TOWARDS AN IMPROVEMENT OF INTERNATIONAL TRANSFER AND EXCHANGE OF INFORMATION ON WATER SUPPLY AND SANITATION IN DEVELOPING COUNTRIES

by

W.-K. Hoogendoorn
Staff member Information Section
WHO International Reference Centre
for Community Water Supply (IRC)
Voorburg (The Hague), the Netherlands

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Synopsis

The WHO International Reference Centre for Community Water Supply is developing an international programme for the transfer and exchange of information on water supply and sanitation in developing countries.
This paper first shows a number of problems, that are connected with this work. Furthermore, it gives an outline of IRC's activities and its information programme.

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The need for relevant information in the broadest sense of the word: scientific and technological information, both written and unwritten, appropriate for developing countries in the field of water supply and sanitation in developing countries is immense and very much of this information exists.
Behind this one sentence - however positive its last words may seem - a large amount of problems is hidden.
Let us have - in order to draw a more detailed picture of these problems - a closer look at the underscored words above, from an information point of view.

NEED: the types of information needed are as diverse as the different potential users of it.
Let us be fair: establishing an information exchange system (even on a world-wide scale) that only deals with, for instance, information on quality norms for potable water to be exchanged between policy makers, will not cause too many difficulties. But here we have to deal (the following list does not pretend to be complete) with:

USERS	NEEDS
- Policy makers (intern. organizations, national governments, subnat./local governments water supply organizations)	- Standards/criteria - Health aspects - Equipment - Appropriate technology - Management information
- Researchers (universities, research institutes)	- Evaluation studies/test results - Training/education (methods) - Socio-economic factors
- Teachers - Trainers - Consultants - Field Engineers - Manufacturers - Consumers	

- fig. 1 -

AVAILABILITY: to each and every possible question, an answer will exist somewhere in the world.
But making this answer available where it is really needed at the right moment and in the right form, can present its supplier with complex problems.

A number of factors hinder an ideal and therefore flawless flow of information, including:

- Mutual ignorance
- Financial constraints
- Visibility/accessibility of information
- Language barriers
- Lack of sufficient information services/facilities

Ad mutual ignorance:

I. Suppliers of information meet with difficulties, when trying to reach (or even to identify) their potential users; this tallies with the fact that

II. the potential users are not able (or enabled) to identify the existing information suppliers/sources.

To tackle this constraint, at least

1. An inventory of existing information sources will have to be established and made available to both users and suppliers of information.
2. Potential users must be made aware of the information being available (e.g. through newsletters, journals, radio; someone asking an information centre a question should not only be supplied with a direct answer, but also with the original source of information).

Ad financial constraints:

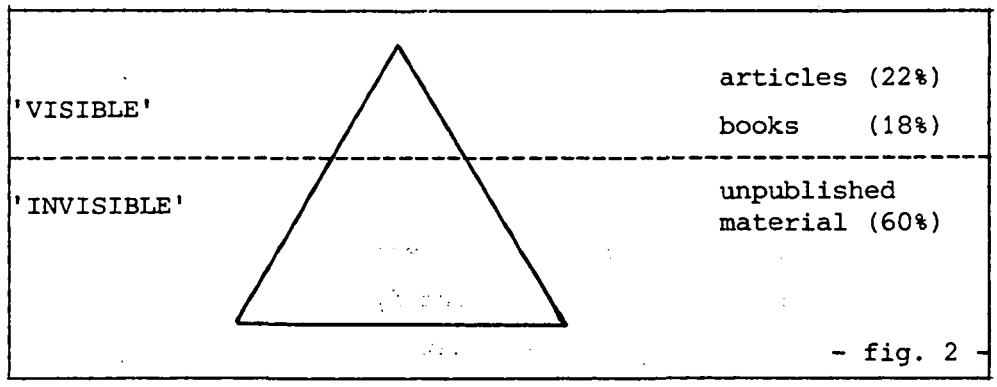
I. Although it cannot be denied that information should be regarded as 'a common good', valid information will always have a certain value (for instance in money).
However, the more exchange of information really takes place, the less important payment becomes.

1. Therefore, this exchange of information must be promoted; a two-way information flow must be envisaged from the very beginning of the development of any information programme.

Especially so, when dealing with (and between) less developed and developing countries, in order to avoid constraints as lack of financial resources or currency discrepancy.
("An eye for an eye, information for information").

Ad visibility/accessability:

I. A DEVSIS-report (see ref.) presents the following picture of visibility of development literature; a picture that will generally be identical in other fields of information, that is of interest to developing countries:



- fig. 2 -

THE DEVELOPMENT LITERATURE 'ICEBERG'

"Periodical articles form the tip of the 'iceberg' (22 per cent), commercially available books or monographs account for a further 18 per cent. But the bulk of the iceberg (60 per cent) is less accessible, invisible literature. It is made up of unpublished working papers, feasibility or pre-investment studies, theses, research reports and documents of governments and international organizations, which are not widely disseminated".
Here should be added that there is even more information remaining unused, apart from unpublished information. Much reliable knowledge and experience is not even written down (take, for instance, experiences of thousands of field engineers, all over the developing world).

II. A UNESCO/UNISIST-report (see ref.) also mentions 'unpublished material as possibly valid information and recommends

1. to deal with this material through special clearing houses or depositories'.

2. As much as possible, attempts should be made to make the invisible material accessible, including:
   - motivation of (inter)national organizations to publish possibly relevant material
   - idem for research institutes
   - invitation to field workers to publish articles on their experiences (for instance in journals).

Ad language barriers:

I. Exchange of experiences, esp. on the lower levels, sometimes becomes impossible because of language problems.

II. Journals, when published in only one language, only reach the smaller part of their potential users.

III. Request handling as well as indexing/storage/retrieval of information can become extremely difficult, again because of language constraints.

1. One of the short-term urgent tasks, when working towards an international exchange and transfer of information, is the compilation of a multilingual thesaurus (at least Eng/Fre/Spa). This is nothing new; such thesauri exist or are being prepared in many fields of information.
   In the water supply and sanitation field no such thesaurus exists. (N.B. Proper use should be made of monolingual thesauri, that already exist or that are being developed, such as the thesaurus of the Pan American Centre for Sanitary Engineering and Environmental Sciences (CEPIS).

2. A multilingual thesaurus (or even a more or less structured keyword list) can serve as a dictionary, e.g. facilitating handling of indexed requests in a foreign language.

3. Priority should also be given to translation of monolingual, highly relevant material.

Ad lack of sufficient information services/facilities:

I. In a number of developing countries (almost) no information services exist.

II. Even when such services exist, management of information systems is becoming more and more complicated: the more complicated information systems become, the larger the systems grow.

III. User needs will gradually increase in sophistication, number, etc. (especially in countries that are rapidly developing). Initially it will be sufficient, when an information service will be able to provide the (classical) library and simple request handling service. Soon other functions will be demanded (in chronological order):
   - documentation function: literature research, abstract/text publication;
   - information function: answering to a question, not by providing a document, a bibliography, but by precise information (e.g. exact quantitative data instead of titles of reports providing access to those data).

1. Extensive attention will have to be paid to the development of information centres (and their manpower) at least at national level.

2. Evaluation of manpower requirements against the background of the priorities and objectives of the planned information exchange and transfer is essential. Once an investment is made in manpower resources, it cannot be readily withdrawn or re-defined.

RELEVANCE: information in the field of water supply and sanitation for developing countries will have to undergo special relevance clearing. When, for instance, a water supplier asks for information on handpumps, he does not only expect a list containing all makers, all types and prices of pumps. He also wants details on their appropriateness for his special situation (maintenance, availability of spare parts, rate of wear), not seldom he even wants a choice to be made for him.

This asks for a 'package of experience and knowledge' to be available at clearing houses or information analysis centres. The before-mentioned package will have to contain (a.o.) socio-economic knowledge (for instance socio-economic profiles of countries, knowledge of methods to obtain community motivation, knowledge on socially acceptable technology, etc.) and water supply engineering (field) experience (for instance experience with 'appropriate technologies', use of local materials, training of local manpower, etc.)

The IRC

The WHO International Reference Centre for Community Water Supply (IRC) is based on a contract between the World Health Organization and the Netherlands' Government and was established in 1968 at the Netherlands' National Institute for Water Supply in Voorburg (The Hague).

The general objective of the IRC is to promote the international cooperation in the water supply field. The Centre initiates, coordinates and conducts programmes as appropriate and ensures that there is follow-up. The essence of the programmes is that the work is carried out in the developing countries themselves; the IRC steps back when the activities can be performed without its assistance.

The Centre works with two different kinds of communication networks with existing institutions, agencies and individuals:

a. a network of contacts on an ad-hoc basis with existing institutions (or persons) which incidentally and dependent on the subject concerned, cooperate in their field of competence. This network has a variable composition in time.
   Its tasks include:
   i. collection of specific information;
   ii. execution of specific research and investigations;
   iii. cooperation in incidental training programmes;
   iv. development of specific manuals;
   v. execution of specific sociological and public health studies;
   vi. development of specific projects,
   etc.

With this set-up, studies and activities can be organized and carried out in collaboration, thus avoiding duplication and using the available resources in an efficient way.

b. a network of contacts on a continuous basis, with existing entities, designated (by WHO) as the official national/regional focal point for the country/region concerned, and which interact with national and local programmes in the collaborative development of water supply and sanitation services. The tasks of this 'backbone' network are:

   i. to stimulate and prepare the development of the programmes;
   ii. to implement them, assisted by other institutions, as required;
   iii. to ensure that information needs are served and to promote the application of the results of international programmes in interaction with the respective national and local development programmes;
   iv. to promote the feedback of experiences and information.

To these, the following general functions can be added:

   i. general information collection and exchange (clearing-house function);
   ii. taking care of matters between regional centres or the IRC on the one hand and local level on the other;
   iii. preparing information for regional centres as far as current programmes are concerned;
   iv. ensuring participation by governments or application of results of the programmes in national programmes or ongoing projects.

This implies that on a national level the network of contacts will consist of institutions which form the focal point of their country. They act as the channel through which the regional and international centres are kept informed about the needs and requirements of each country, and stimulate the development of initiatives arising from the basis. These centres will not have to be directly involved in the programmes which are being carried out by other institutions in the country, on an ad-hoc basis. They will be active however, in the improvement of contacts within their country as one of their focal point functions.

Technical programmes

In the technical programmes of the IRC that are carried out in close cooperation with developing countries and that include, at present, projects on slow sand filtration, public standposts and handpumps, multi-disciplinary elements of training, information and socio-economic studies are centered around activities of a technical nature in what is called 'integrated approaches'.
The approaches have a twofold objective:

1. to transfer evaluated adaptive technologies to developing countries- to localities that have been well prepared as to the acceptance and maintenance of these technologies and
2. to secure subsequent widespread application.

Study programmes

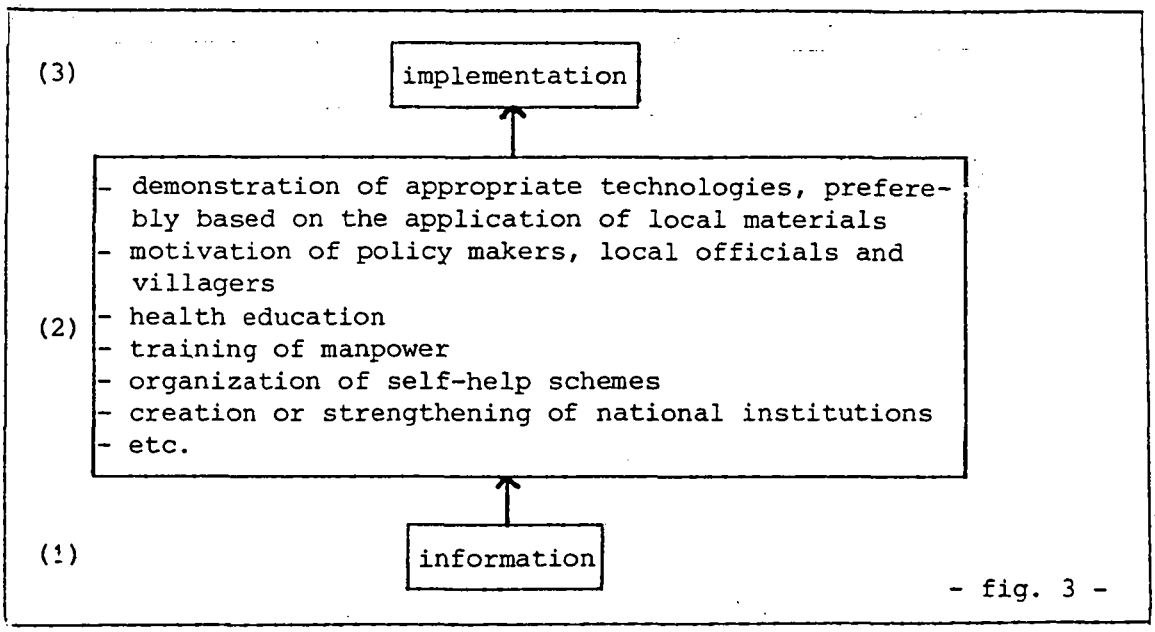
Some other IRC activities are of a more general and long-term nature. One is an appropriate technology programme that has provided the basis for the before-mentioned integrated approaches.
Other activities under the heading of study programmes concern the transfer and exchange of appropriate scientific and technical information. Apart from such various activities as the publication of a monthly newsletter in three languages (10.000 copies; Spanish edition in cooperation with CEPIS, Lima, Peru), the operation of a request handling service, and the collection and transfer of documents, specifically pertaining to water supply problems in developing countries, the Centre recently started the development of an international information programme.

THE IRC INFORMATION PROGRAMME

The IRC information programme aims at the development of a mechanism for the international transfer and exchange of information on rural water supply and sanitation. This mechanism is meant to support the improvement of the overall situation in the water supply and sanitation field in the developing countries.

This 'support function' is to be taken litterally, only too often the establishment of information systems has been considered as a solution-in-itself for any problem.

In fact, the place that information has in a scheme for the development of water supply and sanitation facilities can be pictured as below:



- fig. 3 -

The first stage (information) forms the indispensable basis for the second one, and not (directly) for the third stage (implementation).

Therefore, more information than on technology alone will have to become available; subjects, that will also be dealt with, include: planning, operation, maintenance, finance and administration, demonstration, community motivation, use of local resources.

In order to ensure an optimal flow of information, attention will also have to be paid to the infrastructure, that is needed from an information point of view.
Where necessary, assistance will be given to develop (or improve existing) information services.

In the programme's preparatory phase, a number of so-called 'programme development activities' have been identified, including:

- definition of scope of programme
- definition of users and their needs
- inventory of existing information sources and services

- information system design, a.o.
    - storage and retrieval procedures
    - multilingual thesaurus
    - request handling procedures
    - documentalist guidelines

Complementary to the before-mentioned development activities, 'output'-work is carried out, including:

- translation of water supply and sanitation information
- compilation of bibliographies
- set-up of water supply and sanitation journal

International collaboration is an essential element in developing and organizing this information programme. The major part of the work will -in principle- be done by national and regional centres in developing countries; it will be carried out, taking into account already existing capabilities and programmes in the various regions, in order to avoid duplication of work.

CONCLUSION

The need for relevant information in the field of water supply and sanitation in developing countries is immense.
The mechanisms for transfer and exchange of this information, for which the IRC information programme is expected to be a basis, may help to alleviate this need.

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