

While it may be nearing the end of its ten-year fuel supply, NASA's Landsat 8 still has lots to show us. With the help of a visual creative, this satellite is capturing images of Earth worthy of an art exhibit

## AN ARTIST'S EYE IN THE SKY

Satellite imagery is used for everything from tracking weather to measuring urban growth. Now it's also being harnessed to make art. This is exactly what British-born, BAFTA-nominated filmmaker, architect, and visual artist Richard John Seymour has done with *Landsat Works*, an award-winning series of artworks featuring data from the Landsat 8 satellite.

Launched into space in February 2013 and jointly managed by NASA and the United States Geological Survey (USGS), Landsat 8 collects high-resolution imagery of the Earth's surface for a number of scientific and industrial applications, including agriculture, hydrology, and forestry.

It has two sensors that capture nine different wavelengths of light, ranging from UV to infrared. While most of Land-



sat 8's data is displayed in the visible spectrum (i.e. what we can see), it also maps vital non-visible information that, when rendered using special imaging techniques, can reveal geological properties, such as hidden mineral deposits.

During the recent Covid-19 lockdowns, Seymour spent months poring over Landsat 8's images of some of the world's most remote locales (including north-west Australia, Namibia, Northern Chad, and South Sudan), which are publicly accessible via an archival tool on the USGS website. Then, by stitching together multiple photos and harnessing false-color image processing techniques—which help enhance features and textures that would otherwise be invisible to the naked eye—he reimagined black-and-white satellite data as brightly hued works of art.

“What's nice about *Landsat Works* compared with my previous projects is that it's a process of discovery. When I downloaded the raw images from the USGS website and combined them into the different RGB channels in Photoshop, I almost had no idea what to expect,” Seymour explains. “For me, the most fascinating thing about these almost

Romantic or Expressionist images is that they are also scientific documents that can be used to understand more about the geology of a place.”

On one hand, these expansive artworks shine a spotlight on the role of surveillance in society today, as well as the omni-



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Landsat 8 orbits 705 km above the Earth, and captures in excess of 700 scenes per day.

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 Besides Landsat 8, Earth is surrounded by many planet-facing observing satellites.



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 Landsat 8 captured this image of the Namib Sand Sea, where it meets the Kuiseb River.



presence of the technological gaze. After all, as Seymour observes, satellite imagery is “a technological way of looking at the world that helps us to understand it”.

However, as with many of Seymour’s previous projects, *Landsat Works* also celebrates the sheer beauty of nature—and the urgent need to preserve it at all costs. The false-color image processing techniques that Seymour used were actually co-opted from the mineral prospecting industry—and, in this vein, *Landsat Works* highlights how surveillance technology is often harnessed to manipulate and exploit the environment.

“With *Landsat Works*, it’s about first revealing this invisible layer of information that technology can tell us about our planet, and then grabbing people’s attention and intriguing them with these brightly colored tapestries,” Seymour says. “Thereafter, hopefully they’ll understand the increasing role that technology plays in our environment, and the positive and negative implications of that.”  
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