

Enclosed Sea and Its Coastal Area as A Model of The Global Environment— Three Conditions for Realizing “Sustainable Development” and Environmental Education

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Soundness of the human future depends on whether or not the human beings can establish the world system of "Sustainable Development". And the development of enclosed sea and its coastal area seems to be a just model of that of the finite globe. The "Sustainable Development" system established at these model areas should be extended to the whole world.

Indispensable three conditions for establishing the "Sustainable Development" have been indicated. ① Establishment of a social system for assuring priority of environmental plan, ② democratization of policy making process and establishment of a system for rightly functioning environmental assessment, ③ generalization of setting environmental assimilating capacity and conception on regulation of total emission.

Environmental education as an important strategy for establishing the "Sustainable Development" and subjects for practising it are discussed.

INTRODUCTION

The report "Our Common Future" published by The World Commission on Environment and Development in 1987. And the word "sustainable development" (hereafter referred to as S D) which is a key concept of the report has been popular in the world.

The problem of human environment is no more than that of human activities called developments. Under this understanding a scientists group including me has continued to do studies and discussions with a view of environment and development being in one set since 1972. The 18th Seto-uchi (Seto Inland Sea) symposium of Japan Scientist Association was held in this July in Hiroshima. Our group, then, has thought for a long time about an alternative development system named "environment conservation type production system". And we have discussed and proposed about concrete content of the alternative development and the way to make the new system. Our recognition of the problem is fundamentally common with the S D of "Our Common Future". I'd like to use here the word S D being now popular.

"Our Common Future" has said "S D is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". It is, in other words, a development system which is sustainable through our descendant ages without destroying the planet earth. Here the development means construction of a future world by human beings

themselves. The following conclusion will be deductively proven : human beings have no bright future if they fail to establish an alternative world system, "sustainable development".

The concept of S D is enough clear in a literal expression. However, what sort of real way to aim at the system can be considered ? A concrete way to establish the new system on the planet is very ambiguous in any levels of discussions in the world.

The way to realize the S D system in regional level, in national level and in the world level must be deeply connected with political and/or administrative systems, economic systems and social systems. Furthermore it will be a complicated process which is affected by legal system, developing stage of technology and people's awareness. The establishment of S D system is a difficult process for the human beings and discussion and certainly many trials can be expected. In this report three necessary conditions which are indispensable to establish the S D system are stated.

Two things should be mentioned at this time. Firstly the S D is the development system under comprehension of the finite planet, and therefore "development of enclosed sea and its coastal area" is a just model for "establishment of the world system of S D". And we should make activities in a view that a local S D system established by the model development is extended to the world system. Secondly the three conditions which are brought forward in this report can be looked for in experiences of us Japanese in the period from mid 1960's to mid 1970's. At that time we had been annoyed by severe environmental contradictions called "kohgai" in Japanese.

1. ESTABLISHMENT OF A SOCIAL SYSTEM FOR ASSURING PRIORITY OF ENVIRONMENTAL PLAN

Plans for conserving, utilizing and controlling the environment are first of all made. And these environmental plans should be placed above all the social plans including administrative and private ones. We know some examples of local governments having environmental plan. But the existence of the environmental plan by itself has almost no meaning, and the priority of the plan against all plans for development is just important. In other words, it is critical that a social ethic, "preservation of a sound environment is the basis of all the human activities" is fixed in a society and is supported by the government of that society.

I'm afraid someone may consider this condition difficult to introduce in a society, but we have had a similar system in a local level. For example, a local government which had been in Osaka in 1970's had had a environmental managing program called by a pet name "Big Plan". And at that time in Osaka all developmental plans had to meet the Big Plan. It was a fundamental principle which restricted all behaviors in all divisions of administrative function of Osaka Prefecture. The Big Plan could not be considered an effective social plan, and furthermore the character of the Prefecture varied as a

result of varying of social commitment to environmental issues before certification of enough successful effects of the Big Plan. However the concept of the Big Plan will be able to afford a great model for actions seeking to advance the S D system.

2. DEMOCRATIZATION OF POLICY MAKING PROCESS AND ESTABLISHMENT OF A SYSTEM FOR MAKING ENVIRONMENTAL ASSESMENT RIGHTLY FUNCTION

A development affects greatly to future lives of people. Nevertheless the planning of development in Japan so far has been made without enough consensus of people concerning the project. For example, few people had previously known about extinction of natural coast of Osaka Bey. Such a situation can not be justified in a democratic society. Needless to say, Japanese society has some future planning processes which appear to be democratic for form's sake such as activities of inquiry commissions or some opening systems of the project to public. Nevertheless those processes, under present condition in Japan, has been social means which allow willful acts of a developmental body. Japanese society should have legal or administrative systems which make the policy making processes substantially democratic.

Plainly speaking, we want to have some mechanisms for assuring enough public participation at the time of judging yes or no of the project or investigating alternative plannings. Here public participation does not mean only people who would be effected immediately by the developmental action. The present state of human civilization tells us the planet is our common. Everyone being on the earth should be able to give his opinion on the project.

The human environment means various conditions for human lives. How will the conditions change by the development? And what is the meaning of the change? Environmental assessment is a social human activity of anticipating such an environmental change and its meanings for human lives. It is no doubt to say the environmental assessment should have very important roles in the S D systems' creation. However I have to stress the assessment system can function in its intrinsic state only when it is connected with the democratized policy decision process.

The anticipation and the evaluation of changing environment clarified by the assessment are basic materials for people's selection of their own future. The selection of their future society by people means ultimate establishing their subjecthood. And it has been concerned directly in basis of democracy.

Nevertheless the assessment system in Japan so far has been considered as a supplementing system of non-directional developments from side of environmental NGOs. There is a great gap between the present assessment system and a system being for establishment of the S D.

3. GENERALIZATION OF SETTING ENVIRONMENTAL ASSIMILATING CAPACITY AND CONCEPTION OF REGULATION OF TOTAL DISCHARGES

The third necessary condition is from a view point of natural science. The S D is, as described before, a formation of human future with understanding the limits of the human environment, that is, of the earth. This limit leads us inevitably to the following conclusion. Environmental assimilating capacity by which tolerance level of the finite environment for human activities is offered should be determined scientifically as much as possible in regional, country wide and world wide scale. And needless to say all the human behavior concerning development should be restricted according to this.

The Japanese society had understood in the former half of 1970's that severely polluted environment can not be reformed by conventional regulation of emission concentration of pollutants. People's concern had aimed at the environmental assimilating capacity and regulation of total emission connected with the capacity. I myself had discussed about effectiveness and limitation of the regulation of total emission of contaminants at the International Congress on the Human Environment in Kyoto in 1975. ⁽¹⁾

The regulating way of this type had greatly been expected successful as the last means for preventing severe contamination by many administrative bodies. The Big Plan of Osaka, previously referred, had been evaluated as the first one of the regulation. And in case of national plans some regional environmental pollution control programs adopted the regulating way for total discharges. And the pollution control program of Tokyo Bay, Ise Bay and Seto Inland Sea as representatives of the enclosed sea area in Japan, has contained the regulation of total discharges.

In behaviors of pursuing the world system of S D the concept of setting the environmental assimilating capacity and the regulation of total discharges must be extended to all the sides of development. Furthermore the regulation of this type should be enlarged to the total quantity control of developmental action itself such as utilization of products or production by a close linkage with the priority keeping system of the environmental programs mentioned as the first condition.

4. ENVIRONMENTAL EDUCATION AS A STRATEGY FOR ESTABLISHING THE S D SYSTEM

I have outlined so far the 3 unavoidable conditions in the process for realizing the S D. But for fixing and establishing the systems or conception contained in the conditions, formation of the following people's consensus is necessary. "Environment has a fundamental importance for human existence, and it is indispensable to establish the S D system in the world for right conservation of the environment". In a democratic society the people's consensus is the base of all social behaviors. And then we need to have local and national governments which have a policy of establishing S D as the first one of others. Then furthermore the established S D must be extended

to the world.

Here let's call the action to make the above mentioned consensus "environmental education". We have to come a conclusion that the results of the environmental education is successful or not is the key to assure the eternal soundness of human existence.

Then I'd like to state about main subjects of doing the environmental education briefly as the last consideration of the report. Administrative bodies, schools and NGOs, these three should be considered. The first is administrative bodies. Now the importance of the environmental education has been recognized at the stage of world politics. The administrative bodies have had a better condition to do the education energetically. We will be able to expect roles of the administrative bodies directly or indirectly for the environmental education done at the society, schools and even at homes.

The second is schools. It is a matter of course that education should be commenced since ones younger days. In this meaning, the environmental education at schools has been expected its great position, and now in Japan many discussions about the environmental education at primary, middle, high school's levels have been done. Concerning the discussions one point should be took note. Many teachers regard environmental education as only bringing up children in the nature. I don't deny importance of "education on the nature" or "outdoor education". However, I want to stress the environmental education must be a "grand strategy for establishing the S D systems".

And then we should consider a role of universities in practice of the environmental education. Young people are going to have their great interests in the global human environment. The environmental education by university scientists can be considered very effective under this situation.

At the end of my presentation, I'll mention about very important roles of NGOs. It is obvious that the environmental education is a strategy of changing systems from the present non - S D system to the S D system. The administrative bodies and the schools are organizations which have been made in the present social system. As a matter of course they have certainly a limitation of conception for changing the present system although they have understood well the problem is important. Here the importance of the role of NGOs which can make progressive thinkings from their free standpoint must be stressed. It is necessary that establishment of a right correlation between the administrative bodies and the NGOs in which they supplement their roles each other. In Japan the both organizations apt to be an antagonistic correlation owing to a historical situation. It is not favorable for realizing the great project, the construction of the S D system in Japan.

⁽¹⁾ S.Hayashi and M.Hayashi, Environmental Standard and the Limitations of So-Called "Reguration of Total Emission", Science for Better Environment [Proceedings of the International Congress on the Human Environment (HESC) (Kyoto, 1975)] p.842-848