IS/ISO 14007: 2019

Environmental Management Systems — Guidelines for Determining Environmental Costs and Benefits

Growing economic consequences regarding climate change impacts (in addition to mitigation and adaption measures), concerns about the global depletion of natural resources and the loss of functioning ecosystems are resulting in many challenges for organizations and society as a whole. Dependencies on natural capital (e.g. water, soil fertility, habitats, landscapes) on the one hand and the impact on the environment on the other hand are important issues for organizations and their interested parties in terms of strategic, operational or financial consequences along the whole value chain. There is a need for guidance on practical methods on how to assess and evaluate the economic consequences of environmental actions. Determining environmental costs and environmental benefits will help organizations to manage environment-related risks and opportunities.

Environmental costs are any costs related to the environment, which can result from, for example, the loss of natural capital that companies are dependent on, impacts on human health and the environment or environmental legislation-related compliance costs. Environmental benefits are any benefits related to the environment, which can result from, for example, natural resources used within products or the production processes of a given organization, including their value chain.

Understanding its environmental costs and benefits allows an organization to link environmental impacts and dependencies to its decision-making processes. This can create a better understanding of issues, such as the financial implications related to the environmental aspects of a site, the organization as a whole, or the organization's supply or value chain. It can improve operational performance, risk management, investment decisions and corporate communications. Using this document to determine environmental costs and benefits can help an organization to manage its environmental dependencies and to mitigate its environmental impacts. It will also help to align an organization's activities with national and international environmental goals or agreements.

This document provides organizations with guidance on determining and documenting environmental costs and benefits in a comprehensive and transparent way, either quantified in monetary or non- monetary terms, or described qualitatively. Assessments of the environmental costs and benefits can be carried out either ex-ante or ex-post. Guidance is provided to help organizations to disclose and exchange relevant information.

If organizations wish to assess environmental costs and benefits in monetary terms, the economic valuation methods in this document only capture changes that affect human wellbeing (utility), i.e. it takes a so-called "anthropocentric perspective", including their concern for, and dependence on, nature and ecosystem services. This includes use and non-use values as reflected in the concept of total economic value.

This document is intended for all sizes of organizations and all sectors. It can be applied to private or listed enterprises, organizations that are held by the public or are a public service unit, those that have a role as a large global actor or a small and medium-sized enterprise.

IS 398 (Part 2): 2025

Aluminium Conductor for Overhead Transmission Purposes — Specification Part 2 Aluminium Conductors Galvanized Steel Reinforced (Fourth Revision)

IS 398 (Part 2) for ACSR conductors was published in 1953 and the first revision was brought out in 1961. The second revision of IS 398 (Part 2) was brought out in 1976 and third revision in 1996. IS 398 (Part 5) for ACSR conductors for voltage 400 kV and above was first published in 1982 and its revision was published in 1992. At that time of first publication of IS 398 (Part 5), the development of EHV network was envisaged at 400 kV a.c. only. For this system after detailed techno-economic studies by CEA 54/3.53 mm Al + 7/3.53 mm steel conductor in the form of horizontal twin conductor bundle with a sub conductor spacing of 450 mm was identified as the most suitable conductor. However, with the expansion of Indian transmission network comprising of 400 kV +/- 500 kV HVDC, 765 kV and +/- 800 kV HVDC lines and introduction of new voltage levels such as +/- 320 kV HVDC and +/- 350 kV HVDC use of various sizes of ACSR conductors in the country has been burgeoning significantly.

Further, due to high capacity requirements in several instances, use of higher size of CSR conductor has not been restricted to higher voltage levels and the same are also being used for lower voltage transmission lines on case-to-case basis. Also, with better mechanization, improved modern-day conductor manufacturing technologies and greater focus on quality, ACSR conductor for even lower voltage transmission lines are able to match the tolerance requirements and other quality parameters of conductors for 400 kV and above voltage level conductors. Hence in this revision of IS 398 (Part 2), the existing provisions of IS 398 (Part 2) and IS 398 (Part 5) have been merged together into a common part that is, revised IS 398 (Part 2). With this merger apart from the three sizes of conductor specified earlier in IS 398 (Part 5), this revision now includes even the smaller sizes of ACSR conductor that are used for transmission lines in the country. It is, however, not intended to restrict the standard to the parameters of these conductors only and requirements for any other conductors for the purpose of overhead transmission lines, will be added later as and when the need arises.

The stress-strain test has been removed from the standard, as it was primarily conducted to gather final modulus of elasticity data, which is now readily available with suppliers and manufacturers.