREAM Network are:

- design a structure where the co-ordinating body formed by resource centres take up the role of a management body with a central secretariat; the co-ordinating body will take initiatives and be responsible for co-ordination, management and logistics;
- the STREAM Network members and the co-ordinating body will meet the listed criteria for their membership;
- disseminate among other stakeholders and leave membership later open to those interested but who participate in a passive manner
- functions of the central secretariat, of the co-ordination body and of the member resource centres should be made clear to all members
- STREAM Network members should understand their needs for networking
- an information needs-assessment should be made inside each resource centre
- benefits in general and, in particular, the products and the services the network can offer should be clear to all
- also contributions, the way to access the network, its organisational mechanisms and strategies should be clear to all members
- the central secretariat should make sure that these points are consistent to all
- the STREAM Network should ensure the decentralisation in regional sub-networks to stimulate membership, avoid isolation and facilitate translation to other languages and regional needs
- the choice of network activities and their means of implementation should be democratically made by the co-ordinating body
- initial funding to implement activities will be necessary and there should be a joint effort by the co-ordinating body for the purpose of ensuring further financial sustainability
- advocate for the support of the larger number of stakeholders
- link to other networks to enhance exchange of information and cost effectiveness
- establish a monitoring process by the co-ordinating body to assess progress and avoid deviation from objectives
- provide training for management and implementation of the network

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International Water and Sanitation Centre

Resource Centre Development Processes and Experiences

(STREAM Project)

Challenges to Resource Centres in their Role as Capacity Builders[1]

June 1999

[1] *Prepared for the international workshop "Towards an Enhanced Role of Resource Centres in Capacity Building", 14-18 June, 1999, Delft, The Netherlands.*


W&S Sector
Resource Centre

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1. Introduction

1.1. Role of resource centres as capacity builders

Decentralisation, community management and empowerment, integrated water resource management, private sector involvement, minimising state intervention, integrating gender consciousness; all these new trends are influencing the political, economic and socio-cultural fabric of our societies. The water and sanitation sector so essential to life and health, was one of the first sectors which had to respond to these challenges. After years of experimenting it has been realised that responding to these challenges boils down fundamentally to building the necessary capacity within the sector.

What then is this term "capacity building"? **Capacity building** has been defined by a number of authors (Alaerts et al, Okun and Lauria) as "creating an enabling environment with appropriate policy and legal frameworks; institutional development including community participation; and human resource development and strengthening of management systems." (see also Box 1: Some recommended approaches to capacity building[1])

The STREAM (STudy on REsources And Management) Project was originally proposed and approved against a recognised need in the Water and Environmental Sanitation sector to "develop capacity in the sector through a mechanism of Resource Centres". This recommendation, made during the Ministerial Conference on Drinking Water and Environmental Sanitation (Noordwijk 1994), utilises the STREAM project as the **vehicle to strengthen resource centres** to play this role of capacity builder within the water and sanitation sector.

1.2. The challenge to achieve success and survive

One might argue that to develop capacity in the sector one must first understand the sector, for which it may be necessary to define or describe the sector. We have decided not to dwell upon the sector per se for three reasons.

- Firstly, there are other fora better prepared for this purpose. In fact a world-wide process of developing a sector vision for the coming decades is ongoing. This will it is hoped result in a draft framework for action. This framework for action could help to better orient efforts to strengthen resource centres after it has been adopted in March 2000.
- Secondly, I am addressing an audience of sector specialists who are aware of sector trends, its evolution and the changes that have taken place over the last two decades, and the key sector issues that resource centres must respond to.
- Thirdly, and most importantly, the sector is a dynamic entity constantly evolving, and sector issues and needs today are not the same as they were 10 years ago nor will they be the same 10 years hence. They are linked to the socio-political and environment factors acting upon the sector which are furthermore very country specific. So in developing sector capacity, it is not the current needs of the sector that will influence the role that resource centres will play in developing sector

capacity; but the nature of the sector itself which is dynamic. In other words the **dynamic nature of the sector** influences the manner in which resource centres must respond if they are to be sector capacity builders.

Box 1: Some recommended approaches to capacity building
(as modified by the present authors)

- Developing improved policy and legal frameworks, institutional development and a commitment to development of human resources and managerial systems for the sector
- Having the external support agencies (ESA's) adopt capacity building as an essential element of their assistance efforts, including such initiatives such as supporting community and water user associations, supporting the pivotal role of women in water related activities at all levels
- Urging governments to co-ordinate ESA activities on capacity building in their countries, and encouraging the ESA's themselves to co-ordinate their agencies
- Involving, where appropriate, the private sector in managing or providing water-related services and improving their skills to do so, thereby enhancing sector capacity to respond to the demand
- Encouraging local and foreign universities, institutes, consulting organisations, professional associations and others to participate in capacity building as is most appropriate to their own capacities; ESA's are urged to facilitate this effort
- Encouraging countries to conduct water sector assessments; these assessments must include the need for capacity building in addition to traditional technical, social and economic aspects
- Creating awareness of the vital role and finiteness of water on the part of decision-makers and the public at large

Furthermore an analysis of resource centres in different sectors would show that from an organisational viewpoint, resource centres in different sectors are no different from each other. If they want to be the tool for capacity building in whichever sector they belong to, they would have to face essentially the same challenges. In theory without exploring this much further it would seem that the factors that make for the success of resource centres are not sector specific. So the WS&S Sector can learn from the experiences of resource centres in other sectors. Other success factors such as the over-all priority a sector receives from governments and international bodies may be more specific to the water sector. In a sector, which represents a growing "market", good resource centres could be expected to have better chances of success and little problems of survival. In a sector or an over-all climate where things are generally stagnating, good centres can be expected to be more successful than bad ones, but still face problems of sustainability. In both cases, their ultimate success can be expected to reside in their **capacity to anticipate and respond to change.**

A basic premise is therefore that if resource centres are to be used to develop sector capacity, they must be prepared or geared to responding to a changing environment within the sector. The operational term is change. Any form of strengthening of these centres must be directed towards preparing them to recognise and respond to change.

The above premise and underlying assumptions need further verification and clarification in order to come to grips with the future of resource centres and resource centre networks. What are the success factors and what will a successful resource centre look like in the year 2005? How should a resource centre be articulated? Can

we talk of a vision for resource centres? What are the features of a good resource centre as against a not so good resource centre?

1.3. Purpose and structure of the paper

The purpose of this paper today will be to extract some of the key elements which govern the success of resource centre development, and present them in a simplified manner which can help us to reflect on the viability of resource centres, and how to orient efforts to strengthen them.

After this introduction, the next section will deal with some concepts, definitions and experiences touching on current thinking in relation to resource centres enabling us to explore new perceptions of what a real resource centre should look like.

This should lead us to discussing, in section 3 the key factors for the success of resource centres as capacity builders, whereby the question could be raised whether or not these are in fact the success factors which make a resource centre effective, viable, and efficient.

Such a line of reasoning should give us in section 4, some novel approaches for the articulation of resource centres to sustain their role of capacity builder in the water supply and sanitation sector and perhaps beyond the boundaries of this sector.

Finally in section 5, we shall spend some time on concluding remarks and statements emerging as a result of the analysis conducted, and identifying a few proposals for discussion which could serve as an input for STREAM actions.

1.4. Terminology, definitions, and assumptions

Some basic terminology and definitions (which need to be clarified so we all have the same understanding):

Institutions and organisations:

By institutions we mean the rules of interaction within societies. They can be formal (laws and regulations), or informal (customs and codes of behaviour). They can be created or evolve through time

Organisations are groups of individuals bound by some common purpose. They could be political by nature, economic, social, or educational to cite the main types.

Obviously organisations and institutions are closely linked and in some instances inseparable, which probably explains why in colloquial language the two are interchangeably used.

Sector needs versus sector demands[ii]:

A distinction exists between sector needs and demands. The water and sanitation sector (as with other sectors) has long term institutional development needs, which are not necessarily reflected in demands. Clients are willing to pay for services expressed

as demands, but the needs of the sector tend to get overlooked due to lack of supporting funds.

A viable resource centre

Viable systems[iii] (or organisations if we extend the argument) are self sustaining systems that can reliably meet all present and future requirements in a dynamic, comprehensive manner that assures the continued delivery of (products and services).....The key factor that separates viable from non viable systems is the capability and the commitment of a system to .....(respond to) changes.....

The basic assumptions on which our paper is based are the following:

Assumption 1

If we slightly modify the above definition for a viable system by substituting resource centre in lieu of system we have:

> **A viable resource centre is a self sustaining system that can reliably meet all present and future requirements (of the W&S sector) in a dynamic, comprehensive manner that assures the continued building of capacities (through a fully operational knowledge base) within the sector.**

Assumption 2

Resource centres are human activity systems. As such when studying such systems one realises that they are multi-valued, with many relevant often conflicting values to be explored if one wishes to understand them. In the analysis of such systems one does not speak of a solution to a problem, it is rather a learning process, which leads to decisions to take certain actions with the full knowledge that this will not lead to a solution, but will generate a new situation in which the whole process begins again[iv]. **This statement underlies all of our analyses concerning resource centres presented in this paper, and should be kept in mind when we search for the so called solutions to problems facing resource centres currently.**

2. Resource centres – current perceptions and concepts

What we shall attempt in this section is to identify key concepts and constituents, which will help clarify the notion of resource centres and bring us a step further toward our visionary model.

In order to get a perception of the current thinking amongst resource centres about what a resource centre is supposed to be and what its role is; the STREAM project collaborated with interested partners to prepare a literature review along some predetermined guidelines prepared for this purpose. The participating centres were:

International Training Network (ITN), Philippines
Network for Water and Sanitation International (NETWAS), Kenya
CINARA, Colombia
Programme Solidarité Eau (PS-EAU), France
Swiss Centre for Development Co-operation in Technology and Management (SKAT), Switzerland
Institute of Water and Sanitation Development (IWSD), Zimbabwe

Many of the elements presented in this paper are derived from these literature reviews.

We also prepared a synthesis of 11 case studies prepared by these and a number of other institutes in an attempt to clarify the concept and role of resource centres through an analysis of their current structures, functions, mode of operation and interaction. Having these same institutions present their perceptions on "what constitutes a resource centre", produced some interesting and varied results (see Box 2).

2.1. What constitutes a resource centre

Box 2: "what constitutes a resource centre"

A "Body" which provides services to the sector becomes a resource centre. If they are statutory they perform public functions which revolve around political developments and in general this renders them less flexible and more anchored in routine. If they are non statutory they are more penetrative, and participatory and therefore they are very interactive and responsive to change (IWSD).

A second type of classification centres around mandates and core business. It was suggested that the RC had a predominant focus which could belong to one of the following categories (IWSD): Problem solving through applied research (technical and non technical), influencing policy change through advocacy, facilitating and creating an enabling environment as with the ESA's, developing skills through training, and human resource development through academia.

CINARA proposed a definition of a resource centre as an organisation having great flexibility, neutrality and transparency, which could be depended upon to promote enable and catalyse the process of strengthening local capacities. To achieve this purpose, CINARA further identified the following key areas: education (through universities, training centres), information management (through libraries, documentation centres), and research and development. CINARA's perception was that each of these different types of organisations was a resource centre serving a particular purpose or mandate within the sector.

"In the Phillipine context a community is a resource centre considering that support and information systems are generated from the various traditions and cultural contexts. Even a family or an individual may be considered a resource centre" (ITN-Phillipines).

ITN further qualifies for the purposes of this study that the term resource centre refers to non government organisations providing various services and linkages as a support to a cause. Whilst they have multiple roles they are primarily concerned with disseminating and popularising knowledge. ITN speaks of different types of resource centres classified according to their functional role : research and documentation, education and training, advocacy, project management and technical services, and information management.

NETWAS perception for categorising resource centres was in terms of funding source to the organisation : government supported, NGO/private sector supported, supported by international funding. It focussed its discussion on the ITN concept, which aims to promote needed improvements in the sector through training, information dissemination and research. Some examples of resource centres described were NGO's (some having multisectoral activities), networks, university affiliated resource centres.

Box 2 contd: "what constitutes a resource centre"

PS-EAU's perception signals the importance of the regional dimension for resource centres and the creation of multiple institutional links through partnerships and networks. Flexibility which permits change and evolution in response to sector demands is another key requirement. The examples cited are both NGO type structures and semi-government supported structures. These structures start as projects which were put in place to respond to certain needs of the sector (objectives of the project) and then evolve into a relevant structure which can respond to current requirements. All resource centres cited have extensive networks and utilise these through partnerships to access other capabilities not necessarily available within their own organisation.

SKAT sees the primary focus of a resource centre as providing access to relevant information. SKAT typifies resource centres through their functional role and objectives. The functions commonly cited as being part of a resource centre are research, training, information dissemination, documentation, consultancy, backstopping, though not all these functions are carried out by all the resource centres cited.

From these results it seems reasonable to conclude the following:

- **No two resource centres used the same criteria of classification.**

- **Whilst most of the partners in the study perceived that resource centres catered to a combination of similar functions and mandates, there was great diversity in the types of organisations being used as examples of resource centres in the sector.**

It appears that amongst resource centres there does not seem to be a unified perception as to what constitutes a resource centre. Currently **an organisation qualifies itself as a resource centre if it sees itself as one!** It is their own perception of themselves as resource centres, which defines or demarcates them as such. There is no standard definition of what constitutes a resource centre. Unlike in other spheres where for e.g. a university cannot be called a university without some minimal norms or standards being adhered to or in the professional arena, to call yourself a doctor or an engineer you need certain minimum qualifications; to call yourself a resource centre apparently NOT.

The immediate question that comes to mind is:

Should resource centres be subject to some minimum requirements to be able to function as such? For instance is there a minimum number of core businesses or mandates that need to be in place to make a resource centre effective?

Whatever the response to this question, what we see here in reality is that in terms of the general understanding of the recommendation of the Minister's conference in 1994, many if not most organisations involved in the STREAM project would seem to have, to varying degrees the **potential to develop as sector Resource Centres, even though they do not share the same vision.** Though most comprise some of the constituent elements of a resource centre, cover certain subject areas relevant to the sector, and provide certain services for specific client groups and stakeholders, they

do not seem to have a clear strategy or plan to go beyond their present position. This may possibly be because there is a need to clarify the concept before developing a vision to which a core group of resource centres could adhere, in an effort to mobilise their full potential and - why not? - contribute to establishing appropriate regional networks of like-minded institutions.

We shall in the following paragraphs address some of the key elements that contribute toward composing this shared vision.

2.2. To move forward a resource centre requires to clearly define its strategic focus

Box 3: Strategic focus: follow the market or the mission?

the dilemma of survival.....
"To respond to sector needs or be financially viable?" that is the question that resource centres face as soon as donor subsidies cease. It's a dilemma between choosing to be effective and choosing to be efficient. Admittedly it is to some extent an exaggeration to link efficiency of a resource centre to financial viability alone, when efficiency relates to other criteria of performance as well. However, the bottom line when one speaks of efficiency is indeed generating income because in many evaluations conducted on resource centres, we see that if the centre is financially self sustaining, the evaluators don't really look further to see if they are responding to long term sector needs.

The notion of survival through short term gains pushes Directors of resource centres to suddenly see themselves as consultancy firms, responding to a demand, pursuing market opportunities (market-driven to use another catch phrase), and no longer analysing or responding to sector needs. Currently many resource centres are seeking to **pursue a demand-driven approach to service-delivery** and provide services only to clients who are able and willing to pay, but if they wish to maintain a broad sector approach as a resource centre there have to be necessarily certain limitations to this approach.

.....which takes demand responsiveness too far.
The demand driven approach needs to be supplemented with a pro-active **definition and clarification of long term purpose and values**. A strategic resource centre should not only be driven by a sector, but also drive the sector based on its values, intellectual knowledge, research, international networks and experiences. A balance has to be struck between following the market and following the mission.

The dilemma then is for a resource centre to pursue its mission whilst finding compromises in order to survive.

Strategic focus relates to the purpose and values of an organisation and where it sees its niche. The choice is influenced by a set of dynamic factors both external and internal to the organisation. It's the choice that an organisation has to make between being a consultancy firm or a documentation centre or being something more. This means deciding on the right mix of core business or functions accordingly (training, advocacy, research, consultancy, documentation etc); and also choosing the subject

areas of intervention (participation and community management, rural and urban sanitation technologies etc). As you will note, the external factors influencing the sector such as gender consciousness, community involvement etc will for instance influence the manner in which sanitation technologies are developed and used.

Finding one's niche is more a matter of deciding on the subject areas which are most relevant to the international, regional or national context depending on which level the resource centre is operating at. In this regard a good example is the shift toward integrated water resource management. Broadening one's perspectives to incorporate this new dimension into more traditional approaches to water supply and sanitation is commendable; particularly in the context of researching other options. Being subsumed by it to the point of losing ones original focus is not. Bluntly expressed the choice really is between being a resource centre that addresses sector needs and plays a pro-active role to address future needs, and a full-time consultancy firm which pursues market opportunities for financial benefits.

2.3. A resource centre must perceive itself as a knowledge base

We shall quote here a couple of ideas expressed by participating centres that reinforce the notion of a resource centre as a knowledge base:

> " A resource centre focuses on the collection and dissemination of relevant national and international knowledge and experiences that are of use to the sector. It may provide various kinds of support services, e.g. documentation centre, training programmes, the collection and documentation of local field practices and experiences, institutional support, etc."[v]

> "Resource centres specially those that specialise in research and documentation, education and training, and project management and technical services will play an important role in this regard (capacity building). The collusion of these resource centres in their areas of specialisation will be very helpful in addressing problems and anticipating future difficulties. Resource centres are virtual knowledge banks where new concepts and ideas may be passed on to various water service organisations."[vi]

> "Having multifarious concerns in the delivery of water supply and sanitation services, resource centres play a vital role. They can influence and even enhance the development of the sector. They can look into the future and foresee trends and directions. Thus they can anticipate change and help in managing it."[vi]

> "One key mandate of a resource centre is capitalisation of experiences and lessons learnt (systematically summarising, appraising and validating the gained experiences and the accumulated knowledge), elaborating sustainable concepts and practicable solutions in view of further dissemination"[vii]

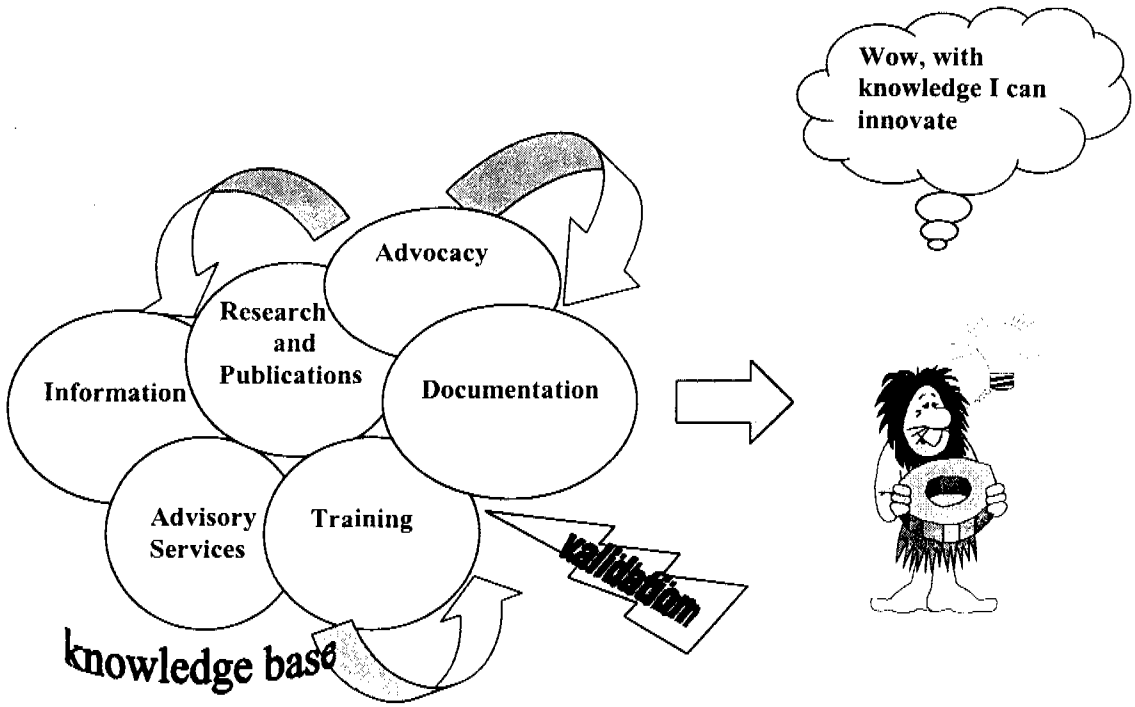
Can we give a more practical dimension to the term knowledge base? Being a knowledge base is more than simply maintaining a data base and documentation unit. Documenting disseminating or repackaging information seems more like it, but that's not it either. Research to develop new knowledge and publication of manuals, papers

and guidelines is sometimes useful, but new knowledge is not easily used in the specific contexts of countries and regions. Advisory, consultancy, and training services contribute to developing the knowledge base through hands on real life experience for RC staff and has the added advantage of contributing to prepare the ground or develop capacities of sector professionals to identify, locate and use information. Working on assorted subject areas can sometimes consolidate the knowledge base but doing so may result in slow reaction to new demands, new needs, and new developments.

So, in fact a knowledge base could also be seen as a dynamic knowledge system whereby different types of services and activities interact internally and with the outside to produce knowledge.

- Knowledge is thus the sum/consolidation of a set of diverse interactions.
- A true knowledge base generates its own information/data from which future scenarios can be projected enabling new hitherto unforeseen interventions.
- An effective knowledge base should have its own systems of validation to ensure quality assurance. This aspect of quality assurance is discussed in further detail in the next section.

Figure 1: a resource centre as a knowledge base



2.4. A resource centre is a centre of excellence

From being a knowledge base follows the idea of being a "centre of excellence". A quotation from an evaluation report described this idea succinctly:

> ".....is considered as a 'centre of excellence'. There is no other group with the same level of knowledge and experience, close contacts with so many donors and support from major stakeholders [ii]"

A resource centre as a centre of excellence has to be knowledgeable, useful and resourceful. The notion of the resource centre as a knowledge base has been discussed above. Knowledge once produced has to be useful in the context in which it is applied. A resource centre thus should have the ability to process raw information and render it useful. It should use its human resources, and the contacts it creates through networks and partnerships, to propagate new ideas and stimulate a learning environment for others, create synergies and maintain commitment of sector institutes to common goals. By being resourceful it is innovative through creating the right attitudes and motivation for its staff and this in turn contributes to creating the learning environment necessary to help others to become resourceful.

2.5. A resource centre needs both administrative and financial independence but in practice how far can financial independence go?

Commonly we have seen that resource centres seek independence of operation after an initial period because they find themselves constrained by the same forces, which supported them at birth – exactly the reaction of children reaching adulthood. This was the case for a number of resource centres from the south set up during the early nineties, which were donor initiatives. Two types of dependency were created within these institutions:

- donor dependency from a financial perspective and
- institutional/administrative dependency from the perspective of affiliation to an existing organisation (in many cases an academic institution).

While it was easier, in due course, to distance the resource centre from its institutional dependency (through obtaining legal status as NGO's for the most part), financial independence from donors was more difficult to achieve.

This was partly due to the preferential treatment given by donors, which was discussed in a previous paragraph and which contributed to some degree in creating complacency within the organisation. Being a donor funded initiative also contributed to creating a national service oriented image for these centres, giving them a special status which encouraged donors and governments to award contracts for training and consultancies without competition from the private sector. At the time of creation they were also unique in the kind of services they provided so they benefited from a monopolistic situation. All this further contributed to donor dependency, since all external funding within the sector that was reserved for these activities, was channeled to these centres. Donor subsidies to these resource centres also tended to distort the 'labour market' of these centres. Individuals in these organisations were given higher salaries during the start up phase to attract and keep the highest quality professionals.

This created a situation in the long-term perspective of higher budget expenditure to maintain a core of highly qualified individuals, which makes it difficult for these centres to reduce their tariff structures for services to the sector institutions. Similarly if they are government statutory bodies, once donor funding ceases it becomes difficult for the state to even finance the salaries of the professionals within.

As mentioned elsewhere in this paper, resource centres when pushed to secure financial stability, might concentrate too much on short term financially profitable assignments (such as training and consultancy) to the detriment of other activities (like research, and documentation,) thereby affecting their role as a knowledge producing centre. **Key stakeholders and donors must understand that all centre activities are not necessarily financially sustainable**, and these should not always be fully-subsidised by the other income generating activities even if they are highly profitable (in any event if such a scenario occurs it implies that the resource centre is already well on the way to becoming just another consultancy firm!!!) **Key stakeholders and donors may have to secure or attribute funding for activities and tasks addressing long term sector needs.** As pointed out earlier sector resource centres should also help donors and stakeholders identify these needs and advocate financial assistance for these purposes.

Even in terms of financial sustainability and profitability of organisations, if one looks closely at the financing pattern one will observe that in reality so-called sustainable operations have only switched from **one form of donor dependency to another!** Many resource centres having restructured their financial management structures following on donor insistence to do so, have ended up not depending on general donor support, but generating revenue as payment of services from the same donors. Given donor dominance of the WS&S sector in countries of the south, this situation is likely to continue.
Similarly, the current thinking on financial sustainability of resource centres is to diversify the source of revenues through identifying different users within the sector. For example in addition to proposing services to international agencies and national government clients, local decentralised bodies may also require services from resource centres and this is a potential source of revenue for resource centre services. However though one talks of solvency of sector actors, and government contribution to donor subsidised projects at the present time, all these sources are still far from operating in total financial independence. So it is still donor money which pays for services, as more often than not the "own contributions" to programmes, in sector institutes, are in kind or as salaries of individuals. The "cash flow" for payment of services rendered by resource centres comes from donor subsidies

But are these new systems more viable than the old? They bestow a form of long term financial sustainability so long as the donors remain in the market. This form of viability is in fact no different to the viability of some consultancy firms from the north, which are also as dependent on donors.

When donors retract funding from the sector, will sector resource centres stand or fall? How should they cope? Is it not time to seriously consider the possible options? Or will this only happen after the sector is fully developed and there is no longer any need for the sector resource centres per se?

But donors are fickle and already in some countries there are signs that more funding is going towards other sectors. An example is the change in direction from water and sanitation to the water sector, through integrated water resource management. Does this mean that sector resource centres should go where the money is?

The question is left open for discussion.

2.6. A resource centre needs a critical mass to be effective

Being effective means achieving an objective set to a sufficient level. If the objective of a resource centre is to produce knowledge that is of use, then one can say that a knowledge base is not **effective if it is not used.** So one way of judging the effectiveness of a resource centre is to estimate the growth in demand for its services. This however is only a quantitative measure, and as an indicator it could be misleading, as there could be a temporary growth in demand (which decreases subsequently) even with resource centres selling old or inappropriate knowledge.

Another way of judging effectiveness is to see whether a resource centre is able to position itself in relation to key issues and challenges in the sector(s) it supports, or is able to serve client groups or stakeholders which it has identified as its main clients or priority. Questions such as:
"are we involved in the right kind of activities?"
"have we chosen the right subject areas?"
"what added value are we bringing to the sector?"
"are we responding correctly to the external signals?"
"have we developed the right products?"
"is there a solvable market for our services and products?"

will help a resource centre to reposition itself from time to time and to redefine its strategic focus. This can be expected to result in better effectiveness.

But whatever the logic a resource centre uses, it is clear from experiences reviewed that the smaller institutions can only respond to demand in a few subject areas and provide only limited information and consultancy services. Consequently they do not play a broader support role and cannot adapt to new demands without external support and advice. In other words they do not have a **"critical mass" to continue to function as a resource centre**. Whether critical mass is described in terms of human resources (professional and non professional), capacities and skills of staff (multidisciplinarity, interdisciplinarity), services/functions, subject areas, facilities, or financial resources; a certain minimum or critical amount of each of these factors (this list is non-exhaustive) is essential for successful operation and continued effectiveness.

> A couple of senior professionals working overtime carrying out consultancy services to keep an organisation going is definitely not the right way to operate a resource centre. The professionals may be the best in the field, their consultancy services may be giving value for money (as is often the case), the organisation may be much sought after (and even given preferential treatment by donors) for carrying

out some types of consultancy studies; BUT, it would be the duty of the persons involved to step back and ask themselves what their strategic focus is.

To quote a report on information management in the sector[viii] which highlights the need for critical mass in terms of capacity and skills of individuals:

> "Expecting national water information systems to be successfully managed by staff with only technical level training in information work is like expecting a national rural water supply programme to be successfully managed by a pump mechanic"

The parallel concerning critical mass requirement for running resource centres effectively, is clear. A certain minimum in the way of skills and capacities is required for any system to achieve its goals and be effective. If this minimum is not available as in the cases described above, the systems or programme cannot function properly.

Strategic planning exercises by resource centres, based on an analysis of the organisational structure and functions would help identify the gaps in critical mass.

3. Key factors for the success of resource centres

Viability is the forerunner to success. Viability is associated with the two terms effectiveness and efficiency. Resource centres once they have got over their initial phase of establishment usually with donor support, face the dilemma of having to pursue their mission whilst finding compromises in order to survive (see Box 3). In other words how can resource centres help themselves to be both effective and efficient? We do not separate the two notions as in my view they are inter-linked – to be efficient one has to be effective, and if one is effective the chances that one can become efficient are higher.

In assumption 1 we spoke of a viable resource centre as being a self-sustaining system with a dynamic response. How can the conditions outlined in assumption 1 be met?

3.1. Achieving a culture of innovation and flexibility

Capacity for innovation within a resource centre

One definition for innovation is 'finding new ways to do the same old thing'; in its simplest form adapting something is innovation. Making a small change to a handpump spout so that it is protected from external contamination would be an innovation. Modifying the shape of the pan in a pit latrine to cater to a woman's needs is being both innovative and gender sensitive (you kill two birds with one stone!)

Innovation has a **human dimension**. It requires people who have analytical ability, who are capable of lateral thinking and who have access to information to quote just three of the key factors. But innovation also requires the right kind of internal organisational environment, an enabling environment that sustains innovation.

In other words to be **innovative in the sector, a resource centre will have to be innovative in itself.** Our thesis is that human responses are governed by the structures within which they operate. If these structures are traditional then the people operating within them will react to outside stimuli in a traditional manner (non-innovative). As an example let us take a resource centre which operates like a traditional government sector organisation with conventional hierarchical lines of authority. In these cases authority and decision-making is centralised, and in the absence of the key decision-maker no decisions can be taken. In such circumstances even the most innovative or creative professional will find that his hands are tied. The result is either fatigue and the person just decides to fit in, or rebellion - and the person quits!

Achieving innovation and flexibility within the context of a resource centre is closely linked to the adoption of new organisational models. Resource centres in general are still structured according to bureaucratic organisational models that do not encourage a culture of innovation or flexibility. Such models do not allow for handling the preponderance of highly qualified professionals of equal standing and experience who are part of a good resource centre. Management of such persons cannot in general be done using bureaucratic mechanisms. It has to be very participatory so that there is room for those who wish to be actively involved, to do so, in all aspects relating to the functioning of such organisations.

3.2. Flexibility – overcoming resistance to change

Flexibility in itself implies being open or receptive to change. Resource centres modelled along traditional bureaucratic structures do not cater to flexibility in their structures. They follow hierarchic systems and function by rules and regulations. To incorporate innovation and flexibility into their structure resource centres will have to adopt new structural models of organisation. But before such flexibility is introduced through a change in organisation pattern, resource centres will have to overcome their **resistance to this change**. A move towards self-organisation must be accompanied by a major change in attitudes and values. In practice however, the realities of power may be reinforced by inertia stemming from existing assumptions and beliefs making change difficult. For many organisations this may require a "personality change" that can only occur over a long period of time – So is our dream of achieving innovative resource centres utopian?

3.3. Being effective through innovative thinking – helps create new markets

An innovative organisation can create and find new markets thereby improving the financial status of the organisation. Some outcomes of having an innovative structure is that prospective clients and donors will recognise the added value that such a resource centre brings, and use its services accordingly. **Positioning oneself** in the consultancy market for special "evolving" type studies requiring different skills to bureaucratic organisations or conventional consultancy firms, is one such possibility.

Going toward the potential client rather than waiting for them to come to you is another. This means that the resource centre will work closely with potential clients making them realise the kind of capacity building they require; through helping them identify their needs better.

3.4. Improving communication within: to enhance transparency and motivation .....

Moving away from traditional models implies that more participatory approaches to planning are being adopted. This requires better communication **within** the organisation so that people who need to know are aware of the decisions being taken and have enough information to be able to participate and contribute in the decision making as well. This also introduces a degree of **transparency** of action within the organisation, which is particularly important in the **motivation** of staff, specially the younger professionals. Decisions would be made in a more consultative manner and staff would be informed of the processes involved even if they were all not implicated in the decision model. They do not therefore feel left out of the decision making process and it is a means also for improving their management capabilities through **learning by seeing or doing.** Better interpersonal communications also helps to create unity of purpose and a sense of belonging, all of which is important for the well being of the organisation.

3.5..... and without; to exchange information, to market the right image, and to advocate new ideas

Exchange of information

Communication with the outside world is important for many reasons. As we have seen all activities in which resource centres are involved require communication with the external environment to a greater or lesser degree. For instance the exchange of technical information typifies this need. "Every institution in the sector needs technical information to enable it to benefit from the experiences of others, and generates technical information which could be of benefit to others"[viii]. Making the best use of an existing information base or information service, or promoting the dissemination of sector information through networking are some other reasons for improving communication.

The exchange of information can be through instruments of mass communication (such as newsletters, journals, abstracting services, or even radio and television including documentaries talk shows, interviews or whatever), and through networks which also use some of these same instruments but are based on mutuality and multidirectional information exchange[ix]

Marketing the right image and the right ideas

Another important purpose of communication is to market oneself. **Marketing the right image** of the resource centre is primordial to its development and acceptance within the sector. Letting others know what the centre represents (its mission and focus, professionality, neutrality, independence of judgement) and what they are capable of doing (its services and products) will improve its impact within the sector and contribute to financial stability as well through enhanced demand for services. A telling example of the importance of marketing is the comment made in a recent evaluation of a resource centre [ii]? "the .....(resource centre's) self-presentation and marketing are below standard.....(its) strengths came more despite of than because of effective administrative structures and systems".

The importance of marketing is finally being realised by resource centres and the more forward thinking ones are even allocating a budget for this purpose. A well known organisation is also good for the morale of its staff – there is nothing more disheartening for the young professional who goes out on an assignment and mentions his organisation by name and gets only a blank stare in return. That's when he wishes he were with the World Bank !!!!

Marketing a resource centre, in its simplest form is like marketing a consumer item, to get it known in wider circles. Just like with the consumer product, this form of advertising creates the urge to try it out once. Of course if the product is satisfactory and the resource centre delivers the goods, then the client will be back for more.

The aspect of the right message that is marketed to the outside world should not be neglected. As for instance resource centres from the north who are mistaken for donors by sector institutes in the south! An insufficiently clear profile (strategic focus

and definition of services and products) and a damaged reputation as a result of lack of quality standards or quality assurance procedures often hamper marketing efforts.

Marketing need not be just the effort undertaken by the management structures of the organisation. It can be also undertaken by each and every staff member of the resource centre, which has the added advantage of creating a sense of belonging among staff members. To this end staffers need to be kept informed and updated of the mission and objectives of the resource centre, its structure and functioning, its plans and policies, code of ethics, etc.. so that there is no risk of misinformation.

Good marketing is a key element in the run for financial survival. New clients whether they are donors or others need to be sold an idea before they will buy it. Many a resource centre has won funding due to the charisma of an individual director who knew how to inspire confidence. The next step is inspiring confidence in the organisation through marketing.

Advocating new ideas is part of the process of marketing. Identifying long term needs and convincing the sector actors to invest in these is also a form of advocacy. To do this a resource centre has to be convinced of the validity and usefulness of its ideas and be convincing when presenting these ideas to the outside.

The better the marketing the higher the chances of getting clients interested – one way of gauging the effectiveness of management structures might be their ability to market the organisation and advocate new ideas.

4. Novel approaches to articulating resource centres

In this section we shall propose some novel approaches for articulating resource centres which incorporate the key concepts and constituents presented in section 2 and the factors of success presented under section 3.

4.1. A new organisational model - the resource centre structured as a brain

Thus far we have discussed various concepts and factors which influence the success of resource centres. Central to the idea of success is that resource centres will need to be structured differently if they are to be geared to respond to change. The brain model for organisational structures[x] might be helpful in understanding this better. It is possible that by using the brain as a metaphor for organisation we may improve our ability to organise in a manner that promotes flexible creative action.

If we use the brain model for structuring a resource centre, two ideas are implied:

- Firstly that a resource centre is an **information processing system** capable of **learning to learn**
- Secondly that a resource centre can be designed to **reflect holographic principles** i.e. a single piece (or part of the organisation) can be used to reconstruct the entire image (or organisation).

Organisation is a reflection of information processing capacities within a system:
Let us investigate the first of these ideas i.e. that "organisation is a reflection of information processing capacities within a system", in terms of its implication for resource centres. Information processing leads to decision making. This may be of two types viz. bureaucratic or mechanistic decision-making through predetermined rules where the organisational forms are mechanistic; or strategic decision making (as with strategic managers) through more ad-hoc or free flowing processes where the organisational form is termed matricial or organic. This latter form of organisation (organic type) is what resource centres should adopt as they are better able to cope with uncertainty or in other words dynamic changing situations. In conditions of increasing uncertainty, these organisations respond by setting goals and targets unlike their mechanistic counterparts, who utilise hierarchical rules and routine procedures and programming. In terms of the rationality of decisions also, because the people making the decisions have only limited information processing abilities, they settle for a "bounded rationality", of "good enough decisions" based on simplified rules of thumb. The way these limits are institutionalised in the structure and modes of functioning of an organisation influence the way in which decisions are eventually made.

Another important implication of this analysis for resource centres is that **new capacities in information processing will lead to new organisational forms**. As for e.g. instant communication through satellite networks, enables professionals to be involved in administrative decisions even if they are physically elsewhere attending to technical functions.

Building in a capacity of learning to learn:
If we explore the notion of a resource centre being capable of **learning to learn** we have to distinguish between the "single loop" and "double loop" learning modes. Most of the resource centres studied have built a **single loop** learning mode into their structure developing an ability to scan the environment, to set objectives, and monitor performance of the system in relation to the objective – keeping the organisation on course.

In **double loop learning**, the system is capable of detecting, comparing, relating and correcting. The additional element here is relating. By relating, the system questions the validity of the norms it has set itself and therefore **the process of correction is enriched** by this exercise.

The following guidelines summarise how learning to learn approach with particular emphasis on double loop learning, can be developed within a resource centre from the point of view of dealing with the human angle.

- Encourage and value openness and reflectivity that accepts error and uncertainty as an inevitable feature of life in complex and changing environments. For e.g. a philosophy within the organisation that legitimate errors are admissible and negative events can serve as a source of knowledge and experience.
- Recognise the importance of exploring different and conflicting viewpoints when analysing and solving problems. In this way issues can be fully explored. It also forces the resource centre to constantly question its role and mission rather than

developing fixed foundations and actions. This is essential to the process of learning to learn (see assumption 2 on resource centre as a human activity system).

- Devise/incorporate mechanisms where intelligence and direction can emerge from ongoing organisational processes. For e.g. more double loop learning can be generated by avoiding predetermined structures of actions (top down planning), and allowing for more participatory approaches to planning, Similarly, norms and standards play a central role within resource centres, but should be viewed as guidelines for action which place an overall acceptable limit on system behaviour rather than as specific targets to be achieved.

Having utilised the above principles to create the software for incorporating a learning to learn mode within a resource centre, how can we create the hardware (making interventions and creating organisational structures and processes) that help implement these principles?

Facilitating self-organisation by incorporating holographic design into resource centres:

The holographic approach to organisation mentioned at the beginning will give us practical insights to this.

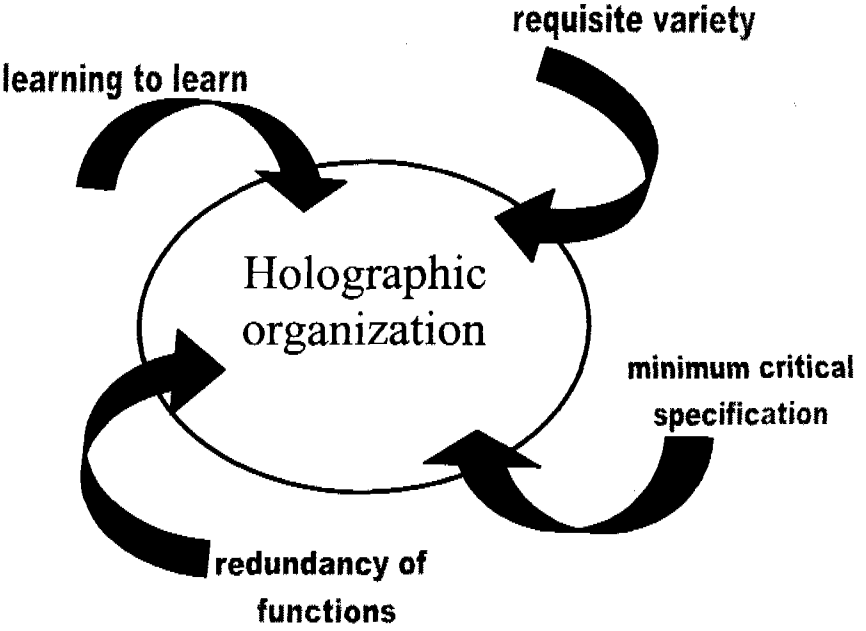
It is the holographic character of the brain that bestows upon it; its amazing capacity to organise and re-organise itself, which allows it to deal with the contingencies it faces. This capacity if built into resource centres will enable them to respond to change.

The potential for developing holographic forms already exists within most resource centres. Brain like capacities are already distributed within even conventional resource centres – all their staff members have brains, and most centres are equipped with computers, which simulate brains. The development of more brainlike forms of organisation thus rests with the realisation of a potential that already exists.
Holographic design is based on the following elements:

- Get the whole into the parts
- Create connectivity and redundancy
- Create simultaneous specialisation and generalisation
- Create a capacity to self-organise

To achieve a holographic organisational design 4 inter-related principles need to be implemented (see Fig 2)

Fig 2: principles of holographic design



The principle of redundant functions shows a means of building wholes into parts by creating redundancy, connectivity and simultaneous specialisation and generalisation. The principle of **requisite variety** helps to provide practical guidelines for the design of part-whole relations by showing exactly how much of the whole needs to be built into a given part. The principles of **learning to learn and minimum critical specification** show how we can enhance capacities for self-organisation.

Any system with the ability to self-organise must have an element of redundancy: a form of excess capacity which, appropriately designed and used, creates room for maneuver. If one analyses the functioning of the brain one realises that in spite of the brain being compartmentalised and having specific functions associated with each compartment; these different portions of the brain are interdependent and capable of acting on behalf of each other. It is this **connectivity,** also expressed by the neurons which are capable of being both communication channels and memory recall units, which accounts for the complexity of functions of the brain. This connectivity is also associated with **redundancy** as at any given time there is a much greater degree of cross connection and exchange than may be actually needed. Redundancy allows the brain to operate in a **probabalistic** rather than **deterministic** manner, which facilitates the process of self-organisation.

Redundancy can be designed into systems in two ways. The first is by incorporating redundancy of parts, which is common to mechanistic or hierarchical systems, which allows for organisation and re-organisation but does not allow for self-organisation. This latter (self-organisation) is what is interesting for resource centres and this is achieved through redundancy **of functions**.

What are its implications for resource centres? An example of the principle of redundancy of functions is providing backup to professionals who are working on various projects simultaneously which normally produces discontinuity in project implementation. Continuity is maintained by having other staff members aware and updated about project activities so they can take action in the absence of the person concerned and thereby sustain the system. Similarly in such a system the absence of the Director of the organisation would not interfere with the process of decision making.

Requisite variety tells one how the redundancy of functions should be applied. An organisation should have all the skills required to face the environment in which it operates, in a holistic integrated manner. In the case of a resource centre all skills required cannot be held by one individual as for instance, the same person cannot be both a sociologist and an economist and a sanitation specialist at the same time. This is where multifunctional teams may be the response. Or for instance the management team or the board of governors of a resource centre should not comprise only senior engineers who think along the same lines. A diverse set of persons is more likely to find responses to changing conditions than people who think similarly. Diversity can also be applied in terms of gender integration. A professionally qualified woman within a male dominated management or research team, brings in different interpersonal skills and perceptions and her presence changes the psychology and dynamics of groups. The converse is true as well ! Another example is utilising "floaters" or part-time professionals (they may even be from other sectors), along with "core" or long term staffers, as an innovation in staffing pattern. Besides the advantage of such a move being cost effective and less of a burden on the budget, such professionals are likely to bring in new perceptions to the resource centre and create new links improving communication within and outside the sector.

A resource centre, which has applied the above two principles, will have a capacity for self-organisation. Applying the principles of **minimum critical specification** and **learning to learn** will enable resource centres to realise this capacity and assume coherent direction. In practice the former suggests that managers in resource centres should primarily adopt a facilitating or orchestrating role, creating enabling conditions that allow an organisation to find its own form. It preserves flexibility by suggesting that one should specify not more than the essentials for a particular activity to occur. An example of flexibility in a resource organisation is the role played by the team leader in project teams. A team leaders role if left deliberately ambiguous to some extent permits different people within the team to take the initiative on different occasions according to the contributions they are able to make. The danger of such flexibility however is that if taken too far it could lead to chaos. This is where the principle of **learning to learn** plays its role. If we take the example of a project team as an autonomous group for example; members must both value the activities they are engaged in and the products they produce, and remain open to the kinds of learning that allow them to question, challenge and change the design of these activities and products. The role of the direction is to create the context that fosters this kind of shared identity and learning orientation. To use textbook terminology, the management models, which evolve, are more behavioural than rational, and one would speak of group productivity instead of individual productivity.

4.2. "Inner circle" networks and partnerships for enhancing the capacity of a resource centre

The following remarks extracted from the literature reviews undertaken by STREAM members describe the conditions under which networks are born and key role they play in enhancing the role of resource centres as knowledge producers and "propounders".

"In the Philippines, where conditions of scarce and limited resources exist, networks are developed primarily to ensure that resources are shared or exchanged by member organisations to partly if not totally solve the problem of limited resources. It also facilitates continuous learning among the members through exchange of ideas and information, minimises the duplication of efforts and achieves economies of scale" [vi]

"For institutions particularly those involved in the generation and adaptation of knowledge; it is fundamental to keep a contact network with other institutions, organisations, and important strategic groups for their work; because this can be of vital importance for information and resource exchange, and can serve as an important validating tool for their developments."[xi]

"One of the principal objectives of networking, is to exchange information and validate (research) experiences, so that partners having the same interests and objectives can improve the effective implementation of projects."[xii]

From these statements it is clear that by being part of a network, resource centres can enhance their capacities. But how should these networks be designed and operated?

Starkey in his book Networking for development explains networks and the process of networking very well, and Maria Lucia Borba in her presentation yesterday made us see the relevance of networking for our purposes.

The diversity in the types of networks existing in the water supply and sanitation sector, their origins and their modes of functioning was brought to our notice through the literature surveys carried out by STREAM partners. They could vary from networks with very specific and limited areas of interest like the Handpump Technology Network, to something more global like the CODE-NGO in the Philippines, the PS-Eau or INTERDEV in France. Between these extremes you find all the others fitting in.

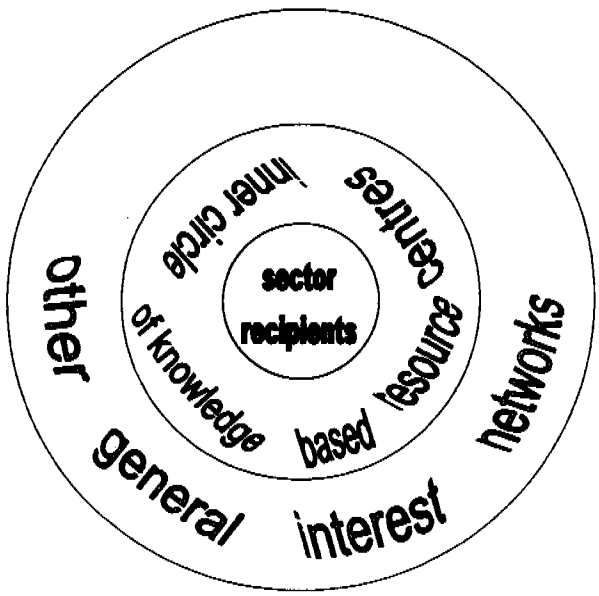
Except for the limited interest networks, what we see is that most others in the W&S sector comprise a wide variety of organisations ranging from potential knowledge base type resource centres to sector service organisations both public and private. There is still another type of network exemplified by the ITN networks in Philippines or in Africa (here again there is a distinction between the two as one covers a country whilst the other covers a continent); and the PS-EAU in France; they can be described

as **network resource centres** where their strength as knowledge based resource centres does not lie in themselves but in the strength of their members or partners.

The variety exhibited in the composition of these networks, whilst having certain advantages, can in itself be a limitation in that with such networks it becomes difficult to focus on the more specific requirements of knowledge based resource centres.

So if I refer back to my question; the argument I would like to put forward (which is open to your criticism of course!) is that **for the purpose of enhancing the capacities of knowledge based resource centres to be more effective in the sector, what we require is a more limited, "inner circle" of resource centres able to interact for mutual benefit and so learn from each other** (see Fig. 3 earth's core model for resource centre networks.) They would maintain the inner circle because they find it mutually beneficial in terms of sharing technical and human resources in a manner suited to enhancing the position of each member centre as a knowledge base. They would in other words share this common vision, have common goals and find complementarity and trust. Working together and sharing positive experiences, meeting basic criteria set up in common regarding timeliness and quality of shared knowledge, transparency in dealings both financial and personal are other ingredients for the success of the recipe.

Fig. 3 Earth's core model for resource centre networks



4.3. Introducing mechanisms for achieving quality assurance : external and internal validation

Quality assurance of products and services is achieved through monitoring processes and products and evaluating these against norms and standards of performance. In a manufacturing organisation, it is relatively simple, as it is the product, which has to be tested and controlled. In a service-oriented organisation assuring quality of services is

a little more complex. Take the example of supplying water. The service would be judged as being of good quality, if the water is of sufficient quantity, potable, is available when required, the price is right, that billing is regular and payment methods convenient, etc. As can be observed ensuring quality in this case requires a number of factors to be monitored and evaluated and renders the process more complex.

Resource centres are in the business of providing knowledge intensive services. In this they are like consultancy firms in that they have to make certain that their client is aware of what he/she is buying, and after delivery that he has received what he set out to buy and is satisfied (otherwise the firm will lose its business). The difference for the resource centre however, lies in the fact that client satisfaction alone is not a sufficient gauge of effectiveness. It is also the quality of the knowledge produced (which of course the client who has bought the service is not fully aware of yet), that the resource centre is concerned with. If the resource centre has even the slightest inkling that this "knowledge" (which may be a new technique) which it has sold to the client, may not be satisfactory in the long run then it has a responsibility not to sell it; irrespective of the fact that the limitations may have been pointed out and technically therefore there is no further responsibility. This creates a fundamental difference in how resource centres operate in the sale of their services or products and gives rise to the notion of quality assurance.

In the case of resource centres as hypothesised earlier, new knowledge is produced through a variety of core functions or businesses which form an integral part of resource centres; and is then offered for use in the form of services and products (advice, published information, training modules etc.). Like with any other product or service the quality of this knowledge has to be of the best. By definition knowledge should not have any degrees of quality, but in reality one finds that all types of information are produced and passed off as knowledge. Producing knowledge is easier than validating it which is the process of making it quality knowledge, judged so by any standards and not just by the standards of the resource centre producing it. It is here that quality control comes in. Resource centres have the responsibility of ensuring the quality of the knowledge produced. So resource centres must put into place mechanisms for ensuring this.

In dealing with knowledge production a second form of validation exists. This is the type of validation related to the usefulness in the context in which it is applied; of the particular piece of knowledge produced. An example is that of a new technique that works which represents knowledge, but if it is unacceptable in a social or cultural sense in the country where it is to be applied then it is not useful knowledge for that situation. So this new technique requires validation through field testing under real life conditions where the social and cultural dimensions of acceptability are incorporated, thus converting the technique into a technology and making it useful and acceptable. This type of validation is more familiar to us.

The first type of validation we find is much less applied in the process of producing knowledge by resource centres. For this type of validation to ensure the quality of any knowledge produced, an **external** validation process is required.

The **external** validation can be equated to peer evaluation. Just as with journals where an article is not published before it is reviewed by a peer group, so it should be with

resource centres where the persons involved in producing the knowledge do not themselves evaluate its worth. Mechanisms should be set up whereby other experts are called upon to review knowledge before it is published. Through **constructive criticism** from peer persons, knowledge is enhanced and value is added to it. In those circumstances it can no longer be refuted. In the scientific world of pure research such mechanisms are common, and it should be possible within the world of resource centres to set up similar processes.

We have seen that constructive criticism is a means of validation, which can be used for ensuring the quality of knowledge. How can one ensure that the organisation is capable in the first instance of producing good quality knowledge?

This is where **internal** validation fits in. The idea of internal validation is associated with the notion of self-criticism as opposed to peer criticism (which of course is assumed to be constructive). It has been suggested that innovative resource centres (which is what the previous paragraphs dealt with) must be designed as learning systems that place primary emphasis on being open to inquiry and self-criticism. Being open is synonymous with the idea of renewing because if a resource centre is open, it can absorb new ideas. These new ideas may reinforce the centres own thinking or it may question the validity of current thinking within the centre. This in turn leads to a process of **internal evaluation or self-criticism.** Such processes when built into the system prevent it from falling into a rut, or becoming complacent. **Complacency** is what has often been behind the loss of dominance of some resource centres in the sector. In the initial phases of establishment these centres often receive preferential treatment. They are given special status within the sector by governments and donors as for instance being designated as a sector-training centre, and they are often perceived as integral parts of the sector rather than as outsiders ("one of us"). This sometimes enables them to have an unfair advantage over other organisations, which may be offering some of the same services. Two negative outcomes of this are complacency and routine. Complacency because they no longer question their reason for existence since they do not feel threatened, and routine because through preferential treatment they get bogged down as a training institute and do not look further to fulfil other roles.

Constantly undergoing a process of self-evaluation and self-criticism keeps a resource centre from becoming complacent or falling into a routine.

4.4. A model for gauging the success potential of resource centres

The potential for success of a resource centre depends on both a group of external factors and a group of internal factors. The external factors like government policies, socio-economic trends etc, influence the way in which resource centres match their services to the perceived need and demands of the sector. But demands do not in themselves provide a guarantee of survival. Internal abilities and qualities built into the organisation, do.

Three principal areas of ability are expected of a resource centre: viz: an ability "to be", an ability "to do" and an ability "to relate". The three areas of ability can be expressed schematically by the cluster model of sustainability [ii] as applied to resource

centres, which may be familiar to you (see Fig 4: Resource centre cluster model of sustainability).

After reviewing the findings of this paper, we develop here the hypothesis/notion that each of the key constituents and factors for success identified and described in the previous sections, may be associated with the respective areas of ability required of a resource centre as follows:

Ability: **to be i.e. maintain an identity, values and purpose reflecting a comparative advantage and the internal organisation to achieve this**

Equivalent key constituents and factors of success:

1. deciding the strategic focus,
2. functioning as a knowledge base
3. perceiving itself as a centre of excellence,
4. the readiness to utilise new organisational models

Ability**: to do i.e. to deliver relevant high quality services and to achieve client satisfaction**

Equivalent key constituents and factors of success:

5. financial and administrative independence
6. critical mass requirement for being effective,
7. enhancing capacity through 'inner-circle' networks and partnerships,
8. validation of outputs/services to ensure quality assurance

Ability**: to relate i.e. to manage external interactions and adapt to changing needs and demands in the sector**

Equivalent key constituents and factors of success:

9. achieving a culture of innovation and flexibility
10. communication within: transparency and motivation
11. communication with the outside: exchange of information, marketing the image, advocating new ideas

On closer analysis it can be seen that the key constituents and factors of success together could form the basis of **guidelines for development of resource centres, because it addresses the survival problem as well as the need to fulfill a mission and be effective and efficient at the same time.** Very aptly here, we can draw an analogy with a bicycle wheel (the symbol of Dutch transport without which the nation will grind to a halt!!); where the guidelines developed are analogous to the spokes supporting the wheel, and the wheel itself is the resource centre (see Fig 5: The spokes of success)

Figures 4 : Resource centre cluster model of sustainability

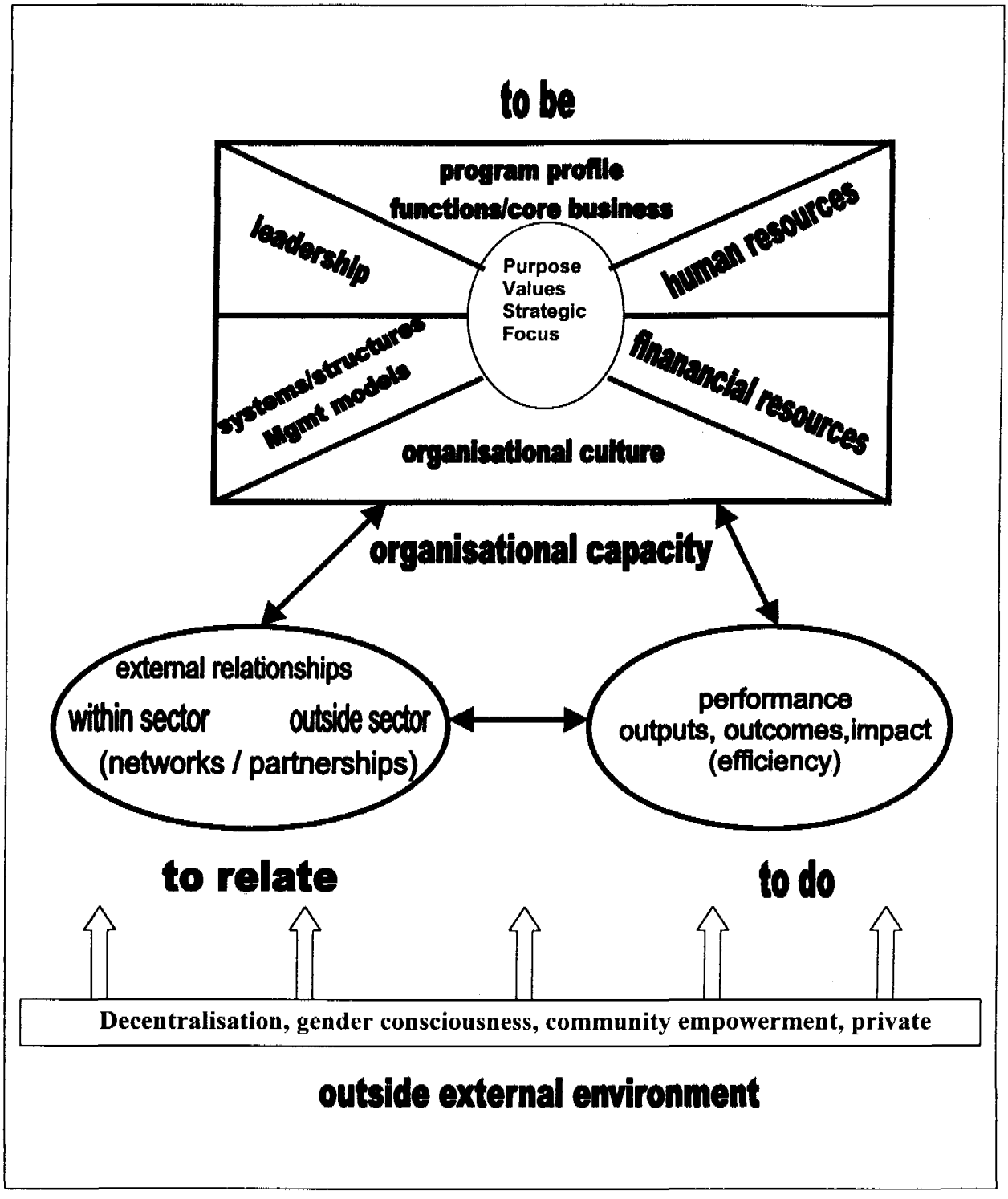
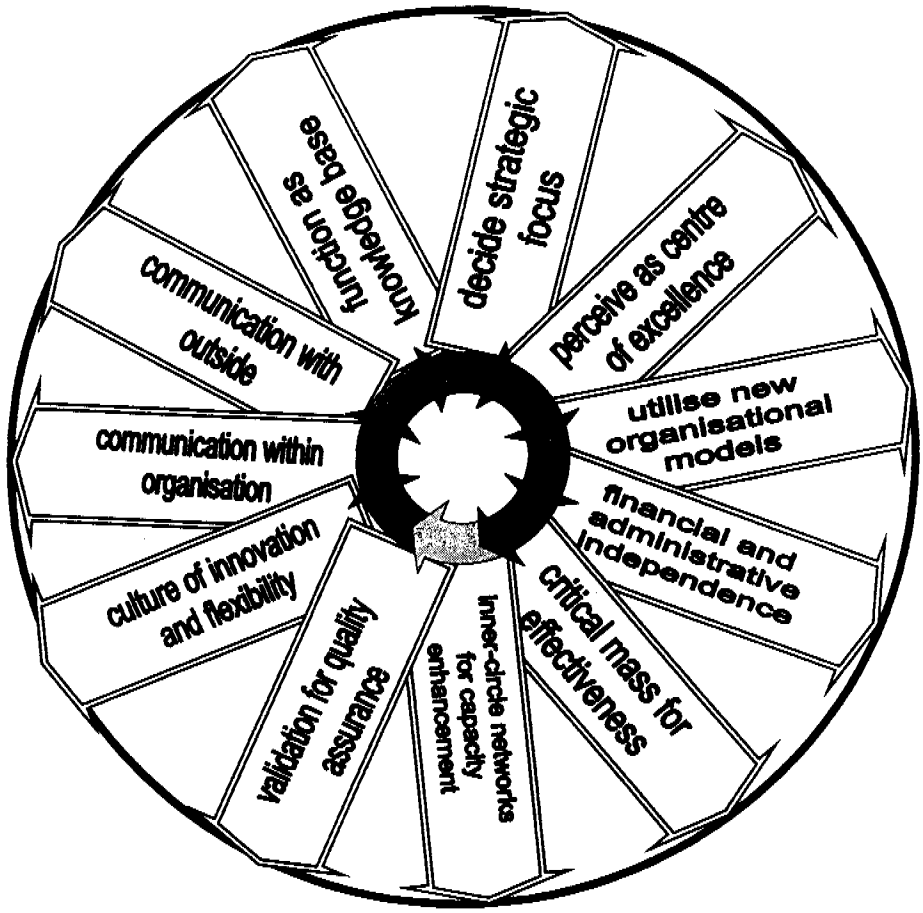


Fig 5 : spokes of success



5. Concluding remarks and ideas for discussion and debate

5.1. Conclusions and statements for reflection emerging from the paper

The key conclusions and statements advanced in this paper have been extracted and are presented below. Some of these may seem self-evident but having reviewed the literature, it is surprising how often resource centres overlook basics, and have been negligent about essentials.

Towards clarifying the concept of a resource centre

1. There is no unified perception as to what constitutes a resource centre. Any definition of a resource centre would meet with criticism. It is therefore important that resource centres co-operating in the STREAM project contribute to clarifying the concept and agree on criteria which need to be met for an organisation to be

recognized as a resource centre in the drinking water and sanitation sector. This same conclusion applies for the water sector in general and probably for other sectors.

2. It is the **dynamic nature of the sector** that influences the manner in which resource centres must respond if they are to be sector capacity builders.

3. A general definition encompassing most if not all different perceptions is that of a dynamic knowledge system whereby different types of services and activities interact internally and with the outside to produce knowledge intended to achieve the desired effects within the sector.

4. To be effective a resource centre should not only react to a market (demand), but address strategic or long term sector needs based on its values, intellectual knowledge, research, international networks and experiences. A balance has to be struck between following the market and following the mission.

5. Guidelines are needed for the development and management of resource centres

The struggle for survival versus a strategic role of resource centres

6. It would seem that organisations which perceive themselves as resource centres have in fact to varying degrees the potential to develop as sector Resource Centres

7. All centre activities are not necessarily financially sustainable, and these should not always be fully-subsidised by the other income generating activities

8. The current tendency for most resource centres appears to be a tendency to combine the role of an effective resource centre addressing long term sector needs, with the role of consultancy firm which pursues market opportunities for short term financial benefits. The dilemma facing resource centres appears to be one of having to reconcile these two roles.

9. Key stakeholders and donors may have to secure or attribute funding for activities and tasks addressing long term sector needs.

10. Smaller institutions can only respond to demand in a few subject areas and provide only limited information and consultancy services.

Conditions for success

11. Successful operation and continued effectiveness of a resource centre is dependent on the availability of a minimum "critical mass", which can be described in terms of human resources, capacities and skills of staff, services/functions, subject areas, facilities, or financial resources. How this critical mass is distributed i.e. what portion of it requires to be in-house and what portion can be obtained from networking under the right conditions needs further investigation.

12. A resource centre will have to be innovative in itself if it wants to play a pro-active role and address sector needs and demands in a flexible way.

13. Flexibility, which in itself implies openness to change, results from a change in organisation pattern and culture. Resource centres will have to overcome their internal resistance to this change.

14. A key condition for success is good communication within a resource centre. This is the cornerstone for participatory approaches to planning and introduces a degree of transparency of action within the organisation, which is particularly important in the motivation of staff especially the younger professionals.

Innovating organisational models and changing management culture

15. Some resource centres apply organisational models that do not encourage a culture of innovation or flexibility, and are reluctant to fully integrate gender into structures and practice. This strongly limits their potential as capacity builders in the sector since human responses are governed by the structures within which they operate.

16. Within resource centres multifunctional teams or diverse sets of persons on projects are more likely to find responses to changing conditions than groups of people who think similarly. Innovation in staffing patterns can be achieved through using "core" staff with "floaters" or by introducing gender complementarity.

17. The capacity to self-organise can be incorporated into a resource centre through introducing redundancy of functions. This provides for continuity of actions thereby sustaining the system.

18. Most of the resource centres studied have built a **single loop** learning mode into their structure developing an ability to scan the environment, to set objectives, and monitor performance of the system in relation to the objective – keeping the organisation on course. This is good but not sufficient for innovation, which requires double loop learning modes that introduce relational links.

19. The role of the direction is to create the context that fosters a shared identity and learning orientation. To use a text book terminology, the resulting management models are more behavioural than rational, emphasizing group productivity over individual productivity.

20. Processes of self-evaluation and self-criticism keep a resource centres from becoming complacent or falling into a routine.

Quality assurance and marketing

21. The importance of marketing is now being realised by resource centres, which even allocate a budget for this purpose. However, an insufficiently clear profile (strategic focus and definition of services and products) and a damaged reputation

as a result of lack of quality standards or quality assurance procedures hamper marketing efforts.

22. Poor marketing and poor quality assurance affect the performance of individual staff in resource centres. A well known organisation with a good reputation is good for the morale of it's staff – there is nothing more disheartening for the young professional than to receive only a blank stare at the mention of his organisation; or worse still to get the blame for the poor quality of services or products in the past.

23. Responsibility to provide quality knowledge creates a fundamental difference in how resource centres operate in the sale of their services or products, and gives rise to the notion of quality assurance.

24. One way therefore of gauging the effectiveness of management structures in resource centres might be to determine their ability to enhance their organisation's profile and market it. Some recognised approaches are advocating innovation and promoting well-defined services and products in areas which match its strategic focus, and improving its reputation by assuring the quality of knowledge and of services and products derived from this knowledge.

Cooperation between resource centres

25. The variety exhibited in the composition of resource centres forming networks, whilst having certain advantages, can in itself be a limitation; since it becomes difficult for such networks to focus on the more specific requirements of knowledge based resource centres such as improving effectiveness in achieving a common goal.

26. For the purpose of enhancing the capacities of knowledge based resource centres to be more effective in the sector, what is required is a more limited, "inner circle" of resource centres able to interact for mutual benefit and so learn from each other.

5.2. Some ideas for discussion and debate

Brains and brawn

Earlier on a question was posed – Is it utopic to imagine that an organisation can be structured to respond like a brain? How can resource centres be articulated to produce knowledge and at the same time offer services? An interesting study would be to develop a suitable methodology and tools to undertake participatory assessments of participating organisations, to identify factors that make them more successful or less successful, and to determine how closely these factors can be linked to our "brain theory for resource centres". The spoke model could be one such starting point in developing such a methodology

Oh what a tangled web we weave
The usefulness of networking and partnerships was underscored in the paper while discussing resource centres as knowledge producers where this capacity can be enhanced by **judiciously** utilising these approaches. A pilot study for operationalising networks to support knowledge producing functions/activities may bring to light the strengths and weaknesses of current practices.

The tools of the trade
Effective and efficient management of operational and administrative information is essential for the smooth running of an organisation and this is equally true for a resource centre. Developing and disseminating effective management tools and guidelines would be useful for the resource centres of the south in particular who often have the best of intentions but lack the skills in this area. However the tools that are applicable in a northern context are not adapted to the social and cultural context of these countries. Serious "innovations" are required before they can be made applicable. Joint learning by doing through twinning between centres from the north and south may be one way of effectively developing and disseminating these tools.

5.3. Acknowledgements

We would like to acknowledge the use of various studies carried out by Stream Research Partners. Specific reference has been made to these documents in the relevant parts of this paper.

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Nigel Browne (IRC) contributed by providing some valuable information about resource centre experiences in other sectors. Marc Lammerink (IRC) contributed ideas about management and organisational strengthening. Others who contributed by providing information and views were Peter Bury and Dick de Jong (IRC).

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IRC International Water and Sanitation Centre

Final draft

Resource Centre Development Processes and Experiences

(STREAM project)

Synthesis of case studies on 11 centres

May 1999

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1. BACKGROUND

1.1 Introduction

The study on Resource Centre Development Processes and Experiences, commonly referred to as the STREAM Project, was originally proposed and approved against the background of changing institutional settings in the water and sanitation sector, and the recognized need to develop sector capacity through the mechanism of resource centres.

The project aims to contribute to capacity development through the strengthening of a selected number of resource centres. A major focus of the project is to gain insight into the process of institutional development of resource centres with a view to documenting and applying the lessons learnt to support capacity building of other resource centres in the future. Through learning from each other's experiences, resource centres can improve their efficiency and effectiveness, and contribute greatly to improving sector performance.

In developing the project, eleven institutions on different continents were identified as research partners: CINARA (Colombia), ITN Philippines, NETWAS (Kenya), IWEE (Tampere University of Technology), SKAT (Switzerland), pS-Eau (France), IPD-AOS (Burkina Faso), SEUF (India), CFPAS (Mozambique), IWSD (Zimbabwe) and IRC (Netherlands). As part of their assignment, these institutions have prepared case studies of their respective organizations on the basis of an agreed format.

An important limitation was identified in the small number of institutions participating in the study. The selection of participating institutions is another limitation. However, these two limitations will not have a significant influence on the results of the study and the conclusions drawn.

The analysis of the eleven case studies, together with the review of selected references, are the basis for the synthesis presented in this report. The methodology of the synthesis is based on the establishment of facts followed by the drawing of major findings. From the preliminary analysis, several conclusions have been drawn, together with the identification of themes for further action.

A brief description of the participating institutions follows:

CINARA

CINARA is an institute of Valle University, in Cali, Colombia, which was established in 1981. It started its activities as a small technical research and development working group within the Engineering Faculty of the Valle University. Its focus is drinking water, basic sanitation and water resources conservation in rural areas, small and medium-sized municipalities and low-income urban areas.

ITN (Philippines)

The Philippine Centre for Water and Sanitation, The ITN Foundation, originated from the establishment of the International Training Network (Philippines) for water and waste management in 1990.
It started its activities as a five-year project of the global ITN program initiated by the UNDP/World Bank Water and Sanitation Programme. From the beginning, the Government of the Netherlands and the government of the Philippines provided funding support to the project.
The work of ITN Foundation is mainly focused on enhancing the capability of the water supply and sanitation, within the overall context of water resources development and management in the Philippines.

NETWAS

The Network for Water and Sanitation International (NETWAS), Kenya, was established in 1986, as part of the ITN program. The Swiss Agency for Development and Cooperation (SDC) supported the establishment of NETWAS through grants. NETWAS was hosted by the African Medical and Research Foundation (AMREF), which provided it with financial and administrative support services. NETWAS transformed itself into an independent NGO in 1995.

IRC

The International Water and Sanitation Centre (IRC), the Netherlands, was established in 1968 on the initiative of the World Health Organization (WHO) and the Dutch Government.

IRC started its activities as a programme within the Dutch Ministry of Housing, Spatial Planning and the Environment. IRC became a foundation in 1981. Its focus is water supply and sanitation, and to some extent also water resources management. In these fields, the work of IRC falls under institutional development and capacity building.

SKAT

The Swiss Centre for Development Cooperation in Technology and Management started its activities in 1978 with a small team as part of the Institute for Latin-American Research and Development Cooperation (ILE) of the University of St. Gallen. SKAT was transformed into a shareholding institution in 1998. The focus of SKAT comprises four areas including water and sanitation (handpumps), Architecture and Building, Transport Infrastructure and Urban Development.

pS-Eau

The Water Solidarity Network (pS-Eau), France, was set up in 1986 on the initiative of the European Ministers of the Environment to increase European cooperation on water-related issues. PS-Eau is financed by the French Ministry of Foreign Affairs, the State Secretariat for Cooperation, the Ministry of Environment, and the Ministry of Employment and Solidarity. It operates as a network and focuses mainly on drinking water and sanitation.

IPD-AOS

IPD-AOS, Burkina Faso, was established in 1977 as a branch of The Panafrican Institute of Development (PAID) International. It started its activities as a training institute for West Africa and the Sahel. IPD-AOS is funded by three major sponsors who are the Netherlands, Switzerland and Canada. Its focus is sustainable rural development. In the field of water and sanitation, its

develops training sessions in partnership with other national and international institutions specialized in this area.

IWEE

The Institute of Water and Environmental Engineering (IWEE), Finland, was established in 1973. It started its activities as an academic institution, focusing on university level education and research. The major part of its activities has been financed until 1990 by the Ministry of Foreign affairs of Finland and the Department for International Development Cooperation (DIDC, formerly Finnida). The focus of IWEE is water supply and sanitation, and to a great extent also environmental Engineering and Technology.

IWSD

The Institute of water and sanitation development (IWSD), Zimbabwe, was established in 1988 as part of the global ITN program. It was developed from the Training Centre for Water and Sanitation, a project hosted by the Department of Civil Engineering, University of Zimbabwe, which provided it with administrative and logistical support services. It became a non-governmental organization in 1993. The focus of IWSD is Water Supply and wastewater disposal, and water resources management in urban and rural areas.

SEU – Foundation

The Socio-Economic Unit Foundation, India, was established in 1987. It started its activities as a project funded by the Government of Netherlands and Denmark. The integrated rural water supply and low cost sanitation project was implemented by SEUF in the State of Kerala. SEUF became an independent organization in 1995. The focus of SEUF is water supply and environmental sanitation.

CFPAS

The Professional Training Centre of Water and Sanitation (CFPAS), Mozambique, was established in 1980. It started its activities as a training centre within the National Directorate of Water, Ministry of Public Construction and Housing. The major part of its activities has been financed by donors (Swiss Cooperation, UNICEF and the Dutch Embassy).
The focus of CFPAS is training in the field of rural and urban water supply.

1.2 Types of Resource Centres

Resource centres can be classified according to their focus and their core business such as research, information dissemination, training and institutional capacity building. The different types of resource centres are discussed in the following.

- ***Technically Oriented Resource Centres***

  Most sector resource centres started off as technically oriented centres, with a focus on technical developments and sustainable technologies. For example, in the initial phase of its development, IRC focused on low cost, sustainable technologies such as the slow sand filtration project, the public standpost water supplies and handpump technology. The initial motivation to create SKAT was the need to provide developing countries with solutions based

on appropriate technologies. Major research activities on low cost technologies have led to the development of technical manuals and technology books.

In the course of the evolution of resource centres, the scope of activities has broadened to include social aspects, community management and gender sensitive approaches. Though there is always a search for alternatives in technology, technically oriented resource centres have almost disappeared

- ***Academic Resource Centres***

Academic resource centres, focusing on higher education and academic research have undoubtedly contributed to sector performance through the delivery of well-qualified engineers. IWEE (Finland) and IHE (Netherlands) are such academic resource centres with a track record in sector capacity building through higher education. Both institutes have an extended network of alumni holding senior management positions in different parts of the world.

Despite the merits of academic resource centres, the relevance of university curricula and academic research is more and more being questioned. The university curricula and academic research tend to focus on theoretical issues and ignore the real needs of the sector. Academic training and research activities are seldom developed on a demand driven basis so as to satisfy the real and anticipated needs of the sector. The results of academic research are often presented in a format which suits academic recognition (journals, books) and as a result the information is not easily accessible to the less academic oriented users. There seems to be a gap between the concerns of academic resource centres and the real needs of the water and sanitation sector.

- ***Problem Solving Resource Centres***

Problem solving resource centres focus on facilitating processes of change and creating an enabling environment for water and sanitation programs. Their strategy is aimed at providing support to communities and sector institutions to better implement their social mission. Research activities are undertaken with a view to better understand sector problems and develop further knowledge. This type of resource centre operates in partnership with communities and sector institutions, with a view to influencing policy changes, implementation strategies and approaches.

IRC and CINARA play a problem solving role and fulfil a function process facilitator, working closely with communities, governmental institutions, the private sector and sector-related support agencies.

There are different types of resource centres that play different and yet complementary roles in the sector.

- ***Multi-sectoral Resource Centres***

  Multi-sectoral resource centre have a cross sectoral focus including for example agriculture, transport and building, in addition to the water and sanitation sector. The added value of multi-sectoral resource centres is the wide range of experiences in different sectors, which enhance learning opportunities on resource centre developments.

  However, the question of the relevance of multi-sectoral resource centres for the water and sanitation sector is posed. In this regard, due attention has to be given to the share of water and sanitation activities in the overall annual budget of the resource centre, and the strategy of the resource centre concerning the water and sanitation sector.

  SKAT (Switzerland) is such a multi-sectoral resource centre, focussing on transport, building, water and sanitation. 30 % of its annual budget is earmarked for activities in the water and sanitation sector.

- ***Network resource centres***

  Network resource centres operate as a network, bringing together a variety of institutions which are directly or indirectly working in the water and sanitation sector. Network partners are government agencies, academic institutions, private companies and NGO's operating in the sector.
  The strength of network resource centres lies in its capacity to draw on a vast multi-disciplinary expertise and achieve a greater impact through its network members.

  ITN (Philippines) and pS-Eau (France) operate as network resource centres, bringing together respectively 18 institutions and more than 2000 public and private partner organizations.

- ***Business advisory resource centres***

  Business advisory resource centres address institutional and management options for water and sanitation in urban and rural areas. They cover issues of private sector participation and commercialization of water supply and sanitation services.
  This type of resource centre is still in its infancy. At present, business advisory services are partially provided by few resources centres.

1.3 Function and role of resource centres

Resource centres are often identified with documentation and reference centres. While acknowledging the key importance of good quality data and information to the successful attainment of sector objectives, it has to be recognized that resource centres engage in more activities than providing exclusively documentation and information services. Commonly, a resource centre may provide various kinds of support services, for example:

- Training programmes
- Research on and collection of local field practices and experiences
- Advisory services
- Documentation and referral services

- Institutional support

More importantly, it is the combination of activities that characterizes resource centres. Research activities are carried out so as to better understand and articulate sector problems. The results of research contribute to the design of training programmes. The data collected from research activities provide the basis for publications and information dissemination.

Through documenting knowledge and sharing knowledge in networks, resource centres constitute a 'sector memory' in the country or region where they operate. Such knowledge is presented in a way which is easily usable by organizations and individuals.

In conformity with their mandate, resource centres are non-profit making organizations. They are committed to helping people in developing countries to improve their living conditions through capacity building in the water and sanitation sector.

Resource centres are further characterized by:

- **A demand responsive approach**
  Resource centres are responsive to localized needs, whether at the community level or the national level. Not only do they respond to defined needs, they also are committed to action and change. They are responsive to new opportunities in the sector.

- **A proactive approach**
  Resource centres are proactive in generating the necessary demand through awareness creation. The results of applied research are used to influence strategies to promote new vision and influence change.

- **Access to information**
  Availability of good quality data and access to information are necessary in planning, in decision making and in formulating strategies. Resource centres collect and store information which is easily retrievable by the users. Resource centres, operating in a network of centres, promote the exchange of information and have access to a broad range of specialized information.

- **Code of conduct**
  What makes a resource centre different from other institutes is its objective, independent and unbiased judgement. Resource centres have a code of conduct which is not geared towards pursuing commercial objectives. Rather, they have demonstrated that, in addition to the respect and acceptance by their peers, they can win the confidence of clients and beneficiaries

1.4 Need for capacity building

The importance of building the capacity of water and sanitation services providers and institutions has, until recently, been seriously neglected both by national governments and donor agencies. Following the experiences gained in the International Decade of Drinking Water Supply and Sanitation, several capacity building initiatives have been developed. One such global initiative was the International Training Network (ITN), launched by the World Bank and UNDP in 1984. The ITN initiative sought to establish, with local and international support, resource centres in a number of regions in the developing countries. Only 15 centres have been established in Africa, Asia and the Pacific.

Recent development in the water and sanitation sector have made explicit the need for capacity building: following the Dublin Principles of 1992 in which water is seen as an economic good, and Agenda 21 which links water and environmental management, the issue of integrated water resource management has been placed at the forefront of water management. In addition to implementing international principles, governments are undertaking internal reforms, including initiatives on community management, demand responsive approaches and gender sensitive approaches. These changes are posing significant challenges for sector resource centres in terms of institutional capacity building.

The global trend towards decentralization and the involvement of the private sector, together with the gradual shift from direct project support to sector programmes, increase the potential role of resource centres in building capacity to assist with managing these processes of change.

The need to develop sector capacity through the mechanism of resource centres has been recognized during the Ministerial Conference on Drinking Water and Environmental Sanitation in 1994. In November 1997, the Water Supply and Sanitation Collaborative Council (WSSCC) met in Manila, and agreed on regionalizing its activities, thereby placing emphasis on information sharing and capacity building. These trends have generated a reorientation in thinking, stimulating the networking among resource centres and the building of partnerships.

1.5 Structure and purpose of this report

The profile of resource centres is given in Chapter 2. Chapter 3 presents the main activities and services provided by resource centres, and how they are linked to the strategy. Some aspects of the management of resource centres and their organizational set-up to implement their role are given in Chapter 4. In Chapter 5, a description is given of the environment of resource centres, their beneficiaries and partners. Chapter 6 sets out the key issues for the future of resource centres and where additional work remains to be done.
Finally, general conclusions are drawn in Chapter 7, together with the identification of areas, where further action is needed.

This synthesis report is intended to be used as background information for the International workshop on resources centre development processes and experiences, to be held in June 1999. The document provides also a framework for reviewing the function and role of resource centres in different countries or regions.

2. PROFILE OF RESOURCE CENTRES

Eleven case studies on resource centre development and experiences were collected.
The information obtained is deemed sufficient to allow an in-depth analysis of issues, constraints and opportunities for the development of resource centres. The wide range of experiences shows that there are different types of resource centres, with different backgrounds and historical development, and that each face their own specific problems in their development.

2.1 Origin of the resource centre and its evolution to date

Most resource centres involved in the STREAM Project started their activities as a project or a research and development team within a university. The focus of these centres was originally on sustainable technologies and technological developments.

IWSD, NETWAS and ITN-Philippines were developed from a project of the UNDP-WorldBank programme, called the ITN-initiative. The aim of the ITN initiative was to strengthen the capacity of sector and educational institutions within the developing countries to carry out training and other human resources development activities on low-cost water and waste management. The primary focus was the promotion of low-cost technologies.
IRC was established in 1968 on the initiative of the World Health Organization (WHO) and the Dutch Government. IRC started its activities as a programme within the Dutch Ministry of Housing, Spatial Planning and the Environment (VROM). The primary focus was on technical aspects of water supply, including slow sand filtration, public standposts and piped water supplies.

SKAT, IWEE and CINARA were developed at the end of the 1970s from small institutes, spearheaded by a small dedicated group of professionals in the respective universities.
The initial motivation was to provide developing countries with solutions based on appropriate technologies.

Most organizations were established during or in the years following the International Decade for Drinking Water Supply and Sanitation. This followed the experiences gained in the Decade.
Experiences with the development of resource centres vary, depending on the environment within which they operate. Most centres had to go through different changes in the process of their institutional development. These changes have affected the kind of services provided by the centres, their focus and identity.

Broadening of the range of support services

From an initial approach concentrating mainly on technical aspects of rural water supply and sanitation, the emphasis of resource centres, as a whole, has broadened to include social aspects, community management, demand-responsive approaches and gender-sensitive approaches. Though changes are taking place at a slow pace, there is a gradual shift towards the issues of urban water supply and wastewater disposal, integrated water resources management and management options for water supply and sanitation.
The range of services has increased from documentation and training, to include consultancy and advisory services, research and advocacy.

Shift in focus

The sectoral focus of most centres is water and sanitation, and in the sector the major focus has been on water supply for rural and small communities, and appropriate sanitary systems. The focus of the centres seems to be shifting within the sector to new areas, including institutional capacity building, policy strategies, urban water supply and water resources management.

Change of identity

From being technically-oriented, centres have changed to become resource centres in the water supply and sanitation sector, offering a wide range of services, focusing on institutional capacity development and assisting in the management of processes of change.

2.2 Aim and objectives

According to their mission statement, most resource centres aim at improving the living conditions of people in developing countries through capacity building in the water and sanitation sector. In particular they address issues hindering access of the poor to services and the sustainability of those services.

The overall goal is to contribute to improving the performance of the sector, through increased substainability of water supply and sanitation projects, and institutional capacity building.

In fulfilling their mission, most centres have included among their (short-term) objectives the following elements:

(i) acting as an information centre
(ii) increasing sector knowledge through focused training and education programmes.
(iii) developing capacity in local communities, governmental and non-governmental agencies
(iv) conducting applied research so as to better articulate sector problems, and influence policy change through advocacy.

A number of resource centres, including IRC, pS-Eau and NETWAS have among their objectives the strengthening of partnerships and the development of effective networks.

2.3 Legal Status

Most resource centres have changed their legal status in the process of their institutional development. The change of status became necessary in order to achieve the independence of the centre and create the conditions for financial and institutional sustainability. Prior to registration, a review of the alternative options was made so as to determine the best way forward: as NGO, non-profit organization (foundation) or a private company.

The legal consequences of each status vary according to the national legislation:
As an NGO, a resource centre has the right to enter into contracts, but doesn't receive government funding. The organization is not taxed.
In some countries, the NGO' status is limited to a certain extent because all the organization's funds need to be secured from donors as grants for specific field projects. A financial statement is required by the Income Tax to show how "donor" funds are utilized.

Cinara and ITN-Philippines have retained a double legal status. As a foundation, CINARA is a non-profit organization, independent from the university. At the same time it is a research and development institute closely linked to the university. *ITN-Philippines is a private organization*, while maintaining the image of a government agency.

Resource centres need to acquire a legal status in order to achieve the independence of the centre and create the conditions for financial and institutional sustainability.

IWEE, CFPAS and pS-Eau still have no legal status. IWEE is an institute of the Technical University of Tampere. CFPAS is dependent upon the National Directorate of Water which falls under the Ministry of Public Construction and Housing. pS-Eau is looking into the possibility of registering as an NGO or GIP (Groupement d'Intérêt Publique).

2.4 Sectoral Focus

The sectoral focus of most resource centres involved in the STREAM Project is water and sanitation. In general, the activities in the sector account for 100% of the budget.
Recently, ITN-Philippines and IWSD have broadened their focus to include elements of integrated water resources management, catchment planning and management, among others. CFPAS, IWSD and NETWAS are focusing more and more on urban and urban fringe water supply and wastewater disposal.

Four centres have a clear multi-sectoral focus. SKAT focuses on transport, building, water and sanitation. The activities in water and sanitation account for 30% of its budget.
The focus of IWEE is environment and institutional development of water and sanitation services. The activities in water and sanitation account for 10% of its budget. The sectoral focus of pS-Eau is agriculture, water and sanitation. The activities in water and sanitation represent 80% of its budget. IPD-AOS focuses on rural development, the main areas of focus being agriculture, environment and health, water and sanitation. Training sessions are developed in partnership with other national and international institutions specialized in the field of water and sanitation.

3. OPERATIONAL STRATEGIES OF RESOURCE CENTRES

In light of the rapid changes taking place in the water and sanitation sector, most resource centres had to readjust their operational strategies so as to respond to localized needs and/or new opportunities in the sector. In adapting their strategies to changing institutional settings, resource centres seek to maximize the impact of their projects and programmes and thus contribute to the improvement of sector performance. This policy is pursued in order for the resource centre to better position itself within its own market, and ensure its financial stability/sustainability.

3.1 Strategy

The broad means by which the mission statement of a resource centre is to be achieved constitute the strategy for its development. There seems to be a lack of harmony between the statement and the strategy being implemented. While the mission statement of IPD-AOS, IWEE, CFPAS aims at improving the living conditions of populations in developing countries, their strategies aim at becoming a "centre of excellence" for training, or education and research in the case of IWEE.

There is a lack of harmony between the mission statement of resources centre and their strategies.

The overall strategy of resources centres aims at maximizing the combined action of training, action-research, advisory services, publications and institutional development in order to increase their impact on the water and sanitation services. The combination of activities and products is aimed at creating the right policy environment for the delivery of services.

The main focus of IWSD is capacity building and to his end, its training, research and information dissemination are aimed at creating the right policy environment for the delivery of water and sanitation services.

IRC focuses on institutional capacity building, and its training, research, advisory services and information services all have a place within a comprehensive institutional capacity building strategy.

Resource centres seek to increase their impact on the water and sanitation sector through generating a synergy among the various activities (training, research, advisory services and information services).

Sustainability is a major issue confronting resource centres. Different strategies have been developed to ensure the institutional sustainability of the centres.

A first group of strategies evolves around the financial stability/sustainability of resource centres. Against the background of dwindling funding sources, most resource centres have to focus on revenue generation and compete for a niche in the marketplace. The strategies developed relate to the full implementation of cost recovery, the diversification of funding sources, the capacity of

attracting long-term project funding of sufficient magnitude, and the need for a minimum core funding to achieve the financial stability/sustainability of the centres.

A second group of strategies focuses on the introduction of quality assurance mechanisms to ensure the provision of high quality services and products. The guiding management philosophy is that the financial/institutional sustainability depends, first and foremost, on the development of efficient and effective organizations. The strength of organizations should be drawn from its resources, including expertise.

Different strategies are developed in order to improve the financial stability/sustainability of resource centres.

The strategy of a few resource centres includes networking and the development of long- term partnerships, as a means of improving the financial sustainability of these centres. In addition to keeping abreast of current developments in the sector through information exchange, effective networking necessarily translates into a wider market for the services and products of resource centres.

Networking and the development of partnerships can help to improve the financial sustainability of resources centres.

As yet, the primary concern of some resource centres is to obtain a legal status and achieve a degree of autonomy and independence. The major drive for these centres is the ability to initiate their own programmes, address relevant issues and maintain an independent judgement.

3.2 Main activities and services

Commonly a resource centre may provide various kinds of support services such as documentation and referral services, training programmes, advice from sector specialists, research on and collection of local field practices and experiences, and institutional support. Each resource centre deals with these areas in its own way. The extent to which various activities are carried out determines the profile of the resource centre. The budget use per type of service/product for 5 resource centres participating in the study, is shown in the table below.

Percentage of budget use per type of service (1997)

Services	IPD-AOS	IWSD	CINARA	IRC	SKAT
Information, documentation			5 %	4 %	5 %
Publications	7 %			10 %	
Research	5 %	27 %	76 %	34 %	
Training	55 %	27 %	15 %	25 %	
Advocacy				2 %	
Consultancy	15 %	46 %	4 %	25 %	35 %
Institutional development	18 %				
Backstopping					60 %

Based on the information provided by the 5 centres, it can be concluded that the priority given to advocacy, publications and institutional development is very low. However, further data collection is needed to draw valid conclusions.

Most resource centres claim that information dissemination and the use of a library are a non-income generating activity. In addition to being providers of services, resource centres tend to be highly responsive to localized needs and pro-active in generating the necessary demand through awareness creation. This results in the development and implementation of a number of key products and services aimed at creating the right policy environment for the delivery of water and sanitation services.

3.3 Development of new products

The development of new products reflects the changes occurring or anticipated in the sector. Particularly in the field of training, the courses being developed address new areas of focus, such as community management, integrated water resources management, water and environmental sanitation in low-income urban areas, and institutional and management options for water and sanitation in urban and rural areas.

Most resource centres are developing new products as a complement to already existing services and products. For example, short courses are developed in addition to existing training courses. New products are not necessarily developed in order to complete the range of services provided by a resource centre, however.

Only two centres, IRC and SKAT, have experience with information sharing and retrieval through the Internet, particularly in the field of information dissemination. This includes newsletters and a few documents, which can be consulted on-line. New forms of database management and document distribution via the Internet are being investigated.

3.4 Analysis of projects under execution

The research partners in the STREAM Project were individually requested to describe in their case study the five most important activities, projects or programmes that have recently been implemented or are currently underway. From the information obtained a number of conclusions can be made:

- Among the projects under execution there are no sanitation projects in rural or urban areas. PS-Eau has launched a programme on 'sanitation and rainwater management'.
- The emphasis of projects is on water supplies for rural and low-income urban areas.
- There are almost no projects being carried out in the field of water resources management. IWSD organizes short courses in the field of integrated water resources management in collaboration with IHE-Delft.
- Most resource centres are involved in capacity building through training, higher education and short courses.

4. MANAGEMENT OF RESOURCE CENTRES

Following on from the preceding discussion of operational strategies and their implications for the delivery of services, this Chapter focuses on some aspects of the management of resource centres. The prevailing uncertainty among resource centres regarding funding sources and the anticipated decrease of subsidy both have consequences for the organizational set-up and staffing of resource centres. As shown by evaluations of individual resource centres, there is an urgent need to improve their efficiency and effectiveness in order to ensure their financial sustainability

4.1 Annual budget and resources of funds

The resource centres participating in the STREAM project are relatively small organizations with an annual budget ranging between US$ 100,000 and US$ 2,500,000.
From 1996 to 1998 the annual budget of each centre registered an increase varying between 10% and 50%. For IWSD, the increase has been four times the annual budget of 1996 due to a sharp rise in income from research activities. Only CINARA has experienced a fall in income, representing as much as 20% of the 1996 annual budget. Most centres receive core funding or subsidies in addition to income for services rendered.

ITN (Philippines), SEUF and CFPAS receive core finances representing between 70% and 90% of the total budget for each year. For IRC, IWEE and IPD-AOS, the percentage of core funding varies between 40% and 60% of the annual budget. For NETWAS and CINARA, core funding is as low as 5 to 10% of the annual budget.
IWSD and SKAT do not receive core finances or subsidies, but are paid for services rendered.

On the basis of the financial information provided by NETWAS, IRC, PS-EAU, IWSD and CINARA the revenues from medium-term projects with a life-span of more than a year account for 10 - 35% of the total annual income. In general, medium-term projects have been in the area of research, whereas the training, advisory and consultancy services are for short duration.

Apart from core funding and revenue from income-generating activities, resource centres do not receive membership fees, direct sponsorship or other financial support.

The funding of resource centres over the period 1996-1998 shows a trend of decreasing dependence on core funding, while at the same time, resource centres are generating their own funds from various projects from government and ESAs.
IRC, IPD-AOS, SEUF and CFPAS are anticipating a reduction in core funding which can vary for each centre between 10% and 40% of their annual budget. On the other hand, IWSD, SKAT, NETWAS and CINARA have to rely almost exclusively on revenues from services offered.

From this situation, a new strategy for resource centres emerges based on the right mix of medium to long-term projects, together with short-term projects, and the diversification of funding from ESAs, NGOs, private sector and government.

4.2 Organizational set-up

The organizational structure of most resource centres consists of three levels.
At the higher level, the Governing Board or steering committee provides policy guidelines for the organization. Within NETWAS, IWSD and pS-Eau, an additional function of the Board is to monitor the activities of each centre. Within NETWAS, the Governing Board is assisted by an Advisory Board, which makes recommendations on strategic issues to keep track of sector trends.

At the next level, the Executive Director is in charge of the management of the organization. The executive director reports to the Governing Board.

At the lower level, the heads of the different sections are responsible for running their sections. Within IRC, the Director chairs the Management Team, which comprises of the heads of the sections.

The following is a summary of the monitoring/evaluation mechanisms currently in place with NETWAS and the role of the different organization units.

- **Bi-annual monitoring** of NETWAS activities;
  Quarterly progress report
- **Annual business plan**
  External moderator assists to review performance
- **NETWAS Council**
  This is the governing body of NETWAS, comprised of 10 members, 8 of whom are external to NETWAS. The Council meets quarterly to review programme and financial performance. It makes recommendations on various strategic issues.
- **NETWAS Advisory Board**
  The Board is comprised of 25 members, mainly from NETWAS partners or associate institutions. This body meets annually to keep track with sector trends. Recommendations are incorporated in the Annual Business Plan.
- **NETWAS Annual General Meeting**
  This is the statutory body and comprises of members of NETWAS who meet annually. It reviews the annual performance of NETWAS both in terms of programme and financial performance. Recommendations are reviewed at the Annual Planning Workshop.

All projects are implemented by teams, which are headed by a project manager who has a considerable degree of autonomy in the management of the project.
Within NETWAS and IWSD, project managers have to report to the section head under which the project is carried out.
Within IRC and SKAT, project managers are directly responsible, and enjoy a high degree of autonomy.
Within CINARA and SEUF, the autonomy of project managers is based on previously agreed procedures, which ensure a self-imposed discipline.

4.3 Staffing

The resource centres participating in the STREAM Project are small organizations with a staff capacity varying between 5 and 49, while the number of support staff vary between 1 and 30 staff members. Eight out of 11 resource centres have a professional staff capacity varying between 5 and 11 staff members.

The qualifications of professional staff indicate that most resource centres are multidisciplinary organizations, covering technology, social sciences, economics and management. However, the composition of professional staff is rather imbalanced.
IRC has 7 social scientists for 5 engineers, CINARA 5 social scientists for 16 engineers, NETWAS 2 social scientists for 5 engineers and IWSD 1 social scientist for 4 engineers. Among the professional staff of most resource centres there is an imbalance between male and female staff members. the professional staff composition of IRC and CINARA shows a male/female ratio of respectively 11/9 and 11/12. pS-Eau, IWEE, CFPAS have no female staff members among their professional staff.

There is a growing trend among resource centres to maintain a small core staff with a backup of consultants. ITN-Philippines has a core staff of 4 members, supported by 12 project-based Task Managers and staff who come in as the need arises.

Compared to the needs for capacity building in the sector, the staff capacity of resource centres seems to be inadequate. There is a critical mass needed to generate the synergy among the various activities.

4.4 Evaluation of the performance of resource centres

Six out of eleven resource centres involved in the STREAM Project have been partially evaluated recently: NETWAS (1994), IRC (1995), IWSD (1996), pS-Eau (1997), ITN (Philippines) (1997), IPD-AOS (1998).
While these evaluations were not exhaustive, they resulted in a global assessment of successes and risks, strengths and weaknesses of the centres.

Major findings of the evaluations, common to all the resource centres, are summarized as:
- Resource centres respond to national and sector needs
- Resource centres influence policies through carrying out applied research and disseminating information for advocacy purposes
- Resource centres have an effective impact on the sector through the provision of capacity building support
- Resource centres need to maintain an independent judgement
- There is a risk in serving as a resource centre while competing for a niche in the market place as a consultant

As a result of these evaluations, recommendations were made concerning the modification of the organizational structure of the centres and the development of policy documents and planning documents, taking into account the revenues generated.

Following up the recommendations of the external evaluation of 1995, IRC has transformed its organizational structure, and has adopted a new policy document and a business plan. Subsequent to the evaluation of 1994, NETWAS acquired an autonomous legal status in 1995, has transformed its organizational structure and has adopted a five-year strategic plan.

Following up the evaluation of 1998, IPD-AOS has adopted a strategy plan for the period 1998-2003.

Despite these changes, policy documents and planning documents are not commonly used by most resource centres. As a result, the performance of the centres has not been clearly defined in terms of outputs and objectives to be attained. The lack of performance criteria is a major shortcoming for the evaluation of resource centres.

5 RESOURCE CENTRES AND THEIR ENVIRONMENT

The institutional development process of a resource centre is largely dependent upon its environment, which consists of stakeholder groups, clients and beneficiaries. Though these are very distinct groups, their functions tend to overlap. Not only do stakeholders provide funds for resource centres; they are sometimes clients of services provided by resource centres. Beneficiaries become clients by using their own resources to pay for the services rendered by resource centres.

Through operating in a network of centres and building mutually beneficial partnerships, resource centres can benefit from broadening their impact and increasing their financial sustainability. This chapter focuses on a better understanding of the environment of resource centres, and how networking and building partnerships contribute to the effectiveness and sustainability or resource centres.

5.1 Clients of services

Although the client groups of each resource centre vary in different countries or situations, some generalizations can be made:

The main client group for a resource centre includes government agencies and non-governmental organizations active in the sector in the country where the resource centre is located. For resource centres located in the North, government ministries/agencies are both clients of services, and stakeholders through the provision of core funding.

External support agencies (ESAs) and technical support organizations are major resource centres clients, though only 5 out of 11 resource centres participating in the STREAM Project have provided services to these international funding organizations. The 5 centres (IRC, IWSD, CINARA, NETWAS, and SKAT) are established institutions, which have a long-standing experience in the sector.

Three resource centres located in developing countries operate on a regional basis: NETWAS for the East African region, IWSD for the southern African region and CINARA for Latin America. In this case, the clients of the centres are the regional offices of international funding organizations and local government departments in each country. It has proved difficult to group clients according to the type of services requested, primarily because most of the clients request a combination of different types of services. In general, the services offered to government departments and NGOs include training, advisory services, documentation and information. Applied research and consultancy services are mostly offered to ESAs, and to a lesser extent training programmes.

Almost all resource centres have undertaken a diversification of client groups in their strategies to achieve financial autonomy. Only CFPAS and SEUF depend almost exclusively on donor funding for their operations.

5.2 Beneficiaries

The beneficiaries of resource centres are government organizations, sector institutions and NGOs, and ultimately the low-income urban and poor rural communities.

In addition to benefiting from projects carried out by resource centres, these groups have access to sector information and data free of charge. Information dissemination, including the production and distribution of newsletters, is offered free of charge. Sector professionals, academics and students have free access to library facilities. These groups of "non-paying" clients are important because they facilitate the generation of knowledge and the development of the sector. The costs for these services are covered through grants or are subsidized as part of the general overheads of resource centres.

Though there is no indication of the magnitude of costs involved, this situation brings to light that full cost recovery within resource centres is not feasible. In relation to financial sustainability, a balance needs to be struck between non-profit making activities and income-generating activities.

5.3 Networking

Networking is perceived by most resource centres as a major opportunity to exchange information and learn from each other, to achieve a better positioning of resource centres and improve their sustainability, and finally to contribute to a better sector performance.

Resource centres participating in the STREAM Project already operate as a network.
ITN (Philippines) is a network of resource centres, bringing together 18 institutions involved in the water sector including government agencies, academic institutions and non-governmental organizations.
The Water Solidarity Network pS-Eau (France) is a network resource centre, focusing on drinking water and sanitation, and bringing together local elected bodies, water organizations, solidarity associations, immigrant groups, research institutions and public authorities.

Resource centres participate in different types of networks.

Local / National networks:

NETWAS has collaboration linkages with the Participatory Learning Network (PALNET), a Kenyan association of sector organizations aiming at the promotion and advancement of participatory methodologies in the sector. Its members are drawn from ministries of Water and Health, sector NGOs, training institutions and sector ESAs. The secretariat of PALNET is provided by NETWAS.
ITN (Philippines) participates in the Water Information Network (WIN), an association of public offices of the water sector agencies, which enables access to important data and information relevant to ITN's work.

Regional networks:

The ITN Africa network is a regional network in the water and sanitation sector. Its members are NETWAS (Kenya), IWSD (Zimbabwe), NCWSTI (South Africa), TREND (Ghana), and CREPA (

Burkina Faso). In 1996 ITN Africa adopted operating guidelines including its objectives, its services and commitment to working together. (See box).

A collaborative program has been formulated in which the centres meet on a rotational basis every year. The major objective of the collaborative arrangements are:

- To promote the free flow of water and sanitation sector information between individuals and organizations in Africa in order to help to solve problems by using local resources and taking into consideration the local conditions, cultural traditions and socio-economic requirements
- To provide practical information and qualified technical advice and assistance to individuals and organizations involved in WSS sector, especially to those who lack the means to obtain such services otherwise
- To maintain contacts with experts, resource centres and specialized organizations outside the ITN Africa in order to exchange information , avail of their services in special cases, and cooperate on projects of mutual interest, thereby avoiding an unnecessary expensive and wasteful duplication of work
- To maintain a regularly updated documentation and computerized database on relevant documents, projects, technologies, institutions consultants and all issues dealing with water and sanitation sector, together with statistics of enquiries, in order to evaluate the effectiveness of ITN Africa and respond to changing needs
- To promote efficient and effective means of communication in order to enhance the exchange of information in Africa
- To act as a resource base for the water and sanitation sector.

pS-Eau (France) participates in various regional networks in West-Africa: an exchange network focusing on water and sanitation in peri-urban areas and small centres. Its members are researchers, practitioners and institutions active in this field. Another network brings together various actors in the Senegal River basin, including organizations in Mali, Mauritania and Senegal.

International networks:

Various networks operate at the international level in the water supply's sanitation sector: Water supply and Sanitation Collaborative Council (WSSCC) is an important platform, bringing together NGOs, donor agencies and professional institutes worldwide.

- AGUASAN is an international water and sanitation network
- GARNET is the Global Applied Research Network
- GWP, the global Water Partnership, is an international network open to all involved in water resources management
- GESI, the Global Environmental Sanitation Initiative, is a network of among sector professionals
- GENNET is the Gender in Water and Sanitation Network.

Most of the resource centres participating in the STREAM Project, except IRC and CINARA, seems not to have collaborative linkages with international networks, as shown in the box below.

Resource centre	International network
IRC	Aguasan, Gen Net , Interwater, WSSCC, Garnet, GWP, GESI
pS-Eau	Aguasan
IPD-AOS	
IWEE	WSSCC, Garnet, IMO
IWSD	
SEUF	
CFPAS	
CINARA	WSSCC, Garnet, GESI, GWP, PAHO/WHO
ITN(Philippines)	
NETWAS	HTN (Hand Pump Technology Network)
SKAT	Aguasan, HTN, Waste

An effort to further promote and develop networking is facilitated through the use of electronic media (E- mail, fax, websites, and databases), the publication of newsletters and the organization of workshops. However, the different tools for networking should not be seen as substitutes for effective networking, which involves network partners recognizing the value of the services that the others provide and initiating collaborative arrangements. Strengthening of networking comes as a result of undertaking joint projects and effectively providing services.

5.4 Partner organizations

Building partnerships with other organizations is perceived as an opportunity to enhance a centre's capacity, to learn from other experiences and contributes to development.
Resource centres engage in different forms of partnerships with different types of collaborative arrangements. The main partnership arrangements are described below.

South- South partnerships:

The ITN Africa Network is a South- South partnership involving five resource centres located in Africa. NETWAS and IWSD are among the five founders of the Network.
ITN Africa is bound by an agreement signed by the directors of the five centres, which defines its objectives, its services and commitment to work together. The mutual benefits derived from this partnership are the exchange of information and collaborative arrangements for undertaking joint programmes and consultancies in Africa.
CINARA, ITN (Philippines) and SEUF have developed partnerships with national government departments and agencies, allowing the undertaking of joint advisory services, joint projects and programmes. There is no standing agreement for this form of partnership. Mutual benefits are derived from an increased knowledge of sector problems in the country where the resource centre is located and the strengthening of capacities within government departments.

South-North partnerships

CINARA, NETWAS and IPD-AOS each have signed a partnership agreement with IRC. The agreement enables IRC to organize joint research projects, training, innovative short courses and advisory activities.
IRC regularly organizes joint research, training and advisory activities with numerous centres with which there is no standing agreement. Mutual benefits are derived from the information exchange and the capacity building of local resource centres.
NETWAS and CREPA have become partners with SKAT without an official agreement. The objective of the partnership is to share information in the field of water supply and sanitation, and municipal solid waste management. Mutual benefits are the creation of a learning environment and the capitalisation of experiences and best practices.

Partnerships in the North

This form of partnership is generally developed without an umbrella agreement. Individual contracts are used for each specific assignment. There is a growing need to establish agreements for collaboration among organizations in the north.
IRC has signed a first agreement for collaboration with IHE (Netherlands) covering training activities, collaboration in resource centre development, joint development of new projects and providing guidance for MSc students.
IWEE has collaboration arrangements with many universities in the North and the East without a formal standing agreement.
Partnerships with international organizations including UN agencies are restricted to collaboration in a project or a programme.
The main problems encountered in the development of partnerships are related to conflicts of interests, or poor communication and coordination of the activities carried out by the respective partners.

6. KEY ISSUES FOR THE FUTURE OF RESOURCE CENTRES

Many lessons have been learnt from the institutional development of resource centres. Drawing on the experience of eleven centres, this Chapter focuses on key issues and constraints for the development of resource centres. The rapid changes taking place in the sector pose significant challenges for resource centres in terms of awareness creation, assistance in managing processes of change and capacity development for the water supply and sanitation sector. Attention will be given to new opportunities that are arising for resource centres and how the STREAM Project can contribute to the strengthening of these resource centres.

6.1 Issues, constraints and opportunities

Developments in the water and sanitation sector are characterized by rapid changes. The main issues emerging in the sector are summarized as follows:

- The development of the sector has changed from an engineering-centered approach to a holistic approach integrating social approaches, management systems and institutional issues. In ensuring the sustainability of water and sanitation projects, the issues of management, institutions, policies, behavioral change and empowerment of beneficiaries or users, have become as important as technological issues if not more important
- Following on from the Dublin Principles of 1992 in which water is seen as a social and economic good and Agenda 21 which links water and environmental management, the issue integrated water resource management has been placed at the forefront of water management. Environment aspects are recognized as fundamental to sustainability
- The global trend towards decentralization and the accompanying strategies of implementing projects in a decentralized manner are posing significant challenges to sector institutions. In addition to the policy of decentralization to local authorities, governments are undertaking internal reforms, including initiatives on community management, demand-responsive approaches and gender sensitive approaches
- There is a growing demand for information from the sector at all levels, and a greater emphasis on information sharing and capacity building. An important issue for information sharing and retrieval is the rapidly increasing use of the Internet and various options for communication, and their applicability for capacity building
- Finally, there has been a gradual shift from direct project support to sector programmes, with direct control of funds exerted by national government and sector institutions.

Most resource centres involved in the STREAM Project have evolved in response to the developments taking place in the sector. Important changes in the organizations are:

- Change from engineering-centered organizations focusing mainly on technical aspects of water supply and sanitation, to multidisciplinary centres focusing on technical, social, management and institutional aspects of water and sanitation. There is a growing awareness among resource centres concerning the need for multi- and interdisciplinary to tackle the complex issues of the sector
- Change from a supply-driven to a demand-driven organization. As the financial dependence on core funding is gradually tapering off, resource centres have to develop strategies for self-

financing. The products and services that are developed have to respond to local needs or new opportunities in the sector
- Change in focus to reflect the needs in the sector and ensure the financial sustainability of the organization.

The lessons learnt from the institutional development of resource centres are related to the implementation of a management strategy and the creation of favorable conditions for the delivery of services. Major lessons learnt are:

Management strategy.

- The strength of a resource centre is dependent upon its own resources, including expertise. The qualification of human resources shall contribute to improve the quality of products and services, the competitiveness and the opportunities for the resource centre. There is a need for a balanced staff composition to allow multi-and interdisciplinary.
- Operational strategies and quality assurance mechanisms are needed in each field of activity to ensure the provision of high quality services/ products.
- The management of the resource centre needs to be supported by the development of a policy document, a business plan and a strategic marketing plan.
- The management systems created by the resource centre, in particular financial management, have to be very transparent, and in conformity with professional management and control procedures.

Favorable conditions

- Networking and building partnerships create the framework for cooperation in projects
- Long-term project funding of sufficient magnitude is required for financial stability.
- There has to be a felt need that creates the necessary demand
- There has to be an appreciation in the country or region of the value of services provided by the resource centre and its contribution to the development of the sector
- There has to be an appreciation of the sector agencies, especially ESAs, of the value of services provided.

In addition to the lessons learnt, some constraints for the development of resource centres are identified:

- Without a minimum core funding, most resource centres find it difficult to sustain their activities. The funding limitations have resulted in a large number of small projects, which are not efficient and viable.
- There is a dilemma of serving as a resource centre while competing for a niche in the marketplace as a consulting firm There is a risk in focusing on income-generating activities to the detriment of non-profit making activities such as information dissemination and the use of library services
- There is a risk in relying on one major donor.

Resource centres play a vital role in the development of the water and sanitation sector. Commonly, a resource centre may provide various kinds of support services, e.g. documentation and referral services, training programmes, advice from sector specialists, research and collection of local field practices and experiences, and institutional support.
Resource centres are characterized not only by the type of services they provide, but also their strategic approach.

The organizations participating in the STREAM Project, view the development of resource centres and networking as follows:

- They provide information and documentation centre services
- They carry out applied research into emerging issues
- They are demand responsive to localized needs and proactive in generating the necessary demand
- They support networking with sector institutions
- They work in partnership with local and international organizations in order to build capacity
- They are objective, independent and unbiased judgement.

6.2 Focus of the Stream Project

The centers participating in the Stream project have concluded that the following issues should be addressed by the project.

Clarification of the resource centre concept

The function and the role of a resource centre need to be clearly defined. A "development model" for a resource centre needs to take into account the analysis of the institutional context of the resource centres located in developing countries.
It has been proposed to develop a policy document on the role, relevance, importance and effectiveness of resource centres.

Development of human resources

The limited skills and expertise of resource centres are expected to be enhanced. The development of information and documentation services within resource centres can contribute greatly to the upgrading of capabilities.

Networking

Networking through the electronic media is an area where capacity building is needed Information dissemination and internal data base management also need to be developed within resource centres.

Partnerships

The project can contribute to the development of partnerships among resource centres.
A first step should be to identify opportunities for joint collaboration in training, research, information and documentation, and consultancies.

7. GENERAL CONCLUSIONS

Human resources development and institutional capacity building are acknowledged as being essential for improving the performance of the water supply and sanitation sector. Their role has become even more apparent, given the global trend towards decentralization and the involvement of the private sector.

Resource centres are recognized for their support in managing processes of change and their contribution to capacity building in the sector. New strategies are required to meet the needs for capacity building.

The rapid changes taking place in the water and sanitation sector are placing new challenges on sector resource centres in terms of awareness creation, assistance in the implementation of new policies and institutional capacity building.

Potential stakeholders and clients need to be aware of the value of services provided by resource centres and their contribution to the development of the sector.

The uncertainty regarding funding sources is often perceived as a major constraint for the financial stability of resource centres. However, other factors like the provision of high quality services/products and the ability to generate long-term funding of sufficient magnitude are found to contribute positively to the financial stability of resource centres.

Resource centres need to develop a policy document, a business plan and a strategic marketing plan in support of their management strategy. The implementation of such a strategy will improve their efficiency and effectiveness, and ensure a favourable positioning within their own marketplace.

The sustainability of resource centres is enhanced through the implementation of quality mechanisms in each field of activity to ensure the provision of high quality services/products.

The performance of resource centres has to be defined clearly in terms of quantitative outputs and objectives, and resource centres need to plan regular monitoring and evaluation of their operations.

Operating in a network of resource centres serves the development needs of each individual resource centre and the development of the sector as a whole.
Effective networking requires the definition of clear objectives and the establishment of collaborative arrangements among network members.

The development of partnerships is enhanced by a signed agreement between partners, defining the type of collaboration and committing each other to work together.

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ANNEXES

Framework for the analysis
Profile of Resource Centres

	CINARA	ITN (Philippines)	NETWAS	IRC	SKAT
Origin of the resource centre	• Started in 1981 as a small technical research and development working group within the Universidad del Valle	• Started in 1990 as a project within the UNDP-World Bank ITN programme.	• Was established in 1986 as a project within the UNDP-World Bank ITN programme	• Started in 1968 as a programme within the Dutch Ministry of Housing, Spatial Planning and the Environment	• Started in 1978 as a small technical research and development team within the university of St Gallen
Aim and objectives	• Improve quality of life and establish a sustainable human development model.	• Promotion of progressive and healthy communities through equitable and sustainable water supply and sanitation services	• Improve the living conditions of the people in Eastern Africa, through capacity building in the water and sanitation sector	• Help people in developing countries to get and use the best water and sanitation services they can afford	• Devise sustainable solutions which empower target groups to achieve self-reliance
Legal Status	• Research and Development Institute of the Universidad del Valle • Foundation, non-profit organization	• Quasi-government agency • Foundation, non-stock private organization	• Non-Governmental Organization • Intends to register as a " Company limited by guarantee"	• Foundation, independent non-profit organization	• Shareholding company
Sectoral Focus	• Drinking water, basic sanitation and water resources conservation	• Water and Sanitation, Integrated water resources development and management	• Water and Environmental sanitation	• Water supply and sanitation, and to some extent water resources management	• Multi-sectoral, Rural and Urban Infrastructure • 30% of budget in water and sanitation sector

Framework for the analysis
Profile of Resource Centres

	PSEAU	IPD-AOS	IWEE	IWSD	SEUF	CFPAS
Origin of the reource centre	• Started in 1984 as a network information centre for French partner organizations	• Started in 1977 as a training institute for West Africa and the Sahel	• Started in 1973 as a university institute	• Started in 1988 as a project within the UNDP-World Bank ITN programme	• Started in 1987 as a project funded by donors	• Started in 1980 as a training institute
Aim and objectives	• Facilitate international cooperation at local level	• Improving the living conditions of populations in West African countries	• Enhance the improvement of water and environmental services	• Assist in the achievement of sustainable development of water resources and waste management	• Support and promote sustainable socio-economic development with focus on empowerment of deprived groups	• Become a specialized training centre for the water and sanitation sector
Legal Status	• Non-profit and independent organization • Intends to acquire a legal independent status	• Regional office of PAID which is an international NGO	• Institute of the technical University of Tampere	• Non-governmental organization Non-profit making organization	• Foundation Non-profit making organization	• No legal independent status • Training centre linked to the National Directorate of Water
Networking	• Multi-sectoral • 80% of budget in water and sanitation sector • 20% of budget in agricultural projects and migrants	• Multi-sectoral in the area of sustainable rural development • Training sessions in the area of water and sanitation	• Water, Environmental Management and water resources	• Water supply, sanitation and water resources management	• Water Supply and Environmental Sanitation	• Water and Sanitation

Framework for the Analysis
Operational Strategies for Resource centres

	CINARA	ITN(Philippines)	NETWAS	IRC	SKAT
Strategy	• Problem solving, supporting and enabling role in the water and sanitation sector	• Aims at capacity building, advocacy and networking	• Focus on capacity building issues in the water and environmental sanitation sector	• Enable institutional and human resources development	• Focus on performance of the water and sanitation sector
Main activities and services	• Training • Publication • Research • Information and documentation	• Training • Research • Information, documentation and dissemination • Advocacy	• Training • Research • Information and documentation • Networking	• Training • Publications • Research • Advisory and innovation services • Information and education • Advocacy	• Consultancy • Project execution • Networking • Information management and dissemination
Development of new products	• Short courses • Technology development	• Training courses	• Training courses • Directory of water and sanitation information	• Database • Learning tools for community • Publications	• Information dissemination
Analysis of projects under execution	• Water and sanitation systems sustainability • Water treatment technology • Capacity building	• Newsletter • Institutional building • Community management	• Rural water supply • Rural sanitation • Community participation • Human resource development	• Rural water supply and sanitation • Human resource development • Institutional development	• Rural water supply and sanitation • Urban water supply and sanitation

Framework for the Analysis
Operational Strategies for Resource centres

	pS-Eau	IPD-AOS	IWEE	IWSD	SEUF	CFPAS
Strategy	• focus on sector development through resource centres	• Aims at becoming a centre of excellence for training, support-consultancy, action-research and publications	• Aims at meeting the teaching standards set for the centres of excellence in education and research for water and environmental engineering	• Aims at positioning the Institute in such a way that it plays a key catalytic and bonding role in the water and sanitation sector	• Focus on health, hygiene promotion, water and environmental sanitation	• Aims at becoming a centre of excellence in training for the water and sanitation sector
Main activities and services	• setting-up working groups • setting up national or regional networks • setting-up joint programmes	• Training • Support/consultancy • Action-research	• Education • Applied research • Short term consultancy	• Training • Consultancy • Information	• Training • Capacity building • Information	• Training
Development of new products	• information dissemination	• Training courses	• Education • Publication	• Research • Publication	• Newsletter in local training	• Short courses • training
Analysis of projects under execution	• rural and urban fringe WSS • gender issues • advocacy	• Management and marketing information system • Training rural development • Training regional planning	• water and environmental management course • water and sanitation programmes	• water and wastewater operator's course • integrated water resources management • capacity building	• low-cost water and sanitation technologies • capacity building for women	• Urban and peri-urban water supply • Administration and of urban and peri-urban

Framework for the analysis
Management of Resource Centres

	CINARA	ITN-Phil	NETWAS	IRC	SKAT
Annual budget and sources of funds	• US $ 1.500.000 • 13% subsidy • 87% revenue - 20% info/training - 76% research - 4% tech. Assistance (Nat. funds 87%, int. funds 13%)	• US$ 100.000	• US$ 670.000 • 5% subsidy • 10% medium project funding • 85% revenue	• US$2.500.000 • 50% subsidy • 17% medium project funding • 50% revenue - 64% info/train/advisory - 34% research - 2% advocacy	• US$ 2.000.000 • 50% med. Proj. Fund. • 100% revenue - 65% doc/backs - 35% consultancy - 5% projects
Organizational set-up	• Steering committee • Coordination committee • Management by delegation, autonomy of project manager on the basis of previously agreed guidelines and operational plan	• Network Coordinating Council	• Governing Council, Advisory Board • Autonomy of Task Managers, report to the heads of section	• Governing Board • Management Team • Autonomy of project managers, advise head of department	• General Stakeholders Assembly • Governing Board • Management team • Management by objectives • Autonomy of project managers, report to head of department
Staffing	• Programme staff: 31 (19/12) • Administration : 19 (7/12)	• Programme staff: 5 (1/4) • Administration:1	• Programme staff: 11 (8/3) • Administration: 12	• Programme staff: 20 (11/9) • Administration: 11 • Documentation: 3	• Programme staff: 9 (8/1) • Administration: 6 • Documentation: 1
Evaluation of performance	• Evaluation of 1997	• Evaluation 1997	• External evaluation 1994	• Evaluation 1995	• No evaluation of the institution as a whole

Framework for the analysis
Management of Resource Centres

	PSEAU	IPD-AOS	IWEE	IWSD	SEUF	CFPAS
Annual budget Sources of funds	• US$ 750.000 • 60% subsidy • 35% med. Proj. funding • 15% revenue	• US$ 1.000.000 • 60% subsidy • 40% revenue - 55% training - 15% consult - 5% research - 18% institute - 7% publication	• US$ 1.500.00 • 40% subsidy • 60% revenue - US$ 100.000 spent in developing countries	• 27% med. Proj, funding • 100% revenue - 27% training - 27% research - 46% consultancy	• 85% subsidy • 62% med. Proj. fund • 21% revenue	• US$ 444.000 • 90% subsidy • 10% revenue
Organizational set-up	• Steering committee • Executive secretariat	• Governing Board • Executive committee • General Secretariat • Operational units • Management by delegation and performance	• University Council • Head of the Institute • Management results-oriented	• Management Board • Executive Director • Management results-oriented • Autonomy of project Managers	• Governing Council • Management by delegation and by objective • Autonomy of staff on the basis of established procedures	• Directorate Council • Consultative Council
Staffing	• Programme staff: 6 (6/0) • Administration: 1	• Programme staff: 9 (7/2) • Administration: 30	• Programme Staff: 8	• Programme staff: 7 (5/2) • Administration:1 • Documentation: 7	• Prog. Staff: 49 (38/11) • Administration: 7 • Documentation: 12	• Programme staff: 4
Evaluation of performance	• Survey in 1997	• Evaluation 1998	• No evaluation of IWEE, instead Institutional review of TUT	• Evaluation 1996	• Half yearly reviews by donor	• Internal review

Framework for the analysis
Resource Centres and their Environment

	CINARA	ITN-Phil	NETWAS	IRC	SKAT
Clients of services	• Local government bodies • NGOs, Private sector • ESA's • IRC, IHE	• Government agencies, local government • Private sector	• Government Ministries in Eastern Africa • ESAs • Int./Nat NGOs • Private Sector	• NEDA/DGIS • UNICEF, UN agencies, EU, UNDP/WB • ESAs • Nat Gov., NGOs, Dev. Banks, Consulting firms	• SDC • ESAs, NGOs • Consultants, Private sector
Beneficiaries	• Communities and sector institutions	• National /local government • Poor rural and low-income urban communities • Professionals/NGOs 1. Library services free of charge, costs covered through grants/subsidies	• Government Ministries, local NGOs, Communities, Training Institutes, all are non-paying clients. 1. Costs are covered through grants	• Individuals, Professionals, Students • Local NGOs • Poor communities in rural and low-income urban areas • Information dissemination free of charge	• Partners in developing countries • Importance in question and answer service, also as a referral - non-fee based costs are covered by a solidarity fund, replenished by profits made
Networking	• WSSCC, Garnet, GESI, GWP, PAHO/WHO • E-mail, Internet, Fax	• Water Information Network, Training Working group, Task Force water resources • E-mail, Fax, planned web page	• Participatory Learning Network (local) • ITN-Africa (regional), Water and Sanitation Seminar, Newsletter • HTN • E-mail, Fax	• AGUASAN, GEN NET, InterWater, WSSCC, Garnet, GWP,GESI • School Sanitation and Hygiene (Unicef-IRC) • Projects (Stream, Manage, PLA, Unicef-IRC)	• Aguasan, • HTN, Waste Organization of workshop, publishing, homepage
Partnerships	• Government Department and Agencies, Institutions in Latin America • IRC, IHE, SANDEC • PAHO, UNICEF, UNCHS	• Government agencies, NGOs, Approtech Asia, ITN Projects • IRC, IHE • WSSCC Problems: conflicts of interest, communication	• ITN Africa, RWSG-ESA • IRC, SANDEC, SKAT	• NETWAS, CINARA, IPD-AOS • IHE • UNICEF, UNDP, WHO, int. NGOs (GWP, WWC, WSSCC)	• NETWAS, CREPA • SDC, HELVETAS • UNICEF

Framework for the analysis
Resource Centres and Their Environment

	PSEAU	IPD-AOS	IWEE	IWSD	SEUF	CFPAS
Clients of services	• Government Ministries • Water Boards, Regional Councils • NGOs	• Government Ministries • NGOs (international and national) • Projects, Farmers, Private sector	• Government • Utilities • Private Companies • Associations	• Gov. departments (Zimbabwe, Southern Africa) • NGOs, UN-agencies, donors • Private sector	• Royal Netherlands Embassy • UNICEF • UNDP	• Swiss projects • UNICEF
Beneficiaries	• Populations in developing countries • Local NGOs, consultants • French NGOs - non-fee based costs are covered by subsidies	• Rural poor, Farmer's organizations • Application of a lower fee for rural communities - non-fee based costs are covered by equity funds and grants	• Universities • Professional associations	• Academics, students • Costs of information dissemination covered by a joint program	• People of Kerala • Local self-governments	
Networking	• Aguasan • International networks (SIE, REDES, ALMAE, RADI, RIOB) • Various networks in west Africa	• Web-site, E-mail	• Universities (local) • Universities (regional) • WSSCC, Garnet, IMO	• ITN Centres • E-mail	• Quarterly newsletter	• Internet, E-mail
Partnerships	• Regional councils, NGOs, CFSI	• EIER/ETSHER, CEFOC • IRC, KIT, IAC	• Universities (Ethiopia, Tanzania, Kenya) • Universities (North, East) • International partners projectwise	• ITN Africa • University of Zimbabwe • IHE	• Government Departments and agencies • AIIH&PH, NEERI • IRC, London school of hygiene and trop. Med.	• IRC

Framework for the analysis
Key issues for the Future of Resource Centres

	CINARA	ITN (Philippines)	NETWAS	IRC	SKAT
Issues, Constraints Opportunities	Constraints • Dissemination of results • Management and marketing capacity • Restricted funds • Need to execute a high number of small projects Opportunities • Improved efficiency	Constraints • Balance social responsibility and institutional sustainability • Stability within the organization ortunities • Leadership in the Philippines in water and sanitation sector	Issues • Sustainability in water and sanitation Opportunities • Introduction of demand-driven approaches • Specialization of resource centres	Issues • Growing demand for information • Decentralization and local government • Private-public partnerships Constraints • Involvement in too many small projects • Insufficient diversification of funding • Limited long-term partnerships in the South • Insufficient marketing of products Opportunities • Electronic communication • Network of resource centres • Partnerships	Issues • Sustainability in water and sanitation • Institution and capacity building • Strategies and approaches • Networking
Follow-up Outputs of the Project	• Clarification of the resource centre concept • Human resources development in RCs • Network of resource centres • Efficiency in resource centres • Sustainability for resource centres	• Enhancement of limited skills and expertise	• Support information and documentation • Enhance electronic communication • Encourage partnerships between organizations	• Performance monitoring of resource centres • Institutional assessment of resource centres • Data base of resource centres	• Electronic communication • Networking among resource centres

Framework for the analysis
Key issues for the Future of Resource Centres

	pS-Eau	IPD-AOS	IWEE	IWSD	SEUF	CFPAS
Issues, Constraints Opportunities	Constraints • Diversification of funding sources • Suitable partners in the South • Capacity to meet large number of requests from the south Opportunities • Decentralization of funds	Issues • Sustainable rural development • Management of natural resources • Development policies Constraints • Financial stability after withdrawal of external support Opportunities • Improvement of efficiency • Expansion of activities in the region	Issues • Need for multi- and interdisciplinary • Institutional issues Constraints • Lack of permanent share of core funding and resources • Insufficient diversification of funding sources • Involvement in a large number of small projects	Issues • Institutional sustainability • Minimum dependency on external support Constraints • Uncertainty of self-financing Opportunities • Enhancing local resources, including expertise • Better positioning • Improving efficiency of organization	Constraints • Transition from a totally funded to self-sustained organization Opportunities • Long standing experience and capabilities • Decentralizing governance to community levels	Issues • Development of human resources for the water sector Constraints • Change from absolute dependence to self-sustained organization • Lack of legal status Opportunities • Only institute in the country, specialized in training for water and sanitation
Follow-up Outputs of project	• Clarification of the resource centre concept • Undertaking joint projects • Cooperation in a network of resource centres	• Update knowledge and competencies of resource centres • Develop electronic networking among resource centres	• Policy document on resource centres • Learning material for capacity building	• Support electronic network • Build information dissemination capacity • Build capacity in internal database management	• Clarification of the resource centre concept • Document institutional development processes	• Link resource centres with each other • Support documentation and information