

NASA’s Science Discovery Engine: Enabling Interdisciplinary Open Science

Goal

NASA is currently implementing capabilities to enable open science access. The Science Discovery Engine (SDE) is a major endeavor in this effort. The SDE supports discovery and access to complex, heterogeneous science data and information across science topical areas.

How does it work?

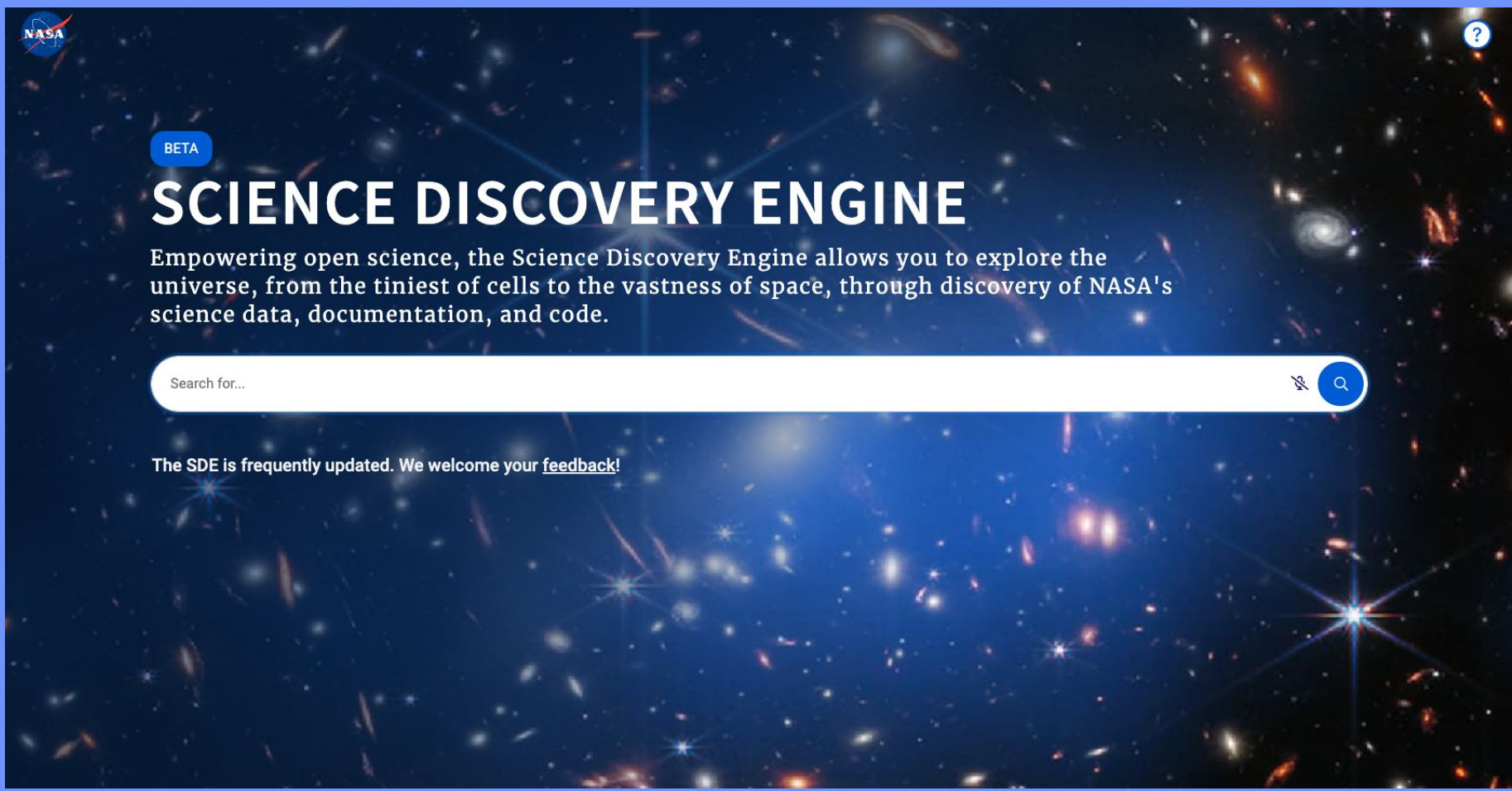
The SDE uses state-of-the-art search technology, often called Insight Engines, to power searches. Insight Engines apply relevancy methods to describe, discover, organize and analyze data. Content is brought in using connectors that index both structured and unstructured content.

The SDE team has built a number of workflows and customizations to make scientific searches effective. These customizations include:

- Leveraged scientific expertise
- Targeted content curation workflows
- Customized front end
- Natural Language Processing techniques

The Science Discovery Engine enables use and reuse of NASA’s open science data and information.

NASA’s Science Mission Directorate (SMD) organizes its work into five broad scientific pursuits: Earth Science, Planetary Science, Heliophysics, Astrophysics, and Biological and Physical Sciences. Data from SMD is made freely and openly available to accelerate the time to actionable science.



Discover NASA’s open science data with the Science Discovery Engine.

Learn More!

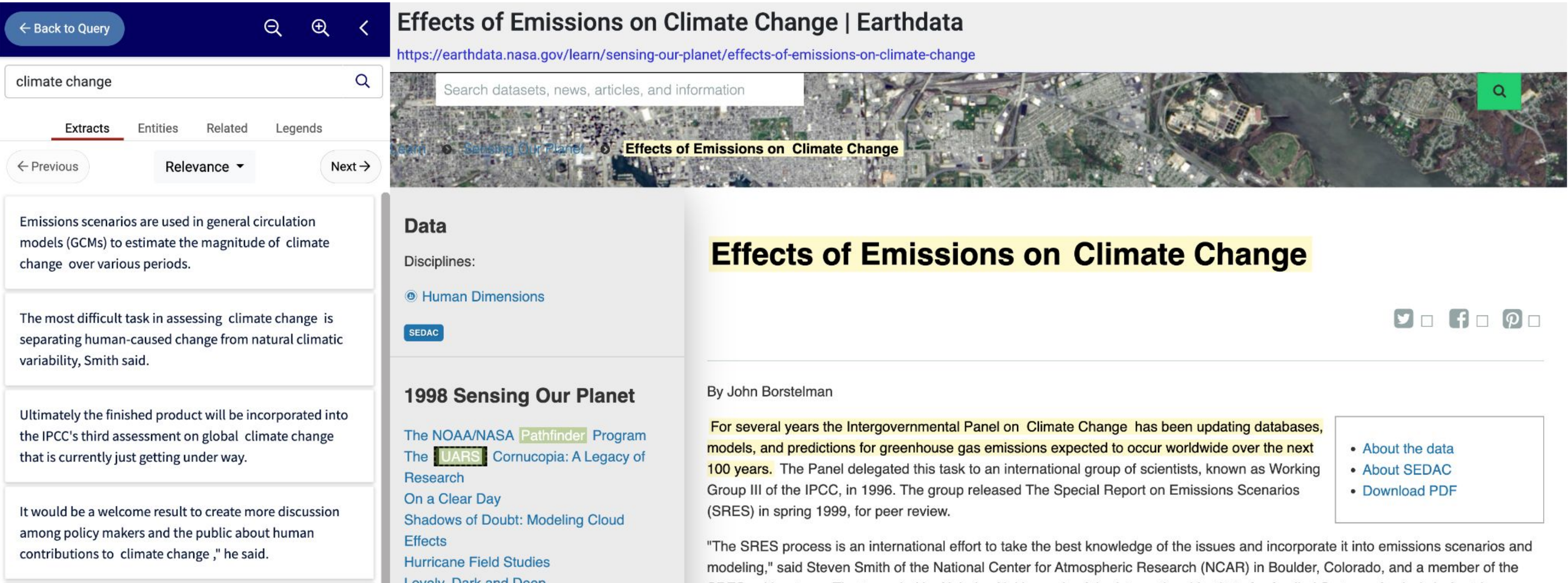
What is available in the SDE?

The SDE enables discovery of scientific or technically relevant information that can be stored digitally and accessed electronically. This includes metadata from over 84,000 datasets and over 700,000 documents including algorithms, software, technical reports, and any ancillary information or work product related to a mission or campaign. Data and information from all five scientific areas are available in the SDE, and new content is continually added as it is identified.

The SDE also integrates key science terms to make discovering content easier. These terms include platforms, instruments and mission to allow for faceted search.

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Science Discovery Engine HIGHLIGHTS

