

## The relation of The International Accounting Standard IAS2 for Stock on environmental costs and support for sustainable development

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**Received:** 10/11/2024

**Accepted:** 10/12/2024

**Published:** 22/12/2024

### Abstract:

This study seeks to elucidate the concept of inventories and their significance in accordance with the Standard Financial Accounting (SCF) and several international accounting standards, including International Accounting Standard 2 (IAS 2). The study examines the evaluation and classification of inventories and their influence on the financial performance of organizations. The paper examines the significance of environmental costs and their integration into inventory expenses to promote sustainable growth. The study encompasses an examination of the various facets of sustainable development and its objectives, along with offering recommendations to enhance openness and accountability in financial and environmental reporting.

**Keywords:** Sustainable Development; Environmental Costs; Stock; International Accounting Standard IAS2.

**JEL Classification:** Q01; Q51; D24; M41.

## **Introduction**

Environmental accounting is essential for every firm aiming for sustainable development, given the rising environmental consciousness and global commitment to environmental protection. Environmental accounting seeks to incorporate environmental considerations into conventional accounting practices by identifying, quantifying, and assessing the environmental costs associated with an organization's operations. Organizations must adopt international accounting standards to enhance the management of environmental costs. The second international accounting standard (IAS2) is a fundamental standard addressing inventory and serves as a crucial instrument for assessing the environmental costs linked to inventory, accurately reflecting true costs and aiding in the pursuit of sustainable development. This study aims to address the following problem:

**What is the impact of applying the second accounting standard IAS2 for inventory on environmental costs and how does it work to enhance sustainable development?**

**Sub-questions:** From the problem, we are led to the sub-questions

- 1- What are the environmental costs linked to inventories, and how may they be assessed in accordance with accounting standards?
- 2- How may environmental costs be incorporated into inventory accounts in accordance with the second international accounting standard IAS 2?

**Hypotheses:** The hypotheses can be formulated as follow

- 1- Applying the second international accounting standard for inventory IAS2 allows for accurate identification of environmental costs associated with inventory.
- 2- Integrating environmental costs into inventory accounts leads to improved transparency and environmental efficiency of institutions.

## **Importance of the study:**

This study emphasizes the significance of the interplay between the second international accounting standard for inventories and environmental costs in promoting sustainable development. The study seeks to elucidate the impact of the norm on financial transparency and dedication to social and environmental accountability, as well as its potential to foster sustainable development and environmental protection.

## **Objectives:**

This research aims to review the relationship between the second international accounting standard and environmental costs and discover how to support sustainable development through the application of the standard.

**Research plan:**

We divided it into the following axes:

**First:** The theoretical framework for each of: the second international accounting standard for inventory, environmental costs and sustainable development

**Second:** Steps for applying the second international accounting standard on environmental costs and sustainable development.

**1. General concepts for each of the second international accounting standard for inventory, environmental costs and sustainable development:**

**The second international accounting standard:**

It is recognized as a framework for ascertaining the appropriate methodologies for assessing the measurement, presentation, and disclosure of inventories in financial statements. This standard seeks to emphasize the influence of operations, events, and circumstances on the entity's financial position and business outcomes, specifically addressing inventories as a fundamental component of financial statements and concentrating on their evaluation and management methods. (Qurain, 2015, p. 39)

The standard emphasizes the accounting of inventory at historical cost, detailing the methods for determining its cost and recognizing it as either an expense or an asset on the balance sheet, while offering guidelines on its appraisal and disclosure, including depreciation (Makhloufi, 2016, p. 48).

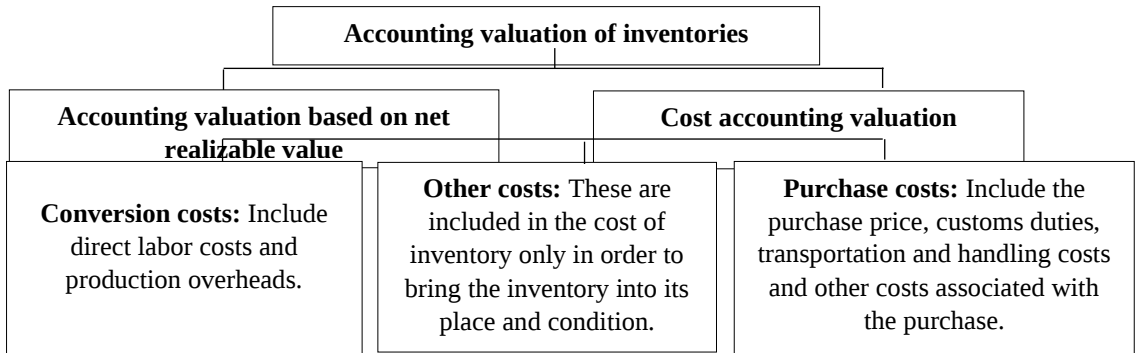
The standard applies to financial statements employing the historical cost method for inventory accounting, with exceptions for working in progress from construction contracts (IAS 11), financial instruments (IAS 39), and biological assets and agricultural products at the point of harvest (IAS 41).

**The standard encompasses the subsequent terms:**

**Net realizable value:** refers to the expected selling price of a commodity in the ordinary course of business, after deducting the estimated costs related to its production and sale (Tuwairat, 2023, page 52).

**Fair value:** It is the value relevant for the exchange of an asset or the settlement of an obligation between knowledgeable and consenting parties on an arm's length basis (Abbas Ali Mirza, page 20).

**Valuation of inventories in accounting:** The standard stipulates that inventory must be evaluated at the lower of cost or net realizable value, as detailed below:



**Source:** By researchers based on references

Additionally, there exist three alternative methodologies for assessing inventory cost:

- 1- **Actual cost spent:** It serves as the foundation for assessing inventory cost.
- 2- **Standard costs:** Which rely on a pre-determined cost structure established according to production requirements and the facility's specific characteristics.
- 3- **Retail method:** is employed in retail establishments and supermarkets with extensive inventories, where the previous period's merchandise is valued at its selling price, and the gross profit margin is deducted from this selling price to determine the cost of the prior period's inventory. (Tawyrat, 2023, p. 54)

**Methods for determining inventory cost:**

The second international accounting standard stipulated two methods for evaluating inventory, which are:

- 1- **First in, first out (FIFO) method:** This method asserts that inventory obtained or produced first is utilized or sold first, leading to the remaining inventory at the end of the period being the most recently acquired or created. (Hawas, 2012, p. 108)
- 2- **Intermediate cost method CMP:** This method determines the weighted average cost of comparable inventories at the start of the period and those acquired or produced during the period by calculating the average for the entire period or for each subsequent shipment received, contingent upon the institution's circumstances. (Alawi, 2010, p. 218)

The last-in, first-out (LIFO) method is no longer used as a method for valuing inventories.

Regarding the second international accounting standard, the subsequent inventory-related information must be disclosed:

- Elucidate the accounting methodologies employed to assess inventory, including the determination of its cost.
- Present the aggregate book value of inventory and categorize it based on the institution's requirements.
- Disclosure of the book value of inventory recognized at fair value minus the anticipated costs to achieve the point of sale.
- Disclosure of the inventory value realized as an expense during the period.
- Declaration of the inventory reduction value acknowledged as an expense for the period.
- Disclosure of the value and conditions surrounding the recovery of any inventory reduction reported as an expense during the period in which the reduction took place.
- Disclosure of the book value of inventory utilized as collateral for liabilities. (Tawyrat, 2023, pp. 56-57)

## **1.2.Sustainable Development:**

### **Definitions of sustainable development:**

Sustainable development is characterized as a comprehensive endeavor encompassing all sectors, including governmental, public, and private institutions, as well as individuals, with the objective of maximizing the utilization of human and material resources and capabilities while ensuring no environmental harm occurs (Daikha Farouk, 2020, p. 201).

The World Commission on Development and Environment, under Brundtland's leadership in 1987, defined sustainable development as meeting present needs without compromising the ability of future generations to meet their own needs (Maryse Lapergue, 2007, p. 60).

A definition of sustainable development can be inferred from the preceding definitions as the preservation of natural resources for the benefit of present and future generations, addressing their needs through rational and optimal utilization while engaging in activities that protect the environment.

### **Dimensions of sustainable development:**

Sustainable development encompasses three key facets:

- 1- **The economic dimension:** It entails maintaining the sustainability and enhancement of long-term economic well-being by fulfilling essential demands for well-being, including high-quality food,

housing, healthcare, and education. (Banzer Mohammed, 2003, p. 179)

- 2- **The technological dimension:** This dimension highlights the shift towards cleaner and more efficient technologies aimed at minimizing energy and resource consumption, while also reducing gas and pollutant emissions through the implementation of specific standards that decrease waste and encourage internal recycling. (Amer Tarraf, 2012, p. 107)
- 3- **The social dimension:** This dimension prioritizes the human being as the central focus of development and its ultimate objective, advocating for social justice and poverty alleviation while underscoring democracy by facilitating transparent public participation in decision-making (Banzer Mohammed, 2003, page 179)

### **Sustainable Development Goals:**

Sustainable development aims to accomplish various objectives, including:

- Increasing national income levels
- Improving food security
- Ensuring the sustainable utilization of natural resources
- Enhancing the quality of life
- Advancing health and mitigating diseases.
- Incorporating contemporary technology to benefit society.

### **Sustainable Development Indicators:**

The report published by the Commission on Sustainable Development has around 130 indicators categorized into four primary areas that represent various facets of sustainable development and facilitate the assessment of its advancement and attainment of objectives as follows:

**Table number (1): Sustainable Development Indicators**

| <b>Social indicators</b>                                                                                                       | <b>Economic indicators</b>                                                                                                                          | <b>Environmental indicators</b>                                                                                                                                                                                                                                 | <b>Institutional indicators</b>                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The primary indicators are:<br>-Poverty index<br>-Unemployment rate<br>-Educational attainment rate<br>-Population growth rate | The most important indicators are:<br>-Per capita share of GDP<br>-Ratio of total investment to GDP<br>-Total external debt as a percentage of GDP. | The most important of them are:<br>-the average per capita allocation of water resources.<br>-Average per capita allocation of total arable land<br>-Annual fertilizer usage quantities<br>-Land impacted by desertification<br>-Alteration in forested regions | Among the data, we observe the following metric:<br>- Main telephone lines per 100 individuals<br>-Personal computers per 100 individuals<br>-Internet users per 100 individuals |

**Source:** By researchers based on references

### **1.3.Environmental costs:**

A consortium of specialists in environmental costs characterizes it as a process of juxtaposing internal and external costs, which constitute components of the comprehensive cost framework employed by the institution. These costs emerge from the interplay between environmental management activities and the consequent ecological harm. (Expert Working Group, 2001, p. 11) Environmental costs are defined as the value necessary for production inputs and the efforts needed to restore the environment to its prior condition following material and human damage caused by institutional activities. These expenses encompass taxes levied by the state on institutions as recompense for the detrimental impacts of their operations on the environment. (Najat Al-Nish, 1999, p. 10)

#### **Advantages of environmental costs:**

Environmental costs confer benefits that can be encapsulated as follows:

- When integrated into the cost structures of institutions, they enhance the efficacy of the cost accounting system and optimize operational decision-making.
- An effective motivation to guide institutions towards environmental responsibility and to incorporate environmental factors in project submissions.
- Facilitates the institution's profit maximization and resource optimization while emphasizing environmental conservation .
- Offers avenues for enhanced decision-making regarding environmental performance and strategic business planning.
- Environmental costs illuminate management practices, prompting institutions to enhance environmental quality and elevate overall performance and efficiency.

#### **Environmental Cost Tabulation:**

Environmental cost tabulation involves the collection and classification of these expenses by their many categories, as well as their allocation to different operations within the institution. This tabulation enhances comprehension of expenses and aids in the analysis and decision-making process for environmental management.

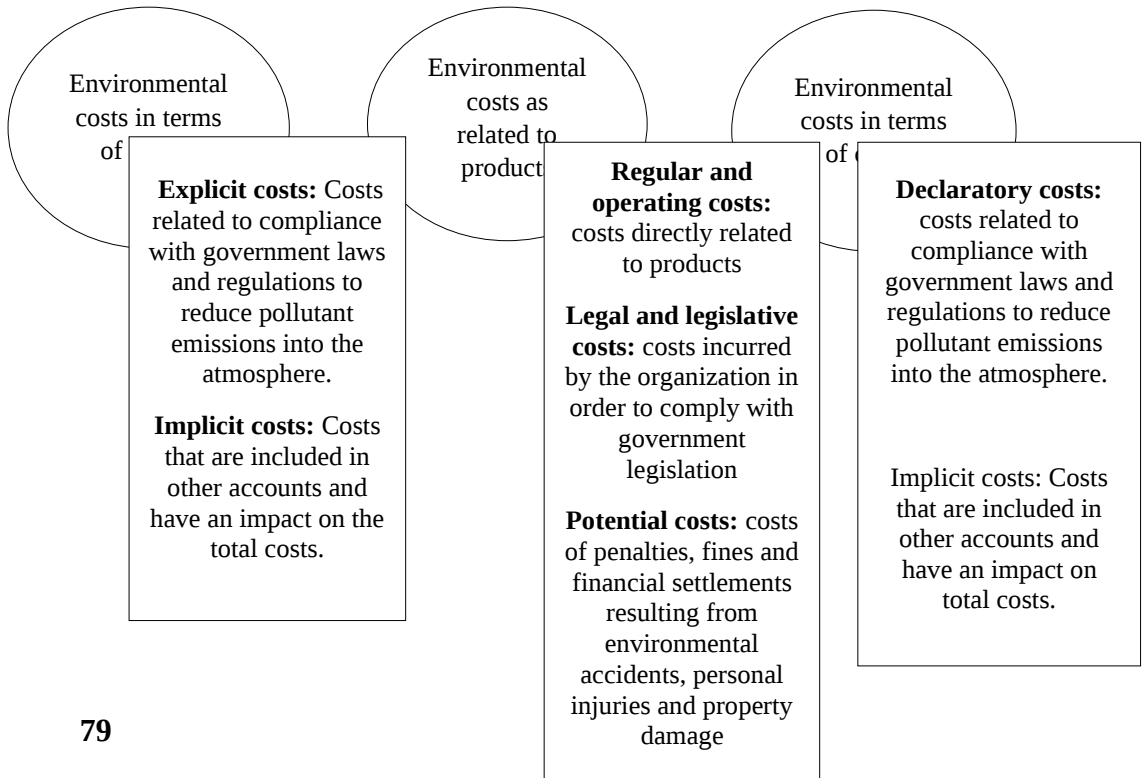
**Table number (2): Environmental Cost Classification**

| <b>Costs tabulation</b>               | <b>The nature of environmental costs</b>                                                                                                                                                                |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product-related material costs        | Whether they are primary or secondary items or their packaging                                                                                                                                          |
| Non-product material costs            | It pertains to the acquisition of resources such as energy and water that do not integrate into the final goods but may result in waste or pollution.                                                   |
| Waste and emission control costs      | It includes the costs related to the management, processing, and disposal of waste and pollutants, as well as indemnification for damages and other associated expenses.                                |
| Environmental impact prevention costs | It encompasses preventive environmental initiatives, including clean production projects and expenses associated with environmental measurement and planning systems.                                   |
| Research and development costs        | It encompasses all expenses associated with environmental initiatives and ecological advancement.                                                                                                       |
| Intangible costs                      | This includes both internal and external expenses related to intangible elements such as environmental liability, potential legislation, productivity, corporate reputation, and stakeholder relations. |

**Source:** Saffar (2006), p. 12.

### **Classification of environmental costs:**

This entails allocating these expenses based on their contributions to enhancing environmental performance or adhering to environmental regulations. This classification encompasses the subsequent items:



**Source:** By researchers based on references

**2. Steps to apply the second international accounting standard for inventory to environmental costs and support sustainable development:**

The second international accounting standard stipulates the treatment and assessment of inventory in financial statements, ensuring precise and transparent information for external users. It recognizes environmental costs as a critical component of the total production cost, facilitating their incorporation into inventory valuation and aiding organizations in more effectively managing these expenses. To implement this requirement on environmental costs, the following primary steps must be considered:

- 1- Determining the cost of inventory:** The International Accounting Standard for Inventory (IAS 2) permits the allocation of direct environmental expenses related to production processes, including waste disposal and environmental compliance costs, to be incorporated into the cost of inventory.
- 2- Valuation of inventory:** Indirect environmental costs (overhead costs) are allocated to inventory in a fair and systematic manner, as the valuation must encompass environmental costs. This is accomplished by accepting the lesser value between the actual cost and the realizable net cost. This aids in depicting a precise representation of the institution's actual expenses, encompassing the costs associated with environmental research, development, and training pertinent to the environment.
- 3- Determining environmental costs:** Through the use of IAS 2, firms can delineate and quantify the environmental costs linked to their operations by recognizing the significant environmental factors and assessing their prospective expenses.

**Environmental expenses may encompass the following:**

- Environmental compliance expenditures: encompass expenses associated with adherence to local and international environmental legislation and regulations, including licensing and permit fees, costs of environmental audits, and mandatory environmental reports.
- trash management expenses: encompass expenditures related to the collection, transportation, and treatment of trash.
- pollutants abatement costs encompass the expenses associated with the installation and maintenance of systems and equipment designed to mitigate or diminish pollutants.

- Environmental training expenses: encompass expenditures related to educating staff on the implementation of effective and sustainable environmental practices.
- Clean energy expenses: encompass expenditures related to transitioning to renewable energy sources or clean energy.

**4- Environmental cost analysis:** is a crucial process for comprehending the impact of environmental operations on overhead and ensuring that companies manage resources and operations with ecological efficiency. Upon gathering data and assessing expenses, it is possible to identify regions that incur significant environmental expenditures and subsequently enhance them. This procedure can be encapsulated in the subsequent points:

- **Data collection:** Information pertaining to environmental expenditures, including energy consumption expenses, waste, carbon emissions, and other raw materials, is gathered. This includes all direct and indirect expenses that may impact the environment.
- **Cost analysis:** This involves examining expenditures to identify areas for enhancement and to manage costs effectively by recognizing where spending can be minimized and operational efficiencies can be enhanced.
- **Cost analysis:** At this stage, the acquired data is examined to comprehend the distribution of environmental costs across various operations. The emphasis is on pinpointing areas for enhancement, such as minimizing waste or augmenting energy efficiency, while evaluating strategies to decrease environmental costs and optimize operations.
- **Environmental impact assessment:** By evaluating environmental cost data, the company may determine the effects of its industrial operations on the environment. This entails evaluating resource consumption, waste production, and emissions. This assessment enables educated decisions to enhance environmental performance, including the adoption of less ecologically detrimental technology or modifications to operations to mitigate overall environmental effect.

These procedures assist firms in making sustainable decisions, thereby diminishing environmental costs and enhancing overall environmental performance.

- 1- Promoting sustainable development:** This is regarded as a primary objective for contemporary institutions. By

implementing the second international accounting standard (IAS 2) to manage environmental costs, institutions can attain significant advancements in this domain. The second international accounting standard, centered on inventory management, offers instruments and data that facilitate sustainability by augmenting environmental efficiency and adherence to environmental regulations. The subsequent methods are the most significant in promoting sustainable development through the application of this standard:

- 2- **Enhancing environmental efficiency:** Implementing the standard facilitates the precise identification and analysis of environmental costs, hence aiding organizations in optimizing natural resource utilization and mitigating environmental degradation. For instance, the reduction of raw material waste or the decrease in energy usage during operations can enhance operational sustainability.
- 3- **Fostering green innovation:** The information supplied by the second international accounting standard can incentivize institutions to invest in clean production and sustainable technology. By minimizing environmental expenses, institutions can implement creative solutions that are environmentally benign, thereby improving competitiveness and fostering long-term ecological sustainability.
- 4- **Enhancing transparency and accountability:** The implementation of IAS 2 can augment transparency and accountability in the organization's financial and environmental reporting. This enables investors and stakeholders to gain a transparent understanding of the company's performance regarding sustainability and environmental responsibility, thereby enhancing trust and assurance in the company's dedication to environmental principles.
- 5- **Augmenting corporate social responsibility:** By acknowledging and adeptly managing the environmental costs linked to inventories, firms can bolster their reputation as socially responsible entities. This fosters robust relationships with consumers and local communities, so bolstering stakeholders' faith in the organization's dedication to social and environmental principles.

- 6- **Adherence to environmental regulations:** IAS 2 assists enterprises in ensuring compliance with environmental legislation by offering a definitive structure for monitoring environmental expenditures. Adhering to this compliance can enhance credibility and mitigate regulatory risks associated with environmental performance.
- 7- **Monitoring and Evaluating Results:** Following the implementation of environmental strategies, the standard permits organizations to assess and analyze the long-term effects of their environmental initiatives. This guarantees the attainment of environmental targets and the enhancement of environmental performance over time.
- 8- **Strategic Planning for Sustainable Development:** Organizations may employ environmentally cost analysis within the accounting standards for inventories to strategically devise their sustainability programs. Identifying possibilities to mitigate environmental impact and enhance financial performance can yield sustainable results over the long run. Consequently, IAS 2 facilitates sustainable development by augmenting the environmental and financial performance of businesses, thereby enhancing their capacity to reconcile economic and environmental objectives.

### **Conclusion:**

In conclusion, inventories play a vital role in the stability of commercial and industrial enterprises. The International Accounting Standard 2 (IAS 2) for inventories plays a prominent role in the management and evaluation of inventories by integrating environmental costs into inventory accounts in accordance with the requirements of supporting sustainable development. The application of this standard enables organizations to provide accurate and transparent financial reports, which enhances the confidence of investors and other parties.

Moreover, considering environmental costs provides a comprehensive perspective that encourages innovation, improves transparency and accountability, and stimulates corporate social responsibility, which ultimately leads to achieving economic, environmental and social goals in a balanced and sustainable manner.

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