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Application of SEA for Planning a Sustainable City

-What type of SEA is appropriate?-

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Abstract: For transitioning to the Green Economy, it is necessary to change the life style of people. Tokyo has a big problem of sustainability caused by its spatial structure. The metropolitan area is the most sprawling and densely populated area on the globe. For energy efficiency of public transportation, it is good. But covered with too much build-up areas is a source of heat island phenomena and the urban sprawl has negative impacts to the quality of life. Sustainability of Tokyo in total is not so high. To resolve this problem, a strategic plan of the spatial structure of the area should be made. One answer might be a systematic linkage of eco cities. And the plan must be made by good practice of public participation based on sufficient information disclosure. SEA would be a way to fulfill this requirement. The paper discusses on the possibility of application of SEA to resolve the problem. A meeting based SEA applying the hybrid model is examined as a way for building a consensus towards a sustainable city.

Key words: Sustainable City, Land Use Control, Consensus Building, SEA, Climate Change

1. A Lesson from Tokyo

To change the life style of people towards the sustainable way, urban and regional planning has the key role, because behavior of the people deeply depends on the spatial structure of their living environment. Creating low carbon cities should be a fundamental way in this meaning. For this, we need have a way to share the concept in a society and collaborate towards this goal. But in many cities all over the world, it has not been successful until now. Some European cities have been changing towards low carbon cities by creating “eco cities”, but it is not prevailing. Most metropolises are too far from sustainable cities. Especially, Tokyo has a big problem of sustainability caused by its spatial structure. The metropolitan area is the most sprawling and densely populated area on the globe.

Failure of Having a Strategic Plan

Figure 1 shows the difference of land use patterns of Tokyo and New York. In the central business districts (CBDs) of the two cities are similarly well developed.

(by S. Harashina,2004)

Figure 1 Comparison of Land Use: 10km from the CBD

But in the areas of 10km points show a clear contrast. The area In Tokyo is still well developed and that in New York is covered with many green spaces. The difference is much bigger in farer points. Why this happened? The reason is lack of a strategic plan in Tokyo, though New York had a regional plan since 1929, the year of the Great Depression. New York people had been strategic

For energy efficiency of public transportation, it is good in Tokyo. But having too many build-up areas is a cause of heat island phenomena. The use of electricity has been increasing in summer time for air conditioning which means high consuming of energy. Sustainability of Tokyo in total, therefore, is low. How can we resolve this problem? The answer is to change the spatial structure of the area to a network of low carbon cities like the Garden City of Ebenezer Howard[1)], though it has not been so successful. But now, we could utilize the current very efficient railway network and telecommunication systems. This eco cities linkage is a multi urban core city[2)] or Sociable Cities as the legacy of Howard[3)].

2. A Strategic Approach towards Low Carbon Cities

From the experience of failure of Tokyo, we need consider how to make a strategic plan. In Tokyo, after World War II, urban planners of the local government argued that growth of Tokyo should be controlled. The maximum population of the central area of Tokyo was set 3.5 million. But it was not realized by strong opponent from land owners and industries. They thought that it had adverse impacts to economic catch up. The priority was put on economy than the quality of the life at that time.

Then, Tokyo became an extraordinary great city. Population of the central area is 8 million and that of Tokyo region in total is 33 million, which is only one in the world. Other major metropolises are less than half of Tokyo. The QOL of people in Tokyo is not so high, though the economic activities are good and it is quite convenient to enjoy such activities of urban life as shopping, dining and various entertainments. But because of long commuting time of the people, time budget for family life in weekdays is quite poor. It also affects the community activities of daily base. In weekends, the people have other difficulties. Because of high density of the living areas and lack of green space, the recreational areas are not enough. The QOL is low in this meaning.

There is another shortcoming in Tokyo. It has a big risk of earthquake hazard. A great earthquake happens almost every hundred years in Tokyo. The last one was in 1923. We could see the huge damage by this in highly urbanized area like the Earthquake in Kobe in 1995. But the case was much better, as it has much more green space very close to the CBD. Kobe was helped from Tokyo and other parts of Japan. But, if it was happened in Tokyo, no other region could help Tokyo. It should bring a quite serious problem not only in Japan but in the world as Japanese economy must be damaged. The impact would be great such as current economic turmoil. We, therefore, need a strategic plan for the future of the Tokyo area. But it is very difficult.

The consensus building process required for making the policy and the regional plan of Tokyo need an innovation, as the public participation on the regional level is quite different from usual participation in urban planning. As policy measures of environmental planning, we should consider three types of wares of “hardware”, “software” and “heart-ware” or mind-ware. Among these three wares, there are reciprocal relationships as shown in Figure 2. Though the goal of the plan is to change of the spatial structure of the Tokyo region, that is “hardware”, we need provide necessary institutional and financial support that is “software”. And we also need make deep environmental awareness in the mind of the people, “heart-ware”, to build consensus of the future.

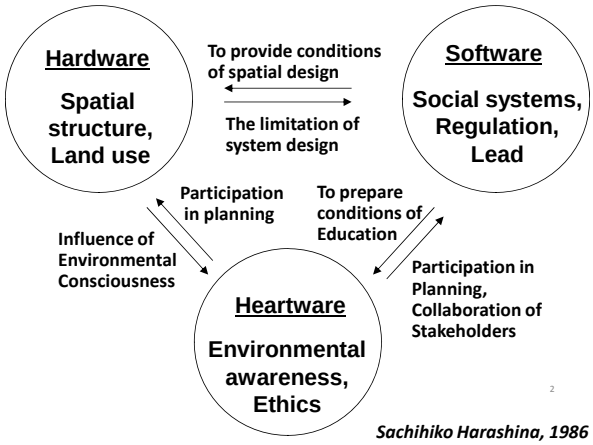

Figure 2: Three Types of Wares as Policy Measures

Strategic Environmental Assessment (SEA) would be a way to create “heart-ware” among the public, as it is a way for deliberative democracy. A meeting based SEA is examined for planning a sustainable city. The paper was written based on my presentation held at the 45th ISOCARP Congress held at Port, in 2009[4].

3. Role of SEA for Planning

3.1 Discussion in a Public Space

Impact Assessment is the way for pursuing sustainable development by controlling human activities to have a good harmony with the environment. As SEA is applied at strategic level of decision making, it is more suitable to secure dialogues or discussions in a society. SEA has been prevailing all over the word[5) 6)].

I deem that the function of EIA or SEA is to conduct “**discussions in public space**” to ensure the decision makers to be more sustainable. The “public space” is a space for communication, which is open to the society and accessible for everybody. It is a similar concept of “public sphere” of the German sociologist Habermas[7)], which is used as a term for overall society. But here, the word of “space” is used for indicating a certain area as the urban or regional environment is not about overall society but about a part of a society.

The function of EIA is exchanging information between proponents and stakeholders by utilizing paper documents such as scoping documents or draft impact reports, and written public comments. These are for dialogues in the participation process. There are usually very many stakeholder groups in project EIA. Paper documents are convenient for sending information to everybody with high accuracy. But for efficiency of dialogues, meetings are better way if the number of the participants is not big. The shortcoming of meetings is that the member size should be limited.

3.2 Meaningful Reply

What kind of participation is necessary for good public participation? There have been many discussions on the levels of public participation. The classic answer was given in the late of 1960’s in the US by Arnstein[8)]. She showed the eight rungs ladder model of participation. I made another model as follows. It was developed based on the studies in this field. The concept is based on the feedback process for dialogues. The concept of the model was originally appeared in 1994 [9)].

(1) Informing (Informing*)
(2)Hearing (Consultation*)
(3)Reply only (Placation*)
(4) Meaningful reply
(5)Partnership (Partnership*)

* The words of Arnstein are shown in the parentheses.

I saw s a big gap between Arnstein’s fifth step (placation) and the sixth step (partnership). This big jump is not realistic. There should be another step between these two. Even though a government has power, public require accountability of the decision in a democratic society. Public and the government need have dialogues through any transparent channels. It might become tokenism, but “discussions in public space” means real reply or response from the government to the public. It should not be reply only, but should make **meaningful reply**. The decision-making of the government should reflect the information created through the discussions. It is an indirect decision making though open process.

For controlling human activities, we need build consensus on the policy. The decision making process should be rational and fair. For rationality, scientific approach is required, then, systems analysis is applied to EIA (or SEA) analysis. For fairness, democratic process is must in a modern society, then, public participation and information disclosure as the base of participation is inevitable in the EIA (or SEA) process.

By these two conditions, “**discussions in public space**” is the essence of the mechanism of EIA or SEA. For instances, in usual EIA processes, paper documents such as scoping documents, draft impact reports or final impact reports, and written public comments are exchanged. And face to face contact is also utilized as compliments to the communication by paper documents. This encompasses informing meetings, public hearings, and workshops.

4. New Style of SEA

4.1 A Meeting Based Way

Thus, I classify two kinds of communication media for public participation. One is paper documents and the other is meetings. The principal media for project EIA is usually paper documents and meetings are utilized as compliments to them. I, therefore, name this as "**paper based way**". In the case of so-called public involvement (PI), it is commonly considered that the principal media is meetings. Then, paper documents are compliment to it, in contrarily. I name this type of participation as "**meeting based way**".

As communication process, the function of EIA or PI is "discussion in public space". It is more efficient if meetings could be held more intensively. But in the case of EIA, the shortcoming of the meeting based way is clear, as the number of the affected people or stakeholders is usually large. It is difficult to select relevant number of representatives from the stakeholder groups. But on the strategic level of decision making, the situation is different. The information exchange could be conducted through meetings by representatives of stakeholders and experts. It, therefore, is possible to conduct the process based on meetings in the case of SEA. This is a new style of SEA, which is conducted by the meeting based way. The principal media are meetings and paper documents are utilized as compliments.

The process of decision-making of a project is done stepwise starting from the policy level, then the plan or the program level and to the project level. In this way, there are upstream decision-makings before the decision of the individual project. This structure is common in every human society, and consensus building is necessary on each stage of decision-making in order. It is required to conduct assessment on plan or program level and policy level for making accountable decision. Then, an approach of SEA is required, if one would like to build consensus about a certain project.

In SEA, as the planned action is not so concrete as those of project EIA, the number of stakeholder groups is relatively small. It, therefore, might be possible to select major stakeholder groups. Theoretically, meeting based way could be applied to SEA for the effectiveness of communication between proponents and stakeholders, if it was transparently conducted. This is a new style of SEA. To conduct this type of SEA, the following three conditions are required for realizing "**discussions in public space**". These are derived from experiences not only studies in the field of consensus building and planning science but also various experience of myself.

4.2 Three Conditions of Meeting Based SEA

(1) Setting the Arena

Firstly, it should be guaranteed that the result of the discussions will be reflected in the decision by the decision maker, which is the indispensable condition. Then, the structure of the members of the arena is the practical problem. As the discussions are required to be conducted in a rational and fair way, the members should be selected to answer these. Experts are selected for promote scientific discussions, which satisfies the rationality. Representatives of Stakeholders are selected to exchange various opinions, which satisfy fairness in a democratic society. The hybrid of experts and stakeholders is essence in the arena. This is the **Hybrid Model**[10]. For efficiency of discussions, the number of the members must be limited. The maximum number should be less than around twenty as the rule of thumb. Good balance of number of experts and stakeholders should be kept.

(2) Transparency of Discussions

The discussions must be done in a very open manner. Sufficient number of observer seats should be prepared. And efforts should be made to allow input from observers to resolve the outreach problem, because of the

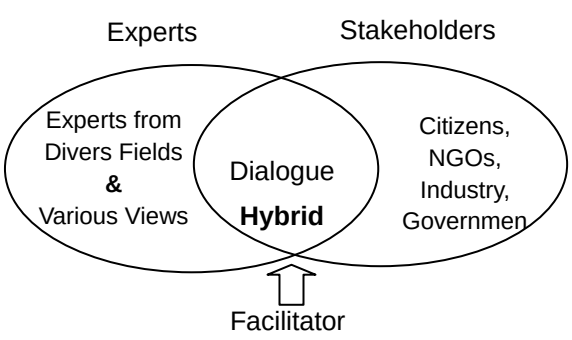

Figure 3: The Hybrid Model

limitation of the number of the members. And even enough number of observer seats is supplied, not everybody can observe at certain time and place. For transparency, diverse communication media should be utilized concurrently such as TV, internet broadcasting etc. In the case of TV broadcasting, CATV is preferable especially for SEA applied to local actions. Written materials are also important for ensuring the contents of discussions. The minutes have to be made and publicized. The minutes of "who said what" type must be produced. For the convenience of making access of the public, not only printed minutes but also electronic minutes should be appeared on the web site.

(3) Sufficient Information

For meaningful discussions, we need sufficient information. Information disclosure is must. Necessary information includes those of "facts" such as reports and data, and those of "value" such as public opinions. Those should be collected from existing data and literatures. It might be necessary to invite experts for providing up-dated data and knowledge. Public comments should be invited not only by letters but also aurally at meetings occasionally. Through providing enough information to the members, a learning process among them could be realized. It, therefore, is desired to give opportunities to have various experiences and collaborations, such as technical visits and collaborative survey.

5. Application of the SEA and a Remark

The new SEA was actually applied in some planning processes in Japan by me. The first one was for waste management planning, which was successful to resolve a dispute on building a new facility in Nagano Prefecture, Japan in 2001-2003[10]. The hybrid model was applied to the case and the experts and stakeholders could build consensus after disputing situation. The process was started from the policy lever, and moved on the plan and program levels. They could create heart-ware in their mind gradually in the process.

Others are for making guidelines of environmental and social consideration of international cooperation organizations such as the Japan International Cooperation Agency (JICA) and the Japan Bank for International Cooperation (JBIC). Especially, New JICA after 2008 has been struggling to make a very advanced revised guideline. Though the people of JICA and JBIC had not been so positive to advanced guidelines, they gradually changed their minds in the processes. Chairing all of the processes, I think that they could create heart-ware.

Thus, this should be happened also if the Meeting based SEA was applied to urban and regional planning, the public should create heart-wares.

For a New Stage towards Sustainability

In Japan, though we have not any opportunities to apply the SEA to urban and regional planning yet, there is an emerging movement of introducing SEA. As Prime Minister Yukio Hatoyama made announcement at the UN conference in September 2009, Japanese government has a will of CO_2 reduction of 25% compared to the level of 1990, we need have more advanced strategy for planning a sustainable city. In this meaning, we should get into a new stage of planning administration. And I believe that we could go towards a sustainable society by applying the Meeting based SEA.

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