A STUDY OF THE APPLICATION OF A CONSENSUS BUILDING APPROACH TO ENVRIONMENTAL DISPUTE RESOLUTION IN KOREA

BY

Kang- Won Lee

THESIS

Submitted to
KDI School of Public Policy and Management,
in partial fulfillment of the requirements
for the degree of

MASTER OF PUBLIC POLICY

2005

A STUDY OF THE APPLICATION OF A CONSENSUS BUILDING APPROACH TO ENVRIONMENTAL DISPUTE RESOLUTION IN KOREA

BY

Kang- Won Lee

THESIS

Submitted to
KDI School of Public Policy and Management,
in partial fulfillment of the requirements
for the degree of

MASTER OF PUBLIC POLICY

2005

Professor. Duk- Geun Ahn

ACKNOWLEDGEMENTS

I would like to express my thanks to the many people who have been associated with this thesis. First of all, I really appreciate the assistance of Prof. Duk -Geun An who acted as the supervisor of my these and I also want to express my gratitude to CBI staff - in particular, Lawrence Susskind, David Fairman, Mieke Van der Wansem and Jenifer Leigh Peyser. And lastly I am grateful to Scott McCreary for his generous help regarding my thesis.

ABSTRACT

A STUDY OF THE APPLICATION OF CONSENSUS BUILDING APPROACH TO ENVRIONMENTAL DISPUTE RESOLUTION IN KOREA

BY

Kang- Won Lee

This paper tries to describe the applicability of a consensus building approach to resolve environmental disputes in Korea by a comparative case analysis between the CALFED WUE program in U.S and the SAEMANGUM project in Korea. To reduce social cost due to prolonged conflict, conflict should be resolved not by confrontation and litigation but by appropriate alternatives including proper processes and methods. Regarding this, a consensus building framework is likely to be an appropriate alternative both in the U.S. and in Korea. This framework includes important factors: 1) mutual gains approach negotiation through all stakeholder involvement; 2) integration of stakeholder interest and decision maker's concern into science information; 3) use of tools to generate agreement including stakeholder assessment; 4) the neutral involvement to design and manage the process to dispute resolution.

According to the result of two case studies, a consensus building framework is significantly effective to resolve the conflicts. The CALFED WUE program shows that there are crucial factors to resolve the conflict such as; 1) mediated negotiation approach; 2) joint fact-finding process; 3) tools to generate agreement (e.g. conflict assessment); 4) collaborative effort among stakeholders. In this case, a consensus building framework resulted in a successful outcome. In contrast, in the SAEMANGUM project, the lack of an appropriate process and methods ended up failing to get agreement such as; 1) bilateral negotiation; 2) zero-sum based negotiation; 3) absence of joint fact-finding process; 4) no tools to generate agreement (e.g. ground rules); 5) lacking collaborative effort. Regarding this, a consensus building framework would be one of the alternatives to overcome these shortcomings.

However, there are several conditions needed to employ a consensus building approach for resolving a dispute over resource and environment filed in Korea. Key stakeholders should participate in a negotiation table and a well trained facilitator (mediator) should be present. In addition proper resources such as time, finance, experts are needed and should be guarantied. The institutionalization of dispute resolution such as law is also important.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURE

Ⅰ. INTRODUCTION

A. Background and Purpose of the Study

Nowadays as the Korean economy and democracy develops, with the expanded diversity of various social groups with different interests violently clashes with each other without reasonable settlement. In particular, conflicts between economic development and environmental protection are becoming urgent dispute cases because of the complexity and scientific uncertainty. For instant, the SAEMANGUEM project one of the most serious environmental conflicts has faced an impasse by environmentalist and the court.

In part, those conflicts contribute to improve both democracies and environmental values. Environmental conflicts can be seen as a process to overcome the problem of government-dominant decision making process through public involvement. However it will not be desirable to continue prolonged conflicts which cause heavy social cost. In the end conflicts resulted in economic loss, social fragmentation and undermine finding the way to balance economic development and environmental protection. Thus, conflicts should be managed and resolved successfully.

No matter the scale, scope, or substance, all environmental and resource management challenges are characterized by the need to make difficult choices about how to value scarce resources and the need to cope with scientific uncertainty.[1] Those conflicts also involve multiple parties with multiple interests and competing political priorities. For this reason, the settlement of environmental conflict seems to be difficult. Poor methods and just a willingness to resolve conflict can not guarantee a successful result. Indeed, what needed is to find the appropriate processes and tools which result in sound settlement of conflict.

With regard to sound dispute resolution, the experiments in the U.S. would be helpful to Korea. In the early 1970s, a number of Americans tried to resolve public disputes including environmental conflicts through Alternative Dispute Resolution (ADR) such as negotiation rather than through political confrontation and litigation. In 1973 the Snoqualmie River Dam conflict, the most representative case at that time, was resolved successfully based on consensus, participation, integration and interested-based negotiation[2]. Since then ADR has

[1]) Lawrence Susskind, Patrick Field, Mieke Van der Wansem and Jenifer Peyer, "Integrating Scientific Information, Stakeholder Interests, and Political Concerns in Resource and Environmental Planning and Management" Kevin S. Hanna, D. Scott Slocombe and others. Oxford University Press, Forthcoming, Fall, 2005.
[2]) Dukes, Franklin E. Resolving Public Conflict. Manchester and New York,

been increasingly employed by people to resolve public disputes and it finally was legitimized in 1992.

A consensus building approach, one of ADR in the U.S., seems an appropriate process and method resolve conflict in public dispute fields. This approach tries to offer a legitimate process and to arrive at sound agreement on environmental conflicts through trying the mutual gains approach negotiation. It also aims to integrate stake-holder's interest, scientific information and decision maker's concern. In addition a neutral mediator promotes productive dialogue among opposite stakeholders and enhances fair procedures on negotiation. According to the results of experiments in the U.S., it seems that a consensus building approach has the potential to resolve not only the value-based conflicts over natural resources, but the questions of fact that often delay or even overturn environmental decisions[3]. As we think of the characteristics of a consensus building approach applied to environmental conflicts in Korea, this approach can be seen as a means of appropriate conflict resolution. Most conflicts in the environmental field first resulted from the lack of stakeholder participation in the

---

Manchester University Press, 1996

[3])Seeing, Consensus Building Institute web, http://cbuilding.org, Lawrence Susskind. 1999."A Shot Guide to Consensus Building" The Consensus Building Handbook: A complete Guide to Reaching Agreement. Lawrence Susskind, Sarah McKearnan, and others. Thousand Oaks, CA: Sage Publications.

early policy making stage. In addition, conflicts include the government involved as a stakeholder. So it would be better resolved if a neutral party contributed to enhance more fairness and effectiveness in the dispute resolution process. This, however, is still not activated and seldom employed by stakeholders. A consensus building approach can overcome those problems such as lack of stakeholder participation, and a poor dispute resolution process.

This paper tries to describe the applicability of a consensus building approach to resolve environmental disputes in Korea. Further, I point out some tasks of employing this approach.

B. Research Methodology

At first, this research introduces a consensus building approach that confines its attention as a solution for environmental conflicts resolution in the U.S. Regarding this I focus on what the characteristics of this approach are and how this framework has become a successful model in environmental disputes resolution.

Based on this, this research analyzes representative cases in the United States and Korea in the environmental conflict fields such as CALFED agriculture water use conservation program in the U.S. and the SAEMANGUM project in Korea. These cases have similarities both in the conflict's properties and attempts to negotiate. It resulted in different outcomes, however, due to employing different processes and methods in terms of conflict resolution. It will show not only the concreteness of this framework but its availability on environmental conflict resolution in Korea.

In addition, my review linked this framework to trends of environmental conflicts happening in Korea and demonstrates how this framework contributes to resolving them.

In my research, I reviewed relevant materials including literatures, documents, and news reports and some interviews.

Ⅱ. CONSENSUS BUILDING APPROACH

A. Definition and Background

Consensus Building approach is the process of brokering or facilitating agreement among a representative group of stakeholders in any issue or conflict. This approach includes information gathering (i.e. joint fact finding) and a negotiation process that follows procedures or protocols that the parties themselves help to specify. The outcome usually takes the form of a written agreement. Because of the complexity generated by the number of parties involved and the technical nature of many of the issues under discussion, most consensus building approach need to be managed by a highly-trained "neutral" or mediator.

Consensus involves seeking unanimity, but settling for overwhelming agreement only when every effort has been made to hear concerns of all participants and respond to them[4]. This approach has main three factors: 1) mutual gains approach negotiation; 2) generating agreement tools such as conflict assessment, joint fact finding, single-text negotiation; 3) mediation to design dispute resolution process and management. It has gradually five key steps to arrive at

[4]) Lawrence Susskind and Jeffery Cruikshank, Breaking Robert's Rules: The consensus building alternative to parliamentary procedure. Cambridge MA: MIT-Harvard Public Policy Dispute Resolution Program, 2005

agreement in conflicts. Besides, this approach has been formulated through trying to seek ADR and improve decision making process operated by public participation and consensus approach. It was also theoretical and practical outcome to put science information into decision making process in the U.S.

Since in 1970s, a number of experts in dispute resolution in the U.S. have tried ADR rather than traditional methods such as political confrontation and litigation. It basically attempted to overcome the delay time and the high cost. It is one of the ADR movements. In addition to a consensus building approach there was an effort to enhance democracy by improving the decision making process. In general, it has been acknowledged that “majority rule” and “vote” are main principle in operating democracy. However, a decision making process made by majority rule essentially faced not only an unstable outcome because of minority opposition but lack of legitimacy because of excluding the minority’s ideas. In order to get legitimacy and rationality in the decision making process, a consensus building process is much better than a majority rule process.

Lastly, a consensus building approach has been developed to overcome the shortcomings of the NEPA (National Environmental Policy Act) in the

environmental decision making process. The NEPA, passed in 1969, requires all federal agencies to asses the environmental impacts of major projects or decisions, the expenditure of federal money, or other actions that affect federal lands; to consider environmental impacts in making decisions: and disclose these impacts to the public.

While NEPA has allowed the public to give input on thousands of projects, some have criticized the ability of the NEPA process to produce public policy that garner a high level of public satisfaction[5]. Although public input is solicited at various points, it has been observed that the public is not involved in a meaningful way in research, decision making, or implementation processes. As evidenced in the strategies used by agencies, "public involvement" often takes the form of simple notification, solicitation of public comment, or other types of one way communication[6]. A consensus building approach grew up as a means of overcoming the shortcoming in NEPA through putting stakeholder involvement into decision making process.

[5]) See. : R. M. Solomon, S. Yonts-Shepard, and others "Public Involvement under NEPA: Trends and Opportunities" in Environmental Policy and NEPA: Past, Present, and Future, Ray Clark and Larry Canter, eds. Boca Raton, FL: St. Lucie Press, 2000.
[6])Jenifer Leigh Peyser. "How does participation in the framing, Review, and Incorporation of scientific Information Affect stakeholder perspectives on Resource Management Decisions. 2005,

B.THE KEY FIVE STEPS

A consensus building approach tries to get mutual gains, the concept that a group working together can create value and "expand the pie" of benefits[7]. This approach is distinct from compromise or "zero sum negotiation" which requires one stakeholder to give up something in order for another to gain. Mutual gains approach negotiation requires dialogue where parties are actively looking for ways they can meet each other's interests at low cost to them. In addition, this approach uses both tools of promoting agreement and facilitation/mediation in designing and managing in the dispute resolution process.

A full consensus building approach includes five steps[8] (See Figure):

1. Convening refers to the initiation of a process, including an assessment of the conflict or problem and barriers to its resolution. The "convenor" is the process sponsor, often a federal agency with regulatory authority. The convenor should involve a neutral facilitator to help identify the range of stakeholders and their

[7])See: Howard Raiffa. The Art and Science of Negotiation. Cambridge, MA: Belknap Press/Harvard University Press.1982, D.A. Lax and J. K .Sebenius. The Manager as Negotiator. New York: The Free Press.1986, Lawrence Susskind and Patrick Field. Dealing With an Angry Public: The Mutual Gains Approach to Resolving Disputes. New York, NY: The Free Press, 1996.

[8]) Lawrence Susskind. "A Shot Guide to Consensus Building" The Consensus Building Handbook: A complete Guide to Reaching Agreement. Lawrence Susskind, Sarah McKearnan, and Jennifer Thomas-Larmer, eds. Thousand Oaks, CA: Sage Publications.1999

interests, whether or not a consensus-based approach is appropriate, and who should ultimately be “at the table” for the consensus building process. Before beginning work, the convenor and other participants should also secure sufficient resources to carry out the process.

In the convening stage, stakeholders may highlight a need for capacity building, or training geared toward preparing participants for the upcoming process. Capacity building can include coaching in the consensus building process itself, to help participants learn how to work together productively. It can also have a substantive focus, targeting key scientific and technical concepts that will be dealt with in the deliberations,

2. The next step is for the group to jointly clarify responsibilities of all participants, including the role of stakeholders, convenor, and facilitator. In a federal decision-making process, the role and participation options for the public at-large must be determined, in accordance with applicable federal regulations. Before addressing substantive issues, the facilitator will help the group establish agreed-upon goals and principles for their work, including ground rules, operating procedures, and timelines.

3. Once theses Key preparation steps have been completed, deliberations can begin. This is the phase that most people have in mind when they think about negotiations. At this stage, the group has already reached procedural agreements, and should build on these successes with a continued emphasis on relationship and constructive dialogue. A number of key principles of deliberation are that stakeholders should express concerns in an unconditionally constructive manner; engage in active listening; disagree without being disagreeable; and strive for the greatest degree of transparency possible.

Documenting the agreement is a critical aspect of the deliberation phase. A written agreement serves not only as a “group memory”, but as a tool to communicate the agreement to each stakeholder’s constituency and other members of the public who were not directly involved in the process. A common method of documenting the agreement is creating a single, detailed report that outlines the group decision. This document would be considered a draft, and not an agreement, until all parties sign it. By creating draft agreements, parties can clearly see trade-offs they are making, and where the draft does or does not meet their interests. When parties disagree, a single –text allows them to be more specific about points of contention. Further, parties are encouraged to not just

disagree, but to articulate alternate language that is more acceptable.

Fisher, Ury, and Patton describe the “one-text procedure” as a negotiation tool to help parties make a clear distinction between inventing options and final decision-making[9]. Parties may be more willing to be creative and experiment with possible agreements if it is clear that, by proposing a new idea, they are not committing to it. A single-text document is one example of a boundary object. Boundary objects are documents, such as tables, maps, text, or even a common vocabulary that can aid people from different disciplines build a shared understanding of an issue[10].

During deliberations, it may be beneficial for participants to consider creating subcommittees and involve experts. Subcommittees, or work groups, can engage in more in-depth learning about a particular subject, brainstorming, or document drafting. Subcommittees are not decision-making bodies and will always bring their work and/or findings back to the larger group.

[9]) Fisher, Robert, William Ury and Bruce Patton. Getting to Yes: Negotiating Without Giving In(Second Edition). Houghton Mifflin Company, 1991.
[10])See S.L. Star and J. R. Griesemer. “Institutional ecology, ‘translations’ and boundary objects.” Social Studies of Science 19(3) : 387-420.1989

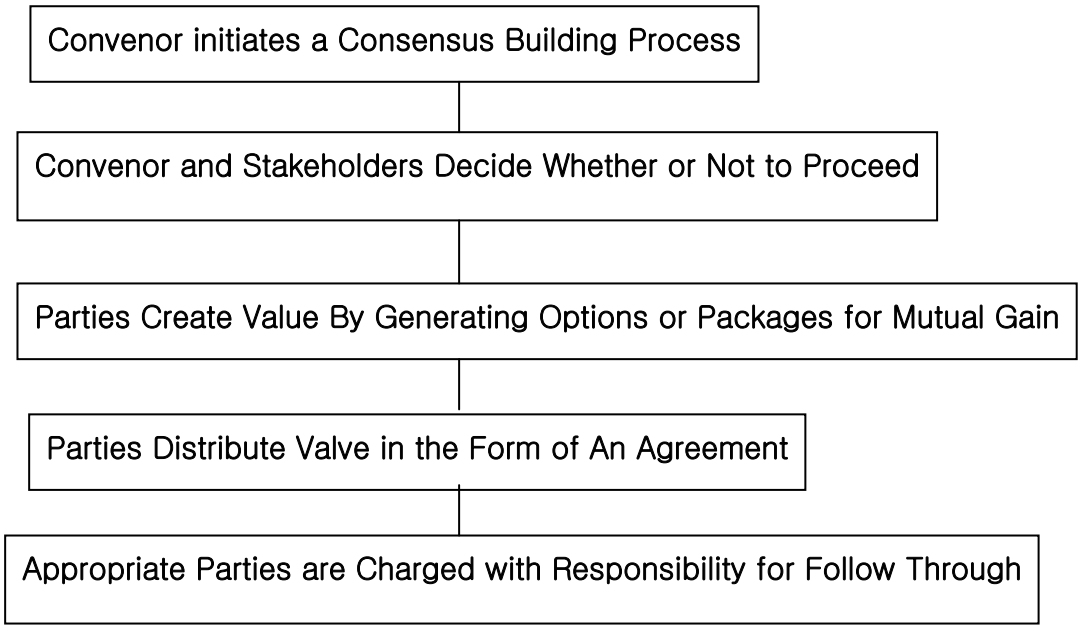
4. When deciding, groups should seek agreements that maximize the mutual gains to participants. Generally, the initial goal of a consensus building group is to reach full agreement. However it is also appropriate to seek overwhelming support on final recommendations if unanimity cannot be achieved after attempting to meet the needs of “holdouts.” In considering, the group’s final recommendations, the convening agency should note which groups did or did not support the decision and why.

5. In the implementation phase, stakeholders must ensure that their constituencies ratify the agreement. In consensus building, the stakeholders at the negotiation table are always representing a larger constituency, such as association or advocacy organization. The success of a consensus building process and the decision phase in particular, is contingent on these larger stakeholder organizations signing off on the final agreement. Thus, it is important for representatives to maintain close contact with their “second table” throughout the process. Facilitators should encourage this communication, and representatives must be sure to take any proposal and final agreements from the consensus building process to the second table of their constituency.

In implementing the agreement, the group should also consider how the

decision's efficacy will be monitored. In the event that unanticipated issues arise as a result of the group"s decision, participants should also consider setting up a procedure to reopen the process and revisit the agreement. Finally, stakeholder groups should evaluate their own participation and consider "lesson learned" for their next collaborative effort.

<Figure 1> THE CONSENSUS BUILDING PROCESS



Source: Consensus Building Institute, 2002

C. THE MAIN TOOLS GENERATING AGREEMENT – JOINT FACT FINDING

In order to resolve conflicts of resource and environment, a consensus building

approach uses not only mutual gains approach negotiation but tools generating agreement. There are three main tools such as conflict assessment, single- text negotiation and joint fact finding in this approach. Since I mentioned above about two tools- conflict assessment and single –text negotiation, in this part I explain about joint fact finding.

Joint fact finding is a consensus-based process by which stakeholders work with scientists and decision-makers to scope, review and incorporate scientific information into policy decisions. This process is quite useful to handle complex scientific and technical questions. There are six key steps in the process of this scientific inquiry.[11]

Step 1: Assess the need for joint fact finding

The convenor, in consultation with an neutral facilitator, should first assesses the need for an joint fact finding process, including a review of the scientific, financial and human resources that will be needed for a successful collaborative inquiry. Convenors should identify the data gaps or scientific

[11])see, consensus building institute website, http://www.cbuilding.org, The MIT-USGS Science Impact Collaborative(MUSIC) website, http://scienceimpact.mit.edu. Jenifer Leigh Peyser. "How does participation in the framing, Review, and Incorporation of scientific Information Affect stakeholder perspectives on Resorce Management Decisions. Diss, MIT U, P41-56. 2005.

controversies that could be addressed by joint research. A neutral facilitator should aid in assessing the situation and the stakeholder's perspectives. This assessment will aid in identifying a balanced group of potential joint fact finding participants. A balanced group should include stakeholders representing different sectors and viewpoints, resource managers who can speak to the "on- the – ground" practicality of proposals and other agency representatives. Experts may be considered at this time, but they must be officially agreed to by the rest of the group after deciding to proceed.

Step 2: Convene the joint fact finding process

If all parties weigh the costs and benefits of joint fact finding and decide to proceed, convenors can invite the group to the table to begin the process. At this point, as called for by the consensus building process, the facilitator assists participants in developing ground rules and a work plan, including outstanding scientific questions and a timeline for their work. Additionally, participants will now jointly determine what kinds of expertise will be needed to help inform the decision-making process and which experts have the training and credibility to join the process. Before proceeding, all parties must understand sources of conflict, which questions are appropriate to deal with through joint fact finding

and what other issues must be considered in the overall consensus building process.

Step 3: Scope the study

After discussing which issues are of highest importance to stakeholders, experts aid participants in translating their concerns about knowledge gaps or conflicting information into researchable questions. Experts also help identify sources of existing information and appropriate methods of information gathering and analysis as well as the costs and benefits of different methods. Throughout scoping and all phases, participants must continue to tie the scientific inquiry back into the policy questions to ensure that their work will be relevant to the decision-making process. For example, beyond determining data needs and study design, joint fact-finding participants would also determine criteria for use in the decision-making phase.

Step 4: Conduct the study

As expert conduct the study as scoped by joint fact finding participants, they should draw on stakeholder expertise and local knowledge. This could include imputing a resource manager's observational data into their models or learning

about a research site from a local stakeholder. Experts should also educate participants about complexities of their research and check back with them regularly with progress reports, data and draft findings.

Step 5: Evaluate the results

Following research, stakeholders, developer, agencies and the scientists evaluate the results. Together, these participants would discuss what the scientific results mean, including the assumptions and uncertainty levels built into the results. Given this information, joint fact- finding participants would determine how these results could be used most appropriate to inform upcoming decision. In developing the draft and final conclusions, participants should maintain transparency by noting the assumptions, uncertainties and limitations of the scientific inquiry.

Step 6: Communicate the results.

Participants should prepare key messages from their research findings to share with different stakeholder constituencies and policy-makers. Communications should convey that the research was scoped, conducted and evaluated in a collaborative manner and that all members of the joint fact-finding team are

behind the results. In addition, participants should listen to feedback from other stakeholders and determine whether additional research is needed, as the eventual policy outcome will affect a much larger population than those stakeholders directly participating in the process "at the table." If joint fact-finding efforts have yielded participants having the necessary scientific and technical information, they can feed this information into the larger policy-making process.

As a result of usefulness in joint- fact finding, this process is particularly suited to resource and environmental management and has been used for many environmental issues, including coastal zone management, watershed management and facility sittings.[12]

D. USEFULNESS OF CONSENSUS BUILDING APPROACH

Owing to characteristics of conflict such as its inherent complexity and scientific uncertainty in the scarce resource and environmental field, the efforts to resolve conflict should include substantial stakeholder participation and appropriate

[12])See: Scott McCreary, John Gamman, Bennett Brooks, Lisa Whitman, Rebecca Bryson, Boyd Fuller, Austin Mclnerny and Robin Glazer. "Applying a Mediated Negotiation Framework to Integrated Coastal Zone Management." Coastal Management 29, 2001.

dispute resolution process and methods. A consensus building approach makes it possible to deal with those conflicts and can result in the legitimacy of dispute resolution process and sound agreement. Figure 2 notes how this approach can get the results in terms of process and outcome sides.

<Table 1> Characteristics and Effects of Consensus Building Approach

<table>
<tr><th colspan="2">Component</th><th>Objective</th><th>Outcome</th></tr>
<tr><td colspan="2">Mutual gains approach negotiation</td><td>- To expand the pie through Interest-based negotiation
- To get collaborative efforts among stakeholders.</td><td rowspan="5">-Enhancing legitimacy and transparency of dispute resolution process.

-Promoting more effective, efficient fair, stable agreement.</td></tr>
<tr><td rowspan="3">Main tools generating agreement</td><td>conflict assessment</td><td>-To design appropriate dispute resolution process
-Setting appropriate Stakeholders, issue, ground rule, work plan</td></tr>
<tr><td>joint fact-finding</td><td>-To get credible information in scientific and technical uncertainty.
-To integrate science information into policy making</td></tr>
<tr><td>single-text negotiation</td><td>- To get written agreement document during negotiation.</td></tr>
<tr><td colspan="2">Facilitation/Mediation</td><td>- To promote productive dialogue, fair process and agreement</td></tr>
</table>

Ⅲ. CASE ANALYSIS

CALEFED BAY-DELTA WATER USE EFFICIENCY PROGRAM DISPUTE IN THE U.S.

In this chapter, I try to analysis, the dispute resolution process of the CALEFED Bay-Delta Water Use Efficiency program[13] (WUE program), a representative case in a resource and environmental dispute in the U.S., based on the method of consensus building approach.

A. PROBLEM CONTEXT`

The Bay-Delta system is an intricate web of waterways created at the junction of San Francisco Bay. The Bay-Delta is the largest estuary on the west coasts of North and South America, and home to many unique plants and animals including migratory birds and endangered fish. More than 22 million Californians rely on the Bay-delta system for all or some of their drinking water, and water supplies from this region are critical to the productivity of the agriculture and high-tech industries.

[13]) At the beginning of Program, title of program is the CALFED Water Use Conservation. However, this title changed to Water Use Efficiency according to result of negotiation among stakeholders. This change includes a crucial meaning. I describe this later.

In California, conflict in the use water had been prolonged among users of water. In its early stage, conflict had been ongoing among agricultural users and users between agriculture and mining industry. Since the mid 1980s, however, conflict regarding the use water among agricultural users, urban users and environmentalists greatly increased because of the growing social need for environmental protection. This conflict also emerged among government agencies. While the state government in California was relatively focusing on a stable water supply-oriented policy, Federal agencies such as the Environmental Protection Agency (EPA) focused on improving water quality and protecting endangered fish. Finally, conflicts in the use of water rapidly became between agricultural user and environmentalist, between state government and EPA.

Under this condition, CALFED- the California Water Policy Council and Federal Ecosystem Directorate- Program grew out of the Bay-Delta Accord signed in 1994 by then Governor Pete Wilson and the Clinton administration to address environmental and water management problems associated with the Bay –Delta system. Its mission is to balance the competing needs of environmental, agricultural and urban interests[14]. In order to carry out those missions, all parties

[14]) See: http://Calwater.ca.gov/CALFDDocuments.html

such as federal, state agencies, agricultural users and environmentalist were asked to form a committee of the CALFED Program. Negotiation to form the CALFED program was started among stakeholders.

However, CALFED Water Use Efficiency Program (WUE), one of the 8 CALFED Program, faced more criticism from environmental, agricultural and urban stake-holders than any other part of the CALFED Program. Most criticism was directed towards conservation potential and was rooted in concerns that CALFED may be incorrectly forecasting conservation potential and therefore proposing an inappropriate mix of actions to improve water supply reliability.

Even though CALFED Program aimed at balancing the competing needs of environmental, agricultural and urban interests in using water, negotiation among stakeholders faced a crisis to proceed. It was still the remaining conflict regarding of use water between agricultural users and environmentalists. Further, science uncertainty of water conservation potential caused more intensive conflict and broke negotiation between agricultural users and environmentalists. In the matter of water conservation, while agricultural users considered agriculture as contributing to water conservation through crops which store

water store in the land, environmentalist regarded agriculture as never contributing to the storage of water.

B. APPLYING MEDIATED DIALOGUE- Restructure meeting committee and trust building

To address the impasse on negotiation among stakeholders, CALFED convened an independent review panel and mediated dialogue on the WUE Program in 1998. CALFED with CONCUR[15] tried to find the way of getting successful implementation of WUE Program, they finally decided make an effort focusing on three factors:1) getting practical stakeholder participation; 2)searching for a correct inquiry about scientific uncertainty; 3) getting feasible agreement.

In early October, CALFED convened twelve stakeholders to mediated dialogue and CONCUR did confidential interviews of them individually. Those stakeholders, called the Agricultural Water Use Efficiency Steering Committee (Steering Committee), consisted of four members from each three parties such as agricultural user, environmentalist and CALFED. As a result of the confidential interviews- so called conflict assessment-, it turned out that the structure of the

[15]) CONCUR is professional private company providing facilitation & mediation service in environmental conflicts. Information about CONCUR refer to website. http://www.concurinc.com

committee had several problems.

First, a too wide-open meeting structure did not achieve solving the problem because of the absence of ground rules. The meeting was not held regularly and representatives of the committee often changed. Second, the poor communication skills did not get rid of hostility between agricultural users and environmentalist. Third, agendas were so wrong that stakeholders could not promote exchange of information and deliberate effectively. Nevertheless stakeholders were still willing to resolve conflicts to use of water through the committee of CALEFD.[16]

For these reasons, CONCUR with CALEFD restructured the Steering Committee to get agreement on the WUE Program. First, CALFED made strong ground rules to achieve productive dialogue and changed representatives of stakeholders to get collaborative efforts. The number of participants was limited 12 to 14, meeting was held regularly and representatives were asked to participate regularly. In particular, representatives participated in the negotiation, reselected not by being representative of a specific constituency but just by

[16])Agricultural Water Use Efficiency Assurances, Stakeholder Focus Group Issue Audit ,1998.

information delivery of broad constituencies. This allowed representatives to move off their position on issues and to promote free discussion and forming common base.

Next, CONCUR changed the agenda to promote trust building and a common base among stakeholder representatives. Before direct discussion about how water should be used by users, representatives freely discussed their interest beyond their position and generating common terminology. It was crucial that representatives to the meeting shared their different terminology, information and perception. This resulted in advancing the discussion. The concept of "Water Use Efficiency" newly defined, resulted from generated a common base through free discussion among representatives. This concept has a crucial point to shift zero-sum based dialogue to mutual gained dialogue[17]. While the concept of water use conservation just focused on restraining water demand, water use efficiency focused on balancing both using water and storing water. Finally, the changed structure of agenda and dialogue to negotiation was essential allowing stakeholders to get agreement about CALFED Water Use Efficiency Program[18].

[17])Boyd W. Fuller. "Mediating Irreconcilable Conflict: Agricultural Water Use Efficiency, CALFED and California", 2003

[18])Scott McCrery, John Gamman and others. "Applying a Mediated Negotiation Framework to Integrated Coastal Zone Management" Coastal Management 29,2001.

In short, as a result of convening mediated dialogue, stakeholders could engage in trust building and discuss in a productive manner by making ground rules, reselecting representative and using interest-based dialogue. CONCUR, the neutral facilitator, moved stakeholders into improving negotiation skill and generating a common base such as water use efficiency.

C.ONE-DAY SCOPING SESSION; DESIGN PROCESS FOR JOINT FACT FINDING

CALEFED originally tried to resolve conflict about the environmental draft, the measure for water management and water conservation potential, through the independent panel's deliberation not linked to stakeholders. Stakeholders, however, asked for the opportunity to reflect their concern before the independent panel's deliberation. According to stakeholders' requirement on October 19, 1998, CALFED convened a one-day scoping session to brief interested members of the public on CALFED's rationale for convening the independent review panel on Agricultural Water Conservation Potential. The one –day session also offered an important opportunity for stakeholders, panelists and general public to provide input to CALFED on the structure and focus of the panel's deliberation.

Lastly it turned out that the one-day session was essential to resolve conflict about water conservation efforts to both stakeholders and panelists.[19] By the one-day session, both got benefits: 1) to improve understanding of purpose of panel's deliberation; 2) to define what main questions should be solved by panel's deliberation; 3) to reorganize questions offered to panelist. Further, stakeholders got a chance to select a technical advisor who participated in the panel's deliberation and to attend the conference making the strategic plan. As a result of the one-day session, the process of the independent panel's deliberation changed to a joint science inquiry among panelists, technical advisor, and stakeholders. This change of the panel's deliberation resulted from CONCUR's recommendation. CONCUR suggested that the independent panel's deliberation should be conducted through all parties' participation and through deciding policy based on accurate scientific information.

At the end of the one- day session, the panelists asked CALFED to amend the questions examined by panel. They pointed out that the original questions - water conservation potential and measures for effective water management- should change to new questions- balancing environmental protection and water

[19]) Scott McCrery, John Gamman and others, "Applying a Mediated Negotiation Framework to Integrated Coastal Zone Management", Coastal Management 29, 2001

supply reliability- achieving the final purpose of Water Efficiency Program. This reorganized question contributed to providing movement overcoming adversary relationship among stakeholders and generating a common base by integrating stakeholders' different interests.

In addition, panelists noted that the measure of effective water management practices (EWMPs) made by CALFED was wrong because the measure was not linked to a specific and measurable objective. Agricultural users initially complained that EWMPs did not take account of regional differences of water potential. Panelist agreed on regional differences in Bay-Delta and emphasized that EWMPs should be in accordance with specific and measurable criteria.

Based on the discussions during the one-day scoping session, the deliberations of the independent review panel were focused to accomplish several broad objectives[20]:

Review, critique and provide recommendations to strengthen the technical assumptions and approach of the agricultural conservation sections of the

[20])CALFED Bay-Delta Program and CONCUR, Inc. Summary Report: Independent Review Panel on Agricultural Water Conservation Potential. P2-32, 1998

CALFED WUE component technical appendix.

Provide guidance on strategies for identifying Bay-Delta problems, as well as structuring solutions and quantifying potential benefits. This discussion will center around representative case studies developed by CALFED staff.

Identify additional data collection and research needs.

More specifically, the panel will consider the following questions in meeting its objectives: Review conceptual model and methodology; Identify problems; Develop objectives and possible solutions; Choose preferred solution & quantify benefits; Research & data needs; Assurance.

D.INDEPENDENT REVIEW DELIBERATION; JOINT FACT FINDING

The independent review panel on Agricultural Water Conservation Potential was held December 14-16 at the University of California, Davis campus. This panel's deliberation was underway based on the result of the one-day session held in past October.

The panel was comprised of five nationally recognized scientists who

collectively provided expertise in the areas of irrigation science and engineering and aquatic ecosystem restoration. The deliberations also included eight stakeholder technical representatives with specific expertise in the Bay-Delta system. These technical representatives provided clarification on specific issues as needed and posed valuable questions and comments for the panel's consideration. The panel was convened jointly by CALFED staff and CONCURS, Inc., a professional facilitation team.

The panel's deliberation first closed-door session was held by panelist, technical representatives, facilitated team and then the result of the session was open to the public including stakeholders. This process strengthened the deliberation through adding public opinion to experts and finally increased the legitimacy of scientific inquiry. There were also two key tools generating agreement employed in deliberation. According to ground rules, the facilitating team synthesized the result of each session by real time and deliberation also went off based on a single document. Owing to these tools, at the end of the panel deliberation, a written summary of the panel deliberation was made by the facilitation team. This summary was regarded as a draft of the agreement.

An agreement draft included important 10 components including changed methodology. The draft pointed out that there were crucial defects in the measure of effective water management practices (EWMPs) made by CALFED. The panel found that the current methodology should be refined to:1)estimate region-specific conservation potential;2) incorporate a more elaborate analysis of evaporation and transpiration;3) include prescriptive information to guide and support planning on a regional basis.[21] The water conservation potential should be determine based on water flow paths and describes the route that water travels to reach a problem area or another unusable destination. The conservation potential is different according to water flowing paths and the most practical strategy for managing water should focus on the flow paths. Further the practice for managing water should be controlled by offering specific and measurable objectives. Finally all stakeholders were satisfied with these recommendations and resolved scientific and technical uncertainty through independent panel deliberation which employed a joint fact finding process.

[21]) CALFED Bay-Delta Program and CONCUR, Inc. Summary Report: Independent Review Panel on Agricultural Water Conservation Potential. P2-32, 1998

E. OUTCOME AND SIGNIFICANCE

By ground rules in the panel deliberation, the facilitation team, consisting of CONCUR and CALFED staff, sent a draft summarizing the result of panel deliberation to the panelist in early January 2000. After being reviewed by the panelist, this draft was sent to all stakeholders and finally accepted as CALFED Record of Decision in August 2000. Ultimately, prolonged conflict between water supply reliability and environmental concerns were dramatically resolved and the collaborative efforts on CALFED Water Use Efficiency (WUE) Program started.

How had prolonged conflict to WUE Program finally been resolved? There were several reasons which resulted in settlement.

Collaborative Efforts to Resolve Conflict among Stakeholders

CALFED was initially established based on principles such as “public participation” and “collaborative approach” to resolve prolonged conflict regarding water use and to making long-term measures for managing water. Even though the WUE program faced on an impasse due to scientific uncertainty and stakeholder’s opposition, CALFED did not abandon the principles of

operating. CALFED tried to overcome this impasse through independent panel deliberation, as well as, by convening mediated negotiations to get agreement about the WUE program. In particular, facing the need to amend the measure of effective water management practices (EWMPs), CALFED did not persist in its position and actively accepted the result of panel recommendation. In the same way, stakeholders to the last tried to resolve conflict through negotiation in the committee of CALFED.

Employed Appropriate Processes and Methods

The collaborative efforts among stakeholders to resolve conflict was one of the reasons resulting in settlement. On the other hand, however, this conflict case showed that there was also crucial limitation to getting a settlement in spite of collaborative efforts. Unless appropriated processes and methods did not employ negotiation, this conflict of water use would not have been resolved successfully. When prolonged conflict among stakeholders intensified with scientific uncertainty, there were something like process and methods needed: 1) to achieve a trust building among stakeholders; 2) to solve the science inquiry; 3) to generate agreement.

There were three key tools employed in CALFED WUE program conflict. First, by conducting conflict assessment, CONCUR, a professional facilitator corporation, with CALFED restructured the stakeholder committee more productively through selecting stakeholder representatives and making ground rules. Thanks to this, representatives maintained balance between reflecting their interest and trying for mutual gains approach and thus the meeting becomes more stable. Second, Joint fact-finding process solved scientific uncertainty about the water conservation potential successfully. Independent panel deliberation, attempted to solve the science problem, finally succeeded not only through all stakeholder participation such as panelist, technical representatives and CALFED but through jointly scoping, reviewing, incorporating scientific information into policy decisions. This process provided significant legitimacy to the process to resolve the dispute. Lastly, a single-text negotiation method, employed as one of the ground rules in this case, resulted in a written draft of the panel deliberation. After review by all stakeholders this draft becomes the final agreement.

Mediated Negotiation

The case of CALFED WUE program conflict showed that conflict with acute

confrontation among stakeholders and scientific uncertainty would be solved more effectively by mediated negotiation rather than by bilateral negotiation. Facilitation /mediation team contributed to promote discussion in a more productive manner, as well as to assisting in setting a well-designed issue, getting mutual gains negotiation and generating agreement. In this case, CONCUR reorganized agendas to enhance trust building among stakeholders and to generate a common base such as “water efficiency.” Further CONCUR designed panel deliberation to be carried out by all stakeholders participation and managed this deliberation effectively. Figure 3 outlined how conflict to CALFED WUE resolved.

<Table 2> Tried Process and Methods of CALEFD's Dispute Resolution

Structure of Negotiation	Characteristic	Mediated negotiation	*Mutual gains negotiation based on scientific information *All parties Participation and Consensus building decision-making * The legitimacy of dispute resolution process
	Committee	Integrating representative committee into independent panel	
	Agenda	Balancing water reliability and environmental protection	
		Promoting Common Base(i.g,.water efficiency)	
Tools Getting Agreement	Conflict assessment	Refine representative committee and Making ground rules	
	Joint-fact finding	jointly scoped, reviewed, incorporating scientific information into policy decisions	
	Single-text negotiation	Promoting a written agreed document	

Ⅳ. CASE ANALYSIS

SAEMANGUM RECLAMATION PROJECT DISPUTE IN KOREA

In this chapter, I try to analysis the dispute resolution process of the SAEMANGUM reclamation project, a representative case of resource and environmental dispute in Korea, based on the method of consensus building approach.

A.PROBLEM CONTEXT

Since in 1991 the government propelled the SAEMANGUM project to produce farmland and fresh water, this project has faced intense opposition by environmentalists, religious groups. For resolving this conflict, a joint inquiry committee between government and dissent groups tried twice, as well as, the court recommended both of them to settle but all efforts failed to get an agreement. This conflict has been going on with protracted litigation and political confrontation without dispute resolution.

While, there was no conflict about this project in the beginning stage, intensive conflict has been emerging after the lake of SIHWA failed to produce fresh water in 1996. A number of people including environmentalists considered

SAEMANGUM project as the same example as the lake of SIHWA. This concern also resulted from increased consciousness of environmental protection since 1990s. Finally an anti-SAEMANGUM project movement has become a significant national issue since 1998. In January 1998, a committee of the new incoming president decided on a complete reexamination of the SAEMANGUM project. As a result of this decision, environmentalists asked the government to stop this project, as well as, to form joint settlement committee between government and the public. In addition, the governor of JUNBUK province also suggested establishing a joint environment inquiry committee.

The overall reexamination of this project provided an opportunity to not only resolve conflict to this project by collaborative negotiation among stakeholders but to reduce exacerbating conflict to this project. There are main three points to consider in resolving this conflict.

First, the discontinuance and modification of a previously propelled project caused a realistic negative effect. The SAEMANGUM project had already completed 60 percent of the whole project and more than one trillion won had been put into this project at that time. Accordingly, the discontinuance essentially

caused the debate about economic loss and seawall stability. This makes it difficult to resolve the conflict.

Second, this conflict involved scientific and technical uncertainty such as the forecast of the scale in ecosystem destruction by making farmland and the estimated value of both farmland and tideland. These inevitably caused intensive debate among experts and made it difficult to get credible information. Thus, the agreement to science inquiry methodology should be made and the legitimacy of process is quite important.

Third, this conflict included acute confrontation between interest and value sides. Thus real stakeholders should attend the negotiation and primarily trust building among stakeholders is quite crucial. Negotiation should be designed to effectively deal with difference of interest and value.

B.LAUNCH OF JOINT INQUIRY COMMITTEE: FIRST NEGOTIATION TO DISPUTE RESOLUTION

First effort to resolve the SAEMANBUM project started out by the launching of a joint inquiry committee between government and dissent groups in April 1999.

To resolve this conflict it is crucial that real stakeholder should attend the committee and agendas must be defined appropriately, as well as, inquiry method to examine scientific uncertainty has to be employed effectively. The first effort, however, did not achieve the above conditions.

The members of the joint inquiry committee consisted of 20 private experts nominated by both government and environmentalist and 9 public servants to support the committee with one representative. An equal number of members from both sides did not attend the committee and a neutral expert never engaged in any group and stakeholder groups did not get involved at all. This composition of committee caused debate about unfairness of operation and adversary debate about science information among participants because of the absence of neutral experts. In general, experts nominated by stakeholders just try to reflect their constituencies and the result of debate among those is likely to fail to get agreement.[22] In addition, only expert deliberation without involving stakeholders has a limitation to resolve this conflict.

[22])Kim Meyong Sic, "SAEMANGUM and Deliberative decision-making" 2001. Lawrence Susskind. "A Shot Guide to Consensus Building" The Consensus Building Handbook: A complete Guide to Reaching Agreement. Lawrence Susskind, Sarah McKearnan, and Jennifer Thomas-Larmer, eds. Thousand Oaks, CA: Sage Publications, 1999.

Besides, the missed agenda could not guarantee to resolve conflict. Discussion about agendas such as “environmental effect”, “preservation of water quality” and “economic effect” essentially ended up as just matter between approval and opposition about this project. Under those agendas, negotiation could not promote mutual gains among different interest such as interest of regional development and of environmental protection. There were also no ground rules to promote productive discussion in meeting and dialogue generating trust building among stakeholders went off poorly.

Further there was no system and measure to examine scientific information in the committee. The result of each discussion and inquiry about agendas was not shared with other session[23]. For instance, the result of discussion and inquiry about “environmental effect” was not input to discussion about “economic effect.” The most serious problem was that there was no agreement to adapt methodology seeking scientific information. Thus, it seems clear that this science inquiry completely was held not jointly but individually.

Consequently, the final report about joint inquiry committee was submitted to government by representative without the final conclusion agreed to by all

[23]) Che Mi Hee. “ Measure for integrating economic validity assessment of large public investment project and environmental assessment”, 2002.

participants in October 2000. This report, however, considered as the final conclusion by government. While this report was just the representative's opinion, government used this report as the whole committee conclusion. This essentially caused intensive opposition by some of the participants involved in the committee. Environmentalist groups and private experts attending the joint inquiry committee spelled out that the representative of this committee significantly distorted the result of this committee[24]. The first effort to resolve the conflict ended up with no agreement and the relationship between both the government and dissent groups become more exacerbated.

C.HOLD ON PUBLIC HEARING AND EVALUATION COMMITTEE: SECOND NEGOTIATION TO DISPUTE RESOLUTION

After ending in failure of the joint inquiry committee about SAEMANGUM project, the political confrontation between government and dissent groups grew more serious. By this time, the Presidential Commission on Sustainable Development Republic of Korea (PCSD) asked the office for Government Policy Coordination (GPC) to review this project because of the defective result of the estimate of economic validity in this project. Finally the government decided to

[24])Civil Society Committee against for SAEMANGUM project. "A press interview for redressing the final report of joint inquiry committee in SAEMANGUM project",2000

determine whether or not this project should continue on based on holding on a public hearing about issues and alternatives after that of the evaluation committee. After all, there was a second opportunity to resolve the conflict to this project by involving stakeholders.

In May 7, 2001, a public hearing about three issues such as tideland, water quality and economic validity was held and discussion about those issues occurred by people who attended the joint inquiry committee and others including the public. After that, public hearing about alternatives of benefits to humanity and society took placed in the same way as hearing about issues on May 10- 11. On May 14 the evaluation committee met, This committee, however, met just one time because there was no way to solve pros and cons and asked a subcommittee to write the report two times. Thus, the result of the evaluation committee was just that the President should directly decide whether or not this project should continue based on pros and cons pointed out by participants. On May 25, PCSD submitted the final report of the evaluation committee to the President and the government finally decided to resume the SAEMANGUM project that day. However, this final report submitted to the President caused serious opposition by environmentalist and people some of whom were the

members who attended the evaluation committee. According to this group, while the original report of the evaluation committee noted that the President directly should decide whether or not this project should proceed, because of there was no agreement in the committee, the final report submitted to the President indicated that the government not the President could make the decision.. In sum, even though there was no agreement in the evaluation committee and the President was meant to decide whether or not this project should proceed, the office for Government Policy Coordination (GPC) unilaterally decided to reopen the SAEMANGUM project.

Even though the second effort to resolve the conflict in the SAEMANGUM project started to include the public involvement and to seek alternatives, the lack of science inquiry methods and the absence of legitimacy in process ended up fail to resolve the conflict.

First, debate of scientific uncertainty in the SAEMANGUM project was not solved just by discussion in a public hearing. What was essentially needed was systematic scientific inquiry methods such as methodology and it was also to jointly scope, review and interpret the resultant information. There was no scope,

review and interpretation. Without this effort to seek scientific information, public hearing was likely to end up as adversary discussion. While discussion about pros and cons was going on, it was unable to get credible information. In addition, Discussion to alternatives in the project was likely to end up getting no agreement in the form of public hearing unless the credible scientific information was offered.

Second, the lack of neutral experts such as science experts and a facilitator produced limitation to resolve the conflict in this project. Discussion about issues, alternatives went off by centering just stakeholders and the evaluation committee also proceeded by bilateral experts nominated. Under this condition, fact-based discussion was essentially unable to proceed and mutual gains approach negotiation was not easy. Even though there were no ground rules to promote agreement, it was unable to overcome this effectively. In general, searching for scientific uncertainty needed neutral experts, as well as, getting agreement on acute conflict needed well designed process by neutral facilitators to resolve conflict.

D.SETTLEMENT RECOMMENDATION BY THE COURT- The third opportunity

Since two efforts to resolve the conflict of the SAEMANGUM project ended up in failure, the confrontation became protracted and serious. The Government established a new planning committee of this project and propelled this project by so- called environmentally friendly development in May 2003. In contrast, environmentalist groups sued for discontinuance this project in 2001 and religious groups had an anti-SAEMANGUM campaign in 2003. Under these conditions, Seoul administration court decided to stop implementing this project in July 2003. This means that the court first acted as one of the factors influenced in the conflict in SAEMANGUM project.

Involving the court in the conflict in this project provided a significant meaning. For a long time the court was reluctant to get involved in conflicts of large public investment projects, It was, however, one of the key factors to resolve those conflicts in the SAEMANGUM project. According to the court judgment, the government had a trouble to advance this project. However, this judgment encouraged dissent groups in an anti-SAEMANGUM project campaign. In particular, in January 2005, the court tried to reconcile both stakeholders to this

conflict and recommended to settle the conflict by providing a third opportunity to resolve the conflict. However these efforts by court ended up in failure. In January 17 2005, the court provided recommendations to settle the conflict of this project: 1) establishing a committee under the President and National Assembly to discuss the purpose of land made by this project and range of land; 2) composed of stakeholders; 3) stopping construction of a seawall until final conclusion was made. Regarding those recommendations, while environmentalist groups accepted, government did not.

Consequently, the court finally ruled to repeal the approval of the purpose of this project in February 4 2005. Under this ruling, the government should submit a changed proposal of this project even though the government continued construction of this project. In the end, the government appealed to a high court and the environmentalist group appealed too. For more than three years, a legal argument to this project had continued, it could not solve the conflict.

It seemed that there were several reasons for the government to appeal to the high court. First, the government persisted in its position as hard as a flint. JUNBUK province strongly opposed any settlement to restrict implementing this

project and the department of Agriculture also denied an alternative of part development offered by environmental groups.

Second, government had a burden to stop this project. The high committee between government and the ruling party finally decided to appeal to the high court about the Seoul administration court judgment because of[25]:1) economic loss and a seawall loss by prolonged project discontinuance ; 2) reappearance of debate and conflict by changing the proposal of project; 3) new plan to this project had already been established as environmentally friendly development reflected by previous two efforts. The position of the government was that enough discussion to this project among stakeholders had already finished and there was also no probability to get agreement in further negotiation.

Third opportunity by court to resolve the conflict in this project failed because of government position was non-collaborative. It seemed that there was also no willingness to resolve the conflicts in the government. On the other hand, it turned out that the process of the legal system essentially has a limitation to resolve the conflict. The system of court action was not suitable not only to

[25]) JoongAan daily, 29, January, 2005.

examine science uncertainty but to satisfy all stakeholders satisfy.

E.OUTCOME AND SIGNIFICANCE

The acute conflict to the SAEMANGUM project originally resulted from the early decision –making stage in this project. There was not enough according to the deal with environmental value and no public involvement to make a decision in the early stage. Since 1998, however, there were several efforts to overcome those problems such as the joint inquiry committee and the public hearing about issues and alternatives to this project and the evaluation committee was formed. In addition, a third opportunity by the court provided to resolve the conflict to stakeholders. However all efforts to resolve the conflict ended up in failure. There were several reasons for failing resolved the conflict.

The lack of collaborative efforts to resolve the conflict

Even though the government tried to resolve the conflict through a joint inquiry committee and public hearing and the evaluation committee, the government did not show a sincere attitude. There was no agreement after two the efforts and there was also opposition to the announcement about the result of the meeting. In part, it seemed clear that there was lack of legitimacy in the dispute resolution

process. However, the government denied extra meetings to resolve the conflict, as well as, distorted the result of the joint inquiry committee and the evaluation committee. In particular, the government rejected an alternative building of a high-tech physical distribution in land made by reclamation under seawater flows offered by environmental groups. It seemed that the efforts to resolve conflict by collaboration in government failed. In addition to government, environmental groups were likely to persist in their position.

The absence of processes and methods for seeking scientific inquiry

In the SAEMANGUM project, the scientific inquiry was quite important even though it was not easy. By reclamation, the forecast of the range in tideland destruction and the value of farmland and tideland essentially caused intensive debate about scientific and technical uncertainty among stakeholders. Thus, it was crucial that the credible data agreed by all stakeholders should be found and all parties primarily should agree on the methodology to examine scientific information. Overall appropriate process and methods for seeking scientific information should be employed. However there was no proper process and methods about science inquiry in two joint inquiries. First there was any agreement about the methodology to seek scientific information and there was

no scope, review and interpretation by stakeholders together. All scientific inquiry was completely individual. What is worse, in the joint inquiry committee the result of each session's discussion to agendas was not share with other session's inquiry. Second, science inquiry was done by experts nominated among stakeholders. There were no neutral experts in scientific inquiry. As a result of this, adversary debate to scientific information was just carried on instead of seeking non-objective fact. In particular, under those conditions the form of public hearing could not resolve conflict to this project. There was just debate about pros and cons in this project. Accordingly, it stands to reason that there was no agreement to scientific information.

Zero –sum based negotiation structure

In acute conflict with different interests and values among stakeholders, it seems that interested-based negotiation was more effective. Discussion about agendas such as "environmental effect", "preservation of water quality" and "economic effect" essentially ended up just matter between approval and opposition about this project. Under those agendas, negotiation could not promote mutual gains among different interest such as interest of regional development and of environmental protection. This negotiation based on those agendas was likely to

be zero-sum based negotiation. In addition, to resolve this kind of conflict the effort at trust building was important. The effort to make common base resulted in a more effective outcome. There was, however, no effort to promote productive discussion in meeting and dialogue generating trust building among stakeholders.

The absence of the neutral parties

In the SAEMANGUM project, the neutral parties to reconcile acute confrontation and to promote productive dialogue was not asked to assist. This made it difficult to resolve conflict. The results of the two times the committee failed to get agreement those committees went off by forming bilateral negotiation. This reflects that conflict to this project would be better solved by supporting the neutral parties rather than bilateral negotiation. In general, public dispute cases including environmental disputes, the government usually becomes one of the parties involved in the conflict. In that case a professional offers not only fairness and legitimacy of the dispute resolution process but promotion of productive dialogue[26]. IF bilateral negotiation to resolve the conflict is difficult,

[26]) Lawrence Susskind. "A Shot Guide to Consensus Building" The Consensus Building Handbook: A complete Guide to Reaching Agreement. Lawrence Susskind, Sarah McKearnan, and Jennifer Thomas-Larmer, eds. Thousand Oaks, CA: Sage Publications,1999.

it is needed to employ mediated negotiation.[27] Figure 4 show how the efforts to resolve the conflict advanced.

<Table 3> Tried Process and Methods of the SAEMANGUM Dispute Resolution

	Joint inquiry committee	Public hearing & Evaluation committee	The court	Characteristic
Structure of Negotiation	Bilateral negotiation	Bilateral negotiation	Mediation	Poor design and manage to dispute resolution process
Agendas of Negotiation	Environmental Impact, water quality, economic effect.	Environmental Impact, water quality, economic effect, alternatives	Environmental Impact, water quality, economic effect.	Ended up pros and corns
Joint fact-finding	absence	Absence	Absence	Fail to fact-finding
Tools to promote agreement	Absence	Absence	Absence	Fail to productive dialogue

[27]) Ju,jae-bok, "Reconcile System of policy conflict between government and organization: comparative study of the river of DONGGANG project and SAEMANGUM project", 2004

Ⅴ. CONCLUSION

A.COMPARATIVE ANALYSIS OF TWO CASEES

There are similar characteristics to conflict between the CALFED Water Use Efficiency (WUE) program and the SAEMANGUM reclamation project. First, they have conflict structures between resource-seawater-exploitation and environment protection and are representative conflict cases both in U.S and in Korea. The conflict of the CALFED WUE program is between improvement of water supply reliability and protection of Bay-Delta Ecosystem. In addition, the conflict of the SAEMANGUM project is between making farmland and physical distribution site and protection of tideland.

Second, in those cases there was need to solve the scientific and technical uncertainty. In the CALFED WUE program, it should examine the water conservation potential by offering the efficient water management practice and the SAEMANGUM project, the forecast of range in tideland destruction and the estimation between tideland and farmland should be defined. Lastly, the government was a key stakeholder to conflict and the multiple parties involved in those cases. In CALFED WUE program, stakeholders are federal government,

state government, agricultural users and environmental groups. There are also stakeholders such as federal government, local government, environmental groups, religion groups and local residents.

In addition, there was effort to resolve the conflict through negotiation among stakeholders in those cases. The result of negotiation in those cases, however, was different because of employing different processes and methods in dispute resolution. This difference is the following factors.

Difference of negotiation structure

While in the CALFED WUE program, mediated negotiation was carried on by supporting the neutral, actually bilateral negotiation without the neutral was going on in the SAEMANGUM project. In CALFED WUE case, mediated dialogue was invited to resolve the impasse among stakeholders. The SAEMANGUM project was under governmental lead, just experts nominated by both government and dissent groups participated in negotiation. As a result of this difference in negotiation, the result of negotiation was different. In the CALFED WUE program, by supporting the neutral the productive dialogue proceeded based on trust building among stakeholders, as well as, the effective process to resolve the conflict was employed. On the contrary, there was no

attempt to overcome unilateral debate and adversary confrontation among stakeholders in the SAEMANGUM project. It seems that the result of mediated negotiation by supporting the neutral is more effective rather than bilateral negotiation in resource and environmental dispute.

Difference of process and method for scientific inquiry

There was a difference in seeking the scientific and technical uncertainty in those cases. First, in the CALFED WUE program, the neural expert never engaged in any stakeholders assembled to examine the scientific information. However, experts nominated by stakeholders centered to solve the science uncertainty in the SAEMANGUM project. This was essentially to find non-objective information. Second, while the CALFED WUE program, the methodology to study about science questions was agreed by all stakeholders, therefore to scope, to review and to incorporate resulted since information into decision-making policy had been agreed upon. This provided the legitimacy of scientific inquiry and resulted in credible data. In contrast, there was no agreement to define the methodology to seek scientific information by stakeholders. In addition to this, there was no attempt to scope, review and to incorporate science information jointly into decision-making policy. All scientific inquiry was completely

individual. Under this condition, it was not easy to overcome so called "adversary science."[28] Last, the form of public hearing could not solve the science questions without a well designed process and methods. Overall it seems that there is no the legitimacy of process in scientific inquiry in the SAEMANGUM project.

Difference of negotiation approach

In order to resolve acute conflicts with different interests and values, the trust building, as well as, mutual gains approach is significant. In the CALFED WUE program, stakeholders by supporting the neutral parties tried to improve the relationship and to seek the common base and finally ended up integrating water supply reliability and environment protection. However, in the SAEMANGUM project, there was no trying to improve the relationship and to seek the common base. In particular, stakeholders just persisted in their position as hard as flint. The government completely denied any alternative to restrict the purpose of the project and environmental groups also centered on the environmental side in early stages. There was no attempt to advance a mutual gains approach negotiation. Poorly defined agendas in negotiation were a crucial factor in the

[28])Some parties use science as a means of influencing a policy outcome. By hiding their interests behind a scientific report, some stakeholders are able to push for a policy outcome most favorable to them. This is often called adversary science.

SAEMANGUM project.

Difference of attitude and skills to negotiation

In the CALFED WUE program, CALFED independent affiliation under government completely tried to resolve the conflict by a stakeholder involvement and consensus building approach. CALFED convened mediated negotiation to break the impasse and integrated by supporting the neutral parties in the public involvement into independent panel deliberation instead the original plan. Stakeholders such as agricultural users and environmental groups also did not give up the attitude to resolve the conflict by collaborative negotiation. In addition, all stakeholders could obtain the effective skill to exchange their interest in negotiation. On the contrary, in the SAEMANGUM project, the government denied extra meetings to resolve the conflict stating there was lack of legitimacy in the dispute resolution process, as well as, distorted the result of the joint inquiry committee and the evaluation committee. It also had no tools to generate agreement in negotiation and no effective skill of negotiation among stakeholders. Consequently, it seemed that there was less collaborative attitude among stakeholders and poor skill in negotiation in the SAEMANGUM project. This essentially made it fail to get agreement. Figure 5

show note the difference to dispute resolution in those cases

<Table 4> Comparison of Process to dispute resolution in two cases

	Process & Methods				Outcome
	Structure of negotiation	Science Inquiry	Negotiation approach	Attitude & tools	
CALFED WUE program	Mediated negotiation	Joint fact-finding centered the neutral experts	mutual gains approach	-collaborative effort -conflict assessment, single-text negotiation, ground rules	-legitimacy of process -credible science information -getting agreement
SAEMANGU-M project	Bilateral negotiation	Individual fact-finding centered experts nominated by stakeholders	Zero-sum approach : ending up pros and cons	- lack of collaborative effort - absence of ground rule and any tools t	- lack of legitimacy of process - absence of credible date -fail to agreement

B.USEFULNESS AND TASK OF CONSENSUS BUILDING APPROACH

Usefulness of consensus building approach

The conflict in resource and environmental fields restrained collaborative effort among stakeholders because of acute confrontation with different interests and values. This kind of conflicts also becomes more serious by adding problems such as the value of scarce resource and the scientific uncertainty. As a result of

those reasons, the conflict caused adversary distrust, political confrontation and litigation among stakeholders and this conflict tends to be protracted. This cost is too huge. Thus, what is needed is that the conflict be resolved not by confrontation and litigation but by appropriate alternatives including proper processes and methods. Regarding this, a consensus building approach is likely to be an appropriate alternative both in the U.S. and in Korea. This approach includes important factors: 1) mutual gains approach negotiation through all stakeholder involvement; 2) integration stakeholder interest and decision maker's concern of scientific information; 3) use of tools to generate agreement including stakeholder assessment; 4) the neutral parties involvement to design and manage the process to dispute resolution.

Finally, it seems that the consensus building approach causes the legitimacy of the dispute resolution process and the sound outcome. It also is likely to be suitable to resolve the conflict to resource and environment filed in Korea. There are several reasons to explain this argument.

First, according to the result of two cases study, a consensus building approach is significantly effective to resolve the conflicts. Those cases show that the conflict

resolution needs both collaborative efforts among stakeholders and an appropriate process and method to resolve the conflict. The CALFED WUE program shows that there are crucial factors to resolve the conflict such as; 1) mediated negotiation approach; 2) joint fact-finding process; 3) tools to generating agreement (e.g. conflict assessment); 4) collaborative effort among stakeholders. In this case, a consensus building approach resulted in successful outcome. In contrast, in the SAEMANGUM project, the lack of appropriate process and methods ended up in failure to get agreement such as; 1) bilateral negotiation; 2) zero-sum based negotiation; 3) absence of joint fact-finding process; 4) no tools to generate agreement (e.g. ground rules); 5) lacking collaborative effort. Regarding this, a consensus building approach would be one of the alternatives to overcome these shortcomings.

Second, a consensus building approach has potential to resolve other conflicts in Korea. To be specific, in the conflict to high-speed railway construction in the CHEONSUNG Mountain, this conflict finally is meant to be resolved through joint-fact finding process by participating stakeholders and neutral experts. This reflected that bilateral negotiation had a limitation to resolve the conflict and the dispute resolution was impossible without seeking scientific information jointly.

After all, this case shows that the effort to improve the legitimacy of the dispute resolution is quite important. A consensus building approach can enhance the legitimacy of dispute resolution process by providing all stakeholders' involvement and joint fact-finding process.

Last, the failure in the court mediation to the SAEMANGUM project shows that the legal process to resolve conflict has a significant defect. It seems that the legal process can not solve effectively the science debate in environmental conflict, as well as, to integrate successfully the different interests and values among stakeholders. Even though the court deliberated about the conflict surrounding the SAEMANGUM project for about four years, it just provided the recommendation to urge bilateral negotiation and a consensus based decision. In this case, it is clear that protracted litigation has a crucial defect to effectively resolve various conflicts. In order to resolve acute conflict in the environmental field, the practical stakeholder's involvement and consensus based negotiation are essentially crucial.

Tasks of employing consensus building approach

There are several conditions to employ a consensus building approach to

resolving disputes with resource and environment filed in Korea. Key stakeholders should participate in negotiation table and well trained facilitator (mediator) should exist. In addition proper resources are needed such as time, finance, experts and should be guaranteed. The institutionalization of dispute resolution such as law is also important.

First, the conflict resolution by negotiation basically depends on the stakeholder viewing the benefit through negotiation as larger than denying participation in negotiation. Thus, it is important that the benefit to negotiation should be provided and stakeholder should maintain a collaborative attitude. Mutual gains approach negotiation, fairness of dispute resolution process and socialization of benefit to negotiation would assist to overcome those problems.

Second, the role of facilitator (mediator) is quite crucial in a consensus building approach. In this model, the facilitator is mean to effectively design and manage the process of dispute resolution. Specific application of this model should be employed differently depending on the specific situation in conflict. The facilitator takes responsibility for this effort. However, there was no well trained facilitator in resource and environmental dispute in Korea. Thus, it should be answered how to foster facilitators effectively.

Third, proper resources are needed such as time, finance, experts and should be guaranteed. a Time and money are needed in promoting trust building among stakeholders and employing a professional facilitator, In particular, promoting mediator service to environmental dispute, the market for this service should be generated. The role of the neutral solving science uncertainty is quite important.

Last, in a long-term point of view, the institutionalization of Alternative Dispute Resolution (ADR) is crucial. In order to achieve this, Susskind[29] says that the effort to promote ADR service is needed in both supply and demand at the same time[30]. While government should try to demand ADR service, academic and civil society should offer ADR service. Also, the institutionalization built depends on Korean situation.

In part, this paper has a defect of generalization. The final decision of application to consensus building approach is not determined by just two case analyses. The real usefulness of this approach would be proven through practical experimentation and inspection of its result. Additional studies on this issue will

[29])Lawrence E. Susskind is Ford Professor of Urban and Environmental Planning at MIT, President of the Consensus Building Institute, and Director of the Public Dispute Program at Harvard Law School.
[30]) Personal Interview, 5 June 2005

be necessary.

BIBLIOGRAPHY

Lawrence Susskind, Field, P.. *Dealing with an Angry Public.* New York, NY: Free Pres,1996.

Lawrence Susskind, Sarah McKearnan, and others. *The Consensus Building Handbook: A complete Guide to Reaching Agreement.* Thousand Oaks, CA: Sage Publications,1999.

Pruitt, Dean G., Jeffrey, Z. Rubin. *Social conflict: escalation, stalemate and settlement.* New York, NY: Academic Press,1986.

William breslin, Jeffrey Z. Rubin and others. *Negotiation theory and Practice*. Cambridge, MA: Harvard law school,1993.

Lawrence Susskind, Patrick Field, Mieke Van der Wansem and Jenifer Peyer. "Integrating Scientific Information, Stakeholder Interests, and Political Concerns in Resource and Environmental Planning and Management" Kevin S. Hanna, D. Scott Slocombe and others. Oxford University Press. Forthcoming, Fall, 2005.

Dukes, Franklin E. *Resolving Public Conflict.,* Manchester and New York Manchester University Press,1996.

Lawrence Susskind and Jeffery Cruikshank. *Breaking Robert's Rules: The consensus building alternative to parliamentary procedure*. Cambridge MA: MIT-Harvard Public Policy Dispute Resolution Program, 2005.

R. M. Solomon, S. Yonts-Shepard, and others. "Public Involvement under NEPA: Trends and Opportunities" in Environmental Policy and NEPA: Past, Present, and Future, Ray Clark and Larry Canter, eds. Boca Raton, FL: St. Lucie Press, 2000.

Jenifer Leigh Peyser. "How does participation in the framing, Review, and Incorporation of scientific Information Affect stakeholder perspectives on Resource Management Decisions" diss., MIT U .2005

Howard Raiffa. *The Art and Science of Negotiation.* Cambridge, MA: Belknap Press/Harvard University Press,1982.

D.A. Lax and J. K .Sebenius. *The Manager as Negotiator.* New York: The Free Press,1986.

Fisher, Robert, William Ury and Bruce Patton. *Getting to Yes: Negotiating Without Giving In* (Second Edition). Houghton Mifflin Company,1991.

S.L. Star and J. R. Griesemer. “Institutional ecology, ‘translations’ and boundary objects.” Social Studies of Science 19(3) ,1989.

Scott McCreary, John Gamman and others. “Applying a Mediated Negotiation Framework to Integrated Coastal Zone Management.” Coastal Management 29, 2001.

Agricultural Water Use Efficiency Assurances. “ Stakeholder Focus Group I issue Audit” 1998.

Boyd W. Fuller. “Mediating Irreconcilable Conflict: Agricultural Water Use Efficiency, CALFED and California”, 2003

CALFED Bay-Delta Program and CONCUR, Inc. Summary Report: Independent Review Panel on Agricultural Water Conservation Potential. 1998.

Kim Myung Sik. “SAEMANGUM and Deliberative decision-making”, The Institute of Philosophy Research, 2001

Choi Mi Hee. “Measure for integrating economic validity assessment of l large public investment project and environmental assessment”, diss., SKK U, 2002

Ju,Jae-Bok. “Reconcile System of policy conflict between government and organization: comparative study of the river of DONGGANG project and SAEMANGUM project”, The Korea Institute of Public Administration, 2004