Working paper 1

TeleSupport Information & Communication model

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1. Introduction:

This paper has been prepared in an interactive process with TeleSupport project partners in 2006 to guide the set-up of the Information & Communication aspects of TeleSupport and arrive at a common understanding of the various functions. It is a working paper will be adapted to incorporate new experiences and views in the follow-up activities.

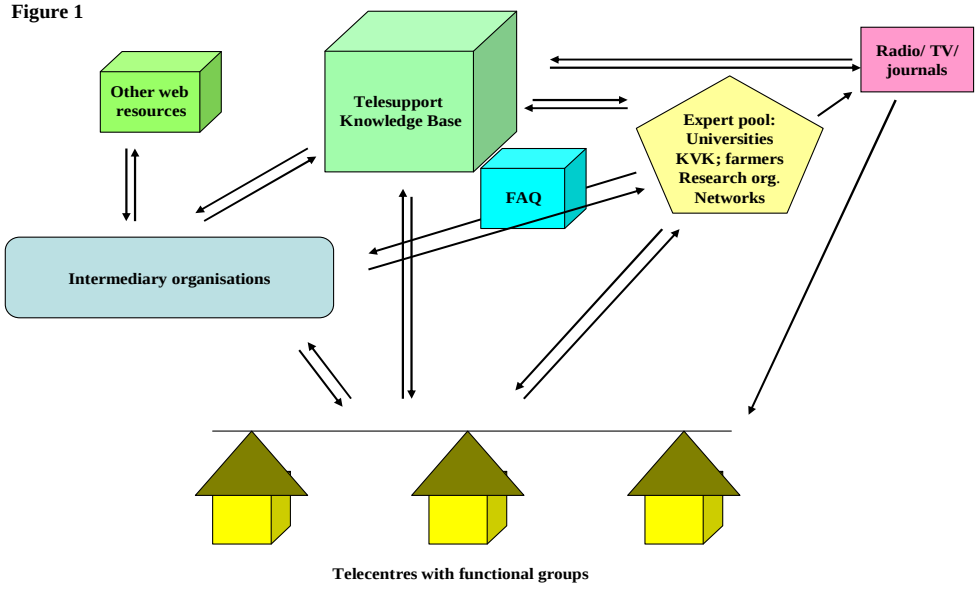
2. TeleSupport information and communication system

Various sources of information and knowledge can be identified (see below 2.a). Telecenters with functional groups of local users are central in the learning process. Functional groups can e.g. be women self-help groups (SHGs), or farmer groups focusing on common issues such as vegetable or rice production

The TeleSupport project makes available various information and communication tools to record relevant information and to enhance livelihoods of the rural poor. The TeleSupport information- and communication system is visualised below.

Information- and 2-way communication flow- Telesupport project

Figure 1



The information and communication flow in the TeleSupport project focuses on Good Practices (GPs). These can be defined as *'Technologies or Methods that contribute to sustainable agriculture and NRM'*. GPs should at least have a proven beneficial effect at local level for a short time-span and should be potentially useful for scaling up and application to other communities.

Key features are that they:

- sustain and enhance the natural resource base
- maintain viable ecology and contribute to sustainable livelihoods
- meet cultural and social demands and are socially acceptable
- contribute to the production of sufficient, safe and nutritious food
- be economically feasible

The GPs can focus on many different areas. In TeleSupport initial key thematic areas are 1) Soil fertility, 2) IPM, 3) Post-harvest, 4) Livestock with cross-cutting issues 5) "Gender in development" and 6) "Environment". Specific GPs cover topics such as methods of pest control of various crops, methods to improve animal health- or production, soil fertility improvement through composting or vermiculture. GPs can be documented for many other topics such as water management, the use of medicinal plants and participatory community mobilisation.

The development of GPs is cyclic in nature since information from local users invites feed-back from other actors. Application in other locations usually requires adaptation of the technology and can generate interesting new approaches. Changing circumstances such as climate change requires adaptation of practices to cope with the new conditions. It is therefore important for farmers to have a range of options available and be able to contact experts to fine-tune GPs for location-specific application.

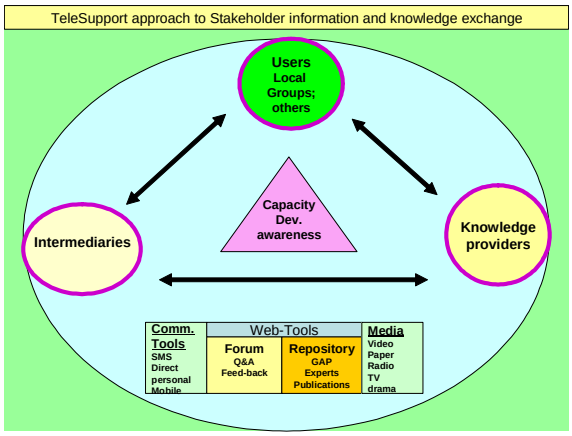


Figure 2 Scheme of stakeholders and tools in TeleSupport

Various actors play a role in the information and communication process.

- **'Expert pool' -** This pool consists of information providers and knowledge sources from various levels and background that generate knowledge that can be used to solve problems of local communities. It includes indigenous or local knowledge which is developed over centuries by local communities. Also the research system comprising of research organisations and universities' can provide relevant information.

Knowledge therefore can be generated and provided by experts from the following entities:

1. Local communities, women's groups, farmer groups or tribal communities
2. Krishi Vigyan Kendras (KVKs)
3. Research organizations
4. Universities
5. Thematic networks of experts
6. Community Based and Non-Governmental Organisations (CBOs)/NGOs

- **Intermediary organisations**. This group consists of NGOs, KVKs, farmer organisations and other community-based organisations that play a key role in supporting local communities. They are instrumental in identifying questions of farmer groups, scout for relevant information in the TeleSupport database and other web resources, contact experts and assure that the information on options reaches local communities timely. The latter can be done via online access, village visits or other means such as posting messages with answers in a central place in the village.

Moreover, intermediary organisations have a key role in training local users in web-based information use and guiding the process of application of the identified solutions. Good Practices usually require adaptation to fit the local situation in terms of agro-climatic, socio-economic conditions and farming systems.

Good Practices recorded in the Knowledge base can be given as options for local communities to solve local problems. In case GPs are not yet documented or not specific enough, the intermediary organisations can contact experts to ask for advice and prepare recommendations. Existing manuals or guides can be used, condensed or adapted. The questions can be recorded systematically and made available as FAQ thereby broadening the Knowledge base.

The TeleSupport project is developing a web-based ***information storage and retrieval model*** to anchor information and expertise. This is combined with a web-based ***interaction model for 2-way communication that*** allows dialogue between local communities and experts to fill knowledge gaps or to fine-tune or adapt the information contributed by other communities. This is further specified below.

- **Radio, TV and journals.** These media are important in disseminating the information about GPs and play a clear role in upscaling information.

- **Knowledge Base**. The TeleSupport Knowledge base that is built on the Infobridge platform plays an important role as a systematic and long-term repository of information. Information in various languages and forms (e.g. abstract, full text documents and videos) can be stored and retrieved. This can be complemented by information from other web resources.

3. Processes of web-based information storage and retrieval

The purpose of the TeleSupport project is to enable end-user communities to access information that provides solutions to key local problems. The information flow is as follows:

a. Identification and documentation of Good Practices
The partners in the TeleSupport project will identify the GPs and document them. Documenting GPs includes describing the approach/method of application with a concise summary, and all attributes that are needed to assess the relevance for other communities. Attributes include the geographical scope, the number of years it has been used, the persons and organisations involved in the development as well as any relevant documents, photos, videos clips or radio commentary. Under the TeleSupport project video clips and/or photographs will be prepared to illustrate selected aspects of GPs. Special emphasis will be given to critical factors that may help or hinder the successful application of the GP.

b. Upload the information on-line in the TeleSupport -InfoBridge Platform
The organisations that participate in the TeleSupport project will appoint at least one data manager. In addition to the core group of organisations this includes all partner organisations that will be trained during the workshops and that get engaged via PR. These persons will be trained in using the web-based platform and enter all the data, using the agreed TeleSupport data formats. Data will be directly visible to all TeleSupport partners, including details of person and time of data entry. GPs will be published, and thus available for public view, once they have been quality assured (see below)". There are actually two levels of quality assurance: The first operates to decide when a GP is ready to be made public. The second relates to feedback from users and other stakeholders

The upload will also include the videos/photos on the GPs produced by the various partners during the TeleSupport project.

c. Data quality check and quality upgrade
The main responsibility for quality checking rests with the Organisational Data Managers (ODMs). They control the quality of data entered on behalf of their organisation. The ODM can further decentralise data entry if and when required. IBF plays a limited overall supportive role in ensuring data quality; especially that organisation-data is entered correctly, information is complete and organisational relations are made correctly.

Once the data are entered and visible online, the data will be checked and feedback will be given. The TeleSupport platform will have a feedback mechanism that will allow users to provide feedback and comment on the GPs. This will provide further valuable information on the use of the GPs. Expert Panels may be established to review GPs and provide guidance on application. Also peer reviews by other farmer groups will be pursued in future.

A tool for filtering out GPs is by rating. A mechanism will be set-up for expert networks and probably also general users to rate the relevance of the entered GPs. This is in order to provide rapid access to the most valuable and proven GPs to their constituencies. Another tool for assessing relevance of GP s is by direct interaction. Questions can be posted to intermediary organisations, experts of the networks or originators of the GPs as part of the Communication Model.

d. Information provision and use by local communities

Functional groups in local communities will be able to input, search and review on-line GPs that are relevant to local problems. This will be facilitated by the intermediary organisations that already work with the Functional groups. The intermediary organizations will ensure that internet connections are available in the Telecenters and that the Functional group will receive initial training in using the web-based platform.

Intermediary organisations will identify selected GPs and support local communities in documenting and placing them on the InfoBridge platform. The intermediary organisation will generally take responsibility for describing GPs. In the TeleSupport project the local communities, especially women's groups, will be trained in making appropriate video clips to illustrate the GPs. On other occasions women will support GPs using radio broadcast, drama and other media.

Besides contributing GPs, local communities will also be able access information from the Internet to solve local problems. The information found on the TeleSupport -InfoBridge platform, or on other key sites, will be part of the discussions on solutions with the Functional groups. Where possible, video clips will be presented on a wide screen and a printed account of the GP in both English and the local language will be provided to help in the implementation of the advice.

The Functional groups will receive user feedback on the efficacy of the GPs and make this available via an on-line feedback form on the platform.

e. Information use by research and development organisations

Individual users and facilitated farmer groups/ SHGs at local level are the prime beneficiaries of the project.

Other indirect users can be identified, including:

1. Extension agencies
2. Agricultural universities
3. KVKs
4. Media, radio/TV
5. Commodity dealers

These users differ in the way they benefit from the shared aggregated information pool. For the extension agencies and KVK, the information and PR material could be used directly in their work. For the media, TeleSupport offers a rich resource that can provide the building blocks for articles and programmes.

4. Models for 2-way communication

TeleSupport will pilot 2- way interaction between Functional Groups in local communities and pools of experts.

Several modes of 2-way communication could be envisaged:

- Radio and TV programs that use experts to address questions from end-users
- Unstructured e-mails, sent directly by end-users, to experts
- Feedback and interaction on GPs specifically on the web-based platform
- Structured and facilitated interaction with expert pools via an on-line dialogue platform. These can be in real-time or asynchronously
- Non web-based interaction e.g. via visits by the intermediary organizations using off-line tools (e.g. flyers) or laptops with videos or PowerPoint presentations.

Unstructured e-mails and the feedback interaction on the platform will both be incorporated in the system as routine approaches. In addition, there will be a pilot of 2-way communication focusing on a facilitated interaction with an expert pools via an on-line dialogue platform. This has 3 dimensions that will be discussed hereafter in more detail:

a. organisational
b. technical
c. managerial

a. Organisational aspects of the 2-way interaction: the combined expert pool
An essential part of the 2-way interaction is the expert pool. Experts should be informed about the project, be able to commit their time, be able to address the questions of the end-users and have access to relevant means of communication.

The pool can consist of experts at 2 levels:

- *Local- district level*. This group of experts is expected to be able to address questions that relate to more generic issues such as existing facilities, regulations and available advice and extension material. This group can be considered more as facilitators.
- *National- international level*; these experts are specialists in certain domains and are able to advise on the adaptation of GPs. Experts in the 6 key domains will be identified and contacted for interest and availability during the pilot. This relates to experts of KVKs, Indian and selected European research organisations e.g. NRI, experts in NGOs and national and international thematic networks. The participation of experts will be on a voluntary basis.

The partners including associated networks will enter data on the experts on the platform and invite experts to complete their data, so that their contact data are available.

The experts will address questions that remain after GPs have been reviewed on-line. Although the TeleSupport project will provide well prepared GPs, they may not contain all the answers to questions that could be raised locally. Some questions may not be addressed fully, whereas some potentially interesting GPs require adaptations before they can be applied in communities with other cultural or agronomic circumstances.

b. Technical aspects of the 2-way interaction
Several options exist for use of a dialogue platform.

A Dialogue Platform (Forum) has been set-up for TeleSupport. It can be used for *asynchronous interaction*, e.g. members of a local group can post a question on the Forum which is made accessible on-line to the groups and experts. Via emails experts can be alerted to the new question and can prepare an answer, usually after a fixed time of 1-2 days.

This asynchronous interaction could be complemented by *direct interactions*. For this increasing possibilities exist such as on-line chat sessions in MSN, Yahoo. The mode of interaction can be typing and will increasingly be oral via the various VOIP programs like Skype. An important aspect is that selected experts are committed and available on-line at that time of these interactions.

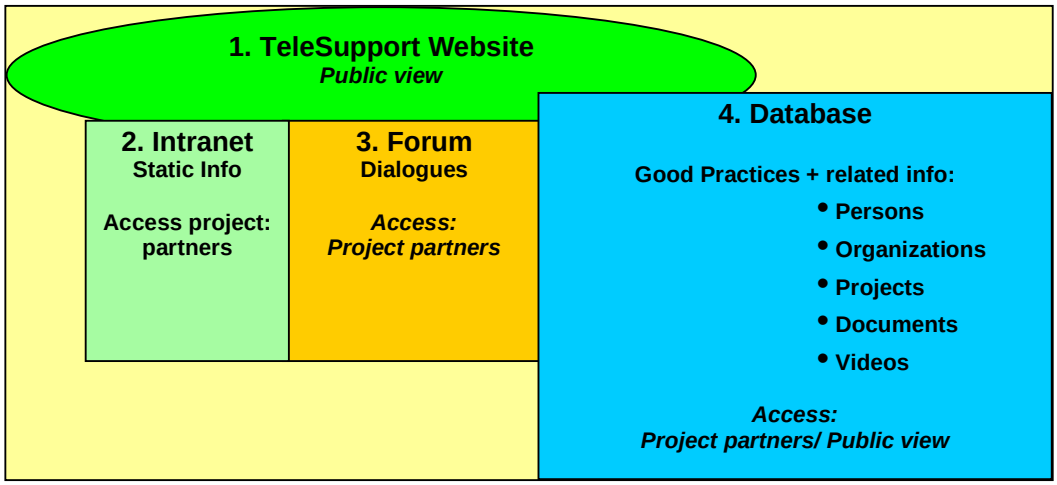
A platform used for asynchronous interaction by Chilean extension services 'Sercotec' provides pictures, details of experts and ratings of the answers by users. See www.infobridge.org/asp/search_outputs.asp?selOrg=sercotec
Questions that are asked several times are put on-line as Frequently Asked Questions (FAQs) to guide future users.

c. Managerial aspects of the 2-way interaction: the process
Asynchronous interaction
Questions can be addressed on-line, asynchronously. The experts will attempt to provide answers themselves or refer questions to the expert pool. Another option is that the intermediary prepares the answers based on the advice of experts. A certain time limit for responses should be set for delivering answers. A short period of 2 days maximum may help to maintain the users' interest. For on-line responses an email notification system should be in place to insure timeliness.

Synchronous interaction
In order to test the 2-way interaction with the expert pool, direct interaction can be explored. For one of the key themes a selected group of experts can be on standby and a dialog with local groups will be conducted via online tools e. g. Skype, Yahoo groups or MSN. An effective dialogue requires a structured dialogue with a facilitator and it is best that participants provide feedback on the interaction.

5. Web-based TeleSupport communication tools

Whereas TeleSupport also uses traditional ICT approaches, great emphasis is placed on use of web-base tools. A combination of web-based tools is used to underpin the repository-, dialogue- and presentation function as shown in the schema below.



Ad 1. The website www.telesupport.org will serve as a first introduction to TeleSupport. For the general public a description will be accessible as well as PR material.
A Content Management System (CMS) will be used so that dynamic information like news can be provided by various partners.

Ad 2. For internal communication and information exchange an Intranet will be made available. The Platform includes an intranet where partners have access to additional information resources. Internal news, agendas and documents can be stored and accessed here by partners only.

Ad 3. A dialogue Forum will be available to TeleSupport partners to support dialogues and interaction on GPs or other topics. Open source software is used as a basis and customised to suit the needs of TeleSupport

Ad 4. In the InfoBridge database that acts as a repository for TeleSupport, the GPs, including related information on experts, projects and documents will be accessible to TeleSupport partners. *www.infobridge.org*
The information is searchable by sector, TeleSupport focus, organisation etc.

Annex 1: 1 & 2-way communication model for interaction with experts on GPs