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A cross-sectional analysis of reported corporate environmental sustainability practices.

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Abstract
The concept of sustainability evolved throughout the 1970s and 1980s, but was formally described by the 27 principles of the Rio Declaration on Environment and Development in 1992. Despite the passage of nearly 20 years, to date there are no uniform set of federal rules, regulations, or guidelines specifically governing the environmental aspects of sustainability practices or related requirements in the United States. In this benchmark analysis, we have collected information on the sustainability programs of the five largest US companies in each of the 26 industrial sectors [based on the Forbes Global 2000 through 2009 (n = 130)]. For each company, we reviewed the most recent corporate sustainability, citizenship, or responsibility report, limiting our scope to environmental components, if available. Ten criteria were identified and analyzed, including leadership, reporting, external review, certification, and individual components of environmental sustainability programs. With respect to the prevalence of sustainability components between various business sectors, we found that the Drugs and Biotechnology (87%), Household and Personal Products (87%) and Oil and Gas Operations (87%) industries had the most comprehensive environmental sustainability programs. Using the nine components of environmental sustainability as a benchmark, we identified four key components as the characteristics of the most comprehensive environmental sustainability programs. These were (1) empowering leadership with a commitment to sustainability (80%), (2) standardized reporting (87%), (3) third-party evaluation of the sustainability programs (73%), and (4) obtaining ISO 14001 certification (73%). We found that many firms shaped their own definition of sustainability and developed their associated sustainability programs based on their sector, stakeholder interests, products or services, and business model. We noted an emerging area that we have called product sustainability – one in which toxicologists and environmental scientists can play a vital role helping to ensure that a manufactured item will indeed be considered acceptable for distribution now, as well as in the coming years. Numerous examples or case studies are presented.

Keywords: Environmental sustainability; Product stewardship; Life-cycle assessment; Energy management; Resource conservation; Greenhouse gas (GHG); Sustainability reporting