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Sustainable Asset Management — Requirements

ICS 03.001.01

Resource Management Sectional Committee, MSD 12	Last Date for receipt of Comments is 23 November 2024
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Foreword

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Resource Management Sectional Committee had been approved by the Management and Systems Division Council. This standard specifies the requirements for Sustainable Asset Management

This standard provides requirements on various aspects of sustainable requirements for Asset Management, when applying asset management principles or requirements for an asset management system, especially covering topics concerned with the title of the standard- This is the first time such standards have been attempted by any organization in the country.

The Bureau of Indian Standards (BIS) with the sole directive to formulate National Standards to assess and certify products, systems and services in the country, undertook the responsibility to devise Indian Standard on ‘Sustainable Asset Management- requirements’. BIS further realized the need to make criteria based standards for Sustainable Asset Management, which will act as strengthened framework for organizations to align their Asset Management practices with sustainability requirements.

0.1 Introduction

One of the benefits of asset management is that it promotes responsible resource utilization and sustainable asset management practices. Sustainable Asset Management can be defined as a process of overseeing and managing physical assets in a manner that is both socially and ecologically responsible.

This involves integrating criteria that mainly assesses the environmental, societal and other impacts of organizations with regard to the management of their physical assets and heritage?. The idea is not only to seek financial returns, but also to contribute, in the first instance, to the long-term sustainable development of the organization, as well as the community and the world at large.

0.2 The relationship of the asset management system to asset management

An asset management system is used by the organization to direct, coordinate and control asset management activities. It can provide improved risk control and gives assurance that the asset management objectives will be achieved on a consistent basis. However, not all asset management activities can be formalized through an asset management system. For example, aspects such as leadership, culture, motivation, behaviour, which can have a significant influence on the achievement of asset management objectives, may be managed by the organization using arrangements outside the asset management system. The relationship between key asset management terms is shown in Figure 1.

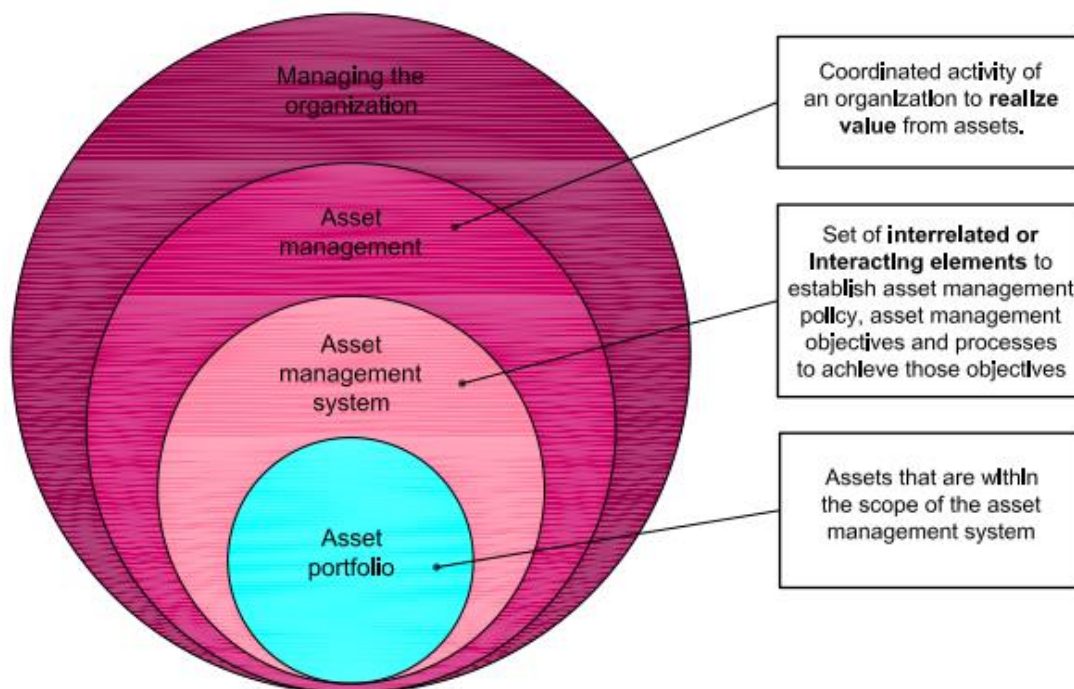


Figure 1 — Relationships between key terms

(Source: IS/ISO 55000: 2014 Clause 2.4.3)

Draft Indian Standard

Sustainable Asset Management — requirements

1 Scope

This standard provides requirements for sustainable asset management by an organization by underlining the importance of sustainability as a focus and benefit of its asset management and utilization of resources in a way that is socially and economical responsible.

The sustainable asset management is for organizations who wish to manage their infrastructure in a sustainable way and has a bearing on environment, society/community and stakeholders.

This document applies to all organizations of all types and sizes regardless of their sectors, industries and activities.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

3.1 The following terms and definitions apply:

3.1.1 Asset

Item, thing or entity that has potential or actual value to an organization.

Notes:

- 1 Value can be tangible or intangible, financial or non-financial, and includes consideration of risks and liabilities. It can be positive or negative at different stages of the asset life.
- 2 Physical assets usually refer to equipment, inventory and properties owned by the organization. Physical assets are the opposite of intangible assets, which are non-physical assets such as leases, brands, digital assets, use rights, licences, intellectual property rights, reputation or agreements.
- 3 A grouping of assets referred to as an asset system could also be considered as an asset.

(Source: ISO 55000:2024, Clause 3.2.1)

3.1.2 Critical asset

Asset having potential to significantly impact on the achievement of the organization's objectives.

Notes:

- 1 Assets can be safety-critical, environment-critical or performance-critical and can relate to legal, regulatory or statutory requirements.

- 2 Critical assets can refer to those assets necessary to provide services to critical customers.
- 3 Asset systems can be distinguished as being critical in a similar manner to individual assets.

(Source: ISO 55000:2024, Clause 3.2.7)

Note: In the context of sustainable asset management, the organization's objectives would include those related to sustainability, CSR etc.

3.1.3 Asset management

Coordinated activity of an organization to realize value from assets.

Notes:

- 1 Realization of value will normally involve a balancing of costs, risks, opportunities and performance benefits.
- 2 Activity can also refer to the application of the elements of the asset management system.
- 3 The term "activity" has a broad meaning and can include, for example, the approach, the planning, the plans and their implementation.

(Source: ISO 55000:2024, Clause 3.3.1)

3.1.4 Asset management systems

Management system for asset management whose function is to establish the asset management policy and asset management objectives.

Note – The asset management system is a subset of asset management.

(Source: ISO 55000:2024, Clause 3.4.3)

3.1.5 Sustainable asset management

The process of overseeing, maintaining and managing physical assets (such as machinery and infrastructure) in a manner that is both socially and ecologically responsible.

4 Organization

4.1 With respect to sustainable asset management, the organization shall specify

- i) the organizational policy, strategy, objectives, and goals;
- ii) how the sustainability objectives are linked/aligned to business objectives
- iii) how the organization creates value for its stakeholders;
- iv) long-term environmental and social sustainability;
- v) how sustainable asset management contributes to achieving the environmental and social sustainability and business objectives
- vi) consideration of the organization's financial viability of assets;
- vii) how to balance the needs of the organization with those of stakeholders.

The organization shall establish relationship between sustainable asset management, asset management and sustainability by interacting with various players like stakeholders (internal and external), environmental agents and the society/community.

4.2 Climate change

The organization shall commit itself to climate change policy, align its sustainable asset management to the policy, and shall employ assets to support such policy and provide necessary assets / resources to implement it. The organization shall:

- i) communicate the importance of mitigation of adverse impact of climate change among its stakeholders
- ii) integrate the processes and policies to mitigate climate change in organization's business processes and asset management.

It is not clear here why Climate Change has been specifically included in this Document and at this place of the document. Few other such items could be "circularity/circular economy concept in asset management, de-carbonization of asset management activities.

Climate Action is one of the goals of sustainable development. There are few other relevant items like "Responsible Utilization/Consumption of Resources", Climate Change would be one of the sustainability related business objectives in an organization.

To be discussed

4.3 Leadership

Top management shall:

- i) define and implement sustainable asset management policy and objectives (see 6.1);
- ii) define its roles and responsibilities for effective sustainable asset management;
- iii) regularly review results of effective sustainable asset management;
- iv) enhance collaboration among stakeholders involved with sustainable asset management.

Note – Top management refers to the person, or group of people, that directs, controls and makes decisions at the highest level.

There would be other aspects of top leadership in this area like alignment, processes, resources outcomes, continual improvement, risk management etc.

4.4 Policy and objectives

The organization shall integrate its sustainable asset management approach into its asset management policies, strategies and plans. The organization shall align its environmental, social and economic goals and objectives its sustainable asset management, and specify how

those objectives would be met. Organization should explore whether its mission, vision and goals are aligned with sustainable asset management. The organization should strive to accomplish environmental, social and economic goals in order to attain sustainability. The organization shall ensure that it has formulated goals to maintain and improve sustainable asset management.-

The organization shall ensure that:

- i) it regularly assesses the performance of its strategic asset management so that its sustainable development objectives are met
- ii) the sustainable asset program is aligned with its business strategy

4.5 Sustainable asset management program

The organization shall manage its processes effectively and efficiently for an asset's life cycle in a way that is both economically, environmentally and safe. For this, the organization shall put in place an asset management program, which includes the following:

- i) **asset discovery and inventory** – While making an inventory, the organization shall shortlist those assets which have long life with positive impact on sustainability goals and such assets shall be employed for their use.
- ii) **asset optimization** – After making an effective inventory, the organization shall optimize the inventory for the value of the assets and shall ensure that they are retired, replaced, or disposed of in environmentally friendly way after their value for the organization is suboptimal, or useful life is expired. Organization shall consider to improve to prolong the useful life- reuse, refurbish. remanufacture, recycle the asset and its components.

Note: The value of the assets here does not refer to the cost of the asset, but its utilization during its life cycle.

iii) asset lifecycle management – After inventorying and optimizing, the organization shall implement an asset lifecycle management process wherein it shall acquire the assets that are environmentally friendly and energy efficient (**Acquisition**). The assets shall be used/operated in sustainable way (**Deployment**) and maintained and improved regularly so that they can be used in optimal way (**Maintenance**). After suboptimal value delivery to the organization and/or expiry of its useful life, the asset shall be disposed of in environmentally friendly way (**Retirement**)- Organization shall consider circular approach acquisition, maintenance and retirement of assets.

5 Impacts, risk and opportunities

5.1 The organization shall describe its policies that address the management of its material impacts on its sustainable asset management, as well as associated material risks and opportunities. The organization shall disclose its general process for asset management and its actual and potential material impacts on its operations. The processes shall provide for remediation of negative impacts, as well as opportunities arising from positive impacts.

The approach to mitigate material risks and pursuing material opportunities and effectiveness of organization's actions shall be disclosed. The organization's approach shall be concentrated around sustainable asset management

5.2 Impact due to strategic assets

The organization shall identify strategic assets.

The organization shall evaluate impact of a strategic asset that have a direct and significant impact on organizational outcomes and competitive advantage, including asset(s) that have the greatest impact and influence on either creating or damaging business value. Specific objectives shall be established for quantifying the impact of strategic assets, including relevant risk and opportunity parameters, and the percentage share that the identified strategic assets contribute to total business value.

5.3 Impacts, risks and opportunities due to utilization targets of assets

The organization shall further disclose the time bound and outcome oriented utilization targets of assets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities. The approach for managing risks in strategic asset management shall be aligned with the organization's approach for managing risk at all levels.

6 Sustainable asset management

6.1 Asset management policy

The organization shall define and implement sustainable asset management policy. The policy may include instructions for purchasing, deploying, maintaining and retiring assets focused on sustainability, circularity. The policy may also guarantee that the assets are operated, maintained and improved sustainably;

6.2 Regular inventories and audit

The organization shall perform regular inventories and audits of its assets and asset management system. A plan for such inventories and audits shall be made. This will help in tracking each asset's state for its best usage and ensure that it is refurbished, replaced, repurposed, or disposed of (remanufactured, recycled) at end of its useful life.

6.3 Automation technology

Organization may consider implementation of automation solutions for enablement of asset management process. This will help in identification and tracking of assets and also will ensure compliance with asset licensing process, if applicable (also see 9).

6.4 Sustainable practices

The organization shall follow sustainable practices in designing, engineering, construction, procurement and usage of assets. Organization shall integrate sustainable practices into its procurement (e.g. green profiling of vendors and contractors), shall procure environmentally

friendly and use other sustainability factors, like star rating, recycling the spare parts. into its processes.

6.5 Retirement process

Organization shall use environmentally friendly way to retire its assets after their life end. Use of regulatory compliance shall be ensured while repurposing, remanufacturing or recycling of parts in the disposing the assets.

7 Stakeholders-

7.1 The organization shall describe its approach to engaging with stakeholders, including:

- i) the categories of stakeholders it engages with, and how they are identified
- ii) the purpose of the stakeholder engagement
- iii) how the organization seeks to ensure meaningful engagement with stakeholders.

7.2 The organization shall commence stakeholder engagement at the earliest stage of asset management and sustain this engagement throughout the asset's life cycle, including significant developmental phases. The organization shall:

- i) ensure that the extent and duration of engagement will align with the nature, scale, and potential risks and impacts associated with the asset;
- ii) ensure that stakeholder engagement will be conducted in a manner that ensures safety, transparency and easy accessibility for stakeholders.

7.3 The Organization shall disclose how the interests and views of its stakeholders are taken into account by the organization's strategy and business model to fulfil sustainable asset management.

8 Society/Community

8.1 The organization's sustainable asset management shall interact with social expectations and responsibility. The asset management framework should involve a sociological perspective, connecting organization's asset management, strategic policies and society. The organization shall consider the views of the communities affected through its actions on assets while deciding its strategy and business model.

The organization shall disclose the information regarding its asset's significant actual and potential negative impacts on local communities, including the location of the assets and the significant actual and negative impacts of assets.

8.2 The organization shall disclose its approaches and actions to mitigate material risks and pursuing material opportunities related to affected communities and effectiveness of those approaches and actions.

The organization shall also understand processes involving assets through which it works to prevent, mitigate and remediate the negative material impact and seek to achieve positive material impacts for affected communities. The organization shall further declare how it tracks and assess the effectiveness of its actions, programmes and investments for intended outcomes for affected communities.

9 Information technology integration

The organization shall integrate information technology(IT) into asset management practices and processes.

The organization shall use automation technology for the integration of corporate sustainability management into asset management by adopting sustainable and environmental friendly assets. Organization shall:

- i) enhance the effectiveness of sustainable asset management processes,
- ii) use automation for data security that contributes to environment sustainability,
- iii) use automation solutions that assist in streamlining and improving asset management processes.