EUROPEAN RISK MANAGEMENT SEMINAR 2018

SUSTAINABILITY

FERMA™
Federation of European Risk Management Associations

INTRODUCTION

Sustainability has always been at the heart of the role of the risk manager, so that their organisations are resilient to shocks and can continue to fulfil their objectives. In the 21st century, that vision has widened, because companies are increasingly asked to be good corporate citizens and to play a part in our overall adaptation to climate change.

Companies have always depended on the acceptability of their business practices to continue developing and prospering. Today that has become critical, with a focus not just on responsible corporate behaviour when it comes to environmental, social and governance risks, but also monitoring and public reporting of risk.

The most recently report of the Intergovernmental Panel on Climate Change (IPCC), which was published during the FERMA European Risk Management Seminar, highlighted further the extensive changes needed to avoid many of the severest climate change impacts. There are great opportunities for the private sector to contribute to adaptation and improvement, especially through public-private cooperation.

We believe that the growing emphasis on this wider role of companies and other non-governmental organisations can gain from the unique skills of risk managers. Risk management is probably the only function that can bring together all the various functions involved in this process, including environmental risk management, human resources, compliance and investor relations, on an enterprise-wide basis.

FERMA's aim in focussing on sustainability in our 2018 European Risk Management Seminar and in publishing this report is to strengthen the risk manager in ensuring the sustainability of our organisations and ultimately our societies.

Jo Willaert, President of FERMA

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October 2018

SUSTAINABILITY – RISK MANAGEMENT IN THE 21ST CENTURY

It is ten years since the financial crash. That event and others since then have heightened awareness of the potential long-term consequences of our decisions and actions. Sustainability has become our goal, allowing us to plan for the future rather than react to increasingly unpredictable events that can throw organisations and countries off course.

Risk management is clearly an essential part of this process and this report deals with two of the most important aspects: corporate behaviour and climate change. We are going through a period of profound transformation. The demand for sustainability and responsible corporate behaviour as well as rapid digitalisation is creating profound changes at the heart of organisations.

Sustainability encompasses care for the environment and our physical world, but it is far wider than green issues. It also applies to responsible corporate behaviour as a whole, because companies depend on the acceptability of their practices to continue developing and prospering. Close scrutiny of corporate conduct will continue as companies are valued increasingly not just on their financial performance but their environmental and social impact.

One issue probably throws the spotlight on the demand for good corporate conduct more than any other: climate change. It is a global issue that requires deep change to traditional business models and corporate behaviour for us to keep global warming below the 1.5°C threshold that the Intergovernmental Panel on Climate Change believes would limit its worst effects. Yet, the need for adaptation opens opportunities.

KEY LEARNING

- **Risk managers' horizons are widening as they must embrace sustainability.**
- **Responsible corporate behaviour and climate change are risk management issues.**
- **Education is critical: for us to deepen our understanding of these issues, and for our organisations and governments to understand the value of professional risk management in achieving sustainable objectives.**
- **Sharing knowledge is part of this. We can do this through FERMA, through our national associations and with our business partners.**
- **Achieving sustainability is a cooperative venture.**
- **We can be the risk managers of the 21st century.**

PANEL SESSION

SECURING OUR FUTURE THROUGH RESPONSIBLE BUSINESS CONDUCT

Responsible business conduct and adapting to climate change both bring risks and opportunities. Educating ourselves with these in mind should be high on the priority list for European risk managers today.

The 'Securing our future through responsible business conduct' panel session moderated by Gaëtan Lefèvre, CMI, Group Risk & Insurance Manager, was split accordingly into two parts: Responsible Business Conduct and Adaptation to Climate Change. The Responsible Business Conduct part covered the Report on Member States' implementation of the EU Non-Financial Reporting Directive and the response from the market. Adaptation to Climate Change followed and focused on EU strategy on climate change and the use of insurance in adaptation alongside alongside natural catastrophe issues.

Each speaker presented these topics from their own specialist angles, which sparked a lively and highly informative debate in the room.

Panel session speakers:

Responsible Business Conduct

Paul Gisby
Manager, Accountancy Europe

Paul explained how the EU Non-Financial Reporting Directive was implemented and covered the common points and differences among the different countries, along with the implications for business models and the evolution of risk management.

Tapio Huovinen
Director Risk Management, UPM Kymmene Corporation

Tapio showed how ERM might be directly implemented for the Non-Financial Reporting Directive taking the example of his company.

Rodney Irwin
Managing Director of Redefining Value and Education, WBCSD (World Business Council on Sustainable Development)

Rodney detailed the work by WBCSD for an upcoming risk management report including the application guidance developed jointly with the Committee of Sponsoring Organisations (COSO) on integrating environmental, social and governance risks into ERM.

Adaptation to Climate Change

Ernst Rauch
Head of Climate and Public Sector Business Development, Munich Re

Ernst discussed climate change though a macro perspective using statistical data, especially relating to the insurance gap between high and low income countries.

Manoelle Lepoutre
Senior Vice President, Civil Society Engagement, Total

Manoelle gave her insight on the challenges an energy company may face in adapting to climate change. Energy players are caught between their mission to satisfy growing world demand for energy and the challenge of climate change. Manoelle demonstrated how Total pioneered by changing its business model and developing new strategies.

Elena Visnar Malinovska
Head of the Climate Adaptation Unit DG Climate Action, European Commission

Elena relayed the main messages that came out of the EU strategy on adapting to climate change. She discussed EU level and member state preparedness for climate change, sustainable finance and what the private sector can expect in the next decade.

WORKSHOP

Responsible Corporate Conduct

Key learning

There are many aspects to responsible corporate behaviour and the professional risk manager is well placed in the organisation to draw them together and work with senior management to advise the board on ensuring sustainability.

Organisations have to manage non-traditional risks that arise from reactions to their business conduct on a larger scale than ever before. Demand for responsible business conduct is not limited to financial prudence, but spans a wide range of environmental, human, governance and social issues.

Negative reaction to corporate conduct can result in protests and pressure from stakeholders and politicians with legal and regulatory action to follow. Companies can lose competitive advantage, especially in fast developing technology-based industries. This is an enterprise risk for a business because it can affect its ability to outperform its competitors and deliver sustainable returns.

Uncertainty and complexity create an urgent need to effectively manage the risks and threats that face us. At the same time, there is great potential for generating corporate and social benefits. Risk managers also have skills that allow organisations to make investments that build sustainability for themselves and for society.

Integrating ESG risks into an ERM programme

Environmental, social and governance (ESG) risks remain new, complex and long term. However, frameworks like those suggested in the COSO ERM 2017 or the ISO 31000: 2018, allow integrating and managing these risks, whether they are opportunities or threats, and sometimes both. Therefore, they should be naturally involved in any ERM project, as these are in essence global and integrated. Further, the success of an ERM programme rests on an open trans-functional cooperation.

Developing and implementing an ERM programme requires strategic thinking and the clear inclusion of uncertainty in the strategic process both at the development stage and the implementation, with a definite imprint on governance.

Where organisations already have an ERM programme, they can incorporate ESG issues to report to the board and highlight to auditors where their status has been changing, especially if action and more detailed reporting are needed.

Success will mean:

- Strengthening of resilience as the organisation improves its capacity to anticipate threats and find the proper controls to mitigate them and/or seize opportunities;
- Common language to address risks.

> *"Risk-managers should play an essential role in cooperating with ESG managers"*
>
> Paul Gisby, Accountancy Europe

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How the Environmental Liability Directive (ELD) transformed the environmental liability insurance market

1. You need to know and understand the new ‘biodiversity risks’. Good baseline data is important to understand your exposure and to assess the possible damages.
2. Some EU countries may have stronger local requirements than others, for example for ecological damage or mandatory financial guarantees. Your local environmental insurance policy will have to take this into account.
3. There are several key factors to consider for the risk transfer decision on environmental insurance: internal organisation, ELD local legislation and similar legislation in other parts of the world.
4. You need to take into account non-regulatory factors like increasing natural disasters due to climate change or cyberthreats that might impact your operations with consequences on natural resources and biodiversity.
5. The choice of the appropriate option for risk transfer depends on the corporate financial situation and the group risk appetite.

Risk mapping in CSR: could it become mandatory?

1. The risk map is not a goal as such, but a tool to measure the appropriateness and effectiveness of your CSR-related activities, required by law or not.
2. A company’s responsibility is not limited to the organisation, but extends to all lines of business, subsidiaries, vendors and subcontractors, products and services.

WHAT IS COSO?

COSO is a private sector initiative developing risk-related frameworks and guidance.

WHAT IS WBCSD?

WBCSD is the World Business Council for Sustainable Development. Rodney Irwin is the WBCSD Managing Director, Redefining Value and Education.

SUSTAINABILITY

Aligning ERM and ESG Risks

Businesses face an evolving landscape of emerging environmental, social and governance (ESG) related risks that can impact a company's profitability, success and even survival. COSO and WBCSD believe that leveraging a company's enterprise risk management governance and processes can support identification, assessment and mitigation of ESG-related risks.

Over the past decade, the prevalence of ESG-related risks has steadily increased while the more traditional economic, geopolitical or technological risks are less dominant.

Companies worldwide have experienced measurable impacts after product safety recalls, worker fatalities, child labour, polluting spills and weather-related supply chain disruptions. Many of these have translated to financial or reputational harm – in some cases to the point of no recovery.

Considering ESG challenges at an enterprise level offers an opportunity for business leaders to expand their understanding of a company's risk profile and the value creation structure – while enabling them to consider how these issues impact shareholders and society.

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Most companies have ERM governance and processes in place to manage risks. The most commonly-adopted framework is that developed by COSO.[1] In September 2017, COSO released an updated framework Enterprise Risk Management: integrating with strategy and performance. The framework consists of five components and 20 principles while addressing the evolution of enterprise risk management and the need for organisations to improve their approach to managing risk to meet the demands of an evolving business environment. See figure below.

PRINCIPLES ACCORDING TO COSO'S ERM FRAMEWORK

Source: Enterprise Risk Management. COSO and WBCSD. 2018. p 8

COSO defines ERM as "the culture, capabilities and practices integrated into strategy and execution that organisations rely on to manage risk and in creating, preserving and realising value."

According to COSO, ERM provides an entity with a path for creating, preserving and realising value. Its foundations support an organisation's strategic goals and business objectives, while maintaining effective governance. Its processes help identify, assess, manage, monitor and better communicate the risks that organisations face. Effective ERM helps an organisation identify the challenges that lie ahead and adapt to meet them.

Incorporating ESG-related risks in ERM could improve risk management practices and company performance overall. A 2013 study by EY, "Turning Risk into Results", found that companies with mature risk management practices outperformed their competitors financially. Companies that ranked in the top 20% in terms of risk management maturity reported earnings three times higher than companies in the bottom 20%. Further, the 2017 "Environmental, Social and Governance Survey" by the CFA Institute found that 38% of institutional investors consider ESG performance a proxy for management quality.

Ultimately, companies should address the disconnection between their financial and non-financial reporting systems. Those which achieve integration between these two areas are better able to manage their risks through a more comprehensive strategy in comparison to an individual, siloed approach.

[1] Based on research of Fortune 100 companies by market capitalisation, 69% of companies use COSO for ERM or internal controls.

USING ERM TO REPORT ON ESG

UPM KYMMENE CORPORATION

AUDIT COMMITTEE | QUARTERLY DASHBOARD | ESG RISK REPORTING

TOPIC	PREVENT	MONITOR	REACT	
			INCIDENTS	REMEDIATION
Labor practice, Safety and Human rights	Generally effective	Generally effective	Generally effective	Generally effective
Environment	Generally effective	Generally effective	Plan to become effective	Generally effective
Product safety	Generally effective	Generally effective	Generally effective	Generally effective
Business integrity	↓ Plan to become effective	Generally effective	↓ Plan to become effective	Generally effective
Protection of assets and Information				
IT (Information and Cyber security)	Generally effective	Generally effective	Plan to become effective	Generally effective
Privacy	Generally effective	Generally effective	Generally effective	Generally effective
Security	Generally effective	Generally effective	Generally effective	Generally effective
Finance	Generally effective	Generally effective	Generally effective	Generally effective
Energy market compliance	Generally effective	Generally effective	↑ Generally effective	Generally effective
Securities market compliance	Generally effective	Generally effective	Generally effective	Generally effective
Supply chain responsibility	Generally effective	↓ Plan to become effective	↑ Generally effective	Generally effective
Stakeholders and society	Generally effective	Generally effective	Generally effective	Generally effective

Environment:
• **(detail)**

IT:
• **(detail)**

Supply Chain: • **(detail)**

Business Integrity: • **(detail)**

↑ ↓ *Improvement / decline compared to previous quarter*

Generally effective

Plan to become effective

Ineffective or significant deviations

Not applicable

"We made this part of the board reporting and simplified this table so that auditors can see the levels of prevention, monitoring and reaction highlighting where the issues lie or are changing – each of the responsible people for each of these topics then come once a year to provide a more detailed report on their specific topic – adding to the level of risk assessment."

Tapio Huovinen, UPM-Kymmene,
Director of Risk Management

NON-FINANCIAL REPORTING

VARIATIONS IN DEFINITIONS OF LARGE PUBLIC ENTITIES

Eleven member states have adopted the standard definition (green).

Nineteen member states have extended the definition to additional organisations (orange).

Source: CSR Europe and GRI, Member State Implementation of Directive 2014/95/EU. 2017

Non-financial reporting (NFR) is intended to provide a clear picture of a company's performance beyond financial information. it is increasingly important for investors and other stakeholders.

The EU Non-Financial Reporting Directive requires organisations that come within its scope - large public entities - to disclose information relating to environmental, employee, social, respect for human rights, anti-corruption and anti-bribery matters. This includes a description of the principal risks relating to these matters connected with the company's operations and how the company manages those principal risks.

It is a first step towards improving and harmonising the publication of non-financial information within the EU but it is far from perfect.

Comparability of NFR reports is essential to their utility especially in comparing organisations in the same sector but there is a way to go.

The Directive allows member states to define what organisations come within its scope beyond a minimum, as the map here shows, and organisations can decide which reporting standards to use. Statutory auditors need only to check that the report exists. However, the Directive has opened grounds for collaboration between accounting professionals across Europe.

> *" I absolutely see a huge role for the risk managers working with the ESG managers, creating tools to measure the quantification to determine materiality – it therefore can't be too siloed within the organisation. "*
>
> Paul Gisby, Accountancy Europe, Manager

Q&A

With Rodney Irwin

Rodney Irwin
Managing Director
Redefining Value and Education,
World Business Council for
Sustainable Development

I suppose the sweet spot is getting this information into the hands of decision makers within the organisation, so that they can manage these issues before they become disclosable.

How do you think non-financial reports will be used most effectively by risk managers?

I think the rush to disclose and report information is a step too far. The risk management community can best serve the organisations they work for by using their unique skills to identify, prioritise and communicate internally environmental, social and governance risks to management, so that they can be managed before they need to be disclosed. Whilst I appreciate that there is a lot happening around the world with respect to disclosure of sustainability information or ESG information, the real area of interest, and, I suppose the sweet spot, is getting this information into the hands of decision makers within the organisation, so that they can manage these issues.

Will there be any sanctions if the company doesn't live up to what it says in its Non-Financial Reporting? Is this a reputation risk?

Probably, possibly and maybe: there is no right answer to this. I think it depends on what the company is saying, to whom they are saying it and whether they can back up what they are saying or not. At a very simplistic level, disclosure in sustainability reports has not been subject to the required disclosure in legal documents like the annual report. Whether statements in the non-financial report, whose contents are not always subject to audit, would open the company to litigation or not is a moot point.

As I'm not a lawyer, I don't think I should comment on this. However, making statements for which you have no evidence and that are to be relied upon by others can create some problems. That is why at the WBCSD we believe that sustainability communication, particularly material ESG issues, needs to be at the highest levels within the organisation. They need to be subject to rigour, they need to be embedded into business culture and into the outcomes of strategy, and not something that is bolted on to the side. Therefore, if a company is really serious about sustainability, it should be embedded into its decision making, it should be disclosed in a manner that is palatable and receivable by the audience, and they should be able to confirm that what they are saying is to the best of their knowledge, true and fair.

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When it comes to ESG, do you think that responsibility falls on the management from the top down?

Absolutely, within any organisation the board, and here in Europe sometimes the supervisory board, has the responsibility for insuring that the company is sufficiently well-managed and that investors and other stakeholders are informed in a reliable manner that is free from material misstatement. Therefore, the tone at the top is all important within this regard and oversight of ESG and risk management needs to be stronger and more aligned.

The tone at the top is all important within this regard and oversight of ESG and risk management needs to be stronger and more aligned.

If you could sum it up, what would be the one key takeaway for risk managers from the FERMA Seminar?

In the FERMA Risk Manager Survey that was previewed at the Seminar, it came as a surprise that the risk management community did not see ESG risks as especially important in 2018. The World Economic Forum's Global Risk Report for the last five years has been showing an ever-growing prevalence of the impact and the likelihood of ESG risk, more so than cyber risks. I'm not saying that those risks aren't important, but the writing has been on the wall for a long time. What I think risk managers can take away from here is that they should ensure that their organisation's sustainability agenda can be supported by the risk management community. Risk managers can offer their skill set to their colleagues and can help embed sustainable outcomes into the core strategy by doing what risk managers do best: looking to the future and identifying what things can help, hinder and prevent the business from thriving; bringing their skills to the management with their opportunities.

In the FERMA Risk Manager Survey that was previewed at the Seminar, it came as a surprise that the risk management community did not see ESG risks as especially important in 2018.

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HOW ELD TRANSFORMED THE MARKET

Over the last 15 years, we have seen the environmental impairment liability insurance market shaped and driven by the European Environmental Liability Directive (ELD) to a point where the overall insurance offer is now recognised as matching the demands of the European Commission.

There remains ongoing political pressure to introduce schemes to cover the most extreme scenarios of large-scale accidents and insolvency risks, and risk managers are coming under renewed pressure to justify their mitigation strategies and plans for environmental incidents.

FERMA European Risk Manager Survey 2018

TOP 10 RISKS	2018	VS. 2016
CYBER THREATS	37%	+6
UNCERTAIN ECONOMIC GROWTH	31%	-1
GEOPOLITICAL UNCERTAINTY	30%	=
Changing consumer behavior	28%	+4
Over-regulation	28%	-1
Speed of technological change	26%	NEW
Availability of key skills	23%	NEW
Climate change and environmental damage	22%	NEW
Data fraud or theft	16%	-2
Exchange rate volatility	11%	=

The workshop, moderated by Gaëtan Lefèvre, outlined ways in which risk managers could –

- Understand the current state of play within the market for Environmental Impairment Liability (EIL) and the anticipated trends and drivers for the next five years.
- Determine when EIL insurance is the most appropriate, considering the different EIL needs in coverages and limits, based upon the size of their company.
- Understand whether other financial solutions are more beneficial when compared with insurance.
- Find a balance between loss prevention and financial protection for the largest loss scenarios connected to an environmental incident.

Aurélie Fallon St Lo, Environmental Risk Underwriter for XL Catlin, presented her thoughts with an overview of the ELD to set the scene for the workshop and how this is implemented at a local level, showing how this impacts upon and reflects differences between European countries.

Significant variations in how the ELD is implemented

- Countries are required to report 'significant' biodiversity damage but there is little information on what the definition of 'significant' is.
- Czech Republic, Denmark, France, Luxembourg, the Netherlands, Slovenia and Slovakia reported no ELD incidents.
- Germany reported 60 ELD cases.
- Hungary and Poland reported more than 500 incidents.

The biggest challenges

- Knowing and understanding your exposure as a result of biodiversity risks.

The importance of good baseline data

- to understand the exposure.
- to assess the damages.

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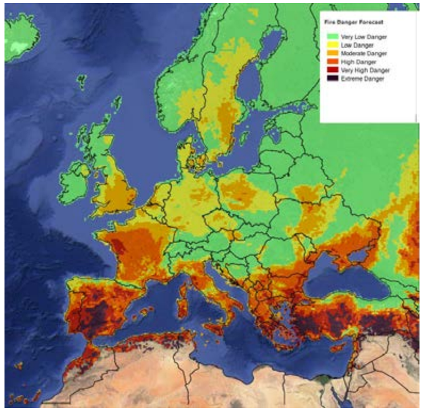
NON-REGULATORY FACTORS - CLIMATE

Arthur Lu, Head of Global Environmental Impairment Liability for Allianz Global Corporate & Specialty, talked to the workshop about how new issues, including climate change and ecological damages, will look to influence and change the shape of the market and how insurance will need to respond in the future.



"I urge you to communicate with your colleagues how you are monitoring emissions and pollution incidents. Only then can you realise early that there is an issue, and you can be proactive rather than reactive."

Annemarie Schouw, Manager Risk and Insurance, Tata Steel

Annemarie Schouw, Manager Risk and Insurance for Tata Steel, brought a practical level of experience to the workshop, outlining how to arbitrate between insurance and other solutions in order to find the best and most flexible answer to the individual needs of each business.

Ecological Damage

"Insuring agreements of EIL policies must be amended where third party claims include ecological damage."

Aurélie Fallon Saint Lo, Senior Environmental Risk Underwriter, Client and Distribution Leader, XL Catlin

CLIMATE CHANGE IS VERY REAL AND CAUSING A LOT OF DAMAGE

WILDFIRES

The number of wildfires in Europe is...

43%

higher than the last 10 years

Greece 80 dead and 200 injured. In the US it is considered the new norm now ($2 billion spent in firefighting in 2017).

10-20

TRILLION GALLONS

FLOODING/ WINDSTORMS

In September 2018, Hurricane Florence in the US dropped between 10 and 20 trillion gallons of rainfall. More than 500 industrial sites in Houston were destroyed. Floods shifted pipelines which left them more vulnerable to leakage.

Q) "How big of an influence does a risk manager have within the organisation for making the decisions on EIL coverage?" *(from a Risk Manager from France).*

A *"It depends purely on the risk manager. Make sure that you have buy-in from the management as well as the people on the floor, so that they help you meet your requirements for the good of the business."*

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WORKSHOP

RISK
MAPPING IN CSR

We are seeing an increasing trend for governments and their supporting regulatory frameworks to ask companies to act ethically. Companies must comply with laws on a broad range of subjects from human rights, environmental protection to labour relations and financial accountability. They have to align their strategy and activities including the entire supply chain to these to demonstrate increased transparency and accountability.

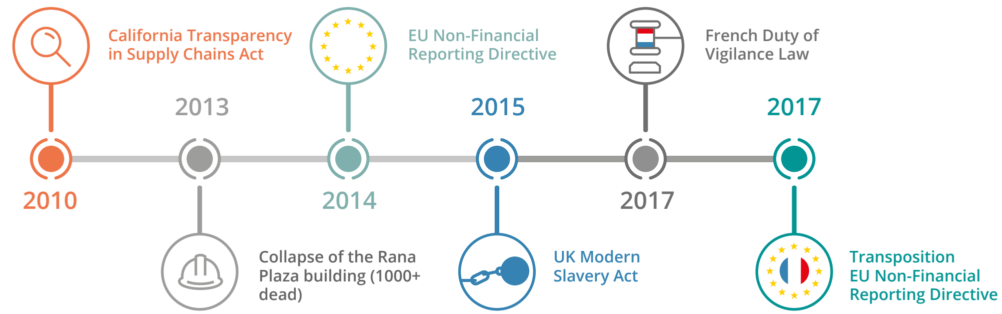
How can risk mapping be applied in Corporate Social Responsibility (CSR)?

The workshop, led by FERMA General Secretary Gilbert Canameras, speakers John Ludlow, CEO of Airmic; Philippe Noirot, Board Member of the French risk management association AMRAE and Chairman of the ERM 360°; and Professor Alexandros Parsakevas of the University of West London, described how risk managers could -

- Understand what type of 'risk mapping' the regulator wants to see and how this is different to the 'traditional' ERM risk mapping of the past.
- Learn how to integrate new transparency requirements into the current thinking around ERM risk mapping.
- Determine what is 'mandatory' in this new environment.
- Learn how to become more closely aligned to the compliance function within the business in terms of risk disclosure.
- Raise the profile of the risk management function by demonstrating the added value of ERM techniques for the new requirements.

The speakers described the increased requirements for companies especially with regard to human rights. Philippe Noirot showed how a risk map could be used a dynamic part of a vigilence plan. John Ludlow and Alexandros Parasakevas discussed transparency in supply chains.

A TRIP TOWARDS CSR WITH A FOCUS ON HUMAN RIGHTS



FRANCE'S DUTY OF VIGILANCE LAW

PURPOSE AND CONTENTS

Disclose a vigilance plan in management reporting and follow up its efficiency

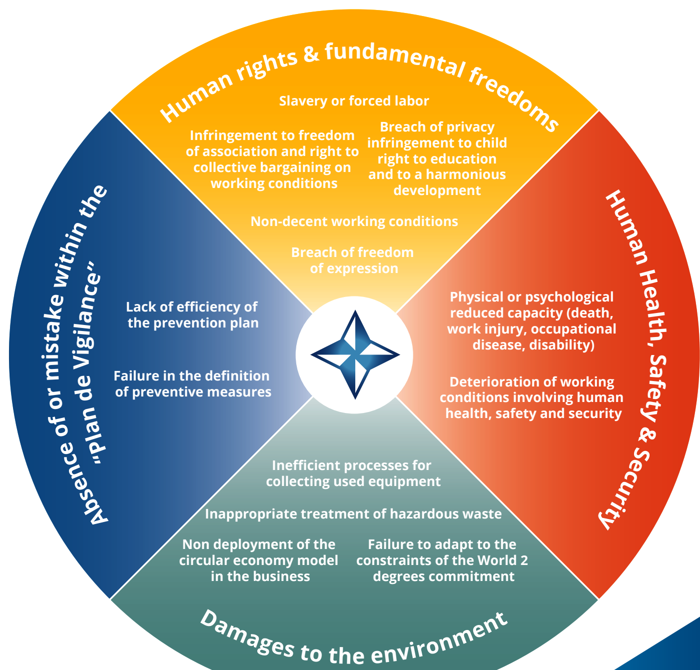
- Companies 5,000 employees in France or 10,000 worldwide
- No control body (like AFA for Sapin2) nor sanctions
- Civil law only

Define, implement and publish a vigilance plan made of 5 components

1. Risk map
2. Assessment of subsidiaries, sub-contractors and vendors
3. Relevant actions: risk mitigation, prevention of serious violations
4. Whistleblowing system
5. Follow-up of efficiency of the plan

THE RISK MAP:

NOT A GOAL AS SUCH BUT A TOOL TO MEASURE THE APPROPRIATENESS OF THE PLAN



Source: Philippe Noirot. "Risk Mapping in CSR. Could it become mandatory?" 2018

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Q&A

RESPONSIBLE BUSINESS CONDUCT: RISK MAPPING IN CSR

Philippe Noirot,
Board Member,
AMRAE

We sat down with Philippe Noirot, AMRAE board member and Chairman of the ERM 360° and a speaker at our 'Risk mapping in CSR - could it become mandatory?' session. Here, Philippe gave an insight into ethical corporate behaviour and risk mapping, and the issues covered in his workshop.

How do you see society shaping ethical corporate behaviour in the next 10 years?

Ten years is a very long time to look ahead - if you look back 10 years to 2008, who would have foreseen the success of Uber or Airbnb?

If we look at the signs now, we can see more transparency in the behaviour of corporations, mainly due to the visibility of data. We can also see a steady flow of corporate interest to manage new cycles - for instance the fact that we are 'always connected' as an alternative to the traditional media, which means that there is immediate communication of any event in the world.

We see increasing expectations by consumers too; In 10 years from now, I would say that these trends will probably continue and focus on the CSR / ethical corporate behaviour. The major trend is towards higher and higher CSR and ethical expectations from the stakeholders, so transparency is really expected, and the laws will probably become tougher with additional sanctions for companies that are not transparent or fair enough. Risk communication and integrity will probably become the rule one day - the risk map is not yet communicated much but will probably become a priority in the future.

Do you have a sense of when risk mapping and the new horizon of transparency and greater communication will become the norm?

I guess that in 10 years from now, all the quoted companies will publish their risk maps in some way.

RESPONSIBLE CORPORATE CONDUCT

TRANSPARENCY IN SUPPLY CHAINS

The UK Modern Slavery Act (2015)

- Organisations carrying out business in UK with £36 million total global turnover must produce annual “slavery and human trafficking statement”
- Company disclosure “should aim to” include six specified topics
- Must have board approval and director’s signature
- UK Secretary of State for Home Affairs may seek injunctive relief
- NGOs actively monitoring statements as they are published

> “The risk mapping challenge is within the company first because of the cultural differences within and viewing these as risks. There is a difference between risk management and CSR.”
>
> John Ludlow,
> Airmic CEO

a. the organisation’s structure, its business and its supply chains;
b. its policies in relation to slavery and human trafficking;
c. its due diligence processes in relation to slavery and human trafficking in its business and supply chains;
d. the parts of its business and supply chains where there is a risk of slavery and human trafficking taking place, and the steps it has taken to assess and manage that risk;
e. its effectiveness in ensuring that slavery and human trafficking is not taking place in its business or supply chains, measured against such performance indicators as it considers appropriate;
f. the training and capacity building about slavery and human trafficking available to its staff.

Source: Transparency in Supply Chains, etc. A practical guide. UK Government. 2017. p 12

Roundtable Question

When you know there are issues internally, do you make these issues obvious to external stakeholders or are you discreet to protect your business?

> “As a risk manager, once you have provided evidence to the board and they have made a strategic decision based upon this, the next step is to develop a crisis plan and begin communication before an incident occurs.”
>
> Professor Alexandros Parsakevas,
> University of West London

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Climate
CHANGE WORKSHOP

Due to the impact on our day-to-day life, climate change is now at the forefront of business risks and the ability of businesses to adapt will become a factor of success in the next decades.

By working across functions, corporate risk managers have an opportunity to support their organisation to embed a climate logic into the business and help not only reduce the financial impact of weather-related events in terms of physical damages and business interruption but also create added value and attractiveness.

The Workshop, moderated by FERMA Board Member Xavier Mutzig, outlined ways in which delegates could –

- Position themselves as a key player in climate change adaptation by making the case of a professional risk management approach for climate-related events.
- Take inspiration from examples of actionable climate-related data that is publicly accessible and in an interactive format demonstrate how to apply them in day-to-day risk management practices.
- Determine which external climate change expertise is needed for their organisations and how to set expectations regarding the insurance market.

> *"The risk manager may be the one person who can put everything together. They need to be a leader in their organisation."*
>
> Christophe Möcklinghoff,
> Environmental Practice Leader, Marsh Continental

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CLIMATE CHANGE

KEY LEARNING

1. Coordination and cooperation are essential between the public and private sectors and along the supply chain.
2. Sharing good quality data is a key step.
3. One key differentiator will be the use of technology for better risk assessment and preventative measures.
4. Natural disasters are affecting us all. Mitigating against our own risks is not enough. Organisations cannot pass responsibility to third parties or sub-contractors.
5. Risk managers add value by coordinating across functions in the organisation. They collect and analyse data, select the right insurance coverage and get the best value for money.
6. An increasing number of insurers and reinsurers are divesting their investments in carbon-intensive companies and stepping back from providing coverage for these activities.
7. Liability for the climate impact of past activities may become a serious issue.

THE RISK MANAGER’S CONTRIBUTION TO THE ADAPTATION TO THIS NEW PARADIGM

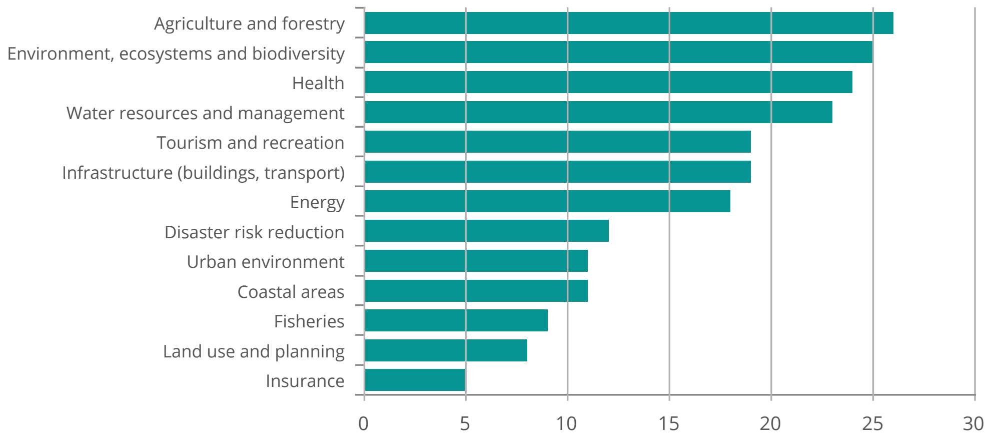
As a risk issue, climate change comes in many formats. Organisations face pressure to make their operations and activities more sustainable. They need to manage the impact of less predictable and more severe weather events, as the changing climate is rapidly altering hazards. The severity of natural catastrophes can reduce the availability of insurance capacity, and organisations with intensive carbon-based operations need to consider their future insurability and the liability implications of past activities.

On a global scale, public-private partnerships offer great opportunities to make communities more resilient to climate change, which in turn supports economic development. In low income countries, less than five percent of economic damages are covered by insurance. However, parametric-based insurance schemes developed by governments and humanitarian organisations are offering a promise of additional financial solutions for resilience and adaptation.

PUBLIC POLICY

NATIONAL ADAPTATION STRATEGIES – ARE WE READY?

Climate-vulnerable sectors identified in the EU



Source: European Commission

"Climate change is always high on the risk agenda of leaders once it is included in risk identification processes. However, this is not always the case, and more must be done to ensure businesses include climate change when analysing threats. That said, given that there are unprecedented levels of public-private collaboration alongside widespread support of European civil societies, the problem can still be solved."

Elena Visnar Malinovska, European Commission,
DG Climate Adaption

Sustainable finance: first steps

1. Establish an EU classification system for sustainability activities
2. Create standards and labels for green financial products
3. Foster investment in sustainable projects
4. Incorporate sustainability in providing investment advice
5. Develop sustainability benchmarks
6. Better integrate sustainability in ratings and market research
7. Clarify institutional investors' and asset managers' duties
8. Incorporate sustainability in prudential requirements
9. Strengthen sustainability disclosure and accounting rule-making
10. Foster sustainable corporate governance and attenuate short-termism in capital markets

Source: EU finance proposals: first steps towards sustainability. European Commission. 2018

THE CORPORATE IMPACT OF CLIMATE CHANGE AND INCREASED WEATHER EVENTS ON PROFITABILITY

How are climate change and severe weather events affecting the bottom lines of companies around the world? With these topics increasingly making headlines – and featuring heavily in the Seminar agenda – it's no surprise that the material impact on companies' earnings is becoming a growing concern.

73

COMPANIES

15% OF S&P 500

EARNINGS AFFECTED FROM WEATHER EVENTS, WITH 4% QUANTIFYING THE EFFECT.

S&P Global Ratings recently collaborated with climate risk management specialist Resilience Economics to determine the prevalence and materiality of climate risk for companies in the S&P 500 index.

The corporate impact of climate change and increased weather events on profitability is increasingly recognised. This report from S&P Global Ratings on 11 June shows that, for the financial year 2017, 73 companies (15%) on the S&P 500 publicly disclosed an effect on earnings from weather events, although only 18 companies (4%) quantified the effect. For the small number of companies able to quantify the impact, it revealed a 6% impact on earnings.

> "The findings in the report show that evidence of climate risk impacting profitability is apparent across all sectors, geographies and seasons, and management teams are becoming increasingly accountable for understanding and mitigating the impact of climate risk."
>
> Xavier Mutzig. FERMA Board Member

CLIMATE CHANGE

WORKSHOP

CLIMATE CHANGE AND ENVIRONMENTAL DAMAGE FEATURE AMONG THE TOP TEN CORPORATE RISKS NAMED IN THE FERMA EUROPEAN RISK MANAGER SURVEY FOR THE FIRST TIME THIS YEAR.

"*Global warming is everyone's business! Without a public-private partnership and trans-sectoral cooperation in key sectors like energy, no solution can be developed. It is a long haul project, but the oil and gas industry now has a strong coalition that not only put $10 billion on the table but also vows to cooperate for innovation. Only ten years ago, such a rapprochement would have been unthinkable. But without such collaboration, no success would be achievable.*"

Manoelle Lepoutre, Executive Vice-President for Sustainable Development, Total Group

Ali Shahkarami, Head of Cat Risk Research from Allianz Global Corporate & Specialty (AGCS), outlined how to improve the collaboration and access to climate-related data to reduce the risk of asymmetric information between insureds and insurers.

Ali spoke about the platform that AGCS is using and the public data that is already available.

Climate change - the need for decarbonisation

Climate change threatens to radically change our environment, our lives and our business.

Climate change, mainly caused by human-activity induced global warming, poses a major risk to the livelihoods of millions of people worldwide. It affects the wealth of people worldwide. It affects the wealth of societies and the value of companies.

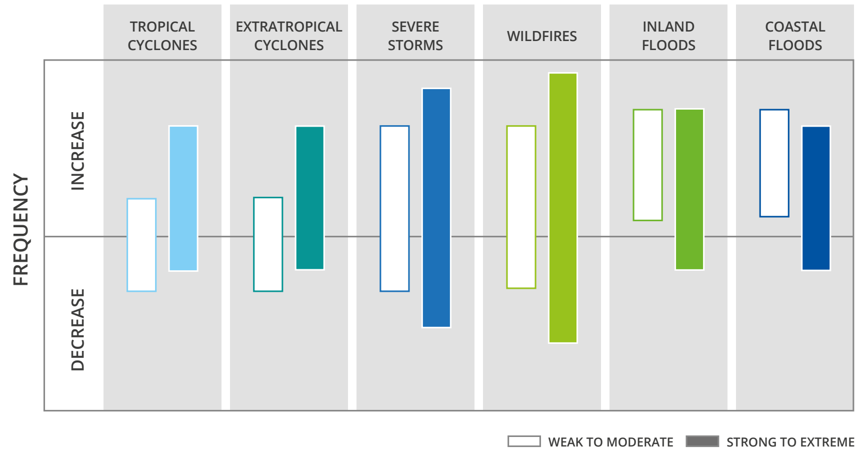
2°C
Limiting global warming to below 2°C is necessary to prevent the most severe consequences of climate change.

197
countries signed 2015 Paris Agreement, which aims to limit global warming to well below 2°C, preferably 1.5°C.

2020
Science points to a desired global emissions peak by 2020, followed by different reduction pathways per sector.

Climate hazard risk assessment

Global cimate change is rapidly altering the hazard landscape



Likelihood of increases or decreases in frequency of weak-to-moderate intensity events (with a 2- to 25-year return period) and strong to extreme events (25- to 250-year return period) for different weather-related phenomena. (Source: AIR Worldwide)

"*Building regulations have to reflect the climate risk now, not wait until after the event. Once the buildings are up, it will be almost impossible to change them.*"

Mediterranean Risk Manager

FERMA Federation of European Risk Management Associations

CLIMATE CHANGE

WORKSHOP

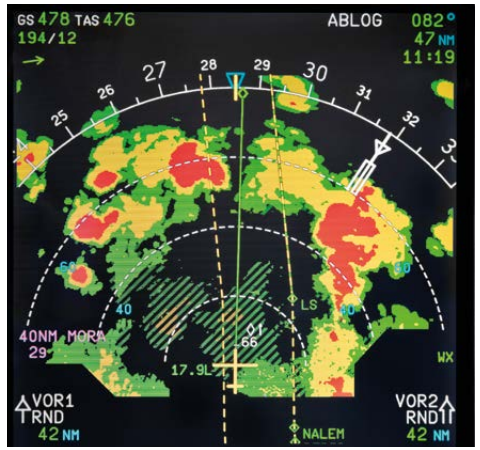
Based on her experience of parametric insurance and the need for highly precise and reliable data, Nataliya Todorova, Head of Insurance at Save the Children, outlined a view of climate change from a NGO perspective.

She described how thanks to public-private cooperation in Senegal, a parametric insurance scheme will quickly provide funds for relief organisations in event of a drought.

Christoph Möcklinghoff from Marsh, where he is Environmental Practice Leader, gave his thoughts on a new perspective: possible new liability exposures arising from climate risks and the limits of natural catastrophe risk insurance, as the claims rise.

Insurers are already divesting from carbon intensive industries and may not insure carbon-related activities.

Climate change-related exposures are putting pressure on the ability of private industry to underwrite.



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NATURAL CATASTROPHIES

MUNICH RE'S ERNST RAUCH DISCUSSES WEATHER BOMBS

> "Climate researchers expect that strong and very strong storms will increase in frequency, with so-called 'weather bombs' also being possible. Weather bomb is the term used to describe an event in which an area of low pressure intensifies considerably in a very short time."

Ernst Rauch - Munich Re's Head of Climate and Public Sector Business Development - defines 'weather bomb' as the term used to describe an event in which an area of low pressure intensifies considerably in a very short time.

Alongside Rauch's explanation above, the UK Met Office **defines 'weather bomb' as an unofficial term for a low-pressure system whose central pressure falls 24 millibars in 24 hours in a process known as explosive cyclogenesis.** Rauch goes on to describe these as wind speeds significantly in excess of 160 kilometres per hour over very large areas.

How expensive are such weather bombs for insurers? Such events may well **lead to insured losses running into the low double-digit billions.** We've not yet seen this from a single event in Europe, but we have seen it as the total of a series of winter storms in one season.

Rauch on climate change

"By the end of the century, we'll end up with warming of four, five or even six degrees. Which is very worrying."

Rauch's work at Munich Re includes performing calculations taking historic weather events alongside simulating meteorologically possible scenarios in order to work out how costly that scenario may be. The most interesting part here is that three parameters can alter due to climate change – and the question Rauch is concerned with is how strongly they do so.

With average global temperatures rising, the three parameters Munich Re must be aware of in performing their simulations are the frequency of hurricanes, their intensity, and the fact that hurricanes may occur in regions where they have never occurred before.

Despite some creation of simulations on historical data, there's currently no reliable study saying that the overall frequency of hurricanes will increase. However, what scientific studies do indicate is that the number of strong storms in the coming decades may increase at the expense of less frequent, weaker events – and it's the big hurricanes that are the relevant loss events for insurers and reinsurers.

When looking at Europe in particular, Rauch stated: "The big loss scenarios for insurers are in fact winter storms, like Kyrill in 2007... Two to three hundred million people can be affected by a single event – significantly more than with a hurrican. Because a winter storm in Europe affects so many buildings, insurance losses can quickly mount up to several billion euros."

When asked if winter storms are the biggest risk in Europe, Rauch clarified that they do have the potential for the biggest insured losses, with less demand for coverage against other natural hazards like flood or earthquake. At the same time, we're seeing an increase in heavy precipitation following severe summer thunderstorms and severe hail damage. The data base is less clear for tornadoes, but physics indicates that, in a more humid climate, these will increase in frequency and intensity in the future – albeit starting from a small base.

See next page for Rauch's presentation on climate change at the Seminar.

Content originally published in German newspaper "Münchner Merkur". 30 May 2018

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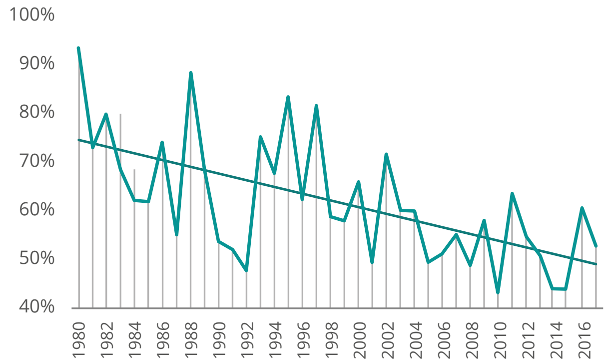
VERY DIFFERENT DEVELOPMENT IN HIGH-VS. LOW-INCOME COUNTRIES

THE NATCAT INSURANCE GAP BY INCOME GROUP

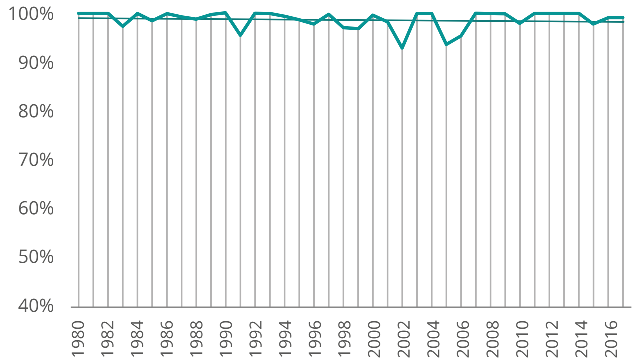
1980-2017 based on MR NatCatSERVICE

Since 1980 the insurance gap (uninsured losses as a share of overall losses) has significantly decreased in high-income countries (below 60%), while in low-income countries it is still >95%.

Insurance gap in high-income* countries



Insurance gap in low-income* countries



Source: Munich Re (2018)

**Income classification defined by World Bank: high-income countries GNI ≥ 12,736 US$; low-income countries GNI ≤ 1,045 US$*

Disaster risk management based on public private partnerships and ex-ante finance frameworks provides key elements to support and stabilise economic growth.

	Focus: **high income economies (OECD)**	Focus: **low income economies (non-OECD)**
	PROTECTION FOR HOUSEHOLDS / PRIVATE SECTOR	**SOVEREIGN RISK PROTECTION**
Policyholder	Private households or companies	**Public** agencies or institutions
Funding / Government role	• (Mostly) financed by private policyholders • Government provides specific regulations enabling the market	• Part of the **federal budget** • Government decides allocation of resources in cases of natural disasters
Insured assets	Private property	Public property and bridging of liquidity gaps in federal budgets

"Public/private partnerships should be developing - the target is to make catastrophe insurance available by 2020 to another 4000 million people within a non-OECD country to help them increase the financial resilience. The first steps have been done, but there is still a huge gap to close."

Ernst Rauch, Munich re Head of Climate and Public Sector Business Development

FERMA Federation of European Risk Management Associations

NATURAL

CATASTROPHE

4,800

RISK MANAGERS

FERMA puts forward three recommendations to be embedded into the future evaluation report of the EU's Strategy on Adaptation to Climate Change. These recommendations ask the EU to address the specific needs of businesses as regards climate change adaptation from a risk management perspective:

1. Organise EU-wide public access to climate-related risk data.

2. Promote professional risk management practice inside businesses and public entities.

3. Facilitate a broader range of risk financing solutions for the largest businesses.

Insurance capacity remains widely available and prices have changed little even though 2017 was a record year for extreme weather events. Nevertheless, financial damages are expected to rise with the predicted increase in severe and extreme weather events, which will put insurance industry capital under pressure. Consequently, (re)insurers who ultimately underwrite much of the exposure for natural catastrophes for the insurance market, will look to increase their prices, reduce the total capacity that they are prepared to offer or both, and these costs will be eventually passed on via insurers to corporate clients.

FERMA represents the interests of more than 4800 risk managers through its 22 national risk management association members in 21 European countries.

According to FERMA, the European Union remains the right level actor to reduce the costs of climate change for businesses and secure future EU economic growth. However, corporate risk and insurance management is still largely missing from the most recent works performed for action 8 of the EU Climate Adaptation Strategy *"promotion of insurance and other financial products for resilient investment and business decisions"*.

FERMA considers that corporate risk and insurance management represents an untapped resource to better support businesses in adjusting to climate change in a future Adaptation Strategy. More specifically, the risk manager adds value to businesses by assessing the exposure of the company's assets to extreme weather events, before deciding what the optimum limits of insurance to purchase to protect their sustainability against catastrophe risks.

FERMA believes that it is urgent for European organisations to adopt professional and mature risk management strategies to reduce climate change impacts. This is supported by the EU High-Level Expert Group on Sustainable Finance which explicitly calls the insurance sector to promote loss prevention and to support risk-mitigation behaviour in its January 2018 reporton, so 2018 report on Action 8 of the European Commission report.

To respond to this historical challenge, FERMA calls on the European Commission to promote a structured risk management strategy among EU organisations in the adaptation strategy of the European Union to climate change. The risk management professional supported by qualified staff will allow organisations to gradually adjust to climate change and more frequent extreme weather events by exploiting the full potential of risk modelling and risk financing tools available globally.

FERMA also urges the Commission to distinguish more precisely between disaster insurance for households and SMEs and for large organisations. Public schemes should recognise that large and well risk-managed organisations allow the corporate insurance market to reflect the quality of the resilience of its clients and encourage further investment.

This will relieve public schemes of a concentration of risk from a comparatively small number of large operations.

SPEAKERS

Aurélie Fallon Saint Lo,
XL Catlin, Senior Environmental Risk Underwriter - Client & Distribution Leader

Gilbert Canameras,
FERMA, Secretary General

Paul Gisby,
Accountancy Europe, Manager

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Manoelle Lepoutre,
Total, Senior Vice President, Civil Society Engagement

Arthur Lu,
Allianz Global Corporate & Specialty, Head of Global Environmental Impairment Liability

John Ludlow,
Chief Executive Officer, Airmic

Christoph Möcklinghoff,
Marsh, Environmental Practice Leader

Thank you for your contribution to the 2018 FERMA Seminar. As a guest speaker and moderator, you played a significant role in the success of this well attended event.

Xavier Mutzig,
Group Insurance and Insurable Risk Director at Johnson Matthey

Philippe Noirot,
AMRAE Board Member and Chairman of the ERM 360° Committe

Alex Paraskevas,
University of West London, Chair in Hospitality Management

Ernst Rauch,
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Annemarie Schouw,
Tata Steel, Manager Risk & Insurance

Ali Shahkarami,
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Nataliya Todorova,
Save the Children, Head of Insurance

Elena Visnar Malinovska,
Head of Climate Adaptation Unit, DG Climate Action

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