

EGP-Guizhou

Improving access to environmental justice to protect people's environmental rights in Guizhou province

General situation of legislation and practice of environmental damage assessment and compensation

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For more information on the EGP-Guizhou project and its activities, please visit the website: www.egp-guizhou.com.

1. Introduction

1.1. The concept of environmental damage

Environmental damage can be classified in accordance with a broad and a narrow sense.

In a broad sense, environmental damage can refer to all kinds of damages to private and public interests caused by environmental pollution. Damages to private interests correspond to the damages to a third person's (other than the polluter's) body, property, mentality, and economy as a result of environmental pollution. Damages to public interests refer to the damages to the ecological environment due to environmental pollution.

In a narrow sense, environmental damage is also called ecological damage which refers to the damage to ecological environment as a result of environmental pollution. It mainly includes costs to implement necessary and reasonable measures to prevent the expansion of environmental pollution, and to remediate and/or restore the damaged ecological environment. It also includes the damage occurred in the course when the service function of ecological environment partially or completely restore to its previous condition. Based on different levels of technological and economic development the specific scope of ecological damage varies with country-specific legislations.

This report aims to briefly introduce the current situation and problem of legislation and practice which is related to environmental damage in a narrow sense.

1.2. The necessity for environmental damage compensation

Currently, the frequency of environmental pollution incidents in China is very high. The environmental problems that have occurred in developed countries in the past several hundred years have extensively emerged in China. However, the legislations on environmental damage compensation (EDC) in China are very principled. They mainly focus on the damage occurred to private interests, but barely focus on the damage occurred to public interests. Consequently, in practice the polluters usually take very limited administrative fine and liability for compensating damages occurred to personal body and property. Ecological damage in the context of public interests usually lacks of effective compensation and finally gets paid by the government.

Hence, the establishment and improvement of an EDC system and a fully inquisition of polluters' environmental liability are urgent needs to enact the Polluter Pays Principle (PPP) and effectively react to environmental challenges.

1.3. The importance of environmental damage assessment

Environmental damage assessment (EDA) refers to the activities of integrative use of economic, legal, technical and other approaches to reasonably identify and estimate the scope and degree of environmental damages, to provide expert opinions and evaluation reports, and to offer services to environmental management and environmental justice.

Compared with traditional personal injury and property damage, environmental damage as a new type of damage is characterized to have diverse and complex scope and magnitude. How to accurately assess and determine the scope and magnitude of environmental damage becomes the prerequisite to effectively implement EDC. Therefore, EDA has very high importance and plays a very important role in the EDC system.

An effective implementation of EDA tasks in terms of scientific determination of pollution remediation and ecological restoration cost is helpful in the following aspects: to help reveal an enterprise's environmental cost of production and to improve an enterprise's consciousness of environmental risk; to help promote the shift of administrative management from extensive to intensive and to speed up the improvement of administrative management of environmental risk prevention and environmental emergency handling; to help provide professional and technological support to judicial authorities for hearing environmental pollution cases, to promote a deep-going implementation of environmental justice, to protect the public's legal environmental rights, and to severely penalize environmental illegal activities.

2. The current situation and deficiency of legislation and practice of environmental damage assessment and compensation in China

Currently, the core content of legislation and practice of environmental damage assessment and compensation (EDA&EDC) in China focuses on the damage occurred to private interests. The legislation and practice of EDA&EDC related to public interests are only at an initiation stage and need improvements.

2.1. The legislative situation of environmental damage compensation

2.1.1. The provisions for environmental damage compensation in civil legislations

The legal character of EDC liability is in the context of tort liability. When there is an absence of provisions specialized to the EDC liability, the general provisions related to tort liability law will be applicable.

Article 124 of *the General Principles of the Civil Law of the People's Republic of China (1884)* and Article 65-68 of the 8th Chapter of *the Tort Liability Law (2009)* provide special provisions for tort liability of environmental pollution.

In summary, the core contents of the aforementioned legal provisions include: the doctrine of liability without fault is applicable to environmental pollution infringement; put in force that the burden of proof for cause-and-effect relationships is reversed, i.e., the polluters are supposed to bear the burden of proof and prove there is no cause-and-effect relationship between their activities and environmental damages; if two or more polluters were liable for environmental infringement, the proportions of polluters' tort liability are determined by the type of pollutants, quantity of emissions and other factors; if the damage as a result of environmental pollution was caused by the fault of a third party, the polluters take the joint liability and are eligible to claim compensation from the third party after paying compensation in advance.

In general, the provisions for EDC in the civil law in China are mainly applicable to private interest-related personal injury and property damage. There is no clear provision in the civil law for the public interest-related EDC.

It is worth to note *Article 55 of the Civil Procedure Law* revised in 2012. It stipulates that authorities and relevant organizations provided by law can file a lawsuit to the People's Court against activities damaging social public interests, e.g., activities cause environment pollution and violation of the lawful rights and interests of many consumers etc. Article 55 provides a legal basis for the compensation and litigation of public interest-related environmental damages. However, there is no clear provision for the scope and evaluation methods of damages.

2.1.2. The provisions for environmental damage compensation in environmental laws

In addition to civil laws, in China a number of environmental laws have provided relevant provisions for EDC. They include Article 41 and 42 of the *Environmental Protection Law (1989)*, Article 90 and 92 of the *Marine Environment Protection Law (1999)*, Article 85 to 89 of the *Law on the Prevention and Control of Water Pollution (2008)*, Article 62 and 63 of the *Law on the Prevention and Control of Atmospheric Pollution (2000)*, Article 84 to 87 of the *Law of Solid Waste Pollution Prevention and Control (2004)*, and Article 61 of the *Law on Environmental Noise Pollution Prevention and Control (1996)*.

In summary, the above provisions are based on the related EDC provisions in civil laws and have the following specifics for EDC: the temporal limitation of EDC litigation is three years; for disputes over the EDC liability and cost the parties involved can request administrative handling from the environmental protection administrative authorities; in cases of where the force majeure exists or the damage is intentionally caused by the victim, the polluter can be exempted from the EDC liability; if the number of parties involved is too big, the parties may elect representatives to jointly litigate; the parties involved can entrust environmental monitoring agencies to provide monitoring data, and the monitoring agencies should accept the consignment and truthfully provide relevant monitoring data.

Overall, the provisions related to EDC in environmental laws in China are mainly applicable to the compensations for private interest-related personal injury and property damage. The only legislation that is relevant to public interest-related EDC is Paragraph 2 in Article 90 of the *Marine Environment Protection Law*. It stipulates that, according to the provision in this law, the departments exercising the power of supervision and control of marine environment can, on behalf of the country, claim damage compensation request against the liable party that damages the marine ecosystem, marine fishery resources, and marine conservation zone and causes significant losses to the country. This provision clarifies the subjects of rights and obligations of public interest-related EDC. It makes the field of marine ecological damage compensation become one of the major areas for practicing public interest-related EDC.

2.2. The practice of environmental damage assessment in China

Despite a lack of top-level design of EDC in state laws, China has in practice carried out positive probes into EDA, under the promotion by the Ministry of Environmental Protection, the Ministry of Agriculture, the State Oceanic Administration, the Ministry of Justice, and the Supreme People's Court.

2.2.1. The practice of environmental damage assessment promoted by agricultural authorities

The agricultural authorities mainly focus on the EDC caused by accidents of fishery and agricultural environment pollutions. They have successively drew up a series of rules and criteria relevant for EDA which mainly include the Administrative Measures for the Qualification of Identification and Investigation of Fishery Pollution Accidents (2000), the Calculation Methods for Economic Loss Caused by Fishery Pollution Accidents (GB/T 21678-2008), and the Technical Guidelines on the Evaluation of Loss Caused by Agricultural Environment Pollution Accidents (NY/T 1263-2007). These rules and criteria have provided principal provisions for the scope, assessment method and procedure for environmental damage caused by accidents of fishery and agricultural pollutions. Currently, the Calculation Methods for Economic Loss Caused by Fishery Pollution Accidents has become the main criterion which is used for fishery damage assessment in the context of EDA.

In addition, the Ministry of Agriculture has established the Judicial Identification Center for Agricultural Ecological Environment and Agricultural Product Quality Safety and the Monitoring Center for Fishery and Ecological Environment in the Middle and Upper Streams of the Yangtze River. They are both eligible to conduct judicial identification and provide technical support to damage assessment of fishery and agricultural pollution.

2.2.2. The practice of environmental damage assessment promoted by oceanic authorities

Article 90 of *the Marine Environment Protection Law* revised in 1999 authorizes the oceanic authorities to claim EDC requests to the liable party on behalf of the state. In 2002 the State Oceanic Administration authorized its North China Sea Branch to file a lawsuit for marine EDC against the Tasman Sea vessel. According to the System and Specification for Oil Spill Identification (HY043-1997) the oceanic authorities assessed the environmental damages and provided key proof needed for claiming compensation. However, the dispute about the scope and assessment method for marine environment damage during the litigation was still the core problem.

Based on the above case the State Oceanic Administration successively drew up the *Technical Guidelines for Assessment of Marine Oil Spill Ecological Damage (HY/T 095-2007)* and the *Technical Guidelines for Assessment of Marine Ecological Damage (Trial implementation)(2013)*, which normalize the scope, assessment procedure and method for marine ecological damage.

At local level, the Shandong Province has drew up the Assessment Methods for Marine Ecological Damage and Loss Compensation in Shandong Province (DB37/T1448-2009) and the Trial Measures for Administration of Compensation for Marine Ecological Damage and Loss in Shandong Province (Trial implementation) (2010).

In addition, the State Oceanic Administration has established the Judicial Identification Office of the State Marine Environment Monitoring Center, which is eligible to conduct judicial identification and provide technical support for marine ecological damage assessment.

2.2.3. The practice of environmental damage assessment promoted by environmental protection authorities

Environmental protection authorities were late in initiating work on EDC, and started in 2007 to conduct specific studies on the legal system, assessment system and technical method for EDC. Based on the above work, the Ministry of Environmental Protection released in 2011 the *Several Opinions on the Identification and Evaluation of Environmental Pollution Damage (2011)* and the *Recommended Methods for the Calculation of Loss Caused by Environmental Pollution Accidents(1st version)*.

In October of 2011, the Ministry of Environmental Protection initiated a trial work on environmental pollution damage identification and assessment (EPDI&A). It identified environmental protection bureaus (EPBs) from five provinces (e.g., Hebei, Shandong and Hunan) and two cities as trial agencies. At the same time the Ministry of Environmental Protection released the *Plan for the Trial Work on Environmental Pollution Damage Identification and Assessment (Letter [2011] No. 1019)*.

Within its subsidiary units the Ministry of Environmental Protection established the Research Center for Environmental Risk Identification and Assessment affiliated to the Chinese Academy for Environmental Planning, the Technical Center for Environmental Damage Identification affiliated to the China National Environmental Monitoring Centre, and the Centre for Environmental Pollution Damage Identification and Assessment affiliated to the Chinese Society for Environmental Sciences. However, these institutes do not have qualifications to conduct judicial identification.

It is worth to note that in recent years some local EPBs have successively set up some EDA agencies with qualifications for judicial identification within the environmental protection system, e.g., the Kunming Centre for Environmental Pollution Damage Identification and Assessment (2011), the Chongqing Centre for Environmental Damage Judicial Identification,

and the Hebei Provincial Centre for Environmental Pollution Damage Judicial Identification (2014).

In practice, there are successful cases in which environmental protection authorities have filed lawsuits as the plaintiff to claim compensation for environmental damages. In 2010 the Kunming Municipal EPB filed lawsuits against two companies for environmental pollution infringement, i.e., the Kunming Sannong Agriculture and Husbandry Ltd. and the Kunming Yangfu Uni-agriculture and Husbandry Ltd. The court adjudged that the defendant must stop damaging the environment and compensate for the environmental loss for 4.1721 million RMB and the assessment fee for pollution abatement in a cost for 132.52 thousand RMB.

2.2.4. The practice of environmental damage assessment promoted by judicial authorities

Compared with the situations in other fields, as a result of constrain from international conventions, the hearing of disputes on damage and compensation caused by vessel oil pollution has indirectly promoted the practice and development of marine environment damage compensation.

In 2011, the Supreme People's Court drew up the Provisions on Several Issues Concerning the Trial of Cases of Disputes over Compensation for Vessel-induced Oil Pollution Damage (Legal explanation [2011] No. 14). According to the provisions the compensation scope of vessel-induced oil pollution damage include: the fee for adopting preventive measures to prevent or mitigate vessel-induced oil pollution damage and further losses or damages caused by the preventive measures; other property damage apart from damages to the vessel caused by vessel-induced oil pollution incidents and corresponding revenue losses; revenue losses caused by oil pollution-induced environmental damage; and the costs for taking or being about to take reasonable restorative measures.

In summary, the environmental damages compensation defined by the above provision includes three categories: first is the cost to take preventive measures to prevent or mitigate vessel-induced oil pollution damage; second is the cost for the already-taken or being taken reasonable restorative measures; third is the cost for reasonable monitoring, assessment, and research.

The costs for preventive and mitigation measures, monitoring, assessment and research must be in accordance with the actual expenditure, but the cost for restorative measures needs to be assessed. However, the above provision does not stipulate anything for the cost assessment of restorative measures.

2.3. The deficiencies in legislation and practice of environmental damage assessment and compensation in China

2.3.1. Imperfect legislative system of environmental damage compensation

Although there are clear host law provisions for environmental damage in China, the relevant laws still mainly focus on the personal injury and property damage caused by environmental pollution. There is no legislation specifically set up for ecological environmental resource damages. Moreover, the relevant mechanisms related to the burden of proof, damage compensation and public interest litigation for private interest-related damage as a result of environmental pollution are imperfect. They also lack of specific operational provisions in the substantive law and procedural law. This leads to many difficulties in EDC in practice. Although a large number of environmental pollution incidents occur every year, there are only a very small number of EDC lawsuits filed. From the procedural provisions, the mechanism for environmental public interest litigation is imperfect and the mechanism for environmental administrative relief is not fully functioning.

2.3.2. Unclear plaintiff qualification

Article 55 of the Civil Procedure Law stipulates that authorities and organizations prescribed by law can file a lawsuit on public interest-related EDC. However, currently only the Marine Environmental Protection Law has clear provisions on the organizations which are eligible to file a lawsuit on marine ecological damage compensation. In addition to a number of local regulations and normative documents there is no law which stipulates that the authorities for environmental protection, fishery and state land can file lawsuits for public interest-related EDC, though these authorities are eligible to exercise the right of environmental protection, monitoring and management.

As the scope of relevant organizations is unclear, the latest *Environmental Protection Law (Revised draft)* strictly defines the organizations, which are eligible to file public interest-related EDC, as "be legally registered at the civil affair departments of the State Council, be specially engaged in environmental protection welfare activities for more than five consecutive years, and be reputable as a state social organization". This apparently excludes the majority of environmental protection organizations to be qualified as the plaintiff and greatly limits the scope of the organizations with plaintiff qualifications.

2.3.3. Vague scope of environmental damage assessment

In the broad sense of environmental damage the law has clear provisions on the scope of personal injury and property damage, but has no clear provisions on the exact scope of public interest-related environmental damage. There are big differences between the provisions on

the scope of damages in the normative documents drafted by the agricultural, marine and environmental protection authorities.

The Calculation Methods for Economic Loss Caused by Fishery Pollution Accidents drew up by the Ministry of Agriculture limits the economic losses caused by fishery pollution accidents to the direct economic loss and the cost for restoration of natural fishery resources. The Technical Guidelines for Assessment of Marine Ecological Damage (Trial implementation) drew up by the State Oceanic Administration limits the scope of marine ecological damage to the cost for preventive measures for pollution removal and damage mitigation, the loss happened during the restoration period of living marine resource and marine environment capacity, the cost for marine ecosystem restoration, and other reasonable costs for monitoring, experiment and assessment. The Recommended Calculation Methods for the Loss Caused by Environmental Pollution Damage drew up by the Ministry of Environmental Protection limits the scope of environmental pollution damage to the ecological environmental resource damage, the cost for emergent handling, investigation and assessment, pollution remediation, damage due to accident effects and other damages which should be included in the assessment scope.

2.3.4. Lack of unified methods for environmental damage assessment

The calculation method for fishery losses defined in the Calculation Methods for Economic Loss Caused by Fishery Pollution Accidents drew up by the Ministry of Agriculture include direct calculation method, comparative method, site-specific harvesting method, corraling statistical method, statistical estimation method, survey statistical method, simulation experimental method, production effect method, production statistical method, expert assessment method, fish eggs and larvae estimation method etc.

The Technical Guidelines for Assessment of Marine Ecological Damage (Trial implementation) drew up by the State Oceanic Administration stipulates that the value of marine ecological damage is estimated based on the expense for implementing measures of ecological restoration, namely, the expense for restoring the marine ecosystem to its baseline level is used as the primary and most preferable value for cost estimation of marine ecological damage. Meanwhile, the economic loss happened during the period of restoring the marine ecology to its baseline level (i.e., the restoration period) should also be included in the loss assessment. In the circumstance the marine ecosystem could not be restored, the expense of replacement project can be used for calculating the loss in value of marine ecological damage.

The Recommended Calculation Methods for the Loss Caused by Environmental Pollution Damage drew up by the Ministry of Environmental Protection stipulates that the cost for pollution remediation should be in accordance with the actual cost of restoration project. If the actual cost of restoration project could not be estimated, it is recommended to adopt the virtual treatment cost method and/or restoration cost method.

The estimation method of environmental resource value and alternative equivalent analysis method widely used in the west have not been approved by the legislative and administrative authorities in China. There are big differences between the assessment method and standard for environmental damage provided in the normative documents drafted by the agricultural, marine, and environmental protection authorities. Different assessment methods lead to big differences between the results from different authorities and agencies, and also lead to low acceptance by judicial courts.

2.3.5. Deficient working mechanism of environmental damage assessment

The law in China does not provide clear provisions on the functions of various authorities for EDA. There is insufficient rationale for the environmental and resource authorities to organize and conduct EDA work. Currently, only the Marine Environmental Protection Law authorizes the right of claiming damage compensation against the liable party to the authorities which are eligible to exercise the right of marine environment monitoring and management on behalf of the state. The EDC right for other authorities is undefined.

About EDA agencies, as a result of the particular specialty and technical complexity of environmental damage identification and assessment, currently the majority of judicial identification agencies do not have the capability to perform environmental damage assessment and identification. A very small number of agencies which have the capability to perform EDA are qualified for judicial identification. The lack of professionals and specific agencies puts severely constrain on the carry out of EDA-related tasks.

3. The legislation and practice of environmental damage assessment and compensation abroad

3.1. The legislation and practice of environmental damage assessment and compensation in United States

3.1.1. The legislation of environmental damage compensation in U.S.

The United States (U.S.) is the first country in the world to establish a system for EDA&C which is currently recognized to be the most perfect one.

In the U.S., public interest-related environmental damage is called natural resource damage. At the federal level, the Clean Water Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; commonly known as Superfund) and the Oil Pollution Act are the three major laws to regulate natural resource damage compensation (NRDC). The Clean Water Act and the CERCLA mainly focus on natural resource damages. The Oil Pollution Act does not just involve natural resource damages, but also private interest-related EDA&C. The three laws all explicitly authorize relevant authorities to draw up specification for nature resource damage assessment (NRDA), and determine and quantify natural resource damages caused by environmental pollution activities.

The request for NRDC should be based on the goal of restoring natural resource to its original state. The specific calculation of compensation includes the following three basic components: 1) the cost for restoration, remediation and replacement, or the cost for acquiring the equivalent amount of damaged natural resources (onwards called remediation cost in short); 2) compared with the baseline value, the reduced value due to damages in the course of natural resource restoration (onwards called loss in the course in short); 3) the reasonable cost for damage assessment (onwards called damage assessment cost). The first component suggests that the natural resource damaged must be restored to its baseline level. The cost in the second component is used to compensate the loss of common public caused by natural resource damage and reduction in the service value in the course of natural resource restoration.

3.1.2. The environmental damage assessment in U.S.

There are two sets of different processes of nature resource damage assessment in United States: first, the U.S. Department of the Interior's (DOI) drafted the DOI rules based on the authorization of the Clean Water Act and the CERCLA. The DOI rules are applicable to assessment of pollution damages caused by leakages of all dangerous substances other than oil within the context of CERCLA and assessment of surface water pollution damage caused by oil leakages within the CWA; second, the U.S. National Oceanic and Atmospheric

Administration (NOAA) drafted the NOAA rules based on the authorization of the Oil Pollution Act. The NOAA rules are applicable to assessment of marine damages caused by oil pollution.

Both of the two sets of rules focus on the determination of the baseline level of natural resources which is regarded as the reference standard for quantification of environmental pollution damage. They both integrate the loss in the course of restoring the natural resource damage to baseline levels into the context of natural resource damage.

With respect to assessment methods the DOI rules rely on the use of economic tools to assess the value-in-use of natural resource. However, the focus of NOAA rules is on the actual project cost for restoring the damaged natural resource to its baseline level. The actual cost is used as a reference to assess the value for natural resource damage. Currently, the method for natural resource damage assessment in U.S. is gradually shifting from the traditional and economic value assessment method to the material-object-restoration-based alternative equivalent analysis method (service equivalent method, resource equivalent method and biotope equivalent method). Currently, the alternative equivalent method and environmental resource value monetization assessment method are both recommended to be adopted by the law.

The DOI rules stipulate two sets of processes for natural resource damage assessment: A type and B type processes. The A type processes are applicable to small-scale and -damage accidents. They need very little field monitoring and mainly rely on the damage estimation by computer models. The DOI rules defines two types of models for the A type processes: the natural resource damage assessment model for coastal and marine environments (NRDAM/CME) and the natural resource damage assessment model for Great Lakes environment (NRDAM/GLE). The B type processes are applicable to large-scale accidents and need to conduct individual and specific assessment for every accident.

In the process of damage assessment, no matter following the A or B type processes, the following four steps supposed to be carried out: First is to prescreen and preselect, i.e., to judge if it could be authorized to act. The prescreening and selection is the prerequisite to conduct a formal natural resource damage assessment; Second is to draft an assessment plan, i.e., the assignee must confirm the exposure level of assigned resource and draft an assessment plan for assessing potential damage. The draft version of assessment plan should receive public intendant and comment; Third is to carry out assessment. This task consists of three stages: damage identification, damage quantification, damage compensation determination. Fourth is to assess.

The natural resource damage assessment process in the context of NOAA rules include pre-assessment, remediation plan and remediation implementation: First is to pre-assess. The assignee first determine if they had jurisdiction based on the Oil Pollution Act, and then determine if they drafted the remediation plan. Second is to draft remediation plan. This stage includes two basic contents: damage assessment and remediation selection. The damage assessment is to assess if oil leakage induced negative changes to natural resource and

ecological service system. In the stage of remediation selection the assignee must determine the necessity and scale of remediation action. Third is to implement remediation. The final remediation plan is implemented by the liable person, or the liable person funds the assignee to implement.

3.2. The legislation and practice of environmental damage assessment and compensation in EU

3.2.1. The legislation of environmental damage compensation in EU

In 2000 the European Commission ever released the White Paper on Environmental Liability which classified damage as environmental damage and traditional damage. In order to truthfully pursue the civil liability of the liable person for causing environmental damage, EU promulgated the Environmental Liability Directive with Regard to the Prevention and Remedying of Environmental Damage in 2004 (onwards called Environmental Liability Directive in short).

The Environmental Liability Directive is applicable to the damages occurred to water bodies, land, protected species or habitats. Water pollution damage was defined as the damages causing significant negative influence to the ecology, chemistry quality or water body classification of water resources, e.g., the damages due to pollution occur to ground water, river and other surface water, and coastal water. Land pollution damage was defined as the damages causing significant negative influence and risk to soil quality and corresponding human health. Ecological diversity damage was defined as the damages causing significant negative influence to the protective species and natural habitats a material adverse effect on the damage to protected species and natural habitats.

The Environmental Liability Directive is applicable to all commercial activities within the EU including public and private sectors. The Annex III stipulates that restrict liabilities will be enforced if commercial activities led to environmental damages. Other doers only take the responsibility for intentionally or negligently causing damages to protected species and habitats.

3.2.2. The environmental damage assessment in EU

The EU Environmental Liability Directive drew lessons from the natural resource damage assessment method of the U.S. It considers the baseline as the reference standard for environmental damage assessment. *The EU Environmental Liability Directive* stipulates that, in the course of restoring natural resource to its baseline level (i.e., during the period of restoration), the liable party needs to take the responsibility for the loss or damage caused by natural resource damage.

The assessment method can be divided into the following steps: resource equivalent analysis, preliminary assessment, identification and quantification of loss and damage, determination and quantification of the benefits from remediation measures, evaluation remediation measures, and supervision and reporting.

The Environmental Liability Directive authorizes the member states to independently set up the main bodies of implementing EDA, the configuration of assessment organizations, and the operating mechanisms. For example, the Italian government sets the Ministry for the Environment, Land and Sea as the competent authority for EDA and the Italian National Institute for Environmental Protection and Research as the sole professional agency for EDA.

3.3. Short summary

Different countries provide different solutions for the EDA&EDC.

The U.S. is the first country to establish a complete legislation and system of EDC in this world. After thousands of cases of natural resource damage compensation, the legislation, assessment technical method, organization and implementation of environmental pollution damage compensation in the U.S. have been continuously improved. They have become references for other countries to establish EDC system. *The EU Environmental Liability Directive* is based on the experience from U.S., and it tries to establish environmental damage assessment models, a method library and a case library. In summary, the major experience of U.S. and EU in the context of EDC system construction includes the following two points:

First, the law clearly stipulates the liability composition of EDC and the scope of damage and assessment method. This provides a clear and complete top-level system design for EDC tasks.

Second, the normative documents drafted by the administrative departments clearly define the EDA method, standard and organizations. They shape a normative and effective EDA mechanism and provide strong technical support for the smooth carrying out of EDC tasks.

4. Policy recommendation

4.1. To improve the law system for environmental damage compensation

The amendments made to the General Provisions of the Civil Law, the Tort Liability Law, the Environmental Protection Law and other relevant laws have clearly defined the scope, liability composition and compensation fund security mechanism of environmental damage, and other contents. The amendments made to the Environmental Protection Law and the Civil Procedure Law have clearly incorporated the ecological environment and resource damage and other relevant contents into the scope of litigation, drafted principal provisions for the litigation subject, causality identification and contentious procedure, clearly defined the identification and assessment system of environmental damage, and clearly defined department responsibility.

The most ideal situation is to draft a specific Environmental Pollution Damage Compensation Act or Environmental Pollution Liability Act, which make specific provisions on the scope of EDC, compensation liability, litigation subject, assessment method and standard, contentious procedure, the burden of proof, liability insurance or fund and other issues.

4.2. To improve the mechanism for environmental damage assessment

The business property of identification and assessment of environmental pollution damage needs clarification. The identification and assessment of environmental pollution damage need to be managed using the management model of “Two Stages Dual Elements”. At the central government level it is recommended that the environmental protection authorities are responsible for technical management, the judicial authorities are responsible for administrative management. At local government level the examination and verification of specific organizations, which are responsible for the identification and assessment of environmental pollution damage, should be reported to the state administrative authorities for filing.

The qualifications of organizations and experts for identification and assessment of environmental pollution damage need to be clearly defined. The technique and method for identification and assessment of environmental pollution damage need to be standardized. The basic scientific research and environmental monitoring capacity should be enhanced. The assessment standard and technique for identification and assessment of environmental pollution damage should be gradually standardized.

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10. *Regulations on Assessment for Marine Ecological Damages and Loss Compensation of Shandong Province (DB37/T1448-2009)*
11. *Regulations on Hearing on Lawsuits of Compensation Dispute for Oil Pollution Damage (Judicial Interpretation No. 14),2011*
12. *Regulations on Management of Compensation Fees for Marine Ecological Damages and Loss of Shandong Province (Interim Procedures,2010)*
13. *Regulations on Qualification for Fishery Pollution Accident Identification and Investigation (2000)*
14. *Standards of Oil Spill Identification System (HY 043-1997)*
15. *Technical Guidelines for Agricultural Pollution Accident Damage Assessment (NY / T 1263-2007)*
16. *Technical Guidelines for Ecological Damage Assessment Caused by Marine Oil Spill (HY / T 095-2007)*
17. *Technical Guidelines for Marine Ecological Damage Assessment (Trial) (2013)*

Laws and Regulations of EU

1. *Directive 2004/35/CE of the European Parliament and of The Council , 2004*

Laws and Regulations of the US

1. *Clean water Act (1972)*
2. *Comprehensive Environmental Response, Compensation, and Liability Act (1980)*
3. *Department of Interior Natural Resource Damage Assessments [43 CFR Part 11]*
4. *Department of Commerce Natural Resource Damage Assessments [15 CFR Part 990]*
5. *Oil Pollution Act (1990)*

EGP-Guizhou: Improving Access to Environmental Justice to Protect People's Environmental Rights in Guizhou Province is one of 15 local partnership projects within the EU-China Environmental Governance Programme (EGP) and will be implemented in Guizhou Province between 2012 and 2014. The aim of EGP-Guizhou is to increase the awareness and capacity of victims of environmental pollution and relevant target groups and to create of a strong base for good environmental governance.

For more information, please contact:

Mr. Mikael Olshammar, Project Team Leader, IVL, tel. +46 8-598 563 08, e-mail: mikael.olshammar@ivl.se

Ms. Gao Xiaoyi, ACEF, tel +86 10 512 666 65, e-mail: gaoxiaoyi@acef.com.cn

Mr. Zheng Mingjie GZICCEP, tel + 86 851 557 7314, e-mail: epbfaec@163.com

Mr Huang Chengde Tel + 86 851 5840297, e-mail huangchengde@vip.163.com

Project website: www.egp-guizhou.com



贵州省环境保护国际合作中心
Guizhou International Cooperation Centre
for Environmental Protection



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