The consequences of large environmental claims, recent and past, has awoken the need to know who should bear the costs of clean-up for the affected areas and for the repair of the damage. This is particularly relevant in respect of damage to «public» natural resources. The liability regimes, together with the principal of «he who pollutes, pays», appear to be very powerful instruments. In this part of the article, we will analyse the evolution of legislation on Environmental Liability (EL) matters in the USA and with special attention to Spain and Portugal, in the framework of the EU.
In recent years, there have been numerous accidents as a result of human activity, following which we have been confronted with serious environmental damage. For example, there was the oil spillage of the Exxon Valdez at the end of the eighties, in Alaska; in 1998, there was the escape of toxic sludge in southern Spain caused by the breaking of a dam at a mine close to the Doñana nature reserve, which caused considerable damage to the nearby natural resources; or the shipwreck of the Erika, a year later, that polluted the French coast.

Disasters in the New Century

We have also recently witnessed some large environmental disasters such as the crude oil spillage in the Gulf of Mexico by British Petroleum (BP) in 2010 – known as the Deepwater Horizon oil spill. This has been recorded as the biggest oil spill in history of the industry. The spill lasted more than three months and produced enormous damage to the marine and terrestrial habitats, to the fishing industry and tourism in the Gulf. BP has set up a fund amounting to 20,000 million dollars to compensate the victims of the disaster.

In 2010, also, there was an important incident in Hungary when the wall of a reservoir, holding millions of cubic metres of toxic waste, broke. It was owned by MAL (Magyar Aluminium Termelos), an aluminium producer, and produced a wave of red sludge that caused several deaths and polluted land and rivers over an area of some 40 km$^2$. The spillage reached the Danube river. The Hungarian government estimated at the time that the clean-up and decontamination of the zone would take at least a year and the cost of the accident would be around tens of millions of Euros.
Also, in 2011, the biggest nuclear accident, since the 1986 Chernobyl disaster, happened at the Fukushima power station. This tragic event was caused by an earthquake and the subsequent tsunami gave rise to a series of breakdowns of the equipment, nuclear fusion and leakage of radioactive material at the Japanese station. Large quantities of radioactive particles were released into the atmosphere and reached the soil and seawater. It is estimated that there will be a significant number of deaths from cancer due to the exposure to high levels of radiation, especially in the population in the vicinity of the power station. The decontamination and dismantling of the installations will take decades.

These and other accidents have had consequences that far outweigh the necessary prevention measures; they have posed the question as to who should be responsible for the clean-up / decontamination in the affected zones and for repairing the damage. Should society as a whole pay the bill, i.e. the taxpayer, or should it be the polluters that pays when they can be identified?

This question is of particular relevance when damages are caused to natural resources with no defined property rights –the so-called «public assets»–, that are rarely considered in companies’ financial reports.

The liability systems, together with the «polluter pays principle», are presented as instruments that can potentially correct this situation for those activities with a high risk of producing this kind of damage. They impose the obligation to bear all of the costs of clean-up for contaminated land and to repair the affected natural resources.

**EVOLUTION IN THE UNITED STATES**

In the U.S., this subject was first dealt with in 1980 under the CERCLA law (Comprehensive Environmental Response, Compensation, and Liability Act), better known as Superfund. It represented a milestone in the application of the «polluter pays» principle as it determined the liability to pay the clean-up costs by those guilty of contaminating land with dangerous waste. After the Exxon Valdez accident, in 1989, the OPA (Oil Pollution Act) was created, as an independent body from the CERCLA, with the specific objective of acting in the event of damage caused by hydrocarbon spillages.

The Superfund Environmental Liability System (ELS) established in the United States is more ambitious than that developed in Europe; the definition of liability and the types of damage covered are wider; there is no monetary limit for the liability…

However, experience has shown the need to develop efficient mechanisms that complement the environmental liability system in order to respond to the costs in the event of insolvency of the liable
companies which has often been called «orphan damage». In this respect, in Europe, operators were obliged to provide a financial tool that enabled them to guarantee their liabilities and the resources necessary to repair the environmental damage in the event of an accident.

**Development in Europe**

The development of the legal system in the European Union (EU) was, naturally, based on the U.S. experience. In 1989, at the heart of the European Commission, a «proposal for a civil liability system for damage caused by waste» was published. This document, which was revised in 1991, proposed strict liability for polluters and, moreover, included the notion of ecological damage as a «significant physical, chemical or biological deterioration of the environments». However, the waste sector strongly opposed and the part relevant to liability was not accepted. Finally, in 1999, the Directive on the landfill of waste was approved with the principle of the «polluter pays» but without a defined liability system.

In May 1993, the European Commission presented the «Green paper on remedying environmental damage», which contemplated this principle under the Civil Liability system although there were still several deficiencies such as: the definition of «environmental damage»; the demonstration of a cause-effect link; the calculation of the amount of compensation; and the question of its insurance. There was also a question mark over who should be in charge of seeking compensation for environmental damage when there was no private property involved. It was decided that this role should be played by the NGOs.

In 2000, the «White Paper» was published, and established the following principles for the future Environmental Liability system in the EU:

- Strict liability to be applicable for activities that are potentially dangerous for the environment.
- Definition of liability exclusions.
- The inclusion of traditional damages –to persons and property– and environmental damages – gradual pollution and damage to the biodiversity.
- An obligation for compensation to be effective in the environmental repair.
- The fixing of financial guarantees for the liability.

Following the reactions to the «White Paper», a proposed Directive was published in 2002 with certain «novelties»:

- Strict liability for activities that represent a potential danger to the environment.
- Considerable intervention by public authorities: they can demand clean-up or prevention measures from the operator or take the initiative to put them in place.
- Non-retroactive liability.
- The exclusions include: force majeure, the
development risk, emissions authorized by permit, etc.
- The emphasis on the repair of the environmental damage is confirmed.
- The innovative concept of damage to the biodiversity, natural resources and habitats is specified.
- It is not applicable to traditional damage to persons and property but rather only to «ecological» damage.
- Financial guarantees are not demanded and this decision is left to the member states.

The proposal was discussed by the European Commission with different institutions, including the CEA (European Insurance Committee) and representatives of various business sectors and environmental protection organisations. However, it was difficult to satisfy everyone. Finally, Directive 35/2004, of 30th April, was published and had to be incorporated into their local legislation by the member states within the following three years. The gist of the proposals was maintained in essence and, with regard to financial guarantees, they were not obligatory and it was up to the member states to decide on whether they should, or not, be obligatory.

IMPLEMENTATION IN SPAIN

In Spain, there was a considerable debate amongst the different sectors and strong involvement of the insurance market –one example is the PERM (Pool Español de Riesgos Medioambientales – Spanish Pool for Environmental Risks)–, which facilitated intense work on conciliating and preparing the regulations with the correct orientation. According to José Luis de Heras, General Manager of the PERM, it all started «a few weeks after the publication of Directive 2004/35 on Environmental Liability. Taking advantage of the possibility contemplated under article 14, the Ministry of Environment announced that Spain would contemplate obligatory financial guarantees within the implementation of the Directive».

Moreover, there was serious concern in doing it correctly because, as de Heras pointed out, «the Spanish regulations already included several hundred rulings on obligatory insurance, most of which were deficient since there had been no prior verification that these insurances were sufficiently available in the market and that the owner of the affected activity could take out such obligatory insurance on reasonable terms». Another difficulty for the general manager of the PERM was that «it did not expressly consider that the said insurances could have exclusions or conditions affecting the validity of the cover».

«To avoid something similar happening with the financial guarantees for Environmental Liability -De Heras continues-, the PERM contacted the Ministry, with the backing of the insurers association, UNESPA, to propose a series of suggestions for the wording of the Law, so that it could comply with the following two objectives: firstly, that the liability mechanism should be clear, practical and, as far as possible, offer legal security for operators and their insurers; and, secondly, that it would be possible to put into practice the legal resolutions of the obligatory insurance». The introduction of standard instruments for evaluating the environmental risks was also proposed, together with cooperation in the whole process. «Fortunately, the Ministry accepted this offer and not only accepted the Pool’s input, but also the cooperation with the business sector (CEOE) and other interested administrations and sector representatives».

In this way, Law 26/2007, of 23rd October, implemented the Directive and established the obligation to constitute financial guarantees for those activities listed under annex 111 of the ruling. These guarantees can be constituted in three
alternative ways or complimenting one another: by taking out an insurance policy, obtaining a bond or setting up a technical reserve through a self-owned fund.

**POSITIVE AND NEGATIVE ASPECTS**

In the opinion of the PERM’s general manager, «the result of this transparent and open process was very positive in many aspects although we should also recognize that some mistakes were made», and he enumerates some of them «in the spirit of it being constructive in general».

In this sense, some of the positive aspects of the implementation (Regulation 2090/2008 that partially develops Law 26/2007) worthy of mention are:

- «The structure of the law, overall, is coherent and comprehensible; it does not introduce contradictions or overlap with other laws as the defects that the initial drafts contained were corrected.
- Suitable treatment has been given to the exemptions and alternatives contemplated in the Directive (joint and several liabilities, authorized emissions, development risks).
- The regulation of the obligatory nature of the financial guarantees has been introduced gradually and there are various alternatives for complying with the obligation.
- The nature of the guarantee contemplated limits that were coherent with the market in 2007.
- Guidelines were provided for the evaluation of environmental risks.
- There is also a guide of criteria for the repair of damage.
- Specific norms are contemplated for special situations: the obligation to repair already degraded resources, the insurance obligations for activities with various dependencies, continuity of cover during the liability expiry period liability once the activity has ceased, etc.

Amongst the negative aspects of the Law, José Luis de Heras mentions that:

✔ «Although the regulation of insurance is realistic, there is too much detail. Moreover, the extent of the covers has evolved considerably in
a short time. It would have been better to leave the detail of the regulation for a technical ruling that could have evolved without having to change the law.

✔ «The design for the evaluation of environmental risks is too complex and, probably, expensive. On the other hand, it is wrong to link its usage exclusively to the fixing of the minimum obligatory sum insured»;

✔ «The threshold for the gravity of the environmental damage is too high and, therefore, the law is only applicable for very serious cases».

In conclusion, for the Head of the PERM, the overall result is positive, but there is still a long road ahead. «Despite these defects, which we propose should be modified in subsequent legislation, we consider that the cooperation between the ruling authorities and the affected sectors has been positive, both in respect of the overall result as well as the process itself. The level of mutual understanding has increased and there is a willingness to continue cooperating on other projects and subsequent phases».

IMPLEMENTATION IN PORTUGAL

In Portugal, on the other hand, there has been little or almost no debate. The Secretaria de Estado do Ambiente, the organism reporting to the Ministry for the Environment that is responsible for drafting the law, made some consultations to the insurance market through the Instituto de Seguros de Portugal (ISP), the authority that controls insurance activities. The Associação Portuguesa de Seguradores (APS), in line with the CEA, constantly voiced its disagreement against having to constitute obligatory guarantees. The reason behind this opposition lay with the fact that it was still a very small and incipient market and they preferred to leave freedom to the parties to develop. So, it can be said that there was a sounding of the insurance market but not a real public debate.

In the opinion of Pedro Ribeiro e Silva, the coordinator of the APS’s Civil Liability Follow-up Committee, «during the implementation of the directive into the Portuguese legal system, the APS always demonstrated to the Secretaria de Estado do Ambiente that it was perfectly prepared to evaluate the impact of the future disposition on insurance with regard to environmental liability».

However, in his opinion, the Secretary of State, unlike in the Spanish case, did not take advantage of working in a team with the experts and, as Ribeiro e Silva goes on to say, «on 29th July, Law Decree 147/2008 was published which, under article 22, declared, effective 1st January, 2010, the obligatory financial guarantees for those activities under Annex III, amongst them being insurance».

But, apart from other contingencies of the decree, «the first great perplexity for the insurance sector –Ribeiro e Silva adds– was not knowing how to quantify the sums to insure and, moreover, they had serious doubts on the extent of the liabilities. The same article 22 contemplated the possibility of a bylaw to fix the minimum requirements for the obligatory financial guarantees, but it was never published».

Pedro Ribeiro e Silva explains that «half way through 1989, the APS officially expressed its concerns to the Secretaria de Estado do Ambiente,
which, in summary, referred to the object of the guarantees (administrative liability, civil liability or both), as well as other questions such as gross negligence, or the non-obligatory nature of insurance, in such a way that the obligatory financial guarantees be only limited to the damages or amounts not covered by an insurance policy. The APS also pointed out that, if this uncertain situation was to remain, the market would not be able to respond to the extent that was expected.

However, this warning was not headed. According to the representative of the APS, «the obligatory financial guarantees came into force on 1st January, 2010 and the market started to consider a wide variety of insurance solutions. The guarantees were, and are, independent, alternative and complimentary. Subsequently, the APS contacted the Agência Portuguesa do Ambiente (APA), the official authority in charge of applying the disposition, informing them of the situation and making them member of the Advisory Board». We should add that, whilst in Portugal there is not a pool for environmental risks, it was always completely open to the possibility of cooperating with the PERM, through the APS or other companies that specialized on the subject.

The only debating initiatives came from private companies, such as E.Value, a consultancy firm specializing in environmental matters, that organized a meeting entitled «More liability, more environment». The event involved several committees of experts of which the participating guests included ISP, APS, insurers and specialised brokers, such as MDS, and also large companies with environmental concerns. There were also representatives from the Ministry who, at that time, were drafting the law but they only mentioned some of the dispositions. Although all of the insurance market representatives were against the obligation of constituting financial guarantees, the Spanish example was followed (although only in the obligation, not in the prior dialogue).

Several conferences were also held on the matter, such as the one organized by MDS and E.Value with the title «Liability asset – Environmental Liability and financial guarantee», which was participated by prestigious speakers. Also attending were representatives from the ISP, the APS and large companies from the industrial sector, which led to an interesting debate. During the conference, there were attempts to demonstrate the need to follow the Spanish experience, as far as prior debate and careful preparation of the law is concerned. It was explained, also, that if this was not done, then there would be serious difficulties with its implementation. However, in the end, it was not to be and the Portuguese law introduced without further-a-do.

The Portuguese EL (Environmental Liability) System

Law Decree 147/2008 of 29th July, in its current form, establishes the legal liability regime for environmental damage and implements Directive 35/2004 into the Portuguese legal system. At the same time, the Portuguese legislators took advantage to «clarify the existing doubts and difficulties in the law on Environmental Liability…».
On the one hand, the disposition introduces a subjective and objective Civil Liability system by which the operators-polluters are obliged to indemnify those persons who suffer damage (for example, personal and property damage, the so-called «traditional damage») due to an environmental disaster. On this aspect, it goes further than the Directive and the Spanish Law that are only concerned with Administrative Liability. On the other hand, the Administrative Liability system was created for not only repair but, above all, preventing damage to the environment and the polluter being liable to the general public. This is the way in which Directive 35/2004 was implemented into the Portuguese law. This truly is a new liability and, moreover, a liability in favour of prevention and repair of environmental damage which, in turn, entails a new and complex concept. The responsibility for this matter lies with the public administration, via the corresponding authority (in Portugal this is the Agência Portuguesa do Ambiente – Portuguese Environmental Agency).

On certain questions, the Portuguese regulations are a «minimalistic» implementation of the Directive since they include the exclusions and possibilities of exoneration for the polluter. However, in other sections, fairly hard rulings are incorporated; for example, it determines that «when the polluting activity is attributable to a legal entity, the obligations under the law will fall, severally, on the respective directors and officers». This means that their personal assets could be affected (as is the case in Spain). With regard to the cause, this does not have to be proven unequivocally as is the case under the civil liability system but, rather, is based on a criteria of probability, which is much more onerous for the polluter.

In both Civil Liability and Administrative Liability, there are two levels of liability: subjective or based on the fault of the polluter; and strict liability which is applicable to the activities set out in Annex III which are considered to be dangerous (for example, operators subject to Directive 96/61/CE – Pollution Prevention and Control, waste management, water collection and discharge, etc.), which means that no-fault liability is applicable to all the activities not expressly excluded and which are not included under Annex III.

Administrative Liability also involves some new concepts, such as environmental damage (damage caused to protected species and natural habitats; damage to water courses and land, in the latter only if there is a human health risk). The Spanish law also adds «damage to the sea shore and river banks», which were not considered under the Portuguese law.

Moreover, and in accordance with the Directive, a series of prevention and repair obligations are contemplated for the polluter who must inform and put into operation a series of urgent measures in the event of an imminent threat. If the operator does not take these measures, APA can, subsidiarily, put them into operation and charge them with the costs. Similarly, the repair measures must always be notified to the APA, who will review them and correct them if necessary. The repair methods are also those contemplated in the Directive like in the Spanish law i.e. primary repair, complementary or compensatory and cannot be substituted by financial compensation.

With regard to financial guarantees, the Portuguese law (article 22) establishes that these are obligatory for those operators that undertake the activities specified in Annex III and, as in the Spanish system, they can be independent, alternative or
complimentary so that «they enable Environmental Liability to be borne by those that carry out the activity». These guarantees can be constituted by taking out an insurance policy, bank guarantee or self-funding arrangements created to this effect (the possibility of participating in environmental funds is also contemplated). The law also states that «minimum limits may be established for the constitution of the obligatory financial guarantees (...) through a specific regulation».

The Environmental Liability Law Decree was subsequently modified by Law Decree 245/2009, of 22nd September, in respect of the use of water resources, and by Law Decree 29-A/2001, of 1st March. The purpose of the first of these changes is to avoid conflicts of authority for its application and establishes APA as the only authorised entity in respect of water. The second modification affects article 22 of the Environmental Liability Law in that it establishes a future fixing of the minimum limits for the constitution of obligatory financial guarantees through a Government ruling (Finance, Environment and Economy). However, up until now, no ruling has been published.

Also, in August of 2010, a regulation was published which established the creation of an Accompanying Permanent Commission and Consultation Board for EL. The former was constituted by public entities such as the Ministry of Environment and APA, the Institute of Water Resources and Nature Conservation, etc. The purpose was to establish specific articulation mechanisms and to support APA in its decisions, through technical cooperation and the sharing of information amongst the entities represented, whenever there is damage or a threat to the environment. The Consultation Board, on the other hand, is comprised of representatives from business, industrial and agricultural associations, municipal associations, representatives from the insurance and banking sectors. There were also representatives from the Ministry of Environment, Territorial Regulator, Health System, Economy, Transport and Agriculture. Their principal objectives are to prepare recommendations, the follow-up of technical and financial aspects relating to the constitution, preparation of conditions and the evolution of the financial guarantee market.

**Development of the Portuguese Market**

Although the law fixed the 1st January, 2010 as the date that the obligatory financial guarantees came into force, due to the possibility of future regulations, the market was waiting for «something» that did not happen. There was great surprise, in the second week of 2010, when all the operators in Annex III received a letter from the APA requesting proof of the contracted guarantee and its amount.

*On certain questions, the Portuguese regulations are a «minimalistic» implementation of the Directive since they include the exclusions and possibilities of exoneration of the polluter, but in other sections they incorporate fairly hard rulings.*
We would also point out that companies should understand that the requirement or not of a guarantee did not have anything to do with the existence of liability. To be clear, the liability is there (once the legal requirements have been verified, naturally); it has existed since 1st August 2008 and the operator that foresees pollution or pollutes will have to take the necessary prevention and repair measures, without any expense limit. This is the case whether or not the operator has a guarantee which, in any case, would not cover all of its liabilities. This guarantee is required for the most hazardous activities and, it should be added, if the operator does not contract the guarantee, it incurs in a very serious offence with large fines (up to 2,500,000 Euros, applicable to companies in the case of gross negligence).

Going back to 2010, the letter from APA provoked a rapid demand for quotations from insurers (perhaps, also, something similar occurred with the banks who were asked for bank guarantees). Similarly, the consulting firms were asked to undertake studies of the environmental risk and to provide advice on defining the amount of financial guarantee that needed to be contracted. Quotations were requested on a daily basis and the few insurers that could offer suitable products did not have the capacity to respond. Then, there was another problem: it was not known what sum insured was required; although some of the larger companies had carried out an evaluation of their risks, 90% hadn’t taken this step and there were no indications from APA on the minimum guarantee amounts or the methodology for evaluation the environmental risk.

Whilst, at that time, there were few insurers in the market that could offer a solution for these types of risk, in a very short time, APA was «inundated» with insurance policies which was the best solution since it was the only one that offered risk transfer.

In this «emergency» situation, our advice as consultants was that operators that still did not have an environmental risk study –which was the case of the majority– should obtain a guarantee with a «provisional» value and that this could be confirmed, or not, afterwards, when a risk evaluation has been carried out. There were very many quotation requests and the operators received numerous proposals for transferring part of their environmental risk to insurers, since the insurance sector could only guarantee a part of the risk –although significant– of the insured’s liability.
Today, two years later, where are we? At the beginning of 2010, APA received considerable documentation confirming the existence of environmental insurance liability which, naturally, had different scopes of cover, depending on the insurer, as well as different limits according to the size of each operator and its likelihood of causing environmental damage.

However, during this time nothing has happened and the reaction to the situation is somewhat «strange». On the one hand, those who have contracted the cover and have provided the respective documentation, consider that they have complied with the authorities’ requirements and this is the case. Others, on the other hand, even though they had requested an insurance quotation and as they hadn’t seen any reaction from the authorities, i.e. coercive measures (that do exist under the law and are very severe), stopped the process, alleging that they were awaiting the regulation which wasn’t forthcoming.

TECHNICAL ORIENTATION

Following the publication of the law and since there were no instructions on its application, once again, it was the private initiative that contributed, in a way, to mitigate the situation. In this sense, the E.Value/Critical Software developed the SARAe Project (Corporate Environmental Liability Evaluation System). Its principal objectives are to test and strengthen the EL evaluation methodology developed by E.Value, creating conditions and opportunities for an effective articulation of the agents involved and obtaining conclusions for the building of an adequate framework for the implementation of the law. Various public entities that have a direct responsibility for the application of the EL at a national level have participated, including APA. The project was concluded in November, 2010 (information available at WWW.sara-eld.com).

In November, 2011, APA published the «Guide for Evaluating Environmental Damage and Imminent threats of Environmental Damage» which, according to Pedro Ribeiro e Silva of APS, «although it is not binding, it helped to position risk evaluation». The guide deals with matters such as the concept of the initial state and quantification of environmental damage, procedures to be adopted in the phases of evaluation, prevention and repair of the damage, the evaluation of environmental risks for human health, etc. It is hoped that the guide can help to reduce doubts and create common procedures (clarify concepts, propose action methodologies) for everyone that uses it and, in such a way, that the Law Decree becomes more transparent.

Moreover, as Ribeiro e Silva points out, «the APS is currently analysing and studying within its Civil Liability Committee, the different ways of contribution for possible uniformity in an insurance product, taking into account that it has to be used for different types of activity in the context of Environmental Liability».  
It is also expected that an additional guide will shortly be published, «Methodological Guide for the Constitution of Financial Guarantees», which will include the proposal to exempt the constitution of these guarantees for activities that are considered to be of a low risk and the methodology for evaluating the environmental risk for the constitution of the financial guarantees. Moreover, together with this guide a document will be published on the «constitution of a financial guarantee» which will establish two levels of complexity for low risk activities: those that are exempt from the guarantee obligation and those that will have to contract it. Thus, the undertaking of a thorough analysis of the environmental risk is an essential tool.

WHAT THE INSURANCE MARKET OFFERS

In Portugal, the market reacted in a fairly proactive way to the new needs and, gradually, products adapted to the new legal reality appeared since the traditional covers (sudden and accidental pollution cover linked to Public Liability policies) did not comply with the minimum legal requirements.

Today, what is offered and the underwriting criteria varies. Some insurers, taking advantage of their long international experience on the subject, have provided their products simply against the completion of a questionnaire whilst others, on the other hand, have decided only to offer the cover to their existing clients. Lastly, a third group of insurers, apart from the cover, are offering an environmental risk evaluation. Without wishing to be exhaustive, we feel that it is important to mention three important examples in the market: Chartis (the North American experience), MAPFRE (a large European insurer with the experience of the pool), and the largest Portuguese insurer, Caixa Seguros.

With regard to Chartis activity on Environmental Liability, Nidia Brito da Costa, Director of Liability at Chartis in Portugal, told us that «back in 2007 AIG had grown considerably in the Environmental Liability class throughout Europe, as a result of its decision and dedication to develop the line of business. At that time, there was no sign of the development of financial guarantees in Portugal, nor of insurance, and the Green Paper for the implementation of the Directive was not known; i.e. there was little talk of Environmental Liability and the financial consequences for operators». This is a true picture of the situation in Portugal only five years ago.

However, as the Chartis representative continues, «by anticipating the change in this situation, AIG decided to invest in a local team and, at the same time, in the creation of a Portuguese product adapted to the local legislation, on the basis that there would shortly be a demand for risk transfer. After all, the Directive had to be implemented into the national legislation». However, as Brito e Costa points out, «with the exception of
certain operators who were well organised in the management of their environmental risks, in general, the impact of the liabilities following the Directive was not recognized, nor the need for risk transfer which was negated or given little importance».

However, he adds, «the awareness of Environmental Liability has grown considerably in Portugal over the last two years, as a result of the increase in legislation on a European level and, above all, on a local level. There have been debates on the matter organized by the interested parties and support for the operators from the point of view of analysis, prevention and repair of environmental damage».

In Portugal, «by importing the US market experience», as from 2007, Chartis offers an Environmental Liability policy called ENVIRONPRO, which protects operators in the event of legal liability following a pollution incident covered by the policy. It was originally conceived to cover very complex industrial risks and we have experienced great demand from different sectors to the extent that this insurance has become one of the most efficient instruments for the transfer of this type of risk.

«ENVIRONPRO cover not only sudden and accidental pollution damage but also if it is slow and gradual and this avoids argument in the event of a claim. It includes prevention and repair costs for environmental damage and also third party bodily injury and material damage, clean-up costs and the insured’s own damage, such as loss of profits. Like any other insurance contract, it has typical exclusions such as fines, abandoned property or

wilful misconduct of the insured». Apart from being the first insurer to offer an EL product in Portugal, Chartis has also had to pay the first claim which was handled with the support of experienced international experts.

«MAPFRE PORTUGAL’s experience in environmental liability stems from the experience of MAPFRE in Spain, through the renowned PERM», says Pedro Ribeiro e Silva who, apart from being Head of the APS Liability Working Party, is Director of MAPFRE PORTUGAL’s legal department. We share Ribeiro e Silva’s opinion when he states that the Portuguese judicial system published in 2008, didn’t take advantage of «that experience in the implementation of the product for this market, taking into account certain specifics and the lack of deliberation of the Law Decree 147/208, of 29th July». But, he goes on, «in the positioning of the
product created by MAPFRE, it was possible to adapt it to a great extent from the Spanish risk evaluation system, due to its similarity and even though Portugal does not use the UNE 150.008 norm nor any other evaluation norm. In 2011, APA published the «Guide for Evaluating Environmental Damage and the Imminent Threat of Environmental Damage».

He adds: «For certain risks a detailed form is used as it is difficult to associate the risk with the sum insured, especially when the legal disposition establishes a control on the operators by the IGAOT (Inspecção-Geral do Ambiente e do Ordenamento do Territorio), with confirmation of the obligatory financial guarantee through different alternatives, including insurance, that enables them to accept the environmental liability risk related to the professional activity».

Pedro Ribeiro e Silva also makes another very important point: «As the legal system does not contemplate an obligatory insurance, the MAPFRE PORTUGAL product is an alternative in the market and, for this reason, it can go further to satisfy the client / operators´ needs without having to adopt wilful misconduct which is an inherent characteristic of obligatory insurances in Portugal, according to Insurance Contract Law (Article 7 of Law Decree 147/2008). In fact, the existing product represents a real commitment with the legal system since the administrative liability cannot be completely covered – limiting it to environmental damage caused by pollution. But, on the other hand, additional covers are allowed in respect of Civil Liability for damage caused by pollution and, in this way, the dual liabilities regime – administrative and civil – included in the regulation is complied with».

In other words, for the Director of MAPFRE PORTUGAL’s legal department, «the absence of the regulation in the Portuguese environmental legislation has enabled MAPFRE to have sufficient imagination to provide its clients / operators with products that, for the moment, meet the existing demand and, at least, ensure a legal ethical minimum. For example, we participate in several programmes in the industrial sector in aviation, mining, commercial and service activities». «At the same time – he adds –, MAPFRE has been contributing and participating in various training activities related to environmental liability with regard to clarifying the consequences of the legal regime in force. MAPFRE has also published articles which, apart from clarifying doubts, have also divulged the qualities of their product».

It is also interesting to learn of Caixa Seguros experiences. According to Susana Teixeira, Head of this company’s Liability and Transport Underwriting Department, «since January, 2010, this group offers its clients an Environmental Liability insurance solution that covers damage caused to natural resources. The principal cover is the insured’s Administrative Liability for environmental damage or the imminent threat of damage and, also, the costs of primary repair measures that are complementary or compensatory for the natural resources damaged by pollution and that are attributable to the insured. It also include the clean-up costs at the insured location that are obligatory by law and, at the same time, those that are produced outside the premises as a result of the spread of pollution initiating in the insured’s premises. This cover is extended to include Environmental Civil Liability that covers damage to third parties following pollution.»
The company has also developed a special cover for the Construction industry (for quantity surveyors).

In his opinion, this is a far reaching project, since «apart from the development of an insurance based on Portuguese legislation and finding and negotiating the appropriate reinsurance for the product, a service has been developed together with Safemode – Proteção de Pessoas, Património y Medio Ambiente (previously called EAPS – Empresa de Análise, Prevenção e Segurança, SA). This service is the analysis of the environmental risk that is essential for anyone that is going to work in this area». And, for them, «our objective of providing a solution based for the environmental risks for each client has been, and will continue to be, a critical success factor».

The head of Caixa Seguros provided some data on the activity sectors that contract this insurance: «40% is represented by the waste management sector, 35% in industry and 15% by municipalities. The average sum insured is between 250,000 and 1 million Euros». Currently, «we are developing simplified solutions for small and medium sized businesses and we have yet to have received a claim».

From these testimonials it can be seen that there is an interesting market on offer in Portugal. The products mentioned cover damage following pollution and, in certain cases, for large companies, covers can be wider and do not require that there be pollution but only the existence of environmental damage. Nevertheless, these are special situations and must be studied case by case.

Apart from these examples, other insurers have transformed or developed products to respond to this need. What is also apparent is the need to support operators in the technical analysis of the policy wordings so that they can negotiate better covers and choose, for example, a «package» with different options that are complimentary (such as Insurance and self-funding solutions).

To obtain this type of support it is essential that the operator knows the exposure to environmental liability which requires the undertaking of technical risk evaluation studies. How can we evaluate the degree of pollution at a location and return it to its former state if we haven’t identified it previously? In this way, the operator can obtain useful information for defining the level of financial guarantee and, at the same time, take preventative measures or action.

Insurers and the banking system – somewhat absent on this subject – should promote and show their clients the advantages of detailed technical analysis in order to obtain results that will enable the sums insured and conditions to be appropriate for the reality of the risk.
Internal models in the calculation of the coefficient of loss of portfolio

In this article, we analyse the advantages of the usage and implementation requirements of internal models in the Solvency II framework. By way of example, we developed an internal model for the quantification of business through approximations for the coefficient of the loss of portfolio, using real data of policy cancellations for an insurance company’s general branch of business. The methodology used was original as it incorporated the contagious effect that exists amongst decisions to cancel policies. The results are compared with those that would be obtained by applying the standard model and with those obtained assuming independence in the decision to cancel. We concluded that to ignore the effect of contagion would lead the insurer to underestimate its exposure to this risk, making the proposed internal model more suitable for quantifying the company’s specific business risk.