

Memories of DIOXIN'94 Symposium in Kyoto

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The 14th International Symposium on Chlorinated Dioxins, PCB and Related Compounds (DIOXIN'94) was held in Kyoto, Japan from November 21st to 25th in 1994, during which time Kyoto was celebrating the 1200th anniversary of its founding as the ancient capital of Heian-kyo. By November winter has normally already arrived in Kyoto, but the November of 1994 welcomed the symposium in comfortable autumn weather with the beautiful sight of red and yellow colored leaves and trees to accompany the great success of the symposium, with 650 participants from 26 countries all over the world.

It was during the 12th symposium (2 years before the 14th) held in Tampere, Finland, when Japan was approached to hold the 14th symposium, making it the second time Japan would host this symposium. Unfortunately, Prof. Masakatsu Hiraoka and I could not participate in the 12th due to the entrance examination of the graduate school of Kyoto University, however, Prof. Christoffer Rappe from University of Umeå asked Dr. Shin-ichi Sakai from Kyoto University about the possibility of holding the 14th symposium in Kyoto. After about one month discussion, Prof. Hiraoka conveyed Kyoto's agreement to host the 14th symposium to Prof. Rappe, and as a result, Prof. Rappe strongly promoted this Kyoto plan to the International Committee. The official document was sent to Prof. Hutzinger on Dec. 28th of that year, and Prof. Hutzinger sent us in return the official agreement confirming that the 14th symposium was to be held in Kyoto, Japan. Therefore, Prof. Hiraoka was nominated to be the chairman, and I served as a Secretary General for the 14th symposium.

This is the brief history of how it was decided that the 14th forum would be held in Kyoto, though my personal history with the symposium extends further into the past. In 1986, the 6th symposium was held in Fukuoka, Japan and was hosted by Prof. Yoshito Masuda. Right after the forum, Prof. Hiraoka, the director of Laboratory for Micro Pollutants Control (made part of the faculty of Engineering at Kyoto University in 1985), invited to Kyoto three researchers from abroad who had just attended the 6th symposium. Prof. Rappe, Dr. B. M. Shepard, and Dr. D. J. Hay worked together to organize the one-day Symposium on micro-pollutants, which mostly focused on dioxins. This was the first time Prof. Hiraoka and I met Prof. Rappe.

In 1989, I had an opportunity to research at Prof. Rappe's research institute supported by the Japan-Sweden Foundation. Though it was only for six months, it was not short enough

to prevent Prof. Rappe and myself from achieving a close relationship. Since then Prof. Rappe has come to Kyoto every year and we shared much fruitful time through discussion, dining, and sightseeing, which brought an idea of starting an international conference on Incineration of Municipal Solid Waste and Dioxin Problems through Japan-Sweden Cooperation. This is so called “The Kyoto Conference on Dioxins Problem of MSW Incineration 1991,” which was held in May 1991 for a three day session. At that time in Japan, “The Guideline for Dioxins Control” was issued from Ministry of Health and Welfare in December, 1990, and “The Manual for Dioxins Analysis in Solid Waste Treatment” was issued from Japan Waste Research Foundation in January 1991, to bring clear vision to the issue of dioxins control in waste treatment. The organization for this symposium led directly to the 14th symposium. Prof. Rappe, I believe, felt that because of the success of the 1991 Kyoto conference, holding an international conference such as the 14th symposium in Kyoto would also have great success.

Dioxins are unintentionally produced by incineration, in the manufacturing process of chemical products and in other methods. Therefore, it is obvious that the more industrialized the country becomes, the more sources and amounts of dioxins there will be in that country. As discussed at “the polar environment session” at the 14th symposium, pollution is already spreading around the polar district even though the sources of pollution are extremely far away. Therefore, I think that hosting the

Nationalities and Regions of Presenters
and Participants in DIOXIN'94

	Presentation			Partici- pants
	Oral	Poster	Total	
Australia	0	0	0	1
Austria	2	1	3	6
Belgium	1	2	3	3
Canada	9	2	11	10
China	0	1	1	0
Czeck Republic	0	0	0	2
Denmark	0	4	4	4
Finland	6	2	8	12
France	0	2	2	5
Germany	27	22	49	48
Hungary	0	0	0	2
Italy	1	5	6	12
Japan	18	59	77	370
Korea	0	0	0	12
Luxembourg	0	0	0	1
New Zealand	1	2	3	1
Norway	2	0	2	7
Poland	0	1	1	1
Russia	1	10	11	12
Slovak Republic	0	1	1	0
Slovenia	0	1	1	0
Spain	0	3	3	4
Sweden	20	12	32	28
Switzerland	0	1	1	7
Taiwan	5	5	10	12
The Netherland	9	5	14	15
U.K.	7	4	11	13
U.S.A.	31	35	66	60
Vietnam	1	6	7	2
Total	141	186	327	650

international conference to discuss these matters is an important responsibility for an industrialized country. Furthermore, the hosting countries up to the 13th symposium are; the United States three times; two times each for Austria, Canada, and Germany; and once each for Italy, Japan, Sweden, Finland; I thought it is our time to host next.

Let me think about the difficulties of hosting the international conference in Japan; (1) Most researchers are from Europe or North America, and it is difficult for them to travel all the way to Japan for participation. (2) Compared to other countries, most of the costs for the conference facility, food, and transportation are significantly more expensive. (3) Generally speaking the common language used at the conference is English which present a difficulty for many of the Japanese participants. Facing those difficulties, however, the 14th symposium ended in great success with the support of many groups and individuals. I was strongly impressed by Dr. Brenner from Germany with his unexpected speech to compliment the success of this forum at the closing ceremony.

To be honest, Japan's Environment Agency in 1994 was not positively dealing with the dioxin problems. By hosting the International Dioxin conference in Japan, I was expecting to enhance the interest in dioxin problems and encourage action at the national level, but this did not occur immediately. During the forum, the media focused on the dioxin problems positively, though the general interest did not remain for long.

After November 1995, however, the Ministry of Health and Welfare and Environment Agency started to discuss about a tolerable daily intake, which gradually enhanced the society's interest towards the dioxin problems. In addition, the fact that the soil around the Municipal Solid Waste incineration facility in Osaka prefecture was heavily polluted by dioxins was disclosed, and the central government started to manage the dioxin control positively.

From February to September of 1999, cabinet conference for dioxin management (13 related ministers) were held five times, and the basic guideline was determined for promoting controls of dioxins. According to these guidelines, over the course of four years 90% of the total amount of dioxin emission was targeted to be reduced compared to the amount emitted in 1997.

Continuously, "Law concerning Special Measures against Dioxins" passed the Diet in July 1999 and was put into effect in January of 2000. Based on this law, environmental quality standards for atmosphere, water, sediment and soil were settled, and emission standards for flue gas and waste water were settled.

As mentioned above, positive measures were taken rapidly while the total amount of dioxin emission in Japan was actually reduced to be less than the original targeted number, and Japanese actual daily intake of dioxins has been reduced to 1.5 pg-TEQ/kg/d.

