Share and Share Alike: Global Applied Research Network (GARNET)

A report highlighting lessons learned during the facilitation of an applied research network in the water supply and sanitation sector, 1993-2001

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1. Summary

- GARNET's networking experiences, though small in terms of impact, have been well documented and relate to generic principles of networking, irrespective of scale or subject. The lessons learned from eight years of facilitation are presented in this report for organisations considering the establishment of a network, or those individuals already charged with the responsibility of facilitating, managing and reporting on network activities.

- GARNET's core mission has remained largely unchanged since its inception. Its *modus operandi* has altered significantly however, involving the process of local decentralisation, embracing information communication technologies, and emphasis on monitoring and evaluation of network operations and impact.

- Key lessons learned during the co-ordination of GARNET include:

    - Careful attention to those factors that motivate participation in a network ('incentives');
    - Emphasis on explanation and demonstration of the tangible benefits arising from participation in networks;
    - Decentralisation of network operations is a slow and resource intensive activity. The dynamism of local co-ordinators can significantly impact on the success or otherwise of the decentralised management structure;
    - Information communication technologies have transformed networking operations and impacts, and will continue to do so. Unless careful consideration is given to mechanisms by which those without Internet access can contribute to network dynamics, there is a danger of a network 'second class citizen' emerging;
    - Regular, 'mini'-evaluations are required to maintain the network's overall direction. More substantive, periodic evaluations (external or internal) are valuable checks on progress and can bring about more formal reorientation of the network's objectives and mode of operation. Adequate monitoring data and monitoring systems are a critical part of the process of reflection for networks;
    - A culture of networking and communication has to be developed and fostered between co-ordinator and network member, especially during the network's infancy;
    - There is a fine balance between maintaining the quality of network activities and restricting network dynamism.;

- Several issues have been identified as priorities for future networking developments, including:

    - The need to orientate the information user to the right network for the right type of information;
    - The potential of co-production of networking events to achieve greater synergy and wider impact from donor funds;
    - The use of Internet and decision support structures with more traditional forms of networking knowledge;
    - Emphasis on refining methodologies to uncover impact assessments with networks;

2. Preamble

The Water, Engineering and Development Centre (WEDC) has acted as project manager for GARNET with Department for International Development (DFID) support since late 1993, when it took over from WASH. Although operational aspects of the initiative have developed and changed over time (through local network centres, conducting an evaluation of activities in early 1998 and embracing new information technologies), the conceptual basis to GARNET has remained largely unaltered.

GARNET's reputation in the sector has continued to grow as a credible and effective networking operation. It was noticeable that the Water Supply and Sanitation Collaborative Council (WSSCC) Secretariat tabled a paper on networking lessons learned for the Montreal 2000 co-ordinators meeting with a view to mainstreaming GARNET experiences across WSSCC activities. In the Iguacu Action Programme, GARNET is listed as one of nine Manila Action Programme (MAP) activities to be selected as a priority for WSSCC mandated follow-up. The current Council emphasis on advocacy, communications and media is firmly anchored on networking experiences.

To mark the end of the current funding cycle (April 2001), this document reviews networking experiences gained over the last eight years of project management. It is based primarily on actual experience and lessons learned from the operation of an information exchange network, but also draws on contemporary thinking in this field beyond the water and sanitation sector.

The report is structured in six short parts. Part one offers a succinct, bullet point summary of the key points to emerge from the report. Part two provides background as to why the report has been produced, how it is structured and who is the intended target audience. Part three is a brief history of the development of GARNET, which marks changing emphases over time. Detailed lessons learned are offered in part four, whilst part five presents some points for discussion based on accumulated experiences. The document ends with part six, which includes several detailed papers of practical value to network facilitators.

The document is intended both for organisations considering the establishment of a network in the sector, and those individuals charged with the responsibility of facilitating, managing and reporting on network activities. It can be used both in the planning and implementation stages of networking.

It is not designed to be a blueprint of *how to* network, but should provide a *framework* of issues and conditions that need consideration during the planning, design and management stages of network operation.

3. Brief history of the development of GARNET

The Global Applied Research Network in water supply and sanitation (GARNET) is a network of researchers, academics and fieldworkers interested in promoting current and proposed applied research in the water supply and sanitation sector. The method to achieve this is through informal, low-cost and decentralized networking links. GARNET is structured around topic networks (TNCs based on themes), local networks (LNCs based on regions) and a Global Network Centre (GNC).

It was at its Oslo meeting in September 1991 that the Water Supply and Sanitation Collaborative Council (WSSCC) identified applied research as one of seven priority issues to be addressed by its working groups. The Working Group on Applied Research, which was established after Oslo, acted as the advisory committee to the Global Applied Research Network (GARNET) formulating terms of reference and guiding developments until the Rabat meeting of the Council in 1993. In Rabat, a mandate was conferred on GARNET that expanded the existing activities to include GARNET as a focal point for the WSSCC's activities in applied research in the sector.

Following the expansion of its role, GARNET's terms of reference were revised to include the following:

- To continue to promote networking amongst researchers and field workers in the sector as per the original mandate and terms of reference;
- To act as a focal point for applied research in the Council's activities in the water supply and sanitation sector;
- To collate and publicize the existing research-related output from past and present Council working groups / activities and to act as a clearing house for enquiries;
- To promote increased levels of support for applied research;
- To liaise with other groups acting under mandate from the Council which are involved in applied research activities.

The main thrust of GARNET's activities between 1993-1995 were to rationalize the networking framework, a process which involved removing inactive and ineffective topic networks and establishing minimum standards amongst topic network centres. Through these and other activities, new impetus was invested in GARNET, and the level of networking activity showed considerable improvement as a result. Both the reported activities of topic network coordinators and the volume of enquiries to the GNC grew significantly.

In the period leading up to the Manila Forum (1995-1997), emphasis was given to consolidating the progress that had been made with topic networks, decentralizing the operations of the GNC to more locally appropriate units (i.e., LNC's), and strengthening electronic forms of networking.

Between Manila and Iguacu Forum in Brazil (1997-2000), the emphasis was on addressing the key recommendations arising from the March 1998 evaluation of GARNET, and consolidating the electronic networking activities of the network, which have taken greater prominence.

In the period following on from Brazil, the future of GARNET will be in stronger emphasis on synthesis of sectoral knowledge, cross-fertilization of experience between networks and language constituencies and the continued development of electronic means of information exchange.

A timeline for GARNET, indicating key project milestones, is featured in ~~the~~ Annex 4 ~~es~~.

4. Lessons learned

This section of the report is broken down into several sub-sections, which have been identified as key areas of learning from the operation of GARNET. The issues below are not an exhaustive listing of all networking concerns; rather they represent those issues that have been found to be critical in the development and sustenance of network operations.

Greater practical information on the stimulation, development and management of networks can be found in Annexes 1 and 2.

Incentive structure

By far the most important and intractable of issues surrounding networking is that of participation, or more specifically, the incentive structure that triggers and fosters participation. There are obvious parallels here with the wider hardware-software debate within the sector, and in essence the same principles apply: networking is as much about people and their behaviours as it is about the systems, procedures or infrastructure that enables them to function. During the period of managing GARNET, this issue is the one that has exposed the most lessons to be learned, and these are summarised as follows:

- Potential and actual network members need to have a strong perception of the benefits of joining the network and participating in networking events;
- Tangible outcomes from joining networks need to be clearly stated and quickly delivered in order to convince members of the value arising from the effort of participation;
- Incentives need to be sufficient for the effort involved in participating, otherwise networks will not gain the momentum required to become self-sufficient;
- Incentives will vary over time, and according to the target audiences involved. Regular user surveys and feedback is one way of ensuring that network incentives and participation remain adequate;
- Incentives for co-ordinators will be significantly different from those of the members, but are no less important. Voluntary inputs for co-ordination can work when the co-ordinator's institutional host has a remit that coincides with that of the network. Otherwise, experience indicates that in order to enable consistent inputs and high quality outputs, network co-ordination needs to be funded.

Decentralisation process

In 1996, GARNET's advisory committee recommended decentralising the networking structure to GARNET, primarily through the establishment of 'local' centres in developing countries. The rationale behind such a decision was to enhance the relevance of research networking locally and to broaden the language of operation beyond English. Criteria for the choice of centres were drafted and agreed, and three institutions, who had worked with GARNET in the past were approached and accepted the role. Terms of reference and minimum activity levels were mutually agreed and the Global Network Centre provided some short term seed funding in order to trigger networking activities.

The experiences with decentralisation have been mixed. Networking activities emerged following the first injection of seed funding, but in some cases are now dormant as seed funds are exhausted. The strategy of triggering activities as a prelude to raising local sources of funding has not generally succeeded, and the opportunities for self-sustaining networking centres have been limited. The reasons for this are threefold and vary from case to case, but include:

- Higher levels of seed funding were required to initiate networking activities;
- The notion of knowledge management and information dissemination has recently become a sector priority. The centres were established at a time when securing funds for such activities was difficult to achieve;
- In some cases, a culture of networking was already well established, in others it was not, hence the difficulty in developing a momentum to networking activities.

Some lessons learned from the decentralisation process include:

- Decentralisation is a slow and resource intensive activity. Immediate, beneficial results, or a commensurate reduction in staff costs from the network's centre of operations are unrealistic expectations;
- It is noticeable that one of the local centres (South Asia) continues to be extremely successful and productive as a catalyst for local networking. A charismatic co-ordinator and a local context in which networking is seen as a necessity for the sector have helped to create this situation;
- The levels of network outputs diverged significantly in comparison to the levels of inputs.

Use of information technology

The development of new forms of information communication technologies (~~ICT's~~ICTs) (such as electronic mail and websites) provides many opportunities for extending and transforming networking operations. In particular, the speed and immediacy of networking improves significantly as compared to reliance on hard copy/postal network formats. Many network co-ordinators have viewed ~~ICT's~~ICTs as an opportunity to enhance network incentives and to reduce costs. GARNET has been no exception, and has developed electronic networking interfaces via a website (www.lboro.ac.uk/garnet) and electronic discussion fora, or listservers.

GARNET has continued to lay emphasis on a dual system where both hard copy and electronic networking formats have equal status. Network newsletters, whether global, local and topic based continue to appear periodically and various types of outputs are available as hard copy documents from the Secretariat. It is clear, however, that the emphasis is changing and that electronic interfaces have become the driving force behind network activity. Hard copy outputs are produced, but they are primarily a function of information exchanged from on-line discussion or initiatives. Unless carefully facilitated, this arrangement has the potential to exclude those lacking ~~ICT's~~ICTs from the genesis and development of the network.

It is important that network co-ordinators continue to facilitate inputs by hard copy to information exchange between members. In the compilation of periodic network outputs such as case study documents or newsletters, this necessity can be addressed through simple administrative mechanisms. The more significant problem becomes when on-line debate on a topical subject is underway. The only provision that exists for such wider inputs is via face to face workshops or seminars on the subject organised by a third party and related to the subject of the on-line discussion. Such an approach has been successfully pioneered during the first phase of the OneWorld Water Think Tank electronic conference series, of which GARNET was a co-founding partner.

Evaluation/s

There is little published work on how to evaluate networks per se, and little on this topic from a sectoral perspective. This poses methodological problems for network co-ordinators that are faced with requests from funding agencies or advisory committees to conduct a review of network operations and impacts. The result is that many evaluations lack the rigour required to ensure a thorough analysis of strengths and weaknesses. It is encouraging to note that the Development Planning Unit, University College London is conducting a DFID funded action research project on the evaluation of networks. The GARNET Secretary is actively co-operating with the research team and sharing experiences where possible.

In general, network operations are much easier to monitor and evaluate than network impact, where difficulties of causality are commonplace. Annex 2 'Issues Paper on Networking Development' (section 6) deals in more detail with evaluations. In the past, GARNET has conducted a series of 'mini-evaluations' on specific topics (such as listserver use) and to date, one major evaluation.

GARNET gained some limited experience on this topic from conducting an internal evaluation of the network in 1998. The purpose of this exercise was to assess the extent to which GARNET was achieving its stated objectives, and to review the potential of the initiative to achieve its objectives. The outcome from the evaluation was a reorientation of network activities and priorities, based upon a matrix of problems identified and recommended actions to address these concerns. The work plan that emerged from the evaluation is currently still in operation. Some of the lessons learned from the evaluation included:

- The identification of operational and structural difficulties with the network;
- The identification of two previously unrecognised issues, namely the importance of incentives for networking and user perceptions;
- The marketing opportunities that arise from such a periodic exercise;

- The evaluation accounted for roughly 1.5 months of staff input from start to completion of report (inputs which were not originally budgeted for)

It is clear that mini-evaluations need to continue as a way of regularly checking network performance and user satisfaction. They also provide needed user feedback that helps to promote and market the initiative. Additionally, a programme of more substantive evaluations should be introduced, but the timing and ~~periodicity~~ frequency of such reviews needs to be determined between advisory committee, funding agency and Secretariat staff. A three to five year interval should be considered sufficient for such an activity.

Messages to/from network members

Regular contact with members is an integral part of developing a culture of networking and communication, as frequent exchanges from the network co-ordinator will demonstrate to members a degree of concern with, and on-going maintenance of, the initiative. This is of particular importance in the initial development of the network, when a networking momentum needs to be established. Thus, co-ordinators need to be seen proactively networking and bringing the benefits of that networking to other members. This may manifest itself in various ways for a network co-ordinator, and some examples of these are detailed in Annex 2 'Issues Paper on Network Development' (section 3).

The frequency of contact is a finely balanced equation. High volumes of network messages will lead to information overload and an inability for members to collate or synthesise information. Low volumes of network messages and members lose interest as there is insufficient new information being introduced. In conventional hard copy exchange networks, the co-ordinator has some control over the volume of information that is released through the compilation and physical publication of a newsletter or some other document. With electronic networks, this role becomes more critical and contentious. If unfettered on-line access is provided, then the network may be easily misdirected according to every member's idiosyncratic concerns. If the messages are 'moderated' the charge becomes one of censorship or too authoritarian a control. In its electronic fora, GARNET has dealt with this issue by moderating, but only for relevance of topic to the fora.

Network co-ordinator interventions that explicitly address the information needs of target audiences, regular stimulus of network members and synthesising of exchanged information are key lessons learned from the operation of GARNET.

Add something about the rebroadcasting activities?- there has been a certain amount of positive feedback on this from members who see this as a useful service.

Quality control

Irrespective of the magnitude of information exchange, good quality, timely information should be a key priority in all network operations. The dilemma facing many networks is how to assure quality without restricting network dynamics. In resource constrained situations, the default response is to defer to members to exercise their own quality control. However, this is a rather unsatisfactory position, as it may further burden the membership and lead to disaffection and annoyance at network operation.

Prescribing or delimiting response fields in information exchanges is one mechanism to address this difficulty. Examples include initiating a debate on a relevant network topic, but within a framework of agreed, key questions. Similarly, requests for case study style information can be framed by adopting standardised response fields or headings. Such an approach has the added benefit of facilitating synthesis and analysis of information exchanges, as there is a degree of standardisation in responses.

In more structured forms of on-line networking debate (i.e., electronic conferences), there is scope for higher levels of quality assurance, primarily through review of messages prior to exchange for relevance, learning, innovation, etc. Such a procedure is not widely practised, as the inputs necessary to facilitate such an approach may be prohibitively high (implying as it does some peer review mechanism) and the negative impact on networking dynamics may be significant.

Monitoring data

In an effort to provide a baseline by which to measure networking levels, the GNC introduced various types of monitoring systems, some quantitative in nature, others qualitative. These systems, and the data drawn from

them, have been used in various ways beyond simple monitoring of operations, most notably for publicity, marketing and reporting functions. A review of the monitoring systems in place with GARNET is illustrated in the following table:

Quantitative and qualitative monitoring systems used by GNC for GARNET		
	Quantitative	Qualitative
Website	▪ Longitudinal analysis of hits, by month	▪ Periodic, but limited peer review of site structure, design, content
Listserver	▪ Longitudinal analysis of exchanges, by month ▪ Analysis of repeat postings to listservers	▪ Periodic survey of user satisfaction, information use, value
Information requests	▪ Analysis of response times, by speed of response	▪ None
Users	▪ Analysis of user profile (organisation, designation, region of origin) ▪ Analysis of repeat users of GARNET information service ▪ Analysis of information provided by users, by category	▪ Periodic survey of users' experiences with GARNET
Document requests	▪ Analysis of document types requested	▪ Periodic survey of users' feedback on content and value of document

These systems are not particularly innovative or sophisticated; but neither do they need to be. Given the constraints imposed on the GNC, they provide adequate indicators of the health or otherwise of the initiative. Lessons learned from these systems are that:

- Website trend data needs to be interpreted with caution, as it is not a clear indicator of separate user sessions. This tends to be a structural problem with the software employed to analyse website hits;
- The volume of listserver messages exchanged is a blunt indicator of networking, since it provides nothing beyond a numerical count of activity. Some additional content analysis of subject, and categories will be required to add value to this type of data. Such analysis could add much to GARNET electronic networking fora, as it would help to demonstrate macro-trends in content and facilitate research 'gap' analysis;
- The data obtained generally tends to concentrate on activities under GNC control or sphere of influence. An important category of data that is missing is that related to topic and local network centre users and feedback on their experiences;
- Longitudinal analysis of the available monitoring data has not been adequately collated. Such an analysis would provide an important process indicator on the initiative;
- Indicators of network sustainability, such as repeat users of information services needs to be better developed and monitored.

Response times

Linked to earlier sub-sections concerned with appropriate incentive structures for networking, the GNC developed a simple spreadsheet based system of recording the date of information requests received, and the date at which requested information was processed. The lag time between the two is the assumed performance indicator. In operation since late 1998, this system has provided a motivating factor to improve response times fashion and has added to the range of monitoring data that can be reported on to GARNET's principal donor agency. Additionally, the information has been useful for marketing purposes.

Although a valuable innovation for GNC operations, it was (a) not accompanied with suitable targets or benchmarks for response times, and (b) not replicated elsewhere within GARNET's structure, such as with topic and local network centres. The former is relatively easy to establish, and could be determined in consultation with other information centres in the sector. The latter is more difficult to implement, as co-ordinators elsewhere within GARNET are operating largely on a voluntary basis, and the GNC has been cautious in overloading co-ordinators with additional reporting procedures.

A response rate goal of 75% all requests processed within 1-3 days is suggested, on the basis of experience. The relative proportions of responses falling in the slower response rate (i.e., 4-6, 7-9, 10-12, and 13 days or more) categories needs to be carefully monitored, as this may negatively affect users perceptions of the initiative.

5. Discussion

Networks are frequently viewed as a relatively straightforward activity to initiate and manage, which may partly explain why the development sector is awash with these types of initiatives. However, experience tends to suggest that there is considerably more to successful and effective networking than is often first thought.

Much of this report has sought to look back critically at lessons learned from the practical day to day operation of a network in the water and sanitation sector. But the report also offered the authors the opportunity to look forward and consider what issues are likely to become important in networking terms in the near future. The following initial thoughts on this subject are highlighted for consideration by those planning or funding new networks:

1. A wider concern is how can networks in the WS&S sector fit into a broader framework of co-operation and collaboration. There are problems raised by the proliferation of information initiatives in the sector in that this may lead to significant duplication of effort, and lack of clarity to the end user. There is a need for an information-brokering role to point sector professionals to networks and their specialist areas of interest. The international community needs to function more as an efficient connector and facilitator of information initiatives to promote the creation and dissemination of knowledge.

2. 'Co-production' of networking events (jointly sponsored and managed by collaborating network secretariats) is one way in which DFID or other donor agencies can influence the impact of networks, and extend the footprint of these initiatives. In the future, donor agencies may wish to consider ring fencing a proportion of funding for networks which is reserved for joint events to promote collaboration and synergy.

3. Information (research) networks need to provide timely, authoritative and readable research digests and syntheses, openly accessible and at little or no cost. Additionally, such networks should provide two-way channels for knowledge providers to confer with knowledge users, who can help them re-focus research proposals, methods or outputs.

4. The increased use of Internet (web/e-mail) and decision support structures (on-line/telephone help desks) to provide 'just-in-time' information services will help to complement more traditional methods and forms of disseminating and networking knowledge.

5. It may be possible to appropriately package research/knowledge and stream it in the general direction of target audiences for networks; the trouble is there is no certain way of judging whether or not any impact has been achieved. Continued work on methodologies for impact assessment will be required.

6. Donors and funders can better support knowledge networking programmes by developing codes of conduct for their establishment / management and by benchmarking examples of good, better and best practice for future initiatives to emulate.

6. Annexes

1 Keynote paper on management and maintenance of networks
2 Issues paper on network development
3 Briefing paper on planning electronic conferences
4 Timeline for GARNET

1 **(Just a thought- would it be better to put Issues paper before Keynote paper as it includes lots of background and this would then read from the more general to the specific?)**

Keynote paper on management and maintenance of networks

How to use this paper

Who is it for?

- Both current and prospective topic and local network co-ordinators.

How should it be used?

- As a reference document for planning networks, their activities and evaluating progress
- In conjunction with GARNET's existing guidelines on *establishing* networks

When should it be used?

- Immediately after the creation of the network to guide early development, and subsequently on a periodic basis

Network objectives

- Networks need clearly defined objectives that will guide orientation, focus, activities and membership. Ideally, the objectives should be formulated and agreed through consultation with potential members
- Review these objectives yearly in order to assess progress and to clarify need for re-orientation
- Networks can and should adapt with time - this means that objectives may change as initial goals are achieved.

Suggested action points:

1. Clarify and develop a network objectives statement (ideally, this would be short and concise)
2. Through appropriate communication channels, consult members on objectives and activities. This may be done by including the objectives statement in a network newsletter
3. Periodically review objectives (in conjunction with members) after 1-2 year period

Network activities

- In an active network a wide range of activities are likely to be on-going at any one time. Not all these activities have to be arranged by a co-ordinator - some could be specific to regions or thematic sub-groups, which report back to the whole network membership once their task is complete. Likewise, electronic networking initiatives need to have concrete activities (electronic conferences, directed discussion)
- As an incentive to participation, network activities should be interesting and produce an identifiable benefit for members. Superficial activities lead to superficial networks
- Active networks encompass more than distributing newsletters, but embark on activities which bring about the resolution of common problems

Participation

- The degree to which individuals will contribute to any network is in large part dependent on the perceived benefits which membership brings. Members should be stakeholders in the objectives of the network, possess an interest in specific activities, want to contribute, and have confidence in network management
- A sense of ownership is vital for network success. In general, decision making processes, activities and the means for implementing these activities should be open and transparent, allowing all members to feel they can influence events. Fostering a non-confrontational framework in which information exchange can occur will encourage debate and co-operation between members

- Conflicts of interest may arise, with competition over limited network resources, or representation on steering committees. Maintaining open and transparent decision making systems, and regular consultation eases such conflicts in the medium and long term

Membership

- Widespread participation is critical to prevent domination of activities by network elites or cliques. However, committed core members, willing to share some of the responsibility for taking initiatives and being responsible for co-ordination, can facilitate network development

- Those involved in any core group or task group activities need to be able and willing to devote time to the task. Core groups need to be representative of the entire network's members, and should be able to draw on their knowledge of wider network membership views and opinions

- The leadership group of any network needs to undergo periods of renewal, possibly through rotation or transfer of responsibilities between individuals or organizations

- Network membership needs to be consulted periodically and asked to self critically review the progress of the network

Decentralization

- In order to prevent excessive centralization of activities and responsibilities, network management should endeavour to facilitate independently organized activities by network members. This enhances both members' professional experience and improves the prospects of achieving sustainability

Resources

- Although funding is clearly integral to the success of a network, there are clearly other factors affecting network sustainability. There are several examples of networks that lack central funding achieving remarkable impact due to the willingness of members to dedicate time and effort to network activities. Nevertheless, the ideal situation is one in which member enthusiasm, involvement and adequate funding are combined

- Networks should plan for the funds required to implement activities. In general, guiding principles should be to: keep overhead and operational costs to a minimum; funding needs to be managed by a broad range of members (to maintain credibility); and networks require a recognized structure to secure and manage funding.

- The greater the degree to which a network is user supported, the stronger it will be. User supplied resources do not need to be financial, but can stress contribution 'in kind': i.e., through submission of written articles, references etc for inclusion in network outputs

- If networks become associated with sympathetic local / international agencies prepared to provide funding, safeguards need to be built to prevent domination of network agenda. Networks relying on a single institution or funding agency are vulnerable to domination, or sudden termination of its resources

Legitimacy

- In order to maintain credibility, a network and its management need the trust and confidence of all members. Legitimacy in turn attracts participation and facilitates funding

- Legitimacy can be enhanced by involving respected sector individuals at networking events, or in well targeted publicity

- Crucially, the short and long term reputation of a network will depend on the quality of the information provided, the regularity of information exchange and the value of those networking activities to members. Attention should be paid to the reliability and validity of information disseminated

Complementarity and linkages

- There is scope for a range of networks to be working within the same sector or sub sector. Networks will have their own niches that can, and should, be complementary. The basis for complementarity is typically geographical (national, regional), horizontal (NGO, farmer groups, research institutions) or discipline based (by topic). Such networks can have different, but overlapping objectives, programmes, membership and management systems, reflecting the particular scope and target audience

- There is an important need for vertical networks, which promote information exchange between different audiences (researchers, funders of research and practitioners)

- The value of establishing links between networks are many and varied: to enhance information exchange, encourage constructive collaboration, avoid competition, reduce duplication, improve the targeting of network benefits and allow maximum benefit to be drawn from different comparative advantages of network membership

- Formal and informal activities need to be fostered and maintained through joint activities and mutual representation at relevant workshops and co-ordination meetings

Monitoring and evaluation

- Networks require regular and thorough monitoring and evaluation. Work plans should be continually assessed against stated objectives and network progress and achievements should be periodically evaluated.

2 Issues paper on network development

Abstract

This paper reports lessons learned from networking experience in relation to several key topic areas: network establishment, stimulation, management, sustenance and evaluation.

1. Introduction

Networking is a recent term that describes an age-old activity: people meeting to exchange information, knowledge and skills which are of mutual benefit. In the water supply and sanitation sector, networking was given considerable impetus by the International Water Supply and Sanitation Decade, that acted as a stimulus for sector professionals to build on the momentum made during that period. The establishment and development of several sector-oriented networks (such as the Global Applied Research Network (GARNET)) was testament to this fact.

The apparent popularity of networking can be explained by examining the benefits that it offers to the sector's key stakeholders. Funders, practitioners and users gain significantly from networking and have an incentive to nurture and encourage its development. Funders advocate their use as a way of facilitating dissemination across country and regional boundaries and permitting resource sharing which may deliver cost savings. Practitioners support networks because they reduce professional isolation and deliver insights into the discipline which may otherwise be lost. Users gain from higher quality and targeted information sharing.

Networks have much to offer, and at times the development sector can seem awash with them. But do we fully understand what they are for, what they mean and where their value lies? In the rush to be part of the latest network, are we sure we know why we are joining and what the likely benefit will be? This paper will examine what is meant by 'networking', describing some of the basic types of networks, reviews the critical steps involved in networking, and draws on lessons learned from co-ordination of networks.

1.1 Networking: a brief overview

Networking is difficult to explain simply and clearly. It is frequently used in conjunction with other terms (research -, information exchange -, co-operative -) which may breed confusion about the general purpose of networks. In addition, common usage implies widely divergent meanings - to some it refers to exchanging business cards and talking informally at conferences, for others it is a formal mechanism by which opportunities within a given field can be tapped and exploited. Networking can mean all things to all people - a fact that may have diminished its value as a tool for education and communication.

This lack of clarity is compounded when examining the many ways in which the concept has been defined. Wesley (1993) sees networking as the transfer, and promoting the transfer of information; Parker (1979) considers networks as the organisational structure which facilitates information resource sharing; Plucknett et al (1990) define networks according to criteria which include participants, purposes and mechanisms. Starkey (1997) suggests networking includes, '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'. Borba (1999) argues that networking focuses 'on organised interaction between members with a common interest who look for an added value to their activities'.

Despite this divergence, certain common features are recognisable. Typically, networks include *associations* (formal/informal; individuals/institutions), who share a *common goal or purpose* (open-ended/task specific); and who *contribute resources or time in two-way exchange or communication*.

1.2 Networking typologies

There are three basic typologies of networks:

Information exchange

Rely on the sharing of information between members and a co-ordinator, and are normally either passive or active. With the former, a co-ordinator distributes information to all network members, usually through a newsletter and there is minimal communication between co-ordinator and members. Active information exchange networks attempt to collate comprehensive information from members and encourage frequent communication between members and co-ordinator. Active networks are based on a healthy two-way exchange of information, views and practice. The rise of information communication technologies such as electronic mail, the Internet, and CD-ROMs has transformed the experiences of this type of network.

Consultation

Rely on face to face meetings of members in order to share information and ideas, normally through workshops or conferences organised periodically. Such networks can be established quickly and are unencumbered by the bureaucracy and hierarchical structures that can hinder the effectiveness of other networks.

Collaboration

Conducts activities that are jointly planned and implemented. Typically, they share resources, participate in design and planning and work together. In developing countries, collaboration networks offer the greatest opportunities for building the capacity of personnel, and as such are looked on favourably by the stakeholders in the research process. However, not all networks necessarily evolve into collaborative ventures, nor should they since the degree of co-ordination and management required makes this type of network relatively rare.

To some extent, GARNET can be seen to be drawing from all three of these traditions, although primarily it is based on an active information exchange network model.

The rest of the issues paper deals in turn with ~~four~~five critical areas of networking, respectively *establishment*, *stimulation*, *management*, *sustainability* and *evaluation*.

2. Establishing the network

Agency experience with the establishment of networks points to several key (common) issues underpinning network establishment. Clearly, there needs to be a strong reason for networking in the first place. A prerequisite therefore is a perception that the lack of access to relevant knowledge in a particular sector is a factor that constrains the development of that sector, or groups operating in that sector. Likewise, the desire to co-ordinate and avoid duplication of activities or outputs may also be reasons leading to network formation. In other cases, networks are established in recognition that an approach failed to achieve its purpose and hence needs to evaluate and consider alternative methods. Other networks, for instance those with a lobbying or advocacy purpose, might be established in response to threats to livelihoods, sustainability, the environment or to a particular vulnerable group. In essence then, many actors and agencies form a network around an issue or problem, one that has been identified and lends itself to solution only through joint action.

The concept of developing a network is usually undertaken by a small number of founding members. This group might decide on a series of fundamental network issues: the objectives and means of operation, membership criteria and commitments, and how the network could be sustained in order to achieve its objectives. Many networks begin with a critical number and inclusive range of dedicated participants. But what is the lowest number? What is the critical range? Ultimately, the number and range depends on the issue and scope of the network. At a minimum, there must be sufficient numbers to sustain basic information sharing, network management and technical support. In terms of the range of members, numbers can be small (if committed), but a majority of the key representatives of the wider sector need to be part of this core group in order to draw adherents as the momentum develops.

The participation of opinion formers (influential agents – is this your alternative term or is there a reference for it?) and the timeliness of the establishment of the network are factors that play a role in the development of many networks, whether they are ultimately successful or not. The association of key sector professionals or agencies with particular networking initiatives can influence the perception, or seriousness with which the network is

considered. The high level support behind the recently initiated Global Development Network (with both Kofi Annan and James Wolfensohn endorsing the initiative) has clearly galvanised and motivated support for the GDN.

The timing of network launch can be important if the network is to gather momentum quickly. Good examples of such timeliness include Mountain Forum which was strengthened by the UN Earth Summit and GARNET which was seen as one mechanism for building on the momentum developed during the International Water and Sanitation Decade.

Other, secondary level points important in network establishment are listed below.

- The identification of technical, managerial and other expertise is an important preparatory step at this stage. Ensuring that ranges of skills are available to the network secretariat will help with subsequent consolidation and operation of the network. In some instances, these skills may need to be drawn in from outside the stakeholder group, although this has obvious cost implications.
- Throughout the process of establishing and consolidating a network, a degree of democratic and participatory practices are essential if network members are to develop a sense of ownership, and for the initiative to be responsive to new developments.
- Building and maintaining trust among network participants must be evident, especially when those participating in the network represent competing interests. Typically, trust can be built through open and transparent means of communication between network management, and face to face meetings for wider network members.
- Networks require a start up location (physical or virtual) from which the network can be administered. Clearly, this location requires the appropriate technical infrastructure to ensure efficient and effective communication. In some networks, the perceived neutrality of the host organisation has played a role in drawing members to the network.

3. Stimulating the network

To develop, and importantly, maintain interest, the network requires proactive, positive and frequent stimulation. Analysis of experience indicates that a specific unit/group/individual should be responsible for implementation of network activities and daily liaison with network participants (i.e. a network secretariat or co-ordinator). As in the case of GARNET, this secretariat might operate at two levels: internationally and regionally. The international unit has responsibility for gathering, collating and re-broadcasting information to network members from a cross-section of international sources; at the regional level, specific activities that are consistent with regionally defined aims and objectives can be actioned.

Responsibility for stimulating networks needs to be assigned to someone who can respond, participate and organise action for the network on its behalf. On occasion this might involve a group of network participants, rather than the network co-ordinator acting alone. Devolving responsibility for network stimulation in this way is to be encouraged as it not only reduces the work burden for network co-ordinators but sends a message to the network about the importance of shared responsibility and collective action if the network is to succeed.

There are many strategies that can be employed to physically stimulate networks. A brief listing of typically mechanisms employed include:

Typical mechanisms for network stimulation

- 'Front loading' networks with relevant information abstracted from other sources (including news, references, case studies)
- Posting technical queries to the network on topical subjects of interest
- Requesting information from all network members which is collated and re-broadcast by the network secretariat (e.g., requests for profiles of research projects)
- Suggesting 'directed discussion' topics to be debated informally via e-mail by all network members with an interest
- Organising electronic conferences on topical subjects in the sector, with a view to developing a state of the art synthesis paper.

Network stimulation is a critical activity in the early stages of network development. A key consideration is that members perceive that activities are on going and can recognise that the network has potential. Initially, this may imply significant inputs from network co-ordinators, but this will lessen as network members begin to recognise its value and participate independently.

4. Managing the network

Once established and initial networking activities are underway, there are on-going, periodic network management issues to consider. At the beginning of this paper, a series of network typologies were reviewed. In addition to these categories, networks can also be considered as 'hard' or 'soft' with regard to management tasks. 'Hard' networks impose a set of agreed conditions or ways of working on the members in network related activities. With 'soft' networks, activities are undertaken on much more of an informal and less systematic basis – generally as needs for such activities arise. Most networks, even the softest, do have some form of management structure, although this structure might be unwritten and at a level of common understanding.

Networks, once established, might be faced with the decision of whether to establish a formal secretariat or management structure, or whether to take an alternative approach to managing the network such as:

- Management tasks undertaken by members in rotation
- Management tasks divided between network members
- No formal management

In considering which of these types of structure to adopt, it is important to consider and anticipate the types of management tasks that are expected at this stage of network development:

- Publicising the network
- Introducing new members
- Organising meetings and planning future activities
- Development, in collaboration with the members, procedural arrangements for undertaking joint activities
- Undertaking other network related activities such as production of a newsletter, e-mail forum and website development
- Training of members
- Fundraising and donor reporting
- Monitoring progress against objectives
- Representing members' interests to official bodies
- Settlement of disputes
- Ensuring that the network is officially registered and recognised, if such registration is deemed necessary.

Critically, the network members themselves would need to decide how important these management functions would be and whether they could themselves take these on, or whether a formal secretariat would need to be established. Additional factors that influence this decision include those listed in the box below.

Additional factors to consider in determining how a network would be managed and operated include:

- Geographical spread of membership
- Total number of network members
- Level of synergy between the objectives and activities of the different members
- Resources – financial, staff and access to communications media, available to the network members
- Whether the purpose of the network is to enable information exchange between members or to achieve more global outputs
- The extent to which the network is made up of different types of organisations - so called vertical networks made up of research organisations, ~~NGO's~~NGOs and grassroots for example, or made up of organisations of similar type - horizontal networks of ~~NGO's~~NGOs only, for example.

Regardless of the types of management structure or tasks envisaged for the network, there are a series of crosscutting issues to be considered:

- Adopting standards for the provision and exchange of documents and other material is an important step in bringing about effective information sharing. Typically, this means adopting the lowest common denominator with regard to proformas for contributing and technology options (ensuring that options are available to all for day to day document sharing)
- Regular contact between members and network co-ordinators (i.e., regional, national, etc) is an important way in which to develop a sense of ownership in the network, and to enhance commitment to the success of the initiative. For the network secretariat, this implies a formalised procedure for contacting network nodes / members (e.g., e-mail bulletin, hard copy update)
- Participants must have the vision, capacity and willingness to allow for a delegation of power within the network, primarily to enable effective strategy development and guidance. Likewise, if the network is particularly large it will require an operational management structure to which all participants must agree. The delegation of power within a network can be amongst the most difficult of tasks to achieve, and cultural and linguistic divides can compound this activity.
- Participants must define their goals and objectives through a democratic process. Statements of objectives need to be chosen carefully – they may need to be valid for the long term, and existing and new network members will need to have a common understanding of what they are pursuing.
- Provide channels for disagreement/conflict resolution and opportunities for self-assessment. Review processes allow for the resolution of conflict and for the next steps to be taken in the evolution of the network (i.e., GARNET was able to redefine activities following its internal review).
- Reasonably stable and sufficient funding is a critical element for any network, especially where there is a lack of resources at national and/or regional level. Funding must be adequate to the task of bringing people and organizations together on a regular basis to solidify relationships.
- The network secretariat ideally should be seen to be neutral (i.e., not associated with any sector agenda or funding agency). Wherever the Secretariat is based it will require stable infrastructure and technical capacity to communicate with all network members. The co-ordinating unit should be able to host the initiative for several years in order to allow for network momentum to build (and to cope with the capacity strengthening process involved).

5. Sustaining the network

Beyond the operational tasks of management, networks need to consider how sustainability can be fostered. Many development sectors can point to examples of networking initiatives that started with great expectations but that failed in the longer term.

Reflection on the sustainability of networks

"The costs of networks in money, time and energy are high, especially at the front end, making any network which does not last beyond 2-3 years especially wasteful. Often to the frustration of donors and members who want quick results and clear impacts, networks take time to 'take off', (estimates are 5-7 years) to establish links with policy makers and to generate legitimacy within the sector. Pressures put on networks to show concrete products and progress in the short term, and decisions to withdraw support quickly where they don't, ironically risk undermining the very capacity and impact for which they aim. Networks don't produce much fruit in only a few years, the foundation is set and opportunities exist, but the risk is that everything will disappear if donors back out too soon".

Bernard, A.K. (1996) *IDRC Networks: An Ethnographic Perspective*. Evaluation Unit, IDRC

Experience with networking indicates the following:

- The long-term sustainability of the network needs to be discussed from the beginning of the initiative, especially if the network structure is complex and involves decentralised (e.g., regional) nodes. This is particularly important when these decentralised nodes are based in southern countries where more sustained levels of funding and capacity building may be required.

- Networks that plan for the funds required to implement activities are more likely to be successful in achieving those activities.
- The initial costs of network development and consolidation are high, but networks should aim for self-sufficiency where possible. Clearly, some networks, particularly those including local groups in developing countries, may never be self-sustaining and here the task may be to understand the level of subsidy that may be required to sustain activities. This underlines the importance of building links to financial and human resources that are available to the network, such as interested government departments in the north, existing knowledge networks, private entrepreneurs, and businesses.
- If networks become associated with sympathetic local / international agencies prepared to provide funding, safeguards need to be built to prevent domination of network agenda. Networks relying on a single institution or funding agency are vulnerable to domination, or sudden termination of its resources.
- Obviously, sustainability goes beyond basic considerations of funding. The development of a sense of ownership, and the presence of the right type of incentive structure for participation are important in ensuring that the network develops a momentum of its own.
- Crucially, the short and long term sustainability of a network will depend on the quality of the information provided, the regularity of information exchange and the value of those networking activities to members. Attention should be paid to the reliability and validity of information disseminated.

6. Evaluating the network

During its operational phase, there should be opportunities for network assessment, with a view to amending focus, objectives and operations, and in the process to create openings for other members to join and contribute to activities. The importance of evaluating the network comes from an understanding that networks are not static initiatives. Networking activities may have the potential to be significantly expanded or curtailed by specific events, e.g. achievement of an objective, limitations of a funding constraint, a change of leadership in the network, a change in external or external events. All these elements can impose changes in the direction of networks, and those networks unwilling to change direction in response to external change might lose relevance, influence and purpose. In short, the lesson is that regular review and evaluation helps to maintain a network's focus.

There are two aspects to the evaluation of networks. First, consideration needs to be given to networking operations (i.e., the internal operations of the network) and second, to the impact of the network. Both are difficult to measure with any certainty, although the latter is the more intangible of the two. Many of the benefits of networking are associated with the potential for operational improvements to organisations / individuals, which is clearly a subjective area to explore and identify.

Networking operations can be captured in a variety of ways, some of which can be measured quantitatively, others qualitatively. The following general points illustrate the type of indicators that might be applied to this first category:

Measures to be considered when evaluating network operations

- Website statistic figures, by month
- Listserver statistic figures, by month
- Diversity of network member contributions to network forums (measure of heterogeneity)
- Number and type of information referrals at network secretariat
- Number of repeat referrals from individual members (measure of repetitive use)
- Number of network members, by organisation, position, country, region (measure of reach to target groups)
- Time taken by network secretariat to respond to information query (measure of responsiveness)
- Coverage of topics and languages

The main difficulty with the second aspect of evaluation (that of impact), is the problem of causality. If the intention is to understand changes in an organisation / individual's practices, then it is problematic to disaggregate the beneficial impacts of networking from other possible influences on the operation of organisations / individuals, such as changes in funding, management structure, and training. Previous evaluations have tried to measure impact in a variety of ways, including:

Measures to be considered when evaluating network impact

- Extent of name recognition within the sector
- Perception of network by cross section of actual and potential users
- User satisfaction levels, including questions such as:
    - How have you used network outputs?
    - Have outputs met with expectations?
    - What constraints have there been to participation?
    - What were your expectations on joining the network?
    - Have your expectations been met?
    - Is there a particular reason why you have not yet used, or do not use, the network?
    - In what ways has the network helped to make an impact in your daily work?
    - What are the network's strengths and weaknesses?
- Extent to which tasks have been shared between network members
- Case studies / histories indicating operational level changes, or instances describing how networking had made an impact.

Networks require regular and thorough monitoring and evaluation. Work plans should be continually assessed against stated objectives and network progress and achievements should be periodically evaluated.

7. Summary: Lessons learned from networking experiences

The following represents lessons have been learnt about the planning, implementation and management of networks based both on direct and indirect experiences of this process.

- **Sustainability**: The key to sustainability of a network is whether the members perceive the benefits of membership to outweigh the costs of contributing to the network. Enthusiasm for networking activities depends on how useful the members perceive the objectives of the network to be and whether they consider these objectives to be achievable.

- **Member participation**: Network members should be involved in the planning, goal setting and work plan for networks. A sense of ownership is crucial if the network is to be vibrant, dynamic and meet the needs of its members. The degree to which people and organizations contribute to network building will depend on the calculation of future benefit they perceive.

- **Membership is not participation**: Although a network may list hundreds of members, in reality a small core group may be driving and shaping the network's agenda. If these individuals lose interest or leave, the network may flounder. Fostering comprehensive participation and providing a sufficient incentive structure for participation is a major (and problematic task) of any network.

- **Define objectives**: Defining goals and objectives firmly will help establish the parameters for who participates, and help prevent the network from being re-aligned;

- **Networks need to be user driven**: Networks should arise from an expressed need within the sector to which individuals or organisations are prepared to commit time and resources. Creating networks without identifying the expressed need is an empty exercise and commonly leads to limited network sustainability.

- **Think holistically**: Networks should not restrict membership only to those who are *perceived* as its natural target audience. GARNET, for instance, endeavours to include all the key stakeholders in the research process including the funders and users of research, in addition to practitioners. An inclusive network is one which may develop greater long-term sustainability and achieve higher quality outputs through the insights that such inclusion can bring.

- **Evaluate, monitor and reflect**: Evaluation and feedback from network members needs to be constantly sought and incorporated into network activities and terms of reference. Networks do not exist in a vacuum,

rather they are likely to shift their emphasis over time. Networks need to be able to identify such shifts and know how to respond to changing needs.

- **Clear focus and remit**: A clearly stated problem or subject will help define the network's purpose and objectives. This will reduce confusion among network members and enable all to work towards common goals.

- **Operating languages**: If networks are to draw on the experiences of members drawn from diverse regions internationally, some provision must be made to allow for different operating languages other than English. There is a danger of raising expectations within a sub-region if network outputs or dialogues are offered in several languages. Crucially, networks must avoid tokenism and possess a mechanism with which to operate multi-lingually.

- **Specific funding**: Network co-ordination takes time and resources for it to be effective. Funding (or assistance in kind) is a crucial part of enabling the work of co-ordinators. Ideally, co-ordinators should receive some form of incentive for the work that they undertake (this simply represents the reality of co-ordination - which is frequently voluntary and additional to existing workloads). Networks that rely on surplus funds and voluntary labour will suffer as a result.

- **Flexibility and openness to new ideas:** Networks need to be prepared to adopt new practices and to adapt to change, otherwise they are likely to become locked into obsolete ideas and practices which do not serve anyone's interest.

- **Communication channels**: Networks should not assume that the medium by which they communicate exists or operates reliably in other countries where network members are resident. New developments offered through information technologies may not be available to the NGO network member working in rural Tanzania, for instance.

  Networks should endeavour to use electronic mail, listserver forums and discussion group variations to build the network into a participatory structure and help to confirm strategy and policy.

8. Selected references

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3 Briefing paper on planning electronic conferences

These notes are designed to outline:

(i) Critical steps in planning an e-conference for agencies interested in this type of consultation
(ii) What inputs are required by what parties, by when.

Critical steps

1. E-conference topic selection

- Need to clarify what the topic of the conference is going to be - if there are several partners involved in the management of the conference, is there a consensus on subject matter?
- Is the topic readily understood amongst a variety of potential participants? This may affect the inclusiveness of participation.
- Is it a topic that will capture participant's interest? Is it provocative / controversial? (this may be an advantage)
- How much information / literature is publicly available on the topic? How does this conference fit into what is already known on the subject?

Notes from experience (perhaps need to outline nature and extent of experience briefly)
It was clear that one reason why the volume of messages was high for previous conferences (which?) was because the topic was controversial, on which many different organizations had specific, and at times, conflicting perspectives. There is some advantage if the topic had not been covered in other electronic fora elsewhere in the sector. This gives the conference a novelty value that will probably lead to many joining and subscribing.

2. Setting e-conference objectives

- Establish the objectives of the e-conference in order to guide the planning and design of the conference. Is the object to peer review / validate key work? To encourage sharing of experiences and practices? To facilitate others to introduce a particular conceptual / practice based perspective to watsan projects?
- Deciding on the conference objectives will impact on the phases of the conference (i.e., the importance and length of a 'case studies' session)
- Be aware of who the key target audiences are for the e-conference

Notes from experience
At the planning stage, encouraging the organizers to focus on the objectives of the initiative helped in identification and explanation of conference phases

3. Deciding discussion themes and the e-conference timetable

- Once objectives have been decided, sub-themes can be determined. This would typically be the responsibility of those persons with the most significant content input to the conference (i.e. conference facilitator, or possibly core group)
- A number of conference days (and exact dates) are usually fixed for each sub-theme. Typically, an electronic conference may start with a general introduction of participants, and thereafter, general topics are covered to trigger discussion and generate conference momentum. Since electronic conferences of this kind are attended by international participants sufficient time must be kept to overcome time zone differences. Our experience suggests a minimum of seven days for any thematic discussion.

Notes from experience
Each phase of the conference (which?) was preceded with some key questions, which in theory were designed to help participants structure their comments. In practice, most participants contributed against their own agenda, and ignored this framework. Conference facilitators need to be aware of this trend, and be prepared to intervene to ensure that discussion remains focused. The length of conference phases (typically at two weeks) might at first appear overly long. However, longer duration of phases proved to be useful given that many participants were unable to respond immediately due to time lag in receiving messages, or because of backlog of work. It was noticeable from previous e-conference evaluations that participants felt there had been insufficient time to discuss a full range of issues, and that debate had been cut short in some cases.

4. Deciding on e-conference team responsibilities

- There are three key roles for the organizing team: content facilitator, listserver operator, and core group.
- The responsibilities of the team need to be divided in the following way

	Content facilitator	Listserver operator	Core group
Responsibilities	• Develop background paper • Help identify core group of participants • Provide content input to conference • Introduce conference on day 1; summarise discussion at end of each phase; close conference	• Create listserver • Maintain listserver • Help identify core group participants • Publicize conference (reflects more accurately Box 10) • Add/delete members • Add background files • Send material to participants • ~~Publicize conference~~ • Circulate evaluation questionnaire; collate findings and feedback	• Provide content input to conference • Stimulate discussion during conference
Timing of inputs	• Planning / design • During conference	• Planning / design • During conference • Post conference	• During conference
Who?	• Lead agency	• WEDC / listserver lead agency	• Miscellaneous core group

- The content facilitator's role is critical to the success of the conference. The qualities of a good facilitator for electronic conferences do not differ markedly from those required at face to face conferences. Ideally, this person needs to possess: (i) a good understanding of the subject of the conference, (ii) a reputation within the field which will attract core group members and participants, (iii) an ability to digest the contributions and make a concise summary which can be posted to participants periodically. All conference participants, irrespective of whether they are passive or active participants thereby benefit from an effective facilitator's input.

Notes from experience
Core group support on the content side of the conference has been difficult to achieve in practice. The facilitator may experience difficulties in timing postings to the conference, particularly if their work schedule and access to e-mail overseas intervenes.

Summarizing phases is critical both as a way to facilitate the final synthesis/summary document, and to enable others who cannot participate on-line to respond (via a third party) to the summaries.

An unexpected outcome from previous conferences has been that some participants have objected to the facilitators' summary of events, leading to the posting of 'alternative' summaries. This should be encouraged as it stimulates debate and widens the range of perspectives being considered.

5. Preparing background material for an e-conference

- Previous experience indicates that the use of a background paper for the conference helps form the basis and focus for discussion.
- The paper needs to strike a delicate balance between providing sufficient information to enable and trigger discussion and be concise and simple enough to ensure that all participants actually read the document prior to the conference. The paper should be well structured with clearly numbered sections that all participants can easily refer to during discussion.
- The background paper needs to be available to all participants at least **two weeks** in advance of the conference, either sent out by e-mail, fax, or accessed through a website. Participants will need adequate time to read, digest and prepare their contributions.

Notes from experience

Although background papers have been made available in advance of discussion, it is unclear to what extent participants actually refer to the paper's questions or to any of the background references? This indicates that background papers need to be written in an engaging and stimulating style.

6. Announcing the e-conference

- Experience indicates that the conference needs to be well publicized in advance. As a minimum, publicity for the conference should go out **one month** in advance, through a variety of print and electronic media.
- Ideally, 'key contacts' list needs to be established, and these persons contacted directly before the one-month deadline. One month before the conference begins, a general publicity campaign should proceed, designed to attract anyone interested in the subject (this assumes that the conference will be entirely open, rather than 'closed')
- The conference should be publicized widely, through the respective networks and links of various stakeholders connected to the topic and sector. If the conference is to be regionally focused then an agreed list of contacts needs to be decided upon quickly. Fliers could be printed (at low cost) and distributed by post to these contacts. Follow up can be made through e-mail and websites.
- The conference announcement would include fairly standard information such as title of conference, dates, purpose, brief description of topic, who should participate, details of how to participate, statement of benefit of joining, outcome from the conference, availability of outputs, contact addresses, etc.

Notes from experience

Previous e-conference have been publicized through related sector based electronic listserver, and via several sector / topic specific websites.

If possible, the initiative as a whole and separate e-conferences should feature in a press release through sector specific outlets (Waterlines). Southern resource centre newsletters such as InfoCREPA, IWSD News, Water and Sanitation News will all help to spread the word.

7. During the e-conference

- In general, the expectation is that the facilitator introduces the conference and its various sub-themes; summarizes the main discussion points at either the end of each week or the end of each thematic session

and provides concluding remarks at the close of the conference. The KIS conference raised questions about: whether moderation should include clearer classification / streaming of messages (avoiding cases of RE: {x} Re: [y]); whether the author of the message could be more easily identified in the header.

- Finally, the e-conference should end with concluding remarks in the form of clear and coherent statement/s about the conference theme/s. Ideally, participants should feel that a definite end has been reached and that the conference themes have been substantially addressed. The facilitator should compile the key points and his/her own analysis as a synthesis from the conference. Later a synthesis paper containing more details could be circulated to participants and placed on the conference site.
- Potential difficulties over delay between end of conference and completion of summary paper- maintaining interest in the list/ continuation of conference discussion or related issues.
- Also, what happens to a list which was set up exclusively for an e-conference- Should it continue? What do participants want? Who will manage it?

8. E-conference evaluation

The conference should be judged in terms of participant satisfaction and achievement of set objectives. A simple questionnaire could be circulated as a way of evaluating the event. In addition to user satisfaction, other indicators of success include:

- Number of relevant messages posted to the conference;
- Availability and actual participation of a qualified chairperson;
- Availability and actual participation of core group members;
- Number of participants other than core group members;
- Relevancy of the messages posted with regard to the conference theme/s.
- Ratio of messages posted to number of participants (to assess the degree of activity amongst the participating group);
- Ratio of active to passive participants (measure of the degree of inclusiveness of the conference)

Notes from experience
The evaluation should carry examples (short case studies) of how participants used the information gained during the e-conference, and how it reached a wider audience (if at all)

9. E-conference outputs

- Participation in any type of conference takes time, money and effort. Clear incentives should be stated as a 'reward' to participation. Hence, production of a synthesis document that summarizes outputs from the conference is advisable. This should be made available electronically and as a hard copy conference output (since it is not always possible, nor do participants always want to access outputs through Internet and e-mail archives).

10. E-conference timeline

Notes from experience	
Week 1 - 4	Clarify key questions outlined in this paper Establish listserver and prepare websites Identify facilitator and core group members Determine conference objectives, themes and timetable Identify potential conference participants Decide on publicity material and media
Week 4	Publicize e-conference
Week 6	Distribute background papers to participants

	Post background papers to website/s
Week 7	Send conference protocols document governing conference procedure
Week 7	Reminder to all participants
Week 8	Welcome statement from facilitator 1st conference phase begins
Week 14	Conference concludes
Week 15	Conference evaluation
Week 17	Synthesis paper circulated

4 Timeline for GARNET

	Year	
September: **First Global Forum, Oslo**. Seven working groups established including applied research. Applied Research group co-ordinated by IRCWD and WASH	**1991**	
	1992	*International Conference on Water and Environment, Dublin.* *Earth Summit, Rio de Janeiro. Agenda 21 emerged and water and sanitation seen as critical elements in human and economic development*
September: **Second Global Forum, Rabat**. Working group on applied research disbanded and Global Applied Research Network (GARNET) constituted and given formal mandate by Council. Focus to promote current and proposed research, with strong emphasis on advocacy and cross-cutting nature of GARNET	**1993**	
	1994	▪ WEDC acts as global co-ordinator with financial support from DFID and SDC. ▪ Emphasis on rationalisation of network topics, and production of publications, namely: Directory of UK Based Research and 'Why Applied Research?' ▪ Newsletters from GNC reporting on activities across the framework published. ▪ Electronic listserver and website created for GARNET
October: **Third Global Forum, Barbados** GARNET identified as one of 10 mandated activities at the Forum. Agreement to seek to decentralise operations. April: Applied Research Workshop, Cairo	**1995**	
	1996	▪ Three Local Network Centres formally established in Latin America, West Africa and South Asia
November: **Fourth Global Forum, Manila** GARNET provided with a mandate for a further three years, as one of WSSCC's four networks Gender issues and wastewater management networks consolidated within TNC framework. Evaluation of GARNET listservers conducted as part of preparation for substantive internal review.	**1997**	
	1998	Internal evaluation of GARNET, conducted by GNC. Recommendations incorporated into further re-orientation of network objectives and activities.
Development of Vision 21: research knowledge synthesis paper GARNET one of the co-producing partners for the OneWorld	**1999**	

Water Think Tank electronic e-conference series		
	2000	November: **Fifth Global Forum in Iguacu**. GARNET endorsed as one of eight mandated activities for follow up within the Council structure.
Networking reflections report prepared and published	**2001**	