

NEGOTIF

## IFAC/IFORS/IIASA/TIMS

The International Federation of Automatic Control The International Federation of Operational Research Societies The International Institute for Applied Systems Analysis The Institute of Management Sciences

# SUPPORT SYSTEMS FOR DECISION AND NEGOTIATION PROCESSES

Preprints of the IFAC/IFORS/IIASA/TIMS Workshop Warsaw, Poland June 24-26, 1992

## Editors:

Roman Kulikowski Zbigniew Nahorski Jan W.Owsiński Andrzej Straszak

Systems Research Institute Polish Academy of Sciences Warsaw, Poland

## **VOLUME 1:**

Names of first authors: A-K

SYSTEMS RESEARCH INSTITUTE, POLISH ACADEMY OF SCIENCES

SUPPORT SYSTEMS FOR DECISION AND NEGOTIATION PROCESSES Preprints, IFAC/IFORS/IIASA/TIMS Workshop, June 24-26, 1992, Warsaw, Poland

## LINKING SCIENTIFIC & TECHNICAL DATA WITH ENVIRONMENTAL NEGOTIATION: FUNCTIONS AND CASE STUDIES

### by Richard C. Collins

Institute for Environmental Negotiation University of Virginia Charlottesville 22903, USA

There are a variety of functions that need to be provided for negotiations in environmental policy disputes. The different stages influence the role and types of support most needed to enhance negotiations. But, third party support can be critical in each of the activities listed below during all three stages. Categories of support are:

> Pre-Negotiation Negotiation Period Post-Negotiation

<u>Convening and Coordination</u>: These functions include assistance in developing the appropriate stakeholders, including identity of the technical support group; the identification of appropriate individuals within stakeholding groups, and agreement among the various stakeholders that the composition is balanced and representative.

<u>Technical & Scientific Negotiation Support</u>: This includes the scheduling and use of outside experts, the development of information or decision-making assistance tools such as questionnaires, computer assisted consensus making, brain-storming tools, Delphi or modified Delphi instruments, etc.

<u>Meeting Management and Facilitation Support</u>: This includes facilitating the meetings, providing a record of dialogue and activities during the meeting, serving as a gate-keeper and time-keeper for discussions and work projects, and preparing a "sense of the meeting." This also includes recording dialogue, documenting decisions and tracking goal attainment.

Logistic and Basic Staff Support: This includes linking the various parties to find agreeable time schedules, locations, durations of meetings, agenda preparations, cos-sharing and expenses, funding staff support.

The latter category is the central component of environmental mediation and it draws support and strength from successful management by the mediation team of housekeeping and advisory functions.

Mediation involves the intervention of the third party in developing a negotiation position among the selected parties as appropriate, suggesting caucus type meetings and offering counsel on negotiation tactics and timing, linking the parties in the actual negotiations; assisting and advising on relations among the various negotiation parties and their constituencies, linking the parties to the public through the media, and helping them develop rules for public participation and or media contacts, etc.

I would demonstrate how these five categories of activities were combined in three case studies.

1. The Mining Water Loss Roundtable

This negotiation developed a scientific-technical rationale for establishing a "Zone of Presumed Impact" within which water has been disrupted or impaired by underground mining operations. The technical-scientific basis for developing such a boundary had substantial legal-economic, and political impacts. The application of "angle of draw" from the mine site to the surface had been the generally accepted technical basis for defining such impacts in subsidence, but was less suited to water loss. The use of experts to illuminate the area of uncertainty, the limits of scientific knowledge, and the costs of getting better scientific information, led to an agreement to use a "social-economic standard" rather than a purely technical standard.

2. Instream Flow Roundtable

This negotiation established a standard of instream water flow below which it would be unacceptable to withdraw further water from a stream in order to protect the riverine habitat. The process of evaluating the scientific literature to agree on a standard, and to establish procedures for the site-by-site evaluation of proposed stream flows demonstrates once again the role of the mediator as a bridge between scientific and technical personnel and the negotiating parties.

### 3. Septic Tank Roundtable

A third case involves the development of a distance between off-site sewage systems and groundwater tables in order to provide protection from wastewater accumulating on the surface of the land or contaminating the groundwater. This distance is an issue with heavy economic and political consequences and determines what land is developable and what is not. This case was resolved by scientific-technical consensus involving the use of outside experts.

