# How do we envision the sustainable society we want to create?

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# Here, Professor Masahide Sakamoto uses Japanese pollution research as a case study for thinking about and understanding how to create a sustainable society

There is no single definition of a sustainable society. This is because society is an intertwining of a wide range of complex elements, such as the relationship between individuals and groups, economic systems, political systems, culture, art, and religion, and has different groups and organizational forms depending on the country or region.

To realize a sustainable society, it is important to reach a consensus on what kind of society we should strive for in the international community as well as at the national and regional levels. Here, we discuss Japanese pollution research as a case study for a sustainable society.

#### Creating a sustainable society from Japanese Pollution Research

In Amagasaki City, Hyogo Prefecture, the damage caused by air pollution became increasingly severe. While factory smoke (sulfuric acid gas) is the direct cause of air pollution, the economic system is the structural cause. In the early 1960s, Japan had flue gas desulfurization technology to remove sulfur from factory smoke, but this technology was never used and pollution worsened.

This history of pollution shows without legal regulation, corporations can cause enormous damage by saving money in production, and that governments can have serious negative effects on society when they act in the national interest, and in the same commercial interests as corporations. To correct such governmental failures, it is necessary to establish a mechanism for consensus building among various stakeholders, including experts, citizens, local residents, businesses, organizations, local governments, NGOs, NPOs, and politicians, in public decision-making.

#### Relief for pollution victims and improvement of welfare

Japan has an "Asbestos Health Damage Relief Program" to provide relief to asbestos health victims without imposing civil liability on individual polluting countries or companies. Benefits under this system are lower than other health damage compensation systems based on civil liability and do not meet the conditions for ensuring the livelihood of asbestos victims.

The author not only presents a methodology from an economic-legal perspective to solve this structural deficiency but also proposes a new system design to reduce the economic and physical and mental burdens of comprehensive victims, including victims and their families and survivors.

Firstly, pollution damage, including asbestos damage, is characterized by a chain of negative effects, such as economic burden and physical and mental burden, from the victims themselves to their families and bereaved family members. Secondly, if the welfare of individual comprehensive victims can be improved in the process of breaking the negative chain, it will lead to an improvement in the welfare of society as a whole.

Therefore, designing a system to improve the quality of life of comprehensive victims is one of the mechanisms to improve the quality of society.

### Renewable energy and its implementation

The introduction of renewable energy has less environmental impact than fossil fuelbased power generation systems. (2) Fossil fuels can only be extracted in certain places, and disputes over ownership are likely to arise, whereas renewable energy can be used in any country with the right technology. This entails wars and conflicts over oil can be avoided, leading to the peaceful use of energy (3) reducing post-disaster damage.

Small-scale, decentralized systems can provide electricity to earthquake and tsunamiaffected areas during the recovery process, from emergency assistance such as lifesaving and first aid to injured people immediately after a disaster. (4) Reducing the risk of border blockades or export restrictions due to the spread of infectious diseases such as new coronaviruses (5) owning wind, solar, and geothermal power plants in the region will provide a mechanism for local revitalization and regional self-reliance, such as using the power for households, agricultural production, and attracting industry, then increasing profits by selling the surplus power.

Although Japan the world's third largest geothermal resources (23 million kW), the actual amount of electricity generated is 603,000 kW, which means that the utilization rate of geothermal resources is only 2.6%. However, Japanese manufacturers have established manufacturing technologies for geothermal power generation equipment early on, and Toshiba, Fuji Electric, and Mitsubishi Power have a 67% share of the global market for geothermal power generation turbines.

ITOCHU Corporation and Kyushu Electric Power Company have participated in geothermal projects in Indonesia, providing expertise in the development and operation of geothermal power plants. Japanese companies have advanced geothermal development technologies in terms of both hardware and software.

The lack of progress in the use of geothermal energy in Japan is the restrictions placed on geothermal development, due to legal constraints such as the Natural Parks Law, the Hot Springs Law, and the Forest Law, as well as the concerns of local hot springs associations regarding geothermal development In order to integrate the use of renewable energy sources, into a sustainable socio-economic system, it will be necessary to resolve legal issues while working together to deepen the understanding of local residents. Ultimately, the realization of a sustainable society will depend on what kind of socioeconomic system is designed by governments.

## What direction of the social economy should we strive for?

Finally, we will present two ideas that we should choose in order to realize a sustainable society.

- 1. If the inequality structure of the capitalist economy remains unchanged, each person should seek happiness in his or her own way within that structure.
- 2. Assuming that it is natural that there are differences in individual abilities, we should build a society in which there are no differences in human values, and we can respect each other as human beings.

Number 1 is based on the idea that people have differences in abilities. However, if people begin to think about what they should do to fulfil their own lives within this framework, in the medium to long term the ground will be created for the idea in number 2 to be accepted as a common understanding in society.

The second idea above is that each person's abilities are multifaceted, and the differences in abilities due to different strengths and weaknesses can be viewed as a positive factor in building a society where people can respect each other.

Since it is difficult to improve the structure of inequality and global environmental problems under the present capitalist economic framework, we must work for structural reform and reconstruction of the socio-economic system toward post-capitalism, while inheriting the historic wisdom of science and technology, education, culture, and art as our heritage.

# Based on the Study of Pollution in Japan and the Structural Transformation of the Socio-Economy

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