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GENERAL REPORT

to Topic IV

**AN OVERVIEW OF METHODS, COVERAGE AND BENEFICIARIES
OF POLLUTION INSURANCE IN THE WORLD**

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Introduction:

A questionnaire containing indicative questions was sent associates all over the world, aiming to obtain information in the light of their country's scenario.

The first section of the questionnaire addresses the issues of environmental legal aspects, such as (i) major general rules on civil liability arising from environmental damages in the countries, (ii) main characteristics and objectives of environmental civil liability in the light of national legislation and court precedents, (iii) peculiarities regarding environmental damages resulting from pollution, (iv) governmental entities in charge of authorizing and supervising activities that produce environmental impacts or pollution and (v) the existence of a legal system of procedural mechanisms in case of environmental offenses.

On the second section of the questionnaire, the parties are required to inform the legal aspects on environmental insurance policies, including (i) the existence of a specific legal framework to regulate environment insurance policies, or any administrative rule, or any other kind of legal regulation that applies to environmental insurance policies, (ii) the existence of compulsory environmental insurance and (iii) when should an environmental insurance policy be obtained.

The third section inquires about operational methods for pollution insurance, in which the parties should inform (i) the modalities of pollution insurance offered in the market (performance bonds or civil liability insurance), (ii) if the law or administrative rule define upper limits for losses or coverage, (iii) if there is any difference in the legal treatment to state-owned and private ventures, and (iv) if insurers insert pre-contractual provisions in the policy and which ones, among other issues.

The fourth section of the questionnaire discusses coverage under pollution insurance, and it address issues such as (i) the major covered risks relating to civil liability arising from pollution, (ii) the major covered guarantees for events arising from pollution, (iii) the major covered operational risks arising from pollution, (iv) the coverage of fines, (v) the coverage for individual and collective moral damages, and (vi) the coverage for punitive damages.

On the fifth section of the questionnaire the parties are asked to inform who are the beneficiaries of the losses recoverable under pollution insurance, if they are individuals, legal entities, state-owned or private institutions, collectivities, etc.

The sixth section of the questionnaire focus on the market status, inquiring about (i) the percentage of participation of environmental insurance at the insurance market in its whole, (ii) which sectors of economic activity obtain environmental insurance and (iii) the sum of losses paid by virtue of environmental damages during the last 5 (five) years.

Finally, on the seventh section the questions revolve around the academic development of the issue, whether there are research institutes focused on the study of environmental insurance, as well as academic and scientific works produced in the fields of law, economy, environment or other similar area, that specialize in environmental insurance.

The next part of this work involves the study of the answers gently presented by the National Reporters regarding the sections described above in the following countries: Australia, Austria, Bolivia, Brazil, Chile, Colombia, Finland, Germany, Greece, Israel, Italy, Japan, Mexico, New Zealand, Poland, Portugal, Russia, South Africa, Taiwan, Turkey, United Kingdom and Uruguay.

Section 1:

1.1. Which are the major general rules on civil liability arising from environmental damages in your country?

Apart from **Poland** (answer was N/A), all countries have law provisions regarding environmental damages. Some countries adopt strict liability to the environment, such as **Austria, Brazil, Finland, Mexico, New Zealand, Turkey**. In **Austria**, for instance damages from emission should be indemnified, and there is strict tort liability independent of fault for neighborhood damage caused by the operation of a plant or a mining installation.

Some countries base the environmental damages on the civil liability system, such as **Bolivia, Japan and South Africa**, where damages will be discussed below under (a) constitutional (statutory) and (b) delictual damage claims.

In Europe there is the Directive 2004/35/CE, which was transposed to the local legislation of countries such as Italy and Portugal. One guideline of the Directive is to define the (reasonable) cost of prevention and repair measures in a timely manner, by integrating legal and technical definitions in order to make more precise quantification of environmental damage and to allow the development (as in the US) of an insurance market in Europe, warned of the risks to "cover". This allows "operators to use financial guarantees to discharge their responsibilities under this Directive".

In **Taiwan**, environmental damages are generally regulated by industries relevant to potential environmental pollutions, and in Israel there are various laws in respect of air, water and land pollution.

In the **United Kingdom** there are two major general rules. The first is the common law tort system. The common law torts of negligence, nuisance, Rylands v Fletcher and Trespass combine to compensate individuals suffering from property damage, personal injury and harm to amenity arising from pollution. The second is the statutory liability system. This has developed comparatively recently in response to criticism of the tort system's reactive (rather than preventative) nature, its high evidential hurdles, and its focus not on pollution itself but on the effects of pollution.

1.2. Please describe the main characteristics and objectives of environmental civil liability in the light of national legislation and court precedents.

1.2.1. How are environmental damages described under the law?

Some countries, such as **Bolivia, Brazil, Finland, Japan, New Zealand, Russia, South Africa, Taiwan and United Kingdom** do not have a specific definition for environmental damages under the law.

In **Austria**, environmental damage in terms of the Federal Environmental Liability Law means damage to the environmentally relevant protected goods water, soil, protected species and natural habitats (this protected property is often referred to as biodiversity). On **Chile**, environmental damages are any loss, decrease, detriment or significant impairment inferred to the environment or to one or more of its components.

In **Italy** and in **Portugal**, as described by Directive 2004/35/CE, damage means a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly.

In **Israel**, the Environmental damages are described under Tort Liability however some damages lead to penal sanctions. **Mexico** describes damages in the Liability Law as any adverse and measurable change, loss, deterioration or impairment of the habitat, ecosystem, or natural resources, their chemical and biological characteristics

In **Turkey**, according to Code on Environment, “environmental damage” is described as all types of negative effects occur in the environment that may ruin the health of the living creatures, environmental values and ecological balance (art.2).

1.2.2. Who may be (either directly or indirectly) made liable?

All the countries establish that the polluter and the operator who carries out the activity which causes the damage can be made liable. The responsibility may rely upon an individual or a legal entity. In **Australia** a wide range of people can be made liable for environmental damage, beyond simply the person who caused the damage. In particular, land owners are often made responsible for contamination on their land, regardless of fault or knowledge of the contamination.

In **Israel**, the state or the local municipality may also be held liable for not supervising and/or monitoring the emissions or the contaminations in some cases, and in **Austria** a legal entity under public law may also be responsible if, for example, necessary conditions or proper supervision have been omitted.

In some countries, such as **Mexico, New Zealand and Brazil**, directors and officers of a company can be held liable if they fail systematically to comply with the environmental regulation.

In **Chile**, only the one that cause the damage directly maliciously or wrongfully can be held liable.

1.2.3. How is the determination of causal link of environmental damages?

In many countries the causal link is determined by the relation between cause and effect, the action and the damage. Also, there are countries in which probable causal link between the activities and the loss referred to are required, such as **Finland and Japan**, where the victim as plaintiff demonstrates, to substantial level of probability, a causal link between the pollution produced by the defendant and the damages suffered by the victim, and if the defendant cannot disprove the assertion, the causal link is acknowledged.

In **Australia** courts are commonly required to deliberate upon the relevant considerations prescribed by the regulation, including the seriousness of the offence, the purpose of the conduct and the offender's record.

On the other side, in **Brazil** the legislation does not provide on different modules of establishment of causality, although the procedural law (Consumer's Defense Code and Code of Civil Procedure) establishes the shifting of burden of proof, in procedural issues, as well as dynamic distribution of the burden of proof, in situations in which one of the parties has the best technical and financial capacity of producing proof.

Chile requires guilty to determine the causal link of environmental damages. In **Austria** and in **South Africa** the *conditio sine qua non*-test is used to establish the causal link.

Due to difficulties in proving a causal link between an environmental damage and the occurred damage on the part of the claimant, the legislator in **Germany** has established a presumption rule, according to which it is presumed that the damage was caused by an installation if this installation is likely to cause the damage that occurred on the basis of the given facts of the individual case.

In **Portugal**, causal link is determined on a basis of likelihood and probability that the fact is able to produce the damage in question, considering the circumstances and other criteria. This means

definite proof regarding a causal relation is not required in order to establish liability, only likelihood.

In **United Kingdom**, as a general rule, a causal link is not presumed between alleged polluter and pollution (and any resulting personal injury or damage to property) in any given situation and must be proved on the balance of probability with appropriate factual and expert evidence.

1.2.4. Does your legislation provide for strict or fault-based environmental liability?

There are a few countries that adopt both, such as **Australia, Austria, Chile, Greece, Israel, Mexico, New Zealand, Poland, Portugal, South Africa and United Kingdom**. In most cases, the strict liability applies depending on the economic activity. In **Mexico**, for instance, the legal system provides that fault-based liability triggers from the intent, error or negligence of a person. Strict liability triggers from accidents that occur due to use of dangerous activities, regardless of the intent, error or negligence. In **Poland**, it depends on the form of the polluters.

The **Austrian** Legislation provides that in the field of environmental law, strict liability dominates. As a rule, the risk liability applies in connection with officially approved plants and particularly dangerous activities. Special provisions also exist for the liability of pipelines for nuclear power plants, mining and water treatment plants.

Since the UE Directive does not establish the type of liability, **Germany, Italy and Portugal** have enacted their own legislation on the topic. In **Germany**, for example, the law is based on a strict liability that does not only include accidents and break-downs but also damages arising from normal operation.

However, there are countries in which the legislation provides for strict environmental liability, such as **Brazil, Colombia, Finland, Japan and Turkey**.

In **Taiwan** and in **Uruguay** the legislation provides for fault base liability.

1.3. Are there peculiarities regarding environmental damages resulting from pollution? If so, are there differences in the legal treatment to air, soil or water pollution?

Finland, Greece, Israel, Japan and Turkey do not set differences in the legal treatment to air, soil or water pollution. In the other countries, there are differences. In **Austria** there is a special law act for the treatment of water /water pollution, and soil pollution is covered by the civil

neighboring law and by the Federal Environmental Liability Law. There is no special civil liability for air pollution.

In **Brazil** there are specific legislations on air, soil, and water resources quality, although they do not establish a different regime of civil liability.

In the **United Kingdom**, not only does pollution of air per se not lead to liability in tort, it does not lead to statutory liability. This distinguishes it from pollution of water and soil which can lead to statutory liability. In relation to statutory liability for water pollution, there is a significant distinction between water damage arising from contaminated land and water damage arising from other pollution sources.

In **Italy** Directive 2004/35/CE deals with water, land and natural-protected species damage. The three of them have the same provisions, prevention and remediation measures, regardless to the type of damage. However, air pollution is not even mentioned in the directive -unless this has no impact on soil, water or natural species-

Finally, in **Portugal** in the case of natural habitats and water, the law mentions “damage” or “imminent threat of damage”; there can be damages without contamination. In the case of land damage, not only contamination is required, but it must also imply a significant risk for human health. Regarding air, environmental damage only includes damage caused by airborne elements as far as they cause damage to water, land or protected species or natural habitats.

1.4. Which are the governmental entities in charge of authorizing and supervising activities that produce environmental impacts or pollution?

In **Finland, Germany and Russia** there is specific governmental entity in charge of authorizing and supervising activities that produce environmental impacts or pollution.

Australia has three tiers of Government, all of which are responsible for environmental protection and regulation in different ways. In **Austria**, as a rule, the district administration authorities within the framework of the (indirect) federal administration (plant, water law), the state government (environmental impact assessment), the competent federal ministers (renovation of contaminated sites, environmental liability) and the municipalities (construction law/regional spatial planning).

The authorities involved in environmental management in **Bolivia** are the MDSMA (Ministry of Sustainable Development and Environment), which is the competent authority on environment at a national level, and the Prefect (Currently Governor) through the environmental unit on a Departmental level.

Brazil adopts models of common (and concurrent) administrative competences as to environmental protection matter (currently regulated by Complementary Law 140/2011), by virtue of the Federal Constitution (article 23). Thus, at all federative levels (Union, States, Federal District and Municipalities) there is the possibility of having monitoring, authorization and supervisory entities of activities impacting environment.

Such set of entities form the National Environment System - SISNAMA, composed of bodies and entities of the Union, of the States, of the Federal District, of the Territories, and of the Municipalities, as well as foundations established by the Public Power, responsible for the protection and improvement of the environmental quality. It should be emphasized the environmental bodies of the States, as well as IBAMA, at federal level.

In **Chile** there are several entities, but all are in the Servicio de Evaluación de Impacto Ambiental and in Israel the authority is conferred to the Ministry of Environmental Protection and the Green Police.

In **Greece** there are several governmental entities performing different tasks related to the supervision of the activities which may cause environmental damage. In **Italy**, the Minister for the Environment and Territorial Protection, in application of the precautionary principle, has the right to take preventive measures at any time, but there are other entities. In **Japan**, the Ministry of the Environment is the main supervising agency for environmental policy. A range of different government bodies are in charge of issuing permits to individual business operators etc.

In **Mexico**, there are several governmental entities, such as the Ministry of Environment and Natural Resources. (“SEMARNAT”), the Federal Environmental Protection Agency (“PROFEPA”), and the National Water Commission. (“CONAGUA”).

In **New Zealand** there are government through ministries and councils through EMA officers.

The State Department of Environmental Affairs is the primary state department in **South Africa**.

In **Taiwan**, Environmental Protection Administration, Executive Yuan (EPA) is the main body in central government to be in charge of the environmental impacts or damages.

In **Turkey**, there are also several governmental entities, and their duties are divided according to the type of environment (sea, land, air).

In **United Kingdom** the principal regulator is the Environment Agency of England and Wales.

In **Uruguay** it is the Ministry of Housing, Territorial Planning and Environment (MVOTMA), through the National Environment Directorate (DINAMA).

1.4.1. What is the scope of activity of these entities?

In **Australia**, the regulatory entities are responsible for setting environmental targets and outcomes, regulation of activities that could have an impact on the environment, and managing and regulating non-compliances or environmental incidents.

The authorities in **Austria** shall check the compatibility of the project with environmental standards, issue operating permits where appropriate or establish its environmental compatibility. If necessary, the requisite conditions must be imposed, which may also apply retrospectively. The monitoring of compliance with the requirements and supervision of installations is also the responsibility of these authorities.

In **Bolivia**, MDSMA (Ministry of Development and Sustainable Development for its acronym in Spanish) will establish, in coordination with competent Sectorial entities the following direct regulation instruments, which are of a general nature norms on environmental quality and norms on the disposal of affluent discharge on different water bodies and the atmosphere, among others.

In **Brazil**, the scope of the environmental bodies that compose SISNAMA is to enforce and cause to enforce the policy and government guidelines established for the environment, according to the respective competences; implementation of programs, projects and by the control and inspection of activities capable of causing environmental degradation.

Colombia, Finland, Germany, Greece, Japan and Russia did not provide an answer to this question.

In **Israel**, the Ministry of the Environment Protection is in charge of national regulation, strategy, setting standards and precedents. The Green Police operates in the field.

The **Italian** Ministry of the Environment has environmental, ecosystem, marine, atmospheric, environmental impact assessment, strategic environmental assessment and integrated environmental authorization. It has expertise in soil protection from desertification as well as hydrogeological heritage. It coordinates and oversees the functions of the so-called Environmental Code, i.e. Legislative Decree no. 152/2006, laying down environmental standards.

In **Mexico**, SEMARNAT is responsible for the protection, restoration and maintenance of the country's ecosystems and natural resources, as well as pollution control, climate change prevention and water resource management, and PROFEPA is responsible for the supervision and protection of the environment, and monitoring the implementation of laws.

Polish administrative authorities strongly emphasize the compliance with the national and the EU environmental law and regulations.

In **Portugal**, the competent authority is APA – Agência Portuguesa do Ambiente (Portuguese Environment Agency) and its scope of activity is wide. The operators are obliged to inform APA about any aspects related to an imminent threat and prevention measures, as well as the occurrence of any damages and the measures taken to contain them. APA has the authority to monitor all measures taken as well as to take those measures whenever operators fail to do so. APA has to be informed at all times and

In terms of NEMA in **South Africa**, the powers of various authorities where the environment is, or has been, seriously damaged, endangered or detrimentally affected by any activity include the powers to direct a person to cease any activity and take such steps as the authority deems fit to eliminate, reduce or prevent the damage, danger or detrimental effect.

In **Taiwan** the scope consists on building a sound structure to promote sustainability, saving energy and reducing carbon emissions to cool the earth, and recycling resources to achieve zero waste.

MTMC in **Turkey** aims to increase global competitiveness of the country and quality of life for the citizens by providing well balanced, secure, economical, attainable, ecological structure interested, sustainable, qualified and supervised services in transport, maritime, communications, space and information technologies over the level of contemporary civilization. On the other hand, MEUP aims to plan, construct, re-cycle and effect works related to environmental

management through a regulative, auditing, participating and solution-oriented understanding in order to provide high qualified lives for urban and sustainable environment.

The Environment Agency in **UK** issues environmental permits to operators that have the potential to pollute and monitors compliance with these permits. It enforces the clean up of unlawful waste activities and water pollution issues and some types of contaminated land.

1.4.2 How do they operate, and on which legal grounds?

In **Australia** the regulator is usually a department within the relevant government body (Commonwealth, State or Local Government). The department is empowered through legislation to condition activities and impose sanctions on offenders.

In **Austria** they operate on the ground of Austrian Industrial Code, of the Environmental impact assessment law and various other laws (water law, forestry law, waste law, etc).

In **Bolivia** the legal grounds are established under the Environmental Law and its regulation.

In **Brazil** the bodies that compose SISNAMA operate, basically, in the definition of standards of issuance, environmental licensing and environmental inspection.

In **Chile** law 19.300 and 20.417 created the new system of evaluation of the environmental impact of an specific project.

In **Germany** section 7 EDA (Environmental Damage Act) entitles the competent authority to supervise the necessary measures in order to avoid, to limit and to remediate environmental damages. In addition, the authority can oblige the responsible person to provide detailed information about an immediate danger, the suspicion or the occurrence of an environmental damage. The federal legislator does not prescribe which authority is in charge of these activities. This is subject to the legislation of the individual Federal States in Germany. The competent authority in Berlin, for example, is the Senate Administration for Environment, Transportation and Climate Protection.

In **Greece**, there are (i) Licensing authorities (for which the relevant legislation includes law 4014/2011 on Environmental licensing of works and activities; the Ministerial Decision 1958/12 and the Ministerial Decision 167563/13 (Official Journal 64/B/13) which describes procedures and criteria of environmental licensing), (ii) Supervision Authorities (for which the relevant legislation includes Presidential Decree 100/2014), (iii) the Ministry of Environment and Energy

and the counties are competent for the implementation of the Presidential Decree, and (iv) the Special Agency of Environmental Inspectors (EYEII), who may conduct regular or special investigations to ensure that the operators' obligations are enforced either by the agency's initiative or by complaint submitted to the agency. EYEII may outsource part or the totality of investigations to other scientific agencies or other specialized private or public agencies, if they can contribute significantly to the accomplishment of this project.

In **Israel** the Ministry of Environmental Protection operates by enacting regulations and rules and the Green Police operated by officers and inspectors on site.

The **Italian** Ministry of the Environment was set up by Law 349 in 1986 and since its establishment its main duty is to ensure, in an organic framework, the promotion, conservation and recovery of environmental conditions in accordance with the fundamental interests of the community and the quality of life, as well as the conservation and enhancement of national natural heritage and the defense of the natural from pollution.

In **Mexico** SEMARNAT is a federal authority that conducts the national environmental politics and promotes the sustainable development and preservation of natural resources of the nation. SEMARNAT operates through its delegations located in each Mexican state, and enforces the environmental law through its decentralized administrative agencies. Its authority is set forth in the Environmental Law.

In **Poland** the key pieces of environmental legislation are the Act on the Protection of the Environment, 27 April 2001 (Ustawa z dnia 27 kwietnia 2001 r. – Prawo ochrony środowiska) (Environmental Protection Law), the Act on the Prevention and Remedying of Environmental Damage 13 April 2007 (Ustawa z dnia 13 kwietnia 2007 r. o zapobieganiu szkodom w środowisku i ich naprawie).

In **Portugal** they act according to DL 147/2008 and other legislation about environment protection.

The state departments in **South Africa** are mandated by the Constitution and the various statutes, primarily NEMA, that governs their activities and powers.

Taiwan Environmental Protection Administration, Executive Yuan (EPA) works with local governments and non-official organizations together with relevant industries to monitor,

maintain, assess and mitigate environmental conditions according to various regulations and programs.

Turkey MTMC has been established and operate in accordance with Decree Law on the Structure and Duties of Ministry of Transport, Maritime Affairs and Communications. MEUP has been established and operate in accordance with the Decree Law on the Structure and Duties of Ministry of Environment and Urban Planning.

In the **United Kingdom** all the regulators have significant powers to investigate pollution matters and in **Uruguay** it works on the basis of an environmental impact assessment procedure, of compliance with the provisions of the Environmental Impact Assessment and Environmental Authorization Regulations, approved by Decree 349/005, of September 21, 2005.

1.5. Is there a legal system of procedural mechanisms in case of environmental offenses?

In **Bolivia, Germany, Poland and Russia** there is no specific legal system of procedural mechanisms in case of environmental offenses. All the other countries provided an affirmative answer.

In **Australia**, each level of Government and each relevant department has its own mechanisms to condition activities and monitor compliance. At the State Government level, there can be separate departments responsible for environmental protection, water, mining, land clearing and vegetation management.

In **Austria** there is a system of mechanism for environmental offenses related to water pollution and in some other cases (for example in the context of forests).

In **Brazil** the procedural arrangements are basically regulated by Law 7.347/85, which regulates on the Public Civil Action of responsibility for damages caused to environment, consumer, assets and rights of artistic, aesthetic, historical, touristic and landscaping value. Such legislation, however, engages with other procedural decrees, such as the Code of Civil Procedure, the Citizen's Action Act, the Law against Misconduct in Public Office and the procedural part of the Consumer's Defense Code, among others.

In **Chile** there are almost three different procedures, one in the Environmental Court (Tribunal Ambiental), one related to sea pollution in a civil court, and one for fines in the administrative authority.

In **Colombia**, there could be an administrative violation or a criminal offense, which sets up a fault liability in case of environmental damages.

In **Finland** environmental civil liability is handled in the normal civil procedure, and criminal offenses are handled in the criminal proceedings including then also the compensations. There are other administrative methods for breaches of environmental permits etc.

According to the Environmental law in **Greece**, the Criminal Code, the Criminal Procedure Code, the Administrative Procedure Code and other relevant laws regulating offenses and specific types of operations, administrative penalties may be imposed both to the liable persons and to the liable legal entities, while criminal charges may be imposed only on the liable persons.

Israel, New Zealand, Portugal and UK did not specify the procedural mechanisms.

In **Italy**, when an environmental damage has occurred the operator shall, without delay, inform the Ministry of the Environment of all relevant aspects of the situation and take immediately remedial measures; the competent authority may give instructions to the operator to be followed on the necessary remedial measures to be taken, or may itself take the necessary remedial measures.

In **Japan** criminal penalties are stipulated in a number of laws, including the Air Pollution Control Law. However, criminal penalties for major acts of contamination which are harmful to human life and health are stipulated in the “Law for the Punishment of Environmental Pollution Crimes relating to Human Health.”

There are administrative procedures conducted by administrative authorities in **Mexico**, in particular PROFEPA, in which sanctions can be imposed to a person or entity for violations to environmental laws, including pollution of the environment. Class actions are also available for the persons that suffered environmental damages, in order to obtain indemnification through remediation and, if not possible, compensation.

Procedures in **South Africa** are determined by statute – primarily in accordance with the NEMA, but the different statutes contain provisions for activities that fall under the scope of that statute, and provide for example for minimum and maximum fines, penalties and terms of imprisonment.

Finally, in **Uruguay** there are no specific procedural mechanisms for the protection of the environment, nor does the Penal Code include environmental crimes, whose protected legal asset is the environment, a project in this sense is still under study by the Legislative Power.

1.5.1. Who is in charge of keeping the environmental protection?

In **Australia**, the relevant department responsible for the administration of the relevant legislation is primarily responsible. However, Australia commonly has rights for third parties to bring actions to stop environmental harm occurring, or to remedy harm that has occurred, even where that person has not suffered a direct loss. As an example, activist groups in Australia are able to bring actions in court for various matters.

In **Austria** on one Hand, the landowner and the plant operator are in charge of keeping the environmental protection, but on the other hand, the authorities are also responsible for environmental protection.

In **Brazil** those legitimized to file public civil action are set forth in article 5 of Law 7.347/85, to wit: Public Prosecution Office; Public Defender; Union, the States, the Federal District and the Municipalities; government agency, public company, foundation or mixed capital company; and associations (for example, NGO's).

In **Chile** there are several entities, not only one in charge, it depends on the activity you are doing.

In **Colombia** there environmental departments in the Government and also the criminal courts in case of a criminal offense to the environment.

In **Greece** a criminal procedure may be initiated ex-officio by the competent Public Prosecutor or after a report of the police, other authority, an individual, legal person, or association. Similarly, the administrative procedure may be initiated ex-officio or after a proposal of any person.

In **Israel** the Green Police and the department of environmental protection of the Police force are in charge of keeping the environmental protection.

In **Italy** the National Network for Environmental Protection (SNPA) is a reality starting from January 14, 2017, the date of entry into force of the National Network for the Protection of the Environment and the discipline of Istituto Superiore per la Protezione Ambientale (ISPRA).

The Federal Authorities SEMARNAT, PROFEPA, CONAGUA and ASEA in **Mexico** are in charge of environmental protection in Mexico. PROFEPA in particular is the main responsible to enforcing the environmental protection laws.

In **New Zealand** the government is in charge through legislation, and local government or councils, e.g. RMA 1991 enforcement. There is also New Zealand Environmental Protection Agency under the Hazardous Substances and New Organisms Act 1996 (HAZNO)

The state Department of Environmental Affairs in **South Africa** and public authorities as identified by the legislation. This includes local governmental and subordinate authorities or nominated non-governmental organizations and specific state-controlled enterprises.

In **Taiwan** there is the Environmental Protection Administration, Executive Yuan (EPA), and in Portugal there is APA – Agência Portuguesa do Ambiente (Portuguese Environment Agency).

Turkey MTMC is responsible for implementing emergency response plans to prevent pollution of the sea as caused by marine vehicles, matters of preparedness and intervention in case of pollution, and matters of compensation for damage and notification of guarantees of financial (OSRL art.4).

In the **United Kingdom** there are the Environment agency, the Local authorities and Natural England.

In principle in **Uruguay** it is an administrative competence under the responsibility of the Ministry of Housing, Territorial Organization and Environment (MVOTMA), through the National Directorate for the Environment (DINAMA), in accordance with the provisions of the article. 3° of the Law N° 16,112, of May 30, 1990 (Law for the creation of the MVOTMA).

In the area of the Judicial Branch, there is no specialized jurisdiction, which is why it is necessary to address the proceedings brought before the ordinary civil justice system.

1.5.2. How does this system work?

In many **Australian** jurisdictions, it is common for businesses to be required to notify the relevant environment department of actual or threatened environmental harm or environmental damage. Queensland's self-notification system has been a cornerstone of its legislation for many years, and requires not only the perpetrator to report an environmental incident within 24 hours of it occurring, but also requires employees within the organization to notify their employer of an

incident. New South Wales has similar legislation, and Victoria is in the process of introducing such a requirement into its environmental law, as are some other jurisdictions. Businesses are also required to notify other relevant stakeholders, including the land owner (where they are conducting activities on another person's land), or neighbouring properties, that could be affected by the incident. In addition, regulators undertake inspections and are actively involved in managing sites where environmental harm could occur, such as mining and large construction sites.

In general, the land- or plant operator in **Austria** is responsible to avoid environmental damages. If the owners/operator fail to protect the environment or to remediate environmental damages (if they are unwilling/unable to do so), authority will take alternative measures and take recourse to the owner.

These past few years in **Bolivia**, the state has been capable enough to remedy and or clean up some business that were responsible enough to acquire or retain environmental safety insurance.

In **Brazil** the procedural system of environmental protection is submitted to the procedural rules set forth in the Code of Civil Procedure.

In **Chile** the system works in the SEIA, according to the law, if you are in a project related to one or more activities listed in the Law, you will need to file previously to begin your project, a study of environmental impact, this study will be reviewed by a regional or national environmental commission.

In **Colombia** there is an administrative procedure for administrative violations and the general penal code applies for criminal offenses.

Since environmental protection is the declared aim of the Federal Republic of **Germany** according to Art. 20a of the German Basic Law (Grundgesetz), it is part of administrative law. Responsible for environmental protection is primarily the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit) as well as the Federal Environmental Agency (Umweltbundesamt). Moreover, there are further authorities in charge of environmental protection at the State level such as the above-mentioned Senate Administration in Berlin.

Competent civil courts and administrative courts and authorities should ensure the proper application of the relevant legislation and enforce them to liable persons in **Greece**. In addition,

there is a procedural mechanism established by the PD (article 8) which provides that in case of immediate environmental damage or after its occurrence, the operator immediately takes any appropriate prevention measures and immediately informs the competent authority for all the details of the damage that has occurred.

In **Israel** the Green Police and the department of environmental protection of the Police force are monitoring and supervising the potential pollutants and in cases of events of contaminations they are exposed to indictments and fines.

Through the Council of SNPA in **Italy**, the System expresses its binding opinion on the technical measures of the Government on environmental matters and reports to the Ministry of the Environment and to the Permanent Conference on Relations between the State, the Regions and the Autonomous Provinces of Trento and Bolzano, opportunities for action, including legislation, in pursuit of the objectives of sustainable development, reduction of soil consumption, safeguarding and promoting the quality of the environment and the protection of natural resources.

The authorities mentioned above for **Mexico** apply the principle of prevention to protect the human right to a healthy environment. In case of breach to the environmental laws, authorities may impose punitive and corrective sanctions on the responsible person and, if applicable, entities. SEMARNAT, supervises the compliance of the environmental law in order to preserve the environment, through its decentralized administrative agencies PROFEPA, CONAGUA and ASEA. In particular PROFEPA has the authority to (i) conduct inspections, (ii) preside administrative procedures for violations to the environmental laws, and (iii) impose sanctions.

Poland has one of the more detailed system of reporting and registering environmental damages and the associated risks. Apart from Hungary, Poland is the leader among the member states considering the number of such damages and the number of court cases conducted in that respect. As per civil liability for damages caused by the activities of the polluter, it is still possible to incur civil liability, even if the pollution level is within the scope of a permit. There is also criminal liability for breaching provisions in environmental legislation. In this case, the most common penalties are fines, restrictions of liberty and imprisonment.

In **Portugal** the law provides for a series of prevention and restoration measures that have to be undertaken by the operator while reporting permanently to APA and in close cooperation.

The authorities require environmental impact assessments (hereinafter 'EIA's) before authorizing activities that could have a negative environmental impact in **South Africa**. They may investigate and act upon any complaint or manifestation of environmental degradation. They have free access to do site and activity assessments. The powers of various authorities where the environment is, or has been, seriously damaged, endangered or detrimentally affected by any activity include the powers to direct a person to cease any activity and take such steps as the authority deems fit to eliminate, reduce or prevent the damage, danger or detrimental effect. This may include issuing compliance orders and directives, as well as interdicting a person to cease activities.

Taiwan Environmental Protection Administration, Executive Yuan (EPA) works with local governments and non-official organizations together with relevant industries to monitor, maintain, assess and mitigate environmental conditions according to various regulations and programs.

In **Turkey** OSRL, the organizational concept and coordination among the response units of the emergency response plans have been described in detail, and the content and the structural format of the national and regional contingency plans have been outlined.

In the OSRL Implementation Regulation, contingency planning is based on the gradual intervention approach according to the size of the pollution. Compensation for pollution damage caused by spills from oil tankers is governed by an international regime elaborated under the auspices of the IMO. In the scope of this regime, the CLC 1992 governs the liability of ship-owners for oil pollution damage. The convention lays down the principle of strict liability for ship-owners and creates a system of compulsory liability insurance. Furthermore, the FUND 92 Convention is supplementary to the CLC 1992. It establishes a regime for compensating victims when the compensation under the applicable CLC is inadequate.

OSRL requires that responsible parties are liable for the damages to living resources and marine life and reinstatement of the degenerated environment. Damages to living resources and marine life are not included in the description of the recoverable damages of the international regime of liability and reinstatement of the degenerated environment is very limited. According to the international system, in the case of environmental damage, compensation is restricted to costs actually incurred or to be incurred for reasonable measures to reinstate the contaminated environment. Therefore, the recoverable damages definition provided by OSRL will not be

applied to the ships and will only be applied to the coastal facilities. However, this situation can cause some problems during the implementation especially for the incidents involved by both the ships and coastal facilities. The scope of the recoverable damages required by the OSRL is more useful to protect the environment by maximizing the amount that can be compensated comparing to the international system. However, without applying the scope of the damages on the ships the protection of the environment will not be satisfied completely

In the **United Kingdom** all three regulators have the power not just to require clean up of pollution and restoration but also (in respect of certain types of pollution) to prosecute polluters (and “knowing permitters”). The powers are exercised most often in relation to unlawful waste activities and water pollution activities.

In **Uruguay** any judicial procedure is governed by the procedural rules of the ordinary trial, although a special and broad legitimation is foreseen for the so-called "diffuse interests" (Article 42 of the General Code of the Process), among which the law includes specific "issues relating to the defense of the environment", in which case they will be entitled to intervene in order to promote the relevant process: the Public Prosecutor's Office, any interested party and the institutions or associations of social interest that according to the law or in the judgment of the tribunal, guarantee an adequate defense of the committed in addition of the Ministry of Housing, Territorial Organization and Environment (MVOTMA) itself, by virtue of the provisions of the article 6th of Law No. 16,112, of May 30, 1990.

Meanwhile, Article 220 of the same Code, provides a special effect *res judicata* in proceedings promoted in representation of diffuse interests, awarding general effectiveness to the sentence, "unless it is absolutory for lack of evidence, in which case, another legitimated one will be able to raise the question in another process ".

Section 2:

2. Legal aspects on environmental insurance policies

2.1. Is there a specific legal framework to regulate environment insurance policies? If so, please describe such legislation, as well as the major features thereof.

Apart from **Mexico**, none of the countries have a specific legal framework to regulate environment insurance policies. In Colombia there is a mandatory insurance for civil liabilities

regarding the environment (set forth in Law 491/1999), but a regulation for this matter is still pending.

The Environmental Law in **Mexico** sets forth the requirement for any party carrying out activities that may harm the environment, including high risk and hazardous waste generation activities, to contract environmental risk insurance based on the secondary regulation (Reglamento) ("Environmental Insurance Regulation") to be issued by SEMARNAT for such purpose. If applicable, the Environmental Insurance Regulation includes the specifics of coverage, insured amount, requirements and other terms of the environment risk insurance and the creation of a National System of Environmental Risk Insurance.

2.2. In the event of a negative response to the question 2.1, please inform if there is any administrative rule, or any other kind of legal regulation that applies to environmental insurance policies. In this case, please describe such regulation, as well as the major features thereof.

In **Australia**, Queensland has just amended its legislation relating to mining activities to allow insurance bonds to be used in the place of bank guarantees as a surety for environmental harm that is caused and not remedied by the mining proponent. Other States are likely to follow.

In **Austria** there are special conditions for environmental insurance and General and Supplementary Terms and Conditions for liability insurance, which are no legal regulation but a non-binding agreement of general terms for the insurance industry.

Brazil adopts sparse rules that refer to environmental insurances so far. We point out two of them, for the special relevance. The National Policy of Environment, established by Law 6.938/1991, with further amendments, defines as one of its principles (article 2, VIII) that of "repair of degraded areas" and, for such, establishes among its objectives the "restoration of the environmental resources aiming at its rational use and permanent availability, concurring for the maintenance of the ecological balance propitious to life" (article 4, item VI) and the "order, to polluter and predator, of the obligation to recover and/or indemnify the caused damages and, to the user, of the contribution for the use of environmental resources with economical purposes" (article 4, item VII). In article 9, it is listed the instruments of the National Policy of Environment and as of 2006, by Law 11.284/2006, item XIII is entered to institute economic instruments, among which the forest concession, environmental servitudes and the environmental insurance.

More recently, it has been established Law 12.305/2010 that refers to National Policy of Solid Wastes, which provides on its article 40 that in the environmental licensing of ventures or activities that operate with hazardous wastes, the licensor body of Sisnama may require the contracting of civil liability insurance for damages caused to environment or public health, according to the rules regarding coverage and maximum limits of contracting established in regulation.

However, there is no regulatory arrangement on the rules of coverages yet.

In **Chile** there is no specific regulation, the only regulation is in maritime issues, in which all the vessels that are under the Chilean jurisdiction, need to have a pollution insurance policy, normally the P&I coverage will be enough.

In **Colombia** the law only creates the mandatory insurance, its nature and the amount of coverage, and environmental insurance is regulated by the general law of insurance contracts.

In **Japan** it is possible for local governments, by mandate, to oblige parties to get environmental pollution coverage. However, there are no local governments currently doing so.

Mexican insurance policies are governed by the Insurance Contract Law (Ley sobre el Contrato de Seguro) (“ICL”). The ICL applies to all insurance contracts, except for maritime insurance governed by its special regulation. Environmental coverage is included as part of civil liability and/or professional risk insurance policies, that are regulated under the general framework of the ICL and are considered as part of the Property & Casualty line of business.

The ICL regulates the basic requirements of the insurance contract, special provisions for each line of business, and regulation on premium and claim determination. Pursuant to the ICL, insurance contracts are formed through the consent of the parties. According to Article 21, paragraph I, of the ICL, the insurance contract comes into effect when the insured receives a confirmation that the insurance company accepted his request for insurance coverage, regardless of whether any written evidence such as an insurance policy or certificate is issued. The effectiveness of an insurance contract may should not be subject to the condition that the respective insurance policy or any other document evidencing its acceptance is issued nor to the condition that the respective premium is paid.

In addition to the general legal framework set forth in the ICL applicable to insurance contracts, the following regulation sets forth mandatory insurance:

(a) The Regulation on Environmental Impact Assessment (Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental) (“EIA Regulation”), grants authority to SEMARNAT, in those projects that require its authorization, to request compulsory environmental insurance if it deems the project may produce several damages to the environment. An activity would be considered to produce several damages to the environment if: (i) substances to be released may transform into toxic, persistent and bio-accumulative agents, (ii) the activities would be performed in an area with bodies of water, flora and fauna, areas with endangered, vulnerable and threatened animals, or protected natural areas, or (iii) the specific project is considered to be of high risk pursuant to the Environmental Law and other regulations. In these cases, terms of insurance coverage would be defined by the SEMARNAT on a discretionary basis.

(b) In 2016, the National Agency for Industrial Safety and Environmental Protection of the Hydrocarbons Sector (Agencia Nacional de Seguridad Industrial y de Protección al Medio Ambiente del Sector Hidrocarburos) (“ASEA”) issued the Rules on the Minimum Insurance Requirements applicable to Regulated Parties that perform Projects or Activities in the Exploration and Extraction of Hydrocarbons, Oil Treatment and Refining, and Natural Gas Processing (“ASEA Rules”). Pursuant to the ASEA Rules, the parties performing the activities regulated thereunder, shall contract environmental liability coverage and, if applicable, well control insurance, with the minimum coverage provided thereunder.

As a general rule, insurance policies covering environmental risks taking place in Mexico must be contracted with a Mexican licensed insurance company.

The relevant legislation in **South Africa**, specifically the regulations issued under the various acts that apply to the different components of the environment (specifically statutes issued under the NEMA framework legislation) prescribe mandatory insurance cover, and government departments within the specific industry (i.e. Department of Water and Sanitation) then stipulate the nature and extent of cover required on an ad hoc basis.

2.3. Does the law provide for compulsory environmental insurance?

The following countries do not require compulsory environmental insurance: **Australia, Austria, Brazil, Colombia, Finland, Germany, Israel, Italy, Poland, Portugal, Russia, South Africa, Taiwan, United Kingdom and Uruguay.**

In **Chile** article 15 Law 19.300 states that the activities that needs a “provisory” authorization of the environmental system needs to obtain an insurance for environmental damages. The DS (Decreto Supremo) N°30 “Reglamento del Sistema de Evaluación de Impacto Ambiental”, defines the conditions, legal requirements, and terms of this insurance.

The **Greek** legislator has opted for the compulsory coverage of the environmental liability for some activities, by means of financial guarantees, such as private insurance, although it was not obliged by the ELD. It should be noted that the compulsory coverage already exists for managing of the hazardous waste in compliance with the Ministerial Decision 113588/2006. The activities listed in the Annex III of the PD include: Waste management by procedures requiring authorization or made available to landfills or incinerators; Waste management of the extractive industry; Disposal of materials in inland surface waters or groundwater, in accordance with Directives 76/464/EEC and 80/68/EEC and respective national legislation; Discharging or diverting pollutants into surface or groundwater, pumping and retention of water (L. 3199/2003 and PD 51/2007); production, use, storage, treatment, burial, release into the environment and transport within the perimeter of the business, of dangerous substances and preparations, plant protectors and biocidal products; transport of dangerous or polluting commodities; Emissions into the air polluting substances of the Joint MD No 15393/2332/2002 (GG B 1022/05.08.2002) etc.

However, the above-mentioned Joint Ministerial Decision, for the gradual inclusion of companies in the compulsory environmental insurance coverage and the type of insurance required, has not yet been issued. In the Ministry of Environment and Energy, a working group was set for the adoption of the Joint Ministerial Decision, with the participation of all interested parties.

Nonetheless, in **Japan** business operators are required to take out liability insurance (specifically nuclear power insurance and ship-owner’s liability insurance) to cover the forms of damages stipulated in the Atomic Energy Damages Compensation Law (Law on Compensation for Nuclear Damages) and the Act on Liability for Oil Pollution Damages (Law for the Reparation

and Compensation of Damage by Oil Pollution). Other than the above two laws, there are no regulations on insurance coverage against environmental pollution.

Mandatory environmental insurance is regulated under the EIA Regulation and the ASEA Rules in **Mexico** (please refer to Section 2.2 above). The Environmental Insurance Regulation to be issued by the SEMARNAT will also include the terms and conditions pursuant to which a regulated party would be required to contract environmental risk insurance if the activity to be performed may harm the environment, including high risk and hazardous waste generation activities.

2.3.1. If so, which would be the relevant risks, covered items and limits?

In **Bolivia** the regulation of environmental Management, states in article 31 that any natural or legal person that handles hazardous materials, must, on a mandatory basis acquire an Environmental Liability Insurance that cover any possible damage of such activities, including their transportation and/or commercialization. There are also less hierarchical provisions such as administrative resolutions that oblige certain entities, companies or natural persons to acquire environmental Insurance Activities under different coverage.

In **Finland** the limits are EUR 6M per occurrence and 10M in the annual aggregate. The policy year is the calendar year. The scheme is financed by the premiums from those companies, which need to have an environmental permit from the state authorities, about 1.400 companies. But damage caused by any other unknown or insolvent polluter is also covered!

The nuclear power insurance mandated by the Atomic Energy Damages Compensation Law in **Japan** constitutes liability insurance for the relief of victims of nuclear accidents. The insurance pay-out is 120 billion yen. The Act on Liability for Oil Pollution Damages is a domestic application of the International Convention on Civil Liability for Oil Pollution Damages (CLC). Accordingly, the insurance pay-out is equivalent to the responsibility (varying in line with a ship's tonnage) of the shipowner under the CLC.

EIA Regulation in **Mexico** does not provide the terms and conditions of coverage or minimum requirements. SEMARNAT has the authority to determine the insured amounts and terms of coverage taking into consideration the damages that may occur in the implementation of the corresponding project. Pursuant to the ASEA Rules, regulated parties should obtain civil liability and environmental liability insurance and, in its case, well control coverage. Insurance policies

should be registered before the ASEA. Reinsurance shall be ceded to duly foreign reinsurance companies duly registered with the National Insurance and Bonding Commission or duly licensed Mexican insurance companies. The minimum insured amount for the required coverage are the following:

Activity Minimum Insured Amount

Onshore Wells 100,000,000.00 USD

Onshore Wells with Production 25,000,000.00 USD

Shallow Wells 500,000,000.00 USD

Deep Wells 700,000,000.00 USD

Mobile Platforms, Jack-ups, or similar 300,000,000.00 USD

Boats and Minor Ships 5,000,000.00 USD

Tugboats 10,000,000.00 USD

Floating Production, Storage and Offloading and Floating Storage and Offloading, and similar 1,000,000,000.00 USD

Other 100,000,000.00 USD

Oil treatment, refinement, and natural gas processing 500,000,000.00 USD

Regulatory authorities in **New Zealand**, shareholders and clients can hold businesses liable for costly environmental exposures, or pollution risk, gradual, sudden and accidental pollution releases, on and off-site clean-up costs and third-party bodily injury and property damage claims, and reimbursement for the restoration or remediation of damaged natural resources, habitats and species

In some industries in **South Africa** mandatory insurance is required. Most of these are required by subordinate legislation (provincial or local government regulations; ordinances or rules). The risks covered depend on the environmental components in play, i.e. water, or for example soil. Activities where water leaks, pollution etc are the risks, the cover should be sufficient to remediate the environment and clean-up pollution. The form of insurance can be first-party property insurance; first party insurance to the benefit of a third party, or third party liability insurance.

CLC 92 Insurance Coverage in **Turkey** states that the owner of a ship registered in a Contracting State and carrying more than 2,000 tons of oil in bulk as cargo shall be required to maintain insurance or other financial security, such as the guarantee of a bank or a certificate delivered by an international compensation fund, in the sums fixed by applying the limits of liability prescribed in Article V, paragraph 1 to cover his liability for pollution damage under this Convention (art. VII, para.1). The minimum limits of the coverage are shown under:

Gross Tonnage (GT) of the Ship Limits of Insurance.

0- 5.000 GT 4,51 Million SDR (Approximately 7 Million \$)

5.001 GT and over Add 631 SDR for each additional GT to the above calculated amount

Without regards to the gross tonnage of the ship At most 89,77 Million SDR (Approximately 136 Million \$)

2.4. In case of a legal requirement or regulation, when should an environmental insurance policy be obtained?

In **Australia**, whenever insurance bonds are being used as a surety for environmentally relevant activities, the insurance bond must be issued prior to the work commencing.

Under most cases in **Bolivia**, prior to obtain some type of Licenses or agreement, for some Works as a requirement, the insurance policy shall be obtained.

In **Italy**, there is no general legal requirement to insure against environmental incidents and/or damages. However, operators that carry out waste management and disposal activities or specific dangerous activities (such as the production and distribution of gas and the management of nuclear plants) can be obligated to take out insurance and/ or performance bonds. Mandatory environmental insurance is sometimes provided by international treaties.

Nuclear power insurance is provided through the **Japan** Atomic Energy Insurance Pool (primary carrier pool) by private Japanese insurance companies, and there is no difficulty in obtaining coverage. Ship owners' liability insurance is mainly available from the P&I Club etc. Unlike the OPA in the United States, high insurance amounts are not required, so there is no difficulty in obtaining this coverage.

The environmental insurance policy must be obtained prior to commencement of the activity or project in **Mexico**. Failure to comply with such requirement, may have as a consequence that the corresponding project is suspended or the authorization revoked by the authority.

In **South Africa** where it is, for example a State tender procedure, tenders or proposals must already contain proof of insurance cover (usually a submission in the form of a letter of underwriting). In other situations where cover is mandatory, cover should usually be obtained when EIA's have been completed and the authorizations for a specific activity are issued. Therefore, cover must have been procured before commencement of such an activity. The cover must in most cases be in force, or renewed, for the duration of the activity.

In **Turkey**, according to Regulation on Determination of the Procedures and Essentials Related to Governance and Auditing of the Certificate of International Convention on Civil Liability for Oil Pollution Damage (art.10) and Regulation on Determination of the Procedures and Essentials Related to Governance and Auditing of the Certificate of International Convention on Civil Liability for Bunker Oil Pollution Damage (art.10) related insurance policies should be electronically issued by the registered ports upon the determination of the convenience of the insurance policy or financial bank guarantee provided for each ship, in accordance with the form governed under the attachment of these regulations. Originals of these policies should be on board the ship (art.11).

2.4.1. In which step of a venture should such policy be submitted under the law?

In respect of bonds of mining operations in Queensland in **Australia**, they are required prior to the activity commencing, and the amount can change during operations.

In **Bolivia**, generally the policy should be issued prior to the initiation of such activity to act preventively.

In **Chile** it is when you file the request of authorization of the environmental impact commission, and in the same request you ask for a provisory authorization to begin your work prior to finish the procedure.

In **Colombia** the mandatory insurance is required in the initial stages, because they are a condition to initiate the business operation.

When a company starts operating and needs an environmental permit for it, it needs to take out also this insurance in **Finland**.

In **Greece**, the moment when the insurance should start in case of environmental damage is not regulated by law. It should, however, be assumed that the coverage should start from the beginning of operations which may cause environmental damage in order to cover the liability of the operator arising from the respective activity. This is supported by the general rules on insurance cover to apply to future risks.

Any nuclear power operator in **Japan** with a national government license to operate can obtain nuclear power insurance. New entries to the market have no difficulty in obtaining shipowners' liability insurance, either.

Insurance policies in **Mexico** must be valid and in force through all of the different development stages of the project or activity, and the coverage may vary depending on the specific coverage requirement for each stage. Under the ASEA Rules, the insurance policies must be registered with the ASEA prior to the commencement of the project.

The person using the environment in a manner beyond ordinary use in **Poland** should obtain a permit that specifies the scope and conditions of use of the environment (e.g. discharge of waste water, pollutant emissions into the air). It is issued by a competent environmental entity. The obtained permission obliges the user of the environment to prevent the negative impact on the environment and may stipulate the obligation to provide the financial security. Financial security for the landfill manager should be submitted to the authority which (in the form of a decision) approves the instruction of the waste landfill.

In **Portugal** for all activities listed in Annex III, the constitution of the mandatory financial guarantee came into force on January 1st 2010, so after that date all these activities are obliged to have the guarantee.

In **South Africa** proof of cover can be required during the initial application period (for permissions/licenses/permits etc to commence with a harmful activity); or during the initial impact assessment period, or may in some cases be required only upon commencement of the activity. It can also be made a continuous duty, in that proof of renewals of cover must be submitted to the governing authority annually. It will depend on the specific industry and the specific statute.

According to **Turkish** Regulation on Determination of the Procedures and Essentials Related to Governance and Auditing of the Certificate of International Convention on Civil Liability for Oil Pollution Damage (art.12) and Turkish Regulation on Determination of the Procedures and Essentials Related to Governance and Auditing of the Certificate of International Convention on Civil Liability for Bunker Oil Pollution Damage (art.12) all the ships that arrive to or depart from any of the Turkish ports or arrive to or depart from a loading-discharging place in the Turkish territorial waters should submit one copy of her policy to the closest port authority that she will arrive to or pass by upon demand, through an agency resided in Turkey before entering into the Turkish territorial waters.

In **Uruguay** the warranty is necessary to obtain the authorization, previous to start the business or industrial activity that could pollute the environment.

Section 3:

3. Operational methods for pollution insurance:

3.1. Which are the pollution insurance's modalities that are offered in the market?

Performance bonds or civil liability insurance?

Most countries have pollution insurance as civil liability policies, namely **Austria, Bolivia, Brazil, Chile, Colombia, Finland, Germany, Italy, Japan, Mexico, Portugal, Taiwan, Turkey, United Kingdom and Uruguay.**

In **Australia**, the key policies available on the market at the moment include: (i) Contractor's pollution liability cover; (ii) Pure financial loss policies to cover third party financial losses; (iii) Statutory fines and penalties cover; (iv) Contractual warranties and indemnities cover; and (v) Environmental impairment policies that are often acquired in conjunction with a general liability policy.

The common way of obtaining insurance coverage for environmental liability in **Germany** is to conclude a liability insurance contract. Claims for personal injury and property damage arising from an environmental damage were formerly covered by conventional public liability insurance policies. After the ELA (Environmental Liability Act) was adopted, the German Insurance Association (Gesamtverband der Deutschen Versicherungswirtschaft, GDV) developed model conditions for a special Environment Liability Insurance (ELI; Umwelthaftpflichtversicherung,

UHV) which are specifically tailored to the liability under the ELA. As already mentioned under question 2.2., operators can also protect their liability risk by means of an exemption or guarantee obligation of the Federation or of a German State, which comes pretty close to performance bonds. However, this option is in practice only available for regional or local authorities and their activities that are subject to public law. It is also likely to remain a rare exemption that credit institutes are willing to submit a declaration of commitment according to Sect. 19 para. 2 nr. 3 ELA. Hence, private enterprise companies are basically forced to conclude a civil liability insurance contract. Furthermore, the liability risk under the EDA which stipulates a public liability for installation operators can be insured by means of an Environmental Damage Insurance (EDI; Umweltschadensversicherung, USV). The corresponding model conditions were released by the German Insurance Association in April 2007.

Even though these model conditions are not binding for insurance companies, they are widely spread on the German insurance market, regardless of the fact that a compulsory environmental liability and damage insurance has not been introduced so far. For this reason, the individual terms can be taken as a basis for the following questions concerning the content of the ELI and of the EDI

The **Greek** legislation provides for compulsory insurance for certain environmental risks and for specific coverage. Apart from that it is possible to obtain (or request) either insurance coverage or performance bonds or even combination of those to cover some or all environmental risks. There is, however, difficulty, in case of big accidents particularly if unlimited coverage would be required. The solution may be in creating guarantees' funds as it has been the case for some types of risks.

Civil liability insurance prevails in **Italy**. However one has to mention the special legal framework concerning the Integrated Environmental Authorization (AIA). This is the authorization that some enterprises need to comply with the principles of integrated pollution prevention and control (IPPC) dictated by the European Union since 1996. Since then, the regulatory framework for the AIA is common across Europe: it was initially established with Directive 96/61/ EC, rewritten by Directive 2008/1 / EC and then incorporated into the Industrial Emissions Directive (IED, Directive 2010/75 / EU). These directives establish that certain types of production installations can no longer operate without AIA; the productive activities that are subject to these authorization procedures are those most relevant to the environment. In order to

obtain the AIA a performance bond (garanzia finanziaria) has to be granted by the enterprise to the public authority. These “garanzie finanziarie” also called “cauzioni” are activated by the public authority if there is the necessity of for exemple a clean up or restoration and the enterprise does not pay for it. Obviously these “garanzie finanziarie” do not rule out the necessity of insurance, as for example they do not cover damages to third parties. “Cauzioni” are commercialized both by banks and insurance companies.

On the **Russian** market pollution insurance can be covered in the following ways:

1. It can be included in the scope of cover of existing insurance policies. For instance the Third Party Liability insurance policy may include the environmental liability extension. The same approach can be applied to other insurance policies.
2. The separate tailored Environmental Impairment Liability (EIL) cover. This is a complex insurance product covering different risks of the company due to damage to the environment.

This product covers:

First Party Loss (clean-up of the site; BI due to the pollution; legal costs; consultancy costs)

Third Party Loss (damage to the environment (air, water, ground, flora, fauna); damage to third parties (life/health/property damage)

In **South Africa** you can obtain insurance in both modalities.

3.1.1. What kinds of risks should be covered thereunder?

Australia’s commonly covered risks include: (i) Sudden and accidental events that cause environmental harm for first and third party; (ii) Gradual contamination (such as a slowly leaking tank) for first and third party; (iii) Fines and penalties for non-compliance; (iv) Site rehabilitation for the first party and any third party; (v) Media management and stakeholder engagement assistance; (vi) Personal injury and property damage; and (vii) Legal costs.

The risks to be covered in **Bolivia** are generally remedial and clean up- There are no punitive or penalty for damages covered.

In **Brazil** the covered environmental pollution risks involve: the disposal, diffusion, release or scape of any irritating, polluting, or solid, liquid, gaseous or thermal contaminant element, including, but not limited to smoke, steam, soot, exhalation, odor production, noises, vibrations, variations of temperature, waves, acid, alkaline, toxic chemical products, fungi, hospital waste and

scrap material, in or on the soil, or in any other structure on the soil, in the atmosphere or in any watercourse, or in other water natural resources, including water tables, among others. This definition of POLLUTION CONDITIONS is the essence of the product, given that all coverages should be related, in their origin, with these Pollution Conditions.

Coverages provided by the Brazilian Market are: Cleaning Costs and Expenses of the Pollution Conditions, Judicial Costs of Defense, bodily, moral Damages and material damages on third-parties, Collective Environmental Moral Damages, Damages to Natural Resources, Environmental Compensation, Loss of Use and Loss of Value, Loss Restraint Expenses, Third-Party's Loss of Profit, Own Insured's Loss of Profit, Pre-Existing Pollution Conditions, Crisis Management, Third-Parties Locations for disposal of wastes and residues.

In **Colombia** the general civil liability insurance policies of the companies cover sudden and accidental contamination that causes a consequential damage, with a limit. The policies do not cover gradual contamination nor pure environmental damages. There are special policies for contamination risks that cover sudden and accidental contamination, gradual contamination and the costs of clean up. Such policies also cover pure environmental damages.

Typically bodily injuries and property damage are covered in **Finland** including financial loss to the suffering party. Pure financial loss is not covered, like any loss to others than the one suffering the primary injury or damage.

According to **German** Nr. A2.-1.1.1 ELI 2016, the insurance cover is extended under the terms and within the scope of the insurance contract to the legal liability according to private law of the insured person as a result of personal injury and property damage caused by environmental impact. The term of "environmental impact" is identical with Sect. 3 para. 1 ELA. The extent of the insured risks depends on the agreements concluded and stated in the insurance policy (so-called "declaration principle"). The ELI provides a system of "risk components" that refer to different installations under Nr. A2.-1.1.3. These are, above all, installations in terms of the WRA and the ELA. The declaration principle and the system of risk components also applies to the EDI. The Environmental Damage Insurance covers, by contrast, the liability under public law according to the EDA for the remediation of environmental damages.

An insurance policy issued to cover liability pursuant to the PD in **Greece**, should cover costs of decontamination of the environment (clean-up and rehabilitation), costs of taking measures to

prevent environmental damage (i.e. limiting polluting conditions), as well as costs of evaluating environmental damage risks and other law implementing administrative costs. Additionally, apart from satisfying authority's reasonable claims, costs of rejecting unsubstantiated claims and insured person's trial costs should also be covered.

In **Italy** this is not directly defined by the law (the definition of which risks have to be covered takes place exclusively in cases of compulsory environmental insurance).

In **Japan** nuclear power insurance has the characteristic of disclaimers for earthquakes and gradual pollution. The coverage offered under shipowners' liability insurance does not differ from that generally provided by the P&I Club.

Risks covered under environmental insurance in **Mexico** include: (i) third parties for environmental damages, including bodily injuries and remediation, (ii) catastrophic events, (iii) breach of environmental obligations and contracts, and (iv) environmental damages, including sudden and accidental events. Coverage also includes the following costs: clean-up, restoration, legal costs, crisis management consulting and business interruption.

In **Poland** the costs of corrective actions in case of environmental damage and the costs of preventive measures are covered.

Policies in **Portugal** covers may vary according to companies, but they mostly offer: (i) Clean up costs; (ii) Bodily injury or property damage to third parties caused by polluting conditions resulting from the policyholder's activities and transportation; (iii) Environmental damage resulting from the policyholder's activities and transportation, (iv) Prevention costs and (v) Defense costs.

Cover can be required for any type of environmental risks in **South Africa**, such as water pollution; air pollution; soil pollution; nuclear risks; oil spills etc.

In **Taiwan** the coverages are (i) Civil liabilities for Bodily Injury, Property Damage, Trespass Nuisance or Obstruction caused by Pollution Conditions whether they are On-Site or Off-Site; (ii) Off-Site Clean-Up Costs arising from the migration of On-Site Pollution Conditions; (iii) On-Site Clean-Up Costs that the Insured becomes legally obligated to pay which are caused by Pollution Conditions on or under the Insured Property, and (iv) Business Interruption.

In basic terms, insurance covers three types of liability in the **United Kingdom**: (i) Tort liabilities arising from pollution conditions; (ii) Statutory clean up liabilities arising from pollution conditions; and (iii) Biodiversity damage liabilities.

3.2. Does the law or administrative rule define upper limits for losses or coverage?

Most of the countries do not have a law that establishes upper limits for losses or coverage, namely **Australia, Austria, Bolivia, Brazil, Chile, Colombia, Finland, Germany, Greece, Israel, Italy, Japan, New Zealand, Poland, Portugal, Russia, Taiwan, Turkey, UK and Uruguay.**

For want of legal or administrative provisions concerning the content of environmental liability insurance contracts, upper limits for losses or coverage can only be provided in the individual insurance contract in **Germany**. Such restrictions are mostly arranged in connection with the agreements regarding the sum insured. Therefore, environmental liability insurance conditions usually rule that the compensation paid is restricted to the maximum amount stated in the policy (sum insured) per claim/insured occurrence.

The **Greek** legislation does not provide the upper limit to the liability, thus the parties regulate the upper limit in their insurance agreement in case such liability is not regulated as mandatory. However, the liability of the operator will remain unlimited. There is no upper limit even in case of compulsory insurance of damage caused by hazardous waste.

Exception constitutes the civil liability from oil pollution damage. Following the latest amendments of PD 286/2002, the level of liability limitation for oil spill is 4,510,000 Calculation Units for a ship not exceeding 5,000 Total Costs. When the vessel has a capacity that exceeds this level, for every extra capacity unit of the vessel another 631 Calculation Units shall be added to the total. The established liability may be limited, but the vessel owner cannot use this limitation, if the incident is caused by its personal act or omission.

In **Mexico** there is a limit in case of compulsory insurance (please refer to Section 2.3.1 above).

In **South Africa** there is a limit too, however, there is no single piece of legislation that sets limits across the board. Statutes are diverse. In some instances legislation determines limits for a specific activity, and for a specific risk to a component of the environment. The government in

tender procedures mostly in their Requests for Tenders stipulate the limits and nature of cover required on an ad hoc basis.

3.2.1. Which are the criteria that should apply to limits' definition?

In **Mexico** under the EIA Regulation, limits should be determined taking into consideration the specific risk and possible environmental damages. The limits set forth in the ASEA Rules, were determined taking into account international standards.

In **Russia** the following criteria apply (i) the type of business and operations, (ii) geography of operations, (iii) turnover.

Criteria in **South Africa** include a financial limit that might be (a) event-based; (b) occurrence-based; or (c) aggregate cover. Furthermore (d) time limits or (e) activity limitations are possible.

3.3. Is there any difference in the legal treatment to state-owned and private ventures?

In almost all the countries, there is no difference in the legal treatment of state-owned and private ventures.

However, in **Austria** if the state operates a venture within the framework of the sovereign administration, the Official Liability Act applies, which largely refers to general civil law.

In **South Africa** it appears that private ventures as a rule have to rely more heavily on private insurance cover, whereas state-owned enterprises might resort under broader cover procured by the state itself. In limited situations such an enterprise may even be exempted from obtaining separate cover where the state is willing to accept the risks and carry costs and damages of a specific activity if it is in the public interest.

3.4. Is there any difference in the legal treatment to fix and mobile facilities?

There is no difference in the legal treatment to fix and mobile facilities in **Australia, Bolivia, Brazil, Chile, Colombia, Finland, Germany, Greece, Israel, Italy, New Zealand, Portugal, Russia, South Africa, Taiwan, Turkey, United Kingdom and Uruguay.**

In **Austria** the neighboring law and the strict liability of the general civil code only applies to fix facilities.

Legal regulations in **Japan** in some cases differentiate between fixed and mobile sources of pollution. For example, in the Air Pollution Control Law there is a separate stipulation on mobile sources of pollution such as automobiles etc. However, there are no regulations on compensatory damages which differentiate between fixed and mobile sources of pollution.

Under the ASEA Rules in **Mexico**, there are different minimum insured amounts applicable for fixed or mobile assets (please refer to Section 2.3.1 above). Additionally, the insurance policy for mobile facility will require to include transportation coverage.

The Act of 11 September of 2011 on Waste of electronic equipment in **Poland**, which also stipulates financial security (in the form of, among others, an insurance guarantee) for entities that market electronic household equipment. There is a financial security in the event of failure to pay a product fee.

3.5. Is there any difference in the legal treatment to underground works, mines or underground quarries?

There is no difference in the legal treatment to underground works, mines or underground quarries in **Bolivia, Brazil, Chile, Greece, Israel, Italy, Portugal, Russia, Taiwan, Turkey and United Kingdom**.

In **Australia** mines have different legal tenure to facilitate extraction, processing and sale, as compared to quarries. Depending on the nature and type of extraction method (including underground mining) the conditions of approval to undertake the works will differ. These conditions are determined by the relevant regulator.

In **Austria** there is a special liability provision for mining damages (§§ 160 ff Austrian Mineral Resources Act).

In **Colombia** these activities require environmental license, and there are different requirements for each activity.

There is a specific legislation on mines in **Finland**.

The ELI policies in **Germany** – and also typical public and professional liability insurance policies – do not cover claims resulting from subsidence damages as well as from mining operations pursuant to Sect. 114 of the Federal Mining Act (FDA; Bundesberggesetz, BBergG) which provides a strict liability on damages in connection with mining damages. Whereas

subsidence damages are only excluded as far as damages of properties are concerned, damages arising from mining operations (firedamp as well as water and carbonic acid penetrations) are not covered at all.

The Mining Law in **Japan** applies to mine operators. This law stipulates strict liability for such businesses. However, general tort law applies for environmental pollution caused by other operations underground (e.g., underground work carried out by a construction company).

Other than the minimum insured amount set forth in the ASEA Rules applicable for the different type of well projects in **Mexico**, there are no additional regulation that provide different treatment for underground works, mines or underground quarries.

Under the Act of 9 June 2011 on the mining and the geological law in **Poland**, concessions for underground storage of the waste or the carbon dioxide (or other concessions, if it is justified by a particularly important public interest, particularly related to environmental protection) are granted provided that a financial security of claims that may arise as a result of such activities will be established. The financial security may in particular take the form of business liability insurance.

Primarily the procedures as set by NEMA and the ECA apply in **South Africa**, yet specific legislation has been promulgated for the operations of mines and management of environmental risks. The Mineral and Petroleum Resources Development Act 28 of 2002; Mine Health and Safety Act 1996; and the Mining Titles Registration Act 1967. Legislation in this industry deals extensively with the duty of clean-up and restoration, and also criminal sanctions for contravention. In this case the activity-specific legislation is extensive and requires EIAs (Environmental Impact Assessments), permits, licenses and specific insurance cover for example against fire damages; seepage; water pollution and so forth.

In **Uruguay** in the case of the so-called "large-scale mining", a guarantee of compliance is foreseen, among other things, for the faithful fulfillment of the obligations derived from the environmental protection norms and the recomposition of the damages to the environment and other damages derived from strictly mining activities and related to them, which among other instruments, can be surety bond (Article 18 and 27 of Law No. 19.126, of September 11, 2013).

3.6. Do insurers use to insert pre-contractual provisions in the policy (pre-contractual disclosure)?

Countries that answered yes: **Australia, Austria, Bolivia, Greece, Italy, Japan, Mexico, New Zealand, South Africa, Turkey and Uruguay.**

Countries that answered no: **Brazil, Chile, Colombia, Finland, Germany, Poland, Portugal, Russia, Taiwan, UK.**

In **Italy** Pre-contractual disclosure is obtained through questionnaires that the enterprise seeking insurance coverage is obliged to fulfill and submit to the insurer.

Extensive disclosures are required in **South Africa**. In addition, the risk assessments are also done with reference to the mandatory EIAs required by government.

3.6.1. Which are the most usual ones?

Site due diligence is often required in **Australia**. This usually encompasses a range of desk-top and on site environmental investigations to determine the current environmental standing of the relevant land. Insurance companies may also refer to policies and procedures of the company, and its historic compliance with environmental law and environmental best practice, depending on the nature of the activity contemplated.

There are pre-contractual risk issues in **Austria** concerning: (i) the storage of petroleum products and other hazardous substances; (ii) distance of the establishment (s) to surface waters; (iii) effluent disposal; (iv) manufacture, supply, maintenance, installation, servicing of equipment with environmental hazard potential (e. g. tanks, sewage treatment plants, filter systems, etc.); (v) history of use of the property (old contaminated sites); (vi) whether there is a protected area (water conservation area, nature reserve) within 500 meters of the plant, (vi) whether there is any knowledge about protected animal or plant species on the premises or in the immediate vicinity.

The pre-contractual disclosure obligation is regulated by article 3 of the **Greek** Insurance Code, which provides that

1) The policyholder shall disclose to the insurer before the conclusion of the contract any and all information or circumstances of which he is aware, and which are objectively material for the assessment of the risk. He shall also answer every relevant question posed by the insurer. It shall be presumed that the information and circumstances in relation to which the insurer has set clear written questions constitute the sole grounds on which the insurer based its assessment and acceptance of such risk.

If the insurer concludes the contract upon written questions, the insurer cannot later rely on the fact that: a) some questions remained unanswered; b) circumstances which were not the subject matter of a question have not been disclosed; or c) an obviously incomplete answer was given to a general question, unless the applicant has acted with intention to deceive the insurer.

2) The insurer cannot rely upon inadequate or defective answers to the questionnaire unless they were supplied deliberately by the policyholder.

The above legal provisions are imperative, thus if a parties agree otherwise such provisions of their agreement would be null and void.

In **Italy** under headings like “INFORMATION ON OCCURRENCES AND PREVIOUS INSURANCE” you may find questions as:

“Over the last five years there have been circumstances and consequences that have been given place third parties for claims for damages or prejudices resulting from the pollution of the environment caused by the activity carried out?”

“Over the last five years there have been circumstances and consequences that have given rise to complaints of violations of laws, regulations or standards concerning the protection OF THE ENVIRONMENT?”.

A prior survey is the most commonly adopted approach in **Japan**.

The insured has the pre-contractual duty of utmost good faith and the obligation to disclose every material circumstance which the insured knows or ought to know and respond to the respective questionnaire of the insurance company in **Mexico**. The disclosure must be written following the form provided by the Insurer.

In **South Africa** they are disclosures of nature of risks; potential increase in risks; compliance with statutory requirements; disclosure of EIAs; financial status and competency.

The insurance companies in **Turkey** do not choose to prepare their own General Conditions and Terms. Although in Article 11(1) of Code on Insurance, the clear wording of the provision is stated that the main contents should be the Insurance General Conditions prepared by the insurer and approved by the Undersecretariat, the legislator has made it possible to open the general conditions (controlled via approving), into negotiations and change them with the

"special conditions", if the business characteristics necessitates. In other words, the terms of the general conditions are reversible, with the condition of not being contrary to the mandatory law.

Although the supervision power given to the Undersecretariat of Treasury in terms of contract law is limited with "approval" ; the Undersecretariat of Treasury, itself, actually became a drafter and an approver since the insurance companies do not prepare individual Insurance General Conditions. Both the "approval" and additionally the "regulator", which it created by itself, actually leads to an excessive supervision over the "general conditions of insurance", going beyond the vision and will of the Code on Insurance.

The contents of the reinsurance contract by the foreign reinsurance company, are inevitably presented without making negotiation to the insured under the term "special condition" in the insurance contract. In today's insurance practice, insurance coverage is not provided unless reinsurance is provided, i.e. the insurance company gets the coverage first, and then provides the coverage. For this reason, the related reinsurance contract, willingly or not, affects the insurance contract in terms of the content.

Special conditions of the insurance agreement differ from one to another. However insurer is under obligation to inform the communication information of itself and its agency, general warnings related to the insurance agreements, coverage given by the agreement, excluded risks by the insurance agreement and additional values that may be covered through an additional agreement, general information on the compensation and rules governing the payment of compensation and finally demands of complaint and information and information on the arbitration membership (Regulation on Enlightenment in Insurance Agreements).

In **Uruguay** the most common are those related to technical-preventive elements, in order to evaluate the eventual requirement of additional insurability requirements.

Section 4:

4. Coverage under pollution insurance:

4.1. Which are the major covered risks relating to civil liability arising from pollution?

In **Australia** the major covered risks include (i) sudden and accidental events that cause environmental harm for first and third party; (ii) gradual contamination (such as a slowly leaking

tank) for first and third party; (iii) fines and penalties for non-compliance; (iv) legal costs. Some policies are also including cover for injury to persons caused by the contamination event.

In **Austria** the major covered risks are (i) liability due to environmental disturbance (impairment of the quality of air, soil or water by emissions), which led to Personal injuries or Property damages and (ii) obligations under public law incurred by the policyholder due to the remediation of environmental damage pursuant to the Federal Environmental Liability Act or other statutory provisions in implementation of the Environmental Liability Directive RL 2004/35/EG) due to (a) Damage to protected species and habitats, (b) Damage to of air quality in the event of environmental disturbance, (c) Damage to soil quality in the event of environmental disturbance, and (d) Damage to water quality in the event of environmental disturbance.

The main risks covered in **Bolivia** would be repairs and environmental clean-up and in **Brazil** are the risks of soil and surface/groundwater pollution.

In **Chile** the major risks covered are liabilities for environmental damages, cost of cleaning, defenses, fines, moral damages.

In **Colombia** the policies of environmental liability cover damages to the insured Property, losses caused to third parties, legal costs and pure environmental damages in some policies.

In **Finland** the cover bodily injuries and property damage including the financial loss to the same suffering party.

As previously described, the insurance cover in **Germany** is extended under the terms and within the scope of the insurance contract to the legal liability according to private law of the insured person as a result of personal injury and property damage caused by environmental impact. Furthermore, financial losses are covered that were caused by the violation of appropriation rights, the right to an established and operating business as well as user rights or authorities granted under water legislation.

Because the insurance coverage for civil environmental liability is defined very broadly, the question is less which risks are covered, but rather which ones are not. Hence, ELI policies regularly provide a set of exclusion clauses that restrict the insurer's contractual performance promise. Among the most important are the exclusion for so-called "spilling damages" that relate to handling water-polluting substances as well the exclusion for damages arising from normal operation. Apart from that, as already indicated, the exact extent of the covered risks always

depends on the “risks components” in relation to specific installations that are agreed under the ELI policy.

The major covered risks in **Greece** for third party liability environmental insurances are: bodily injury, property damage, clean up expenses including the cost of rehabilitation / fixing the property that was damaged during the cleaning, costs of remediation of water or land, legal defense expenses.

In **Italy** operators can insure themselves against environmental incidents and/or damage in the following two ways: (i) through a dedicated policy for pollution damage (that is, a "stand-alone policy" (RC Inquinamento)), or (ii) through the extension "accidental pollution" on a general liability insurance policy (RC Generale).

The stand-alone policy, although not widely available in the market, provides more advantages than the general liability policy because in principle it can cover all of the following: (i) any kind of environmental liability, including for damage caused in the absence of negligence or fault of the operator and for the legal expenses and the costs spent by the insured operator to assess the causes of the damaging event for the purpose of excluding its liability, (ii) the damages suffered by the operator in addition to damages suffered by third parties, and (iii) the specific environmental liability of the insured operator, which can be claimed by the state under Article 300 of the Legislative Decree no. 152 of 3 April 2006 (Italian Environmental Code).

However, the general liability policy usually only covers damages to third parties as a consequence of certain specific events listed in the policy (for example, breakdown of plants or pipelines) caused by the negligence of the insured operator, and the maximum insured amount is often not enough to cover the entire damage.

Risks covered under environmental insurance in **Mexico** include: (i) third parties for environmental damages, including bodily injuries and remediation, (ii) catastrophic events, (iii) breach of environmental obligations and contracts, and (iv) environmental damages, including sudden and accidental events. Coverage also includes the following costs: clean-up, restoration, legal costs, crisis management consulting and business interruption.

In **Poland** the coverages are the liability for damage resulting directly or indirectly from the emission, leak, release or other form of penetration of any hazardous substances into the air, water or land

As mentioned before, in **Portugal** we are dealing with Environmental insurance and not strictly pollution insurance. Some pollution insurance covers remain, as an extension of General Liability policies, but they have a very different – much more limited – scope than that of DL 147/08.

On the **Russian** market pollution insurance can be covered in the following ways:

1. It can be included in the scope of cover of existing insurance policies. For instance the Third Party Liability insurance policy may include the environmental liability extension. The same approach can be applied to other insurance policies.

2. The separate tailored Environmental Impairment Liability (EIL) cover. This is a complex insurance product covering different risks of the company due to damage to the environment.

This product covers first Party Loss (clean-up of the site; BI due to the pollution; legal costs; consultancy costs) and third Party Loss (damage to the environment (air, water, ground, flora, fauna); damage to third parties (life/health/property damage).

In **South Africa** surface water and groundwater pollution is the most prevalent coverage; then soil pollution; soil subsistence and soil erosion risks; and to a lesser degree air pollution (seldom for damages, more often only clean-up and restoration costs). The latter resulting mostly from the problems in proving causation for purposes of a civil claim.

The major covered risks relating to civil liabilities in **Taiwan** are bodily injuries, deaths, cleaning expenses and business interruptions arising from the pollutions.

In **Turkey** the major covered risks are medical costs, financial costs (including cleaning costs, carriage and removal of wastes etc.), death or disablement of third persons are frequently covered risks relating to civil liability arising from pollution. See 2.3.1 above for each type of insurance covering environmental pollution damages.

In basic terms, the following risks are covered in the **United Kingdom**:

- (i) Tort liabilities arising from pollution conditions;
- (ii) Statutory clean up liabilities arising from pollution conditions; and
- (iii) Biodiversity damage liabilities.

To be covered, risks usually have to present in connection with:

- (i) Specific locations;

(ii) Specific covered operations; or

(iii) Transportation activities.

The main risks covered in **Uruguay** are specific damages to people and property. The damage to an element of the environment could be covered if it is a sudden, unforeseen or accidental damage.

4.2. Which are the major covered guarantees for events arising from pollution?

Policies in **Australia** do not generally cover guarantees or warranties as a general cover under environmental impairment policies, however many insurers are working closely with insureds to develop policies that respond to specific risks in the environmental space.

In **Austria** the major covered guarantees are (i) fulfilling the costs of obligations under public law, (ii) reimbursement of costs for rescue measures, and (iii) coverage of the costs in case of claims due to the liability for environmental disturbance.

There are no express guarantees under insurance policies in **Bolivia**; nevertheless, there may be insurance policies that are subrogated to third parties such as the contractors, and they become some sort of guarantees.

In **Brazil** the major covered guarantees are the warranties involving the coverages of cleaning costs and expenses of pollution, and also the coverages of pollution related to wastes generated by Insured Persons and intended to third-party's places (landfills, for example), in addition to the Costs of Defense related to such coverages.

As a civil liability insurance, the ELI in **Germany** covers the examination of the liability question, the defense against unjustified claims for damages as well as the indemnification against justified claims for damages. Furthermore, the insurer is obliged to compensate costs incurred before the occurrence of the insured event in order to avoid or to mitigate an otherwise unavoidable personal injury, property damage or insured financial loss. A condition for this is, however, that these expenses result from an operational disturbance or from an administrative order.

This issue has not been regulated in the **Greek** legislation. It is not habitual in Greece to request guarantees for events arising from pollution.

In **Israel** most policies shall provide cover for mental anguish, distress which includes infringement of the autonomy of the free will.

In the event that the company does not warn a particular risk of pollution, the requirement should be limited to the purchase of the pollution liability extension provided for the civil liability contract in **Italy**. It covers damages caused to third parties as a result of death or personal injuries, direct or material damage to property, interruption or suspension of industrial, commercial, agricultural or service activities, and, in general, the impossibility of using the goods that are in the affected environment, whether due to an accidental fact, that is, an abnormal and sudden event.

In the possibility instead of using an autonomous coverage dedicated to the risk of pollution, it is possible to activate a cover, with a dedicated ceiling, aimed at ensuring the enterprise against sudden, accidental and even gradual release, in the long run, of polluting substances.

It is also possible to extend these policies to cover:

- remediation and restoration costs, both within and outside the company site;
- damages caused by the interruption of the activity (also of the insured itself);
- harm to the environment;
- advertising and communication costs, often entrusted to specialized companies;
- post-remedial monitoring costs to check that the pollutant values remain under control.

We can also mention the following insurance products:

> RC inquinamento accidentale (civil liability for accidental pollution)

This insurance policy keeps the insured person indemnified from and against all liabilities for damages that he or she is obliged to pay as a result of claims filed for the first time against him during the policy period (claims made model) resulting from pollution events initiated after the date of coverage. The definition of damage includes, in addition to bodily injuries and material damage, legal fees and neutralization costs and security charges. Policies offered by some insurance markets also cover from pollution damage within the site (possibly up to the limit of the ceiling) and offer the possibility of extending the coverage even to radioactivity events.

> RC inquinamento graduale (civil liability for gradual pollution)

This policy, very similar to the version for accidental contamination, with which it often forms a common policy object, covers potential and future liability associated with pre-existing

contamination. The Insurer undertakes to keep the Insured free of liabilities for damages that he is obliged to pay because of pollution events that are initiated before the date of the policy. Also for this type of coverage it is possible to cover the costs incurred by the Insured for the restoration of the site.

> Responsabilità per inquinamento a carico dell'appaltatore (contractor's responsibility for pollution)

This coverage has been designed to provide liability protection for contractor activities (including asbestos removals), both when they come from new cases of pollution and when the extension of contaminations is already in place. Coverage may be extended to damages related to disruption of work, such as costs resulting from the delayed delivery of a work in the case of projects under construction.

> Responsabilità per danni ambientali a seguito di inquinamento pregresso (Responsibility for environmental damage as a result of previous pollution)

Environmental damage coverage can provide protection for potential liability related to pre-existing pollution from past activities, both for the benefit of the polluter enterprise and for the current owner of the site, as well as for a builder and/or buyer who has inherited the risk within a sales contract. The insurance cover may refer to the remediation costs on its own site or to the reclamation required for damage to third parties, material or corporal damage caused by the pollution, and the legal defense costs deriving from the accident. Policies can provide durations of the contract up to 10 years.

> Costi "certi" per operazioni di bonifica (Remediation costs)

These insurance programs can be structured in order to provide protection against unexpected and outside the budget costs in clean-up projects of polluted sites. Coverage for certain costs mitigates financial risk by providing funds to complete the project in case of overcoming the estimated costs caused by accidental events such as a more extensive or rooted pollution degree. Insurance can be combined with sophisticated funding techniques to help the company make the best use of its financial resources.

Contractual Pollution Liability Insurance in **Mexico** serves as guarantee in case of any breach to any of the environmental obligations under a specific contract or project.

In **Poland** the additional clauses to the general terms and conditions of the entrepreneur's civil liability insurance are the most popular form of including the risk of damages to the environment in the insurance activity of the Polish insurance companies.

Significantly, the separate insurance agreements concerning pollution of natural environment (the so-called stand-alone coverage), can be found in the portfolios of the insurance companies, operating in Poland on the basis of the principle of freedom of establishment.

The use of the environmental guarantee by one of the insurers, which uses the less popular type of insurance operations, that is the insurance guarantee contract can be considered a positive symptom. The subject of the environmental guarantee is the obligation of the insurer to pay an amount specified in the guarantee, when the entity, on the request of which the guarantee was granted, did not remove the negative effects in the environment, caused by the conducted activity or which - despite the written request for payment - did not entirely or partially pay claims resulting from the costs incurred with reference to the remedying of the damage to the environment within the specified period of time . The environmental guarantee is the legal security of receivables of the Treasury represented by the environmental protection authority.

The answer to the demands of the market is the insurance, the aim of which is the supplementation of the protection guaranteed by the common civil liability motor insurance. The damages to the environment caused during the transport of harmful substances are excluded from the statutory extent of coverage of those insurance

The insurance which are in the portfolio of one of the Polish insurers are to fill that gap, and are addressed at entrepreneurs who transport harmful substances. They allow the insurer to cover the costs defrayed by the perpetrator of the accident for clearing the damaged area - performed by a specialized entity, which often reach high amounts.

In **Taiwan** there are no guarantees for events arising from pollution.

Turkish Insurer undertakes to cover guarantee of death, guarantee of disablement, guarantee of medical costs, guarantee of material loss, guarantee of carriage and removal of wastes and guarantee of cleaning are the major covered guarantees for events arising from pollution. See 2.3.1 above for each type of insurance covering environmental pollution damages.

4.3. Which are the major covered operational risks arising from pollution?

In **Australia** the major covered operational risks arising from pollution are (i) site rehabilitation for the first party and any third party; (ii) emergency response and recovery; (iii) legal costs; and (iv) media management and stakeholder engagement assistance (to manage business reputation risks).

The major covered operational risks arising from pollution in **Austria** are (i) operation of installations which, due to their environmental hazard, require a permit (risk of pollution of surface and groundwater, soil and air); these include in particular so-called IPPC installations as well as landfills and waste disposal facilities, and (ii) any type of activity relating to substances dangerous for the environment (especially chemicals, plant protection products and biocidal products, waste and genetically modified organisms).

Some policies in **Bolivia** may cover operational risks; however, this is not a general common policy.

The industrial risks in **Brazil** of industrial plants of the most different sectors of the economy, such as chemical, metallurgical, automotive industries, power generation, among others are the major covered operational risks arising from pollution.

In **Finland** the major covered operational risks arising from pollution are bodily injuries and property damage including the financial loss to the same suffering party.

As already mentioned above, operational risks are not covered as far as they result from “normal operation” in **Germany**. This exclusion refers to damages arising from environmental impacts which are necessary and accepted to sustain normal operation. It is often regarded as unsatisfactory in the view of policyholders because it leads to a significant coverage gap. However, the reason for this exclusion clause is that normal operational risks shall be borne by the operator of an installation on the one hand and that the risk assumed by the insurer shall remain calculable on the other hand.

The major covered operational risks in **Greece** are fully or partly interruption of operations, temporary or permanent, and the respective profit loss and covering of damages to the operations. A recent example of a profit loss was temporary interruption of operation of a) fishermen and b) numerous restaurants and cafés located at the coast and beaches polluted after the September 2017 oil spill in Athens’ Argo-Saronic gulf.

Policies in **Israel** shall cover class actions filed for mental anguish and infringement of the autonomy of the free will.

Environmental risks and associated third-party responsibilities have never been such a threat to the businesses' financial stability in **Italy**. Different factors – for example a related increasing legal sensitivity, high costs for businesses, investors, buyers and sellers' needs for a good management both of the environmental factor and its risks management, an increased awareness and perception of environmental problems – are the driving force behind pressure to properly assessing and managing environmental risks. Activities interested in insurance solutions for environmental risks:

- Manufacturing Industrial Facility
- Stockpiling Area and Warehouse
- Industrial Waste Treatment and Waste-Disposal
- Disused and/or Convertible Industrial Areas
- Real Estate and Private Equity Companies
- Dredging and Reclamation Companies
- Commercial and Residential Sites
- Companies Dealing with Acquisitions and Mergers
- Companies Dealing with Problems bound up with Verified Responsibilities
- Companies Dealing with Implementing Dredging and Reclamation Activities on Their Own Areas

In recent times, environmental issues have been becoming more and more important: they are both subject of debate and source of concern for legislators and public opinion. Industrial activities can badly impact on natural resources and biodiversity: in consequence, new requirements entail introducing strict regulations in order to make some environmental management measures mandatory, penalizing polluters.

Pollution hazard exposes enterprises to civil liability. This aspect became more important with the adoption of Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage. This Directive introduced a keynote: polluter is

required by the law to take corrective measures or to pay a financial compensation for repairing the environment damage caused to the environment and to the community.

In solving major environmental issues for the enterprises, it is necessary to adopt sophisticated risk management techniques, by using appropriate/well-chosen insurance tools and/or by using alternative risk financing mechanisms. Insurance is a key aspect and plays a leading role in managing environmental risk.

Sudden and accidental coverage is an operational risk covered in **Mexico** usually under catastrophic coverage. Gradual spills and slow leaks are usually covered under non-catastrophic coverage.

In **South Africa** they are mining, power plants both coal and nuclear; waste management, water sanitation, and the storage and transportation of hazardous goods form the major operational risks. Chemical manufacturing processes may also contribute to air and soil pollution, but to a lesser degree.

The major covered industry in **Taiwan** would be the petrol stations.

Operating risks are usually not covered by the specific pollution policy in **Uruguay**. The company can have insurance against all operational risk due to the company's usual operations, which usually excludes the risk of environmental damage

4.4. Does the insurance cover fines?

In **Australia** and in the **United Kingdom** it only covers civil penalties. Criminal penalties are excluded.

The insurance does not cover fines in **Austria, Bolivia, Brazil, Colombia, Finland, Germany, Greece, Israel, Italy, Japan, Mexico, Poland, Portugal, Russia, South Africa, Taiwan, Turkey and Uruguay**.

In **Chile** the insurance covers fines.

In **New Zealand**, these all depend on the product:

- Generally, environment insurance offers companies a solution to regulatory obligations, contract/ lender/ landlord requirements, shareholder needs and board of director objectives;

- gradual, sudden and accidental pollution releases, on and off-site clean-up costs and third- party bodily injury and property damage claims;
- reimbursement for the restoration or remediation of damaged natural resources, habitats and species;
- Ordinary negligence;
- Breach of by-law, statute, or regulatory obligation;
- Usually liability of the insurer is capped up to \$30m, but clean-up costs can exceed this;
- Insurers limit coverage over mandatory work orders in abatement notices and/or clean up requirements;
- Insurance liability for clean-up work should be uncapped, policies scrutinized.

4.5. Is there coverage for individual moral damages, being understood as such any physical or psychological suffering experienced by the victim and/or injury against his/her honor or personality?

In **Australia** “moral” damages for injuries to feelings/honor/personality are not recognized. Damages for hurt feelings or humiliation or distress are usually included in the overall damages awarded, such as general damages for pain and suffering, compensation for hurt feelings and stress in defamation cases, compensation for hurt and humiliation experienced by employees in sexual harassment cases, and compensation for distress, hurt and humiliation for wrongful termination cases. Although the operation of each policy depends on the liability that it covers, it would not be typical for liability for compensation resembling “moral damages” to be covered or under an environmental/pollution policy. Liability to pay compensation for injury is more typically covered under a general liability policy.

In **Austria** there is coverage, but only within the framework of (immaterial) personal injury (= in conjunction with killing, personal injury or harm to people's health.)

Most policies do not cover this type of risk in **Bolivia** and in **Finland**. The same situation occurs in **Italy, United Kingdom and Uruguay**.

All policies of the **Brazilian** Market provide coverages for individual moral damages, when caused by events of environmental pollution.

In **Chile** there is coverage and in **Colombia** there is coverage with a sublimit, whenever the moral damages arise out of physical direct damage covered by the policy.

As described above, the ELI in **Germany** covers, inter alia, the civil liability of the insured person as a result of a personal injury. Hence, the insurance does not only cover the immediate personal damage, but also all consequential damages that are traced back “adequately causally” on the injury sustained. This also includes damages for pain and suffering which can be claimed according to Sect. 253 para. 2 German Civil Code and – as far as environmental liability is concerned – to Sect. 13 sent. 2 ELA.

Persons who suffered damage may, in compliance with the **Greek** Civil Code, claim all types of damages, including the moral damage, from the person that caused such damage by breaching of the law and who is liable for the breach (subjective liability). Thus an insurance contract may cover this risk in case of environmental damages as well. The habitual risks covered in Greece are those of bodily injury and property damage, caused by pollution conditions, as well as business closure costs due to pollution condition

Japanese tort law recognizes consolation payments as a form of compensation for damage caused by psychological distress etc. In other words, in some cases damages subject to insurance payment may include damages such as those caused by psychological distress etc.

Moral damages may be covered in **Mexico**. Usually it is excluded from the general coverage unless a special endorsement is added including this coverage.

ACC in **New Zealand** bars personal injury civil claim lawsuit, potentially a claim could be made to ACC for physical or psychological suffering by an individual. Potentially exemplary damages at common law for conduct that needs to be punished could be brought as a class action for a group of victims (difficult remedy as have to go beyond gross negligence or recklessness standard). No punitive damages available under RMA 1991 for damage to environment but conduct considered with sentencing/remedy

There is coverage for individual moral damages in **Poland, Portugal, Russia and Taiwan**.

In **South Africa** there is no coverage as a general rule. There may, however, be cover for personal injuries such as occupational health and injuries in the mining sector (i.e. asbestosis) which could indirectly cover injuries that lead to an infringement of dignity; or in the case of an enterprise, and reputational issues etc.

Individual moral damages are excluded from the coverage of specific insurance policies in **Turkey** (General Conditions of Coastal Facilities' Compulsory Financial Liability Insurance on Marine Pollution A.5; unless otherwise agreed by the parties of insurance agreement, General Conditions of Financial Liability Insurance on Environment Pollution A.6; Compulsory Liability Insurances for Dangerous Goods Tariff A.4). Rest of the insurance general conditions examined above in 2.3.1 do not clearly exclude the coverage of moral damage in the insurances that they provide.

4.6. Is there coverage for collective moral damages, being understood as such any moral injury undergone by a group of certain persons who are interconnected by a fundamental legal relationship or by a same event experienced by all of them, or any injury to non-determinable trans-individual rights?

In **Australia** “moral” damages for injuries to feelings/honour/personality are not recognised. Damages for hurt feelings or humiliation or distress are usually included in the overall damages awarded, such as general damages for pain and suffering, compensation for hurt feelings and stress in defamation cases, compensation for hurt and humiliation experienced by employees in sexual harassment cases, and compensation for distress, hurt and humiliation for wrongful termination cases. Although the operation of each policy depends on the liability that it covers, it would not be typical for liability for compensation resembling “moral damages” to be covered or under an environmental/pollution policy. Liability to pay compensation for injury is more typically covered under a general liability policy.

The following countries do not offer for collective moral damages: **Austria, Bolivia, Chile, Colombia, Finland, Germany, Greece, Italy, Japan, New Zealand, Russia, Taiwan, Turkey, United Kingdom and Uruguay.**

In a recent movement (of 1 year for present times), Insurance Companies in **Brazil** are modernizing their clauses and starting to provide coverage for collective environmental moral damages.

Collective moral damages may be covered under catastrophic coverage in **Mexico**. Usually it is excluded from the general coverage and is only covered when a special endorsement is added including this coverage.

There is cover for moral damages in **Portugal**, as foreseen by law, but only in the case of civil liability, so a collective action would only be possible in the case of several injured parties as a consequence of the same event.

In **South Africa** cover might be for a group such as all mine workers suffering from asbestosis; or all farmers in an agricultural area who suffer losses due to water pollution by another enterprise or industry. Yet, the lack of aesthetic appeal, moral damages etc. is not a risk covered by most environmental policies.

4.7. Is there coverage for punitive damages, being understood as such any penalty levied on the agent of the illicit conduct, in addition to the compensation of damages themselves?

In **Australia** there is no bar to the insurability of punitive damages. As a general approach, however, policies usually exclude cover for punitive damages.

There is no coverage for punitive damages in **Austria, Bolivia, Brazil, Chile, Colombia, Finland, Germany, Greece, Israel, Italy, Japan, Mexico, New Zealand, Poland, Portugal, Russia, South Africa, Taiwan, Turkey, United Kingdom and Uruguay**.

Section 5:

5. Beneficiaries:

5.1. Who is entitled to be beneficiary of losses recoverable under pollution insurance? Any individuals, legal entities, state-owned or private institutions, collectivities?

At this point in time, only named policy holders in **Australia** can recover under environmental policies. However, there is consideration at the moment regarding the ability for environmental insurance policies to be able to be claimed against by the regulators, so that in the event of an environmental incident, the regulator is able to make a claim against the insurance policy held where the proponent fails to do so (commonly, in instances of insolvency). This is a big issue at a regulatory level at the moment, and there is work being done to consider how policies can respond in this context.

In **Austria** the beneficiaries are partly the state, that had to undertake redevelopment measures, partly the owner of the polluted land, partly the damaged persons.

Pursuant to current coverage, in **Bolivia** the State through local governments which at the moment of the approval of the Law, were known as Prefectures, have become the entities in charge of establishing sanctions and environmental obligations or liabilities. The law also acknowledges the participation of other public and private entities, and even those known as Territorial Base Organizations (OTB's) under different limitations.

From the point of view of the insurance, it is not clear yet who are the beneficiaries of an environmental insurance in **Brazil**. Analyzing the traditional aspect of the civil liability, beneficiaries are third-parties, individual. In this case, the reflective environmental damages that affect individuals should have indemnifications inured for the benefit of the own damages individual, according to its losses.

However, as to the third-party definition, including for purposes of understanding of the range and of the beneficiaries in the insurances of environmental civil liability, within the scope of the environmental risks and of the diffuse injuries, receive own outlines and very special regarding the resizing of the injured third-party in the environmental civil liability, especially with regard to the damages to natural resources, loss of the environmental quality and diffuse non-property environmental losses. The third-party, beneficiary of the insurance, shall be the collectivity, not customizable.

Thus, the solution, by speculation, will undergo the adhesion to the general system of environmental protection of diffuse rights, with conversion of indemnifications to Environmental Damages Recovery Funds, or equivalents, that in Brazil has compensatory nature, that is, funds resources are intended to recovery, protection and environment preservation projects, not necessarily interconnected to the activity that gave rise to the environmental damage. On the other hand, there is the possibility, in a procedural perspective, of imposition, to the insured person that has caused an environmental damage, of specific measures (obligation to do) to recover the environmental damage directly caused.

Therefore, beneficiary will be the holder of the right or interest of the environmental property that had its quality reduced (damages to natural resources, loss of environmental quality and diffuse non-property environmental damages) and, being such holder the community, its defense

will be made by those that have procedural capacity and legitimacy, as already previously pointed out (item 1.5 above).

For environmental damages, the state (Consejo de Defensa del Estado) will be entitled in **Chile**. For moral damages, and personal damages, each person would be the beneficiary.

In **Colombia** the damages to the insured property are paid to the insured. For consequential environmental damages, the beneficiaries are the individuals that suffered the damage.

In **Finland** the beneficiaries are individuals, legal entities, state-owned or private institutions, collectivities. However, according to the Insurance contract act the policyholder of the liability policy has the right to use or not use his/her insurance. In case of insolvency, authorities' requirement or use in the marketing, the claimant gets the direct action right against the insurer.

Since the ELI in **Germany** is a civil liability insurance contract, the insurer's promised benefit is understood as the exemption from claims raised by the damaged party. This means that the damaged party cannot directly sue the liability insurer for compensation, but rather has to claim against the damaging party. Nevertheless, the damaged party receives the recoverable compensation in practice directly from the liability insurer who fulfils his contractual obligations towards the policyholder this way – always provided that the policyholder's liability is covered by the ELI contract in the individual case.

According to the PD in **Greece** the competent public authorities should receive prevention and remediation costs or refunding, in case such authority has undertaken the works itself or by engaging a third person. The prevention / rehabilitation costs will be used only for this purpose, not for the compensation for damage caused to third persons.

Any of these subjects (individuals, legal entities, state-owned or private institutions, collectivities) may potentially be entitled in **Italy**. The concrete beneficiary will depend from the wording of the policy.

In **Japan** the beneficiary is the insured party who collects insurance money. In other words, in many cases, it is the party who caused the pollution. Yet, there are also policies which include contractual clauses on direct claims, whereby the victim can claim insurance money directly from the insurer.

The authorities and any party suffering damages may be appointed as beneficiaries in **Mexico**. Under the ASEA Rules, any payment of insurance should be included in a special Trust for purposes of restoring the environment.

In **New Zealand** the beneficiary is the prosecuting authority or applicant.

In **Poland** the beneficiaries are individuals, legal entities, state-owned or private institutions, State Treasury, local government units, ecological organizations.

In the case of administrative liability, the environment itself is the beneficiary of indemnity in **Portugal**. This means that preventive and remedial measures will have to be taken at the expense of the operator who is responsible, and they will be coordinated by the competent authority. However, intervention of the authority, or notification of imminent or effective damage may be required by a number of entities, considered to be “interested parties”. The law defines these “interested parties” as anyone who may be affected or have an interest related to the damage or imminent threat in question, or claims there has been a violation of a legitimate interest protected by law. In the case of civil liability, the individuals or entities suffering losses, as established in the Civil Code.

In **Russia** the beneficiaries are the suffered parties. For third party damage – suffered individuals and legal entities, and for first party damage – the insured. As per damage to the environment – State authorities are the beneficiaries.

Beneficiaries in **South Africa** can be any individuals, legal entities (juristic persons such as companies), state-owned or private institutions, collectives such as traditional ethnic groups who collectively utilize land.

In **Taiwan** it could be any individuals, legal entities, state-owned or private institutions.

All the beneficiaries whose losses recoverable under pollution insurance are listed in accordance with the legislation governing the compulsory application of the specific insurance coverage in **Turkey**, as detailed below:

CLC 92 Insurance Coverage: Person means any individual or partnership or any public or private body, whether corporate or not, including a state or any of its constituent subdivisions (CLC 92 art. I, para.2).

BUNKER Insurance Coverage: Person means any individual or partnership or any public or private body, whether corporate or not, including a state or any of its constituent subdivisions (BUNKER Convention art. 1, para.2).

Financial Liability Insurance Tariff and Directive on Maritime Passenger Transportation: Damaged person means passenger who suffers damage that requires compensation demand or third person that does not travel in the insured marine vehicle however damaged because of the accident or person who is destitute of support of the dead (A.2).

Third Party Financial Liability Insurance Tariff: All damaged third persons (art.1).

Compulsory Liability Insurances for Dangerous Goods Tariff: All damaged third persons.

Insurance Coverage Tariff Against Maritime Claims: Owners of the below placed maritime claims which are determined in art.2 of LLMC 76:

- (a) claims in respect of loss of life or personal injury or loss of or damage to property (including damage to harbour works, basins and waterways and aids to navigation), occurring on board or in direct connexion with the operation of the ship or with salvage operations, and consequential loss resulting therefrom;
- (b) claims in respect of loss resulting from delay in the carriage by sea of cargo, passengers or their luggage;
- (c) claims in respect of other loss resulting from infringement of rights other than contractual rights, occurring in direct connexion with the operation of the ship or salvage operations;
- (d) claims in respect of the raising, removal, destruction or the rendering harmless of a ship which is sunk, wrecked, stranded or abandoned, including anything that is or has been on board such ship;
- (e) claims in respect of the removal, destruction or the rendering harmless of the cargo of the ship;
- (f) claims of a person other than the person liable in respect of measures taken in order to avert or minimize loss for which the person liable may limit his liability in accordance with this Convention, and further loss caused by such measures.

General Conditions of Financial Liability Insurance on Environment Pollution: Damaged person means person who suffers damage that requires compensation demand or who is destitute of support of the dead (A.3)

General Conditions of Coastal Facilities' Compulsory Financial Liability Insurance on Marine Pollution: Owner of demand means person who suffers damage that requires compensation demand or who is destitute of support of the dead (A.2). Owner of demand in terms of General Conditions of Coastal Facilities' Compulsory Financial Liability Insurance on Marine Pollution can be also evaluated under OSRL application which means all persons (real persons and legal entities) who has right to demand compensation.].

As long as the claim is for one of the covered risks, the policy should respond regardless of the regulator or third party making the claim in the **United Kingdom**.

All those of whom could suffer specific damages to their person or property could be beneficiaries in **Uruguay**. In some cases, it has been foreseen that the State or the environmental agency will be beneficiaries. While the drive is legitimized on the basis of diffuse interests, among which the law specifically includes "questions relating to the defense of the environment" (see answer 1.5.2), there is no agreement in the doctrine on the possibility of making beneficiaries to the people or entities legitimized to represent such interests

Section 6:

6. Market status:

6.1. What is the percentage of participation of environmental insurance at the insurance market in its whole?

The insurance against environmental disturbance in **Austria** is part of the basic cover of the company liability insurance, so the percentage of participation at the insurance market equal to the participation of the general company liability insurance. The percentage of participation of the environmental remediation insurance is however quite low, because the underlying Environmental Liability Act is almost a dead law.

Current statistic available information, acknowledges only Civil Liability in **Bolivia**, which last year had a percentage of 5% in relation to General Insurance; out of this percentage it is very possible that only 2% of such insurance carries Civil Environmental Liability.

According to data of the Superintendence of Private Insurance – SUSEP, the participation of the environmental insurance in the **Brazilian** market is lower than 1%, considering only the property and liability insurances (therefore, disregarding life, pension and health).

There is no information on the percentage of participation of environmental insurance at the insurance market in its whole in **Chile, Colombia, Germany, Greece, Israel, Italy, Japan, Mexico, New Zealand, Poland, Portugal, Russia, South Africa, Taiwan, Turkey and Uruguay.**

The environmental liability for sudden and accidental pollution in **Finland** is included in the General Liability insurances. Thus, the penetration is close to 100%. For gradual pollution or for ELD liability the penetration is low.

There are no official numbers as the market information includes Environmental liability in the General liability branch in **Portugal**, but estimates are of 4 to 5% of the liability insurance market premiums.

The percentage is very low (<1%) in the **United Kingdom**. There are 14 carriers in London.

6.1.1 As regards the figures thereof, what is the yearly participation of premiums collected under environmental insurance?

There is no information available regarding the yearly participation of premiums collected under environmental insurance in **Austria, Chile, Colombia, Finland, Germany, Greece, Israel, Italy, Japan, Mexico, New Zealand, Poland, Russia, South Africa, Taiwan, Turkey and Uruguay.**

Pursuant to the information given by the Pension Control, Supervision and Insurance Authority in **Bolivia**, in 1996; out of \$us. 264.674.000 of total prime, the amount covered by Civil Liability was of 13.321.000 that includes some part of Environmental Civil Liability.

According SUSEP data, in 2016 it was collected 17 million Dollars in premiums in **Brazil**. In **Portugal** it was collected around € 5,5 – 6 M, in 2016 and in the **United Kingdom** £100m approximately.

6.2. Which are the sectors of economic activity that use to obtain environmental insurance?

In **Austria** they are industry, tradesmen, plant operators, and in **Chile** they are Mining, Oil, ocean carriers.

Those areas that most use Civil Liability Insurance in **Bolivia**, and in some cases on a mandatory basis, are Mining, Hydrocarbons oil and hydrocarbon transportation.

Many sectors use environmental insurance in **Brazil**, such as: chemical, metallurgical, automotive, pharmaceutical, storage of hazardous products, transportation of hazardous loads, energy (generation, transmission and distribution) and steel.

In **Colombia** they are contractors, clinics, food industry, textiles, plastics, logistics centers, storage warehouses, distribution and production of chemicals and oils, treatment and disposal of waste and refuse, production of biofuels, oils and mining.

In **Finland** all sectors obtain, but the significance varies widely.

The ELI model of the **German** Insurance Association does not contain a blanket coverage of all conceivable environmental risks. It rather covers – according to the above-mentioned declaration principle – specific risks components which are tailored to the needs of the individual policyholder and which have to be agreed separately. Hence, the customer group addressed by the ELI ranges from smaller agriculture holdings or gardening businesses to large facilities handling with environmentally hazardous substances.

In **Italy**, we can specify that 50 % are enterprises active in the Industrial Waste Treatment and Waste-Disposal. As the Regione Veneto has introduced a compulsory pollution insurance on waste disposal this 50% stems from the enterprises located in Veneto.

Sectors that contract environmental coverage in **Mexico** are mainly hydrocarbons, petrochemical, chemical, iron and steel, paper, sugar, cement, electrical, real estate developments, fishing and agricultural.

In **Poland** producers the sectors are heavy industry, chemical industry, petrochemical industry, producers - food industry, energy and gas suppliers, companies dealing with waste management, companies running construction projects, companies from the water and sewage sector, sewage works, companies dealing with waste management, retail trade, warehouses, transport and logistics companies, property owners, developers and tenants of the area, companies specializing in consulting and environmental engineering, oil and gas production (including shale gas).

Large multinational companies tend to write this insurance in **Portugal**, namely those with activities listed in Annex III. Among these, in the last year and due to an increase of inspections by the competent authority regarding compulsory guarantees, auto repair shops and transport companies have been looking for insurance solutions, so the number of insurance policies for these activities has increased significantly.

All activities that have the potential of posing a risk of environmental impairment in **South Africa** obtain environmental insurance, including manufacturing; storage; transport; power supply; mining and agriculture.

In **Taiwan** it is majorly the petrochemical industry, the electronics industry and the steel industry. Insurance firms, banks, insurance agencies and brokers are the mainly used people to obtain environmental insurance in **Turkey**. Hence according to updated official statistics hold in between 01.01.2017 and 31.03.2017; all the coverage for Financial Liability Insurance on Environment Pollution is obtained by the banks.

Owners and coastal facilities are the main people who use insurance firms, banks, insurance agencies and brokers in order to obtain environmental insurance. However for the sectors and persons who are not under obligation to act a compulsory liability insurance contract for environmental risk, there is not any statistics published on the web-site of Insurance Association of Turkey (www.tsb.org.tr).

In the **United Kingdom** they are waste management; energy and natural resources; real estate; heavy manufacturing; utilities; logistics.

Companies or large projects, in sectors such as pulp, energy, afforestation or mining obtain environmental insurance in **Uruguay**.

6.3. During the last 5 (five) years, what is the sum of losses paid by virtue of environmental damages?

There is no information available regarding the sum of losses paid by virtue of environmental damages in **Australia, Austria, Bolivia, Colombia, Finland, Germany, Greece, Israel, Japan, Mexico, New Zealand, Poland, Portugal, Russia, South Africa, Taiwan, Turkey, United Kingdom and Uruguay**.

Indemnified losses, by virtue of environmental damages in the last 5 years in **Brazil** have been in the amount of approximately 10 million Dollars.

This sums are normally private and are not well known by the market in **Chile**, nevertheless in the last pollution cases (involving more than 6.000 fishermen's, the total paid amount was USD3.000.000.-

In **Italy** the sum is approximately 75 million euros losses.

6.3.1. What percentage of the aforesaid losses was covered under insurance?

There is no information on the percentage of the aforesaid losses that was covered under insurance in **Austria, Chile, Colombia, Finland, Germany, Greece, Israel, Japan, Mexico, New Zealand, Poland, Portugal, Russia, South Africa, Taiwan, Turkey, United Kingdom and Uruguay.**

We only count on disasters covered by Civil Liability in general that in 2016 were of an amount of 21 % over total primes in **Bolivia**; surely less than half of that would correspond to Environmental Civil Liability, which in other words, would mean that on a total payment of 2.832.000; Environmental Civil Liability could only account for less than a Million US Dollars.

In **Brazil** the percentage of the aforesaid losses that was covered under insurance is an annual average of 20%, and in **Italy** it is below 10%.

Section 7:

7. Academic development

7.1 Are there research institutes focused on the study of environmental insurance? Please identify them.

There are no identified research institutes focused directly on the study of environmental insurance in **Australia, Bolivia, Brazil, Chile, Colombia, Finland, Germany, Greece, Israel, Italy, Japan, New Zealand, Portugal, Russia, South Africa, Turkey and United Kingdom.**

However, in **Bolivia** and in **Brazil** Aida was working parties focused on environmental law and insurance.

In **Austria** there is the Johannes Kepler University Institute of Environmental Law.

The **Mexican** Association of Insurance Companies (Asociación Mexicana de Instituciones de Seguros) (“AMIS”) is an association comprised by the main insurance companies in Mexico. Within its functions, AMIS carries out development and market studies regarding different type of line of business, including the environmental coverage. We approached AMIS to obtain information on the environmental insurance market and have been told they do not have any such information. Also, the National Institute of Ecology and Climate Change (Instituto Nacional de Ecología y Cambio Climático) (“INECC”) is a scientific research institute within the SEMARNAT. INECC’s mission is to contribute to the development, conduct and evaluation of national policy on climate change, green growth and sustainability through the development, coordination and dissemination of studies and scientific or technological research.

Due to the fact that insurance constitute an economic and legal category, the majority of research has been so far conducted by the representatives of economic sciences and management sciences in **Poland**. They dominate over the research conducted by the representatives of legal sciences. The analysis of the Polish literature indicates several interpretations of the issue of ecological (environmental) insurance. Hence, the close connection of the ecological insurance with the concept of ecological (or environmental) risk, crucial to the economic approach to insurance. Adopting a specified model of ecological risk taken over by the insurer determines the scope of the ecological insurance. The analysis of the Polish literature on the subject allows for several interpretations of that issue.

The first and broadest approach results from the concepts of ecological (environmental) risk, the source of which is found in all the interactions taking place between people and the remaining elements of the natural environment, including also in the interactions resulted from the impact of the natural forces not connected to the pollution - e.g. lightning, hurricane or hail. With such an understanding of the concept of ecological (environmental) risk, the elements of protection against the effects of the implementation of the environmental risk can be looked for in the structure of almost all the insurance conditions (so-called insurance products) available on the insurance market. The flaws of such a broad approach are contrary to the business practice and the idea of dividing the insurance into homogeneous groups, the objective of which is to precisely determine the object of the research (scientific approach) and management of the insurance activity (business approach). A moderate approach embraces the ecological (environmental) insurance of the civil liability for damages in the environment and property

insurance protecting against the effects of pollution. We should also take into consideration the view according to which the ecological insurance should include the administrative liability insurance for damages to the environment. It is controversial that the Polish insurance law regulations provide no bases for the functioning of such insurance. The moderate approach group can include also the supporters of including the personal insurance protecting the personal rights against the pollution risk into the ecological insurance. The narrowest approach to ecological insurance is limited to the civil liability insurance for damages to the environment and is in compliance with the current insurance practice in Poland.

The **Taiwan** Insurance Institute has been keeping an eye on the development of the environmental protections and the environmental insurances in cooperation with relevant parties such as the government, insurance associations and relevant institutes. There are also many scholars who are specialized in this area and do researches and publish reports.

In **Uruguay** there is the Center for Environmental Law (CDA-Uruguay) of the Faculty of Law (University of the Republic), <https://www.fder.edu.uy/cda>, and the Environmental Law Commission of the Uruguayan Bar Association (CAU), which is studying the issue of liability for environmental damage and insurance, <http://www.colegiodeabogados.org>.

7.2 Are there academic and scientific works produced in the fields of law, economy, environment or other similar area, that specialize in environmental insurance? Please indicate some reference legal manuscripts and books, and the main authors thereof.

In **Bolivia** the issue has been addressed in some energy conferences and insurance law conferences of AIDA BOLIVIA, but there is no institute or academic entity especially dedicated to environmental law.

Chile indicates the following:

1.- La responsabilidad por daño ambiental (Jorge Femenías)

2.- Civil Actions Arising from Environmental Damage in Act N° 19.300; Revista de Derecho de la Pontificia Universidad Católica de Valparaíso

XXIX (Valparaíso, Chile, 2do Semestre de 2007) [pp. 119 - 140] Álvaro Vidal Olivares.
http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0718-68512007000100003.

3. Jurisprudencia Ambiental. Casos destacados 2013-2014” (Editorial Metropolitana). Rafael Vargas Miranda.

Colombia sent the study called LA RESPONSABILIDAD EN MATERIA AMBIENTAL Y EL SEGURO DE RESPONSABILIDAD, written by Juan Manuel Diaz-Granados Ortiz, in which there are some references on the subject.

The following works can be mentioned representatively for specialized literature concerning **German** environmental liability insurance law:

- Armbrüster, Christian / Schreier, Vincent: “Aktuelle Rechtsfragen der Um-weltschadensversicherung”, Zeitschrift für die gesamte Versicherungswissenschaft (ZVersWiss) 2016, p. 3 et seq. (concerning the Environmental Damage Insurance)
- Beckmann, Roland Michael / Matusche-Beckmann, Annemarie (eds.), Versi-cherungsrechts-Handbuch, 3rd edition, Munich 2015 (§ 27 concerning the En-vironmental Liability Insurance)
- Hellberg, Nils: ELD implementation – Update on German developments, Brussels 2013 (document available at http://ec.europa.eu/environment/legal/liability/pdf/eld_meetings/German_insurance_update.pdf [as of November 22nd 2017])
- Hellberg, Nils / Orth, Markus / Sons, Jörg / Winter, Dietrich: Umwelt-schadensgesetz und Umweltschadensversicherung, Karlsruhe 2008 (concerning the Environmental Damage Insurance)
- Langheid, Theo / Wandt, Manfred (eds.): Münchener Kommentar zum Versi-cherungsvertragsgesetz, vol. 3, 3rd edition, Munich 2017 (chapter 330 concern-ing the Environmental Liability Insurance and the Environmental Damage In-surance)
- Späte, Bernd / Schimikowski, Peter (eds.): Haftpflichtversicherung, 2nd edition, Munich 2015
- Vogel, Joachim / Stockmeier, Hermann (eds.): Umwelthaftpflichtversicherung / Umweltschadensversicherung, 2nd edition, Munich 2009
- Wagner, Gerhard: “Umwelthaftung und Versicherung”, Zeitschrift für Versi-cherungsrecht (VersR) 1991, p. 249 et seq.

- Wagner, Gerhard: “Die Zukunft der Umwelthaftpflichtversicherung”, Zeitschrift für Versicherungsrecht (VersR) 1992, p. 261 et seq.
- Winter, Gerd: German Environmental Liability Law, Basic Texts and Introduction, Nijhoff/Graham & Trotman, Dordrecht 1994 (for an overview of German environmental liability law)

There is a rich publication material in the financial sector in **Greece**, dealing with the parameters and factors that may affect the general financial security sector. However, this material primarily focuses on the financial terms related to the structure of the insurance market itself. On the other hand, the subject of environmental insurance has not been addressed by numerous academics or legal researchers. Below is an indicative list provided for your convenience:

- Antigone Pinakidou, “Insurance of environmental damages”, dissertation submitted to Aristotle University of Thessaloniki, 2014.
- Zoi Theodorikakou, Insurance liability legislation, as interpreted in common law. Liber amicorum in honor of the ex-President of the Conseil d’Etat, Konstantinos Menoudakos, 2016.
- Theodoros Lytras, Environmental pollution and civil liability, Digesta, 3rd vol, 2003, available online at www.digestaonline.gr
- Ioanna Koufaki, The liability of the businesses that operate some activities due to environmental damage, according to EU and Greek national legislation, Nomikon Vima 2014, vol. 62, p. 2240.
- Ioannis Rokas, Insurance Law Essays³, 2014, p. 138 following, where it is suggested that the insurance of environmental liability could be regulated under article 23 of the Greek Insurance Law (L. 2496/1997)
- Ioannis Rokas, Private Insurance: Insurance Contract, Insurance Corporation and Distributors Law, Sakkoulas Publications, 200510.
- Kleoniki Pouikli, “Environmental liability pursuant to D 2004/35/EU – In the edge between innovation and inefficiency”, Dikaiosyni (Justice) 2015, vol. 1, p. 405 and “The principle of the one causing the damage is liable to restore the damage and the Environmental liability” Dikaiosyni (Justice) 2016, p. 427.

- Kyriaki Nousia, Environmental liability from sea petrol operations, Perivallon and Dikaio (Environmental Law), 2011, p. 74.
- Maria Mylona, Environmental insurance liability in the Greek legal system, Perivallon and Dikaio (Environmental Law), 2013, p.469.
- Miltiadis Miltiadou, Insurance e in Environmental liability, published by IAC (Insurance Association in Cyprus) 2008.
- Panagiotis Matzoufas, Danger in Environmental Law, Efimerida Dimosiou Dikaiou (Public Law Journal), 2013, p. 544.
- Renia Chatzinikolaou - Aggelidou, The relation between the insurance of environmental liability and the principle that the one causing the damage is liable to restore the damage” Liber amicorum in honor of Ioannis Rokas, p. 1007.
- Stavroula Pouli, The application of the D for the environmental liability in Greece (in theory and in reality, Dikaio syni (Justice) 2015, p. 32.
- Chrysoula Pechlivani, “Environmental liability insurance under D 2004/35/EU”, dissertation submitted to Aristotle University of Thessaloniki, 2014.

The office of the Cooperation for Dealing with Environmental Damages (SIGAPEZ) has published several very useful papers on the definition of the insurance of environmental liability and the liability itself, available on the website of the Ministry of Environmental and Energy, aiming to inform the public and the public sector agencies to ensure a better implementation of the PD 148/2009.

From the above mentioned papers, closer to the issue this questionnaire is dealing with are: Konstantinos Tsolakidis, “Financial security” and “environmental liability and Latest developments to the insurance market to provide the environmental liability products”; George D. Konstantinopoulos, Issue form the application of the compulsory financial and economic insurance in Greece; Margarita Karavasili, Application of the Directive for the Compulsory insurance on environmental liability, a tool to manage the environmental danger. SIGAPEZ’s review (October 2013) for the acquired experience on application of the environmental liability in Greece, pursuant to article 28 D 2004/35/EU.

Italy has pointed out the following:

> A. D. CANDIAN, Responsabilità civile per danno ambientale e assicurazione, in *La parabola del danno ambientale*, Milano, Giuffrè, 1994;

> D. DE STROBEL, Problemi di assicurazione del danno ambientale, in *L'impresa ambiente*, 1990, n. 4, p. 109.

> D. DE STROBEL, Il danno ambientale fra legislazione precedente e attuale, in *Diritto ed Economia dell'Assicurazione*, 2009, n.1, pp. 241-256;

> A. MONTE, Environmental Risk: A Comparative Law and Economics Approach to Liability and Insurance, 2001, 9, *Eur. Rev. Private L.* 51

Japan sent an attached list (I did not receive such list).

Below please find some examples of academic works on environmental insurance in **Mexico**, as follows:

(i) *Teoría y práctica de los seguros y fianzas ambientales* (Mayela García Vázquez, Adán Martínez Cruz and Carlos Rodríguez Castelán), (2004).

(ii) *La importancia del sector asegurador* (Adán Martínez Cruz y Carlos Rodríguez Castelán).

(iii) *Compulsory Insurance and Alternatives to Liability Insurance* (Michael Faure) (2003).

(iv) *Los seguros y fianzas como instrumentos de protección al medio ambiente* (Carlos Rodríguez Castelán).

(v) *La responsabilidad civil por contaminación del ambiente y su aseguramiento* (Arturo Díaz Bravo).

(vi) *El principio de la reparación del daño ambiental en el derecho internacional público. Una aproximación a su recepción por parte del derecho mexicano* (Tania García López) (2007).

The research initiated by D.Maśniak in the last decade of the 20th century, published in the monograph entitled *Ecological insurance (Ubezpieczenia ekologiczne)* constitute the starting point for more precise research in **Poland**, which take into consideration the current legal status and the current insurance practice. The legal barriers of the development of the ecological insurance, which although are noticed by the economists who study insurance relations, should be diagnosed with the use of legal methods. Literature:

Borys G., *Ryzyko ekologiczne i jego systematyka na gruncie teorii ubezpieczeniowej*, [w:]

Instrumenty rynkowe w ochronie środowiska, S. Czaja (red.), Jugowice-Wrocław 2002

Fiedor B., Economic Aspects of Ecological Liability and its Insurance, International Experiences and the Polish Case, <http://web.sfc.keio.ac.jp/~kgw/Research/JPJRP/ResearchPaper2003/Fiedor.pdf>,

Lemkowska M., Pojęcie szkody i odpowiedzialności prawnej jako podstawa kształtowania produktu ubezpieczenia środowiskowego, Przegląd prawa ochrony środowiska 2/2016,

Lemkowska M., Ubezpieczenia odpowiedzialności administracyjnej za szkody w środowisku – problemy prawne, Prawo Asekuracyjne 1/2013,

Maśniak D., Ubezpieczenia ekologiczne, Zakamycze 2003

Maśniak D., Obowiązek ustanowienia zabezpieczenia roszczeń z tytułu szkód w środowisku jako wyraz interwencjonizmu państwa na rynku ubezpieczeniowym, Tom 22- Prawne aspekty interwencjonizmu w gospodarce i środowisku, Gdańskie Studia Prawnicze, Gdańsk 2009

Maśniak D., Problematyka ubezpieczeń ekologicznych w świetle wybranych regulacji kodeksu cywilnego dotyczących umowy ubezpieczenia, Tom 21 – Studium z prawa prywatnego, Gdańskie Studia Prawnicze, Studia z prawa prywatnego, Gdańsk 2009

Maśniak D., Interes społeczny a przymus w ubezpieczeniach rolnych i ekologicznych, Tom 28- Studia prawnoadministracyjne, Gdańskie Studia Prawnicze, Gdańsk 2012

Maśniak D., Ubezpieczenia jako instrument zarządzania katastrofami spowodowanymi przez człowieka : perspektywa unijna, Prawo Asekuracyjne 3/2014

Panasiewicz A., Ubezpieczenia środowiskowe jako czynnik przyspieszenia przemian próśrodowiskowych, [w:] Ubezpieczenia wobec wyzwań XXI wieku, W. Ronka-Chmielowiec (red.), „Prace Naukowe Akademii Ekonomicznej we Wrocławiu” 2008, Nr 1197,

Żebrowska T., Ubezpieczenia ekologiczne a ochrona środowiska naturalnego, „Wiadomości Ubezpieczeniowe” 1997, Nr 3-4

The following works will be referred to in their original language in **Portugal**:

Maria José Freitas (2014). Metodologia de Aplicação da Responsabilidade Ambiental à Indústria Cerâmica Estrutural – Tijolos e Telhas. Dissertação incluída no mestrado integrado em

Engenharia do Ambiente, da Faculdade de Ciências e Tecnologias da Universidade Nova de Lisboa.

Alcides Pais Marques Mamede (2014). Responsabilidade ambiental aplicada ao sector dos resíduos sólidos urbanos: caso de estudo: Aterro Sanitário de Mato da Cruz. Tese de Mestrado em Cidadania Ambiental e Participação apresentada à Universidade Aberta (2014).

Clara de Almeida Couto e Valverde de Moura (2013). METODOLOGIA DE AVALIAÇÃO AMBIENTAL E QUANTIFICAÇÃO DE CUSTOS NO ÂMBITO DA RESPONSABILIDADE AMBIENTAL. Tese de Mestrado em Economia e Gestão do Ambiente. Faculdade de economia da universidade do Porto.

Fábio Miguel Pimenta Marques (2012). Avaliação do Risco Ambiental e Cálculo da Magnitude do Dano em ETAR. Dissertação para obtenção do Grau de Mestre em Engenharia do Ambiente. Instituto Superior Técnico.

Ana Salgueiro (2003). Development of a Framework to Support the Implementation of an Environmental Insurance System. Faculdade de Ciências e Tecnologias da Universidade Nova de Lisboa

Teses da Universidade de Lisboa e Católica

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2009 Repercussão do ato administrativo extinto na responsabilidade penal ambiental

Costa, Geyson Nunes da

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2011 Argumentos publicitários de defesa do ambiente

Sílvia, Alexandre; Horta, Ana

bookPart

30-Jun-2015 A responsabilidade ambiental no âmbito dos deveres dos administradores

Menezes, António Maria Côrte-Real de Magalhães

masterThesis

18-Jun-2013 Responsabilidade internacional por dano ecológico

Xavier, Bernardo Pinto

masterThesis

20-Ago-2014 Fundo ambiental da União Europeia

Machado, Sara Daniela Coelho

masterThesis

19-Jan-2015 Responsabilidade da administração por déficit de ponderação de circunstâncias de risco no âmbito do licenciamento ambiental

Barroso, Aquiles das Mercês

masterThesis

27-Ago-2014 O transporte de resíduos perigosos e a responsabilidade por dano ecológico

Madeira, Ana Rita Fonseca

masterThesis

2009 Responsabilidade civil por dano ambiental: inovações legislativas

Sanches, Filipa Melo Pires da Silva

masterThesis

Livros:

Responsabilidade Ambiental - Operadores Públicos e Privados. Sofia Sá. 2011

Responsabilidade Ambiental – O princípio do poluidor pagador e a importância da Gestão de Risco. Ana Salgueiro – 2013.

The issues are only dealt with as a sub-issue of either insurance law in general (very seldom including specifics on environmental insurance cover) and environmental law (again, very little focusses on the insurance aspects). No original texts exist only on environmental insurance in **South Africa**, except for B Kuschke “Insurance against Damage caused by Pollution” (UNISA 2009); some journal articles include B Kuschke “Insurance Claim Triggers for Cover against Environmental Damage caused by Hydraulic Fracturing” 2016(3) Journal for Environmental Law and Policy.

Here are some research documents as examples in **Taiwan**:

- Discussion on the Sustainable Developments of Insurance Industry and the Principle of Sustainable Developments. Ming-Che Cheng and Yu-Chuan Hsiao - (2014)
- An Active planning for Establishing Environmental Liability Insurance System - By Environmental Protection Administration, Executive Yuan (EPA) (2012)
- A Scientific Report of Climate Changes in Taiwan - By National Science and Technology Center for Disaster Reduction (2011)

The following research and application centers are focused on the study of environmental studies in **Turkey**: Ege University Centre for Environmental Studies, Anadolu University Centre for Applied Environmental Research, Ankara University Environmental Problems Research and Application Center, On Dokuz Mayıs University Environmental Problems Research and Application Center, Mugla Sıtkı Kocman University Environmental Problems Research and Application Center, Cumhuriyet University Environmental Problems Research Center, Ataturk University Environmental Problems Research Center, Iğdır University Environmental Problems Research and Application Center, Marmara University Environmental Problems Research and Application Center, Celal Bayar University Environmental Problems Research and Application Center, Bulent Ecevit University Environmental Problems Research and Application Center, Giresun University Environmental Problems and Clean Production Research and Application Center, Hacettepe University Environmental Research and Application Center, Center of Social Labour and Social Security Training Research, Turkish Environmental Protection Foundation and Turkish Environmental Education Foundation.

Hereunder valuable publications written that specialize in environmental insurance are briefly stated:

Abdullahzade, Cavid: Gemilerden Kaynaklanan Petrol Kirliliği: Türk Hukukundaki Son Gelismelerin Degerlendirilmesi, Ankara Üniversitesi Hukuk Fakültesi Dergisi 2009, Vol: 58, No.: 4, p.693.

Abecassis, D.W. (trans: Atamer, Yesim): Deniz Kirlenmesi “The Patmos”, Denizati Dergisi 1988, Year:’, No: 22, p. 20.

Acar, Serdar: Kirlenme Zararlarına İlişkin Tazminat (Sorumluluk ve Sigorta) Sistemi, Denizcilik Dergisi 2009, Year:10, No:45, p.50.

Atamer, Kerim: Yargıtay Kararları Işığında Deniz Ticareti ve Deniz Sigortası Hukukund Güncel Sorunlar ve Gelişmeler, XXIII. Ticaret Hukuku ve Yargıtay Kararları Sempozyumu (12.06.2009), Ankara 2009, p. 165.

Atamer, Kerim: Part II Chapter 13: Marine Pollution, in Atamer, Kerim / Damar, Duygu (eds.) Transport Law in Turkey.

Bilgişin, İlkyay: Uygulama Açısından Gemilerin Denizi Kirlenmesi Dolayısıyla Donatanların Sorumluluğu, Sorumluluk ile Sigorta Hukuku ve Uygulama Açısından Türkiye’de Deniz Kazaları Sempozyumu (13-15.10.1982), Ankara 1983, pp. 321-334.

Günay, Barış: The US and International Compensations Regimes for Vessel Source Oil Pollution: A Comparative Study, Prof. Dr. Turgut Kalpsüz’e Armağan, Ankara 2003, p. 391.

Kara, Hacı: Legislation Regarding Pollution From Ships, Maritime Advocate 2003, Vol:24, p. 37.

Kender, Rayegan: Uluslararası Deniz Hukukunda Kirlenme Zararlarından Doğan Sorumluluk için Mecburi Sigorta, Milletlerarası Hukuk ve Milletlerarası Özel Hukuk Bülteni, Year:2, No:2, p.14.

Özbek, Dolunay: Implementation in Turkish Law of Oil Pollution Conventions-Some Recent Developments, Milletlerarası Hukuk ve Milletlerarası Özel Hukuk Bülteni, Year: 24, No:1-2, p.599.

Özçayır, Oya: Limitation of Liability Problems in Cases of Oil Pollution, Maritime Studies, No.110, January/February 2000, p.1.

Soyer, Barış: Oil Pollution Damage for Economic Loss, Journal of International Maritime Law 2003, Vol:9, No.:3, p.224.

Soyer, Barış: Compensation for Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources, Chapter 4, in Soyer, Barış / Tettenborn, Andrew (eds.), Pollution at Sea: Law and Liability, London 2012.

Unan, Samim: Liability of the Turkish Administration and civil liability of the Classification Societies acting on behalf of the Turkish Administration for damages caused to the shipowner or

to third parties – Seminar on Comparative and Community Law regarding liability of Classification Societies, Istanbul 2004.

Unan, Samim: Some Aspects of the New Turkish Legislative Work Related to Private Insurance, *Kompatibilität des türkischen und europäischen Wirtschaftsrechts – Der neue türkische HGB-Entwurf und benachbarte Rechtgebiete*, Mohr Siebeck, 2009, p. 130 f.f.

Unan, Samim: New trends in Turkish Insurance Law, *International In-House Counsels Journal-Insurance Sector 2010 edition*, Pinsent Masons, p.103 f.f.

Unan, Samim: A Turkish Insurer's precontractual information duty, *Australian Insurance Law Journal*, Vol.23 Number 1 May 2012, p. 97 f.f.

Unan, Samim: Some private international law problems relating to insurance law in Turkish practice- *Revija za pravo osiguranja/insurance law review*, Year XI, 4/2012, p.60 vd.

Unan, Samim: Insurance Precontractual Duty to Inform and Warn/Advise – Insurer's Precontractual Information Duty, 2013, p.9 f.f.

Unan, Samim: Yeni Zorunlu Sorumluluk Sigortaları Öngörülürken Dikkate Alınması Gerekli Olan Hukuk İlkeleri, *Panel on Compulsory Insurances*, 1994, p. 41 f.f. SHTD Publication.

Yazıcıoğlu, Emine: Tekne Sigortasında Geminin Elverişsizliğinin Sigorta Himayesine Etkisi, *Sigorta Hukuku Dergisi*, pp. 30-35, 2003.

Yazıcıoğlu, Emine: Tekne Sigortası Sözleşmelerine Eklenen Sınıflama (Classification) Klotunun Türk Hukuku Bakımından Geçerliliği, *Sigorta Hukuku Dergisi*, pp. 36-42, 2003.

Yazıcıoğlu, Emine: *Tekne Sigortası Sözleşmesi*, Beta Yayınları, İstanbul 2003.

The **United Kingdom** suggested Environmental Liabilities and Insurance in England and the United States, by Valerie Fogleman.

At a national level, the works we are aware of in **Uruguay** are:

"Civil Responsibility and Environmental Insurance", presentations by Osvaldo Contreras (Chile) and Marcelo Cousillas (Uruguay), in VI National Insurance Law Days, Montevideo, April 26 and 27, 2006, [http:// www. aidauruguay.org.uy/](http://www.aidauruguay.org.uy/)

"Environmental insurance as an instrument to protect the employer and environmental safeguard", presentation by Pery Saraiva Neto (Brazil), at the 11th Insurance Law Conference, Montevideo, April 12 and 13, 2012, <http://www.aidauruguay.org.uy/>

"Climate change and its importance in insurance", presentation by Hilda Zornosa (Colombia), at the 11th Insurance Law Conference, Montevideo, April 12 and 13, 2012, <http://www.aidauruguay.org.uy/>

"Environmental insurance (adequate coverage in the context of oil exploration and exploitation and mining)," presentation by María Silvia Morón (Argentina), at XIII Insurance Law Conference, Montevideo, April 24 and 25, 2014, <http://www.aidauruguay.org.uy/>

"Environmental risks in Uruguay current and future outlook", presentation by Marcelo Cousillas (Uruguay), in XV Conference on Insurance Law, Montevideo, May 12 and 13, 2016, <http://www.aidauruguay.org.uy/>

"Liability insurance ...", by Andrea Signorino, chapter on environmental civil liability, Ed. FCU, Montevideo, 2011.

"Civil liability insurance. Current issues ", by Andrea Signorino, chapter on environmental civil liability, Ed. Ibáñez, Colombia, 2017.

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