



# Environmental Information in the Annual Accounts

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**Abstract:** This paper will analyse the environmental information of seven of the most polluting companies in Spain in 2020, which include information in their annual accounts, balance sheet, profit and loss, annual report and management report.

**Keywords:** Environment, Environmental Accounting, annual report.

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## 1. INTRODUCTION

Environmental issues such as the scarcity of natural resources, climate change, nuclear disasters or plastic islands are becoming increasingly common. This is one of the problems that has been of greatest concern to society for some time ago. Pollution in general is a challenge that is difficult to solve, and it is known that business activity is the main cause of the problems that currently exist in our environment. For this reason, it has been necessary to design and establish a policy or legislation that allows economic activity to be carried out without interfering with the environment or, at least to reduce the negative effects on it.

This project will focus on investigating the environmental information and accounting provided by the most polluting companies in Spain in 2020. The aim of this study is to analyse whether the most polluting Spanish companies follow either the guidelines dictated by the General Accounting Plan (PGC) or the guidelines dictated by the International Financial Reporting Standards (IFRS). In carrying out this analysis, we want to see both the difference in interpretation and information included between companies, as well as the commitment that companies have to the environment.

In the following sections, this study will present the development of environmental information legislation from its beginnings to the present day, both Spanish and European. This study will focus especially on the Spanish legislation, in the resolution of 25 March 2002. In addition, attention will be paid to the PGC approved by Royal Decree 1514/2007 of 16 November, due to the incorporation of the accounting principles of the ICAC Resolution.

Having described the regulations applicable to environmental information, this study will then explain the justification for the project based on the research needed to find out on of the 7 most polluting Spanish companies.

The main focus of this work will be to check the quality and quantity of the information provided by the chosen companies in their annual accounts, to verify if the quantity and quality of the information varies between sectors and to see if the information provided is placed in the corresponding location with respect to pollution.

To this end, the information provided by each company, including those mentioned in the second paragraph, will be analysed to find out whether they comply with the information requirements stipulated in the applicable PGC regulations by analysing their annual accounts. The research will be carried out with different elements, each of which will specify the information to be shown or recommended to be shown, and each element will be evaluated in terms of the information and its legibility.

Once the results have been obtained, a comparison will be made between the different companies and sectors to which they belong, and we will determine whether there is a clear link between the environmental information provided and pollution.

## **2. ENVIROMENTAL ACCOUNTING**

### **2.1. Definition**

The need to care for the environment and society's concern for it is growing. According to Herrero et al. (2011), the human development model is centred on permanent growth, understood as a constant increase in the consumption of goods and services, leading to the intensive extraction of finite natural resources and, in turn, the production of polluting waste. For this reason, human behaviour towards the environment has created problems that nature cannot absorb (Egea and Soledad, 2011) such as forced displacements and migrations, these problems have created great evidence of the negative impacts of environmental deterioration on humanity and have caused international organisations and numerous countries to become alert to this situation. As a result of this deterioration of natural resources, a branch of accounting has emerged in the area of environmental accounting, which seeks to respond to the different environmental problems.

Environmental accounting is the field of knowledge that studies highly complex environmental systems in relation to the economic activity developed by companies (Barraza and Gómez, 2005, p.27), i.e. it is defined as a part of applied accounting, whose object is the relationship between an entity and the environment (Fernández Cuesta, 2004, p.33). It allows the recognition, organisation, valuation and recording of conditions and changes in natural resources and the environment, through indicators for the evaluation of environmental sustainability in the context of development, establishing information systems for the evaluation of environmental sustainability in the context of development, establishing

information systems that facilitate the control and auditing of actions that affect the condition of nature in a business environment (Mantilla, 2006, p.143). (Mantilla, 2006, p.143). Environmental accounting has been developed as a way of transmitting information that covers both social and environmental aspects in order to satisfy information needs and be useful for internal and external decision making, showing economic results beyond the environment and social production processes of the organisation, for example, the social obligations that companies face today, making the preparation and delivery of information relevant to the natural environment in which they operate (Amigo C., A., 2019).

It is important to mention that according to Larrinaga (1997), the theory of environmental accounting can be used as a tool to redirect a business towards a more sustainable path, being able to be manipulated spontaneously and committed to the creation of social change. And therefore, accounting has been of great use to us through the provision of information on the use of natural resources over time, according to Masanet-Llodrá et al. (2002), p.13:

*“Companies have been using and have even been appropriating this type of goods without offering any type of consideration for them, even without concern for the deterioration they cause in them, although such deterioration could compromise their future survival (...) and for this reason, society, which is the owner of the natural goods, can and should demand that companies act more coherently with the environment, and an effective way of controlling business performance is the accountability of companies to society”*

## **2.2 Origin and environmental evolution**

Over a long period of time, from the 1970s, when the first research on environmental accounting began, to the present day, environmental accounting has evolved over a long period of time. Some authors (Zabala Luna, 2016) (Mera, 2017) (Amigo Casson, 2018), distinguish four periods in environmental accounting:

- Period from 1970 to 1980, the first stage described as reflection.

There is a follow-up of the field of environmental accounting, the inclusion of financial and accounting data in accounting, especially in the more traditional financial reports, concerning

the environmental impacts of the company's actions. The first applications of the concepts at the micro-accounting level and the inclusion of practices associated with the elements of the financial statements that could be quantified begin.

- Period 1980 to 1990, second stage described as production.

During this period, the United Nations Environment and Development Programme begins. The promulgation of the concept of sustainable development and commitments to cleaner production begins. There were social and institutional pressures to tax the social and environmental costs of production, in addition to the emergence of the structure of fiscal and tax incentives, cost accounting and auditing for respect for the environment. The implementation of environmental management and compliance systems and the use of macro-accounting in States, Systems of National Accounts, emerged.

- Period from 1990 to 2000, third stage described as the "polluter doesn't sell" concept.

This period refers to the evidence of an environmental crisis that moved from the academic and political sphere to the social sphere, to the emergence of new expressions such as: green economy, quality management for the whole life cycle of polluting companies and full green cost accounting.

A follow-up of the global pact and the objectives of the era promoted by the UN by promoting corporate information that transcends conventional visions: sustainability reports (systematic, quantitative, and qualitative reports) and reports in the triple dimension: economic, social and environmental.

Increasing number of organisations, standards and research that evaluate these reports and at the same time verify compliance with environmental criteria at the institutional level: ISO 1400, ISO 26000, AA1000, SA8000, among others.

- Period 2000 and onwards, fourth stage.

During this stage, regulations began to be issued by some countries requiring environmental accounting information from companies, both positive and negative, as well as the considerations included in the IFRS "International Financial Standards" and the resolution of the ICAC of 25 March 2002, describing quantitatively and qualitatively the environmental activity carried out.

Between 2011/2012 the greenhouse gas legislation was approved for the installations included in the National Plan for the allocation of gas emission rights (Law 13/2010 and Law 40/2010) where these laws, according to the Official State Gazette, "aim to incorporate the provisions contained in the Directive into Spanish domestic law, adapting them to the industrial, geological and energy reality of our country, and establishing a legal basis for the geological storage of carbon dioxide, in safe conditions for the environment, contributing to the fight against climate change and being able to avoid emissions in 2030 that represent approximately 15% of the reductions required at European level".



*Figure 1: Source: Environmental accounting timeline, own laboration*



### **3. ENVIRONMENTAL REGULATION UNDER THE EU**

#### **3.1. Background**

Companies have been evolving with their environment, adapting to the changes generated in it (...) although it is true that all these changes of a social nature were initiated with the aim of improving the image of companies in the eyes of society, to have a favourable impact on their sales figures, explains Masanet-Llodrá et al. (2002), p.7.

In order to encourage the incorporation of environmental issues in financial reporting and to regulate its possibilities, numerous bodies have issued statements on this subject, such as the Securities and Exchange Commission (SEC) through its Regulation S-K, the United Nations (1994, 1999), the Financial Accounting Standards Board (FASB) (1989 ; 1990) or the European Commission (1998, 2001), among others.

According to Larrinaga et. al. (2002) organisations such as the International Accounting Standards Board (IASB) focus on the idea of more traditional usefulness, as they consider that environmental issues should be standardised to the extent that they provide useful information for investment decisions. Other institutions, such as the United Nations, seek long- term sustainability objectives.

In Spain, until relatively recently, accounting resolutions had been oblivious to environmental issues. There was no specific treatment in this area in the 1990 Accounting Plan, although there was the possibility of recognising environmental liabilities for accounting purposes. This situation began to change with the enactment of provisions such as Law 54/1997 of 27 November 1997 on the electricity sector.

The result of this law was Royal Decree 437/1998 of 20 March 1998, which approved the rules for adapting the General Accounting Plan to companies in the electricity sector, in the first place regulating the procedure to be followed for the accounting recognition of certain environmental economic events.

An increasing number of companies have stated that their industry has a significant impact on the environment. This view was also shared by consumers and legislative authorities. As a result, environmental regulations are becoming more and more precise (Crespo, 2005).

### **3.2. European regulation**

The European Union has been concerned about the accounting environment, for which directives have been drafted assessing the effects of certain developments on the environment, such as Council Directive 2001/4/EC of 19 January 2001 amending the sixth Directive (77/388/EEC) on the common system of value added tax, with regard to the length of time during which the minimum standard rate is to be applied.

In the latest directive drafted by the European Parliament Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, the European Union assumes that there is no system for coordinating the impacts of different projects with direct environmental impacts at the European level, so that Member States can develop environmental protection standards to protect the environment.

With the approval of Regulation (EC) No. 1606/2002 of the European Parliament and of the Council of 19 July 2002, the EU regulates the use of IAS/IFRS accounting standards for the preparation of consolidated financial statements of companies listed on regulated markets. Thanks to this approval, all European companies will follow the same accounting standards, which is undoubtedly a great advantage for all investors as they can compare and contrast companies from different countries in a way that makes communication between them more efficient, faster and easier. IFRS are used in many countries around the world and around 75 countries are obliged to use them. On the other hand, other countries have decided to adopt them in the future either by direct application or by adapting national legislation.

The body in charge of developing and regulating these standards, to which the EU adheres, is the International Accounting Standards Board (IASB), which operates under the supervision of the International Accounting Standards Committee Foundation (IASCF).

Although there are communications issued by the above organisations, the references should be consistent with the fact that companies disclose their financial information in accordance with generally accepted standards. It is important to refer to International Financial Reporting Standards (IFRS) and their relationship to environmental accounting and International Accounting Standards (IAS).

This IASB accounting model does not establish a specific standard on environmental issues as it has been created only to issue financial information, but yes, the literature makes us see some of the standards that have some relation with this topic. As in the rest of the EU Member States, Spanish listed companies draw up their balance sheets on the basis of IFRS as a complementary standard to national accounting regulations.

In the European regulatory context, the 2001 Recommendation of the European Commission, which details issues relating to the measurement of environmental liabilities, stands out, as does the International Accounting Standards Board (IASB) through IAS 20, 37 and 38, which we explain below.

### **3.2.1. Standards**

In this work, only international standards with environmental information are mentioned, as follows:

**IAS 20: Accounting for government grants disclosure of government assistance.** These standard details that it shall only be recognised when there is assurance that the company complies with the conditions attached to the grant and the grant is received. They are intended to provide financial support and are recognised over the periods in which the company recognises as an expense the related costs that the grant is intended to offset, for example, environmental service costs. If they are non-monetary assets, they are measured at fair value and recognised in the same way as monetary assets as deferred income items or by deducting the grant from the carrying amount of assets.

**IAS 37 Provisions, Contingent Liabilities and Contingent Assets.** This standard ensures appropriate recognition of provisions, contingent liabilities and contingent assets, as well as

detailing supplementary information in notes, to enable users to understand the nature of these items.

IAS 37.19 states that only those obligations arising from past events whose existence is independent of the entity's future actions, for example, the obligation for an environmental fine or costs of repairing environmental damage caused in contravention of the law, are recognised as provisions.

**IAS 38 Intangible Assets.** It should reflect a deferred income (liability) when these rights are estimated at a cost of their fair value or, as in IAS 37, a provision is presented when the business starts to pollute.

**IAS 41 Agriculture.** This standard refers to agricultural activity. The purpose of this standard is to prescribe the accounting treatment, financial statement presentation and disclosures relating to agricultural activity. Agricultural activity is the harvested produce of an entity's biological assets, but only at the point of harvest. Thereafter, IAS 2 Inventories or other standards related to harvested produce apply.

**IFRS 6 Exploration for and evaluation of natural resources,** is intended to specify the financial information relating to the exploitation and evaluation of natural resources. An entity shall apply this IFRS to exploration and evaluation expenditures incurred. This IFRS requires entities to recognise exploration and evaluation assets for impairment in accordance with this IFRS and to measure possible impairment in accordance with IAS 36 *Impairment of Assets*.

### **3.3. International certifications**

Other organisations, such as the Environmental Management and Audit Scheme (EMAS) or the International Organisation for Standardisation (ISO) have a certain authority in the management of a company's environment. EMAS are voluntary laws of the European Union, which certify those companies that have established an Environmental Management System,

committing themselves to reduce their environmental impact, facts that can be corroborated by independent audits.

The objective of EMAS, in the latest version of Regulation 1221/2009 of 25 November, which repeals the 2001 version of EMAS (Regulation (EC) No 761/2001) and Commission Decisions 2001/681/EC and 2006/183/EC, is to promote continuous improvements in the environmental performance of organisations through the establishment and implementation of environmental management systems, systematic evaluation, the dissemination of information on environmental performance, open dialogue with the public and other interested parties, and the active involvement of staff in organisations, as well as appropriate training for them.

ISO certifications are also granted on a voluntary basis, as the International Organisation for Standardisation is a non-governmental body that does not depend on any other body at international level. Among the many certifications in this organisation, we focus on ISO 14001, the Spanish Standard UNE-EU ISO 14001:2015 "Environmental management systems" aims to serve organisations that are interested in achieving and demonstrating through a certificate from a third party a correct environmental performance and continuously reduces the environmental impact for a whole year. According to the European Commission, institutions today go further by implementing the EMAS and/or ISO 14001 environmental management system, exchange best environmental practices seeking environmental excellence through inter-institutional environmental management groups (GIME and Greening Network), in line with the EU Green Deal towards a climate neutral Europe by 2050.

According to AENOR, 2015 "Both EMAS and ISO have developed an effective system that can help organisations to manage and constantly improve their environmental work". These certificates are widely accepted and recognised worldwide, showing the concern and action taken on a global scale in relation to environmental aspects of Corporate Social Responsibility (CSR).

## **4. ENVIROMENTAL ACCOUNTING REGULATION**

The main Spanish environmental resolutions are analysed below.

In Spain, environmental regulation in this area begins with Law 54/1997, of 27 November, on the electricity sector. This includes the obligation to provide detailed and specific information on the activity that affects the environment. It was approved by Royal Decree 437/1998 of 20 March 1998, which established the rules governing the PGC of energy companies in order to include aspects related to environmental accounting in the legislation.

Some of these obligations are included in the General Accounting Plan (PGC) approved by Royal Decree 1514/2007, of 16 November, which amends Royal Decree 1/2021, of 12 January, amending the General Accounting Plan approved by Royal Decree 1514/2007, of 16 November.

The General Accounting Plan for Small and Medium-sized Companies approved by Royal Decree 1515/2007, of 16 November, as well as the Rules for the Preparation of Consolidated Annual Accounts approved by Royal Decree 1159/2010, of 17 September, the rules for the adaptation of the General Accounting Plan to non-profit entities approved by Royal Decree 1491/2011, of 24 October, for the recording of legal, contractual or implicit obligations, the commitments for the prevention or repair of environmental damage and the incorporation of the information in the annual accounts.

### **4.1. Environmental assets: definition and treatment**

According to the ICAC of 25 March 2002 it defines environmental assets as:

*- "The elements incorporated into the assets of the entity for the purpose of being used on a lasting basis in its activity, the main purpose of which is the minimisation of environmental impact and the protection and improvement of the environment, including the reduction or elimination of future pollution from the entity's operations."*

For the treatment of assets of an environmental nature, the Resolution of 25 March 2002 of the Spanish Accounting and Auditing Institute states:

- They will be recorded in the corresponding items of group B) Fixed assets, on the assets side of the balance sheet of the models included in the fourth part of the General Accounting Plan.
- Their recording, determination of the acquisition price or production cost and criteria for depreciation and corrections are recorded considering the valuation rules of the General Accounting Plan, as also provided for in Valuation Rule 3. "Special rules on fixed assets".
- For calculating valuation adjustments, the environmental factors that may affect them must be taken into account.

#### **4.2. Environmental provisions and contingencies: Definition and treatment**

Provisions of an environmental nature are provisions for expenses incurred in the same or a previous year that are specified as to their environmental nature, are probable or certain to be incurred but uncertain as to their exact amount or as to the date on which they will be incurred. They shall be recognised under '145. Provisions for environmental actions', within item 3.

As the obligation is contingent, they are included in the notes to the ACs' annual accounts in the following cases:

- When settlement of the obligation is not likely to give rise to an outflow of resources.
- When the obligation is conditional on the occurrence of an uncertain or unlikely event over which the Entity has no influence, and which confirms the origin of the obligation.

### **4.3. Environmental expenses: definition and treatment**

The ICAC Resolution defines environmental expenses as: *"amounts accrued for environmental activities carried out or to be carried out for the management of the environmental effects of the Entity's operations, as well as those arising from the environmental commitments of the accounting entity"*.

These expenses are related to pollution prevention, waste and spillage treatment, decontamination, restoration and environmental management, and the standard states that when the amount of these expenses is significant, a specific item entitled "Environmental expenses" shall be created within the "Other operating expenses" group of the profit and loss accounts; it shall also be reported in the new Note 22 of the report "Information on the environment".

Depending on their nature, they can be divided into ordinary and extraordinary expenses. Ordinary expenses are created by the day-to-day operations, practices, and habits of the company. Extraordinary expenses are understood as "those that occur as a consequence of events outside the ordinary activity of the entity and are expected to occur infrequently". Including fines, penalties, and compensation to third parties for environmental damage.

As detailed in section four of the Resolution, "expenses arising from environmental actions that must be undertaken now or in the future as a result of past events will not be considered extraordinary expenses, except in the case of a change in criteria or correction of an accounting error from previous years".

### **4.4. Environmental income: definition and treatment**

No reference has been found in national accounting standards to specific environmental income, although we have found opinions that allow for other similar types of income, such as work carried out by the company itself for the construction of elements intended for



environmental protection (Déniz, 2007, p.185), or income derived from environmental financial investments (Lopez Gordo and Rodríguez Ariza, 2006, p.86).

According to the International Accounting Standards Committee (IASB), environmental income is defined as "increases in economic benefits, in the form of inflows or increases in the value of assets, or decreases in liabilities, that result in increases in equity".

Although the ICAC Resolution of 25 March 2002 does not contain a specific standard for the recognition of environmental income, note 22 of the notes to the financial statements contains a section on "environmental grants received" and certain activities related to the environment.

Some examples are given below:

- Income saved by reducing the consumption of raw materials, such as support material, wrapping and packaging paper or by reducing the consumption of water, energy, and fuel.
- Increased sales thanks to the good environmental image provided by the company.
- Environmentally related subsidies.
- Windfall profits from the sale of environmental assets.

For treatment on an accrual's basis, an item is recognized as revenue when there is an increase in economic resources related to an increase in assets or a decrease in borrowed funds.

## 5. PRESENCE OF THE ENVIRONMENT IN THE ANNUAL ACCOUNTS

### 5.1. Balance sheet

#### **Environmental information to be provided in the balance sheet:**

This section shows some examples of the assets and liabilities that are affected by environmental management. Following the traditional order of a company's balance sheet in accordance with Royal Decree 1514/2007, of 16 November, which approves the General Accounting Plan:

#### **A) NON-CURRENT ASSETS**

**A.1) Intangible fixed assets:** This includes expenditure on research and development of processes and technologies related to the environment. Patents, licences and environmental trademarks once they have been registered and computer applications for the purpose of controlling environmental management.

**A.2) Tangible fixed assets:** Land and buildings for which a true and fair view of the state of contamination and the corresponding provisions for valuation corrections are known. Technical installations, tools, and furniture in the event that they are adapted to environmental regulations. New acquisitions and investments for environmental reasons and administrative acquisitions of land located in protected natural areas with the aim of promoting their conservation. Also, environmental investments: furniture, transport elements, insulation, etc. and improvements in soils, conditioning of landfills, insulation of buildings and installations.

**A.3) Financial Investments:** All those investments with an environmental relation are reflected, undergoing an environmental audit process, as this will allow adjusting the real price and avoiding fines or penalties for valuation errors leading to an adjustment in the balance sheet. For example: investments in green funds for the financing of sustainable projects.

## **B) CURRENT ASSETS**

**B.1) Stocks:** Ecological products or raw materials manufactured by the company, materials that can replace traditional materials with less polluting ones. An estimated control should be kept of expired products that become waste, since in addition to having no value, it is necessary to incur additional costs for their destruction, and of stocks for the company's own recycling. The cost of waste management, atmospheric emissions, production and control failures and discharges into water are also recorded under stocks.

**B.2) Trade debtors and other accounts receivable:** In this section are recorded the collection rights for sales of ecological products and the dividends receivable that come mainly from the shares in the capital that are committed to collaborate with the environment.

## **C) LIABILITIES**

Environmental audits understood as creditors for environmental services rendered, debts arising from environmental fines or penalties and contingencies and provisions related to existing obligations and liabilities due to environmental regulations, of which the following are examples:

- Impairment losses on contaminated land.
- Waste disposal costs.
- Future costs associated with legal trends in environmental matters.

<b>LIST OF SPECIFIC ENVIRONMENTAL ACCOUNTS TO BE INCLUDED IN THE BALANCE SHEET</b>	
<b>145. Provision for environmental actions.</b>	Those constituted because of the company's legal or contractual obligations or commitments acquired by the company to prevent, reduce, or repair environmental damage.

*Table 1: List of specific environmental accounts to be included in the balance sheet. Source: Ruiz de la Rosa, C. I., & Martín-Pinillos Castellanos, I. D. (2002). Normativa sobre la información medioambiental a incluir en las cuentas anuales de las empresas españolas: Resolución del ICAC.*

## 5.2. The profit and loss account

A company's profit and loss account should show environmental expenses on the debit side and environmental income on the credit side of the profit and loss account.

The expenses that may appear as environmental in nature in the profit and loss account could be:

<b>LIST OF SPECIFIC ENVIRONMENTAL ACCOUNTS TO BE INCLUDED IN THE PROFIT AND LOSS ACCOUNT.</b>	
<b>622. Repair and maintenance</b>	<ul style="list-style-type: none"> <li>• Those for the maintenance of the assets included in group 2, as well as expenses to reduce or repair damage caused to the environment, including those derived from the Integrated Waste Management Systems (Law 11/1997, of 24 April 1997 and Law 10/199, of 21 April 1997) and their development at the four-digit level:               <ul style="list-style-type: none"> <li>- 6220 Repairs and maintenance in general</li> <li>- 6223 Environmental services</li> </ul> </li> </ul>
<b>623. Independent professional services</b>	<ul style="list-style-type: none"> <li>• Amount paid to professionals for services rendered to the company. This includes the fees of economists, lawyers, auditors, including environmental auditors, notaries, etc., as well as commissions of independent mediating agents. It is broken down to four-digit level as follows:</li> </ul>

	<ul style="list-style-type: none"> <li>- 6230 Independent professional services</li> <li>- 6233 Environmental services</li> </ul>
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*Table 2: List of specific environmental accounts to be included in the profit and loss account. Source: Ruiz de la Rosa, C. I., & Martín-Pinillos Castellanos, I. D. (2002). Normativa sobre la información medioambiental a incluir en las cuentas anuales de las empresas españolas: Resolución del ICAC*

On the other hand, the following are recognised as environmental income (in addition to those mentioned in section 5.4):

- Sales of ecological products.
- Acquisitions of environmental fixed assets for profit.
- Capital subsidies of an environmental nature. They are granted by the public administration and are non-refundable. Generally, grants, legacies and donations are recorded as income directly attributed to net assets and are recognised in the profit and loss account.

### 5.3. Annual report

#### Information to be provided in the annual report

The ICAC Resolution of 25 March 2002 details in its ninth standard that there should be a minimum amount of environmental information in the notes to the annual accounts that should be mentioned in the following notes:

<p><b>Note 4. Valuation standards</b></p>	<ul style="list-style-type: none"> <li>• Valuation criteria, as well as the imputation to results of the amounts allocated to the above purposes. The basis of measurement shall be disclosed as an expense for the year or as an addition to the corresponding asset value.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Accounting policies for remediation of contaminated sites.</li> <li>• Description of the estimation method used and calculation of provisions for environmental impact.</li> </ul>
<b>Note 12. Tax situation</b>	<ul style="list-style-type: none"> <li>• Information on deductions for investment in measures to reduce environmental impact.</li> </ul>
<b>Note 22. Environmental disclosures</b>	<ul style="list-style-type: none"> <li>• Description and characteristics of the most significant systems, equipment and installations incorporated into tangible fixed assets and the protection and improvement of the environment, indicating their nature, purpose and book value.</li> <li>• Expenses incurred during the year for the purpose of protecting and improving the environment, distinguishing between ordinary expenses and those of an extraordinary nature, indicating in all cases their purpose.</li> <li>• Risks and expenses for provisions corresponding to environmental actions, with special indication of those deriving from litigation in progress, indemnities and others; for each provision, the following shall be indicated: initial balance, allocations, applications and final balance.</li> <li>• Contingencies related to the protection and improvement of the environment, including risks transferred to other Entities.</li> <li>• The full amount of environmental liabilities and, where appropriate, any compensation to be received.</li> <li>• Subsidies received of an environmental nature, as well as income arising from certain environmentally related activities.</li> </ul>

*Table 3: Environmental information to be included on the annual report. Source: Ruiz de la Rosa, C. I., & Martín-Pinillos Castellanos, I. D. (2002). Normativa sobre la información medioambiental a incluir en las cuentas anuales de las empresas españolas: Resolución del ICAC.*

#### **5.4. Management report**

The management report is not an annual account, even if it has to be represented with these. According to the Comisión Nacional del Mercado de Valores (CNMV), with reference to environmental information, on the one hand, the information provided in the management report will depend on the sector in which the company operates and, on the other hand, on the strategy followed by the company to reduce the company's impact on the environment and thus contribute to sustainability. This information must be detailed and must be faithful to the evolution of the company and the situation of society.

The regulations governing its content are set out in Chapter III of the Capital Companies Act. It does not specify the content of this report, but DIRECTIVE 2014/95/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial information and diversity information by certain large companies and certain groups of the European Parliament does regulate the disclosure of environmental information.

Through Directive 2014/95/EU of the European Parliament there is an article that explains which companies must include environmental information in their management report:

According to art. 19a: Public interest companies that exceed at the balance sheet date the average number of employees to 500, shall include in its management report in a section a non-financial statement that has the information of the impact of the activity to environmental and social issues. This means that it should include impacts on nature systems, including ecosystems, land, air and water.

In addition, there are a number of key environmental issues that affect all companies in general. According to the Comisión Nacional del Mercado de Valores (CNMV) these examples could serve as a reference for companies when dealing with environmental reporting: materials, energy, spills and waste, water, biodiversity, transport, products and services, and regulatory compliance.

It is recommended to include details of the environmental management systems in place, as well as the certifications obtained by them, indicating the components of the entity to which they refer. The resources available to address the above objectives, including the policy regarding lawsuits and litigation that may be filed. Procedures related to training and awareness of environmental aspects; as well as monitoring and measurement procedures and corrective and preventive actions, including:

- Plans for implementing policies or achieving natural environment objectives.
- Achievements and differences, risks and opportunities related to environmental issues.
- Changes in systems or structures made during the reporting period aimed at improving performance.



## 6. OBJETIVE OF THE STUDY

The objective of this study is to determine whether the most polluting companies in 2020 include environmental information in their annual accounts, balance sheet, profit and loss, annual report, and management report. In addition, we want to check whether this information is adapted to the guidelines of the Spanish Securities Market Commission (CNMV). This will show whether there is any relationship between the position of the companies with regard to pollution and the information obtained by the companies.

The aim is to analyse the environmental information provided by Repsol, Endesa, Gas Natural, EDP, Cemex, Cementos Molins and Cementos Alfa. A comparison will also be made focusing on the companies by sector, according to fuels and energy and cement. This will show which sector presents more information and in a clearer way. In this way, we will know if they comply with the legislation by showing environmental information in their annual accounts, what type of information and the difference between them when presenting it.

## 7. JUSTIFICATION

At present, these seven companies emit around 25% of the total Spanish greenhouse gas emissions. Repsol is the company that emits the most gases, 11.290.294 tonnes of CO<sub>2</sub>, followed by Endesa with 10.127.953 tonnes and in third place is the natural gas company with 5,9 tonnes, followed by EDP with 3,6 tonnes of CO<sub>2</sub>, Cemex with 2.458.370 tonnes, Cementos Molins 830.354 and Cementos Alfa 428.440.

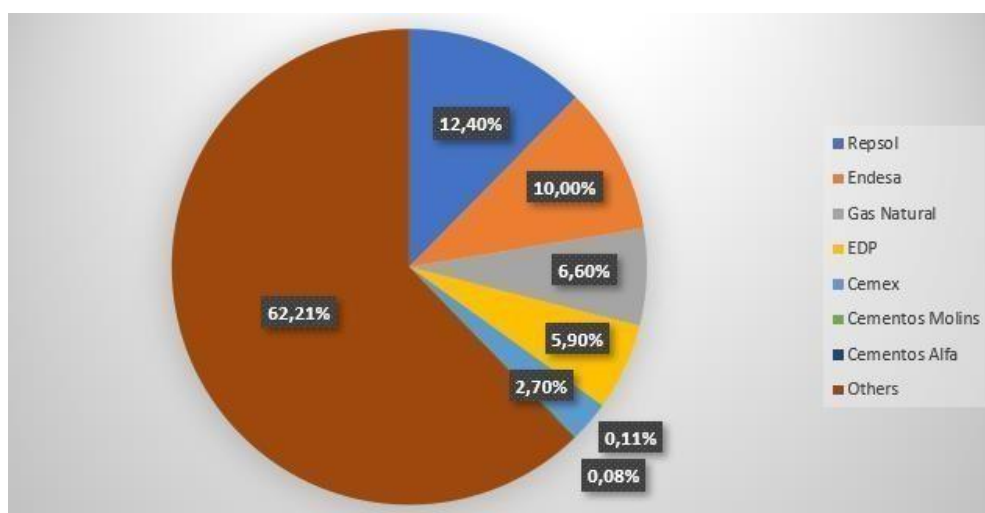


Figure 2: Source: Percentage of CO<sub>2</sub> emitted by some of the most polluting companies in Spain, own elaboration

## 8. METHODOLOGY

As a methodology to achieve the proposed objective, an analysis will be made of the environmental information provided by the company in the annual accounts 2020 of the National Securities Market Commission of the companies listed on the stock exchange and the commercial register of the accounts of the companies that are not listed on the stock exchange.

The information provided is mainly descriptive in nature, with the management report being the accounting document in which the references analysed are mainly found. The information that appears in the Balance Sheet, Annual Report, Profit and Loss Account will also be analysed, based on the environmental information to be provided according to the Spanish General Accounting Plans and the information to be provided according to the Environmental Resolution of 25 March 2002.

In order to be able to analyse the information provided in the management report, we will take the National Securities Market Commission as a guide. The following elements will be studied: The environmental information on the Balance Sheet and Profit and Loss, note 4 of the regulations on registration and valuation of the report, note 12 tax situations, note 15, note 14 provisions and contingencies of an environmental nature and environmental information in the management report.

The answers will be processed following the content analysis methodology introduced by Krippendorff (1997). This methodology has been used for the analysis of different academic articles, such as Rodríguez Ariza, Lazaro, and María Gloria López Gordo. "Análisis de los atributos cualitativos de la información medioambiental proporcionada por las compañías del IBEX 35 (1998-2002)." (2004) and Carqués, Francisco Javier Husillos. "Información medioambiental, contabilidad y teoría de la legitimación. Listed companies: 1997-1999." Working Paper 7 (2004).

If there is no environmental information in a section, i.e. the company analysed does not provide information in this section, a 0 will be assigned, and on the contrary, if it provides detailed and accurate information, the value will be 1. If there is little information and of low quality, the value will be 0.5.

## **9. ANALYSIS OF THE RESULTS**

In order to be able to analyse the most polluting companies in Spain, we will separate them by sector. In this way, we will compare the results between the companies in each sector.

The environmental information will be compared according to the annual accounts and management report, with respect to the level of pollution it represents in Spain.

### **9.1. Fuel and energy sector**

#### **9.1.1. Repsol, S.A**

The first company analysed in the fuel and energy sector is Repsol, S.A., the most polluting company in Spain, with a total of 11,290,294 CO2 emissions per year.

The first element that we are going to analyse is whether this company provides environmental information in its balance sheet and profit and loss account. It can be seen that it does not provide environmental information in this item, it will have a value of 0.

In section 2, note 4, Recording and valuation standards, Repsol presents in note 3 the valuation of costs, environmental assets, and provisions. This items have a value of 1. For item 3, it does not specify anything, therefore it has a rating of 0.

The company Repsol, S.A. has section 29 dedicated to the environment, Information on climate change and the environment. In this section of its report, it explains the environmental assets and their depreciation, so we proceed to the valuation of item 4 with a score of 1. It also details its environmental expenses, expenses for covering CO2 emissions made in 2020 and they amount to 69 million euros, therefore, the score of the item will also be 1.

As for item 8, Environmental compensation, it does not say anything, and the score for this item is 0.

As for item 9, Provisions and contingencies of an environmental nature, a summary is detailed in note 15, it will obtain a score of 0.5.

In relation to item 10, Environmental information in the management report, it provides sufficient information having an environmental point where this point expresses the ratios and the environmental policy, therefore, this item will obtain a score of 1.

From the above information we obtain the following table:

<b>Item</b>	<b>Item Description</b>	<b>Score</b>
1	Environmental information in the Balance Sheet and P&L	0
2	Note 4 of the annual report to the Financial Statements Recording and Valuation Standards	1
3	Note 12 Tax Situation	0
4	Note 15 Item A. Environmental Assets	1
5	Note 15 Item B. Environmental Expenditure	1
6	Note 15 Item C. Environmental provisions	1
7	Note 15 item D. Environmental investments	1
8	Note 15 item E. Environmental compensation	0
9	Note 14 Environmental provisions and contingencies	0,5
10	Environmental information in the management report	1
	<b>TOTAL</b>	<b>6,5</b>

*Table 4: Source own elaboration.*

Repsol scores 6,5.

### **9.1.2. Endesa, S.A**

The second company analysed is Endesa, because it is the second most polluting company in Spain, with a total of 10.127.953 tonnes of CO2 emissions.

With reference to item 1, Environmental information in the balance sheet and profit and loss, in the case of Endesa, S.A. we did not find any environmental information. The score was 0.

We move on to the second item, Note 4 of the report, recording and valuation standards. We obtain information on the valuation and recognition of emission rights in section K). Your valuation in this item is 1.

With reference to Note 12, Tax situation. It does not provide us with any environmental information. It obtains a score of 0.

Items 4 and 5 in section 20, Information on environmental activities, contain the following information: The company does not have any assets earmarked for environmental activities, nor does it record any corresponding current expenses. They obtain a result of 0.5.

Item 6. Note 15, Provisions of an environmental nature, we do not obtain any information. It obtains 0. Regarding investments with an environmental nature, it only refers to future investments. Result 0.5.

Regarding item 8, we find in note 21.7.3) the information that it has compensated 1,400 tonnes of carbon dioxide. Result 0.5.

Lastly, item 10. Environmental information in the management report. We found that it provides enough information, explains the company's environmental policy, mentions future

environmental investments and sustainability policy as well as development and innovation to reduce environmental impact. Result 1.

Item	Item Description	Score
1	Environmental information in the Balance Sheet and P&L	0
2	Note 4 of the annual report to the Financial Statements Recording and Valuation Standards	1
3	Note 12 Tax Situation	0
4	Note 15 Item A. Environmental Assets	0.5
5	Note 15 Item B. Environmental Expenditure	0.5
6	Note 15 Item C. Environmental provisions	0
7	Note 15 item D. Environmental investments	0.5
8	Note 15 item E. Environmental compensation	0.5
9	Note 14 Environmental provisions and contingencies	0
10	Environmental information in the management report	1
	<b>TOTAL</b>	<b>4</b>

*Table 5: Source own elaboration.*

Endesa scores 4.

### **9.1.3. Gas Natural**

The third company analysed is Gas Natural, the third most polluting company in Spain after Endesa, with CO2 emissions of 5.9 million tonnes of CO2.

With reference to item 1, Environmental information in the balance sheet and profit and loss, it does not directly provide environmental information, nor in the profit and loss accounts. The result will be 0.

Item 2, note 4, Recording and valuation legislation, is detailed in note 2. It mentions cost and asset accounting and explains the environmental provisions, resulting in a score of 1.

Item 3, Taxation, is listed in note 21, but does not detail anything of an environmental nature. It will have a score of 0.

Natural gas only offers a section dedicated to the environment Note 39. Environment, which only details environmental investments but does not detail any other item. Item 7 scores 1, while items 4, 5, and 6 score 0.

Item 9 is assessed below. Note 14 environmental provisions and contingencies. Gas natural provides details in Note 36 on environmental incentives for coal-fired power plants in Spain, but only reports on this. It obtains a score of 0.5.

In reference to item 10. Environmental information in the management report, we find that it provides enough information, explains the company's environmental policy, mentions future environmental investments and sustainability policy, as well as development and innovation to reduce environmental impact. Result 1.

<b>Item</b>	<b>Item Description</b>	<b>Score</b>
1	Environmental information in the Balance Sheet and P&L	0
2	Note 4 of the annual report to the Financial Statements Recording and Valuation Standards	1
3	Note 12 Tax Situation	0
4	Note 15 Item A. Environmental Assets	0
5	Note 15 Item B. Environmental Expenditure	0
6	Note 15 Item C. Environmental provisions	0
7	Note 15 item D. Environmental investments	1
8	Note 15 item E. Environmental compensation	0
9	Note 14 Environmental provisions and contingencies	0.5

10	Environmental information in the management report	1
	<b>TOTAL</b>	<b>3,5</b>

*Table 6: Source own elaboration.*

Gas Natural scores 3,5.

#### **9.1.4. EDP, S.A.**

The fourth company analysed is EDP, S.A., the fourth most polluting company in Spain after Gas Natural, with CO2 emissions of 3.6 million tonnes of CO2.

Referring to point 1. Environmental information in the balance sheet and profit and loss accounts, it does not provide direct information on environmental issues. Result 0.

In point 2. of the report, in note 4.J) Environment, EDP details the valuation of environmental assets, expenses and provisions in note 4.J) Environment. It obtains a result of 1.

Referring to item 3. The tax situation does not detail anything of an environmental nature. It will have a result of 0.

Regarding note 15, items 4, 5, 6, 7 and 8: It only details in note 20 that EDP does not contemplate making investments to prevent or correct environmental impacts, nor does it recognise any provision for this concept. Nor is any type of expense itemised for these concepts and the directors consider that there are no contingencies in environmental matters. Its score is 0.5.

EDP does not provide a list of the notes to the annual accounts where the information relating to the annual report is included.



In item 10, Environmental information in the management report. It explains the company's environmental policy, mentions future environmental investments and the sustainability policy, as well as the innovation strategy to reduce environmental impact. Result 1.

<b>Item</b>	<b>Item Description</b>	<b>Score</b>
1	Environmental information in the Balance Sheet and P&L	0
2	Note 4 of the annual report to the Financial Statements Recording and Valuation Standards	1
3	Note 12 Tax Situation	0
4	Note 15 Item A. Environmental Assets	0
5	Note 15 Item B. Environmental Expenditure	0,5
6	Note 15 Item C. Environmental provisions	0,5
7	Note 15 item D. Environmental investments	0
8	Note 15 item E. Environmental compensation	0,5
9	Note 14 Environmental provisions and contingencies	0
10	Environmental information in the management report	1
	<b>TOTAL</b>	<b>3,5</b>

*Table 7: Source own elaboration.*

The EDP company scores 3,5.

## **9.2. Cement sector**

The three companies in the cement sector that are among the most polluting companies in Spain are analysed below.

### **9.2.1. Cemex**

Although they may be at the bottom of the ranking, Cemex emits 2.458.370 tonnes of CO<sub>2</sub>.

Item 1 does not provide any environmental information, the value will be 0.

In item 2, note 4 of the report Recording and valuation standards, the company Cemex reports on the valuation of greenhouse gases, in this case they are included as subsidies. On the other hand, the same note explains the valuation of environmental provisions and expenses. The result of this item is 1.

As for item 3. tax situation, no information has been obtained. result 0.

In the annual accounts of the company, Cemex dedicates a special note to environmental information, note 28. In this note it details the values of the assets of an environmental nature and their depreciations, on the other hand it explains that the investments are included in the values of the assets only. you will obtain a 1 in item 4 and in item 7, a 0. You will get 0.5.

As for items 6 and 8, the company Cemex does not provide information either in note 28 or in note 24. other provisions. Result 0.

Item 9. Note 14. provisions and contingencies of an environmental nature, no information is provided. result 0.

Finally, in item 10. Environmental information in the management report, no information is provided, so the result will be 0.

<b>Item</b>	<b>Item Description</b>	<b>Score</b>
1	Environmental information in the Balance Sheet and P&L	0
2	Note 4 of the annual report to the Financial Statements Recording and Valuation Standards	1
3	Note 12 Tax Situation	0

4	Note 15 Item A. Environmental Assets	1
5	Note 15 Item B. Environmental Expenditure	0,5
6	Note 15 Item C. Environmental provisions	0
7	Note 15 item D. Environmental investments	0
8	Note 15 item E. Environmental compensation	0
9	Note 14 Environmental provisions and contingencies	0
10	Environmental information in the management report	0
	<b>TOTAL</b>	<b>2,5</b>

*Table 8: Source own elaboration.*

The Cemex company scores 2,5.

### **9.2.2. Cementos Molins, S.A**

The second company analysed is Cementos Molins, which emitted 830,345 tonnes of CO2 in 2020.

As for item 1. Environmental information in the Balance Sheet and P & G, it does not indicate any information. Result 0.

Item 2. Recording and valuation standards. In note 3, section y) of the report details that they consider criteria as an environmental expense. result 0.5.

With regard to item 4. Assets of an environmental nature, no information is given on the amount of these.

Items 5 and 6: Environmental expenses and provisions, we find that they are reflected in note 29. Information on greenhouse gas emission rights, reporting the amount as "other current management expenses" 19.18 million euros, its counterpart being "provisions for liabilities and charges". The result of the Item will be 1.

Item 7, Investments of an environmental nature, details Cementos Molins in note 34. Information on the environment details the main investments made to protect and improve the environment, as well as their value and corresponding depreciation.

With regard to items 8 and 9, Environmental compensation and Environmental provisions and contingencies, no information is found in this respect. result 0.

In item 10, Environmental information in the management report. We found that it provides enough information, explains the company's environmental policy, mentions future environmental investments and sustainability policy, as well as the innovation strategy to reduce environmental impact. Result 1.

<b>Item</b>	<b>Item Description</b>	<b>Puntuación</b>
1	Environmental information in the Balance Sheet and P&L	0
2	Note 4 of the annual report to the Financial Statements Recording and Valuation Standards	0,5
3	Note 12 Tax Situation	0
4	Note 15 Item A. Environmental Assets	0
5	Note 15 Item B. Environmental Expenditure	1
6	Note 15 Item C. Environmental provisions	1
7	Note 15 item D. Environmental investments	1
8	Note 15 item E. Environmental compensation	0
9	Note 14 Environmental provisions and contingencies	0
10	Environmental information in the management report	1
	<b>TOTAL</b>	<b>4,5</b>

*Table 9: Source own elaboration.*

The Cementos Molins company scores 4,5.

### **9.2.3. Cementos Alfa, S.A**

The third company analysed in the cement sector is Cementos Alfa, S.A. This company emitted 428,440 tonnes of CO<sub>2</sub> in 2020.

Cementos Alfa does not detail environmental information in the Balance Sheet and P&L. In item 1, it obtains a result of 0.

In item 2, note 4 of the report Recording and valuation standards. Cementos Alfa details the valuation of assets of an environmental nature, but does not detail any other information.

Result 0.5.

Regarding item 3, tax situation, it does not provide any environmental information. Result 0.

In item 5: Note 15 point B. Expenses of an environmental nature, we find information in this regard in note 18. This company obtained in the financial year 2020 expenses for the improvement of the environment of 441,000 euros. As also appears in this note information on indemnities referring to item 8, but it only informs that in the event that this could occur the company is adequately covered with insurance policies. result item 5: 1, result item 8: 0.5.

This company details the environmental provisions in note 19, indicating the main movements during the financial year 2020. 62 million euros were allocated for the restoration of quarries based on the tonnes exploited in this financial year as "provisions". In item 6, the result is 1.

As for item 10. Environmental information in the management report, we find that it provides enough information, explains the environmental policy of the company, mentions the future environmental investments and the sustainability policy, as well as the innovation strategy to reduce the environmental impact. Result 1.

Of the remaining items such as 4. environmental assets, 7. environmental investments and 9 no information is found. Result 0.

Item	Item Description	Puntuación
1	Environmental information in the Balance Sheet and P&L	0
2	Note 4 of the annual report to the Financial Statements Recording and Valuation Standards	0,5
3	Note 12 Tax Situation	0
4	Note 15 Item A. Environmental Assets	0
5	Note 15 Item B. Environmental Expenditure	1
6	Note 15 Item C. Environmental provisions	1
7	Note 15 item D. Environmental investments	0
8	Note 15 item E. Environmental compensation	0,5
9	Note 14 Environmental provisions and contingencies	0
10	Environmental information in the management report	1
	<b>TOTAL</b>	<b>4</b>

*Table 10: Source own elaboration.*

The Cementos Alfa company scores 4.

## 10. COMPARISON BY SECTOR

Once the results of the valuation of each company have been obtained, the following table is provided:

Company	Score
Repsol, S.A	7
Endesa, S.A	4
Gas Natural, S.A	3,5
Energías de Portugal, S.A	3,5
Cemex, S.A	2,5
Cementos Molins, S.A	4,5
Cementos Alfa, S.A	4

*Table 11: Source own elaboration*

We can see that the majority of the companies obtain a low score; we can see that the tendency of the companies is not to present all the environmental information.

The company with the highest score is Repsol, followed by Cementos Molins. On the other hand, the company with the lowest score is Cemex, S.A., with a score of 2 points. This company does not present much environmental information, little more than the legislation on registration and valuation.

Sector	Sector average
• Fuel and Energy	4,5
• Cement	3,67

*Table 12: Source own elaboration.*

Below is the average of the companies analysed in each sector analysed, we can see that the score is similar and low. It stands out that petrol and energy is the sector that has polluted and pollutes the most today, on the other hand it is the one that obtains the best score although it does not pass. However, in the cement sector, it can be observed that it obtains a lower score than the oil and energy sector, with a score of 3,67.

## **11. CONCLUSIÓN**

The aim of this study was to determine the quantity and quality of environmental information in the annual accounts, balance sheet, profit and loss accounts, annual report and management report of some of the most polluting companies in Spain.

To this end, a search was carried out on the evolution of environmental legislation. The ICAC Resolution of 25 March 2002 and the Spanish National Accounting Plan approved by Royal Decree 1514/2007 of 16 November were highlighted.

It was decided to analyse these companies by sector because the differences in emissions between sectors are notorious and here some companies outperform others in terms of detailed information in their annual accounts. In this way, it is also observed whether there is a link between pollution and the environmental information provided. Then, the elements are analysed as items assessing the quantity and quality of environmental information and an analysis is made of the results of the different companies and sectors to which these companies belong.

In conclusion, it should be noted that neither the mandatory information nor the voluntary information to be presented is carried out. Moreover, the information is not clear and of low quality. Therefore, it is observed that the environmental information in the annual reports is very scarce.

It can be seen that all the companies analysed represent item 2, Note 4 of the Report on Recording and Valuation Standards. Most of the companies analysed do not have tax benefits for environmental investments. However, all the companies include a section in the report dedicated to environmental information, although only some of them manage to show the



recommended amount.

By the same token that there is no correlation between the position of companies and their emissions. This is because Repsol, Endesa, Gas Natural and EDP have a low average score of 4.5 and have the highest degree of pollution.

Due to the finding that the most polluting companies provide scarce and low-quality information, more and more transparent reporting can be recommended, as this will increase their competitiveness and the trust of their customers.

## 12. BIBLIOGRAFÍA

- Acosta, S., 2022. Estas son las diez empresas que más CO2 emiten en España: Repsol adelanta a Endesa. [online] EIDiario.es. Available at: <[https://www.eldiario.es/ballenablanca/crisis\\_climatica/son-diez-empresas-contaminantes-pais-gas-nuevo-carbon\\_1\\_7801491.html](https://www.eldiario.es/ballenablanca/crisis_climatica/son-diez-empresas-contaminantes-pais-gas-nuevo-carbon_1_7801491.html)> [Accessed 20 May 2022].
- Amigo Casson, A., 2022. ¿Qué es la contabilidad social y ambiental? - Cnmv.es. 2022. [online] Available at: <[http://www.cnmv.es/DocPortal/Publicaciones/Grupo/Guia\\_Gral.pdf](http://www.cnmv.es/DocPortal/Publicaciones/Grupo/Guia_Gral.pdf)> [Accessed 8 May 2022].
- BOE-A-2002-6389 Resolución de 25 de marzo de 2002, del Instituto de Contabilidad y Auditoría de Cuentas, por la que se aprueban normas para el reconocimiento, valoración e información de los aspectos ambientales en las cuentas anuales. [en línea] Disponible en: <<https://www.boe.es/buscar/doc.php?id=BOE-A-2002-6389>>
- BOE-A-2006-3054 Resolución de 8 de febrero de 2006, del Instituto de Contabilidad y Auditoría de Cuentas, por la que se aprueban normas para el registro, valoración e información de los derechos de emisión de gases de efecto invernadero. [en línea] Disponible en: <<https://www.boe.es/buscar/doc.php?id=BOE-A-2006-3054>>
- Boe.es. 2022. BOE.es - DOUE-L-2014-83373 Directiva 2014/95/UE del Parlamento Europeo y del Consejo, de 22 de octubre de 2014, por la que se modifica la Directiva 2013/34/UE en lo que respecta a la divulgación de información no financiera e información sobre diversidad por parte de determinadas grandes empresas y determinados grupos.. [online] Available at: <<https://www.boe.es/buscar/doc.php?id=DOUE-L-2014-83373>>
- Carqués, Francisco Javier Husillos. "Información medioambiental, contabilidad y teoría de la legitimación. Empresas cotizadas: 1997-1999." Documento de trabajo 7 (2004): 04.
- Criado, et al., (2004) La industria cerámica española ¿ante un cambio de ciclo? <[https://www.researchgate.net/profile/Manuel-Regueiro-Y-Gonzalez-Barros/publication/242393957\\_La\\_industria\\_ceramica\\_espanola\\_ante\\_un\\_cambio\\_de\\_ciclo/links/5965ed5f4585157fcc63950b/La-industria-ceramica-espanola-ante-un-cambio-de-ciclo.pdf](https://www.researchgate.net/profile/Manuel-Regueiro-Y-Gonzalez-Barros/publication/242393957_La_industria_ceramica_espanola_ante_un_cambio_de_ciclo/links/5965ed5f4585157fcc63950b/La-industria-ceramica-espanola-ante-un-cambio-de-ciclo.pdf)>
- Deniz Mayor, J., 2022. La regulación de la información contable medioambiental en España: La Resolución del Instituto de Contabilidad y Auditoría de Cuentas del 25 de marzo de 2002. [online] Scielo.org.mx. Available at: <[http://www.scielo.org.mx/scielo.php?script=sci\\_arttext&pid=S0186-10422007000100008](http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0186-10422007000100008)>

- Ec.europa.eu. nd EMAS – Medio ambiente - Comisión Europea . [en línea] Disponible en: <[https://ec.europa.eu/environment/emas/index\\_en.htm](https://ec.europa.eu/environment/emas/index_en.htm)>
- EMAS en las Instituciones Europeas. nd EMAS – Medio ambiente - Comisión Europea .[en línea] Disponible en: <[https://ec.europa.eu/environment/emas/emas\\_registrations/emas\\_in\\_the\\_european\\_institutions\\_en.htm#news](https://ec.europa.eu/environment/emas/emas_registrations/emas_in_the_european_institutions_en.htm#news)>
- Larrinaga, Carlos, et al. "Regulación contable de la información medioambiental. Normativa española e internacional." Aeca, Madrid (2002).
- Media3turdera.com.ar. 1997. Metodología de análisis de contenido . [en línea] Disponible en: <<http://www.media3turdera.com.ar/mediosyrealidad/Klaus-krippendorff.pdf>>
- MUÑOZ, M.P. & ENCISO, V. (2020): “La contabilidad ambiental como herramienta para la incorporación de la sostenibilidad ambiental en las empresas de Economía Social”, CIRIEC-España, Revista de Economía Pública, Social y Cooperativa, 103, 249- 277. DOI: 10.7203/CIRIEC-E.103.17838
- MASANET LLODRÀ, M. J., MR Rovira Val, and A. Llull Gilet. "La información medioambiental en el marco conceptual de las NIIF y en la regulación española. Su aplicación al caso de los pasivos." 5th. Conference on Social and Environmental Accounting Research. 2005.
- Negash, Minga (2009) “Los IFRS y la contabilidad ambiental”: Nicniif.org. 2022. [en línea] Disponible en: <<http://www.nicniif.org/files/otros/Los-lfrs-y-La-ad-Ambiental.pdf>>
- Llodrà, Maria J. Masanet. "Accounting information in environmental management: a case study of an innovative strategic sector." Novos desafios na Gestão, Inovação ou renovação?: XII Jornadas Luso-Espanholas de gestão científica. Universidade da Beira Interior (UBI), 2002.
- NIC - Normas Internacionales de Contabilidad - Nuevo PGC. 2022. NIC - Normas Internacionales de Contabilidad - Nuevo PGC . [en línea] Disponible en: <https://normasinternacionalesdecontabilidad.es/>
- Rodríguez Ariza, Lazaro, and María Gloria López Gordo. "Análisis de los atributos cualitativos de la información medioambiental proporcionada por las compañías del IBEX 35 (1998-2002)." (2004).
- Ruiz de la Rosa, C. I., & Martín-Pinillos Castellanos, I. D. (2002). Normativa sobre la información medioambiental a incluir en las cuentas anuales de las empresas españolas: Resolución del ICAC

- Sistemas de gestión ambiental — Requisitos con orientación para su uso . [en línea]  
Disponible en: <<https://www.iso.org/obp/ui#iso:std:iso:14001:ed-3:v1:es>>