SEMARNAT Protects Natural Resources with Data Integration and National Reporting

ONE

source for all environmental data

Challenge

In the past, most of Mexico's Secretariat of Environment and Natural Resources (SEMARNAT) analytics efforts were performed manually. The agency used print publications to disseminate relevant environmental information. This was a cumbersome process. After realizing that a solid business intelligence (BI) and analytics platform was the best way to manage statistical information, SEMARNAT chose ibi™ solutions.

"During the evaluation, ibi stood out as the best-suited platform for our project, as it enabled us to change how we manage information to better support environmental protection, restoration, and conservation within a sustainable development framework," says Georgina Alcantar, director at SEMARNAT.

"The flexibility of ibi allowed us to undertake larger future development and to enable our system to continue growing," Alcantar says. "The platform reduces reporting times, delivers complex analysis, and above all, shares these results with intranet, extranet, and Internet users."

Transformation

Internally-generated information is one of the main products delivered by the agency through its National System of Environmental and Natural Resources Information (SNIARN). "This project focused on the integration, management, and dissemination of statistical data on the country's natural resources and environmental status," Alcantar says.

SEMARNAT

Mexico's environment ministry, SEMARNAT, is charged with protecting, restoring, and conserving the country's ecosystems, natural resources, assets, and environmental services. Its goal is fostering sustainable development and keeping Mexico's citizens informed on matters concerning the environment and natural resources.

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The system's ability to easily locate and visualize information supports the formulation of strategies and programs aimed at conserving biodiversity, protecting the environment and natural resources, and promoting sustainable development. "ibi's web-based tools that make up SNIARN help keep the public informed regarding the state of the environment and natural resources," Alcantar adds.

SNIARN encompasses databases, equipment, personnel, programs, and procedures—all aimed at collecting, organizing, and disseminating environmental and natural resource information. The system combines information derived from natural resource inventories, ecological land-use planning, and programs designed to preserve ecological balance and protect the environment. SNIARN also includes scientific, academic, and technical reports, as well as documents on the country's environmental and natural resource preservation efforts.

"Thanks to SNIARN's reports on actual environmental conditions, SEMARNAT has answered the growing demand for information on Mexico's environmental situation, as well as on improvement and conservation actions undertaken," Alcantar says. "ibi is a major contributor to this success."

Benefits

SEMARNAT recently used its new platform to build the National System of Environmental Indicators (SNIA), one of the core components of SNIARN. Through a series of indicators, SNIA offers a brief but clear vision of the current situation and changes in the country's environment and natural resources. It also provides insight into the challenges affecting them and the institutional response related to their conservation, recovery, and sustainability.

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Another project developed during this period enabled advanced users, such as academic institutions, consulting firms, and federal and local entities, to issue dynamic ad hoc queries of the National System of Environmental Information and Natural Resources' statistical database. The technology powering this database allows for information from various sources to be accessed, integrated, purged, processed, and analyzed all within an optimal response time.

According to Alcantar, "Information is structured in levels of detail, based on the needs of each user. Once the information has been consolidated and evaluated by the departments in which it originated, the system ensures it is always updated." In addition, access to historical data is available, enabling users to perform pattern or comparative analysis.

SEMARNAT plans for future milestones including enabling citizens and key users inside the Secretariat to access available information from their mobile devices, use of active PDFs, and integration of both statistical and geographic databases, allowing users to exploit information from maps, and create new maps based on this information. "These projects have been made possible by ibi's technologies," Alcantar concludes.

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