

# Environmental Risk in Insurance Practice

## UNEP Finance Initiative

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# *Key Analysis*

*Environmental Risk vs Pollution Risk*

*Environmental Liability vs Civil Liability*

*Traditional vs New Generation Insurance Solutions*

# *Environmental Risk*

*EU Directive 2004/35/CE*



*Biodiversity (protected species & natural habitats) / Water / Land*

***Primary Remediation:*** restoration of the damaged natural resources to ***baseline conditions***

***Complementary Remediation:*** providing the ***equivalent resources*** at a different location where primary remediation is unsuccessful or a return to baseline is not achieved

***Compensatory Remediation:*** restorative actions to compensate the ***interim loss*** of resources pending return to baseline or completion of complementary remediation

***Preventive actions*** where their activities pose an ***imminent threat*** of environmental damage

# *Environmental Risk*

*EU Directive 2004/35/CE*



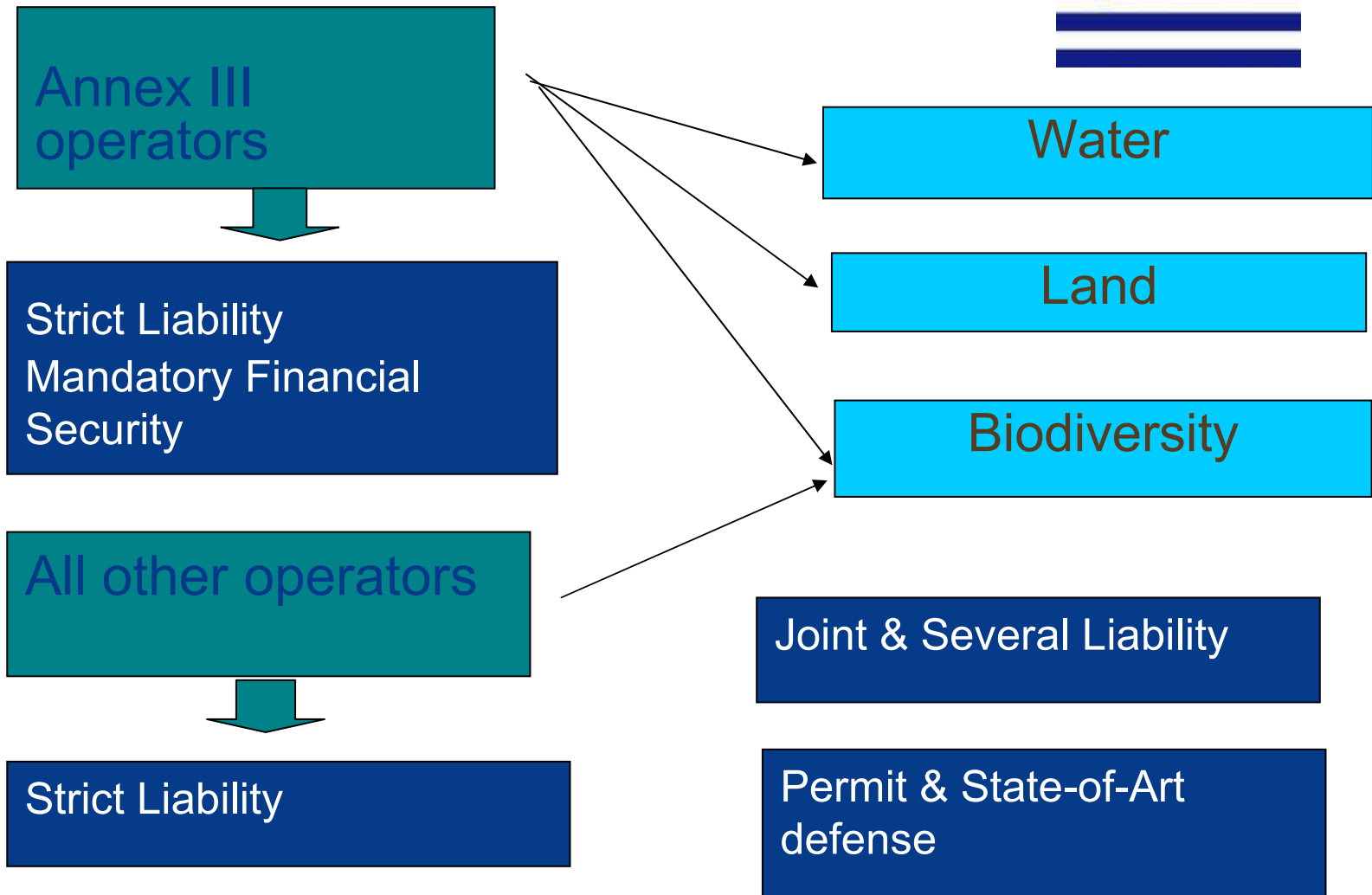
*“The Polluter Pays” ⇒ Economic Value of Natural Resources*

*Annex III operators: Strict Liability*

*Not limited to Pollution conditions*

*Does not apply to Third Party Bodily Injury / Property Damage*

# *Environmental Risk*



# Case Study

## Asopos River contamination



- 1979: river appointed receiver of industrial sewage ⇒ Largest Industrial region (1.300 industries)
- 200.000 inhabitants (drinking use, crop irrigation)
- 2007: heavy metals detected, especially carcinogen chromium-6
  
- **Deaths caused by cancer: from 6% to 32%**
- **Farmers / fishermen reduced income**
- **Beaches declared unfit for swimming**
  
- **Historical pollution** conditions – normal operating conditions - how to identify the baseline condition?
- **Joint & Several Liability** – which business operator will be held liable? Do they have permits to dispose off waste to the river, that are based to old legislation ?
- **Gradual Third Party Bodily Injury / Property Damage** - going beyond Environmental Liability to Civil Liability

# Case Study

## Oil Seepage from Service Station



The Insured operates a logistics platform in France that includes a truck maintenance workshop and an in-house service station.

While installing a gasoline additive system, a contractor discovered oil seepage entering via a trench intended to be used as cables pathway.

Investigation revealed that oil pollution extends underneath a 50m<sup>2</sup> paved area and further below the workshop. A gradual leak from the distribution pump has been found as the root cause. On-site soil remediation has been assessed.

Loss resulting from **on-site Clean-Up cost** and **Business Interruption** due to **Gradual Pollution** conditions

Actual Claim handled by Chartis

# Case Study

## Incomplete Cleanup Works



In 2005, the local authority conducted an inspection at a private housing construction site. The site had previously been a gas factory and was sold to the re-developer a few years earlier.

Physical evidence was found that clean-up of pre-existing conditions had not been properly conducted and failed to achieve a level that would ensure no detrimental health effects to future inhabitants. The presence of carcinogens was suspected.

An order to extend cleanup was made despite the housing program which was almost complete. As a result, 15 houses were demolished and then rebuilt and intricate additional building costs were incurred (soil removal, groundwater filtering, etc) and project delivery was postponed

Loss resulting from **on-site & off-site Clean-Up cost** and **Increased Project Cost** due to **Pre-Existing Pollution** conditions



# Case Study

## Oil Spill from Tomato factory



The Insured owns and operates a plant that produces derivative tomato products in Portugal. The plant has various equipment on site including vapor heat exchangers, fuel oil heat exchangers and vapor water heaters.

Under normal operations, clean condensates from the oil and water heat exchangers are collected and discharged into a storm water drainage system which ultimately discharges into a nearby stream and river.

A crack developed in the piping of the fuel oil heat exchanger allowing fuel oil into the condensate, eventually affecting the nearby stream, river and vegetation. Local regulatory authorities were engaged.

Loss resulting from **First party on-site clean-up costs**, **Third-party claims** for off-site clean-up costs, bodily injury, property damage and **Biodiversity Damage** arising from **Accidental Pollution** conditions

Actual Claim handled by Chartis

# Case Study

## Environmental Damage Incident

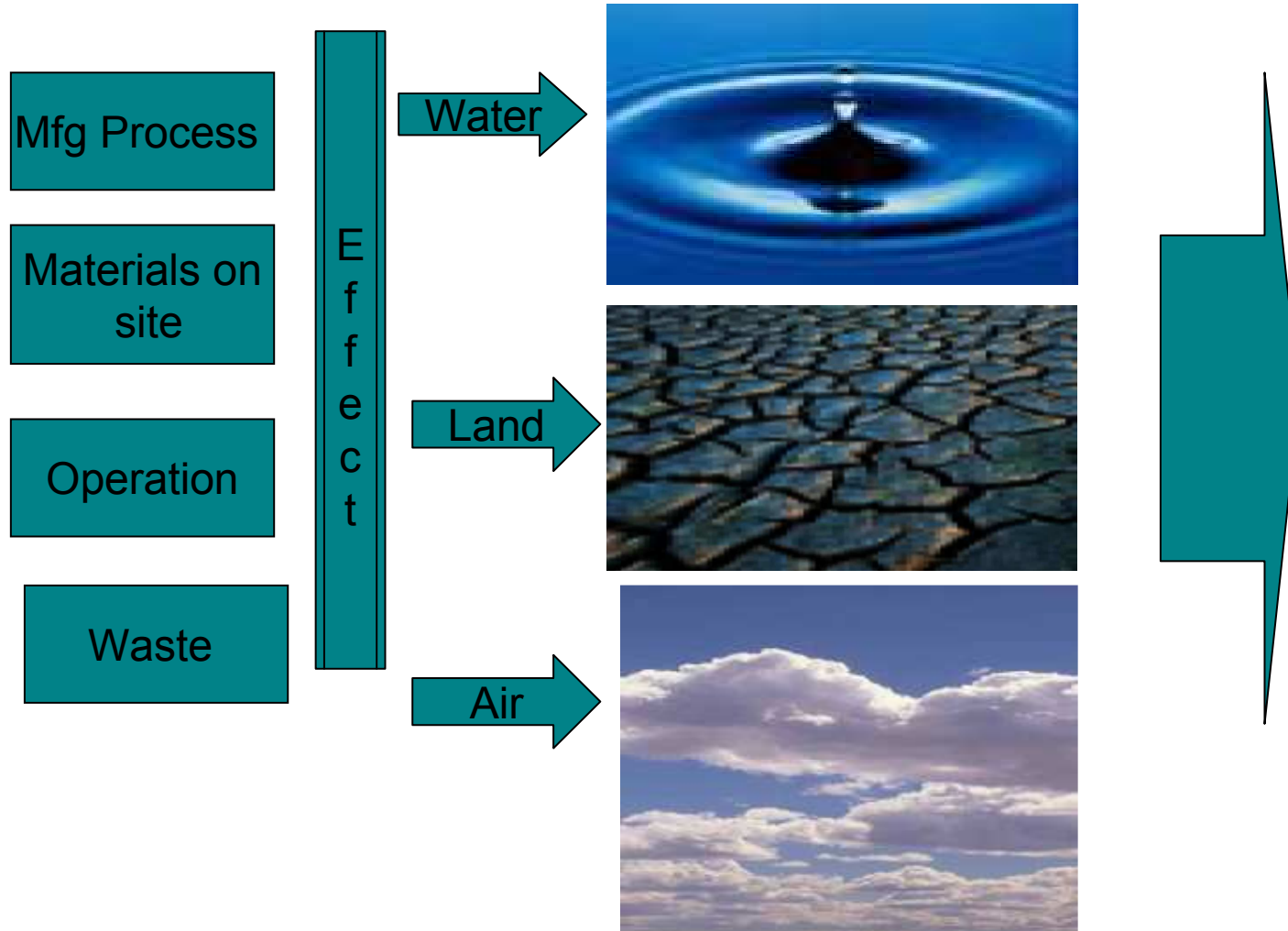


A business, not insured by Chartis, negatively impacted an area inhabited by environmentally protected reptiles, insects, birds and frogs while constructing a golf course in the Czech Republic. The business also removed trees and graded the existing natural topography without authorization. The country's environmental regulatory agency cited the business for negatively and irreversibly affecting the environment, levied initial fines totaling approximately 1.4 million CZK and ordered the business to repair the habitat and construct a pond in a nearby town.

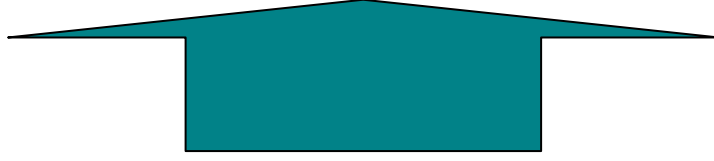
Loss resulting from **Biodiversity Damage** arising from **Non-Pollution** conditions

**ELD Complementary Remediation principle enforcement**

# *Pollution Risk*



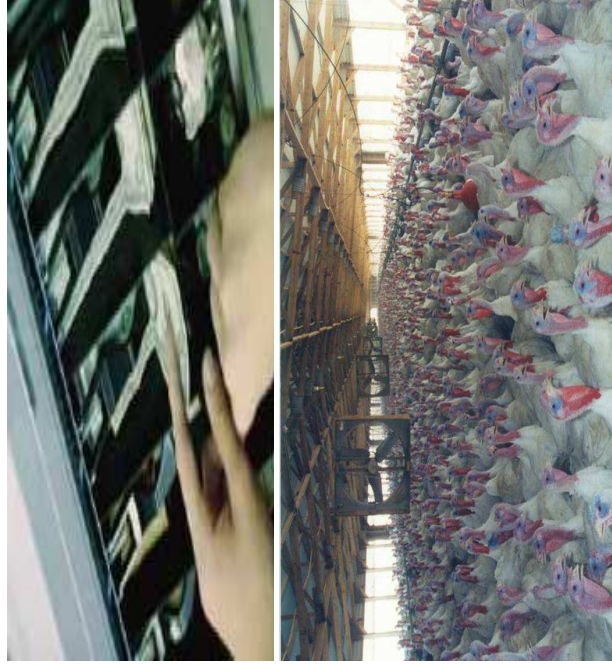
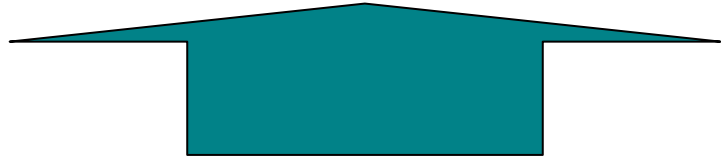
# *Environmental Damage*



Damage to  
Water, land, biodiversity

# Third Party Claims

Bodily Injury, Property Damage,  
Loss of profit



# *First Party Loss*



**Clean Up Cost**



**Business Interruption**

# *Traditional Insurance Product*

## *General Liability*

*Third Party only – no biodiversity, no first party*

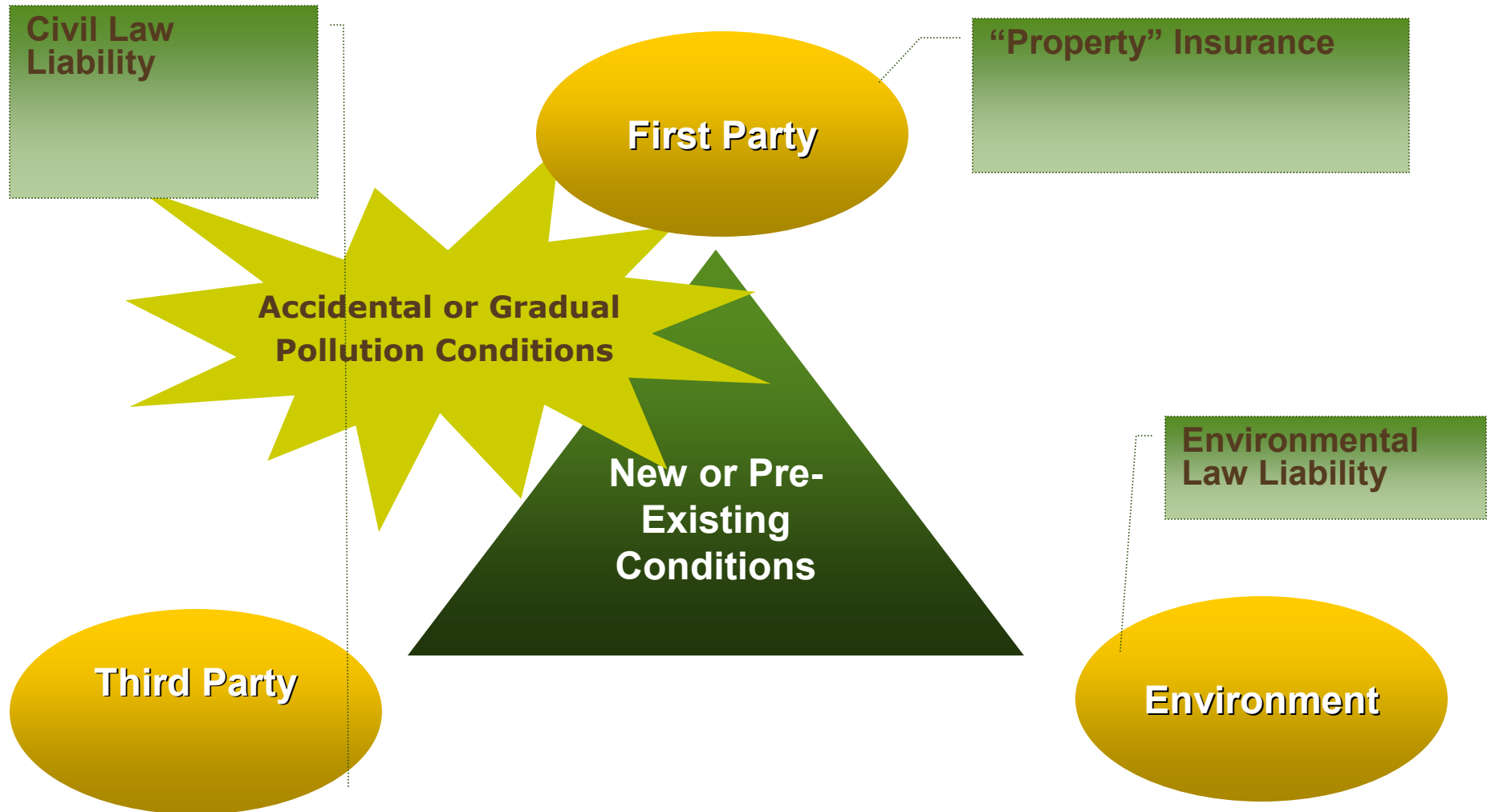
*Restoration basis – no complementary / compensatory remediation*

*Post Loss basis – no loss prevention*

*Accidental Pollution – no gradual*

*New incidents only – no pre-existing conditions*

# *New Insurance Product*





# *Risk Assessment*

## *Premises Assessment*

*information on:*

*Materials On-Site/ Storage/ Containment*

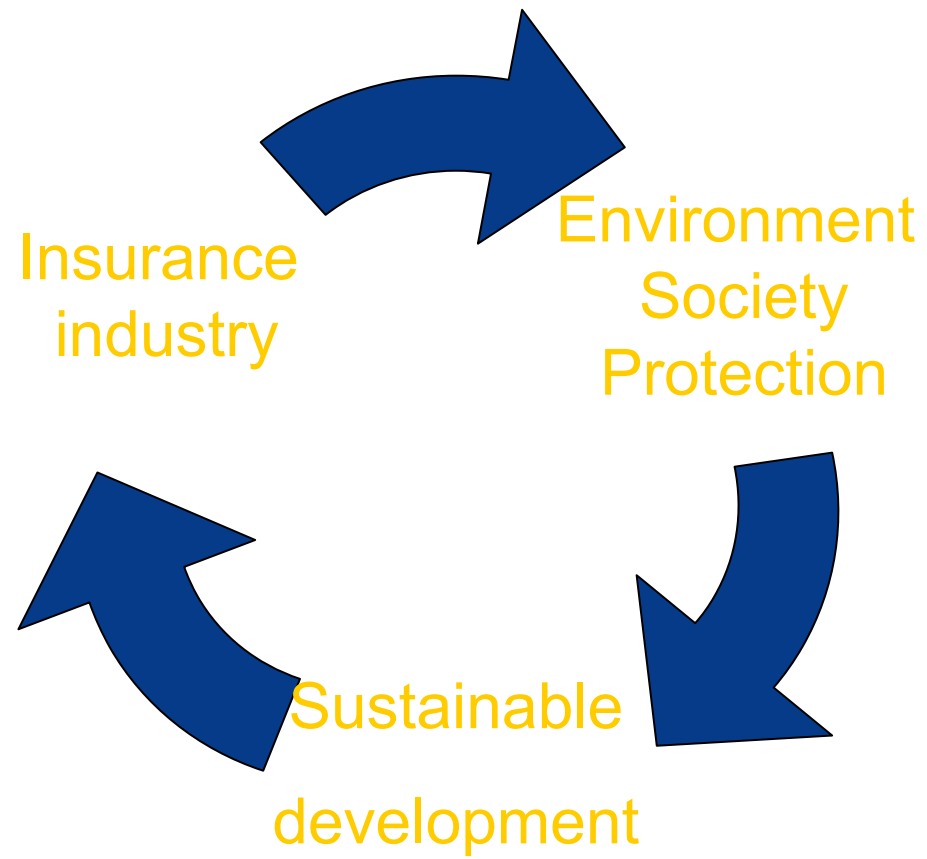
*Environmental Practices*

*Site History/ Future Use*

*Effluent Exposures*

*Surrounding Environment*

**Risk Consultants**



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