

# **A Study on the deliberative poll in decision making process of nuclear energy policy**

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Jisoo Kim(KRILA), Sunwoo Lee(Korea National Open University), Da-hee, Lim(RICC)

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# 1. Introduction

- **Representative Democracy is the foundation of the national system but it might make the principal-agent problem(Strom, 2000).**
  - **Conflicts rising from these problems could make socio-economic costs and government distrust(Jasanoff & Kim, 2009).**
    - **A typical example is the decision process of nuclear energy policy in South Korea.**
- **Traditionally, energy policy has been determined on the basis of scientific electricity demands analysis and forecast by elites.**
  - **However due to the scientific uncertainty of the risk of accidents, there is not objective risk perception but subjective risk perception.**
  - **Risk perception is socially constructed. Especially, after the nuclear corruption scandal in 2013, the awareness to the limitation of the decision making process by the small number of elites has increased strongly in South Korea.**
- **This is reason why residents ,who is one of the direct stakeholder, participate in the energy policy decision-making process.**
  - **On the other hands, there is also criticism about decision making process using the resident's participation.**
    - **Negotiation between government and residents who live near the nuclear power plant is effective in solving the principal-agent problem. However, there is a criticism that the cost of negotiations is too high.**
  - **Recently, Moon administration tries to solve this problem using deliberative democracy process.**
    - **Because the nuclear policy is strongly confronted with the pros and cons, conflicts always arise regardless of which policy the government adapted.**
  - **Government establishes the Public Deliberation committee on Shin-Gori Nuclear Reactors No. 5 & 6(PDC, 2017).**

# 1. Introduction

- **3 months later, government decides to resume the nuclear power plant according to the Committee's recommendation.**

The Committee conducts deliberative poll and submits recommendation to the government. In this process, direct stakeholders such as residents, business man who works in the nuclear industry, governments and environmental NGOs do not have the right to make decisions. They only serve to provide information and review the fairness of committee operation. Only general citizens who is not direct stakeholder participated to deliberative poll and it's discussion and survey.

(source: [www.sgr56.go.kr/](http://www.sgr56.go.kr/) )

- **Surprisingly, there is no conflicts with respect to this decision. What does it make this amazing result?**
  - Of course, there was a debate that the specific design of the deliberative poll should be improved socially.
  - Recently, however, Korea is interested in policy decision through participation of ordinary citizens. Therefore, it is necessary to precisely research on how to use the deliberative poll considering the context of Korean society.
- **This study analyzes the deliberative poll case in South Korea using Ostrom's IAD framework and suggests specific design for the policy decision making process using the deliberative poll in the Korea context.**
  - Ostrom's IAD is a suitable analytic framework for conducting institutional analysis to solve such a policy problem in dilemma through analysis of the interaction between the environment and the system.
  - Especially, this study deals with the operational rules, which is one of the attributes that affect the action arena as a process of Fishikin's deliberative poll.

# 2. Deliberative Democracy and Deliberative Poll

## 1) Relationship between deliberative democracy and deliberative poll

- According to post-positivism, policy decisions by a small number of elites must include some errors because of bounded rationality (Fischer, 1998). Because this is a human limitation, critical discussion among people with diverse ideas is a necessary process for developing better policies (Hoppe, 1999; Wildavsky, 1989).
- The deliberative democracy is related to the policy making process of this post-positivism.
  - The deliberative democracy emerged as an alternative to overcome the limits of representative democracy and formed a consensus on the necessity in recent years.
- However, we are looking for a concrete method of how to realize the deliberative democracy.
- Fishik (1988)'s deliberative poll is one of the methods.

## 2) Background of Deliberative poll

- In many countries, surveys are being used as a way of asking citizen's opinion about specific issues.
- However, most citizens are indifferent to certain issues. Therefore, no matter how wise individuals are, it is easy to become a 'foolish crowd', driven by populism, making foolish decisions. The deliberative poll is developed to overcome these problems.

## 2. Deliberative Democracy and Deliberative Poll

### 3) The concept of deliberative poll

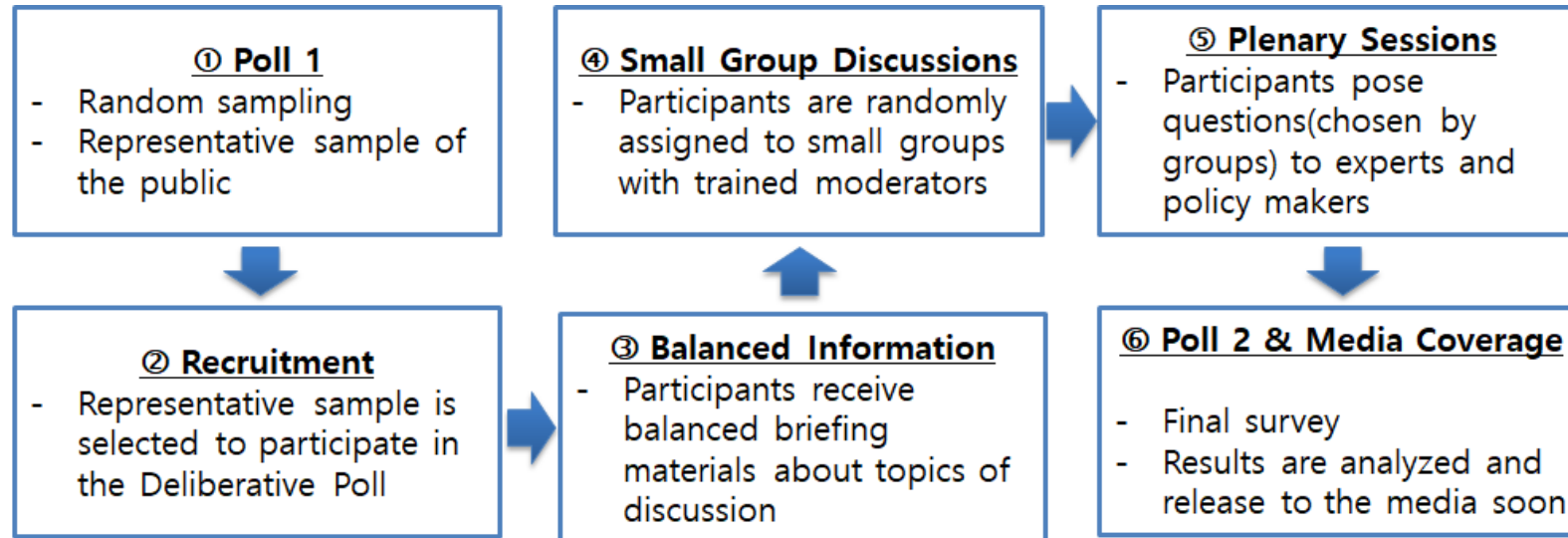
- The Deliberative poll is characterized by randomly gathered representatives of citizens in order to learn and discuss on specific issues, and to set their positions based on their discussions.
  - This process combines with the methods of survey and deliberative discussion.
  - The following factors are important: ① Representative of participants, ② Fairness and expertise in process operations, ③ Accuracy, neutrality and sufficiency of information

### 4) A basic structure of designing Deliberative poll

- Gathering the participants by random sampling → The first poll → Providing balanced information → Q&A for experts and policy makers(Panels) → Small group discussion with moderator → The second poll → Sharing the results with the citizens who did not participate
- The committee which operate the deliberative poll is made up of staff to run the deliberative poll and some citizens to participate in decision-making

## 2. Deliberative Democracy and Deliberative Poll

[Figure 1] Process of the deliberative poll



\* Source: <http://cdd.stanford.edu/what-is-deliberative-polling/>

### 5) Using of the deliberative poll

- The deliberative poll begins with a sort of social experiment, not a government decision-making process.
  - So, in principle, the deliberative poll does not need to social binding on the results.
- The deliberative poll as a deliberative decision-making process for debating issues is different from the usual case.
  - Therefore, it is necessary to analyze the deliberative poll case under following conditions; lots of budget, time and effort, and the actors with high expectation. So this situation should be reflected for designing the deliberative poll.

# 3. Ostrom's IAD Framework

## 1) Basic logic of Ostrom's IAD framework

- **Human beings make a rational choice to maximize their own self-interests.**
  - However, the kinds of rationality are various other than economic rationality.
- **It is necessary to analyze how he perceives in the social context in order to clarify the individual behavior and the motivational structure of the behavior(Ostrom, 1992).**
  - The social context consists of various attributes and rules. It affects the interactions among the actors in action arena.
  - So if we wish analyze this structure, we should understand this case.

## 2) IAD framework (Ostrom et al., 1994; Ostrom, 2005)

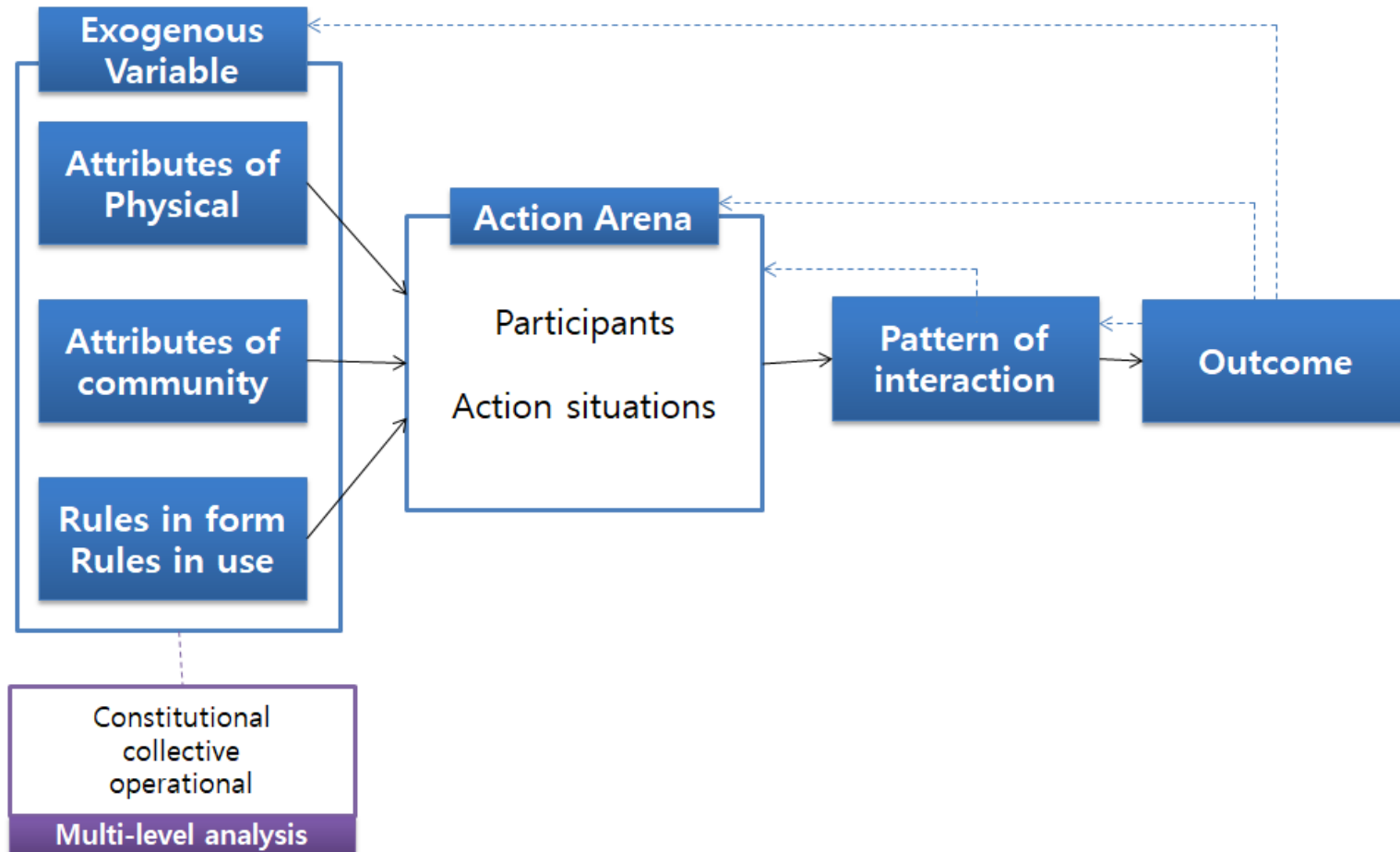
- **Exogenous variable**
  - Biophysical attributes: typology of goods or service
  - Rules and institutions: working rules and rules-in-use
  - Community attributes: ① community sharing values, preferences, and culture, ② community scale and composition et al.
- **Action arena among the actors: participants and action situation(incentive structure)**
- **Patterns of interaction and Outcome**



# 3. Ostrom's IAD Framework

- This framework is suitable to analysis on this case.

[figure 2] Ostrom's IAD framework



# 4. Nuclear Energy Policy and Conflict in South Korea Context

- **South Korea depends heavily on nuclear energy. At the same time, however, citizen's risk perception about nuclear accidents is too high.**
  - **Korea is very close to Japan geographically in the wake of the Fukushima nuclear accident. And, In recent years, the frequency of earthquakes in Korea has increased. But Korea has low energy independence, and due to the division of South and North Korea, it is like an island in terms of energy production and supply.**
  - **Koreans have a high level of concern with CO2 and fine dust. Thus, it is a trend to reduce the method of thermal power generation. But the production of alternative energy is not yet economically efficient. The government believes that nuclear energy is the best way to secure a stable energy source. And the additional economic benefits generated through nuclear power plant exports and nuclear R & D are excellent.**
- **Previous administrations chose to 'operate nuclear power plants with peace of mind through safe regulation and management'. But Moon administration has stated that it will be necessary to change energy-mix to alternative energy from nuclear energy in terms of long term perspective.**
  - **President announced Permanent Stop Ceremony of Kori No. 1. As a result, construction of Shingori No. 5 & 6 was suspended.**
- **Government said that it would make policy decisions based on public opinion through the Public Deliberation committee.**
  - **There has been a controversy in Korea regarding the policy frame transition of the government. However, the general public has a consensus opinion that policy decisions should be made by citizens.**

# 4. Nuclear Energy Policy and Conflict in South Korea Context

- Korea has experienced the failure to operate the Public Engagement Commission on Spent Nuclear Fuel Management because of the problem of neutrality of committee.
  - So, most important point was the Committee's fair operating method. But the planners were under pressure to successfully make policy decisions within a short period of three months, half a year after the president's inauguration.
- Recently, however, Korea has actively used citizen participation procedures to manage conflicts. Based on this experience, Korea has designed a public inquiry procedure that fits the policy context and issue characteristics.
- Korea designed its own deliberative poll as a decision making process using the citizen participation without concerting by Fishikin.
  - Therefore, it is necessary to verify the appropriateness of the deliberative poll in this case through post analysis.

# 5. Methodology

- **Time span: 2017.08.~ 10.(3 months)**
- **Spatial range: South Korea**
- **Research method**
  - **single case study**
  - **Interview(participants in 1 of Government officials, 2 of moderators, 3 of Specialists)**
  - **Literature research (White paper and documentary, video, presentation, official speech et al.)**
- **The purpose of this study is to analyze the case of the Public Deliberation committee on Shin-Gori Nuclear Reactors No. 5 & 6 in Korea using Ostrom's IAD Framework.**
  - **What dimension of analysis is required? Operational choice level**
    - \* **Constitutional choice level: the highest level of official rules like the Constitution, laws. These rules forms the basis of other rules.**
    - Collective choice level: rules that directly affect an actor's collective actions based on the constitutional rules**
    - Operational choice level: detailed operational guidance derived and changed by actors during interaction**

# 6. Case Study

## 1) Exogenous variable

### • Biophysical attributes

- public goods(electronic power), common goods(the home of life without radioactive contamination)
- Choice based on individual rationality may differ from public interest.
- The views of the direct stakeholder may differ from the citizen who is not related directly.

### • Rules

- Nuclear Safety and Security Commission(NSSC): NSSC has a official power to decide whether to restart the construction of nuclear power plant or not. However the government asked NSSC to decide following the Public Deliberation committee on Shin-Gori Nuclear Reactors No. 5 & 6(PDC) 's recommendation as a consultation procedure.
- Public Deliberation committee on Shin-Gori Nuclear Reactors No. 5 & 6(PDC): PDC has the authority to give NSSC an official recommendation.

- NSSC

- the commission under Prime Minister, vice-minister level commission
- the President, speaker of the National Assembly, and NSSC's chairman recommends a committee, the President appoints a committee
- Because NSSC is composed of pros and cons of nuclear energy, NSSC has always been distpute about the fairness of committee composition and it was at the heart of nuclear energy conflicts.

- PDC

- temporary advisory committee based on the Prime Minister's Order(No. 690)

# 6. Case Study

## - Design of PDC

- ① Preparation for PDC operation: task force team composed of officials in the Office for Government Policy Coordination
- ② PDC support team: It operated by officials from related departments(National Research Institute staff: only 1 person). They do not have any interference with decision making, except administrative support for operations.
- ③ PDC: PDC summarizes the opinions of the citizen participants and suggests recommendation to NSSC. PDC has a professional organization appointed by PDC to run the deliberative poll process and monitor & supervise it. PDC determines the main procedures and criteria for the deliberative poll process.
- ④ Monitoring Committee: it reviews the fairness of PDC operations after closing the PDC. Their independence is ensured. A university research institute with expertise about the deliberative poll was selected for this task.
- ⑤ Consortium composed of the private professional institute: It is fairly selected by PDC. It temporary composed of research company, association for the conflict studies, and NGO for this task.
- ⑥ Key procedures and standards: PDC decided on the main procedures and rules before commissioning itself. However, in case of an unexpected event, PDC decided the operating rules through the it's decision(a majority of attendance committee members and a majority of attendance committee members).
- ⑦ Participants selection: random sampling, appropriate scale to ensure representation(at least 5 times more to choose since the citizen's willingness to participate may change)
- ⑧ Sharing the results with the public, transparent process: the results of the 4 times surveys are disclosed only in the final announcement because it affects to the public and participants.

## • Community attributes

- presidential impeachment by candle-light revolution, citizen-led peaceful regime change, situation of the high citizen's self-esteem about their citizenship, early in Moon's presidency, presidential approval rating about 80%
- Social atmosphere in which citizen participation and deliberative choice are more important than a small number of experts(elites).

# 6. Case Study

## 2) Action Arena : participants

- **Committees of PDC**

- ① PDC committee members: within 10 persons except energy field experts and direct stakeholders
- ② Chairperson: appointed by the Prime Minister
- ③ 4 sub-committees(Humanities and Social Sciences, Science & Technology, research & Statistics, Conflict management): 2 members each
- ④ Committees: 8 persons(29 persons recommended by neutral expert institutes → except 12 persons by direct stakeholders → 8 persons: final decision based on sex and age ratio, detailed major field, recommendation institution)
- ⑤ The committee held a meeting on the day before the deliberation to ensure that the members were fully informed.

- There is no type of participants on the basic design of the deliberative poll developed by Fishikin.
- However, it is necessary to consider Korea 's situation that the deliberative poll process requires high neutrality and fairness due to the high level of conflict about nuclear energy policy and that the citizen thinks that policy should be implemented according to the result of participation.
- PDC needs to design the institutions in order to overcome above shortcomings because relevant experts do not involve in order to ensure neutrality.

# 6. Case Study

- **PDC support team**

- **PDC has support team which consists of officials from related departments.**
- **Support team helps to organize PDC in a short time and to utilize the infrastructure of various government departments.**
- **Fishikin's model only refers to the process of conducting the deliberative poll through referral to a specialized agency.**
- **In other words, it is necessary to respond appropriately to the process of commissioning to the specialized agency or the role of the government for this.**
- **In particular, in the case of commissioning and conducting the deliberative poll process to private consortium, there is a need for a public service organization that plays a role in supporting their activities through cooperation with government agencies.**

- ① **The officials of related departments are consist of this team.**
- ② **6 sub-teams: the ratio of Grade five of administrative officials is about 60%.**
- ③ **They have not any interference with decision making, except administrative support for operations.**
- ④ **Some of team leaders serves as a secretary to 4 sub-committees(legal division, research division, deliberation division, communication division)**



# 6. Case Study

- **Consortium composes of the private professional institute**
    - They are responsible for formal operations of the deliberative poll and working directly with the participants.
    - The moderator selection process is decided by consortium( not randomly).
    - The number of experienced moderators was insufficient, and people with inexperienced persons were also partially included.
- ① Organizations with public opinion surveys, large-scale surveys, and moderator experience form a consortium
  - ② The main decisions on operation of the deliberative poll are made by the PDC
  - ③ Consortium plays a role of facilitators, moderators(53 persons), staff(50 persons) and observers(20 persons) recommendation
- **Monitoring Committee**
    - MOU with a university research institute with expertise to ensure the reliability of the process and the results.(This committee was composed in order to overcome the issue of expertise in PDC members about the deliberative poll).
    - Ensure committee independence(5 persons)
  - **The Youth (teenagers)**
    - Since the participant is composed of adults aged 19 and over, PDC sought the participation of teenagers to overcome the problem that future generations were excluded(Their discussion video was provided as a reference to the participants.).
    - The enthusiastic discussions of the youth led the participants to a serious discussion.

# 6. Case Study

- External experts

- Although the committee was not commissioned to be an expert in the field for neutrality, it needs their helps. Therefore, experts were actively utilized through the advisory committee system(each 4 sub-committees).
- Experts who participated in the discussion panel made statements supporting the pros and cons based on scientific evidence.
- Especially, in the case of **the regional public debates**, there were many trials and errors in the interregional operation process and the low recognition in the area. It is because that academic associations had to manage the debate without the precise directions from PDC support team in the event of an urgent schedule and a conflict between pros and cons.

- ① Experts who can represent the position of the pros and cons or supplement / verify the claims from the scientific / economic point of view were directly involved in the discussion panel.
- ② Specialists in conflict management, humanities & social sciences, research & statistics, and science & technology who did not participate as PDC members acted as advisory committees.
- ③ In particular, experts in conflict management have conducted conflict management and public opinion training on PDC members. They also acted as advisors in setting direction, deliberation and resolution of the committee's operations.
- ④ A variety of academic associations hosted a regional public debates .

# 6. Case Study

- **Direct stake-holders**

- **Direct stake-holders include anti-nuclear NGOs and nuclear industry , which participate in the communication council and conduct presentation, question, and answer.**
- **Direct stake-holders play a role to expel experts in the selection process of external committee members (Direct-stakeholders could not be a committee member by themselves. In doing so, PDC could retain public confidence)**

- ① **Direct stake-holders: Nuclear industry Association & Anti-nuclear NGO**
- ② **They participated as members of the communication council under the communication division of PDC. This council actually acted as a preliminary coordination process to ensure that PDC would operate unbroken.**
- ③ **They participated as a panel of discussions and conducted information provision, presentation, and Q & A sessions.**
- ④ **They played a key role in the entire process, including the selection of speakers to represent the pros and cons, the process of de-commissioning PDC members and expert advisors.**
- ⑤ **Residents nearby the nuclear power plant were excluded from civic participation. However, some residents participated in the panel discussion.**

# 6. Case Study

- Some residents protested in front of the power plant site. However, their activities were not noticed or supported by the public.
  - The communication council was an arena of the battle between the pros and cons. There was a debate on the possibility of undermining the fairness between two parties. For example, the contents of other materials with different pros and cons have been indicated, and there have been differences in whether to record e-learning lectures with the voice of a voice actor. They also discussed the order of presentation of the national tour discussion, the time of the speech, and the chance of refutation. In some cases, it was not decided whether to attend the discussion until the day before. However, since this process was not publicly available, citizens could have confidence in the operation of PDC. This was a lesson in NSSC operation.
- **Citizen participants**
    - Randomly selected representatives among 20,000 citizen participants responded to survey.
    - Participants initially had relatively low belief that their decisions would affect policy. However, through the small group discussion, in the final stage they are to play an active role in securing the fairness of the operation of the deliberative poll recognizing itself as the representative of the people. Participants trusted in the fairness of the committee([figure 4]).

# 6. Case Study

[ Figure 3] An example of the materials

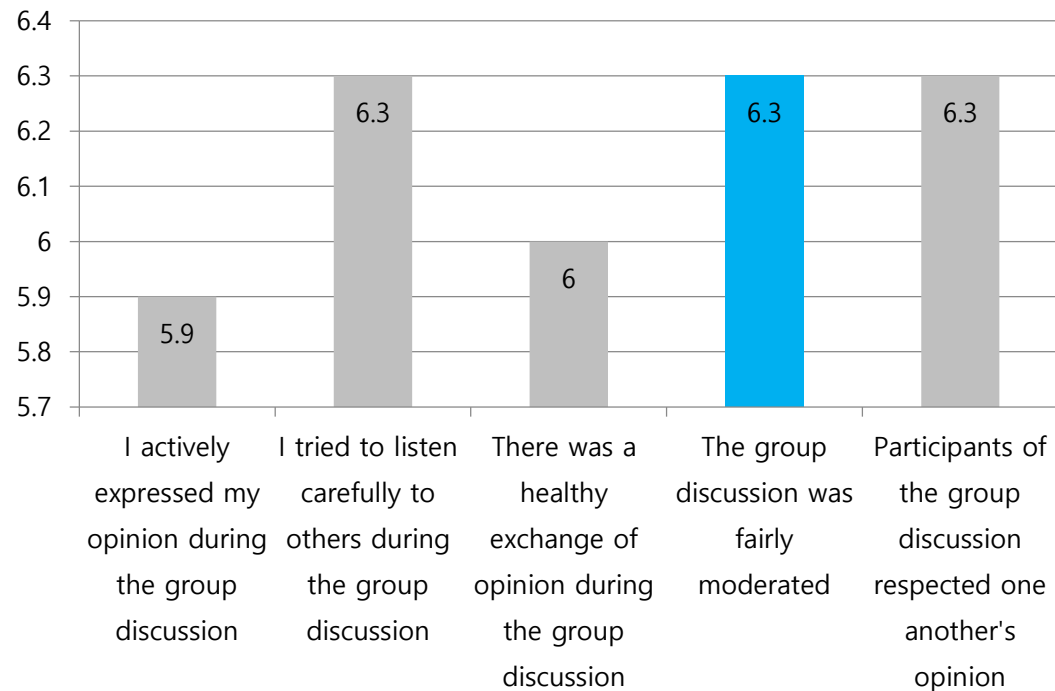
- 신고리 5·6호기 사고는 더 큰 피해를 일으킵니다.
  - 신고리 5·6호기는 대용량 원전이기 때문에 방출되는 방사성물질이 훨씬 많습니다.
  - 중대사고가 났을 때 3일간 방사성물질 방출량은 후쿠시마 원전의 1.64배입니다.<sup>4)</sup>
  - 신고리 5·6호기에서 사고가 발생하면 최소 대피 여유시간은 7시간에 불과합니다.<sup>5)</sup> 원자력안전연구소가 지난 3월 고리 원전 주변 20킬로미터 밖으로 대피하는 데 걸리는 시간을 시뮬레이션 한 결과 22시간 이상 걸렸습니다.
  - 100퍼센트 안전한 원전은 없습니다. 스리마일, 체르노빌, 후쿠시마 원전 사고는 예측하지 못한 상황에서, 원전 사고가 발생한다는 것을 증명합니다.
- 만약 사고가 나면 382만 명은 어디로 가야 할까요?
  - 체르노빌과 후쿠시마 원전 사고 당시 반경 30킬로미터 내에 사는 사람들이 대피했습니다.<sup>6)</sup> 고리원전 반경 30킬로미터에는 382만 명(부산 249만, 울산 104만, 양산 30만)이 살고 있습니다. 원전 사고가 나면 신속하고 안전한 대피가 불가능합니다.

4) (전문가 의견) 전기출력 1,000MW급인 기압경수로에 전력공급이 끊기는 중대사고를 가정한 추정치임 (Prog. in Nuclear Energy, Vol. 88, pp. 245-256). 이때 신고리 5·6호기 격납 건물과 실수기 작동에 의한 과압 방지는 고려되지 않음.  
5) (상대측 의견) 신고리 5·6호기 경우 격납건물 등 여러 안전장치를 추가하여 최소 60시간 이후에 방사성물질이 외부로 누출됨.  
6) (상대측 의견) 후쿠시마 시의 강제피난구역은 20km, 권고피난구역은 30km 이내였음, 우리나라는 방사능 방재법에 따라 방사능누출 이전에 반경 5km이내 주민은 우선 대피하고, 그 외 지역은 방사선영향평가 결과에 따라 해당되는 주민을 대피시킨.

- ① 원자력발전소 건설 재개와 중단 양측이 각각 자료집을 만들
- ② 각주 4) : 본문의 내용과 반대되는 전문가 의견을 객관적 증거와 함께 첨언
- ③ 각주5)와 각주6): 건설 중단측이 작성한 본문 내용에 대해 건설재개측 입장이 다를 경우, 반대측 입장이 어떤 내용이고, 어떤 근거를 가지는지 등을 각주로 기술함
- ④ 이와 같은 작성방식은 참여자들이 양자의 입장을 균형있게 이해할 수 있도록 도와줌

# 6. Case Study

[Figure 4] The fairness of the public deliberation process



\* source: PDC(2017)

- ① 1<sup>st</sup> poll: 20,000 persons, proportional allocation by region, age, gender
- ② Selected participants: At least 350 people, finally 500 people(Considering the average participation rate of 75% in overseas cases), If the subject overrides his / her intention to participate, he / she will be replaced by a person with similar attributes in the same section.
- ③ Fee: 2 nights 3 days participation, 850,000 won + accommodation
- ④ Panel, PDC members, PDC support team does not directly meet participants.
- ⑤ The moderator made the most intimate contact with the participants. ([figure 4] blue bar) .

# 6. Case Study

## 3) Action arena: patterns of participants

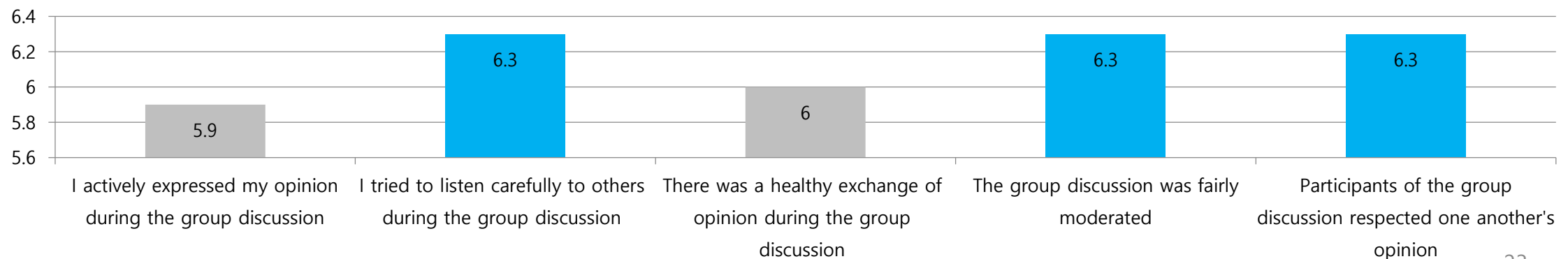
- **Pre-meeting before formal meeting for decision making**

- This method was developed based on the experience of operation of major conflict councils.
- To prevent formal meeting broken by meaningless debate; To coordinate conflict among the PDC members through free discussion; To agenda setting under the sufficient understanding

- **Minimizing the role of the moderator in the small group discussion**

- Moderators do not express their opinions. The moderator only acts as a primary counterpart to the participant's asks and queries. The moderator supports the progress of the public discussion. The moderator keeps the occupation of the participants confidential and encourages equal dialogue in the small discussion process.

[Figure 5] How would you describe your experience of the group discussion held during the debate?(PDC, 2017)



# 6. Case Study

- **Smoking room discussion**
  - The smoking room was a space for communicating with participants in another group. Smoking room was inevitably crowded because smoking room was only one in the hotel. The smoking room was the source of negative rumors that the Commission's opinion would not eventually be adopted as a policy.
- **Participants act voluntarily and have responsibility**
  - Participants received 850,000 won as an allowance, and then acted as active discussants.
  - Participants had sense of responsibility for their own decisions, and then actively studied related contents. E-learning lecture rate was over 90% overall(PDC, 2017). The learning progressed autonomously, but the staff encouraged learning progress checks and attendance.
  - The contents of the materials have been verified by pros and cons. If there are any parts that are not accepted by the other party or expert, such facts are indicated in the materials.
  - In Q & A for participants, participants freely asked experts and allowed them to listen to the answers. At this time, the participants complained that the experts gave the distorted answers or answered them late. The staff immediately addressed these issues, instructed the experts to limit the answers to the experts within 10 lines and to make clear the source of the data.
  - As a result, participants' knowledge of the discussion topics was gradually improved(participant's average score: 2.8 → 4.8 → 6.0)(PDC, 2017).



# 6. Case Study

- Participants regarded themselves as representatives of the public and officials in policy decision making process.
- Therefore, they sought to make judgments based on high rationality. Participants were critical of the emotional appeal, the lack of objective evidence, and the lack of rationality, regardless of which position the power plant construction resumed.
- Participants were able to confirm press reports and SNS responses in real time. They therefore wanted to be acknowledged that the committee's decisions were fair, and that they communicated with external reactions in real time. As a result, the participants positively posed a problem in the field when the MC asked the question biasely in the process of question and answer, presentation of the panel.
- **Interaction in the communication council is the most serious.**
  - The pros and cons have been debating for more than 10 years, and the nuclear industry has generally been a defense against the attacks of the anti-nuclear NGOs. Since the pros and cons could not be members of the committee, they agreed that a formal consultation channel was needed to determine how to formulate and operate a fair committee. This council was aimed at fair rule setting.
  - This council was attended by three representatives from each of the pros and cons, and held a weekly meeting(3 times in total). This committee played a key role in discussion rules, constructing questionnaires, developing and verifying the materials, selecting topics for discussion, and selecting panels.

# 6. Case Study

- The meeting of the council was followed by an emotional response, high-stakes battles, and table clashes. However, the council has become a space for finding a balance between both sides through such hassles and struggles. Like a swan on a lake, the PDC played a role in fairly running the council's struggle. As a result, the public could trust the PDC's fairness.

[Figure 6] Comparison of Pros and Cons

## < Pros >

- Pros have long advocated energy policy decisions by civic participation.
- Moon administration has the same stance on the necessity of anti-nuclear.
- They noted that the committee do not become a unfair playground.
- They argued that if unfair problems arise, they would refuse to participate at any time.



## < Cons >

- Cons have developed their own logic to fight against anti-nuclear NGOs for quite a long time.
- They have a lot of expertise and funding. However, they had to overcome the problem of high nuclear risk perception and distrust of industry in our society.
- It is a public enterprise that must comply with the government's decision, and can not refuse to participate.

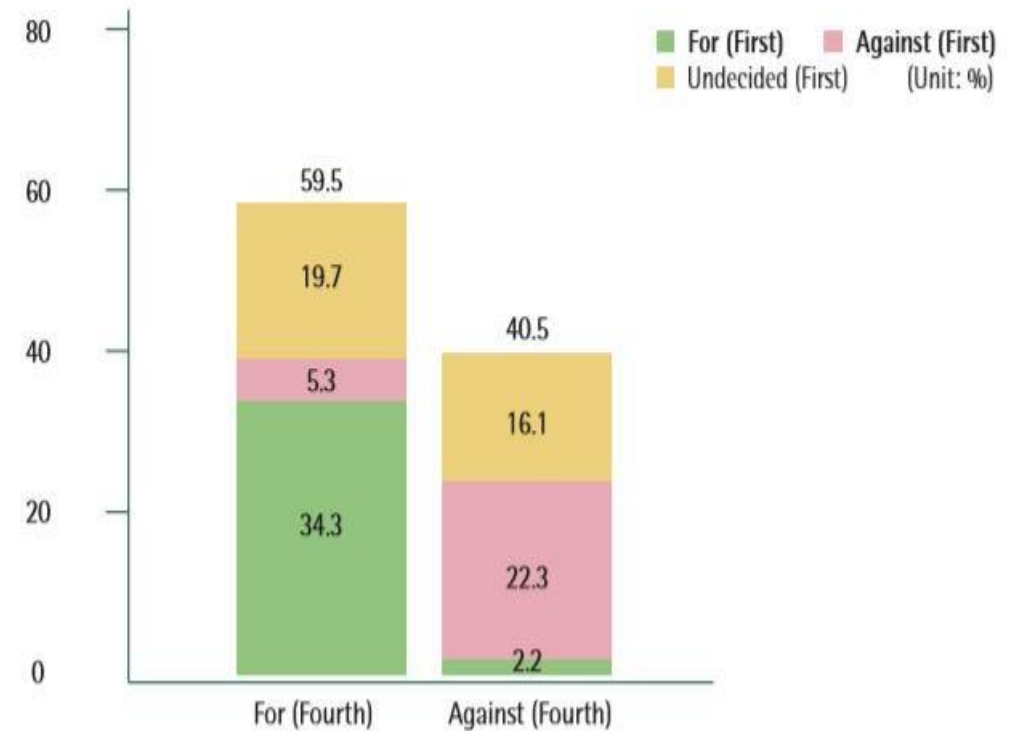
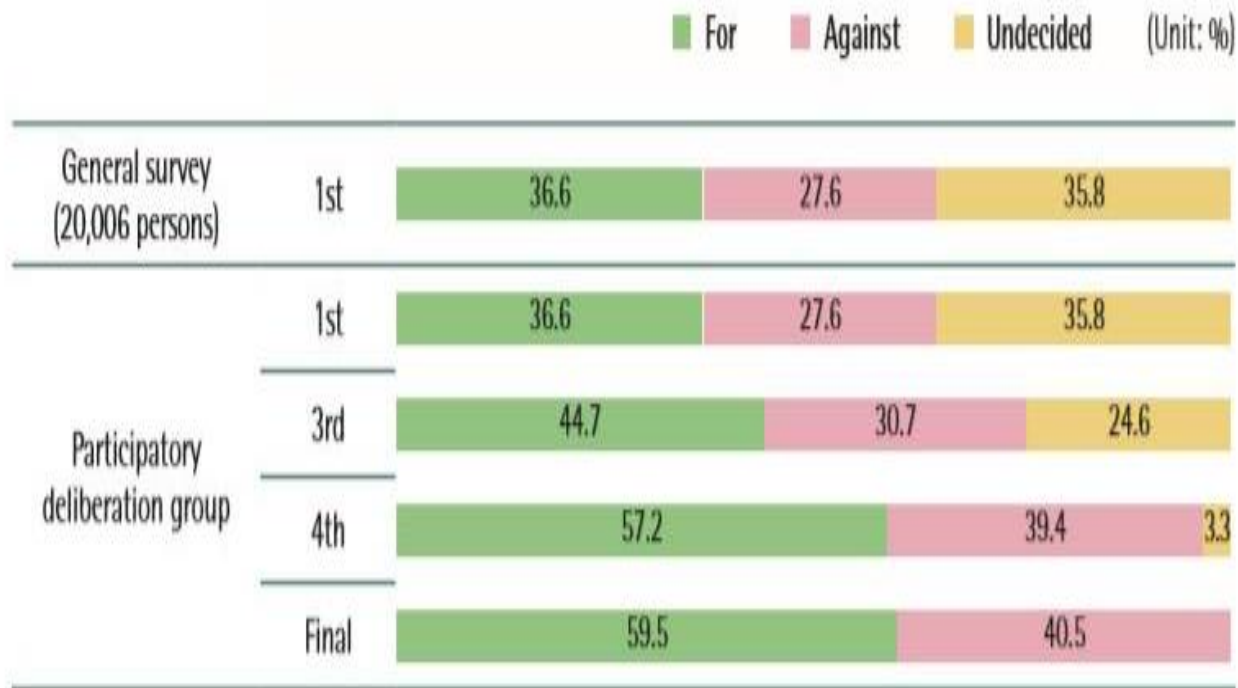
# 6. Case Study

- **The regional public debate**
  - Discussion proceeded with various expert associations(6 regionals). It consists of presentations, discussion and Q&A with audience. But the public was not interested in these regional public debates.
  - The regional public debates went on different topics in different regions, and also avoided sensitive subjects. The debate was not decided by the day before the debater and the presenter, or experienced a crisis that one side refused to attend.
- **The Public discussion(3days)**
  - Topic: the reason of suspension and resumption of the nuclear power plant construction; safety and environmental effect of the nuclear power plant; economical efficiency of electricity supply and demands
  - For each session, each side asked 10 questions and experts answered for 2 minutes(2 minutes of refutation each, 1 minute of re-refutation). The order of the presentation and the question and answer time were decided by negotiation with the council.
- **The entire process was broadcast live.**
  - Participants therefore behaved themselves aware that their own actions were recorded and made public.
  - There were discussions and facts on major issues in the civic engagement room of the web page.

# 6. Case Study

## 4) Outcome

- Participants' positions were changed through this process. As a result, it was decided to continue building nuclear power plants.



\* Source: PDC(2017)

# 7. Conclusion and discussion

- Result shows that the public who perceived themselves as the representative of citizens made a very rational choice. In other words, this case confirms that the institutional setting can lead to individual's publicness. Particularly, it is necessary to deeply study how participants create a mood to learn seriously and to have ample discussion.
- Korea case is policy decision making process of government using a deliberative poll by general participation of the public regarding the issue with conflict.
  - Result indicates that the neutrality and fairness are very important in the process.
- Official decision making authority does not have direct stakeholders. However, they set the rules themselves through a private official channel called the Communication Council.
  - Since the strife between direct stakeholders went private in the communication council, there were relatively few media reports that could lead to a loss of the standing or fairness of PDC.
- The role of the moderator is very important.
  - It is necessary to make efforts to educate experienced moderators in the future.

# 7. Conclusion and discussion

- Operating costs to consortium during 3 months was around 2 billion won. In other words, a large amount of budget is required for the deliberative poll. If a small-size deliberative poll is conducted at the regional level, it is likely to operate on a small budget. Is it possible to operate fairly even in this case?
- If the results of direct negotiations between the residents and the government and the deliberative poll by the citizens are different, Residents can file lawsuits against the government. How will you deal with these problems?
- The social context was an important variable. What if the social support for the president was not high? What if the civil revolution and the impeachment of the president did not raise the public consciousness and pride of the people? What if the government tried to influence the decisions of the committee? What if the government decides the council's recommendations?
- The fact that the media, participants, and the general public were able to communicate in real time made a reasonable choice.

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