

INTRODUCTION

At the last meeting in Copenhagen, the problem of contaminated sites seemed to be growing in importance more than it was initially believed; the more we do the inventory of old mining sites, Brownfields, abandoned petroleum facilities and military bases, the more contaminated sites are found!

As the problem is growing, more important are the costs to address the problem and bigger is the challenge to reuse the sites and to recover the land use.

In the early 80's, the emphasis was to develop technologies to treat the contaminants effectively; however, with the increase in the number of contaminated sites, countries are facing a major problem associated with the huge costs of the cleanup and several countries realise that they cannot afford it within a short-time frame. It is now questioned if the heritage of the past activities of our societies can be resolved during the next generation or if we should plan on distributing the burden of the costs over several generations. The issue of distributing this responsibility of cleaning up the sins of the past was discussed in a "controversial way".

The principle of sustainable development takes a new form because of this new revealing reality; we may have to transfer to at least a few generations the heritage of the past in order to deal with the historical contamination problem. Many countries have adopted new regulatory frames to deal with future land contamination; however, the problem of historical pollution remains the main problem to address financially.

Several countries, members of the ***Ad Hoc International Working Group on Contaminated Land*** met in Leipzig during the ConSoil meeting to prepare for the meeting in Geneva. For all countries, it is becoming obvious that the reuse of contaminated sites requires a mix of solutions including the use of risk analysis for both human and ecological receptors in the decision-making process. Natural attenuation has been perceived by many as a very promising solution for several sites; however, several experts question the capacity of the natural systems to handle large contamination problems efficiently and mostly when recalcitrant compounds are present or when sensitive resources are at risk. It is also recognised that the pressure on natural ecosystems and natural resources is becoming very important and several people point out the need for investigating more the capacity of natural systems to deal with the impacts of the contamination from several sources.

In order to explore potential solutions, the following topics were proposed for the meeting in Geneva. They were published in the ***Newsletter of the Ad Hoc International Working Group on Contaminated Land, June 2000***. The Newsletter is available at www.adhocgroup.ch/newsletter.html.

- A. Persistent Pollutants Sites or: Where Natural Attenuation Comes to an End
- B. Sustainability Considerations for the Remediation of Contaminated Sites
- C. Limits of the Polluter Pays Principle
- D. Future Land Contamination
- E. Contamination Resulting from Oil Production: From the Borehole Through the Refinery to the End User

This report represents a compilation of the contributions of the participants to the meeting. In order to keep authenticity as high as possible, the individual contributions were left unchanged as far as their statements are concerned.

The organisers are very grateful to those who have contributed to all aspects of this meeting.

The organisers would like to express their gratitude to Mr. René Goubier of ADEME, France, for his long-term contribution to the Committee and to the field of contaminated sites in general. We would like to wish him our best wishes on his retirement from his professional activities.

REPORT OF THE ORGANISERS

The meeting held in Geneva was prepared by Switzerland, with the support of Canada. A planning meeting took place in Leipzig at the ConSoil International Conference in September 2000, where the participating countries discussed the themes submitted by the members in Copenhagen. The following themes were selected:

- ♦ Polluter Pays/Owner Pays Principle
- ♦ Future Land Contamination
- ♦ Sustainable Remediation of Contaminated Land
- ♦ Natural Attenuation and Persistent Pollutants
- ♦ Groundwater, Fit for Use or Clean
- ♦ Contamination Resulting from Oil Production; From the Production Well to the End User

Each theme was appointed to leading countries whose role was to consult with country members in order to elaborate the content and the format of the session at the Geneva meeting. Theme leaders selected speakers, or consulted on a broad base, several members of the Working Group to seek their opinions on the topics. The organisers met in Bern in January 2001 and published the Newsletter in March 2001.

In September 2001, representatives from the following countries met in Geneva for a two-day meeting to exchange their views and experiences in the field of contaminated land.

Albania	Germany	Russian Federation
Armenia	Hungary	Slovakia
Austria	Italy	Slovenia
Belgium	Ireland	Spain
Bosnia-Herzegovina	Latvia	Sweden
Bulgaria	Macedonia	Switzerland
Canada	Moldova	Ukraine
Czech Republic	Netherlands	United Kingdom
Denmark	New Zealand	Yugoslavia
Finland	Norway	
France	Romania	

All representatives joined their voices and their thoughts to remember the very sad events of September 11, 2001, in the United States.

The following countries contributed papers to the meeting but were not present in Geneva.

Columbia

Japan

United States

In addition to representatives of the countries mentioned above, the Swiss and Canadian organisers were very happy to welcome representatives from the following institutions:

European Commission	EU Commission DG XII
CLARINET	Contaminated Land Rehabilitation Network for Environmental Technologies
ICS-UNIDO	International Center for Science and High Technology of the United Nations Industrial Development Organization

The following consulting enterprise contributed to the meeting:

Ecolisto	Switzerland
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The meeting was chaired by the Swiss Agency for the Environment, Forest and Landscape (SAEFL), represented by Mr. Christoph Wenger and Mr. Urs Ziegler, while the secretariat was assumed by the National Research Council of Canada, represented by Mr. Adrien Pilon and Ms. Eileen Raymond, in collaboration with Mr. Michel Beaulieu of the Québec Ministry of the Environment.

The meeting was held in the International Conference Centre of Geneva (ICCG).

Switzerland covered all the costs for the meeting facilities as well as for conference lunches and dinners. Switzerland also supported the travel and accommodation expenses of several participants from CEE-countries. Canada was responsible for the coordination of a number of sessions and for the production of the final report.

Switzerland organised a special Conference Dinner which took place on a boat on magnificent Lake Geneva.

Hotel registrations and other touristic assistance were provided by the Geneva Tourist Office.

WELCOME ADDRESS FROM THE SWISS EPA

Speaker: *Mr. Christoph Wenger*
Swiss Agency for the Environment
Switzerland

On behalf of the Swiss Ministry for the Environment, Traffic, Energy and Communications as well as the Swiss Agency for the Environment, Forests and Landscape, I have the great pleasure to welcome you to the 5th Meeting of the Ad Hoc International Working Group on Contaminated Land here in Geneva. We are very pleased that again a big number of environmental ministries have paid high attention to this international platform for discussion of contaminated sites policies and strategies. More than 50 representatives from over 30 countries around the world have found their way to Geneva.

Unfortunately due to these horrible attacks in the United States last week, some of our colleagues cannot attend this meeting here. We feel very sorry for them and hope to meet them in Canada.

I would like to thank all the representatives who have in one way or the other, contributed to the preparation of this meeting since our preparatory meeting one year ago at the ConSoil meeting in Leipzig. But the warmest compliments have to be sent to the representatives from Canada with whom we have co-operated in a very fruitful and excellent manner. And last but not least, I personally would like to thank my colleagues Urs Ziegler and Peter Oggier as well as our secretaries in Bern for the organisation of all the facilities here, to solve all the difficulties with visas and tickets and many more.

At the very first meeting in Washington in 1993, the general objectives of the Ad Hoc International Working Group on Contaminated Land have been stated as “to provide a forum, open to any country, in which the issues and problems of contaminated land and groundwater can be discussed at a national level and information can be freely exchanged to the benefit of all participants.”

Switzerland started contaminated sites management on the federal level exactly 10 years ago. A specific contaminated sites legislation was put into force only 4 years ago and from next year on we will finally have the necessary funding for orphan sites. In the meantime, the activities have developed in a very positive way and many sites have already been remediated.

During the past 10 years, Switzerland could highly benefit from the experience of countries, which became involved into contaminated land management earlier and which were ready to share their experiences with newcomers like us in that field. We could not only take advantage of technological knowledge or conceptual developments from our neighbouring countries; we also could learn from the failures that had to be experienced by some of the pioneers.

But all this has only been possible through our involvement in the existing international network since the beginning of our activities. Today, Switzerland is no longer at the beginning of managing its contaminated land. By now it has, like many of our fellow countries in the Ad Hoc Group, quite a number of experiences to be shared and discussed with colleagues in order to find even better solutions to the actual problems in relation to contaminated land.

For the upcoming years I think we have to face another challenge: after some years of so-called “business as usual”, politicians and the local economy will lose more and more their interest and support for contaminated land issues. They cannot think in long-term dimensions, as examples show from the pioneer countries. It is therefore important to convince these people, that solving the contaminated land problems will last at least one generation. I think that the so-called “new-comers” will therefore play a prominent role to keep awake the attention for contaminated land issues also in the future.

Based on our own experience we think that it is very important to maintain such networks as the Ad Hoc International Working Group on Contaminated Land and we are also convinced that this meeting will be very helpful and fruitful in one way or the other for all the participants.

I’m therefore glad to open officially the 5th meeting of the Ad Hoc International Working Group on Contaminated Land.

All of you are not only official representatives but also tourists here in Switzerland. As the weather is not lovely, my colleague Urs Ziegler will now introduce you to the highlights of this country.

HIGHLIGHTS OF SWITZERLAND

Speaker: *Mr. Urs Ziegler*
Swiss Agency for the Environment
Switzerland

Good morning everybody.

I am also glad that all of you who are here have made it to Switzerland without too much hassle and problems. I heard from the NATO meeting that it wasn't too easy for some of you to come here, that you had some problems in planning flights and connections and everything, so welcome to Switzerland. Our mountainous country in the middle of Europe has more mountains than flat areas as you may have seen from the plane or will see when travelling through. I have just two or three pictures to get you in the mood for having the meeting in Switzerland with all the "clichés" we have from Switzerland. To show you where we are right now, we are at the south westernmost corner of Switzerland and close to France at the south-west end of Lake Geneva. Tonight we will have a boat trip or dinner on a boat and we will tell you how to get there and where it is.

Other than Geneva, there are other nice places to visit in Switzerland. Lausanne for instance, is only a half-hour drive from here. Cows can be found everywhere; Lucerne, takes a bit longer to get to, but it is very famous with the Japanese tourists and it is very worthwhile going there. Of course, you have mountain areas – keep this picture in your mind because we might not be able to see the sun too much, so these pictures show you how it might be. Of course, there are beautiful mountains, specifically in the region where we are now. This is where our offices are located. The North Face which it is one of the most complicated faces to climb through. Of course, there is the Swiss money, the banks, the beautiful mountains like Jungfrau and Mönch, not too many contaminated sites; local fauna, dangerous animals, and of course, the cheese.

I just wanted to show you a few "clichés", but of course, there are not only "clichés", there are also contaminated sites and that is the topic we are going to discuss here.

If you have any problems, don't hesitate to ask me or my colleague, Peter Oggier.

Note: This text was prepared by the compilers from Mr. Ziegler's recorded presentation.

INTRODUCTION TO THE MEETING AGENDA

Speaker: Mr. Adrien Pilon
NRC – Biotechnology Research Institute
Canada

Good morning, ladies and gentlemen.

It is a very great pleasure to be here from Canada. I would like to thank Switzerland for hosting this very interesting meeting and my colleagues from Canada who managed to travel here. Unfortunately, my colleague, Eileen Raymond couldn't make it.

I would like to go over the agenda that you have in front of you. This is the result of discussions among different countries over the past year since the ConSoil meeting in Leipzig. The different thematics were discussed and from that we prepared the agenda. The most important thing, I think we would like to suggest to all participants, is that we would like to stimulate discussions. These topics are there for stimulating discussions and we will welcome questions from participants from all the sessions and we will make sure that the chair from each session will allow enough time for discussions and we are also open for some suggestions during the sessions and we will try to find some time during the sessions for discussions and maybe open up some topics, but we have a fairly busy schedule.

Session 1 will be International Activities in the Field of Contaminated Land.

Session 2 will be for discussing Sustainable Remediation of Contaminated Land.

Sessions 3A and 3B will be dealing with Natural Attenuation and Persistent Pollutants.

We will be ending the sessions today at 17:00.

Conference dinner is at 18:00.

Tomorrow:

Session 4 will be on Hydrocarbon Pollution and my colleague from Canada, Mr. Claude Chamberland will talk about this.

Session 5 will be on Bearing the Costs of Remediation: Polluter Pays and Owner Pays Principle. Many participants have prepared documentation to discuss this.

Session 6 will be about Future Land Contamination.

Session 7 will be the closing session and we will then have closing remarks and some presentations to share with you about future activities.

During these two days I invite you, during the course of discussions, to think of topics that you would like to be discussed within this Committee and in preparation of the next meeting in 2003.

Note: The reader can find the complete agenda in Annex 1.