



ELD Financial security in Spain

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Environmental Quality and Assessment**



Principles on which Directive 2004/35/EC is based

- Prevention principle
- Polluter pays principle

Main objectives of Directive 2004/35/EC

- Prevent significant environmental damage when there is an imminent threat
- Remedy such damage when it occurs



ELD PRINCIPLES AND OBJECTIVES

FIRST LINE OF DEFENSE IN ELD

“PREVENTION” PRINCIPLE

“POLLUTER PAYS” PRINCIPLE

RISK MANAGEMENT MEASURES

PREVENTION MEASURES

“LIMITATION” MEASURES

REMEDIAL MEASURES

Entered into force in 2007

First pillar = Directive

Reduction of costs

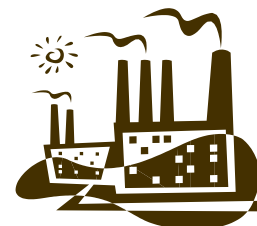
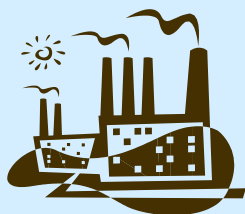
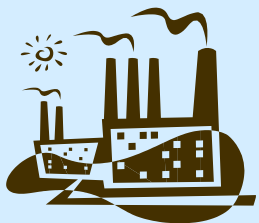
Second pillar. Not in Directive

ENVIR. RISK ANALYSIS

Reduction of FP cost/ exempt

FINANCIAL PROVISION

In force
2018 (P1)
2019 (P2)
2021-2022 (P3)



Normal activity

Threat of damage

Environmental Damage





MAIN FEATURES (2nd Pilar. Financial security)

- **Some Annex III operators must ensure they have the financial security to cover the environmental liability inherent in their intended activity/s.**
 - ✓ **Seveso, industrial emissions, and waste management from mining**
- **Will be determined based on an environmental risk analysis (based on ISO 150.008 Standard)**
- **20 M € limited coverage (prevention, avoidance and primary remediation costs)**
- **Exemptions mechanisms (art. 28 Law 26/2007):**
 - Operators likely to cause damage remediation estimated to be less than 300,000€
 - Or between 300,000 € and 2,000,000 € and are associated to EMAS and/or ISO 14001 Standard

Benefits of the mandatory financial security system + environmental risk analysis

•Benefits for operators

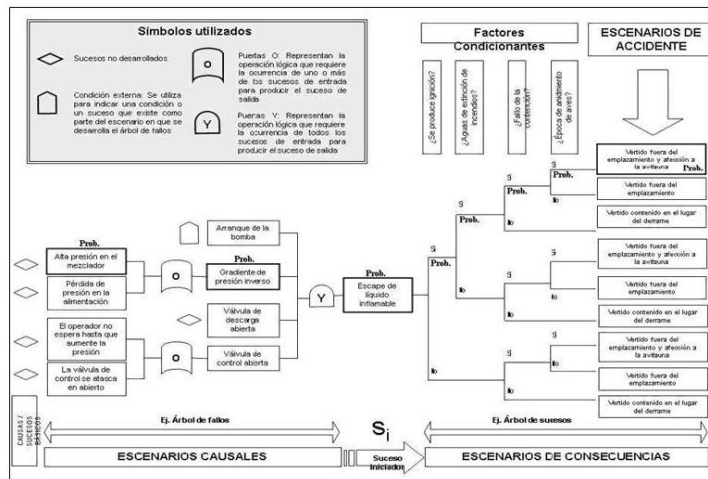
- Lower operational risks and greater viability in case of accident
- Environmental risk analysis help in corporate decision-making, enabling global risk management of the facilities
- Makes them aware of their risks (environmental and in terms of costs)

•Benefits for society

- It promotes the culture of environmental risk management, contributing to a reduction in the number of accidents affecting the environment and minimising their consequences
- In case of environmental damage the costs are not borne by society but transferred to the operator



Environmental risk analysis



Esquema metodológico norma UNE 150.008

Suceso iniciador	Prob. (veces/año)	Vol. (m³)	¿Actúa eficazmente la contención automática?	Prob. (veces/demanda)	Vol. (m³)	¿Actúa eficazmente la contención manual?	Prob. (veces/demanda)	Vol. (m³)	No se aplica ninguna gestión de aguas y derrames	Prob. (veces/demanda)	Vol. (m³)	Código	Prob. Esc. (veces/año)	Vol. Esc. (m³)	Relevante	Recursos potencialmente afectados			
																A	S	H	E
Derrame de Catalizador líquido 1	5,10E-07	14,00	Si	9,00E-01	0,00	Si	5,00E-01	0,00	Si	0,00E+00	0,00	E.1.1	0,00E+00	0,00	No				
										1,00E+00	0,00	E.1.2	2,30E-07	0,00	No				
										0,00E+00	0,00	E.1.3	0,00E+00	0,00	No				
										1,00E+00	0,00	E.1.4	2,30E-07	0,00	No				
										0,00E+00	11,00	E.1.5	0,00E+00	11,00	No				
										1,00E+00	11,00	E.1.6	2,55E-08	11,00	Si	Q	Q	Q	Q
										0,00E+00	11,90	E.1.7	0,00E+00	11,90	No				
										1,00E+00	11,90	E.1.8	2,55E-08	11,90	Si	Q	Q	Q	Q

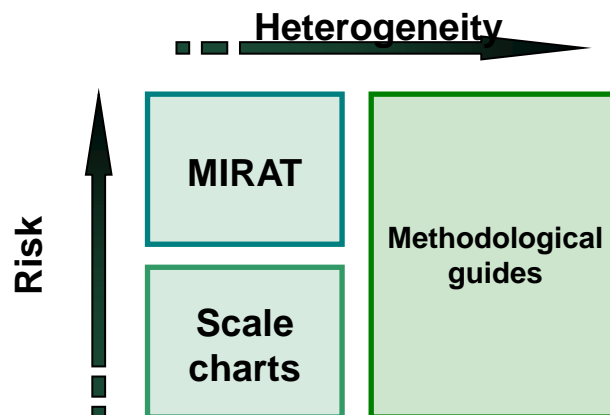
Q: posible afección por vertido de agentes químicos
F: posible afección por vertido de agentes físicos (temperatura)

Figura 6. Árbol consecucional para el suceso S.A.1y2b: fuga/derrame de catalizador líquido 1 desde depósito fijo aéreo o por colisión



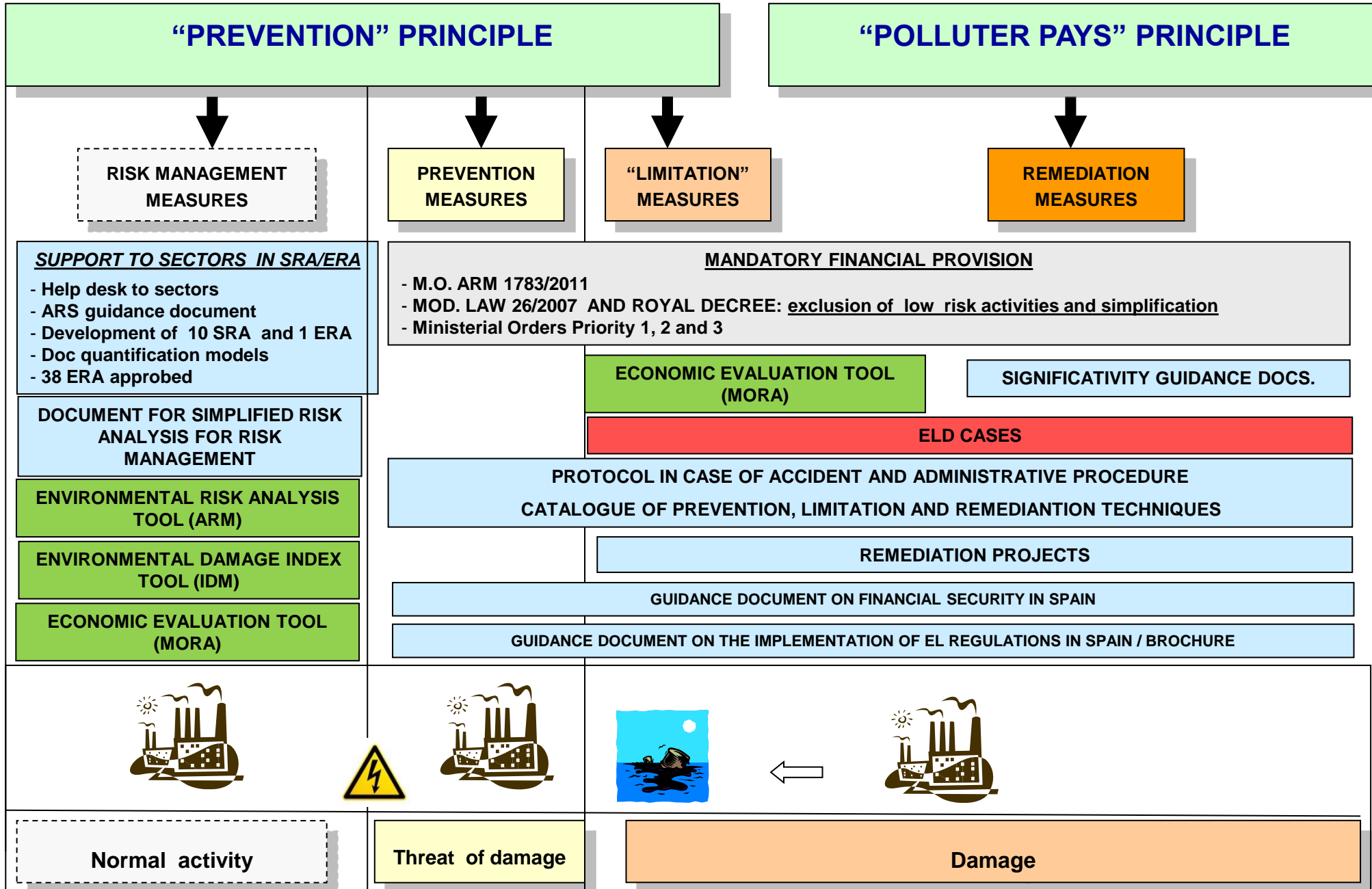
MAIN FEATURES (2nd Pilar. Financial security)

- Annex III operators obliged to carry out an **Environmental Risk Analysis** in order to:
 - Determine if are under the obligation to have a FS or are exempted, and calculate its amount
 - It is a **prevention tool** (risk management decision-making tool)
- Sectorial environmental risk analysis tools to help operators carry out the individual ERA and share the costs between operators:
 - MIRAT
 - Methodological guides
 - Scale charts



They must be approved by the Technical Commission for the prevention and remediation of environmental damages

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Environmental Liability Information System (SIRMA)



- Free access (registration required). Available in Spanish and English
- User's guide available in Spanish and English

[Link to SIRMA \(English\)](#)

[SIRMA user's guide \(English version\)](#)

[Annexes \(English version\)](#)



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Environmental Liability Information System (SIRMA)



- Gathers all the documents, guides, protocols and tools developed.
- Access to ARM, IDM and MORA computer applications, developed for helping operators to carry out the environmental risk analysis and determine the mandatory financial security.

Information on Law 26/2007 on environmental liability

- ✓ Legal basis
- ✓ Risk Analysis
- ✓ Financial Security
- ✓ Implementation reports and environmental liability enforcement
- ✓ Publications
- ✓ FAQs

ARM-IDM-MORA computer applications

- ✓ Global ARM-IDM-MORA project
- ✓ ARM application
- ✓ IDM application
- ✓ MORA application





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Environmental Liability Information System (SIRMA)



- 10 Sectorial environmental risk analysis, 1 Scale Chart and 1 individual ERA funded. All available on MITERD webpage



Sector-specific risk analysis instrument or rate table	Date of creation
Rate table for the paint and printer ink manufacturing sector, created for the Asociación Española de Fabricantes de Pinturas y Tintas de Imprimir (ASEFAPI).	2011
Guide to methodology for the polymetallic sulphide and sodium and potassium salts mining industry, created for the Confederación Nacional Empresarios Minería y Metalurgia (CONFEDEM).	2012
MIRAT for the olive oil and oilseed industry, created for the Federación Española de Industrias de la Alimentación y Bebidas (FIAB).	2012
Guide to methodology for hazardous and non-hazardous waste management activities, created for the Asociación Nacional de Gestores de Residuos de Automoción (AN- GERE), Asociación de Empresas Gestoras de Residuos y Recursos Especiales (ASEGRE) and Federación Española de la Recuperación y el Reciclaje (FER).	2015
MIRAT for road freight transport activities, created for the Confederación Española de Transporte de Mercancías (CTEM).	2015
MIRAT for the smelting industry, created for the Federación Española de Asociaciones de Fundidores (FEAF).	2016
MIRAT and rate table for the poultry meat and egg sector.	2018
MIRAT and rate table for the pig sector.	2019

- 38 Sectorial environmental risk analysis developed and approved



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Environmental Liability Information System (SIRMA)



ARM-IDM-MORA computer applications

Procedure for mandatory financial security determination in Spain

- Environmental Risk Analysis
- Determination of financial security:

1. Identification of risk scenarios and their probability



2. IDM calculation: reference scenario determination



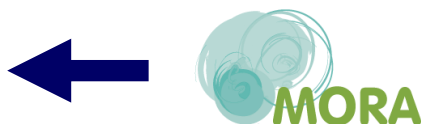
3. Risk of each scenario (IDM * probability of occurrence)

4. Selection of scenarios that represent 95% of total risk

5. Environmental damage cost of **reference scenario**

- A. Quantification

- B. Cost



Financial security: Cost of primary remediation + 10% prevention measures



Environmental Risk Analysis (ARM)



ARM-IDM-MORA computer applications

- Helps in the elaboration of the ERA, creating the “**events trees**”: selection of sources of danger; determination of initiating events; introduction of conditioning factors; and obtaining the accident scenarios with their probability and, where appropriate, the amount of pollutant released.
- Identifies high risk scenarios (high probability of occurrence, or the magnitude of the agent involved) allowing the implementation of **risk management decisions**.





ARM-IDM-MORA computer applications

- It allows to estimate the **order of magnitude of the damage** of each risk scenario.
- It gives a semi-quantitative result that allows to **classify the risk scenarios** by the potential damage they can cause.
- It is based on cost **estimations of primary recovery costs**, but IDM is non-dimensional (no units)

The screenshot displays the SIRMIA web application interface. The top navigation bar includes the Spanish Government logo, the Ministry name, and the SIRMIA logo. The main content area is titled 'Sistema de Información de Responsabilidad Medioambiental (SIRMIA): Environmental Damage Index (IDM)'. It features a sidebar with navigation options like 'Law 26/2007 / Information', 'Computer applications ARM, IDM and MORA', 'ARM Application', and 'MORA Application'. The main panel shows a 'Description' section for the IDM application, followed by a 'Consultation of IDM reports' section with a search form and a table of reports. Below that is a 'Consultation of scenarios included in the IDM report' section with a search form and a table of scenarios.

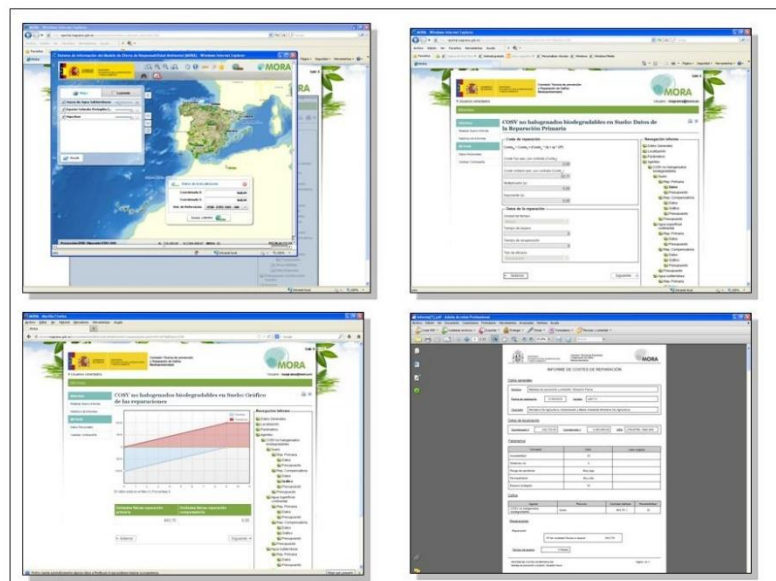
Name	Date of performance	Version	User	Completed	Duplicate	Modify / See	Remove
Informe IDM 01	02/07/2020	03/01	XXXXXX XXXXXXXXX	Yes			
Informe IDM 02	23/04/2020	03/01	XXXXXX XXXXXXXXX	No			

Ref.	Scenario	Probability	IDM value	Finalized	Duplicate	Modify / See	Delete
✓	Escenario guía 01	1.00	218.713.39	Yes			
	Escenario 02	1.00	117.308.65	Yes			



ARM-IDM-MORA computer applications

- Calculates **primary, compensatory and complementary remediation costs** of scenarios
- Primary remediation costs of the reference scenario = financial security (adding to it the costs of prevention and avoidance measures)
- Provides the **best available remediation techniques** to restore the resources damaged (and their services) to their baseline condition





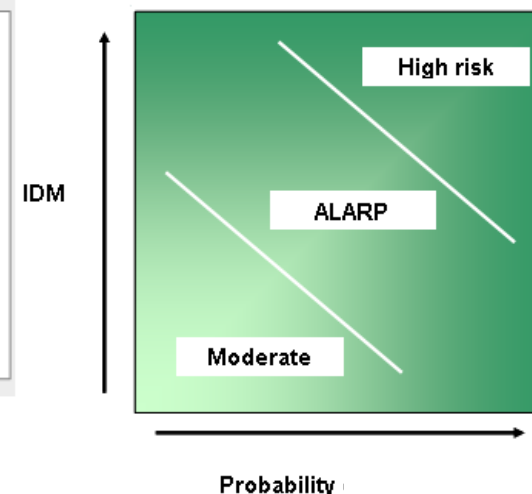
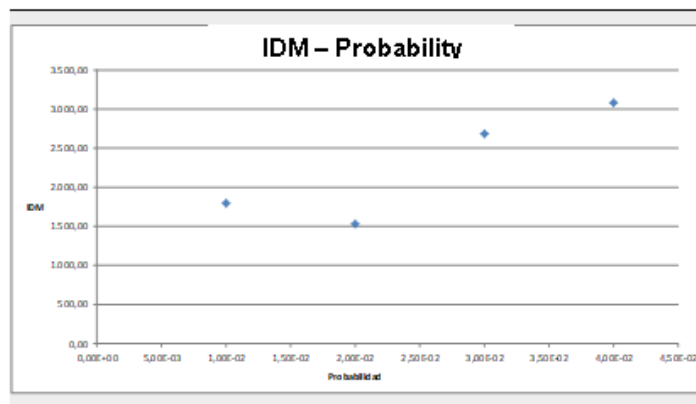
Environmental Liability Supply Model (MORA)



ARM-IDM-MORA computer applications: ARM-IDM-MORA global project

- Projects that sequentially incorporate all the phases of the ERA in an assisted way through the ARM, IDM and MORA applications
- Provides with a very useful tool for implementing risk management measures:
 - Identification of accident scenarios with higher probability of occurrence / higher potential environmental damage.
 - Simulate changes in their probability of occurrence or environmental consequences

The screenshot shows the SIRMA web application interface. At the top, it displays the logo of the Spanish Government and the Ministry for the Ecological Transition and Demographic Challenge. The main header identifies the system as the 'Environmental Liability Information System (SIRMA)' for the 'Global ARM-IDM-MORA project'. A navigation menu on the left includes sections for 'Legal Basis', 'Risk Analysis', 'Financial Security', 'Publications', 'Documentation', and 'ARM, IDM and MORA computer applications'. The 'Description' section explains that SIRMA allows the creation of a complete project connecting the functionalities of the Environmental Risk Analysis (ARM), the Environmental Damage Index (IDM), and the Environmental Liability Supply Model (MORA) software tools.





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Environmental Liability Information System (SIRMA)



The screenshot shows the SIRMA website interface. At the top, it features the Spanish flag and the text 'GOBIERNO DE ESPAÑA' and 'MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO'. Below this is the 'Comisión Técnica de Prevención y Reparación de Daños Medioambientales' logo and the SIRMA logo. The main heading is 'Sistema de Información de Responsabilidad Medioambiental (SIRMA)'. A navigation menu on the left includes sections for 'Información Ley 26/2007', 'Aplicaciones informáticas ARM, IDM y MORA', and 'Mi Perfil'. The main content area is titled 'Bienvenidos al Sistema de Información de Responsabilidad Medioambiental (SIRMA)' and contains introductory text about the system's purpose and access to various tools and documents.

This screenshot displays the 'Informes de aplicación y exigencia de responsabilidad medioambiental' page. It includes a sidebar with navigation options like 'Aplicación ARM', 'Aplicación IDM', and 'Aplicación MORA'. The main content area is titled 'Informes de aplicación y exigencia de responsabilidad medioambiental' and contains detailed text regarding the determination of the significance of environmental damage. A diagram at the bottom of the page illustrates the relationship between the 'Normativa de responsabilidad medioambiental' (Environmental Liability Normative) and the 'Importancia del daño' (Importance of the damage). The diagram shows a horizontal line representing the 'Umbral de significatividad' (Significance threshold). Above this line is 'Daño significativo' (Significant damage) and below is 'Daño NO significativo' (Not significant damage). Three circular icons represent specific legislative areas: 'Legislación de aguas' (Water legislation), 'Legislación de suelos' (Soil legislation), and 'Legislación de hábitats y especies' (Habitat and species legislation). Arrows indicate that these legislative areas contribute to the overall significance of the damage.

SIRMA provides operators with a risk management tool for their facilities, contributes to the prevention of damages and helps in the implementation of Law 26/2007



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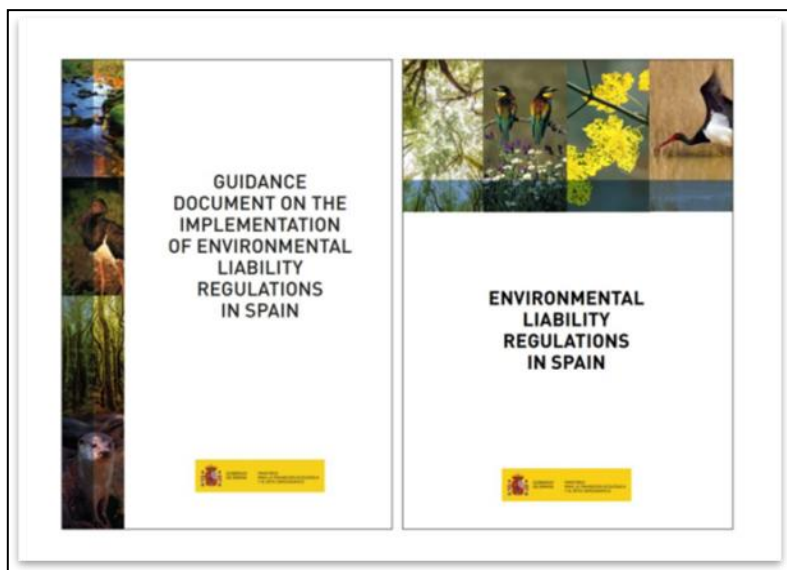
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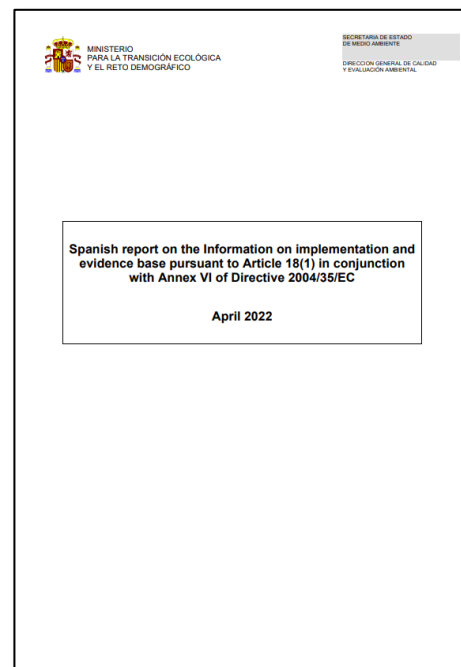
Guidance document and brochure on the implementation of environmental liability regulations in Spain

Spanish report on the Information on implementation and evidence base pursuant to article 18(1) in conjunction with Annex VI of Directive 2004/35/EC



[Link to Guidance document](#)

[Link to Brochure](#)



[Link to report](#)

IMPLEMENTATION / APLICACION OF LAW 26/2007

Temas

- Atmósfera y calidad del aire
- Biocología
- Etiqueta Ecológica Europea (EEE)
- Evaluación ambiental
- Sostenibilidad industrial
- Medio ambiente y salud
- Movilidad
- Prevención y gestión de residuos
- Economía circular
- Productos químicos
- Agencia Europea de Medio Ambiente e Información Ambiental
- Responsabilidad medioambiental**

Responsabilidad Medioambiental

La Ley 26/2007, de 23 de octubre, de Responsabilidad Medioambiental, que incorpora al ordenamiento jurídico interno la Directiva 2004/35/CE, del Parlamento Europeo y del Consejo, de 21 de abril de 2004, ha instaurado un régimen administrativo de responsabilidad medioambiental de carácter objetivo e ilimitado, basado en los principios de "prevención de daños" y de que "quien contamina, paga".

Esta Ley, desarrollada parcialmente por medio del Real Decreto 2090/2008, establece un nuevo régimen de reparación de daños medioambientales de acuerdo con el cual los operadores que ocasionen daños a los recursos naturales o amenacen con ocasionarlo, deben adoptar las medidas necesarias para prevenirlos o, cuando el daño se haya producido, para limitar o impedir mayores daños medioambientales, así como devolver los recursos naturales dañados al estado en el que se encontraban antes de que se produjese el daño.

Los recursos naturales protegidos por esta ley son los que están recogidos en el concepto de daño medioambiental, es decir: los daños a las aguas, los daños al suelo, los daños a la ribera del mar y de las rías, y los daños a las especies de la flora y de la fauna silvestres presentes permanentemente o temporalmente en España, así como a los hábitats de todas las especies silvestres autóctonas.

En los diferentes apartados de esta sección se recoge la siguiente información sobre la normativa de responsabilidad medioambiental:

Base legal
Incluye todos los textos normativos, tanto originales como consolidados con las modificaciones que se han llevado a cabo desde la aprobación de la Ley 26/2007.

Comisión técnica de prevención y reparación de daños medioambientales
Proporciona información sobre este órgano de cooperación técnica y colaboración entre la Administración General del Estado y las comunidades autónomas para el intercambio de información y el asesoramiento en materia de prevención y de reparación de los daños medioambientales.

Sistema de Información Ambiental de Responsabilidad Ambiental (SIRMA)
Integra toda la información relativa a la normativa de responsabilidad medioambiental, así como de las herramientas y documentos desarrollados para facilitar su implementación en España, estructurada en dos apartados principales: Información sobre la Ley 26/2007, y Aplicaciones informáticas ARM, IDM y MORA.

<https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/temas/responsabilidad-mediambiental/>



GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA
Y EL RETO DEMOGRÁFICO



THANK YOU FOR YOUR ATTENTION!!

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