

Executive Summary

Contaminated soil assessment scheme

A UIC polluted soil remediation project

THE AIM WITH THE PROJECT

The railway business together with other industrial areas is affected by the downturn in world economy and finances. For the railway to be more competitive and cost-efficient it is therefore necessary to set up a risk management system for properties affected by contaminated soil.

Within the UIC railway community there are various systems for the collecting, handling, storing, interpretation, application and use of geographical and other data, e.g. mainly based on the track network for railway operation.

Due to the fact that environmental issues and regulations will increasingly influence railway operation there is a significant need to analyze all existing contamination assessment and record schemes.

The main goal of the project “contaminated soil assessment scheme” is to make an up-to-date inventory about the existing systematic approaches and systems for managing the risks and information of contaminated soil on UIC railway member railway property, from assessment and data gathering management to use of data in all aspects and procedures.

Study phases:

PHASE 1

Gathering basic information about assessment and data storage. Hereafter data analysis and data use by evaluating a questionnaire and sending it to all Member railways.

PHASE 2

Gathering of detailed information through interviews and on-site demonstration at selected railway companies

PHASE 3

All information gathered in phase 1 and 2 is analyzed, interpreted and condensed to give the railway community an overview about existing system key factors.



Onsite remediation, oilphase removal

EUROPEAN GUIDELINES AND REQUIREMENTS

Influence of European directives, guidelines and legislation

Due to European legislation and especially for railway companies in the new Member States, which will be asked to create and install contamination registers for their property, it will be essential to get a know-how support and exchange from UIC about existing and approved systems used in the railway community. It will help achieve the goal to set European standards and procedures within the UIC railway network collaterally in the EU community. The influence of these guidelines is underestimated and will cause significant additional costs for railway companies.

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PROJECT STEPS

The project has been carried out in 3 steps:

Questionnaire 1 focused on the status quo of dealing with brownfield site problems. Questions with national and company relevance have been asked in the field of a) Legal aspects, b) Railway Company's strategy and c) Contamination management.

A second questionnaire was sent out focusing on more detailed subjects (see step 2).

<input type="checkbox"/>	Step 1 Questionnaire 1 was evaluated and sent to 45 companies Responses: 25 answers (55 %)	<input type="checkbox"/>		
<input type="checkbox"/>		Step 2 After analysing responses a more detailed questionnaire was sent to 45 companies Responses: 23 answers (51 %)	<input type="checkbox"/>	
<input type="checkbox"/>			Step 3 Direct and telephone interviews of selected companies for background and detailed information.	<input type="checkbox"/>
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Example questionnaire

Second Questionnaire
Polluted soil assessment scheme

a) Legal aspects:	yes	no
Are contaminated areas systematically registered nationwide?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a legal obligation for registering?	<input type="checkbox"/>	<input type="checkbox"/>
Will assessment and sampling be done based on national lists about sensitive property use?	<input type="checkbox"/>	<input type="checkbox"/>
Will these contaminations be registered due to:		
- building and construction activities	<input type="checkbox"/>	<input type="checkbox"/>
- environmental damages	<input type="checkbox"/>	<input type="checkbox"/>
- assessment program	<input type="checkbox"/>	<input type="checkbox"/>
Is there a legal requirement which party provides financing for each EPA phase.	<input type="checkbox"/>	<input type="checkbox"/>
If yes:		
<input type="checkbox"/> your company		
<input type="checkbox"/> authorities		
<input type="checkbox"/> others		

55 % responses from railway companies

The structure of **Questionnaire 2** was almost identical to Questionnaire 1. To obtain representative data on the investigation, remediation and management of contaminated sites it was necessary to obtain more detailed information about existing data and assessment schemes within the UIC railway community.



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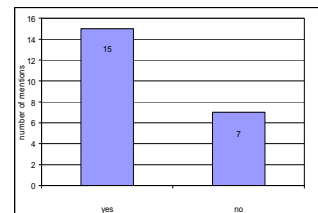
KEY RESULTS

Company large-scale contamination register required!

Question:

Do you see a need for a company wide contamination register?

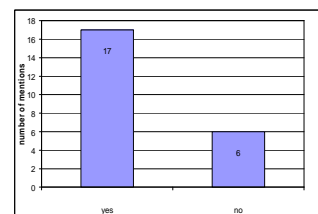
Approximately two thirds of the companies feel the need for a company large-scale contamination register, therefore a contamination register exists in already two thirds of the companies. An additional need of registers is declared but there are still one third of the companies without any systematic data.



Question:

Does a contamination register exist in your company?

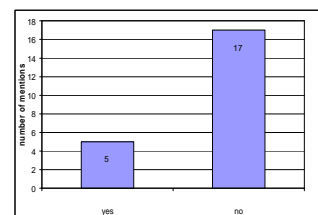
More than two thirds of the companies keep records on contaminations. Hence within the company contaminated sites are noted.



Question:

Will this be done for balance and privatisation purposes?

Registration programs for polluted soil properties are done for balance and privatisation purposes by only one third of the companies. The purpose of the programs of the other companies is unknown. It is assumed to be mostly done due to a public request.

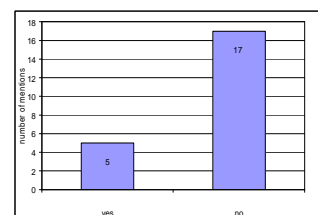


The majority of railway companies are not prepared for European data directives. The majority of existing data not compatible with public databases.

Question:

Are these data structured according to EU directives?

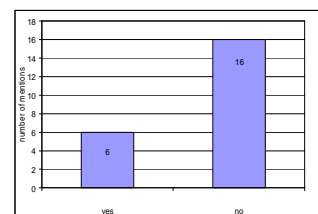
Data of approximately 80% of the companies is not structured to EU directives. The awareness for a need of interchangeable data is not given. Strategic advantages in data management leadership for railway companies are not used.



Question:

Are your sets of data compatible with public databases and other company databases?

Data of only 25% of the companies is compatible with public databases and other company databases. Further data processing, reporting or cross referencing within the company or country will be difficult and expensive.



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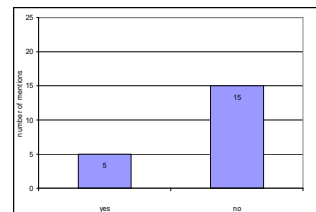
KEY RESULTS

Railway companies run into financial risks due to contamination.

Question:

Is there a regular process for selling or buying contaminated property in your company?

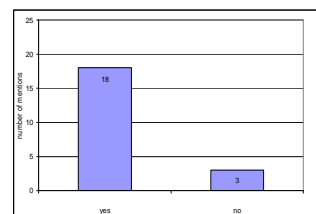
Approximately two thirds of the companies have **no** standard procedure for selling or buying contaminated property. This implies that there is little awareness of financial risks and liability for third party damage. Railway companies could end up paying for other polluters.



Question:

Are there third party polluters on your properties?

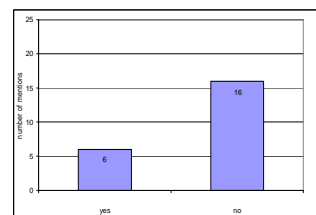
Approximately 80% of the companies stated that the property was polluted by a third party. The property value is decreased by the pollution, and the railway company will face a profit loss.



Question:

Is there a risk-management system in your company to evaluate the economic impact of contaminated sites?

Approximately one quarter of the companies have implemented a risk assessment system to evaluate the economic impact of contaminated sites. This shows that financial risks of contaminated sites are underestimated, and profit loss is not monitored!

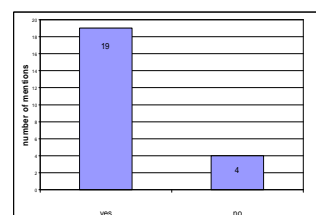


Railway companies do have environmental goals but no budget.

Question:

Are there any environmental/sustainability goals based on contaminated soil in your company?

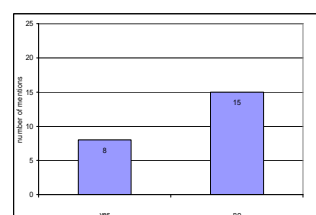
80% of the companies pursue a sustainability policy. These companies recognize that contaminated soil has to be seen as a long term problem.



Question:

Is there a fund or budget in your company to cover additional contamination-related costs in future projects?

The trend of the previous questions shows that awareness of risks are present, yet only one third of the companies stated that they have a fund or budget to cover additional cost in future projects. This indicates a lack of farsightedness of future activities, as well as poor monitoring of environmental (soil related) goals.



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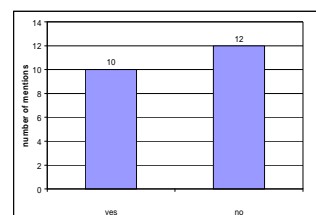
KEY RESULTS

Digital data availability is not guaranteed despite the legal obligation to register.

Question:

Are these data digitally available?

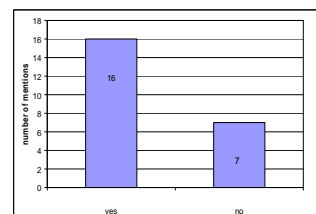
Data on contaminations of half of the companies are not available digitally. This create problems in data availability, and data processing and handling costs!



Question:

Is there a legal obligation to register?

In more than two thirds of Member States there is a duty by law to list contaminated sites. Approximately 90% of companies register the sites systematically, but sustainable data management has to be improved.

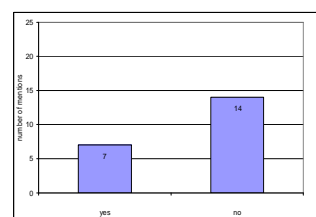


Railway companies do not pay enough attention to contamination risks.

Question:

Is there a quality management system in your company to support your contamination risk assessment?

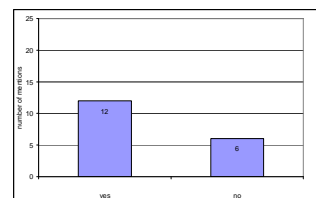
Only 30% of companies have a quality management to support contamination risk assessment. The importance and advantage of such a tool is not recognized by most of the companies.



Question:

Do you charge third party polluters routinely for environmental damages?

One third of the companies that have third party polluters on their property charge them routinely for environmental damages. The question now is whether the other companies claim compensation from them or only occasionally (for example only when leaving the property).



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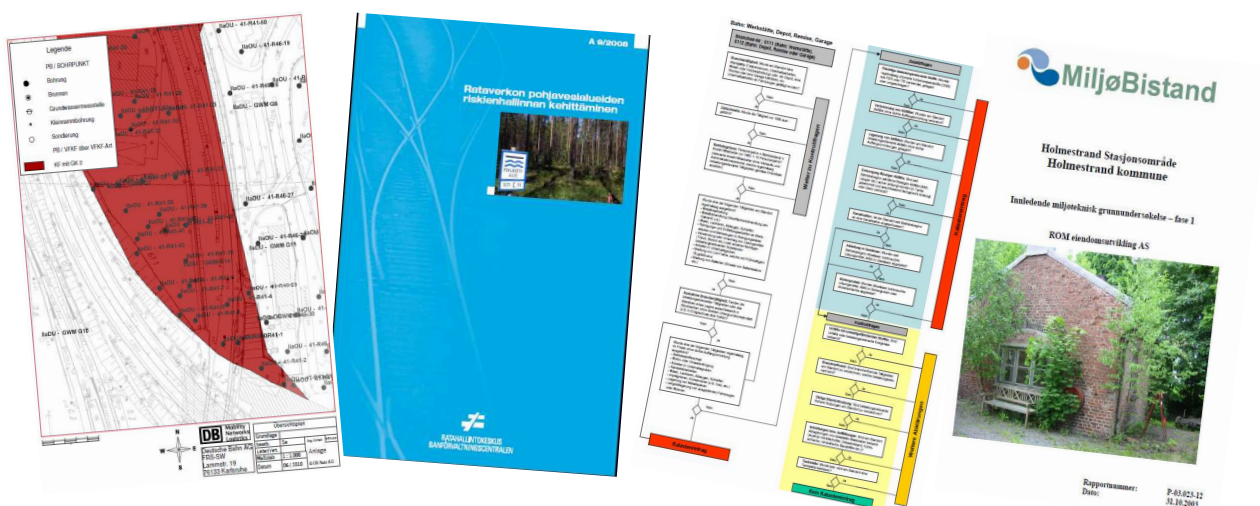
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KEY RESULTS

Sufficient contamination know-how in railway companies available!

A substantial number of guidelines and handbooks documents the wealth of experience and know-how within the railroad community.

Anything from accident handling to contamination manuals for assessment – risk management and remediation are available in UIC member companies.



Conclusion

Based on the existing know-how within the railway community and with regard to some risks and problems identified in the survey, the next step is now to create a “pollu-guider“ giving some basic guidelines for the community in handling and managing monetary and physical contamination risks.

NEXT-STEPS

Seminar on soil pollution (hosted by LDZ, Latvian Railway)

Riga, Latvia, 14 and 15 October (with technical visit)

CONTACT POLLUTED SOIL GROUP:

Lisette Mortensen e-mail: mortensen@uic.org
Harold Resida e-mail: harold.resida@NS.NL
Rolf Gerhardt e-mail: rolf.gerhardt@deutschebahn.com

