

Distribution of Landsat Images for Monitoring Environmental Changes

For most of the world's population, the first-ever look at the entire planet -- a color photograph taken in 1968 from Apollo 8 on the first manned flight to the moon -- provided realization of the potential power of images from space. This single image so seized the public's imagination and so concentrated a developing international concern that it became the emblem of Earth Day, first celebrated two years later in the United States.

Photographs of the earth from space have also had another, subtler, globalizing effect: they have helped to remind people that they do, indeed, inhabit a single globe. It is probably no coincidence that an awareness of planet-wide environmental problems such as climate change, depletion of the ozone layer and deforestation has come about in parallel with man's ability to go into earth orbit. Satellites, some in orbit for decades, have documented the rapid shrinking of Lake Chad and the Aral Sea, the greening of the globe, the destruction of rainforests, the deadly effects of oil spills and other major environmental changes.

In his speech to the UN Security Council on September 7, 2000, then President Clinton announced that the United States would contribute to the UN the first complete set of detailed, up-to-date satellite images for a global assessment of ecosystems. The National Aeronautics and Space Administration (NASA) will work with other U.S. agencies to assemble and provide these images from its TERRA and Landsat satellites over the next six months, with subsequent updates.

NASA donated these data sets to UNEP in May 2001. The data sets contain 1970s, 1990s and 2000 Landsat 7 satellite information over 17,000 images, with wall-to-wall coverage of the earth's entire surface. Data from these years could be used to monitor environmental changes over the past thirty years and are valued at some \$21 million.

The data will help UNEP and Governments better understand the status of the world's forests and provide policy-makers with new tools to help control illegal logging, conserve threatened forest areas, and promote sustainable economic growth.

The NASA data sets and UNEP's role in managing, distributing and analyzing them for the Millennium Ecosystem Assessment, implementation of environmental conventions and other sectoral assessments represent a landmark occasion. UNEP in cooperation with NASA and University of Maryland is distributing these data sets to every developing country in the world to enhance their capacity building for assessing changes in land cover *inter alia* providing scientific basis for decision making.

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