Legal tools of environmental liability in Greece: application in the broader region of Asopos

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Abstract: This paper seeks to examine the legal tools of environmental liability in the Greek legal order which are: 1) the subjective civil liability of the Greek Civil Code; 2) the objective civil liability of Law 1650/1986; 3) the penal liability of Law 1650/1986; 4) the implementation of the Environmental Liability Directive (ELD) in Greece. The aim is to determine their effectiveness and to analyse whether the 'polluter pays' principle actually applies. The present paper endeavours to study the application of these legal tools in the case of the environmental damage caused in the broader region of Asopos River. The main findings of the study are: 1) the lack of interoperability between the competent authorities; 2) the missing connection in practice between the different tools of environmental liability and above all; 3) the lack of a holistic approach concerning environmental liability.

Keywords: environmental damage; environmental liability; environmental law; Asopos; Greece; European Liability Directive; Law 1650/1986.

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1 Introduction

Technological innovations during the last decades have resulted among others in an increase of industrial activity. While this contributes significantly to economic growth and prosperity, in some cases it can lead to environmental problems. In particular, these kinds of activities often have negative consequences to the environment, causing environmental damage.

The question that arises in this context is to determine who is responsible for this type of damage, or in other words, who is environmentally liable. In order to respond to that, it is necessary to define which legal mechanisms allow the 'punishment' of such an environmental damage. This paper refers to the 'extensive definition' of environmental damage (Sands, 2003) which includes environmental restoration *per se*, financial compensation and criminal prosecution.

Until recently no mechanisms were found in the Greek legal order referring explicitly to environmental liability. Nonetheless, examples of application *in analogiam* of other legal provisions exist in Greek case law, aiming at the allocation of environmental liability.

More specifically, until recently, the question of environmental liability was being treated exclusively by the Civil and Penal Courts. The implementation of the Environmental Liability Directive (ELD) in the Greek legal order in 2009 introduced for the first time the national and regional administration as a primary player in that context with certain rights and obligations.

It is necessary to study first which are the legal tools for allocating environmental liability, which is their interconnection, how they coexist, their level of effectiveness and last but not least their actual implementation. Concerning their implementation the much effected area of Asopos River in Central Greece is being chosen as a case study, in order to show if and how these legal tools can contribute to the restoration of environment and the allocation of liability for environmental damage.

2 Existing tools of environmental liability in Greece

2.1 The mechanism of subjective civil liability

The mechanism of subjective civil liability for environmental damage is based on several articles of the Greek Civil Code (CC), such as Article 281 (abuse of rights), Articles 1003 to 1005 (neighbour law) and Article 57 (right to personality).

Article 57, the right to personality, is the one that is actually applied more often. The Greek Constitution states that "everyone has the right to freely develop their personality (...)" (Article 5 of the Greek Constitution 1975). This article as a generic clause aims to protect a certain number of goods for every citizen, goods that are inextricably linked with its own human dimension. Some goods such as human health or a certain quality of life are considered *conditio sine qua non* for the development of one's personality. In that sense, the legal good of the environment, being every person's sphere of development, has also to be protected (Kalavros, 2009). For that reason the environment is protected explicitly in Article 24 of the Greek Constitution. Every breach of that article constitutes automatically a breach of the right to personality. Such violation entitles victims according to Article 57 to damages and compensation. Victims have also the right to

demand that the violation will not to be repeated in the future.[1] Established case law states that "protection of the environment is part of the uniform system of protection of personality, even against the state" (Decision No. 29/2007 of the Single Member Court of the First Instance (SMCFI) of Athens and Decision No. 2786/2008 of the SMCFI of Volos).

The conditions for the application of Article 57 in this context are the following:

1 the existence of environmental damage

2 an unlawful act

3 culpability.

Unlike in other branches of law,[2] environmental damage under the CC is considered only the violation of the private right to use and enjoy goods common to all (*res communus*), such as air and sea, and communal goods as defined in Article 967 of the CC (Karakostas, 1996).

According to some scholars and some judiciary decisions, the protection of Article 57 of the CC is provided even if there is no direct violation but only the reasonable possibility of it (Karakostas 2006; Decision No. 431/2000 of the Larisa Court of Appeal and Decision No. 2645/2002 of the Thessaloniki Court of Appeal). This solution results from the combination and the teleological interpretation of Article 24 of the Greek Constitution and Articles 2, 6 and 174 of the Treaty Establishing the European Community (concerning the precautionary principle) because of the irreversible character of violations of the environment or of environmental goods (Koutoupa-Regkakou, 2005).

Furthermore the act has to be unlawful, be illegal, or in other words violate a legal provision aiming at the protection of the environment. That implies that every act that violates Article 24 of the Constitution or Article 970 of CC regarding the use of communal goods is considered an unlawful act according to Article 57. Even the absence of publication of the information about a possible environmental danger (Decision 17/2009 of the Supreme Court) or the violation of the precautionary principle could constitute such a violation of Article 57 (Balias, 2009).

Finally, the last prerequisite is the personal (subjective) culpability of the person who caused the damage. That means that the person responsible for the damage must be held personally liable for his act. In other words, this 'subjective' view of culpability implies that one is culpable for one's intentions (*dolus*), rather than the results they produce. Furthermore, there has to be a direct causal link between one's intentions and the damage resulting there from and finally, the person damaged has to prove the existence of such a link. Especially, the two latter conditions undermine often in practice the effectiveness of the law. This is explained by the difficulty to prove before Court the intention (*dolus*) to damage the environment. This legal obstacle is even more aggravated by the fact that the burden of proof lies with the party having suffered the damage.

All in all, the application of this mechanism in practice though has been rare. One reason for that is the lack of an accurate definition of what constitutes environmental damage. Furthermore, in practice it is very difficult to prove the connection of environmental damage with the violation of the right to use common goods (air, sea, etc.). In order to do so, one needs an accurate and measurable definition of environmental damage and all supporting instruments such as, e.g., standardised soil prototypes, strict water quality regulations, etc., to measure the damage. No such definitions existed until recently though in Greek Civil Law.

Moreover, the main reason for its little use is the fact that it is extremely difficult to prove before court the linkage between the damage and a certain activity of an industrial operator or a private person, especially when the proceedings last many years and any evidences or traces may disappear along the way. Further critique to this legal tool is that it only covers compensation and damages and does not provide for the actual restoration of the environment.[3]

2.2 The mechanism of objective civil liability

As demonstrated above, the legal tool of subjective civil liability proves itself often ineffective in practice due to the difficulty to prove the operator's *dolus*. For that reason, the Greek legislator introduced the mechanism of objective civil liability for cases of environmental damage. According to Article 29 of Law 1650/1986 "any natural or legal person who causes pollution or environmental degradation is responsible for compensation unless he proves that the damage is due to force majeure or that it resulted from a wrongful action of a third party that acted fraudulently". This form of liability differs from other forms of liability established by the CC. Specifically, it does not require the existence of an unlawful and wrongful act. This provision sought to endorse proactive protection of environmental goods because industrial operators would become more diligent as to their actions that could be dangerous to the environment.

More precisely, Article 29 establishes the civil liability of the industrial operator for every act of pollution or degradation of the environmental system. The prerequisite for its application is not only the existence of one of the latter but also the existence of damage to a good that is protected by law (e.g., the value of property, reducing the production of a farm, death of livestock, etc.). It could be argued that goods that are not protected specifically by law (e.g., pollution of the atmosphere) do not fall under the scope of this legal provision. Nonetheless, in cases of environmental damage, Article 24 of the Constitution concerning the protection of environment should be interpreted in a broader sense to include the protection of every possible category of environmental damage.

The cost of restoration of the environment – often carried out by the state following his obligation to protect the environment according to Article 24 of the Constitution – is also considered as a damage in that sense. This means that this legal tool does not only cover compensation and damage but could also guarantee the actual restoration of the environment – or at least the reimbursement of its costs – after an environmental damage.

The second condition for the application of Article 29 is the existence of a causal link between the operator's actions and the damage. The causal link can also be proven though merely by the fact that the industrial operator was operating a hazardous source that could cause the environmental damage. In that case the causal link does not have be proven between the actual actions of the operator and the damage (*subjective aspect*) but moreover between the possible damage risks that are connected to this hazard and the causal link to the actual damage (*objective aspect*).

However, this provision has not been applied so far. This is due once more to the vague definition of environmental damage and to the fact that most individuals prefer to address the civil courts aiming to prevent any further damage by demanding interim protective measures. In fact, its vague definitions resulted into letting this rule stay a dead letter (Kretsi, 2007). A possible solution to this problem of vagueness could be the recent amendment of Article 28 of Law 1650/1986.[4]

2.3 The mechanism of criminal liability

In the last years, there is a trend worldwide in criminal law to bolster the collective goods protected by the respective national penal codes. The environment is such an example. Some countries, such as Germany,[5] have already included criminal provisions for infringements to the environment in their Penal Code.

In Greece the penal regulations concerning environmental liability can be found in more specific laws, while the Greek Penal Code (GPC) has only general criminal provisions.

More precisely, in the GPC there are no articles protecting the environment *eo ipso* but only some provisions aiming at its indirect protection. These can be found in Chapter XIII of the GPC, concerning 'commonly dangerous crimes' (Articles 264–289) and in Chapter XXVI concerning 'misconducts' (Articles 411–457). In practice though, someone is rarely held liable for an environmental damage according to these provisions, especially industrial operators.

The main part of criminal regulations regarding environmental liability is scattered in many laws. Main characteristics of all these regulations are the small fines or sentences.

Law 743/1977 'on the protection of the marine environment' was in that sense a milestone in a first effort to criminalise acts that affect the marine environment by providing for the first time a framework with simple and comprehensible rules. Subsequently, a series of special laws regarding criminal liability for environmental damage followed. Law 998/1979 is also worth mentioning, where the interest of the legislator is equally focused on prevention.

The first legislative attempt to systematically establish a framework of criminal rules specifically adapted to environmental protection resulted into the numerous environmental criminal law provisions of Article 28 of Law1650/1986.

More specifically, paragraph 1 of Article 28 sets out the basic form of crimes introduced by Law 1650/86. According to this article, with imprisonment from three months to two years and fines is punishable anyone who:

a "pollutes or degrades the environment by an act or an omission contrary to the provisions of this law (…)" or who

b "operates a business without the required (…) authorization or approval, or exceeds the license or authorization issued and downgrades the environment."

However, despite the multitude of penal provisions, criminal environmental responsibility has been applied in very few cases in practice. This is mainly due to the practical difficulty of proving fault of the operator. Fault is an element of every crime. It takes the form of either intention (*dolus*) or negligence (*culpa*). Most of the aforementioned crimes leading to criminal environmental responsibility are punishable only for *dolus* and some for heavy negligence. This is why it is difficult to argue and prove before Court that it was the operator's intentions to damage the environment.

Another obstacle is the proof and determination of the causal link between the cause (actions of the operator) and the damage. This difficulty is furthermore enhanced by the vagueness of the terms 'pollution' and 'degradation' as defined in Article 28 of the Law 1650/1986. Solution to the latter problem could be given by the amendment of the Article 28 of Law 1650/1986 by Article 16, paragraph 4 of Law 3937/2011, which specifically states that "environmental degradation is also considered the causing of environmental

damage, according to the provisions of Presidential Decree (P.D.) 148/2009 on Environmental Liability" which was adopted in order to implement the ELD in the Greek legal order. By doing so, the anachronistic definition of environmental degradation is enriched by that introduced by the P.D. 148, providing a more accurate definition. Furthermore, it refers to a definition of 'environmental damage', which will *prima facie* be determined by the Greek administration and not by the Greek courts.[6]

Finally, after a series of efforts by the European Union for a unified proposal for the protection of the environment through criminal law the Directive 2008/99/EC was introduced in 2008 and was transposed to the Greek legal order by Law 4042/2012. Aim of this Directive is the standardisation of criminal offenses related to the environment. More specifically, the Directive introduces standards concerning intentional violations or violations by gross negligence, and describes and defines nine of them in Article 3 (Vatheia, 2010). In that way the national legislator "has the opportunity to adopt some improvements to the already existing Laws 1650/1986 and 743/1977" (Tsiridis, 2009).

2.4 The implementation of the EU ELD in Greece

The "Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage" (ELD) was finalised in 2004 after almost two decades of negotiations. The final text adopted could be considered as a framework directive leaving some discretion to the Member States as to the adjustment (Winter et al., 2008). The ELD, finally, reflects the 'precautionary principle' and the 'polluter pays' principle (De Sadeleer, 2006, 2010).

2.4.1 The implementation of the ELD in Greece: the Presidential Decree 148

The ELD was transposed into the Greek legal order, only after Greece's condemnation by the European Court of Justice in 2009 (case C – 368/08) for failing to adopt within the prescribed period. This took place only a few days before the general elections of 2009, by the Presidential Decree (P.D.) 148/2009. It is worth noting that Greece opted for a more severe and strict adoption of the ELD in many subjects where the Directive was allowing a margin of appreciation.

The aim of the ELD is to establish a framework for environmental liability based on the 'polluter pays' principle, with a view to preventing and remedying environmental damage. In order that aim to be achieved, a central coordination body named Coordination Office for Restoration of Environmental Damage – CORED (Συντονιστικό Γραφείο Αποκατάστασης Περιβαλλοντικών Ζημιών) was created by the P.D. 148. This Office is responsible for deciding and supervising the necessary preventive and remedial measures at central level. On decentralised level 13 Regional Bodies, following the regional administration structures that existed at that time in Greece, were established to deal with issues of environmental damage at regional level: Regional Committees of Environmental Damages Restoration – RCEDR (Περιφερειακή Επιτροπή Αποκατάστασης Περιβαλλοντικών Ζημιών).

Finally, P.D. 148 aims at setting up a system of compulsory insurance that should cover the cost of restoration. Nevertheless, the required Ministerial Decisions are yet to be signed (postponed until 31.12.2012 while previous deadline was on May 2010).[7]

2.4.2 The role of the Regional Committee for the Restoration of Environmental Damages

According to P.D. 148/2009, each Region [now Decentralised Administration (D.A.)][8] must establish a 'Regional Committee of Environmental Damage Restoration (RCEDR)'. This Committee is to be established by decision of the Secretary General of the Region (now Secretary General of the D.A.).

With a circular letter in October 2010, the Ministry of Environment and Climate Change and more particularly the Special Secretariat of Environment and Energy Inspectorate as the competent authority to oversee the implementation of the ELD, has further clarified the framework of operation of the RCEDR. According to this letter, the Committees have, in addition to the specifically mentioned responsibilities in the P.D. 148, the following tasks:

a to ensure that a specific public accounting code is included in the annual budget for emerging cases of environmental damage falling within the scope of the above mentioned Decree

b to collect data of the environmental situation at regional level

c to identify needs for environmental studies and to recommend the necessary funding through the Regional Operational Programs

d to inform in a specified period not less than six (6) months the competent central authority (SYGAPEZ) on cases that are in the process of P.D. 148/2009 and the state of implementation of preventive measures and rehabilitation.

Of the above mentioned tasks, until now, only the last one is being executed in practice.

Pursuant to P.D. 148/2009, each D.A. is empowered through the RCEDR to take certain actions relating to the prevention and remedying of environmental damage, as defined in Articles 8 and 9. These measures include the right to impose measures – preventive and repressive – to the responsible operator, which are approved by the General Secretary of the D.A. If the responsible operator cannot be identified, the RCEDR is responsible to take the necessary measures on its behalf. Also, it must notify all natural or legal persons affected or potentially affected by environmental damage when applying the P.D. 148 mechanism. Until now this has not happened in any of the cases that the mechanism was applied to in Greece.[9]

It is obvious that in order to achieve the substantial application of the P.D. 148/2009 the auditing mechanisms play a crucial role. The lack of these auditing mechanisms at the level of the D.A. make the bolstering and reinforcement of such mechanisms at local level even more important.

2.4.3 The novelties of the ELD mechanism

The ELD not only introduces for the first time in the Greek legal order dynamic definitions such as the "imminent threat of environmental damage" but also sets up for the first time an effective mechanism of objective liability for environmental damage. Along with the adoption of the ELD mechanism, the existing legal tools of combating environmental damage were not only enriched, but their individual use became also more efficient. In particular, the definition of environmental pollution or damage prescribed in law 1650/1986 was supplemented by that of the P.D. 148, giving finally a solid and

realistic well-defined legal base for the application of penal and civil environmental liability according to Law 1650/1986.

Besides that, the mechanism of the P.D. 148/2009 sets up for the first time the basic Administration structures, necessary to fulfil its responsibilities according to Article 24 of the Greek Constitution to prevent, remedy and recover environmental damage. In practice that means that for the first time the administration plays *de facto* and *de iure* an important role in a sector that was until now mainly the responsibility of the judiciary power (Kalavros, 2010).

3 Case study: The application of the legal tools of environmental liability on the region of Asopos River

3.1 The application of the mechanism of subjective civil liability

The main legal tool of subjective civil liability in cases of environmental damage is that of Article 57 of the Greek CC. The conditions for the application of Article 57 are as already described:

1 the existence of environmental damage

2 an unlawful act

3 culpability.

An example of an environmental damage in the region of Asopos River is the high concentrations of hexavalent chromium in the drinking water of the region (Agricultural University of Athens, 2009; Association of Greek Chemists, 2007). Taken into account the requirements of Article 57 CC, it is difficult to conclude to an illegal act concerning the high concentrations of hexavalent chromium in drinking water because there is no clear and precise limitation of these concentrations in Greek legislation. Specifically, there is no precise legislation that defines the upper permissible limit of hexavalent chromium occurrence in drinking water. Moreover, it is very difficult to demonstrate a causal link between high concentrations of hexavalent chromium and damage, meaning any harm to the health of residents (e.g., increased incidence of carcinogenic diseases). Finally, the proof of intention in that case could result from the knowledge of the high concentrations and the continuation of water supply.

The application *in stricto sensu*, therefore, of Article 57 CC does not offer an effective tool for holding someone responsible in this case. On the basis of this practical example, one can easily understand the limits of subjective liability as a repressive measure.

For that reason the tool of civil liability should be interpreted in a broader sense. In fact, it could be possible to apply Article 57 CC in a precautionary way, meaning without any prior unlawful infringement, but only based on the imminent risk of occurrence. This reasoning is perfectly compatible with Article 174 of the Treaty Establishing the European Community establishing the principle of precaution and preventive action.

The precautionary principle considers that the mere existence of indications of potential risks of serious damage, which cannot be excluded based on scientific findings, impose restrictive measures concerning the circulation of goods or professional activities.

In this case, the possible serious damage lies in the fact that there is a substantial threat of environmental damage due to the potential health risk to the residents. The risk is far from excluded, based on the scientific studies and findings in the region. In that sense a preventive claim based on Article 57 could be taken into consideration.

The SMCFI of Chalkida followed that reasoning in a groundbreaking decision in 2010. The Court ruled in favour of local environmental associations against the Municipal Enterprise for Water Supply and Sewerage of the Municipality of Messapia and decided to ban the distribution of contaminated water in the region. Specifically, the Court stated that "*the water supplied in the region of Messapia in Euboea (...) is not healthy nor safe and poses serious health risks*" and concluded that "*the presence of hexavalent chromium in drinking water at such high concentrations is associated with (possibly irreversible or hardly reparable) damages in the human body*".

The breach of Article 57 according to the Court's ruling consists in the *endangerment* of the legal good of life (of the residents) and not in the actual proven *damage.* The same applies to the environment as a legal good that was being endangered here by these high concentrations. The Court reached that verdict taken into account that the Municipality of Messapia knew about the high concentrations of hexavalent chromium in the drinking water and was also informed about the possible dangers to health of these high concentrations.

Following that, the Court temporarily prohibited the municipality from distributing water for any use, which contains hexavalent chromium at concentrations greater than two micrograms per litre of water (2 mg/lt).

The innovative decision of the SMCFI of Chalkida can form the basis for an efficient implementation of the civil liability tool in cases of environmental damage, not only in the broader region of Asopos River but in the whole country.

3.2 The application of the mechanism of objective civil liability

The objective liability tool is the one less often used in judicial practice of the four mentioned above. The same applies in the region of Asopos River. There is not a single known case of application of the Article 29 of the Law 1650/1986. This is mainly due to the vagueness of the requirements of proof of environmental damage and of producing the causal link with the activities of the respective operator.

However, taken into account the fact that other tools of environmental liability were used in the region, it is surprising why this mechanism has not been used yet. Especially, linked with the application of the P.D. 148 mechanism the claim of Article 29 can be particularly useful. Specifically, the mechanism of Article 29 of Law 1650/1986 can be used as a next step of the mechanism of P.D. 148/2009, which stops at the restoration of the environmental damage. In case an environmental damage is detected and the mechanism of P.D. 148 is activated, the next step should be to examine whether there has been any damage to human health or property. If so, the damaged party has the right and also the legal basis – as the definition of environmental damage is of 2011 the same for both mechanisms, P.D. 148 and Objective Civil Liability – to file for compensation. Moreover, according to the circular letter No. 1724/19-10-2010 of the Ministry for Environment and Climate Change the RCEDR has to inform the residents that may be affected in every case the mechanism of the P.D. 148 is activated.

3.3 The application of the mechanism of criminal liability

The principal tool for criminal liability is that of Article 28 par. 1 of Law 1650/1986. In order to apply this article though, one has to prove the fault or negligence of the responsible operator. For this reason, sufficient evidence is needed to prove both the intent (the subjective element of the crime) and the pollution or environmental degradation (the objective element of that crime).

These two elements constitute in practice the biggest 'obstacles' for attributing criminal liability to industrial operators in the region of Asopos. Often, the lack of sufficient reasoning or proof of fault has resulted to the revision of such decisions by the Supreme Court. The necessary proof that the industrial operator is aware and in acceptance of polluting is often difficult to prove and that he is doing so in breach of his respective 'authorisation of environmental terms' that have been approved by the competent state authority. Such evidence, however, does not exist in the region of Asopos River.

Possible solutions to this problem should be sought either in the evolution of case law or in the change of administrative practice. Especially, the latter is in need of revision. The lack of evidence is not a purely legal matter but also a result of poor auditing by the competent state authorities.

In the study area the problem lies mainly in the lack of timely activation and transfer of information from the competent state authorities when a possible infringement of Article 28 of Law 1650/1986 is detected. The State's Attorney's Office in the city of Thebes apparently lacks the tools, mechanisms and personnel for monitoring compliance with environmental provisions and there for the competent administrative authorities have to communicate relevant information immediately to the Public Prosecutor for further examination.

More precisely, the competent auditing authorities in the region, such as the Bodies of Environmental Quality Control – BEQC (ΚλιμάκιαΕλέγχουΠοιότηταςΠεριβάλλοντος) and the Department of Development of the Region of Central Greece, could and should increase their numbers of inspections and investigations. And when doing so, any possible infringements should not only lead only to administrative fines – often reduced before the administrative courts – but also to the immediate informing of the State's Attorney of Thebes of all material and clues related to the environmental damage.

The Audit Report of the General Inspector of Public Administration of 2008 for the region of Asopos River found that a number of companies did not have the required authorisation by law for the operation of their facilities and there for meant a threat to the environment (General Inspector of Public Administration, 2008). This fact alone constitutes a breach of Article 28 paragraph 2 of Law 1650/1986 and should result into criminal proceedings examining the possible criminal liability of the industrial operations.

3.4 The mechanism of the P.D. 148/2009

The D.A. of Thessaly and Central Greece set up its RCEDR by Decision No. 1187/2013/1-4-2011 of the Secretary-General of the D.A. and it has so far been activated several times in cases of environmental damage.

Regarding the registration of the public accounting code in the annual budget of the D.A., the competent Department for Environment has been asking for it twice, a demand which was nevertheless rejected, both by the competent Budget Department of the D.A. and the Central Ministry.

All the cases of this area cannot be examined at this point, but it has to be mentioned that only a few of them are nearing completion (meaning completed restoration of the environment). One case study has been chosen in order to examine the way and the means of the implementation of the P.D. 148 mechanism: the case of one company called here 'B'. On 04.12.2010 Environmental Inspectors of the Ministry for Environment and Climate Change conducted an inspection control following complaints. Despite the fact that the operation of these facilities had already been banned, the inspectors found the business operating and the courtyard full with hundreds of cubic meters of waste of metallurgical processes, many of which were classified as dangerous or potentially dangerous. The business owner was arrested for environmental degradation, illegal waste management and illegal operation. The inspectors further requested the activation of the PD 148/2009 by the D.A., because, despite the intention of the operator to undertake voluntarily preventive measures, no relevant study has ever been submitted or approved.

Further on, the Department of Environment (DoE) of the D.A. conducted an autopsy on 22.02.2011 at the premises of the operator to perform sampling for assessing the environmental damage and prepared the autopsy report of 02.22.2011, which was sent to the RCEDR. The DoE in this paper suggests a number of measures for the rehabilitation and restoration of the site.

The RCEDR of the D.A. of Thessaly and Central Greece met on April 15, 2011 to discuss among others the case of the company 'B'. The RCEDR decided that the operator must apply the measures suggested by the DoE, and must proceed with a study of consolidation – restoration of the site and the decision was communicated to the company.

By 12.7.2011 the company submitted a management plan of environmental damage, while at the same time the Institute of Geological and Mining Research (ΙνστιτούτοΓεωλογικώνκαιΜεταλλευτικώνΕρευνών) transmitted the results of sampling that were performed during the autopsy of the DoE and the procedure of environmental restoration began.

The primary objective of the P.D. 148/2009 though is that the operator has to take itself the necessary preventive measures without prompting or enforcement thereof by the competent authority.

In practice, however, almost none of the many operators in the area of Asopos River were considering themselves as an imminent threat of environmental damage from their activity. For this reason in that area there is no evidence of application of the P.D.148 by any operator/s as to the preventive part. The only case that can be mentioned is the document from 02/07/2011 of the company 'B' to the D.A. of Thessaly and Central Greece, which refers to the company's intention "to take immediate preventive actions" and "in particular in small-scale mechanical processing of coarse mixture of lead oxide and to secure storage in closed and sealed containers". In this case, which was described above, the operator did not proceed to the proposed action and therefore the P.D. 148 mechanism was activated as to its restorative part.

As to the remedial part of the P.D., the operator shall inform the competent authority of all aspects of the damage and take the necessary measures to restore the damage. In practice, however, in the study area, the only operator who by his own will has informed

the responsible authority of an environmental damage is the National Electric Company (ΔΕΗΑ.Ε.). The reasons for the operators' inactivity are mainly the economic costs of these measures and the small numbers of inspections in the area.

Besides the growing number of activation of the P.D. 148 mechanism, it is somehow surprising though, why the mechanism has not been activated in some other cases, given also the deteriorating situation of the environment in the region. For example, another company called here 'C' based in Inofyta, was sanctioned by a fine of 24,000€ and was obliged to proceed with a recovery study of the existing wastewater disposal system because violations of the environmental conditions were found after controls of the Environmental Inspectors of the Ministry for Environment and Climate Change. However, in this case the mechanism of P.D. 148/2009 was not triggered by the D.A.

Similarly, there are also a number of enterprises whose licensing was ruled illegal by the Supreme Administrative Court. It is astonishing that, while the Supreme Administrative Court considered that these operators have violated the environmental terms and conditions of licensing in such a way that the Department of Development was obliged to revoke their licenses, those infringements were not examined by any competent authority of the P.D. 148, whether they have caused environmental damage. Often the main reason for not activation of the ELD mechanism is the lack of information of the competent authority of these cases (European Commission, 2010).

4 Conclusions

Overall it has been seen that besides the existence of four different tools of environmental liability, an industrial operator is not always held responsible for his actions when causing an environmental damage. This is mainly due to the lack of joint use of all aspects of environmental liability (penal, civil, P.D. 148/ELD) in cases of environmental damage and the lack of interoperability of the competent authorities for each mechanism. All in all, there is a lack of a holistic approach concerning environmental liability.

The implementation of the ELD into the Greek legal order though offers some new prospects for the future as it reunites all tools – at least on the basis of the definitions of environmental damage. By doing so, the environmental liability in general can be applied in future more easily starting with the restoration of the environment carried out by the mechanism of the P.D. 148. On the same time, the State's Attorney should be informed of the activation of the mechanism and should examine any possible criminal violations with regard to the culpability of the operators as the damage has already been specified. And last but not least, the citizens that may be affected should be informed every time the mechanism of the P.D. 148 is activated by the competent authority and they could claim compensation on a solid legal base though the mechanism of objective civil liability – due to the common definition of both legal tools.

Furthermore, in order to implement the 'polluter pays' principle in a more effective way, given the difficulty to prove the causality of a certain damage to a certain operator, a subsidiary mechanism of collective responsibility could be introduced. This subsidiary mechanism could be similar to that of the USA 'Superfund Act' setting up a device for non-binding allocation of responsibility (NBAR) or a special trust fund to which all operators in the area contribute according to their environmental damage risk. This would lead that even in cases where the responsible operator cannot be identified the state would

not have to bear the cost of the reparation but, instead, the possible polluter and risk holder, changing the known principle into 'possible polluters pay'.

For Greece the ELD offers a unique opportunity – as stated above – to ensure at last the effective application of all legal tools of environmental liability. Moreover, the P.D. 148/2009 offers an opportunity for a holistic approach of environmental liability. An example of this effective implementation of the P.D. 148 based on the conclusion from this paper can be found in Appendix (Filentas, 2011).

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Notes

1 The breach of the Constitution in that case does not result automatically at the unconstitutionality of the respective law or provision in question. Moreover, it has to be determined if the application of the law or the law itself are in breach of the Constitution. Only in the second case is the law declared unconstitutional and becomes inoperative.

2 *Voy*. Chapter II.2. and II.3.

3 For methods of environmental damage assessment *voy* (Martin-Ortega et al., 2011).

4 *Voy*. Chapter II. 3.

5 The German model collects all environmental crimes together in Chapter XXIX of the German Criminal Code (*Strafgesetzbuch*) titled '*Straftaten gegen die Umwelt*' (Articles 324–330d).

6 *Voy*. Chapter II. 4.

7 Article 14 of the P.D. 148 stipulates that, operators of business activities covered by the P.D. are obliged (as of May 1, 2010) to use insurance or other means of financial security to cover possible recovery or restoration in cases of environmental damage. The deadline was though adjourned and the joint Ministerial Decision by the Minister of Environment, Energy and Climate Change and the Minister of Finance, Competitiveness and the Maritime, that would designate the specific insurance rules is yet to be signed. The general terms and provisions that apply concerning insurances for environmental risks are regulated in the Insurance Act (Law 2496/1997). According to Article 37 of Law 3892/2011 the required amount of financial security can be reduced for those operators that are using the European Eco-Management and Audit Scheme (EMAS).

8 According to the changes in Greek regional and local government following the Program of Administrative Reform 'Kallikrates' (Law 3852/2010).

9 As to October 2012.

Appendix

Table A1 Interoperability between the different mechanisms of environmental liability (see online version for colours)