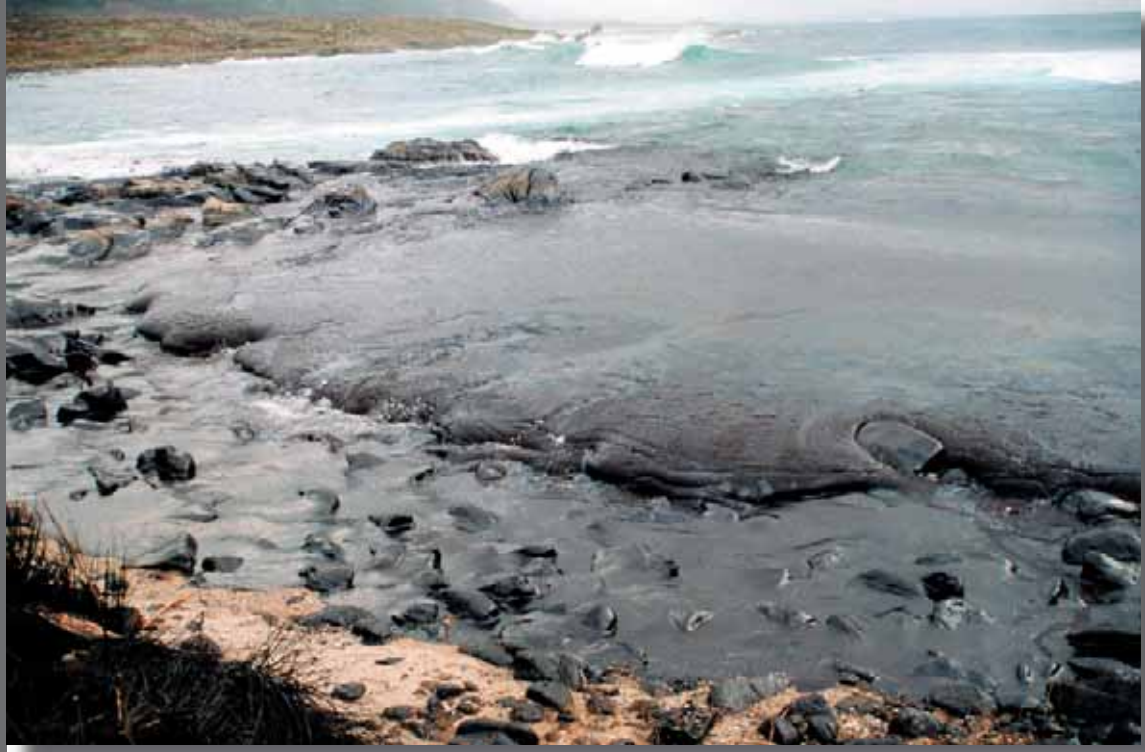
Atelier international



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Les dommages écologiques causés par les marées noires : évaluations économiques et indemnisations

18 - 19 mai 2006
à l'Institut Océanographique
Paris

Organisé par le Centre de Droit et d'Economie de la Mer
de l'Université de Bretagne Occidentale

SOMMAIRE

Présentation de l'atelier

L'atelier international « Les dommages écologiques causés par les marées noires : évaluations économiques et indemnisations » s'inscrit dans le cadre de l'animation scientifique de l'Appel à Propositions de Recherche (APR) « Évaluation économique des dommages écologiques des marées noires » financé par le Ministère de l'Écologie et du Développement Durable. Il est organisé par le Centre de Droit et d'Économie de la Mer (CEDEM) de l'Université de Bretagne Occidentale (UBO), avec l'appui du Département d'Économie Maritime (DEM) de l'IFREMER, dans le cadre des activités d'animation scientifique du Groupement de Recherche Aménagement des Usages des Ressources et des Ecosystèmes marins et littoraux (GdR AMURE).
L'objectif de l'atelier est de proposer un état des lieux :

- des connaissances, des méthodes et des débats actuels en matière d'évaluation économique des dommages écologiques causés par les marées noires ;
- des questions afférentes à la reconnaissance et la prise en compte institutionnelles de cette catégorie de dommages.

L'atelier accueillera plusieurs spécialistes internationaux de ces thématiques. La première journée de l'atelier sera axée sur l'évaluation économique des dommages écologiques causés par les marées noires, en accordant une large part à la présentation de cas d'étude. La matinée de la seconde journée abordera les thèmes de la responsabilité et de l'indemnisation des dommages écologiques.
Les présentations seront commentées par les experts internationaux et serviront de support pour les débats entre les participants de l'atelier.
L'atelier s'achèvera par la présentation des différents projets de recherche retenus dans le cadre de l'APR et de leur état d'avancement, suivie d'une discussion ouverte.
Les langues de travail seront, en traduction simultanée, le français et l'anglais. Les communications présentées lors de l'atelier feront l'objet d'une publication dans un numéro spécial de la revue *Océanis*.

PROGRAMME

JEUDI 18 MAI

9h00 > 09h30
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09h30 > 10h00
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10h00 > 11h00
Variabilité des impacts écologiques et indemnisation: Amoco Cadiz et Erika

Lucien Laubier,
Directeur de l'Institut Océanographique

11h00 > 11h30
Impacts de la non-prise en compte des dommages écologiques dans l'évaluation économique des effets des marées noires

Julien Hay, CEDEM
Olivier Thébaud, IFREMER

11h30 > 12h30
Quelles mesures économiques des dommages marchands et non-marchands causés par les marées noires?

François Bonnieux, INRA

12h30 > 14h00 - Buffet

14h00 > 15h00
Preventing Damage from Major Oil Spills: Lessons from the Exxon Valdez

Sheila Walsh, CMBC, Scripps Institution of Oceanography, UCSD

15h00 > 16h00
The United States' Experience: Resolving Oil Pollution Liability with Restoration-Based Claims

Steven Thur, NOAA

16h00 > 17h00
Conducting Cooperative Natural Resource Damage Assessments: A Case Study of the Chalk Point Oil Spill

Norman Meade, NOAA

PROGRAMME

VENDREDI 19 MAI

9h00 > 10h00

Compensation for Damages to the Marine Environment : the Civil Liability and the Fund Conventions

Brian Dicks, ITOPF

10h00 > 11h00

Compensation for Damages to the Marine Environment : the Italian Law and Practice

Angelo Merialdi, avocat

11h00 > 12h00

NRDA under the European Directive on Environmental Liability: a Comparative Legal Point of View

Hannes Descamps, avocat

12h00 > 13h45 - Buffet

13h45 > 14h00

Présentation de l'APR « Évaluation économique des dommages écologiques des marées noires »

Sébastien Treyer, MEDD

14h00 > 14h40

Indemnisation des dommages à l'environnement et régime international d'indemnisation des dommages dus à la pollution par les hydrocarbures : bilan et perspectives

Julien Hay, CEDEM

14h40 > 15h20

Traduction juridique de la notion de dommage écologique et proposition d'amélioration du système d'indemnisation de ce dommage

Marie Bonnin, CDE

15h20 > 15h40 - Pause café

15h40 > 16h20

Processus de reconnaissance des dommages écologiques : apports potentiels de l'évaluation économique à la construction des valeurs écologiques, sociologiques et juridiques

Christophe Bouni, AsCa

16h20 > 17h00

La remédiation environnementale après une pollution majeure : que peut-on considérer comme raisonnable, équitable, durable?

Florence Poncet, CEDRE

17h00 > 17h30 Discussion générale

17h30 Clôture

Recueil des résumes

Excluding ecological damages from the monetary valuation of oil spill impacts: issues and elements of evaluation

Julien Hay, Cedem - UBO
Olivier Thébaud, Ifremer

The aim of this paper is to assess, based on the available quantitative information, the potential consequences of excluding ecological damages from the monetary assessment of the impacts of oil spills in the marine environment. The analysis is based on a review of selected cases of oils spills in various liability regimes, and on data collected from damage assessment studies, as well as from the compensation process. Based on a proposed typology of ecological damages, the paper presents a quantitative assessment of the importance of "strict" ecological damages in the social cost of spills. These costs are also compared to the other main categories of costs following oil spills. In conclusion, differences between the IOPC and the US NRDA practices relative to the inclusion of ecological damages are discussed.

Economic assessment of market & non-market damages of oil spills

François Bonnieux
Unité d'Economie et Sociologie Rurales

Economic damages of an oil spill can be analysed by distinguishing two types of costs. The first type includes clean up and restoration costs. The second type labelled as indirect damages, stem from the adverse physical effects of the spill, which occurred in spite of cleanup efforts. Indirect damages include costs to tourism, aquaculture and fishing industries, as well as amenity and ecological losses. While some damages refer to goods and services that are traded in the market place, others belong to the non-market category. When no market price is available, several approaches, including travel cost and contingent valuation methods can then be applied.

The Amoco Cadiz case, which offered a good example of a comprehensive economic damage assessment, demonstrated that non-market damages represented an important share of total damages. With respect to damages caused by the Erika wrecking, recreational and amenity losses did concerned a quite short period of time but a highly populated shoreline close to an urbanized area, those of Nantes. Residents were disturbed by the accident, through their leisure activities, mainly fishing on foot, a very popular activity on this coastline. For the residents, this is a major component of the whole damage. The problems with valuing ecological losses arise from the extensive uncertainty about how ecosystems function internally and what they do in terms of life supports functions. By now the economic literature favours willingness-to-pay approaches based either on the cost of restoration programmes or stated preference methods.

Preventing Damage from Major Oil Spills : Lessons from Exxon Valdez

Sheila Walsh
Scripps Institution of Oceanography
University of California San Diego
USA

The widespread damage from the oil spills in Europe naturally raises the issue of what can be done to prevent similar harm from occurring in the future. The Prestige oil spill, which impacted the coastline of France and Spain, was neither the first large oil spill in Europe nor is it likely to be the last. In this paper, we look at the lessons for Europe that might be learned from the earlier Exxon Valdez oil spill in Alaska. The key to reducing future oil spills is to increase the penalty shippers of oil have to pay for a major spill. The economic rationale here is straightforward. Shippers facing greater penalties will take increased steps to prevent oil spills from occurring and to contain a spill that has occurred. These steps will be taken up to the point where the expected marginal prevention/containment cost is equal to the expected marginal change in the penalty.

Implementation of this simple economic solution requires attention to a few critical issues. The first is how to determine the **"**correct" level for the penalty. A penalty that is set too high would easily fulfill an objective of having no oil spills occur simply because no rational economic agent would ship any oil. The second is that a coherent administrative and legal framework must be established for the assessment of penalties for oil spills. The third is that the economic analysis used in the assessment must consider certain conceptual issues in its methodology. The fourth is the potential of an undesired response from oil shippers. Shippers of oil may find it optimal, when facing high potential liability, to effectively go bankrupt by abandoning the oil tanker and its cargo in the event of a major spill. Fifth, large oil spills are by their nature accidents and will require prior planning and resource allocation to facilitate prevention and containment. Response plans will need to be coordinated with government authorities, in part because it may be necessary to "break" some existing pollution regulations to avoid even more serious environmental harm. Lastly, how to allocate effort and monetary resources to initial response, restoration, and compensation for remaining injuries must be decided. All six of these issues are will be considered here using U.S. experience with the Exxon Valdez oil spill.

The United States' Experience: Resolving Oil-Pollution Liability with Restoration-Based Claims

Steven Thur, Ph.D.
National Oceanic and Atmospheric Administration
USA

The United States' Oil Pollution Act of 1990 mandates that natural resource trustees seek damages from those responsible for the discharge of oil into the environment. The implementing regulations specify that, when feasible, the measure of damages should be the cost of primary and compensatory restoration plus the cost of conducting the damage assessment. Determining the cost of primary restoration, those actions required to directly restore the injured natural resources to baseline, is relatively straightforward. However, even if the injured resources are fully restored to baseline, the public experiences a loss of natural resources and their services between the time of incident and the time at which the injured resources return to baseline. Compensatory restoration is required to offset this interim loss. Habitat equivalency analysis (HEA) is a method often used in natural resource damage assessments to quantify the amount of compensatory restoration required to offset interim and perpetual losses. HEA relies on the assumption that the public is willing to accept some trade-off between natural resource services lost because of the injury and provided through compensatory restoration projects. The interim and perpetual service losses and compensatory benefits are quantified in non-monetized units. The objective of HEA is to yield a quantity of restoration that equates the present value of the losses due to injury with the present value of the benefits from the compensatory project. Once the quantity of compensatory restoration required is determined, the cost of that action becomes the second component of damages sought by the trustees.

Conducting Cooperative Natural Resource Damage Assessments: A Case Study of the Chalk Point Oil Spill

Norman Meade
NOAA Damage Assessment Center
Office of Response and Restoration
USA

Regulations under the U.S. Oil Pollution Act for conducting natural resource damage assessments (NRDA) encourage cooperation and participation between the natural resource trustees and the responsible party(s) in all phases of the process. There are many advantages to conducting cooperative assessments, including lower transaction costs and faster restoration of interim lost natural resource services. The Chalk Point Oil Spill case provides an illustration of a successful, cooperative NRDA using a combination of ecological-based, "service-to-service" and more traditional monetary scaling of the compensatory restoration claim. Over 500 thousand liters of fuel oil were spilled in a marsh on the Patuxent River, a tributary to the Chesapeake Bay, in April 2000. The spill injured marine and terrestrial habitat, fish, birds, benthic organisms, terrapins and recreational services. Settlement of all trustee claims for natural resource damages was achieved in January 2003. Most of the compensatory restoration projects have been completed.

Compensation for Environmental Damage caused by Oil Spills: An International Perspective

Dr. Brian Dicks
Technical Team Manager
ITOPF
London, UK

Compensation for clean up costs and damages caused by oil spills from tankers is governed in many maritime nations by two International Conventions, the Civil Liability Convention (CLC) and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FC). These Conventions came into force in the 1970's. In their earliest versions compensation for environmental damage was not considered – the primary purpose was to provide compensation only for reasonable costs of clean up and proven economic loss. The Conventions have been revised several times during the last twenty years, and in the latest version (CLC and FC 1992) have been expanded to cover some aspects of environmental damage. This has taken the form of admitting costs of reasonable reinstatement measures and post-spill studies, with the focus on identifying and then undertaking measures which enhance recovery of the damaged area. The Conventions exclude valuations of environmental damage calculated by theoretical and speculative methods and thereby differ from US regulations. The scope of the Conventions with respect to environmental damage is reviewed and examples are given of what might constitute reasonable reinstatement measures and post-spill studies.

Compensation for Damages to the Marine Environment : the Italian Law and Practice

Angelo Merialdi
Studio Legale Siccardi Bregante & C.
Italy

Since its beginning in the mid to late 1980s the Italian legal practice in the field of liability for damage to marine natural resources has been looked at with interest by the international maritime and academic community, due to the peculiarities of some of the solutions adopted.

In particular, much attention has been dedicated to the way Italy dealt with the difficult and sensitive issue of quantification of damage to natural marine resources.

While at the international level the far most prevailing trend was to reject any method of quantification based on theoretical models and to consider damage to the natural resources as equal to the cost of reasonable measures of reinstatement actually undertaken or to be undertaken, as provided for in the 1992 Protocol to the CLC, for some time Italy went its own way by advocating the theory that the said damage was to be assessed on an equitable basis.

The legal background of this practice was represented by the case law of the *Corte Costituzionale* (decision No. 641 of 30.12.1987), stating that the damage to natural resources is to be compensated irrespective of the cost of reinstatement measures, if any, and by Law No. 349 of 8.7.1986, Art. 18 of which allowed the Judge to quantify the damage to natural resources on an equitable basis, by taking into account not only the reinstatement costs, but also elements having a punitive characterization, i.e. the gravity of the fault of the wrongdoer and the profit earned by the same as a result of its activity.

Until the late 1990s the above legal background remarkably influenced the attitude of Italy at a diplomatic level. For a long period Italy refused to become party to the 1992 Protocols to the CLC and Fund Convention, arguably for the main reason that the 1992 CLC Protocol contained provisions providing for compensation of damage to natural resources based on the reasonable cost of measures of reinstatement. Italy also filed with the IMO proposals aiming at the revision of said Protocols so as to allow compensation of damage to natural resources based on flexible and far reaching criteria such as entity of the spill, nature and chemo-physical implication of the spill for human beings, flora and fauna, natural and economic characteristics of the area affected by the spill.

In the decisions of Italian Judges in the “Patmos” and in the “Haven” cases, the two most important cases of vessel source pollution having ever occurred in Italy damage to natural resources was assessed on the basis of equity.

However, upon close scrutiny these decisions reveal the cautious attitude adopted by Italian Judges, who in both cases awarded damages in amounts considerably lower than those requested by the claimants, by taking into account elements having an objective nature, such as restoration

costs (“Haven”) and market price of fish (“Patmos”) and relying on scientific data gathered by Court experts.

The decision issued by the *Tribunale di Genova* in 1996 in the “Haven” case is also characterised by the effort made by the Judge in reconciling the content of Art. 18 of Law No. 349 of 8.7.1986 with the content of the provisions of the CLC 69, taking into account the purely compensatory - as opposed to punitive – aim of this latter instrument.

As a matter of fact, it may be said that the “Haven” case marked the turning point in Italian practice concerning damage to marine natural resources.

Shortly after the settlement of the “Haven” case, Italy signed and ratified the 1992 CLC and Fund Protocols which meant that, at least in respect of the subject matter covered by said instruments, the equitable method was eventually abandoned in favour of the generally accepted principle of compensation based on the reasonable cost of reinstatement measures.

Art. 18 of Law No. 349 of 8.7.1986 was recently abrogated by the legislation implementing Directive 2004/35/CE of 21.4.2004 on environmental liability with regard to the prevention and remedying of environmental damage (*Decreto Legislativo* 3.4.2006 No. 152). The impact of said legislation in the subject matter hereby discussed is still to be assessed.

NRDA under the European Directive on Environmental Liability: A Comparative Legal Point of View

Hannes DESCAMPS
Division on International Environmental Policy
Bruxelles

The contribution focuses on natural resource damage assessment (NRDA) under the European Directive on Environmental Liability against the background of the Marine Pollution Liability Conventions (CLC, IOPFC, HNS & Bunker Oil). The purpose of the EC Directive is to prevent and remedy environmental damage by establishing a framework of environmental liability based on the polluter pays principle. The Environmental Liability Directive (ELD) explicitly recognizes natural resources and the services they provide. The European Scheme is to some extent inspired by the American Oil Pollution Act (OPA).
Operators of occupational activities are, inter alia, obliged to restore, rehabilitate or replace damaged natural resources and impaired services or to provide an equivalent alternative. In situations where primary remedial measures do not bring back the damaged natural resources or their services to baseline condition, complementary remediation will be undertaken. Compensatory remediation is required to compensate for the interim losses until the primary and complementary measures have taken full effect.
However, the Directive shall not apply to environmental damage or to any imminent threat of such damage arising from an incident in respect of which liability or compensation falls within the scope of any of the aforementioned International Agreements, provided that these Conventions are in force in the Member State concerned.

Notes

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Réalisation affiche : Séverine Julien - GdR Amure

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- Gildas Appéré, Cedem-UBO
- Denis Bailly, Cedem-UBO
- Julien Hay, Cedem-UBO
- Séverine Julien, GdR-Amure
- Olivier Thébaud, Ifremer, Cedem-UBO

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