



Highlights of [GAO-05-52](#), a report to congressional requesters

Why GAO Did This Study

Environmental indicator sets assemble quantitative measures of conditions and trends (known as indicators) to assess the state of the environment and natural resources and to gauge progress toward specific goals. Such sets are now being developed to bridge the gap between needed and available information and to prioritize further data collection. The widespread development and use of environmental indicator sets has led federal and nonfederal entities to consider the benefits such sets provide when measuring performance and improving oversight of environmental programs. In this context, GAO was asked to identify (1) the purposes for which federal and nonfederal organizations are developing and using environmental indicator sets, and how they are being used; and (2) the major challenges facing the development and use of environmental indicator sets.

What GAO Recommends

GAO recommends that the Chair of CEQ develop institutional arrangements needed to ensure a concerted, systematic, and stable approach to the development, coordination, and integration of environmental indicator sets. Moreover, GAO recommends that the EPA Administrator establish clear lines of responsibility and accountability and identify specific requirements for developing and using indicators. CEQ and EPA generally agreed with GAO's recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-05-52.

To view the full product, including the scope and methodology, click on the link above. For more information, contact John B. Stephenson at (202) 512-6225 or stephensonj@gao.gov.

ENVIRONMENTAL INDICATORS

Better Coordination Is Needed to Develop Environmental Indicator Sets That Inform Decisions

What GAO Found

GAO identified the purposes for developing environmental indicator sets and major challenges facing their development and use to inform decisions by interviewing key experts, surveying developers and users, and studying eight major indicator sets. GAO found that federal and nonfederal organizations develop environmental indicator sets for several purposes, including assessing conditions and trends, communicating complex issues, and supporting performance management activities. Some environmental indicator sets are limited to use within specific political jurisdictional boundaries, while others are confined to specific natural areas, such as watersheds, lake basins, or ecosystems. Similarly, some sets address specific resources, such as water quality or land use, while others focus on quality of life issues or sustainable development. The indicator sets GAO reviewed are primarily used to assist in strategic planning efforts, communicate complex environmental issues, and track progress toward environmental goals.

Environmental indicator set developers, both federal and nonfederal, commonly face several major challenges. Such challenges include ensuring that a sound, balanced process is used to develop indicators, which can require a resource-intensive effort to address the needs of potential users. Similarly, obtaining sufficient data on environmental conditions and trends and their causes is particularly problematic. Another key challenge in developing useful environmental indicator sets involves coordinating and integrating the various related federal and other indicator sets in order to advance knowledge about the environment. In this regard, the efforts of the Council on Environmental Quality's (CEQ) Interagency Working Group on Indicator Coordination are promising, but they lack the long-term, stable institutional arrangements needed to ensure continued guidance and coordination of federal activity in this area. Moreover, indicator sets designed to link management activities, environmental and natural resource conditions and trends, and human and ecological health have difficulty because many such relationships are not well understood. To that end, the Environmental Protection Agency's (EPA) continuing work to develop indicators to assist the agency's efforts to manage for results highlights this challenge. While EPA has made progress, its efforts to better understand such relationships over many years have been hampered not only by technical difficulties in establishing linkages between program activities and changes in the environment, but also by changes in leadership within the agency and the absence of a systematic approach, including clear expectations, milestones, and designated resources. Such institutional arrangements would enable the agency's senior management, Congress, and other stakeholders to monitor and assist EPA's efforts toward a complete and periodically updated *Report on the Environment*.