

OPENING ADDRESS:

**THE INTERNATIONAL MEETING ON ORGANOHALOGEN COMPOUNDS
DIOXIN '90
10TH INTERNATIONAL CONFERENCE ON CHLORINATED DIOXINS AND RELATED
COMPOUNDS**

**THE STATE SECRETARY
FEDERAL MINISTER OF THE ENVIRONMENT
CLEMENS STROETMANN**

Ladies and gentlemen,

First of all may I welcome you here today on behalf of the Federal Government and the Federal Environment Minister Professor Töpfer, under whose auspices this international Dioxin'90 conference is taking place.

The process towards German unity, for which we have been yearning and which is now becoming a reality, means that the Environment Minister too has appointments he simply cannot postpone, and hopes you will understand that he is unable to open this meeting today in person. My particular thanks goes to the organisation committee of Bayreuth university. you have succeeded in making this meeting today a point of contact among leading scientists, and a global stocktaking of all knowledge we at present have at our disposal. I should also like to the opportunity of thanking you prof. Hutzinger for your expert support in the past. With other scientists you contributed to the Dioxin pilot study undertaken by the NATO environment committee.

Under the leadership of the Federal Environment Ministry, the task of the German working group was to report on the formation of dioxins in the industrial sector and on technical measures to break them down. And so on to the topic being dealt with here.

A particular challenge posed to our industrial society is the handling and use of persistent substances which endanger man and the environment. This is the case in particular for organohalogen, and also includes those substances which are taking center stage here at this international symposium in Bayreuth: not only dioxins and polychlorinated biphenyls, but also CFCs.

There can be no doubt that organohalogen compounds are substances of particular relevance for the environment and have toxic potential. With regard to the evaluation of health risks from dioxin concentrations found in soils, in sewage sludge, in filtered dust, in foodstuffs and in mothers, milk, there are considerable matters of uncertainty and differences of opinion, and indeed fears are prevalent among the public at large. The question is how we react to this.

New safety culture for the **industrial society**. Our leitmotif cannot be fear of dangers and risks posed by industrial society and the wish to cast off a reality that is complex, fraught with conflict and whose consequences are considered a burden to the environment. What we need rather is to develop a new safety culture in our industrial society, a safety culture which retains technical progress, combination we also require in the interests of environmental protection.

The safety culture must be expressed in a willingness to take anticipatory action bearing in mind our responsibility for man and the environment - and this as an integral part of entrepreneurial planning. This means both investigation of the hazardous properties of Chemical substances before they are brought into circulation in the first place, as well as optimum safety at installations.

Requirements must also be set for production processes where hazardous substances arise and are released as pollution. Overcoming environmental contamination from chemical substances at all levels also demands a closely-knit network of anticipatory measures. Over the past few years, therefore, the German Federal Government has developed an overall concept for protection against hazardous substances which is also exemplary at international level. Anticipatory action on chemicals has been comprehensively extended thanks to the amended Chemicals Act, the programme for abandoned contaminated waste and former industrial sites and a whole range of prohibition, limitation and maximum permitted quantity ordinances. The handling and use of hazardous substances have been made safer. Moreover, measures on the safety of installations, the extension of the Federal Immission Control Act so that it becomes an Act on the Safety of Installations, and the environmentally compatible disposal of waste are also part of the overall plan to overcome the Chemicals risk. In the interest of comprehensive, multisectoral protection of man and the environment, environment policy measures will therefore in future increasingly be taken at the production stage of a hazardous substance or when the substance is being brought into circulation. Thus a safety system can be created in all phases - from production, to distribution, use and disposal. The major aspect of our future work in the Chemicals area is the systematic reprocessing of existing substances. The Federal Government is striving to examine and evaluate substances in circulation at the moment. We are continuing to rely on an international division of scientific labour and on cooperation. This international symposium will also play its part in this. An environment policy geared towards preventative action must, for the sake of present and future generations, act effectively now, even if all the scientific interrelation have not yet been Cleared up once and for all. Thus joint action to protect the earth's atmosphere from certain organohalogen is urgently required today. We must achieve a world-wide stop in future to CFC production and use.

The Federal Republic of Germany will continue to set an example here and as early as 1995 will be the first country in the world to halt the manufacture and use of CFCs and halons.

This conference has adopted a demanding programme to deal with the problem substances dioxins, PCBs and CFCs, a sure sign that the next few days will see discussions on the most topical international environment problems in the chemicals area. I am convinced that Dioxin'90 here in Bayreuth will be a further scientific milestone on the road towards world-wide protection against

organohalogens and dioxins, and will contribute to an intensification of the international environmental partnership in this field.

Measures against Dioxin Pollution

In view of the global importance of the dioxin problem, my ministry saw it necessary to put the present level of scientific knowledge up for discussion at an international dioxin symposium in January of this year in Karlsruhe.

During the concluding consultations, the basis was set for risk evaluation. The symposium in Karlsruhe was not in competition with this meeting. Both symposia are rather complementary to one another. While in Karlsruhe the main emphasis was on providing answers to questions arising from administrative measures, it is overwhelmingly purely scientific questions that are being discussed here in Bayreuth.

The data presented in Karlsruhe and recently in the NATO study on dioxins prove that several sources are of relevance when it comes to discovering the cause of dioxin strain. These include in particular:

- The global use of the industrial chemical pentachlorophenol (PCP) and polychlorinated biphenyls (PCBs).
- Incineration processes of all kinds, particularly improper waste incineration and copper smelters,
- The use of "scavengers" - certain added substances - in leaded petrol.

In all these areas the federal Government has, in particular in recent times, taken decisive legal measures to reduce considerably new inputs of dioxins.

Ordinance on the prohibition of polychlorinated biphenyls (PCBs)

The largest dioxin input into the environment is probably a result of the former use of polychlorinated biphenyls. These were widely used up until the early 1970s, in particular as a dielectric and as hydraulic oil. Their use in open systems led to a situation in the past in the Federal Republic of Germany where up to 60,000 tonnes of PCB were emitted into the environment. Since PCBs contain not negligible concentrations of dioxins, the entire output of these from this source over the last twenty years is estimated at 90 kg. The tenth Ordinance amending the Federal Immission Control Act banned the use of PCBs in open systems. They did however continue to be used in closed systems, for example in condensers and transformers. Further amounts of dioxins reached the environment because of the improper disposal of products containing PCBs and because of fires in transformers.

It was not until the Ordinance on the prohibition of polychlorinated biphenyls of 18 July 1989 that the use of PCBs was banned in closed systems too.

Ordinance on the Prohibition of Pentachlorophenol

The production, bringing into circulation and use of PCP has been banned in the Federal Republic of Germany since 23 December 1989.

In the past, PCP were mainly used in wood preservatives. Since PCP contain considerable amounts of dioxins, this Ordinance will also mean a significant reduction in the inputs of dioxins into the environment. It is estimated that in the past, the input of dioxins from this area was around 1300 grammes 2,3,7,8-TCDD equivalents per year.

Ordinance on Incineration Plants for Wastes and Similar Combustible Substances

The Federal Government has recently passed the Ordinance proposed by my ministry on incineration plants for wastes and similar combustible substances, which includes a stringent limit value for dioxins.

Thus the most modern environment and safety requirements now apply in the Federal Republic of Germany. The Ordinance agreed upon is aimed at

- Reducing as far as possible air pollutant emissions from these installation,
- making the licensing procedure more easily calculable and putting it on a clearer legal footing.

As regards the forward-looking requirements laid down in the 1986 Technical Instruction on Air Quality Control, the emission limits are being made much more stringent, and in some cases have been reduced by more than 50%. This is the case, for example, for dust, with a reduction of the daily mean value from 30 to 10, and for chlorine compounds with a drop from 50 to 10 both expressed in milligrams per cubic meter of waste gas.

For dioxins and furans, remarkable progress has been made over the past few years in minimizing their emissions. Thus, even around Just five years ago, emissions amounted to about 10 nanograms per cubic meter of waste gas.

Thanks to the provisions of the 1986 Technical Instruction on Air pollution Control, it has already been possible to reduce this figure to around 1 nanogram.

For dioxins and furans, a limit value is now being set for the first time at 0.1 nanograms per cubic meter of waste gas. This represents in total an around 100% improvement over the previous level and means that emissions will now amount to only 4 grammes of dioxins a year as opposed to 400 grammes of dioxin a year, relative to the 2,3,7,8-TCDD.

The tightening up of the legal provisions have meant that the Federal Republic of Germany today enjoys the highest safety standards in waste disposal.

Ordinance on the Prohibition of "Scavengers"

I should furthermore like to point out that my ministry has presented a draft Ordinance on the prohibition of "Scavengers" in leaded petrol. "Scavengers" concern dichloroethane and dibromoethane. Both compounds are elements in lead anti-knock agents which, when burnt, produce dioxins. This prohibition ordinance blocks off another source of dioxin emissions, and thus the around 50 grammes 2,3,7,8-TCDD equivalents of dioxin emitted each year will be avoided in future.

Sewage Sludge Ordinance

Finally mention must be made of the already well underway draft amendment to the existing Sewage Sludge Ordinance in which maximum permitted values are set for the first time for dioxins and PCBs in sewage sludge.

Open Questions

Ladies and gentlemen,

The Federal Government has taken trenchant legal measures to ensure new inputs of dioxins and furans are considerably reduced, although the measures taken will only be able to reduce strain on people in the long term. Our further aim must therefore be to reduce dioxin uptake in other ways, uptake which occurs above all through eating contaminated food.

Under discussion therefore at the moment is the setting of national limit or guideline values in soils, animal feed and foodstuffs for human consumption. The prerequisites for this include however knowledge of the pollution situation. Only if the extent to which animal feed or foodstuffs are contaminated is known will any geared measures be taken. We also have insufficient knowledge of the transfer of dioxins and furans to humans via the air, soil, plants and foodstuffs. Knowledge here however is an indispensable condition for soil- and use-related measures to guard against damage to health.

Since we cannot and will not wait until all questions have been scientifically answered, it will be necessary to reach a consensus on provisional guideline values and to define risk thresholds with regard to limits on use and to rehabilitating contaminated soils. We hope during this conference to hear answers given by the experts present on a whole range of open questions.

I have deliberately chosen to use the word "experts" here since "self-styled experts" increasingly distribute advice where it has not been asked. It is alarming the credulity sectors of the public give to the outpourings of these scientific gurus. Who is however an expert on dioxins whose advice

can be relied upon? Professor Hutzinger expanded this point as follows: "An expert is a scientist with many years, experience in his particular field, including the problem now up for discussion."

In our example, an expert is an experienced toxicologist who has himself worked with dioxins and is able to interpret the data from his specialist area. "Anyone who has never worked with dioxins but has his information from secondary and tertiary sources is certainly not an expert."

Professor Mohr made another distinction between the tasks of a researcher on the one hand and an expert on the other. He defines the nature and duties of the expert as follows: "While it is the task of the researcher to discover new knowledge, it is the task of the expert to work on this knowledge to make it available. It is the expert who brings scientific knowledge to the awareness of the public and into political consultation."

It is appropriate here that Mohr notes that scientific knowledge is brought into political consultations. This cannot however replace political decision-making. Translating knowledge into action is the responsibility of other experts, political expert of whom I believe I am one.

Hans Maier said recently in an essay on the relationship between morality and politics, "Action in the field of the unknown is the risk taken by the politician". The fact that he takes this risk characterizes his specific honour and value. This honour may not be withdrawn from him - even under the pretext of putatively protecting the common good. Otherwise a politician becomes a puppet, an opportunist seeking no more than this; otherwise, in the end, he merely shirks the responsibility he shoulders."

Experts in questions of environment policy have to weigh up both uses against risks as well as various risks against each other. This develops into reality only when deriving limit values which complement the general principle of minimization and are in many sectors the guiding force for environment policy measures.

Even if, in the final analysis, it is politicians who bear ultimate responsibility for laying down limit values, we should involve the specialist public more intensely than has been the case to date in the process of discovery, and at the same time make the decisions we take more transparent. In the long term we can only secure confidence of the public at large that health and the natural basis for life is being adequately protected by environment policy if the evaluation base we use is easily understandable.

I am convinced that the speeches and discussions you will have here will provide us with more information enabling us to set limit and /or guideline values. You will understand then that it is therefore partly with a selfish interest that I wish this meeting every success.