Saph Pani

Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India

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Communication Strategy

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1 Context

Saph Pani is an EU funded collaborative research project in which a consortium of 20 partners from India, Europe, Sri Lanka and Australia are involved. Objectives for training and dissemination measures are defined in the Description of Work:

- Transferring knowledge through existing education and training networks to ensure that the knowledge and skills generated during the project are shared with the wider network of end-users and are finally implemented.
- Offering specific oversight training courses targeting different stakeholders involved in natural systems for water treatment in India, in close collaboration with related WP leaders, participating academic/training and research institutes and water utilities in India.
- Disseminating information on project research activities, progress and outputs through project website, newsletters, publication in international peer reviewed journals and presentations in different scientific meetings, IWA conferences and other water events in India and abroad.
- To organize a final scientific conference to disseminate the main results and key achievements of the project.

The described objectives belong to the sphere of human interaction and communication. A communication strategy was developed in order to reflect the planned communication and make the most of the allotted resources. The communication situation within multinational collaborative research projects was considered.

2 Intercultural Communication

Saph Pani is a collaborative project in which partners from different countries and with different cultural background are involved. Individuals from different cultures attempt to work together on scientific matters, to exchange information and interpret or understand partners from other countries. The project communication will be influenced by the intercultural aspects.

Intercultural communication considers the wide range of communication difficulties that can appear when individuals from different religious, social, ethnic, and educational backgrounds communicate. It seeks to understand how people from different countries and cultures act, communicate and perceive the world around them. The factor culture determines how individuals encode messages, what kind of mediums they choose for transmitting, and the way messages are interpreted. Aside from language, intercultural communication theory focuses on social attributes, thought patterns, and the cultures of different groups of people. Intercultural communication is referred to as the base for international businesses (Cai, et al., 2000).

Since individuals from different cultures encode and decode messages in different ways the chances of misunderstanding increases. A first step towards successful communication is to be aware of the cultural differences. Thus frustration for members of both cultures can be minimized. Aspects that influence intercultural communication situations are:

- communication abilities
- culture of origin
- importance of the relationship (negotiator or researcher)
- knowledge of other cultures reflected in the global community
- motivation and skills to interact with partners

For succeeding in intercultural communication it is important that individuals deal with the foreign cultures and communication conventions (Bennett & Bennett, 2004). This will minimise the risk of making mistakes. Setting up a code of practise so that everyone may understand nature and scope of interaction can be helpful.

3 Culture and communication in India

The communication objectives are mainly to be realised in India. For setting up a communication strategy it is important to consider the communication situation in India, including plurality of culture, religion, and language.

India is marked by a great diversity in culture and religion. The Hindu tradition is most common with about 80% of the Indian population. Other Religions are Muslims (13%), Christians (2%) and Sikhs (2%). Also Buddhists, Jainists and Parsen live in India. In addition to the religious diversity India also is marked by a great linguistic plurality. Next to the official languages Hindi and English other 21 regional languages are officially recognized (Schneider, 2007).

3.1 Media

Freedom of press is an essential part of Indian democracy and India's media scene is agile and self-confident. The largest media companies are:

- BCCL (e.g. Times of India Group)
- Hindustan Times
- ABP (e.g. Ananda Bazaar Patrika, The Telegraph)
- Dainik Bhaskar
- The South Indian Malayala Manorama- and Eenadu-Group
- The Hindu Group
- The Indian Express Group
- Living Media (e.g. India Today Group)

Most of the media companies have diversified from print media to TV- and radio stations as well as internet services.

In January 2011 about 148 million Indian households owned a television. Today approximately one-third of these households watch the state-owned television broadcast service Doordarshan. Until the early nineties Doordarshan had had a monopoly position. Later on private (commercial) satellite and cable television were introduced to the market. The new kind of television has a great growth rate (German Federal Foreign Office, 2012).

In 1992 only 1.2 million households used cable and satellite television. Today more than 100 million households are using cable and satellite television. Most cable operators offer DW-TV, BBC World Service, and CNN. In total there are over 600 Indian TV channels as of January 2011.

The number of private TV news channels increases continuously. Those channels compete with each other to reach highest viewer levels. Private TV news channels reach mainly the urban elites. NDTV, India Today Group and TV 18 Group broadcast their program in English and Hindi-language channel. Moreover commercial broadcaster offer a variety of regional news programmes and further programmes in different regional languages (German Federal Foreign Office, 2012).

India's Internet market is growing rapidly. The number of Internet users has increased from 5 million (2000) to 121 million (2011). This represents 8 % of India’s population.

Print media are numerous in India and in many cases of high quality. English-language daily newspapers have a stake of 17 % of the total circulation of all newspapers. With a stake of 36 % Hindi newspapers have the bulk. The remaining stakes are spread over several regional-language newspapers. Overall there are over 70.000 registered newspapers and magazines with a total circulation of 350 million (German Federal Foreign Office, 2012).

4 Science communication in India

In India efforts have been made from governmental and non-governmental platforms to enhance the public understanding of science. India's science communicators have used various modes of communication to reach out to the masses. As a result, a lot of infrastructure, software, and human resources are available in the country. Given the vast diversities existing in India, each has its own significance and utility (Patairiya, 2002).

4.1 Print media

There are scientific journals (popular and technical) published by the government. Additionally, several national and regional daily newspapers produce weekly science pages.

4.2 Audio-visual media

On All Indian Radio (AIR) a variety of science-based programmes are available such as Radioscope, Science Today, Science Magazine and Science News. Science Programmes have also been broadcasted by a number of television channels. For example, a film serial on the history of science and technology in the Indian sub-continent (entitled Bharat Ki Chaap) was produced by NCSTC and broadcasted on Doordarshan in 1989.

4.3 Interactive media

Interactive forms of science communication are science exhibitions, science fairs, demonstrations, seminars, workshops, lectures, scientific tours. They have the advantage of giving the possibility to communicate in a face-to-face-mode.

An example for interactive science communication is the Vigyan Jatha (Patairiya, 2002). During this event, groups of scientist visit villages and interact with local people. They spread information about science relevant to their day-to-day lives.

Information technology has given a new way of science communication. Digital media is to be an effective way for illustrating difficult scientific concepts. It had made science communication more accessible both to handicapped and less educated people (Patairiya, 2002).

5 Saph Pani Communication Strategy

After the characteristics of intercultural communication, Indian communication in general and Indian science communication have been illustrated, a communication strategy for Saph Pani will be described in the following paragraph. The information in Chapter 2 to 4 will be integrated into the strategy.

5.1 Structure according to Lasswell

In November 2011, a draft communication strategy was presented on the Saph Pani kick-off meeting in Dehli. The planned communication was structured according to Lasswell ((Wikipedia, 2012); Figure 1).

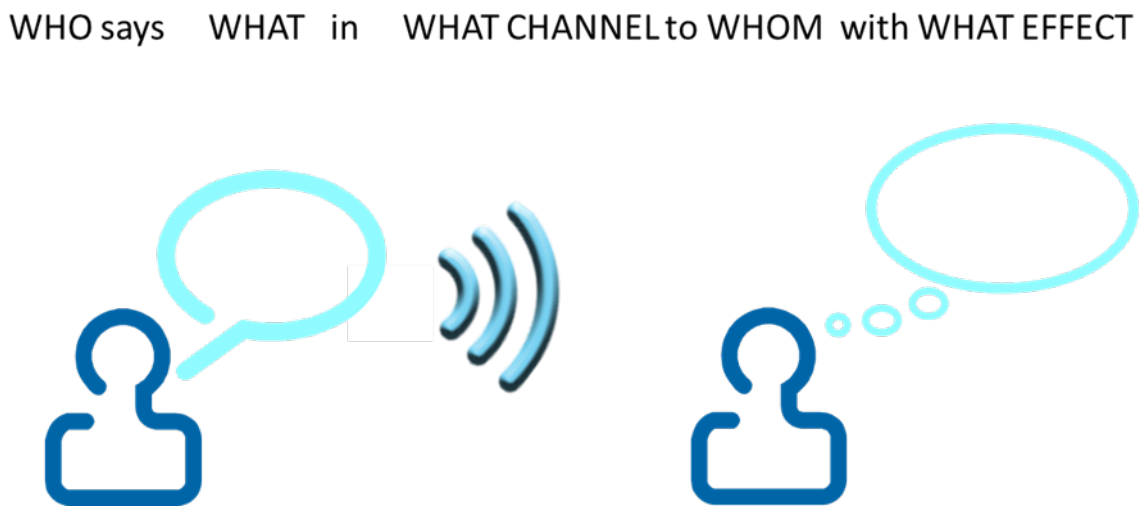

Figure 1: Flow of communication (Nättorp, 2011)

The following communicator-categories were identified (Figure 2):

- Project partners, work package (WP) leaders
- Professionals from Indian water utilities
- Professionals from companies of the water sector
- Master Students
- PhD-Students
- Researchers
- General public international
- General public in India.
- Indian authorities (national and state)
- Professionals from European water utilities

WHO says	**WHAT** to	**WHOM** through	**WHAT CHANNEL** to	**WHAT EFFECT** ?
Professionals from Indian water utilities WP-Leaders Partner Universities in India	Project Goals, Progress, Output Contacts (Networking) Knowledge NWT Knowledge BF Knowledge SAT Knowledge MAR Knowledge MAR QC-Risk Knowledge Wetlands Knowledge Pre-/ Posttreatment for NWT Contacts (specific questions) Policy recommendations	Professionals from Indian water utilities Professionals from companies of the water sector Masterstudents PhD-Students Researchers General public in India General public international Indian authorities, national and state Professionals from European water utilities	Existing Educational Network Existing Training Network Targeted Course Website Newsletter Scientific Paper Conference India Conference International Own Conference Leaflets, printed and electronic	Educate students on natural water treatment (NWT) techniques and utility Train professionals on natural water treatment techniques and utility Awareness raising in the public Create networks for NWT-Activites

Figure 2: Overview of communication planned for Saph Pani (Nättorp, 2011).

The communication channels foreseen in Saph Pani and potential alternatives will be briefly described below. The groups that can be reached with each channel are summarized in Table 1.

Table 1: Communication activities of Saph Pani and their target groups

Communication activity	Target groups (Communicator-categories)
Website	Each target group can be reached. The target group “General public in India” can only be reached if they have internet access.
Newsletter and leaflets	Each target group except “General public international” can be reached, but distribution by project partners and networking is necessary. Only the literate fraction of the target group “General public in India” can be reached.
Scientific Papers	PhD Students and researchers can be reached by peer reviewed papers. Other science related publications have larger audiences.
Interactive Media	Each target group can be reached except “General public international” and “General public in India”.
Networking	Each target group can be reached except “General public international”.

5.2 Website

The website www.saphpani.eu is created for external and internal communication. The internal area can be used by project partners. In this area partners can download documents or can exchange and share documents in project groups.

The external part of the website is used for presentation of the project: the consortium, the objectives, the study sites and the work plan (Figure 2). Continuously news, links, and downloads of deliverables and other material is added as the project proceeds. There is also a heading “Ask the expert” where interested people can ask specific questions relating to specific subjects. Through the website the project partners are able to reach all target groups which have access to the internet (Table 1).

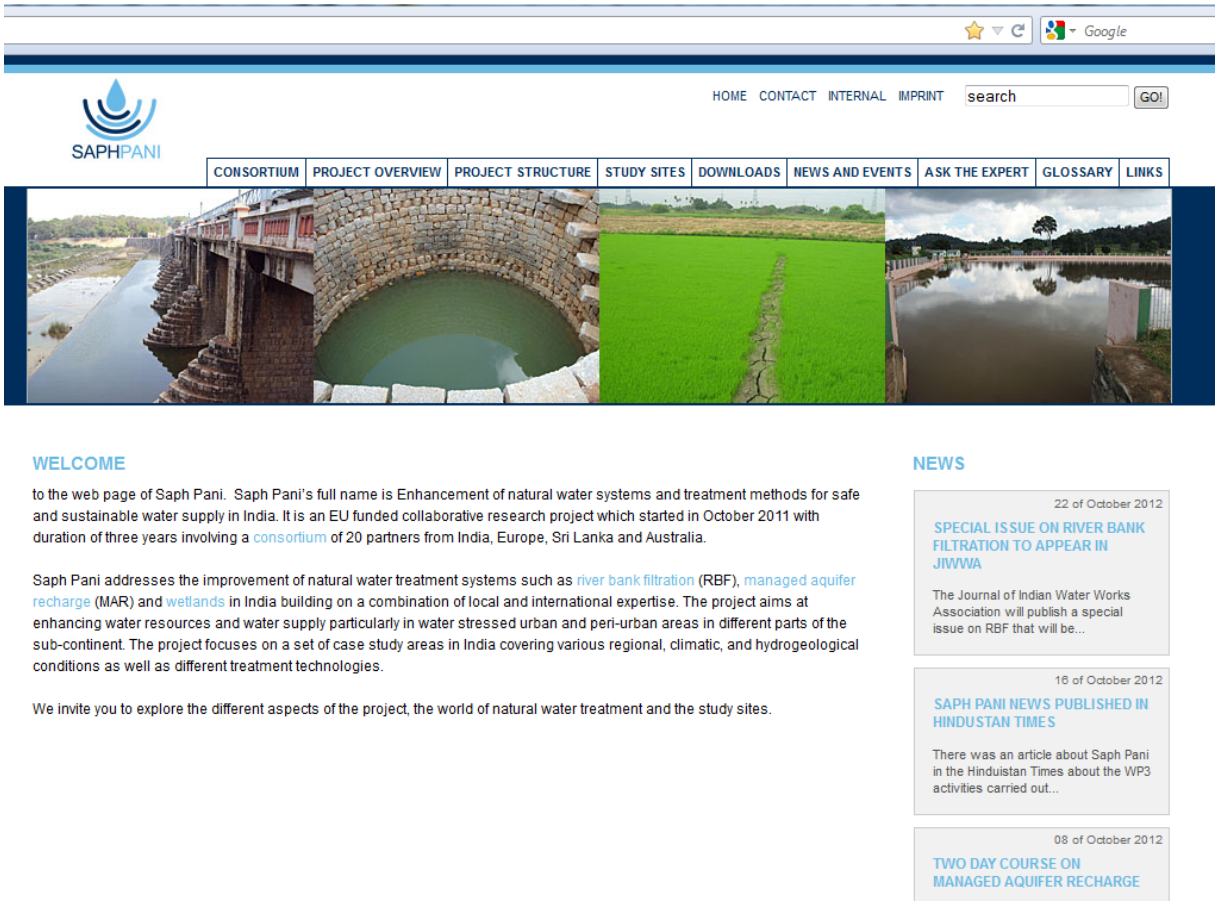

Figure 3: Screenshot of the Saph Pani Homepage

5.3 Newsletter and Leaflets

The consortium of Saph Pani publishes a biannual newsletter (Figure 4). This newsletter is sent to all partners who distribute it to their network. The newsletter is also published at the website www.saphpani.eu and can be downloaded as pdf- file. It gives information on latest updates, events, progress, and project deliverables.

The newsletter is mainly an external communication instrument. The news are mainly for persons related to the water sector, but accessible to all groups provided they are literate.

Leaflets presenting results of the project will be made available in printed and electronic form to national and state authorities as well as representatives of professional associations. These can in turn distribute the leaflets to the general public.

SAPHPANI

Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India

Biannual Newsletter 1
5th of April 2012

Saph Pani Launched

India has 18% of the world's population, 1.15 billion people, but access to only 4% of world's fresh water resources. Today, 70% of India's irrigation needs and 80% of its domestic water supplies come from groundwater. This practice has led to rapidly declining groundwater tables in most states in India and is no longer sustainable.
Saph Pani is a new EU funded collaborative research project which started in October 2011 with duration of three years involving a consortium of 20 partners from India, European Union, Switzerland, Sri Lanka and Australia. Its full name is "Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India" and it will address the water challenges of the 21th century. Saph Pani will build on already existing Indian projects for natural treatment and storage of water identifying potential for their improvement by applying hi-tech measurement equipment and conducting field trials. For more information, visit: www.saphpani.eu

Saph Pani at the India Water Week

The Saph Pani project will be presented by project manager Anders Nättorp from the FHNW (Fachhochschule Nordwestschweiz) at the India Water Week (IWW). Also during this week, Saph Pani's first dissemination event, a training course on bank filtration, will be held. The event is organised by the National Institute of Hydrology, Roorkee, India and the University of Applied Sciences Dresden, Germany. The objectives are to provide fundamental knowledge about bank filtration for natural treatment of drinking water and for adopting it on a larger scale in India. More information on the event can be found here.

Saph Pani in the Indian news

The Hindu, one of India's leading English newspapers, reported on the 23rd of March, 2012 about the proposed research at the Chennai study site. You can read the whole article here.

Saph Pani Project presented at DSDS Meeting

Professor Elango from the Anna University Chennai presents the Saph Pani project at the 12th Delhi Sustainable Development Summit (DSDS). You can download the presentation here. Find a summary about the event here or follow this link for more information on the DSDS event.

FUB and Anna University intensify collaboration

A delegation of the FUB (Freie Universitaet Berlin) visited Anna University, Chennai on Friday the 24th February 2012. This meeting was possible due the existing collaboration between these universities under the Saph Pani project. The members of the delegation agreed to establish a Memorandum of Understanding in order to strengthen their cooperation.

Delegates of the Freie Universitaet Berlin are welcomed by the Vice Chancellor of the Anna University Prof P. Mannar Jawahar (centre) and faculty members.

DHI-WASY informs partners in German

DHI-WASY informs partners in German about the Saph Pani project and the successful Kickoff-Meeting in Dehli on 3-4 November 2011.
Download Newsletter

Figure 4: Cover of the first Saph Pani Newsletter

5.4 Scientific Papers

Publishing in scientific papers is an external communication activity and can be used for communicating results and increasing the awareness level. Researchers and PhD students can be reached by peer reviewed journals. Branch journals and popular scientific magazines can make information available to all target groups.

5.5 Interactive Media

The Saph Pani communication instruments "conference international", "conference India" and "targeted courses" fall into the category of interactive media. Interactive Media have the advantage of giving the possibility to communicate in a face-to-face-mode. Conferences deliver insight into methods, results, output, and progress. They also give the opportunity for discussions, demands, and exchange of information. Conferences can give cause for further communication activities: An article concerning the conference can be published on the project-website, the conference can be noted in the biannual Newsletter and an article or an announcement can be placed in scientific Papers. In addition TV and radio might be invited.

The project partners can meet other participants in the water science community and discuss in a face-to-face-situation (e.g. during the practitioner group meetings), relationships can be consolidated, and networking can be intensified. With interactive media, the project partners

are able to reach all target groups except the general public. Interactive media have also an internal communication dimension, spreading knowledge inside the Saph Pani consortium.

5.6 Networking

Communication in India is based on relationships (Crossculture Academy, 2012). According to Lewis (1999) maintaining relationships often has higher importance for Indians than exchange of exact information.

Networking as a relationship-based communication instrument therefore is most important for communicating and making an impact. Networking supplements other communications channels. For example existing networks such as educational and training networks can be used for training courses. Networks can be used for recommendation: project partners can use their individual communication networks to arrange new contacts, make the project website known or articles published in scientific papers known. The partners can distribute the project newsletter and recommend project conferences and courses. In general, they are able to inform interested people of the project Saph Pani. Nearly each target group can be reached by networking communication (Table 1). In addition, target groups themselves may start to inform members of other networks about the project. Information is transmitted by a reliable contact will have a high credibility and be given high attention.

5.7 Additional Options

The paragraph Science communication in India contains some communication vectors not included in the communication activities planned in the Description of Work of Saph Pani. These possibilities could be explored if additional funds or the support of partners can be secured.

5.7.1 Audio-visual media

As a variety of science-based programmes are available on All Indian Radio (AIR) and have also been broadcasted by a number of TV-channels. For reaching target groups which do not have access to the internet (e.g. public in rural sectors) or which do not read scientific papers, using television and radio might be useful.

5.7.2 Folk media

Folk media like puppet shows, street plays, stage performances, and folk song and dances successfully are able to reach target groups where other forms of media have limitations. These traditional forms of communication have been exploited as alternative media for science communication (Patairiya, 2002). They are entertaining and offer a two-way-communication. Where print and electronic media have limits caused by literacy levels and accessibility, folk media can take a crucial role. Folk media might be personnel and cost intensive compared to web-based or printed media.

6 Conclusion

The communication concept defined in the Description of Work of Saph Pani has been analysed using a basic communication model. The communication channels and the stakeholder groups were structured. The foreseen communication channels were compared to the channels available and those commonly used for science communication in India.

It can be concluded that the Saph Pani communication concept addresses all the relevant stakeholder groups and uses communication modes that are likely to function well in India. The importance and usefulness of the networking aspects in the Saph Pani communication is highlighted. The inventory of Indian science communication experience shows that audio-visual media can also be used to reach groups without access to the used media (Internet, scientific print) and illiterate groups which cannot access the leaflets.

7 Glossary

Science communication

With science communication science-related topics can be presented and explained to non-scientists. It includes science exhibitions, science journalism, science policy, and science media production (The Centre for Science Communication, 2012). The Integration and Application Network (USA) defines science communication as "successful dissemination of knowledge with a wide range of audiences including non-scientists".

Communicator

A communicator is a person, who acts in communication. In interaction a communicator sends messages as well as he receives and uses them. For achieving communication aims, a communicator uses communication activities and communication instruments (Metz, 2007).

Communication activities

All measures which a company or a consortium uses for communication aims (Bruhn, 2010).

Communication instruments

Communication instruments are groups of similar communication activities, e.g. media advertising, sales promotion, direct marketing, and public relations (Bruhn, 2010).

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