Create.
Develop.
Analyze.

ENVI®

Extract Timely, Reliable, and Accurate Information from Geospatial Data.

ENVI is the industry standard image processing and analysis software. It is used by image analysts, GIS professionals, and scientists to make critical decisions and solve difficult problems with confidence.

Analytics. Insights. Answers You Can Trust.

ENVI uses scientifically proven analytics to deliver expert-level results. Businesses and organizations choose ENVI geospatial software because it integrates with existing workflows, supports today's most popular sensors, and can easily be customized to meet unique project requirements.

Industry Standard

Since its launch in 1991, ENVI has remained on the cutting-edge of innovation, is scientifically proven, easy to use, and offers the best image processing and analysis tools available.

Trusted Results

Organizations trust ENVI's patented algorithms to accurately and reliably extract meaningful information from all types of geospatial imagery and data such as hyperspectral, multispectral, thermal, LiDAR, and SAR.

Complete Solution

ENVI's suite of tools enable users to pre-process, process, and analyze data and imagery in one software package, saving time and money.

From Data and Imagery to Insights and Answers

Read and Analyze Different Data Formats

ENVI supports over 70 data formats including scientific formats such as HDF and CDF and image types like GeoTIFF, and additionally provides JITC-compliant NITF support. And, ENVI delivers enterprise capabilities that provide you quick and easy access to imagery from OGC and JPIP compliant servers within your organization or over the internet.

Fuse Multiple Data Modalities

Use ENVI to fuse radar, LiDAR, SAR, optical, hyperspectral, multispectral, stereo, thermal, and/or acoustic data to exploit the strengths of each sensor and create rich geospatial products for informed decision making.

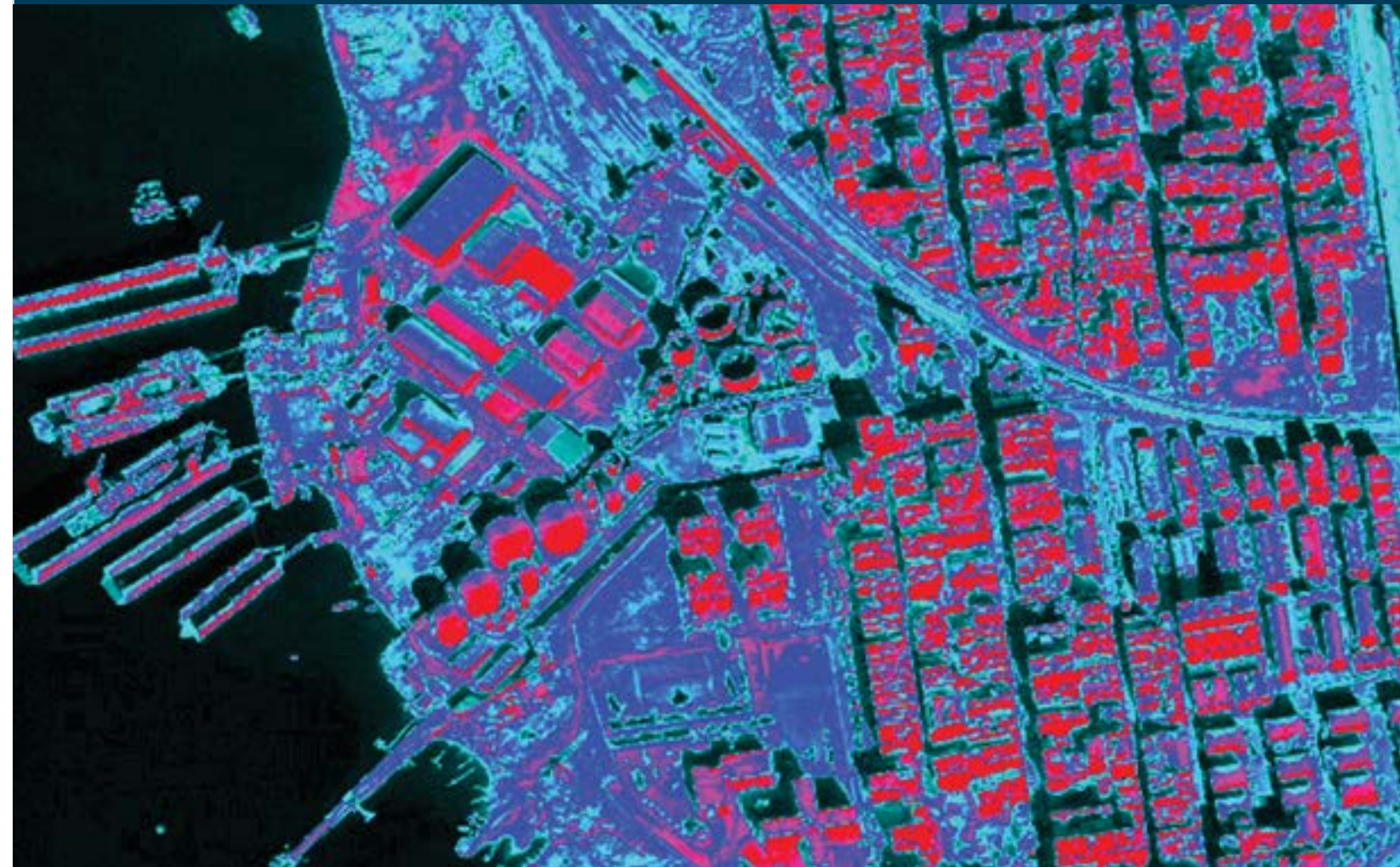### Exploit Information From Different Sensor Types

ENVI supports imagery gathered from the newest and most popular satellite and airborne sensors including panchromatic, multispectral, hyperspectral, radar, thermal, HDF5, full motion video, Net CDF-4, and LiDAR. These sensors include ASTER, AVIRIS, AVHRR, Landsat 8, NPP VIIRS, Pleiades, QuickBird, RADARSAT, SkySat-1, SPOT, TMS, USGS DEM data, WorldView-3, and more.
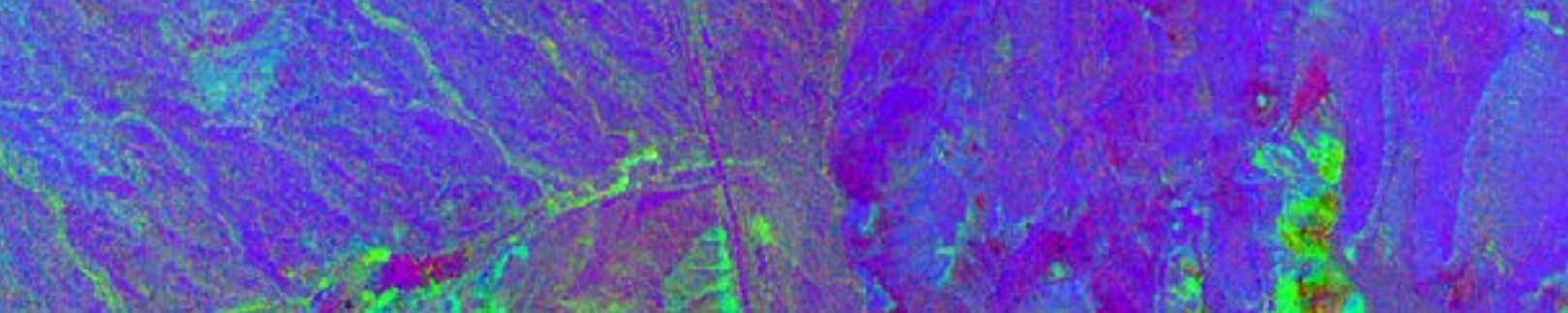
Easily Process Large Data Sets

ENVI works with any size data set and has automated tools to quickly and easily prepare big and small imagery for viewing or further analysis.

"We have found that analyzing remotely sensed imagery using ENVI provides us with the best prospects for success."

-Dr. Wasit Wulamu, Saint Louis University

Customize ENVI to Meet Your Unique Needs

ENVI is written in IDL®, a powerful development language that provides the ability to extend or customize ENVI features and functionality to fit image analysis requirements and specific project needs. Through customization, it is possible to add image analysis capabilities to existing tools and models, combine multiple tools that include image analysis functionality, and create new custom image analysis tools based on desired outcomes. ENVI also provides the option to string together discrete pieces of analytic functionality and create custom workflows that can be enabled within a cloud environment.

The Leader in Advanced Analysis Tools

Spectral Analysis

ENVI is the definitive leader in spectral image processing with tools that rely on established, scientific mapping methods to perform spectral analysis – using pixel responses at different wavelengths to obtain information about the materials within each pixel. These tools detect targets, calculate vegetation and forest health, map materials of interest, and much more.

Data Analysis

ENVI's comprehensive suite of data analysis tools use proven algorithms to quickly, easily, and accurately discern information about an image, such as generate image statistics, measure features, and model topographic characteristics.

Advanced Image Analysis Tools

With ENVI software, highly specialized tasks from rigorous orthorectification and feature extraction, to atmospheric correction and DEM extraction, can all be accomplished using one software package, saving you time and money.

Using ENVI Modeler, it is now easy to perform batch processing or effortlessly create custom image processing workflows without having to write a single line of code.

Automated Workflows to Get Answers – Fast

ANOMALY DETECTION Search an image for statistical and spectral distinctions from the background landscape	**CHANGE DETECTION** Look for areas of change by comparing two images from different dates using band ratio or feature index techniques
CLASSIFICATION Classify terrain automatically or with user-defined specifications	**THEMATIC CHANGE** Perform change detection between two classification results
FEATURE EXTRACTION Find objects of interest using parameters based on spatial, spectral, and textural characteristics	**RPC ORTHORECTIFICATION** Correct imagery to account for terrain and sensor distortion
IMAGE REGISTRATION Improve the georeferencing of an image by tying it to an accurate base map	**VIEWSHED ANALYSIS** Perform a line of site analysis
MULTISPECTRAL A set of automated workflows designed to take advantage of multispectral imagery	**HYPERSPECTRAL** A set of automated workflows designed to take advantage of hyperspectral imagery

Access ENVI Where and When You Need It

Proven for Desktop

ENVI provides a complete suite of processing and analysis tools and workflows.

ENVI for the Enterprise

Deploying ENVI image and data analytic capabilities within an enterprise environment takes advantage of existing investments in server and enterprise technology and enables the use of lightweight browser-based clients and applications to access ENVI analytics.
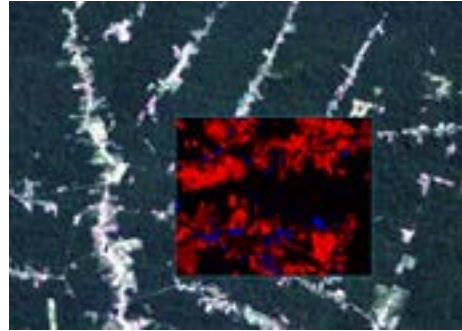
ENVI in the Cloud

Using a convenient subscription model, ENVI in the Cloud offers the full desktop experience of ENVI and IDL through a web browser.
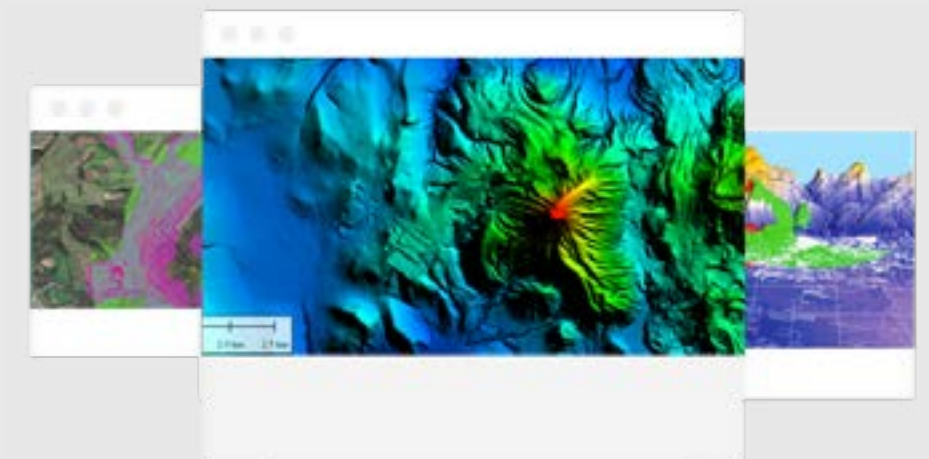
Integration with Geospatial Workflows

ENVI seamlessly integrates with existing tools, offering you the ability to customize its features and functionality to fit your image analysis and geospatial workflow, update a GIS with valuable information from imagery, and collaborate and share results with others.

ENVI's analytics can be accessed in the ArcGIS interface, making it easy to implement advanced processing techniques on the desktop or in the enterprise. Additionally, there are automated workflows exposed out of the box in ArcGIS that deliver expert-level results regardless of image analysis experience. Users also have access to fully integrated preconfigured templates for ArcMap or ArcGIS Pro that are ready to run out of the box, along with the ability to share results via ArcGIS Online.

Benefits:

- One solution that works with all your data types
- A complete suite of processing and analysis tools and workflows
- Customizable to meet your project needs

This image previews ENVI change detection results. Using two Landsat images taken at different times, ENVI automatically identified deforested areas (in red). The blue areas indicate new growth or planting.
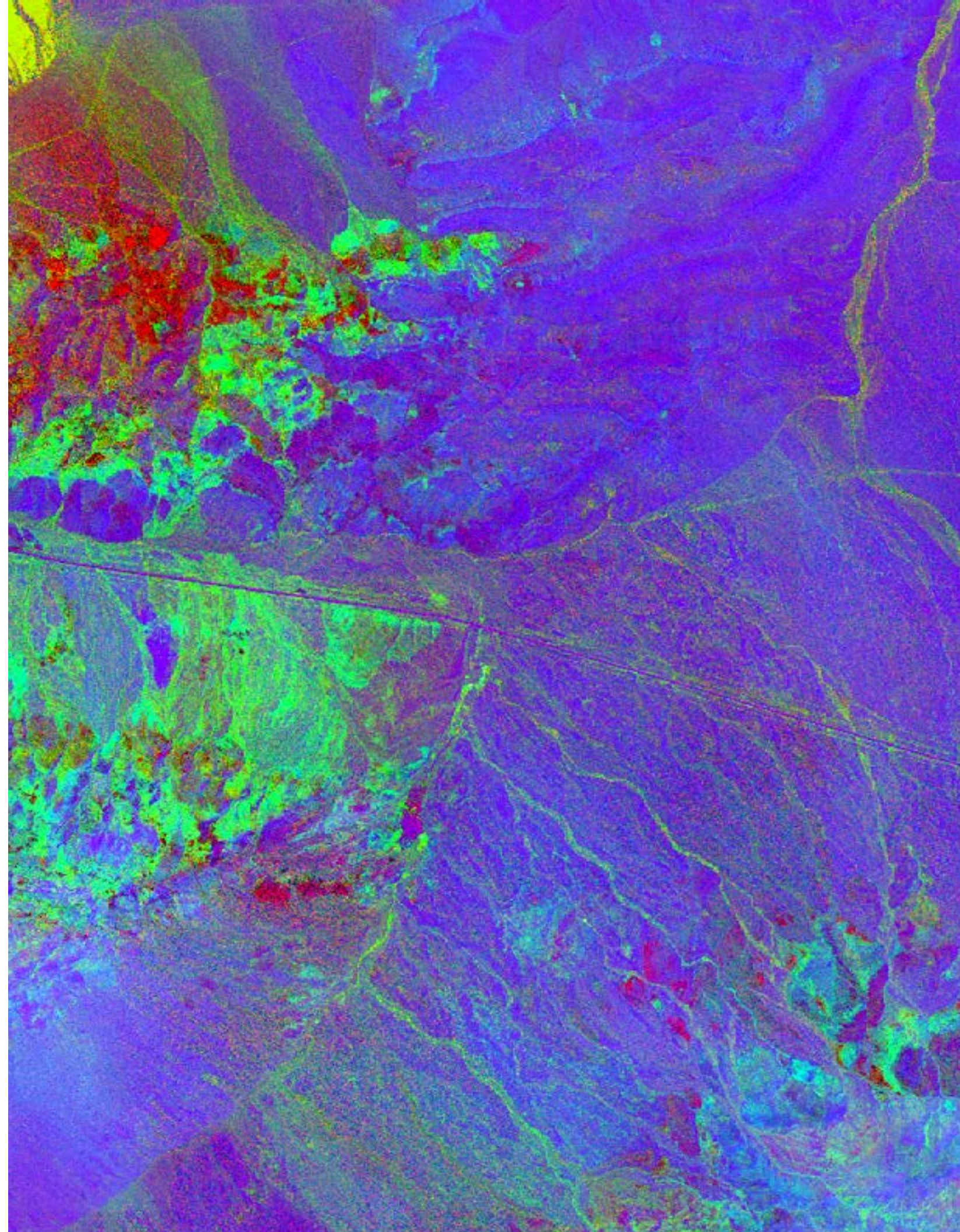

When the workflow is complete, the results are output as a vector file, which can be used in both ENVI and ArcGIS for further analysis and to create an output map.

With ENVI, it is easy to share maps, reports, presentations, and other geospatial products in virtually any environment. Information extracted from imagery with ENVI can be saved directly to a local file, a geodatabase, or to another server environment as image files, shape file, or Microsoft® PowerPoint® files.

ENVI is the industry standard in image science. Users rely on ENVI because it is scientifically proven, easy to use, and offers the best image processing and analysis tools to solve difficult problems with confidence.

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