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Opening Address

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OPENING ADDRESS

Ladies and Gentlemen,

Being Director of the Environment is rather like being in a wonderful observatory, particularly since I also have the privilege of holding the position of Cantonal Ecotoxicologist for a few more months to come.

For some 22 years now I have been speaking out on behalf of the voiceless. I have been the spokesman for all those living creatures – bacteria, plants, animals, and occasionally even human beings – whose only means of communication are the symptoms of dysfunction, disappearance, or territorial conquest.

THE NEED FOR BASIC RESEARCH

The needs of such beings cannot be met by words alone. Instead, observation of the environment has now become a crucial factor, for the naturalists' work not only shows us what is happening in the environment, it also provides us with tentative answers to our questions about those events.

Yet such work, meticulous though it might be, is but a catalyst that prompts us to turn to more technical and more complex means of research. We must investigate the infinitely small before we can attempt to explain matters on a global scale.

FROM BASIC RESEARCH TO APPLIED RESEARCH

Some scientists devote their lives to basic research. They do so in their quest for a clearer understanding of the origins of our world and even, perhaps, of the uni-

versal law that led to the Big Bang. Their work is firmly based on the principle of the conversion of mass and energy, $E = mc^2$. Such research leads us to imagine that perhaps one day we will know where we came from and where we are going, and to discover the extraordinary fact that we are heading towards an unavoidable future.

Others devote themselves to more specialized fields which, by their very nature, are rather less grand in scope. This category would include all the pure sciences, so I shall not elaborate on the meaning of the two words “basic research”.

Yet basic research includes the work of scientists who specialize in the environment, in chemistry, physics and biology. Scientists who not only put their work to the advancement of science, but who dare undertake more technical and more applied research. In so doing, they enable others to advance further in the observation of our biosphere and to better understand the mechanisms, most of them anthropic in origin, that disrupt the functioning of our ecosystems.

The term used to describe such work, “applied research”, is often used to compare it with the term “basic” research. But such comparisons are wrong.

And so I applaud the efforts that the organizers of this Symposium have now been making for several decades to promote environmental knowledge by practical means.

USING THE RIGHT LANGUAGE TO CONVEY THE MESSAGES OF RESEARCH

I should nonetheless like to make a suggestion. During the course of my work, I frequently come across scientific papers, expert reports and other documents whose contents are often extremely interesting. And yet their message fails to get through. This is because scientists speak their own language, with little regard as to how their words are perceived by people outside the scientific community – that is, to people other than the likes of you and me. Yet in our daily lives, **we ourselves complain that politicians, those very people who regulate our society, fail to understand us.**

Are we not responsible for our own poor communication? I myself am frustrated by this phenomenon on a daily basis, and I am sure you share my frustration, and that poor communication infuriates you as much as it does me. And so rather than citing numerous examples, I shall limit myself to one:

You may remember that long ago people referred to the “Canaan dialect” whenever they chose not to understand the minister's sermon. The preachers of

the time were probably well aware of the term, yet they did nothing to substantially improve communication. As a result, churches are virtually empty today.

And so I should like to suggest that you pay special attention to this point, for not only are we responsible for clear communication in our capacity as scientists, but as citizens of Geneva too.

A FITTING PHILOSOPHY FOR ENVIRONMENTAL MATTERS

In addition to the risk of not being understood, we also run the risk of not taking the necessary time to synthesize. Worse still, we run the risk of failing to apply a global and philosophical approach to the environment.

Swiss environmental legislation has a global objective – to protect mankind, animals, plants, biotopes and biocenoses through the use of preventive means or the introduction of purification measures which mitigate damage to the environment. Yet when you ask the authorities to specify precisely which measures are to be applied, or what, exactly, are the priorities, you run headlong into a brick wall: you are told that every aspect of the problem must be tackled simultaneously.

That is impossible.

Any strategy for the protection of the environment must be based on one of action, on basic plans that include guidelines for the long term. Could not such a strategy focus on tackling the increases in entropy in such a way as to reduce those increases to the absolute minimum?

The type of environmental protection applied by society, by our societies, must be defined by the principles of long-term development. For if a project is to be viable, not only must it allow for steady economic development and cause as little degradation as possible, it must also be socially useful, it must enable communities to live together harmoniously and with as little friction and with as great a degree of equity as possible.

PLANS OF ACTION

A global approach of this kind requires a plan of action. In this regard, I should like to point out two priorities for Geneva:

The first concerns the rehabilitation of our water courses, river banks and shorelines. This process is a priority for the Conseil d'Etat, and was so described

in a speech at the Saint-Pierre cathedral at the investiture of the newly elected government.

Geneva has a surface area of 282 km². Within this area, only one river, the Seymaz, is entirely Genevese. All other water courses in Geneva are shared with our neighbours in Vaud or France. The fact is, virtually all these rivers and streams are in a sorry state. Their water levels are low, they are fed by the treated waters of water purification plants, and the dismal condition of their benthic fauna reflects the poor quality of the water. For years now talk has prevailed over action, and our reaction to this situation is this: let's get started! Particularly since we have an annual budget of over 10 million Swiss francs.

The time has come for our scientists to provide the means for the necessary corrective measures!

The second priority is that of waste reduction, whether such waste is generated by households or light or heavy industry. Did you know, for example, that every man, woman and child in Geneva produced 407 kg of household refuse last year?

Decreasing this volume is not enough; we must also review our incineration policy. In addition, we must sort more efficiently, enhance the value of products more effectively, and identify outlets for products made from recycled materials. This process, however, must not hamper our efforts to set up the Cheneviers plant as a self-sufficient enterprise once its purpose has been redefined. For in addition to being the producer of consumer goods, electricity and heat, this plant is also rich in technological knowledge and environmental expertise.

Unfortunately, however, the plant has limited flexibility since it is still under the administration of the State of Geneva. Its tariffs, for example, are set according to regulations and thus cannot adapt to changes in the market. And so there is room for improvement in this regard.

THE COSTS OF ERROR

I should like to make one more point, and one which relates to my previous comments. It concerns the costs of error.

I do not wish to justify the right to make mistakes, for that would be too simple. I merely wish to draw your attention to the consequences of the environmental research you are undertaking. For inaccurate, badly coordinated or poorly documented research can result in unreliable interpretations.

And in environmental matters the cost of rehabilitation, of clean-up operations and of remedial action is so high that we cannot afford to go astray.

Generally speaking, wrong conclusions, poorly contained pollution and badly managed cleanup operations do not have an immediate negative impact. In the long term, on the other hand, nature has consistently shown us that her answer to such wrongdoings is never anthropocentric, and that humans pay a heavy price for such actions.

I should thus like to plead in favour of quality research, and of spreading knowledge by means of clear communication. I should like to see the scientific community distance itself from acquired results and take the time to reflect, to pass on to others the wisdom it acquires on a day-by-day basis, so that its findings may benefit our entire planet.

Lastly, I should like to express my very best wishes for this symposium on the chemical analysis of pollutants. I hope it will be rich and enriching, studious and recreative, serious and fun, and that all your discussions are fruitful.

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