



International Symposium on Environmental Endocrine Disruptors 2000

Saturday, December 16 - Monday, December 18, 2000

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Part 1
Saturday, December 16, 2000

取組の現状

Current Strategy

How the Liberal Democratic Party Takes Measures for the Problem of Chemical Substances and Future Issues

Hiroshi Hase

Member of the House of Representatives

Chairman of Subcommittee of Chemical Substances, the Liberal Democratic Party

1. Tackling of the subcommittee

- The subcommittee was established because there is a possibility that endocrine disrupting chemicals (environmental hormone) have a fatal influence on the human health and ecosystems.
- The subcommittee was held 15 times in 1998 and 1999, and consulted opinions from researchers industries, etc.
- The subcommittee has judged that it is important to promote research work, as researchers pointing out that there is much that still needs to be learned about action mechanisms of endocrine disrupters and presence of such chemicals in the environment.
- The name was changed to "Subcommittee of Chemical Substances" beginning with the year 2000, and the subcommittee began to deal with dioxins and PCBs as well.

2. Promoting the risk assessment of endocrine disrupting chemicals

- The subcommittee should ensure that the various agencies and ministries involved draft budgets and should make efforts to secure the necessary funds.
- A survey of the state of the environment on a global scale was conducted, and risk was furthermore assessed by the Millennium Project. The subcommittee will support these efforts.

3. The need for urgent countermeasures for dealing with PCBs

- PCBs, which ceased to be manufactured in 1972, are still being used and stored in great quantities.
- There have also been accidents involving devices that used PCBs and have exceeded their useful life. Countermeasures for dealing with PCBs are of urgent importance.
- The subcommittee strongly urges the government to create a system for collection and disposal of PCBs as soon as possible.

4. Countermeasures for reducing discharge of dioxins

- The subcommittee drafted and obtained the party approval for the Law Concerning Special Measures against Dioxins. This law sets the TDI (Tolerable Daily Intake), the standards for dioxin levels for air, water and ground, establishes regulations against dioxin levels in exhaust gases and waste-water and sets out a framework for cleaning up contaminated ground.
- The amount of dioxins discharged in 1997 was 7,320 - 7,580 g. In 1999 it was 2,610 - 2,830 g - a 70% reduction in 2 years.

5. Necessity to support the work of researchers

- It is expected that young researchers carry out original and creative research, because they are the center of the promotion of research work.
- Increase manpower is also indispensable to reinforce the research systems.

6. Necessity to support international joint research

- The international joint research should be promoted, as the international cooperation is indispensable for this problem.



How New Komeito Takes Measures for the Problem of Endocrine Disrupters (3)

Shuichi Kato, Ph.D.

Member of the House of Councilors

Chairperson of New Komeito Project Team on Environmental Endocrine Disrupters

Vice-chairman of New Komeito Dioxin Problem Headquarters

1. Introduction: Aiming to be leading nation in green reform

New Komeito is a political party that has promoted "green reform" as a mainstay of its environmental policy. The party first raised the problem of endocrine disrupters in the environment in the Japanese Diet in March 1997, and the Law Concerning Special Measures Against Dioxins proposed by New Komeito was enacted by unanimous agreement of the entire Diet in July 1999.

In conjunction with the new law, the year 2000 has been established as the true start of the age of recycling. New Komeito guided the Basic Law for Promotion of Recycling as well as many related laws enacted in May 2000, thus enabling effective treatment of waste. The party has worked to make Japan a leader in environmental protection by means recycling founded upon economic principles.

2. Getting off to a quick and concerted start

As is evident from party reports such as the "Written Opinion on Questions Regarding Problem of Dioxin" issued in June 1997, the "Written Opinion on Questions Regarding Problem of Endocrine Disrupters, etc." in December 1997, and the "Written Opinion on Questions Regarding Problem of Endocrine Disrupters (Environmental Hormone)," issued in June 1998, New Komeito has demanded the government deal with the problem of endocrine disrupters in the environment. The party also issued its "Urgent Proposal for Measures Against Contamination by Dioxin" and "Urgent Proposal for Measures Against Endocrine Disrupters" in May 1998. In addition to this, New Komeito carried out a study of school lunch utensils for schools of all prefectures in June 1998, established countermeasures committees for local governments, and realized a ban on polycarbonate (PC) based school lunch utensils as a preventative measure. The party also made a positive contribution with a proposed amendment to the PRTR Law in July 1999, an amendment to the JIS Dioxin Measurement Law in September 1999, Nationwide Dioxin Measurement Survey, and Proposal for Nationwide Study of Endocrine Disrupters in the Environment, both in November 1999.

3. Recent efforts of New Komeito

1. 25-year analysis/study of death rate of newborn infants according to dynamic population statistics conducted and results published (March 1998 -)
2. More than \100 billion acquired from supplementary budget for 1998 for countermeasures against dioxin (June 1998)
3. Problem of PCB pollution in U.S. military bases (December 1995 -)
4. Auxiliary measures for detoxification treatment and study of lost or unknown PCB waste (August 2000 -)
5. Exchange of opinions with NGOs concerning organotin pollution in ship scrapping operations
6. Enactment of Basic Law for Promotion of Recycling (May 2000)
7. Study of administrative evaluation of environmental policies by introduction of Administrative Evaluation Law (September 1999 -)

8. Government officials urged to sign POP's international treaty and prepare domestic laws (September 1999 -)
9. Exchange of opinions and cooperation with environmental NGOs and NPOs
10. Lectures and literary contributions to educate the public
11. Study of environmental and social guidelines of the International Cooperation Bank
12. Expansion and improvement of environmental guidelines concerning trade insurance
13. Proposal of countermeasures against unlawful disposal, obtaining ultimate destination, and countermeasures against dioxin (October 2000)
14. Further reinforcement of study and countermeasures of endocrine disrupters in the environment (August 2000)
15. Countermeasures against dioxin in farmland, etc. (1999 -)
16. Study of children's environmental standards of the Miami Summit and study of International Children's Treaty (1999 -)

4. Conclusion

Next to global warming, the pronounced spread of toxic chemical substances in the environment is the biggest threat to the safety and security of human beings. New Komeito is doing its utmost to enact laws such as the "Chemical Substances Safety Basic Law" and the "Soil Contamination Preventing Law." The party is also working to bring about international restrictions for endocrine disrupters. Symposiums such as this are important from the perspective of international cooperation. We intend to continue to support such functions in the future as well.

*Literature introducing activities of New Komeito includes: 1. "Dioxin Contamination: A Vicious Cycle of Poison", by Yuriko Ohno (Gakuyoshobo), 2. "Dioxin Pollution", by Sadakazu Aoyama (Houken), 3. "More Information on Environmental Endocrine Disrupters and Dioxin", by Sadakazu Aoyama et al (Gyousei), 4. "Reasons Behind Enactment of the Law Concerning Special Measures Against Dioxins", by Shuichi Kato ("Chemicals and the Environment" No. 38, Eco Chemistry Research Society), 5. "Dioxin: Global Effort for the 21st Century", ("Todai," June 2000), 6. "What Members of Globe Japan Say", "Environment Local Government" (September 2000)

*The document outlining New Komeito's activities is distributed at the entrance: "How New Komeito Takes Measures for the Problem of Endocrine Disrupters (3)"

Current Strategy on Endocrine Disruptors in the U.S.A.

Gary E. Timm

U.S. Environmental Protection Agency (EPA)

The U.S. has strategy for endocrine disruptors consists of two complementary components: a research component focusing on basic science issues and the development of methods, and a screening and testing component to identify and characterize endocrine disruptors. The Food Quality Protection Act (FQPA), signed into law on August 3, 1996, requires that the EPA develop a screening program, using appropriate validated test systems and other scientifically relevant information, to determine whether certain substances (that is, pesticides) may have an effect in humans that is similar to an effect produced by a naturally occurring estrogen, or such other endocrine effect.....”

The screening program will consist of two tiers, a screening tier containing eight assays with three possible alternatives, and a testing tier, containing five multigeneration tests. The screening battery is designed to determine whether or not the agent being evaluated has the potential to interact not only with the estrogen-hormone system, but also the androgen- and thyroid- hormone systems, as well. The testing tier is designed to provide definitive characterization of an agent’s inherent ability to disrupt one or more of the three hormone systems.

This presentation will briefly give the status of EPA’s implementation efforts to date and the projected timetable for completion of the validation program and priority setting system. It will also propose new international cooperation beyond the current OECD efforts. Although there is cooperation on a frame work and validation of some test methods in OECD, no attempt has yet been made to develop a coordinated international overall strategy for testing, assessment and regulatory decision-making. Such a strategy would include agreement of what substances are priorities for testing and assessment, which countries will take the lead on specific tasks or chemicals to be addressed, and how the results of each country’s efforts can be shared to leverage resources. Without such a strategy, there will be duplication of efforts and waste of valuable and scarce resources (and, potentially, conflicting results) on testing and assessment of chemicals.

International activities could be visualized in reference to the conceptual framework for the U.S. EPA’s Endocrine Disruptor Screening Program (EDSP). That framework envisions sorting the universe of chemicals into four categories: 1) chemicals with no/low concern including polymers and other chemicals exempted from further testing or assessment, 2) chemicals with little or no information that need screening level data to make a preliminary determination of hormonal activity, 3) chemicals with substantial information that they can/do interact with the endocrine system and which need further testing to characterize the effects of the interaction, and 4) chemicals with sufficient data to permit a hazard assessment. The US priority-setting efforts are focused currently on commercial (industrial) chemicals (many of which are also inert ingredients in pesticide formulations) and pesticide active ingredients. The commercial chemicals fall primarily into category 2 , that is, they are candidates for screening to identify their potential for interacting with the endocrine system. Chemicals which are positive in the Tier 1 screens will need to undergo further testing and may ultimately need hazard assessment and risk management.

European Community Strategy for Endocrine Disrupters

Birgit Van Tongelen

European Commission

Endocrine disruption is a mechanism whose effects relate to the functioning of the Endocrine system, that is, development, growth, reproduction and behaviour of humans and wildlife. There is growing concern about a range of substances which are suspected of interfering with the endocrine system and which may cause adverse health effects such as cancer, behavioural changes and reproductive abnormalities. In December 1996, at a European workshop held in Weybridge, UK, it was concluded that there is sufficient evidence that testicular cancer rates are increasing, that the apparent decline in sperm counts in some countries is likely to be genuine and that some cases exist in the EU where adverse endocrine effects in birds and mammals coincide with high levels of substances shown to have endocrine-disrupting properties in some test systems. It was also concluded that consideration should be given to measures to reduce exposure to endocrine disrupters in line with the precautionary principle. Furthermore, the Commission Scientific Committee for Toxicity, Ecotoxicity and the Environment has identified a potential global problem for wildlife. In October 1998, the European Parliament adopted a Resolution, calling upon the Commission to take specific actions, in particular with a view to improve the legislative framework, to reinforce research efforts and to make information available to the public.

The Communication proposes a Community Strategy for Endocrine Disrupters. The objectives are two-fold:

- To identify the problem of endocrine disruption, its causes and consequences.
- To identify appropriate policy action on the basis of the precautionary principle in order to respond quickly and effectively to the problem, thereby alleviating public concern.

The strategy identifies four key requirements, that is,

- the need for further research,
- the need for international cooperation,
- the need to communicate to the public and
- the need for appropriate policy action

and recommendations are made in the short-, medium- and long-term to address these requirements.

Short-term actions represent a timeframe of 1-2 years. These include the establishment of a priority list of substances for further evaluation of their role in endocrine disruption, use of existing legislative instruments, establishment of monitoring programmes, identification of specific cases of consumer use for special action, information exchange and international cooperation, communication to the public and consultation of stakeholders. Medium-term actions require a 2-4 year horizon. These include the development of agreed test methods and testing strategy and the reinforcement of research efforts as well as the identification of substitutes and voluntary initiatives. Finally, long-term actions require a timeframe of more than 4 years and entail the adaptation/amendment of existing and proposed legislation in order to take specific account of endocrine disrupters.

Government Policies Related to Endocrine Disrupters in Korea

Geum-Su Seog

Ministry of Environment, Republic of Korea

In recent years, endocrine disrupters have emerged as a major environmental science and policy issue. The problems surrounding endocrine disrupters have drawn strong public concern through mass media since 1998 in Korea. Though the effects on human of the chemicals suspected to be endocrine disrupters are scientifically controversial, the potentially serious consequences of human exposure to these chemicals made the Government take actions.

Since 1998, the Government has implemented a series of measures under the following strategies;

- Accelerate the research and survey to clarify the effect of endocrine disrupters on human and wildlife in cooperation with foreign countries and international bodies such as OECD
- Support the role of NGOs to play in the design and implementation of the policies and research plan
- Devise the proper regulatory tools and implement the regulatory actions such as the restriction of a chemical on a specific use, as appropriate

First of all, the Government convened multi-stakeholder council, "the Council for Endocrine Disrupter", to provide advice regarding the policy and research plan related to endocrine disrupters. This council was composed of the experts on endocrine disrupters, the representatives of NGOs and the governmental bodies such as the Ministry of Environment, the Food and Drugs Administration, the Ministry of Labor and the Rural Development Administration.

In July of 1999, "Mid and Long-term Plan for Endocrine Disrupter Research (1999-2008)" established with the cooperation of all the committee members and other experts. As a part of this initiative, the Ministry of Environment conducted the nationwide surveys of the 37 chemicals suspected as endocrine disrupters in the environmental media and wildlife in 1999, of which the results was made open to the public in September this year.

The results showed that a variety of chemicals suspected as endocrine disrupters were detected in the environmental media and wildlife like fish and frogs, and, therefore, the exposure of human and wildlife to these chemicals is currently not avoidable. Based on 1999 survey results, the Ministry of Environment will implement the following policies in the future;

- Forward aforementioned research plan for evaluating the risk of endocrine disrupters
- Enact the law for controlling the Hazardous Chemicals such as Dioxins and others for integrated management of hazardous chemicals
- Establish emission inventories of Hazardous Chemicals. The project for establishing dioxin emission inventory will be launched in 2001.



Current Strategies against Environmental Endocrine Disrupters by Environment Agency, Government of Japan

Hirozo Ueda

Director, Environmental Health and Safety Division
Environmental Health Department, Environment Agency, Government of Japan

1. Dealing with endocrine disrupters

Endocrine disrupters are chemical substances that disrupt hormonal stability in the bodies of wild animals and human beings. A serious problem affecting health and the environment, scientists have pointed out the likelihood of serious consequences due to the fact that the substances are passed on to offspring.

Since raising the problem of endocrine disrupters both in Japan and overseas, the Environment Agency announced its "Strategic Programs on Environmental Endocrine Disrupters SPEED '98" (updated November 2000) and has promoted experimental research and development of new technologies for dealing with the problem. While working with foreign governments and international institutions, the agency is working to create a system that will not delay administrative means, which is based on new scientific observations that indicate a rapid increase in the future. Along with participating in international development of methods of testing such substances, the agency conducts surveys and risk assessments with priority on substances suspected of being endocrine disrupters.

2. Overview of "Strategic Programs on Environmental Endocrine Disrupters SPEED '98" (updated November 2000)

With "Strategic Programs on Environmental Endocrine Disrupters SPEED '98", the agency proposes conducting study and research to find out whether or not suspected substances are endocrine disrupters, whether they are potent or not, and to shed light on the mechanism by which they act. In specific terms, the plan calls for the following:

- (1) Study of the environment monitoring and affect on wild animals, etc.
- (2) Experimental research and development of new technologies for dealing with the substances
- (3) Risk assessments/management and provision of information
- (4) Work to strengthen the international network

3. Environmental monitoring and other researches

In 1998 the agency conducted a survey of concentration of some chemicals, primarily those suspected of being endocrine disrupters, in the six mediums of air, water, sediment, soil, aquatic organisms and wild animals. In addition to a wide variety of substances including nonyl phenol and ester-phthalates being detected, substances such as PCBs were found to have accumulated in animals at the top of the food chain such as whales and raptors. The agency continued to monitor the environment in both 1998 and 1999.

The Environment Agency is also conducting a study of the behavior of chemical substances and burden on the environment in Japan by production and use of such substances in order to learn the route of exposure and to what degree people and wild animals are exposed to such chemicals.

4. Risk assessments

The agency has begun the risk assessments based upon the results of environmental monitoring and scientific

survey concerning the effect of endocrine disrupters. In specific terms, the Millennium Project calls for ranking over 40 substances according to priority and evaluating the toxicity of the substances for a period of three years. A literature search and various types of screening are used to select substances of high priority ranking. So far, eight substances have been settled upon as having priority to be evaluated for risk for the year 2000. These are: tributyltin, 4-octyl phenol, nonyl phenol, n-dibutyl phthalate, octa-chlorostyrene, benzophenone, dicyclohexyl phthalate, and 2-diethylhexyl phthalate.

5. Participation in international network

Along with Japan participating with other advanced countries at the initiative of OECD in development of methods of screening and testing, last December, the agency began joint research with the U.K. on the effect of endocrine disrupters on the ecosystem. National Institute for Environmental Studies of Japan and National Institute of Environmental Research of Korea have also begun participating in joint research since last year.