

**EURO FORUM
ENVIRONMENTAL RISKS
BRUSSELS**



IN ASSOCIATION WITH

The Key Environmental Risks

Research conducted by StrategicRISK in association with ACE highlights some of the issues relating to environmental liability that are taxing corporate risk professionals. In this Euro Forum discussion, our panel discussed some of the findings of that research and drew upon their own experience of dealing with the impact of environmental risks.

Currently, it seems to be historic contamination that is causing the biggest problems, particularly in terms of costs. However, our participants were well aware that what is today's seemingly manageable environmental risk could be tomorrow's major legacy liability. With the relentless introduction of ever more stringent national and international environmental legislation, the world's largest corporations need to have global standards that will

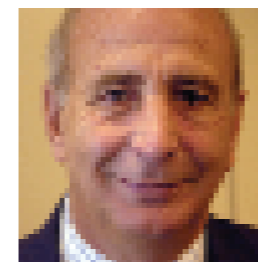
hopefully meet some if not all of the requirements that may emerge in the future.

The new EC Environmental Liability Directive is posing some issues, with the inclusion of liability for destruction or impairment of habitats. The hard to quantify nature of biodiversity – how much is one species of flora or fauna worth compared to another species? – also provides food for thought.

The insurance industry is responding to these new potential liabilities but there are still relatively few players in the specialist environmental risks marketplace. However, it does appear that a risk transfer solution for biodiversity damage in Europe is feasible.

Sue Copeman, Editor, StrategicRISK

Participants



Pierre Sonigo
Group and Environmental Risk
Manager, Alcan, chaired the
discussion



Karl Russek
Senior Vice President, ACE
European Group



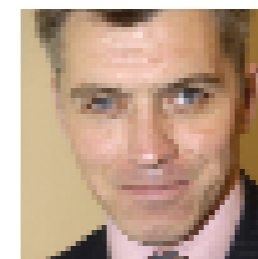
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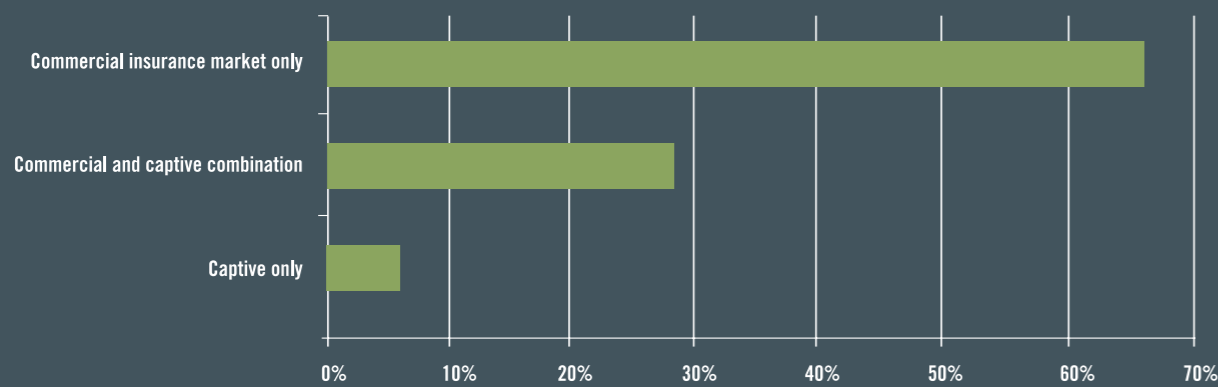


Adrian Clements
Senior Insurance Risk Manager,
Arcelor Insurance Consultants,
Arcelor-Mittal Group

ADVERT

Executive Summary

A third of respondent business were using captives for environmental liability risk



Do you transfer any environmental liability risk to the commercial insurance market?

	Number	Percentage
Commercial insurance market only	21	66%
Commercial and captive combination	9	28%
Captive only	2	6%
Total	32	100%

Environmental liability risks are an important concern for Europe's industrial base. For this survey, Strategic RISK interviewed 40 risk managers in European business organisations. Most worked in large industrial or quasi-industrial companies. Even among the four respondent companies mainly involved in finance, media, retailing or business services, however, three had direct practical exposure to environmental risk through their business operations – while the fourth had concerns about potential for indirect exposure under the EU's evolving environmental liability regime.

Exposures

Of these 40 interviewees, 35 per cent rated their potential environmental exposures 'high' or 'very high', 35 per cent 'average' and 30 per cent 'low' or 'very low'. Many interviewees seemed to believe that although the environmental risk from their operations was theoretically

high, tight risk management processes drove the actual residual risk to a lower level. Judging by the results of this survey, however, a significant new environmental liability loss can be expected to affect about one in ten major European companies each year.

Legacy issues are just as much of a problem. A full 60 per cent of interviewees said their companies had known environmental liabilities arising from past operations. Forty-five per cent said they had known liabilities through the previous operations of acquisitions or subsidiaries. Those companies that seem to have avoided liabilities through their own operations also appear to be avoiding exposures through subsidiaries or acquisitions.

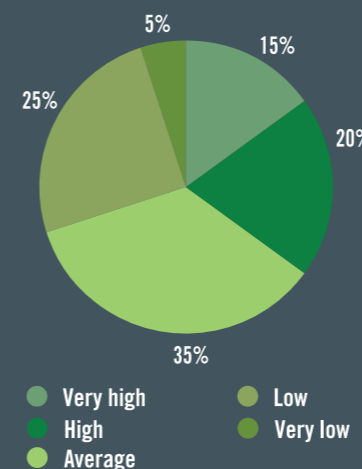
Confidence

One respondent in three was willing to state complete confidence that his company had identified all potential environmental liabilities under current

regulation. Many of those opting for 'reasonable' confidence, however, expressed a high level of confidence in their potential liability investigations that fell only just short of 'complete'. The survey showed, not surprisingly, that the higher the company's perceived risk, the less likely the interviewee was to be fully confident in its identification of potential environmental liabilities under current regulation.

Of our 40 interviewees, 15 said that they were aware of changes affecting them that could arise from the new EU Environmental Liability Directive. Most of these 15 worked in companies they rated 'average' to 'very high' in environmental liability risk. Most European companies seem ready to take the Environmental Liability Directive in their stride, though some risk managers expressed concern about proposals to hold companies liable for the loss of or 'significant' damage to natural habitats.

Thirty-five percent rated their potential environment liability high or very high



How would you rate your company's potential exposure to environmental liability risks?

	Number	Percentage
Very high	6	15%
High	8	20%
Average	14	35%
Low	10	25%
Very low	2	5%
Total	40	100%

Procedures

So how well are companies managing their potential environmental liabilities? Only one respondent said that his company did not have a formal, written environmental management strategy. Sixty per cent said that their companies had 'detailed and well-rehearsed' processes for dealing with sudden pollution accidents. The majority carried out regular training exercises to rehearse procedures – and some had had occasional additional 'rehearsals' in the form of responses to live incidents.

For most companies, responses to sudden, accidental pollution were an integral part of their wider crisis management or incident management planning. Many respondents spoke of having IT systems in place to support the internal reporting and management of incidents. Interviews also revealed many different approaches to processes for dealing with sudden, accidental pollution incidents.

Insurance

Of our 40 respondents, 32 were able to discuss their insurance arrangements. All of these made some provision for transferring environmental liability risk. Only 35 per cent had specific environmental liability policies, however. The remainder relied on such limited coverage as existed in their standard product liability or public liability policies.

Many respondents complained that transferring their gradual environmental liability risks to the commercial insurance market was either impossible or prohibitively expensive. But several said they kept the situation under annual review – indicating an interest in offloading such risks as soon as the chance arises.

Varying national regulatory regimes affect how companies view and manage their insurance. In Germany, companies are legally required to separate their environmental liability and general insurance: specific, standalone environmental management cover is mandatory.

Communication

Many companies are putting a real effort into communicating their environmental management policies to the public, interest groups and – not least – investors. Where environmental matters are concerned, reputation management seems to have a strong commercial rationale. One third of respondents said that their companies now produced a free-standing environmental impact management report and several French respondents, plus one each in Denmark and Ireland, said that this was now mandatory for them. Twenty-one per cent said they included a section on environmental impact management within a wider-ranging Corporate Social Responsibility (CSR) report, while the largest group – 38 per cent – said they included information on their environmental impact management within their general annual report. Only three interviewees said their companies published no environmental impact

management information at all.

Most posted their environmental management reports on their website. Quite a few – French firms in particular – had website sections, or even entire dedicated websites, addressing environmental and sustainability issues, often as part of wider Corporate Social Responsibility initiatives.

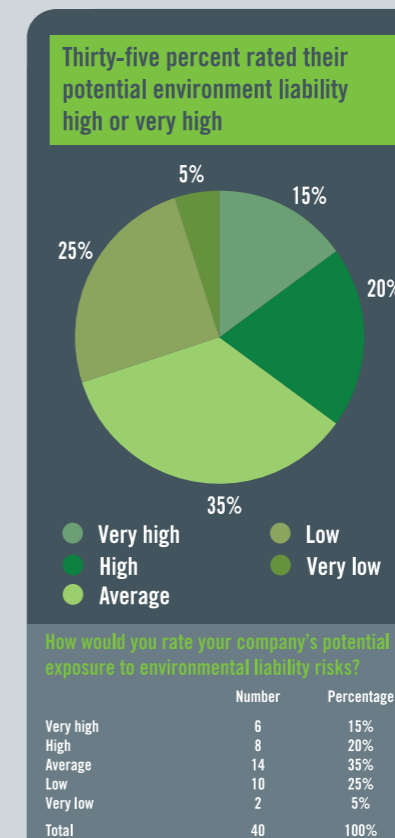
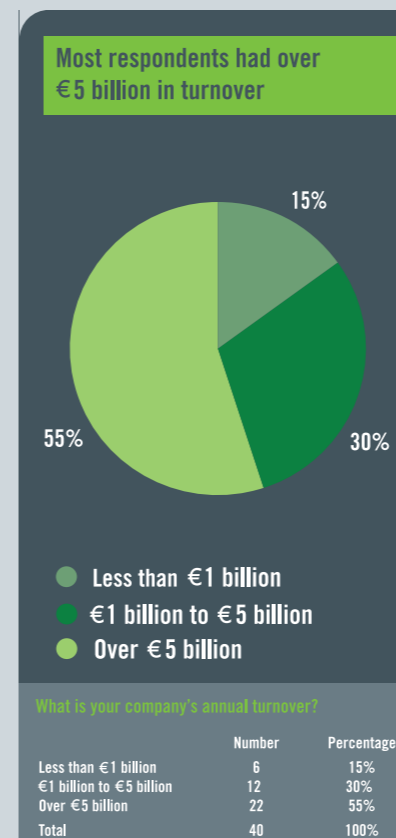
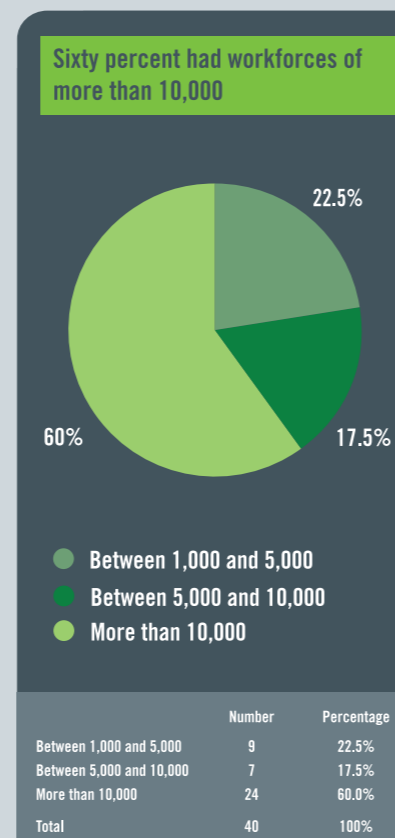
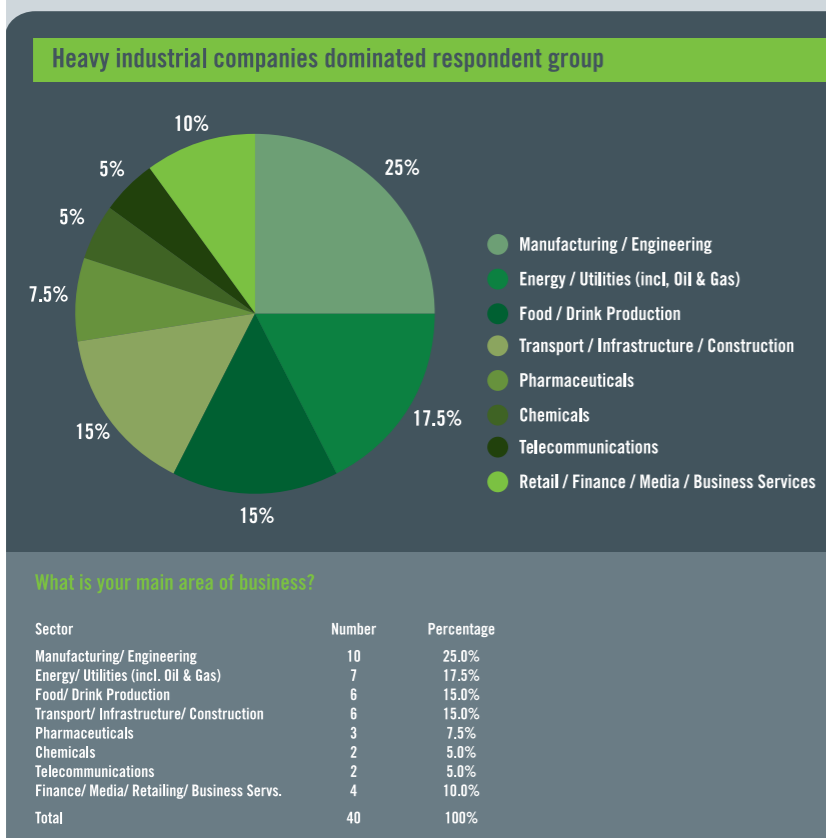
Companies are using many other, often quite innovative methods to communicate their environmental management strategies and establish reputations as good corporate citizens. Some had dedicated public relations officers at key plants, ran visitor centres for the public, conducted exhibition tours of local towns or published community newsletters. Others supported charitable foundations, got actively involved with community environmental improvement projects or engaged with interest groups through regular liaison meetings and discussion forums.

To what extent were companies relying on external environmental consultants? Forty-one per cent of interviewees said their company used external environmental consultants in M&A due diligence, while 23 per cent said they had them in regular use at all sites. Fifteen per cent said they had them in regular use at critical sites. Only eight per cent said their company never used them.

The Future

Today, the march of 'globalisation' is shifting much of Europe's industrial activity to lower-cost operating bases in the East. Several manufacturing companies we spoke to were running down their European production and opening new plants in China or India, where industrial pollution regimes are, of course, lax by today's western standards. But in time, that will change. Several interviewees we spoke with insisted that their companies would be applying European standards of environmental management wherever they operated. That approach will help avoid reputational damage today and heavy decontamination bills tomorrow.

Respondents profile



What is your company's main industry sector?
 Our 40 interviewees worked overwhelmingly in industrial or quasi-industrial companies of one sort or another. The chart above divides the respondent companies into eight groups: manufacturing and engineering; energy and utilities, including oil and gas; food and drink production; transport, infrastructure and construction; chemicals; pharmaceuticals; telecommunications; and finance, media, retailing and business services. The greatest number of respondents – 25 percent – fell into the manufacturing and engineering category, with energy and utilities the next largest group. Even among the four respondent companies mainly involved in finance, media, retailing or business services, three had direct practical exposure to environmental risk through their business operations.

How many employees does your company have?
 Our interviewees came from medium-sized and large companies. Sixty per cent practised their risk management skills within organisations employing more than 10,000 people.

What is your company's annual turnover?
 Corporate turnover figures reflected a similar picture. Only six of our 40 interviewees worked in companies with turnover of less than €1 billion. Of these six companies, one turned over about €300 million, while the remaining five all turned over at least €500 million. The remaining 34 interviewees worked in companies with over €1 billion in annual turnover. Of these, 22 came from companies turning over more than €5 billion a year. Our interview sample therefore included many of Europe's biggest industrial groups.

Would you describe your company's potential exposure to environmental liability risks as: very high/ high/ average/ low/ very low?
 To establish a baseline, we asked interviewees how they rated their companies' potential exposure to environmental liability risks. Thirty-five percent rated their potential exposure 'high' or 'very high', 35 per cent 'average' and 30 per cent 'low' or 'very low'. Of the 14 respondents who rated their company's potential exposure to environmental liability risk as high or very high, five were in manufacturing or engineering, two in food or drink production, two in pharmaceuticals, two

in transport or infrastructure, two in energy or utilities and one in chemicals. Of the 12 respondents who rated their company's potential exposure to environmental liability risk as low or very low, two were in telecommunications and three were in finance, business services or media. It seems obvious that a banking office should have less potential exposure to environmental liability risk than an oil refinery. But of the remaining seven 'low' or 'very low' risk companies, two were in energy or utilities, two were in food or drink production and one each were in pharmaceuticals, transport or infrastructure and manufacturing or engineering. Some companies may well

have managed to reduce their potential exposures to a much lower level than others in the same industries, but interviewees also seem to have varied in their interpretation of the meaning of subjective terms such as 'low' and 'high'. The responses here might understate the extent of potential environmental liability risk among these companies. Many interviewees seem to have reasoned that while the underlying environmental risk from their operations was theoretically high, tight risk management processes drove the actual, residual risk down to a lower level.

If you would like to receive an electronic copy of the full environmental risks research report please contact Patrick Pouillot, IT Underwriting Manager for Continental Europe, ACE European Group Ltd on Tel: + 33 01 55 91 45 45 or email patrick.pouillot@ace-ina.com

Environmental Risks Roundtable



PIERRE SONIGO: I would like to congratulate StrategicRISK and ACE for conducting their environmental risks study. It is the first time we have obtained some facts and figures regarding environmental liability and how it is perceived in corporations. I would like to come back to some of the findings of this study later but first I would like to pose a 'warm up' question to the group. The environment is obviously a very large issue. A lot of people are putting many things into the environment. I would be interested to know what you consider to be the major environmental risk for your companies. Is it going to be past, present or future liabilities? Is environmental risk a risk to your company? So who would like to start?

HANS BRANDT: Our group is involved in providing services associated with water, energy and waste management, as well as transportation of people, so of course it is important for us to have a good approach to the environment. But I think it has been and remains an important issue for all people in society so it is going to be a more natural part of all our work in the future, reflected in our corporate policies as well as insurances. In the research report, someone said that safety of people is the most important thing and next comes safety of the environment. I think there is a lot of truth in that. If there are 100 people killed in a train crash that will be reported on the front pages of the newspapers. If you have a pollution incident or something serious like that, it may also be

reported although not in the same way. So the environment is important to all of us.

PIERRE SONIGO: It is also an opportunity for your company because it involves your business.

HANS BRANDT: Well yes it is a big business. If you look at the map to see where we are located, you can see for instance that the water side of our operations goes east down to Asia and that helps the people to get clean water. That is one example. So it is important.

DIDIER MELLAERTS: I have perhaps an odd opinion about environmental problems for the future compared to the past. Our group

in the past was very much involved with heavy metals for more than 100 years. This means that the environmental problems are coming from the past mostly and in connection with remediation of two sites, one in Belgium and the other in France. And a substantial amount of money is involved. But in respect of future environmental liabilities in Europe, I think we can manage these, not just because of the availability of insurance but also because of the legislation. We are now organised internally to manage the environment, we have specialist external consultants and we have insurance policies although mainly for pollution from sudden and accidental events. I think that our organisations can manage this through the permits that we're required to have. The

extreme regulations that are imposed make it difficult but we can manage for the future. My view is really an optimistic one. I have been involved in insurance for a lot of years and also involved in the legal aspects of the environmental issues and I see a positive trend. When you see what is now imposed in respect of permits for installation, for control, for continuity plans or crisis management plans, really I am not so afraid for the future, with one exception. The requirement to protect biodiversity in the new EU Environmental Directive will be a big challenge because nobody knows what the risks are and you cannot calculate what is involved. The best proof of this is that the insurance companies are not offering some coverage.

PIERRE SONIGO: Thank you, we will come back to the insurance coverage maybe a little bit later. Is there any more comment on why the environment is perceived as a risk in your company?

ADRIAN CLEMENTS: In my company I believe there are two areas we have to look at. Most of our facilities have ISO14000/14,001 certification, we are probably 97% compliant. However, that is the photograph of risk today. How risk changes in the future, how the governmental legislations will change, that I see as being the future risk. You don't know where it is going to go and therefore, even though you are compliant today, you don't know what will happen in the future. I have had personal experiences of that when, during clean-up of a certain incident, the law has changed and you have to clean up again. In fact there is one incident that I remember where we cleaned up twice because it took so long to clean up the first event that the law had changed, and then while we were trying to clean up for the second time, the law changed again and we had to clean up again to reach the new level. So we paid three times for the same incident.

The other risk I see is the past. As many of you know Arcelor is a steel company. Most of the steel industry was in the past government owned and still is in some countries a major part of the government assets. We don't know what those governments were doing in the past 100 or 150 years ago. In fact in some of our plants we don't have any drawings at all of where the power supplies come from, or where the drainage go - we actually have to have men walk along drainage tunnels to find out where they go - because some of the plants are so old. To clean up some of those plants would be difficult. For example, I don't think we would ever be able to honestly sell a piece of land that has had a blast furnace on it and say it was clean, the contamination is just there. But the owner was the government. So if you start to make a lot of these legal requirements retroactive, you end up at the door of the government which is creating this new legislation.

Most of our sites are enormous. For



MANAGING THE ENVIRONMENT IS A SPECIFIC ACTIVITY

DIDIER MELLAERTS

example, in Brazil we have 133,000 hectares of eucalyptus forest for coke production. And some of our plants are on the migratory paths for birds. We have nature reserves on some of them. We don't know what flora and fauna are being killed in Brazil, for example, right now, not because of us but because of other environmental issues in the country, but if it is happening on our property maybe we will be held liable. The same would apply to China. It's a really big future problem - are you to blame if you don't know? Ignorance is not an excuse.

TOMASZ MIAZEK: I represent a company that I think is at the low end of the environmental risk spectrum. This is a large Polish telecommunications company that was formerly state-owned. We deal with some environmental issues like heavy metals and asbestos in buildings - we have lots of buildings all over the country. We just use specialist disposal companies to deal with any hazardous materials and we feel safe at this stage.

PIERRE SONIGO: So it is a risk but not a big one?

TOMASZ MIAZEK: We haven't suffered any major pollution incidents so far. There was quite a big issue with the wooden poles used which were impregnated with some toxic materials but because it is split into such little portions we don't recognise it as a very high risk. However, if we change any of the wooden poles - there are thousands of them - we take care to dispose of them in a special way.

PIERRE SONIGO: Does that fall into the characteristic of a risk for the insurer as it seems very broad?

KARL RUSSEK: In a word, yes, environmental risk is a very broad topic. You can view it in the narrow view as an outgrowth of the casualty cover for the fortuitous accident and loss going into the future but the majority of the issues we deal with have to do with legacy issues or specifically with legacy or operational issues with political risk. In many ways, what we underwrite is not necessarily how well managed your sites are, because the majority of your sites will be ISO 14,000/14,001 certified - there is no question that the state of the art in the industry currently is much better than it used to be. The questions we look at when we are underwriting in a particular jurisdiction are what are the current regulations?, how are they likely to change? and what is the political climate? In order for you to perceive a risk and look at insurance as a way of managing that risk, your stakeholders, that is your local communities and your shareholders, need to see that as a risk as well. They need to make you aware of that risk. So that is really what we look at, not at whether a site is contaminated or not, because more often than not it is contaminated if it is a legacy site, but what is the likelihood that you are going to have to do something about it or that your stakeholders will force you to do something about it?

HANS BRANDT: I have a question for you, Karl. I understand you are from the US but you are now based in London. What are the main differences in this area between the US and Europe?

KARL RUSSEK: In viewing the development of regulation in both areas, there is so much more legacy and so much more history - and a more complex history - to deal with in Europe than in the US, and the regulatory focus has been much more on compliance, much more on operational control and the prevention of future pollution. Whereas in the US you have Superfund, which was well intended but is a disaster from a public policy standpoint. To try to impose that purely retroactive scheme in Europe simply wouldn't work particularly because it runs back to public ownership in many cases. Our experience in the UK currently is that this is one of the main hindering factors, it is what is keeping local governments from enforcing their own regulations because more often than not they are the ones who would end up having to pay for the clean-up. But at the same time these are issues that society as a whole and the political sphere have to get their head around because the public is demanding some means of addressing the issues and this is where we see the drive. In the US, we see the drive from the regulations and from the lawyers whereas we are seeing the drive in Europe to tackle the legacy issues more from a purely financial and business standpoint.

Europe is a densely developed continent compared to the US so in many cases the real estate has much more inherent value and therefore there is much more of a pure business drive to be able to do something with that real estate and develop it for a higher use. That is where we see many of these questions coming up, what can we do with these contaminated sites? Can you sell a former blast furnace site as clean? Likely not, but can it be made into a motor yard or something like that perhaps?

ADRIAN CLEMENTS: We just sold a plant worth around \$160m for just \$2m because we wanted to sell it and it was contaminated. Someone has a wonderful piece of land but it is contaminated. We know it, they know it.

KARL RUSSEK: If everybody enters the transaction with their eyes open, then the tools are available to manage that risk and it can make very good business sense.

ADRIAN CLEMENTS: But you can lose out

as a company. If you look at your assets, you have to consider what their actual value is if you can't sell any of your sites. Companies can be insuring their assets for a huge amount, reflecting the cost to replace them, but if they cannot sell them for anything like this amount, they have a problem. And that problem is with the shareholders because they are buying shares in a company which at the end of the day, theoretically taking the worst case scenario, has assets that are not worth the money because the company can't do anything with them. They have to remain steel plants or whatever because the company is the only one that wants to use them.

That could be a problem if a company wants to sell or is perhaps obliged to sell some sites because of a merger. It could actually be eroding its capital assets. I don't know if that is the aim of the new laws but it is certainly a consequence.

PIERRE SONIGO: So a new dimension to the environmental risk is merger and acquisition.

We have discussed the definition of what is an environmental risk, and we have touched on many different subjects connected with that. Clearly, the risk of compliance is a major issue for corporations now. If the regulations are always changing, it is difficult, and there is a difference between the past legacy risks and those risks likely to arise in the future which we feel apparently is much more controlled now than in the past.

We have also talked about environmental liability risk as a third party risk but more and more we are seeing it becoming a first party risk. It is more damage to their own property rather than damage to others which is the concern for companies now, and that changes slightly the perception and scope of our activities.

If we agree that the environment is a major risk for corporations, do we think that it is well handled within the corporation? And how is its management organised? This was another issue that was touched on in the research report. Is a risk manager really involved in the management of environmental risk, and if so, how? Is he in charge of environmental health and safety or is he just working with other people? What is his role in respect of this, is it changing and evolving, are there any trends emerging?

DIDIER MELLAERTS: I saw that one of the responses in the report was that most risk managers are not really responsible for the environment, at least that is the impression I got. Personally, I think environmental risk is very specific, very technical. It is not so much insurance, because the number of insurers that provide cover in this market is very small, most of the cover is limited to sudden and accidental events. In our company, managing the environment is a specific activity, with a special department created to deal with environmental and also health and safety aspects. I cannot speak for all companies but the impression I get from other risk managers is that their companies are the same.

HANS BRANDT: Within my group we have environmental control, it is part of our business, so I am probably not any more involved directly than anyone else here. But I think I would be the one who was contacted if something went really wrong and when there was a claim. Of course, I do look at the prevention side and also - most important - the environmental issues when we buy companies. Then it is part of my job but otherwise not.

ADRIAN CLEMENTS: I would say it depends on the size of the company. If you have a relatively small company say 500 or 1,000 workers, then it is the job of the risk manager because of his education, experience and knowledge to handle that type of risk. In a very large organisation, there is no way that the risk manager can know of everything that goes on out there, so it is the responsibility of the plant manager. He is responsible for everything that happens in that plant, not just environmental issues, and the risk manager will help him from a corporate level by providing support, resources, whatever he needs, and setting up the network so he can talk to his colleagues. Each plant will have its own environmental manager and they have to know their own local laws - there is no way that the risk manager could know every country's laws. So each manager knows what they have to do, they know what the company's benchmark is.

In my own case, we also have external auditors who visit each plant both for the certification process and also for knowledge and information. But we have a



THE ENVIRONMENT IS A MAJOR RISK FOR CORPORATIONS

PIERRE SONIGO

very clear policy, it is the responsibility of the plant manager to handle environmental issues. It is important to ensure that the company's own benchmark is adequate. You can't have double standards, for example a different environmental standard in China than you have in Germany. Your benchmark must be high enough to reflect the most exacting regime. Everyone must be aware of that and then it is the plant manager's job to comply.

TOMASZ MIAZEK: I have the impression that generally in Poland low risk companies treat environmental risk as a compliance issue, not as a risk to cover by insurance, because the possibilities of transferring the risk by insurance are very poor. So we have a manager responsible for environmental issues and we have control from the local authorities; local environmental authorities are requiring us to take certain actions. It is not really our initiative, most of the activities are imposed by the local authorities. It isn't really something that a risk manager can do much with. Also I don't think the potential loss has been really recognised. The view has



ESTABLISHING THE LIABILITIES IS DONE AT THE CORPORATE LEVEL

ARIE J VAN DER STEEN

been: what will be the loss?; exchanging the soil can't cost that much. This may change with the new directive because of the biodiversity requirement. As Didier said, we don't know how much that may cost.

ARIE J VAN DER STEEN: From my own organisation's perspective, we are a big company, we run about 300 plants worldwide, we are in the healthcare, coatings and chemicals industries, and I do not fully agree with you. There can be different aspects and there can also be big damage to the environment and even to local communities where we operate. So we have to be aware that the risks and liabilities are well covered. Coming back to Pierre's question, we have a complete department dealing with risk management. Regarding environmental risk, the biggest risk we have is based on liabilities associated with contamination of land and soil and ground water. Basically the responsibility to analyse this and to solve it is at the corporate level. Risk management can help, insurance people can help us, but basically establishing the

liabilities is done at the corporate level rather than locally.

ADRIAN CLEMENTS: But your sites have to comply with local laws.

ARIE J VAN DER STEEN: They have to comply but you often find that the people at the local level go for local solutions and that is not always the best solution.

ADRIAN CLEMENTS: That is why we have the corporate benchmark. First they have to comply with local legislation - which is the minimum requirement - and then they have to comply with the corporate benchmark because we don't want to have double standards worldwide. It is the coordination which is done at corporate level. A really big incident could go over country borders so it is important to be very careful. That is why some of those risks are handled at an enterprise risk level. We have enterprise risk management. We are aware you could theoretically get a domino effect arising from a lot of these sector level or business unit level risks and so we go beyond even the corporate risk management level and end up at the enterprise risk management level. It is their job to say, it is very unlikely but if two or three incidents do occur or if the law changes, what will be the consequences and what will be the potential cost.

I once worked for a company that made dangerous chemicals and we gave them to a waste company to dispose of. Then Greenpeace took some photographs of these drums of chemicals in the Congo and it was our reputation that was affected. So now every drum from this particular company is accompanied to ensure that it's disposed of properly. My own organisation takes a similar approach to PCB transformers. We need to be sure that when they're disposed of, they're not sitting in a field somewhere, contaminating the ground. So we ensure that each one has been incinerated. We need certification and feedback to say this transformer has been incinerated, it has gone. If you don't have that kind of system, something will come back and bite you in a few years and then it will cost you much more - not only reputation.

DIDIER MELLAERTS: When you have a lot of plants you have to spread the risk

responsibility. Yes, the responsibility for the local operation is with the plant manager and his guys but there's actually been a big problem from the past as the local operation's job has been to operate for the future. Secondly, you need a lot of money, you need to make provisions for that at the corporate level. Practically, you will have the help of each plant manager and environmental manager in the plants but we have a special department which is coaching, coordinating and organising the remediation. It depends on the problem and if you can split it. And do not forget that when you have made provisions you also have auditors checking, your provisions must be right about the cost and so on. Just to come back to insurance, it is not the insurer who can help you here.

PIERRE SONIGO: I think it is difficult across the organisation to know where the responsibility lies. Major corporations now want to have an image and they have an environmental policy that they communicate. Based on this environmental policy they want to have action plans and to meet certain standards, etc. It is difficult to make this the sole responsibility of the plant manager who is responsible for complying with so many things. I don't think he is entirely responsible. It is a shared responsibility. When I was risk manager of Pechiney before it combined with Alcan, I was not only risk manager but also the EHS manager. It was a conscious decision to combine the two and to really consider that environment, health and safety were major risks for the company and they had to be handled within the same group. So we had environmental specialists within the risk management department. Their role was to assist the subsidiaries in solving their environmental issues. I found this to be a very good way of organising things because then we could talk the same language of risk management applied to different types of risk. Unfortunately I don't see this as a trend in companies. Rather, I see more that the EHS is being handled by specialists on one side and the risk management is being handled by other specialists on the other side. Very seldom do they talk to each other. For example, on insurance solutions, I am sure the risk manager can come up with some solution financially which can be interesting on clean-up costs, for example,

on capping of clean-up costs for certain areas. But if people don't talk to each other, they don't share each other's expertise to understand the issues and to come up with an adequate solution. As the report says, these areas tend to be separate in an organisation

DIDIER MELLAERTS: What I want to add to that is a big definition of risk management. In a certain sense the EHS manager is also a risk manager. We must abandon the idea that the risk manager is the guy upstairs who runs everything. A plant manager is also a risk manager, he has to manage his risk, and this should be part of the culture of the companies.

ADRIAN CLEMENTS: There are some positive sides to environmental issues for the company. As I mentioned, we have nature reserves in some of our plants. In one of our plants in Brazil we have very rare butterflies and crocodiles; we have the resources to do this. We actually helped the town to create a zoo in our plant. This is a very positive initiative. It helps us to attract good employees, to attract highly educated people. There are some cities in Europe where if you have a doctorate you don't work in our industry - who wants to get their hands dirty in a steel plant? I think that is one of the biggest risks now facing some industrial sectors - actually hiring people. If you take it from a global perspective, I agree with you 100%. You have experts in many areas. Maintenance is managing risk, insurance is managing and transferring risk. There are many definitions of risk management and that is the problem. There are too many definitions. The ultimate goal, one of my visions, is to make sure that the board has the person on it who is a risk manager, who is actually managing the risks of the company. One of the questions we will probably discuss is mergers and acquisitions. A lot of these guys just look at them from the purely financial view and they are not taking a step back and saying, let's look at this from a different perspective. There are positive sides and there are negative sides. One of the problems that the risk manager has is that he always shows himself from the negative side - what can go wrong? He is a pessimist!

But on the other hand, if you want to attract new employees, and human

resources is a risk, the demographic curve is a risk, having a good reputation, showing that you care about the environment, and helping local companies improve their image, are very important. In the case of one of our plants, it was built in the area because there was nothing else there and now a city has grown around that plant. If we close the plant, we close the city. It is the centre of the community and if you close it the community dies. This part of the risk has to be looked at. You can't pollute, you can't create a bad image, it's not something you can insure. You are investing your own money. You are investing in the future.

HANS BRANDT: So if you look at the title risk manager, the risk part is both a threat and a possibility?

ADRIAN CLEMENTS: Entrepreneurs take the most risk.

HANS BRANDT: As risk managers, I think we have to build up our own reputation and sell ourselves as problem solvers, bringing positive results to the board. In an organisation like mine that is buying a lot of companies, there will be a small team, a lawyer, some financial people, and they will be handling all the main work around that transaction. In that situation, I look to provide some positive benefits, perhaps by decreasing premium costs. I also look at areas such as old environmental liabilities and what the companies concerned did in the past. But it seems that it's natural to have the financial and legal guys involved but it's not natural to include the risk manager. Maybe we should devote a little time to promoting ourselves and our reputation.

PIERRE SONIGO: Regarding your comment, Adrian, about the plant in the middle of a city with the whole community depending on it, that's a corporate social responsibility issue. Everybody is talking about corporate social responsibility now as part of a sustainable development image. Is the risk manager supposed to play a role in this corporate sustainable development? I have heard and seen presentations saying that sustainable development is also about managing risks, long term risks, social risks. Are you involved - or do you think you should get more involved - in those



WE HAVE TO SELL OURSELVES AS PROBLEM SOLVERS

HANS BRANDT

areas? What is your feeling about that? It touches on environmental issues.

ADRIAN CLEMENTS: Within our system for sustainable development we have eight points - one of them is environment and one of them is safety. I interpret that as risk management.

KARL RUSSEK: On the question of risk management as part of CSR, a company can spend years trying to build a positive reputation. That can disappear overnight with a badly managed incident, whether it is a sudden and accidental type incident or something that comes to light from a legacy issue that the company is seen as insensitive on. People can turn all your CSR efforts and all your public relations efforts upside down and make them look hollow.

PIERRE SONIGO: I think it will become a subject in the future. Companies are spending so much money on sustainable development that one day they will realise that it is all risk management of future risk, whether it is environmental, economical or

social risk that they need to manage. I believe a risk manager will have a role to play in that area.

We have been talking about the risk and the organisation. The research report also mentioned the risk management tactics which are being used to manage environmental risks. Perhaps we could move on to the risk assessment and risk treatment of those risks and finish with risk financing and insurance. I was surprised to see in the report that 60% thought that they know their environmental liability but only 33% are confident that they have full information on their environmental liability. Do you think those risks are properly assessed in your company?

PETER JOY: It is very contradictory isn't it?

PIERRE SONIGO: It is contradictory, so do you believe that your company, whether it is the EHs manager or whether it is yourself, has a good grasp on what the environmental liability is? Do you know all your exposures? Do you know the landfills that you have been using in the past? My answer would have had to be no, because I was very surprised as the risk manager and the EHS manager of Pechiney to suddenly discover that we had a mine somewhere in the US that we didn't know about, and we received a letter from the EPA to say that we had to clean up that site. When we started to try to build up a data base of all our operations, even in France, there were a lot of areas that we didn't know where we had put waste. Some people even questioned whether we should do this because they considered that if we didn't know we would not be responsible.

ADRIAN CLEMENTS: Ignorance is not an excuse but some people try to use that.

DIDIER MELLAERTS: We have worked for many years on assessing our exposures, but nobody can predict the future. You have to investigate, wait for new legislation and so on. But I think I can answer yes as regards the past because we decided to make provisions and to spend a great deal of money on remediation. No-one can know everything – we must be modest! But I feel confident about the major problems of the past because of the internal organisation, our work with external consultants and also the legislation imposed in France.

PIERRE SONIGO: Do you believe, Arie, that you have good control over your environmental risks?

ARIE J VAN DER STEEN: We have been through a lot of acquisitions and divestments in the last 20 years or so. Basically, our environmental liability risks are associated with really old operations – they are historic liabilities. When we buy and also when we divest we try to make an inventory of all those liabilities so I think we have been managing this already for many years. What is a new development is that basically the liabilities now have to be very well documented, and have to be very well based on evidence. But new conditions come in and there we find of course some surprises, for example that people at sites were declaring provisions without an adequate basis. So we have to go back and work out more details about what the exact liability was because it was just an estimate. But if you look at the company as a whole, the total liabilities are not changing that much.

HANS BRANDT: How far back do you go, if you buy a company?

ARIE J VAN DER STEEN: We have sites that go back 100 years.

DIDIER MELLAERTS: We have the same.

ARIE J VAN DER STEEN: Some go back 150 years, like old coating sites along the River Thames where the old shipyards were. All the sites that we have that were built after the 1970s are pretty clean. We feel we have a decent overview of those liabilities, but you have to manage it continuously.

HANS BRANDT: Have you had any legal cases where you've been able to use the material you've put together to prove that you are not guilty?

ARIE J VAN DER STEEN: It is a question of transparency and if you want to show what is there. Sometimes we also have plants with contamination in the ground that we didn't know about when we bought them, and then it is discovered and the old companies that we bought the plants from do not exist any more. So then it is your problem. You have to deal with the legal authorities and

make the necessary arrangements, and it can be quite costly. We always do due diligence for acquisitions and it has to be very good, so we use highly respected companies for that. It can be quite tricky.

PIERRE SONIGO: We know how to deal with mergers and acquisitions now but in the past companies would often sell a plant and keep the environmental liabilities - they were not aware of the need to try to transfer those liabilities because nobody worried about them - and that creates a lot of problems now.

ADRIAN CLEMENTS: But can we guarantee that the contracts that are being set up by the legal department are actually correct? It can happen that although you have a standard contract which says that you sell all liabilities with the plant, in order to sell the plant there are some changes made. And the risk manager may not be part of that last decision making process. Even though the contracts are corporate documents, signed and agreed upon, the final wording is agreed when the actual negotiations take place. We are not there so we don't know what liabilities have been sold. Either you take the time to follow up on every contract, which I would say is impossible, or you live with a residual risk, and you are going to get hit one day.

PIERRE SONIGO: It is a very difficult issue. In our department we have been able to enforce the policy that a member of our department should always be included in the due diligence team because, as you say, the contract is often changed at the last minute and environmental issues can be very tricky. So one way to avoid this problem is to insist on being a member of the environmental due diligence team.

ARIE J VAN DER STEEN: It's the same in our company. There is always one member in there as the environmental specialist.

PIERRE SONIGO: He reads the contracts?

ARIE J VAN DER STEEN: He sees the contracts and the progress.

PIERRE SONIGO: That is how we learn, we learn from our past errors by doing that.



ARIE J VAN DER STEEN: Because at the last moment if anything changes, if the commercial guy thinks it is fine ...

PIERRE SONIGO: And if the lawyer thinks it is fine ...

ADRIAN CLEMENTS: It is fine from his viewpoint!

HANS BRANDT: Within my company I would say we have fairly good control. We run buses, ferry companies, trains, etc, and buy bus companies and ferry companies. Of course, you cannot know for sure what they did in those companies many years ago. As regards train services, we lease trains and run them on a contractual basis for two or three years on a certain railway and this can present a new problem. If in five or 10 years time, we are accused of having had an oil leakage on the railway, how can we be sure it was us because other operators were running services on that railway before and after us? I think that will be an increasing problem in today's Europe when a lot of transportation is no longer monopolistic, it is put out to contractors like ourselves. Another small problem we encountered in one country involved an accusation of a tram causing noise. I don't know if that is an

environmental claim, it may be. Then of course, in addition to that and it doesn't involve my company's activities, there are the things like electromagnetic fields and what our mobile phones may be doing to us, so that is a new area. As I said, I think my company has very good control but as long as we are contractors for a certain time then there might be problems.

PIERRE SONIGO: From the insurance point of view, do you feel that the people who need to buy some environmental liability protection have enough information about the risk? Can we quantify the risk? Can we give you all the information that you need to underwrite the risk?

KARL RUSSEK: Typically, the scenario that we see involving a large company is that there is a particular transaction, perhaps a steel mill that it is trying to sell, and the deal gets bogged down at the last minute over environmental issues. We have found when we are seeing them at that stage, and it is towards the end of the deal, the risk manager isn't even involved. The risk manager may be asked at the last minute to review this insurance policy that the commercial people and the lawyers have come up with as an idea to help salvage the

transaction. So there is insurance being used as part of these transactions either on behalf of the divesting company or on behalf of the buyer of the property in order to help digest the environmental risks associated with these transactions that the risk manager of the department may not even be aware of, in some cases not until after the fact, because it tends to be driven by the lawyers, by the deal people, and in some cases by the bank who are the private equity fund buying the property. There are so many different moving parts that it is very difficult to keep tabs on it.

ADRIAN CLEMENTS: Because people are buying insurance it would imply that they have done a risk appetite type of calculation, that they know what they are doing, but I personally have the feeling that a lot of companies, maybe not the big ones but the others, don't really know how to quantify that risk. So they want to buy insurance to transfer all the risk and I would expect that the insurance company will not like that, or increases its prices, or adds clauses. If you want to reinsure or insure a company which knows its risk, has quantified it, has its own risk appetite, that surely that would make your risk appetite better?



CAN INSURANCE HELP POTENTIAL BUYERS BE COMFORTABLE?

TOMASZ MIAZEK

KARL RUSSEK: Generally when we see a transaction, because it is typically some sort of property transaction or corporate transaction, the level of due diligence that has been performed is quite good, it is up to normal standards. It depends on the industry. I would say if it is an industry which has had historic awareness of environmental issues like steel, non-ferrous metals or chemicals or what have you, the EHS departments in those companies are generally quite good at finding the right vendors to do the due diligence. In those circumstances it usually comes down to a couple of isolated issues where there may be a grey area. But we do see companies who come in and are evaluating the use of insurance who have done virtually no due diligence and who think that they can simply transfer all the risk. That is not the case. Frankly it is the more educated buyers with whom we have more success because they understand the risk, they understand what is insurable and what is not. I would say it is increasingly insurable as due diligence becomes more and more standardised and as the regulatory situation

comes into focus in the various jurisdictions.

ADRIAN CLEMENTS: Do you have blacklisted countries? Generally we have been talking about the western world but most of us are expanding in other areas.

KARL RUSSEK: North America, most of Latin America, EU - the list is growing where we are quite comfortable. We can generally provide some degree of coverage worldwide, where we are allowed to sell insurance, but am I going to cover the environmental legacy for a former state-owned steel mill in China? Likely not. At the same time, we are seeing risks in Eastern European countries where obviously the history of compliance has not quite been what it is in western Europe or North America, but where the standard of due diligence applied is quite good. So we can understand very well what is likely to be under the site, even though the due diligence may have been more difficult because you don't have the records of compliance necessarily. There are many variables.

ADRIAN CLEMENTS: You mention contaminants below the ground, but you also have to look to your waterborne and airborne substances. Environmental covers everything. How do you know what came out of the top of a blast furnace maybe 30 years ago? Maybe it was not so nice but it landed 10km away. So would you expect to have these due diligence reports covering a 10km or 20km radius? Similarly, the steel industry pumps a lot of cooling water back into rivers, so a problem may be 30km downstream. Is that something you cover - something you can handle?

KARL RUSSEK: It is a function of how well it is understood. Do you know what the current state is? Do you know how long this has been the case? There's also the question of what jurisdiction you are in. You may have a discharge into a river that has been permitted for 30 years in western Europe but is now something that is likely to be looked at in a biodiversity context - the question of the thermal discharge as opposed to the actual permitted chemical levels, and things like that.

It's also a question of scale. What is the likelihood? In many cases, we are

underwriting it as a political risk policy, not only what is the likelihood something will be required through the letter of the law, but also what is the likelihood you are going to be a target. And you get into the CSR type questions. Are you seen as a good actor in the community or are you seen as a perennial compliance problem that the regulators are likely to want to make a target of? Frankly they sound like soft qualitative issues but they are the type of issues we are taking into account when we are underwriting and deciding whether or not we want to accept the risk.

PIERRE SONIGO: Some people in the report said it was difficult to get coverage and you said, Tomasz, that that's the case apparently in Poland. Can you comment on that, please.

TOMASZ MIAZEK: First, we are fully complying with all the regulations about environmental risk so we feel very comfortable, but we plan to sell some of our buildings. It's a trend in the telecoms business to sell buildings because electronic equipment is getting smaller and smaller so we don't need to a lot of buildings any more. So I am interested in how insurance can help potential buyers to be comfortable about potential risks. Is it possible to cover any of the environmental risks? I thought the only possible insurance was civil liability - sudden and accidental cover - which is not really what we are looking for.

KARL RUSSEK: Typically, when we are looking at it in the context of a corporate transaction, historic unknowns are the first things people are looking to have covered. They've done some degree of due diligence but some surface investigation is inherently imperfect, you can't know everything that's under a site. If a reasonable degree of due diligence has been performed, we can provide a policy that will respond in the event that something is discovered after the property has been sold off.

TOMASZ MIAZEK: Would you cover the disposal of asbestos which was not discovered during the due diligence?

KARL RUSSEK: Asbestos in structures is a particularly difficult question. Typically, what we are dealing with is soil and ground

water contamination, surface water contamination. Also, particularly as we look at different jurisdictions where we are not seeing a US style regulatory regime, more and more we are being asked to provide, and are providing, coverage for third party liabilities associated with known historic conditions. For example, you may have a soil or ground water condition that is well managed, it is being cleaned up, but there maybe some inherent third party bodily injury or diminution of property value risk or something like that, more of a financial exposure associated with a known clean-up obligation. Something like that can also be covered along with, as Pierre mentioned earlier, capping the actual cost of clean-up itself. All of these things are a function of how much information you have on the properties

TOMASZ MIAZEK: But this would not apply to the internal walls, the construction of the building itself. This is what the people responsible for selling the buildings are asking me.

ARIE J VAN DER STEEN: What are they worried about?

TOMASZ MIAZEK: They are worried that some asbestos may be discovered.

ARIE J VAN DER STEEN: We have very many plants all over the world. Some of them still have asbestos in them. In general it is not a problem if you know it's there and you manage it, and that also applies with divestments or acquisitions. If you know it's there and you know where it is, you can handle it as part of the maintenance programmes. You have to take special measures, call in specialist companies, but in general if you know it is there and it is marked well, as soon as maintenance is up you can take it out, pack it, wrap it, and get rid of it.

KARL RUSSEK: The question of biodiversity came up and the political risk, what's coming down the pipe, it is not unusual in the context of due diligence to identify issues at a site that are not actionable based on current regulation. That doesn't mean they won't be actionable four or five years down the road. We see this particularly in continental Europe, where

large companies have a great deal of knowledge on what is under their sites. Their industrial facilities are likely to remain industrial facilities so there is no reason that it may need to be contained or there may need to be restrictions put on the property. That situation can be very well managed without a lot of active clean-up. But you cannot necessarily control what happens to the neighbouring property. That neighbouring property may be developed for commercial and residential purposes which changes your clean-up levels or, at a minimum, changes the risk perception and changes the potential plaintiff pool in that what was formerly industrial property is now residential. The question of biodiversity comes up. You may have had a completely permitted discharge, but what is the possibility that you can be brought to task for historic discharges over the past 20 or 30 years? Or even going forward, something may be permitted but is it resulting in some sort of long term cumulative impact so that a governmental body or a third party may allege some sort of claim? The mention came up about the insurability of biodiversity. Frankly I think biodiversity is very insurable. It will take some time to develop the specific methodologies, but, biodiversity in the US is referred to as natural resource damages and has been part of environmental insurance policies for the last 10 years.

ADRIAN CLEMENTS: I have to disagree slightly because we have a plant down in Marseille, for example, which is right next to the acid ponds where the flamingos nest in the summer. You could gradually contaminate and create a state where the flamingos don't come back. How are you going to get those flamingos back? You can't. No matter how much you pay, you have changed their natural habitat. We have rare plants on some of our sites. If they're gone, they're gone. I don't know how the legislation will cope with that.

KARL RUSSEK: How it is typically handled in my experience - and a lot of the guidance documentation that is being developed at the EU level is consistent with what I have seen - it's a question of not necessarily focusing on individual organisms but on what is called habitat equivalency where, if you contaminate a priceless irreplaceable



HOW WILL THE LEGISLATION COPE WITH LOSS OF NATURAL HABITATS?

ADRIAN CLEMENTS

piece of habitat, and it can never be brought back to 100%, maybe it can be brought back to 80%. These are very rough over-simplistic numbers I am using. In exchange for not being able to bring it back to 100%, part of the settlement negotiated may be to purchase and protect other similar habitat, to restore other similar habitat or to create additional wetland for example - to purchase one of the former unused industrial properties and turn it into a wetland. It is basically questions of what services was this area you contaminated providing to the environment and how can those services be restored? And also it is a question of a payment in kind. You cannot replace that bird but you can restore additional habitat, you can provide additional funds for environmental education, you can fund the regulatory agency, these are all things I have seen happen in practice.

ADRIAN CLEMENTS: If I play devil's advocate, maybe that is the cheapest solution.

PIERRE SONIGO: The application of the



THE AMOUNT OF COVERAGE AND THE AFFORDABILITY HAVE CHANGED DRAMATICALLY

KARL RUSSEK

Environmental Liability Directive which involves repairs to damage to natural resources has an annex which is Annex 2 which clearly defines what are called primary remediation, complementary remediation and compensatory remediation. The primary remediation is to try to provide remediation on the same site with the same species of the same kind up to a certain level. If you cannot go back to baseline, then you have complementary remediation which does not necessarily involve species of the same kind and is not necessarily at the same location. So if you cannot restore the habitat for your flamingos at that location, you may be asked to restore habitat for salmon in another area.

ADRIAN CLEMENTS: What I am getting at from a devil's advocate point of view, to give an example, if I am a local government I might well think it would be great to have a highway running through this nature reserve because it will bring more people to my industrial area, to the shopping area, etc. Then OK, I take the bulldozers and destroy this natural habitat, build a highway, and

somewhere else - on really cheap land - build another habitat. The cheapest solution is to use this legislation in a very negative way because who is going to sue the government for doing that?

PIERRE SONIGO: That's an issue with government, but in the case of a company, the government is going to tell you whether it is acceptable to repair damage to the habitat at another location.

KARL RUSSEK: I wouldn't understate the monetary amounts involved and the amount of time involved to do compensatory and complementary remediation. You are buying yourself a 20 year project to purchase and restore a habitat. It is not like soil remediation or even ground water remediation where it's a capital expenditure of five to seven years and done.

ADRIAN CLEMENTS: And that is why I say, looking at it again from the negative side, maybe the cheapest short-term solution is to completely destroy that habitat in a way which can't be rebuilt and pay for somewhere else.

PIERRE SONIGO: But I think it will depend on what is called the exchange rate between a pink flamingo and a salmon somewhere else, and now the European Union is facing some difficulties in trying to find the adequate exchange rate between two different species. So I am not sure you will be gaining from a cost point of view if you have this attitude of specifically and intentionally destroying. But it is an issue.

ADRIAN CLEMENTS: It is not my opinion, it is just a point of view!

PIERRE SONIGO: I think some governments, particularly in some eastern countries, may decide that it may not be worth repairing damage in a certain area but may be more important for other political reasons to repair damage in another location. So they say: OK, we agree that you won't repair the damage here but you have to do it somewhere else. Now obviously this raises insurance questions - whether the insurance company is willing to compensate for that at another location not directly connected to your risk.

HANS BRANDT: But with property insurance today, you can negotiate with the

insurance company if you have a fire in a building in one country, so that you can get your financial settlement and build in another country instead.

PIERRE SONIGO: But it is quite difficult and you have to go into cash value or repair replacements, which are different if you do it at another location and at another site. But yes, you can negotiate anything with an insurance company!

ADRIAN CLEMENTS: Well, if we take the CO2 problem, if we blew up a coke plant, we would probably not be able to rebuild it within Europe because of the CO2 emissions. Therefore, we actually have that clause that allows us to build anywhere because the government in the country where we had the loss might not allow us to rebuild there.

PIERRE SONIGO: Has anyone any more comments on the risk financing side, the coverages that the insurance market is providing or not providing? What do you think, Karl? Except for biodiversity, can we buy any type of coverage that we might need?

KARL RUSSEK: There is a lot more out there now than there was even three or four years ago. There is a lot more breadth of cover and flexibility in the market place.

PIERRE SONEGO: Is this is going to be true in all the EU countries?

KARL RUSSEK: Definitely.

PIERRE SONEGO: Even Poland, Bulgaria, Romania?

KARL RUSSEK: Obviously we look at every risk individually but compared to three or four years ago the amount of coverage and the affordability has changed drastically because I think you have seen ACE in particular but other companies as well viewing this as a long term differentiator. We feel it is an emerging risk but it is very much a quantifiable risk in our opinion so we feel it is an area that we need to be in as this issue develops.

PIERRE SONEGO: Would you treat electromagnetic fields as an environmental

risk or another type of liability?

KARL RUSSEK: At this point we consider environmental risks to be what we talked about earlier - the soil, ground water contamination, discharges to air, water and the like. A lot of the emerging risks you see bubbling up tend to be either products or occupational issues. They may have some environmental overtones. The environmental risks as we underwrite them are more either first party clean-up of your own site or third party discharge of a solid, liquid, or gas.

PIERRE SONEGO: One last question on risk financing, do brokers add value in this area? I used a broker in the US to place a cap on clean-up costs for a mine which needed to be rehabilitated. I think in that case the knowledge of the brokers and the engineers that we used really helped us to deal with the insurance company to place the business. But I think that the expertise that exists in brokers in the US in the environmental area, doesn't yet exist in Europe and it is difficult to use brokers to place our business right now.

TOMASZ MIAZEK: I think they concentrate more on the placement, finding the capacity for the risk instead of providing technical expertise. Generally there is a limit to the amount of cover you can buy from one insurer and if we need, say, a billion dollar policy we may need several insurers. Then we would need the worldwide broker to find the pool to cover the risk. That is how we use brokers mainly, not for their technical expertise.

Is there much competition in the environmental insurances market?

KARL RUSSEK: Currently in the EU I am aware of three other companies actively writing this and some of them are country specific. You have the pools in certain countries as well. It is not an area at this point that many of the large historic indigenous property and casualty carriers have invested resources in. Similarly, a few of the larger brokers have developed some specific expertise but they struggle to get their knowledge spread through the network and to get it in front of specific clients. It is a long term resource and education question even for the brokers that have agreed that they want to invest in

this area. It is a high barrier entry because to underwrite and to broke these risks takes a great deal of expertise and it is difficult to find a chemical engineer who wants to be in the insurance business! So it is going to be a long term play until perhaps awareness of these issues moves down into the middle market. Then you will see some speciality brokers pop up and some of the larger houses develop speciality teams.

HANS BRANDT: I know a few brokers in the Scandinavian countries who are involved in this area but it's almost a sideline. I think the reason for this is that there hasn't been any big incident involving environmental liability issues so there is not really that much demand for insurance coverage. But from time to time you need it and the broker may not be that familiar or up to date with it.

KARL RUSSEK: Being in London we see things coming in from a lot of different places. We have got risks in front of us now from Finland, Norway, Singapore, China, Australia, largely from western European or North American companies who have experience with risks of this type who are looking to hedge against the regulatory risk in emerging areas. There is definitely an increasing demand. Whether or not it is necessarily well qualified from a commercial standpoint or underwritable depending on where they are is a different question, but the awareness level is certainly increasing.

TOMASZ MIAZEK: May I ask you a question, Peter? You said that environmental risk is a hot topic at the moment because of the new directive. I understand that the directive extends the risk to biodiversity. Does it have any other effects?

PETER JOY: It seems to be a tighter approach to soil, water and air contamination. A lot of the concern, I think, seems to revolve around the gap between national legislation and EU legislation. My impression from the interviews was that, particularly in the Nordic region for example, there was a firm degree of confidence that the EU Environmental Liability Directive would bring little if anything new and that people are already up to or beyond the EU



IT SEEMS TO BE A TIGHTER APPROACH TO SOIL, WATER AND AIR CONTAMINATION

PETER JOY

standard. But in southern Europe there was a sense, true or not remains to be seen, but there was a sense that there was a gap between existing national legislation and this new directive that they were going to have to step up and fill now, right across the board. Does that tally with your own views and experiences gentlemen?

ADRIAN CLEMENTS: As a company, we apply the same standards worldwide so at the end of the day I guess it doesn't really matter if there is a gap between, say, Greece where we have a small plant and the EU legislation. Each company should define what their level is and then benchmark themselves and their level must be at least European legislation, best practice or whatever. Maybe the bigger companies that have the resources should look to the future and say, what will the future legislation be?

There can also be conflicts of interest. Just for example, it costs us a fortune to replace all the halon systems in our plants. Halon puts out fires wonderfully but there is a conflict of interest between environmental protection and fire protection. The question



is, is the smoke worse than the halon? We are having a similar situation now with another chemical which puts out fires wonderfully but is associated with ozone depletion and global warming. So who is right? The risk engineer from the fire property standpoint who wants to put out the fire or the environmentalist? And in some areas you end up with this small conflict where all the parameters are not being reviewed. Normally we have alternatives so therefore environmental comes first.

And when it comes to some of the things that I've talked about, for example the flamingos in Marseille and some of our plants being in migration paths, you have to make sure to have high environmental standards regardless of the EU.

PETER JOY: By contrast, the people that were most concerned about the directive tended to be nationally based and in southern Europe and therefore would have been able to get away with taking a different approach to your own company up to now.

ADRIAN CLEMENTS: But what do they do when they merge or are taken over. Suddenly they have an enormous risk that they don't identify because they are not used to it.

PETER JOY: Yes, and this is what they have become increasingly aware of, it seems.

ADRIAN CLEMENTS: When you are always merging you tend to be more aware of these additional risks. You have a mechanism within your company to handle them. But if

you are a small company taking the first merger steps, the learning curve is very steep sometimes.

PETER JOY: Tomasz, can I ask you a quick question? Electromagnetic radiation, pollution from that, is this a concern in your industry these days or has it receded?

TOMASZ MIAZEK: Yes it is. First of all, there are protests in local communities against building base stations because people think it may be dangerous for their health. Secondly, we need permission from the government for certain amounts of emissions. Thirdly, there are cellular phones and the possible health damage they may cause. There is still not any proof regarding the negative effects but, like tobacco, asbestos and so on, it may be that suddenly someone will prove that there is a negative effect. Then we will be liable.

PETER JOY: Have you an insurance strategy where this is concerned?

TOMASZ MIAZEK: Yes, we have liability insurance against claims from electromagnetic fields. I must say that it was not easy to buy.

PIERRE SONEGO: This relates to occupational health as we discussed before but I think more and more legislation is putting occupational health as part of the environment liabilities. More and more I see that environmental risk is no longer outside of our facilities, it is also inside the facilities, the working environment. For example, the exposure of our workers to the chemicals

that we use is treated as an environmental issue. Programmes like REACH will impose a risk assessment of all chemicals being used and may imply long term health issues for our employees. So perhaps there are going to be a new type of environmental liabilities which are probably not certain right now but will become a major problem for us. I don't know how reinsurance companies will respond to that type of risk because it is difficult to quantify them, it is difficult to identify them and they represent very long term liabilities. I believe that's the next challenge for the risk manager.

I'd like to end this discussion by asking if anyone would like to make a final comment on environmental liability. Perhaps we can start with you, Tomasz.

TOMASZ MIAZEK: After this discussion I can see that environmental risk is not only penalties from government, it is also first party, damages and some other costs for recreating or rebuilding new habitats. It is not only compliance with the regulations.

HANS BRANDT: The environment and taking care of it is very important and you have to take care of your reputation. I found Adrian's comments on having to sell assets significantly below their book value particularly interesting. That really proves how much environmental risk can cost. How many buildings like that do we have on our books? I don't think I have many but I may be wrong.

ADRIAN CLEMENTS: My personal opinion is that the environment doesn't stop at the border. Therefore I would have to really seriously ask the question whether it's better to invest the million dollars that we invest in one plant in France in Africa instead. Maybe in terms of the global effects, the world environment, the investment is better put there than in Europe?

KARL RUSSEK: These issues are becoming more and more boardroom issues and having significant financial impact. From the insurance standpoint I think the definition of what is insurable continues to expand.

ARIE J VAN DER STEEN: It was good to hear that an insurance company is looking to deal with the risks associated with biodiversity.