

# Management Brief

The International Irrigation Management Institute

## THE COMMUNICATION AUDIT: A FIELD-METHOD FOR ASSESSING COMMUNICATION IN IRRIGATION ORGANIZATIONS

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### INTRODUCTION

Irrigation managers are decision-makers. To make decisions that result in effective irrigation system performance, they need timely and reliable information. A manager's access to information about water timing and irrigation system operations, for example, depends on the good "health" of communication flows within his agency, information about crop-water needs and the effect of water deliveries depends on effective communication between his agency and the farmers. Attempts to improve the flow of information between an agency and its clients should begin with an evaluation of actual communication activities within the agency before trying to evaluate the complexities of communication within the client community at large.

Evaluation is often defined as personal judgement, formal measurement, and comparison between objectives and performance. Its goal is to improve decision-making by providing comparative information regarding the progress of some activity. The communication audit provides such information.

This *IIMI Management Brief* will familiarize the reader with the concepts involved in using a communication audit as a management tool for helping to improve irrigation system performance through improved communication within the agency responsible for system operations. It will discuss some of the methods an irrigation manager might use to evaluate the effectiveness of communication within his own unit, and it will explain what a manager will encounter if a communication audit is conducted on his unit by outside auditors. In the first case, this knowledge is important because it expands the management tools available to a conscientious manager; in the second, such knowledge will assist the auditors in providing the best audit possible.

### CONCEPTS

A communication audit is a systematic process of gathering data in three areas: 1) communication climate, 2) communication function, and 3) organizational and communication structure.

*Communication climate.* The communication climate consists largely of the collective perceptions that employees have about the quality of communication relationships and the adequacy of information in an organization. These perceptions affect the em-

ployees' morale and opinion of the organization, and thereby influence their ability to work effectively. The communication climate is more crucial in creating an effective organization than communication skills or techniques taken by themselves. An understanding of the dynamics which exist between the kinds of messages, channels, and technologies, and the kinds of people who work in an organization is crucial to assessing the communication climate.

*Communication function.* Communication in an organization is effective if it helps employees interact in ways that produce and maintain the organization's products, services, and systems, and helps the organization itself operate successfully in a particular social, cultural, and politico-economic environment. An organization that cannot grow and change internally as a response to outside changes will not be able to perform work that satisfies the needs of employees and clients alike.

*Communication structure.* Communication structure refers to the pattern of regular and repetitive interactions in a communication network. An audit focuses on changes occurring in the patterns and how the changes affect other organizational characteristics. A single change in the network of communication relationships can ripple throughout the entire organization and have

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immediate or delayed, temporary or permanent effects on the organization and its members. Communication networks in an organization tend to change over time for several reasons: 1) the outside environment changes causing uncertainty and compensating activity; 2) the membership of the organization's social and task groups grow and change; 3) tasks increase in number and complexity, and the work-force changes accordingly; and 4) changes occur in the interplay between power, authority, and responsibility within upper-level management. Clearly, structure impacts on both communication climate and function as they impact on each other to create a continuously changing organization.

## METHODS FOR A COMMUNICATION AUDIT

A communication audit must find out what is happening with communication in an organization. To do this, it compares communication activities with other activities in the organization, such as labor productivity and product output. And, it compares these activities at several points in time, or it compares them at a single point in time for several different organizations or units within an organization. Thus, to be really useful, a communication audit should be a study made over time in order to reveal persistent communication activities as well as trends in the interpersonal dynamics operating within the organization. Such a study uses the following format: 1) pre-study, 2) formal communication audit, and 3) post-audit follow-up study.

### Pre-Study

Timing is important in a communication audit. For an auditor to "drop-in" on an organization or a manager to conduct an independent audit without regard for periodic business cycles like inventory, activities like hosting a nation-wide conference, or staff reassignment is to risk gathering biased data. Therefore, it is essential to know something about the organization before setting foot on the grounds. The Pre-study should consist of at least a general survey of the organization and a review of the literature or products it generates.

*Organizational survey.* This survey consists of discussions between the auditors and management, and consultations with individuals in both the public and private sectors who have done business with the target organization. Through these contacts, the auditors try to understand something about the organization's operations, its input-output economics, its formal management structure, its procedures and rules, its personnel movements, and, hopefully, the identification of organizational decision-makers and authority figures. The goal is to obtain enough understanding of the organization to focus the formal communication audit.

*Product analysis.* The product analysis is a comprehensive assessment of the organization via its publications, products, and records. The information gleaned from such sources is coordinated with that from the survey, and the result serves as a baseline from which certain comparisons can be made. It also provides information helpful in making decisions about how to approach the formal audit and which instruments will produce the best data.

### Formal Communication Audit

The audit itself is the application of a six-stage mix of research methods for identifying both the over-all communication system in an organization and that organization's specific communication activities. This mix provides: 1) an organizational profile of participants' perceptions about communication events and operations, 2) a mapping of the organization's communication networks, and 3) a profile of actual communication behaviors.

Communication in an organization is ever-changing. It is a dynamic mixture of behaviors, attitudes, and value systems which are influenced by, and simultaneously influencing, the organic structure of the organization and the environment in which it exists. The techniques discussed are designed to attack the problem from as many angles as possible. However, the results of any single audit will show only what communication is really like in the organization *at that moment in time*. The time involved in a complete audit can vary from a few weeks to several months

depending on the size of the organization and goals of the audit. Although the communication audit is discussed as a system of research tools, managers can use some of the techniques independently.

*Questionnaire.* One or more formal questionnaires can be administered to all or a random sample of employees. The sample can be stratified to reflect a hierarchical organizational structure. The questionnaire can be designed to gather in-depth information about a few specific areas delineated during the pre-study, or it can focus on a broad array of topics. Certainly demographic questions should be included, but questions can also be asked about specific operations, organizational and personal goals and objectives, adequacy of communication and information flows, and attitudes and opinions.

*Personal Interviews.* Interviewing people is time-consuming and expensive; however, it reveals a quality of information which questionnaires alone cannot provide. The auditors should interview all management personnel, a random sample of employees at lower levels, and the group that had been previously identified as decision-makers and/or authority figures. Interviews also permit the auditors to follow-up promising lines of inquiry derived from the pre-study or from the results of questionnaires.

*Communication logs.* A communication log is an exact daily record of communication activity for a particular individual. Most often management is requested to log the time of communication, the channel used (i.e., telephone, memo, etc.), the source of incoming messages and the receiver for those being sent, and perhaps the general content of the message. The log is maintained continuously for the designated time period, usually 2-3 weeks. Other logs, called "traffic studies," are maintained by secretaries, switch-board operators, and/or internal messengers and mail service personnel to provide an alternative source of information about communication traffic.

*Participant observation.* One way of gathering information about communication in an organization is to have a trained observer watch people interact. The observer can attend meetings and use

assigned codes to record non-verbal communication behavior, for example. Observation can also be used at the coffee break or in the lunch room to get some idea about informal communication networks and the effects of gossip. In this way, the added dimension of interpersonal communication can be overlaid on the more quantitative data to provide depth and richness to the audit. However, the observer must be careful not to influence interaction by his presence or to invade privacy.

*Physical analysis.* Communication is affected by the layout of the offices and rooms in which it takes place, the proximity of the actors, the kinds of equipment in use, and the physical constraints on interaction. Such physical attributes of the organization and its equipment can have a profound effect on interaction. Again, this analysis can help explain other analyses or enrich the study.

*Network analysis.* Communication network analysis is a method of research to identify communication pathways, roles, and constraints in a given network by analyzing communication flows. Every member of the target organization (the boundaries must be clear so that everyone concerned is included) is asked to indicate his or her recollection of communication interaction with the other designated members of the network. It is important to get responses from everyone so that missing data does not bias the results. Furthermore, because networks can exist at many levels in the organization, it is vitally important to clearly specify the type of communication under investigation (e.g., written messages about task-related matters, face-to-face interaction of a social nature, etc.).

Because organizational networks tend to be complex, network analysis is usually done on a computer. Computer programs for network analysis are of three types: 1) those that simply aggregate statistical data about the employees, 2) those that divide the employees into subsets according to common factors (block modelling), and 3) clique or cluster detection. The latter type, although more complex, is of more value than the others to an audit because it attempts to identify cliques and small groups according to pre-set criteria. From

the results, particular roles can be assigned to the employees according to their place and function in the communication network and a "map" drawn to illustrate commonly used communication pathways.

### Post-Study and Follow-up

The timing of the post-study follow-up should be determined as part of the overall strategy for the audit. Normally, there should be a delay of several months. A follow-up questionnaire for the entire population or for a random sample and based on the results of the audit can add immeasurably to an understanding of organizational dynamics and change. Likewise, a selection of personnel for subsequent personal interviews can identify changes which may have resulted from such factors as a management reorganization. Interviews can also probe more deeply certain questions that may have arisen during the analysis of the audit data. It is important to do another network analysis. Because the network analysis is based on self-reported data, the validity of a single analysis tends to be suspect. Data that correlate highly across time tend to show the more durable characteristics of the network. Furthermore, changes show up clearly as positions of the actors shift. If such shifts correspond with other information, the auditors can assume they are observing the results of real communication dynamics.

### CONCLUSION

Generally, the communication audit terminates with a final report. This often consists of: 1) an oral report with a questions and answers session, 2) an executive summary which focuses on recommendations, and 3) a complete report which includes the results of all the analyses, a cost accounting, and a record of the methodology used and actual data collected for subsequent reference. This final report need not be the only report made during the audit. Interim reports and progress reports are often made at particular stages where strategy changes may be appropriate.

The communication audit seeks a union of quantitative and qualitative analyses to achieve a depth of evaluation that will

reveal a large measure of the true communication interaction in an organization. Clearly, no one technique can do everything. However, the integration of a variety of techniques used over time, each with its own strengths and weaknesses, has been shown to provide the most focussed recommendations.

Finally, an assessment of communication effectiveness in an organization should be an ongoing procedure. It is important to integrate periodic communication audits into overall organizational activities. In this way, data can be accumulated to show which kinds of communication activities work best for the organization and should be encouraged, and which cause problems and should be changed.

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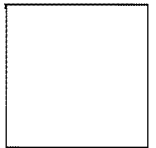
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