

Swiss Re



Resolving the long-term liability contractual risk

A Reinsurer's point of view



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CO₂ Leakage

The issues at hand (EU)

Health and/or property

Subject to national laws in Member States

Damage to the local environment, e.g. protected species and habitats

Environmental Liability Directive

Damage to the global environment

To be captured under EU emissions trading system and Kyoto mechanisms (CDM, JI)

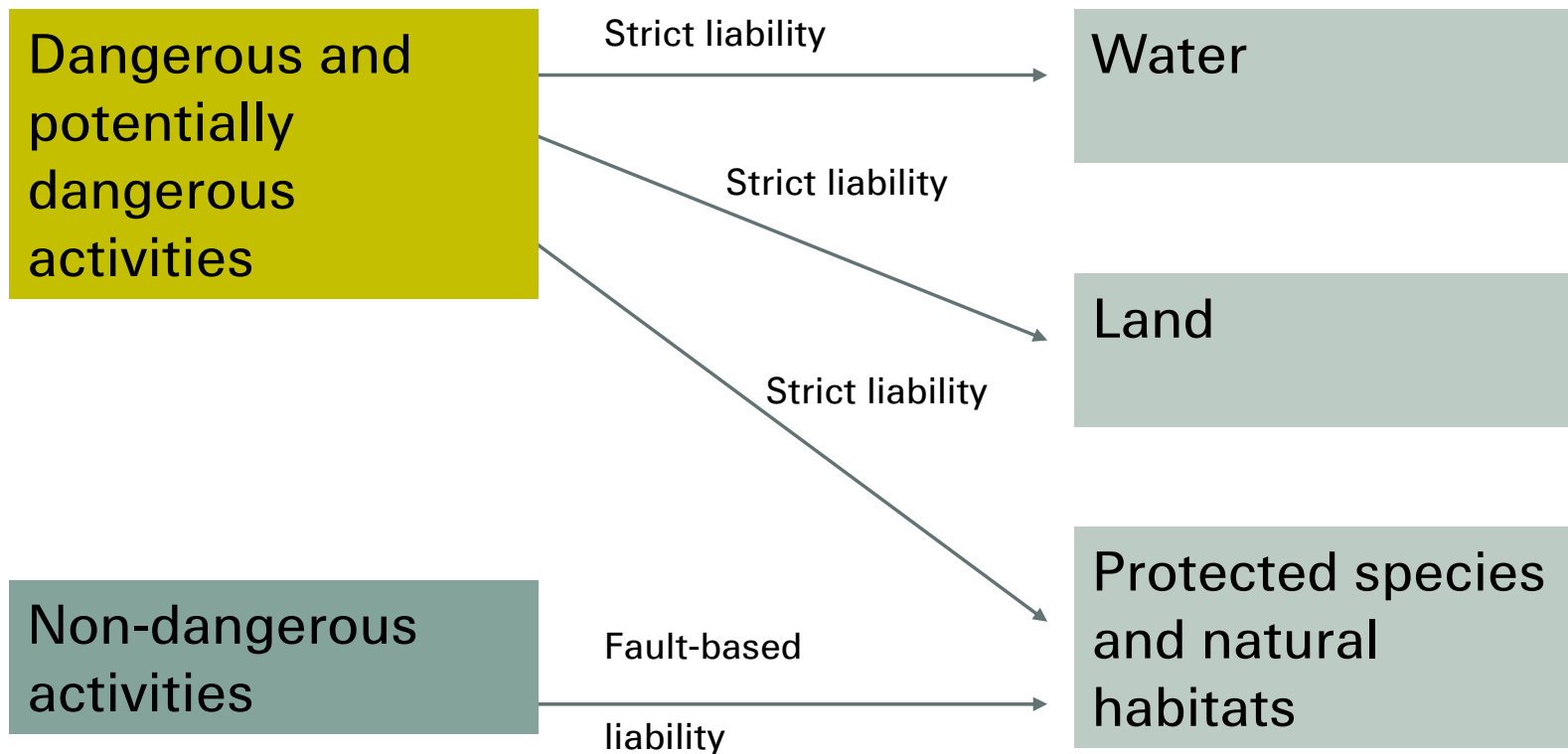


Environmental protection legislation in general...

- Environmental impairment leading to third party bodily injury, property damage and pure economic losses (environmental liability)
- Strict liability regulation occasionally supplemented by presumption of liability to prevent undue disadvantage to injured parties where it would otherwise be very difficult to prove a link between cause (emission of pollutants), and effect (bodily injury, property damage or pure economic loss)
- Law can alleviate the burden of proof falling to the injured parties
- Even more stringent, legal action initiated against the real property holder being a different person from the site operator in addition to the operator of a site as the actual perpetrator of the pollution
- Last but not least, legislation increasingly makes the party, which originally produced the waste/pollutant, or the party delivering the deposited materials jointly liable with the site operator



...applied to sudden and accidental as well as gradual CO₂ leakage in the EU





... resulting in important questions

- What is considered dangerous?
 - ⇒ see Massachusetts vs EPA in the US
 - ⇒ how to deal with new technologies?
- What is the damage?
- Is there a causal relationship between leakage and damage?
- Who is liable?
- Who is the insured party?



General insurability considerations for environmental damages

- New types of insurance losses (e.g. biodiversity)?
- Damages to the environment defined in terms of money?
- Sufficient empirical loss data available?
- Estimation of loss severity and loss frequency possible?

Currently only engineering coverage is available to cover third party liability occurring during construction and operation (e.g. damage caused by injection activity or erection of machinery)



Damage to the environment

Alternative risk transfer?

Available Risk transfer instruments

	INDEMNITY BASED	INDEX BASED
Settlement	Loss amount defined through loss adjustment process; hence payout is uncertain	Loss amount defined through payout formula based on third-party measurements
Legal basis	Environmental protection legislation	Environmental protection legislation if considered insurance; securities law if considered derivative

health, property, local environment

carbon credit related losses?

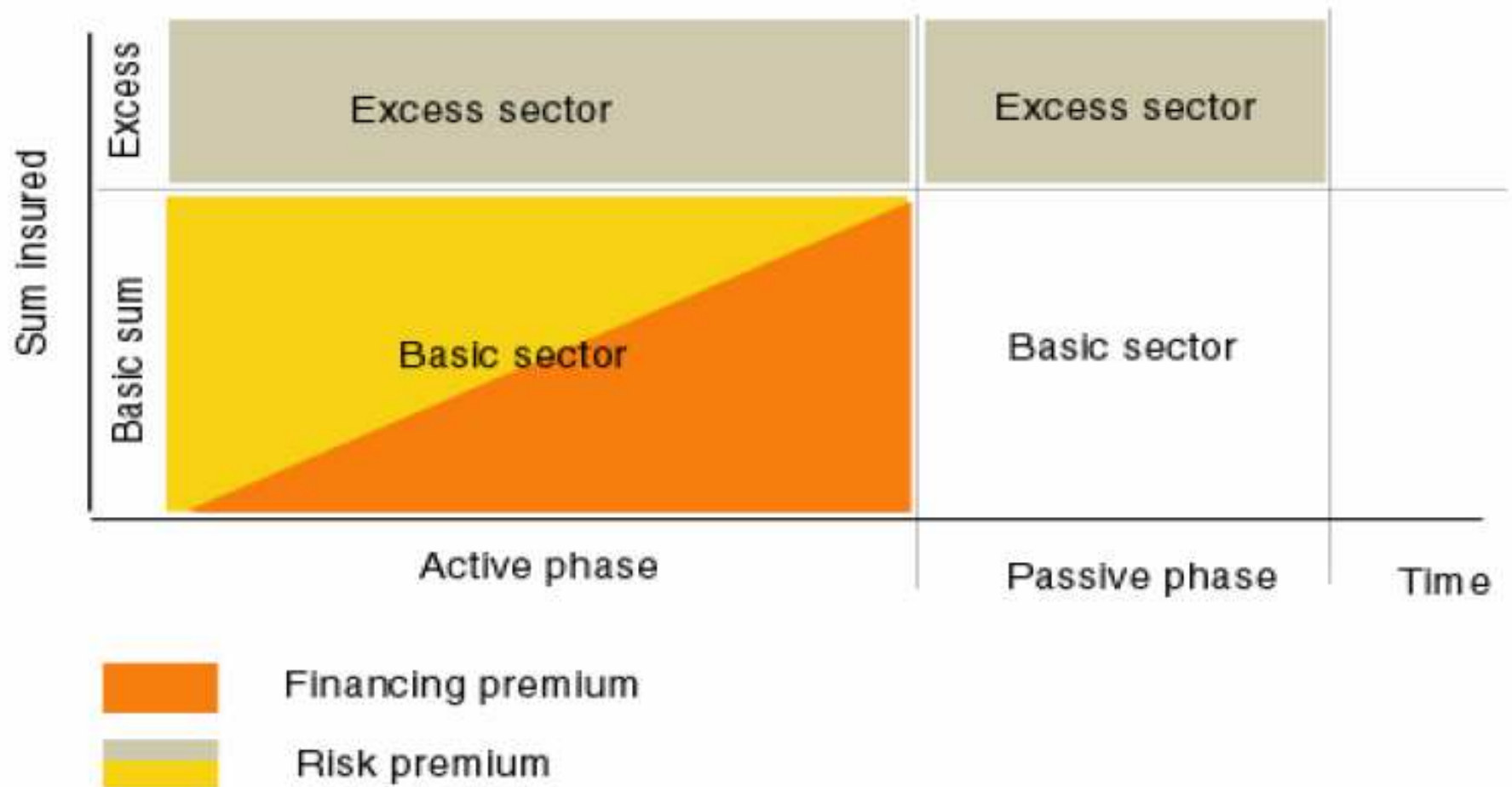


Requirements for parametric solutions

- Defined payouts, i.e. carbon price tag, market price
- Defined source, i.e. project boundaries
- Defined measurement stations & methodology
- Empirical data to model risks
- Third party reliable, verifiable and consistent data
- Legal & compliance qualification with local regulator
- Defined risk management standards and practices
- Clear ownership structures, i.e. counter party



Environmental liability impairment insurance – a model





The model – key points

- Sum insured: upper limit to indemnity from gradual and sudden release, depreciative
- Excess sector: funded by regular premium payments during active phase and interest income from funds during passive phase
- Basic sum: funds handed over to the government after end of contract
- Model takes risk specificity into account by providing financial provisions after active project phase, has been implemented for landfills

Conclusions

Mechanisms that ensure adequate risk management practices and the availability of (financial) resources for remediation, monitoring and compensation are needed

Swiss Re is prepared to engage in shaping the regulatory framework and to play a role in risk taking

The long term nature of the problem requires government involvement



Acknowledgment

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