

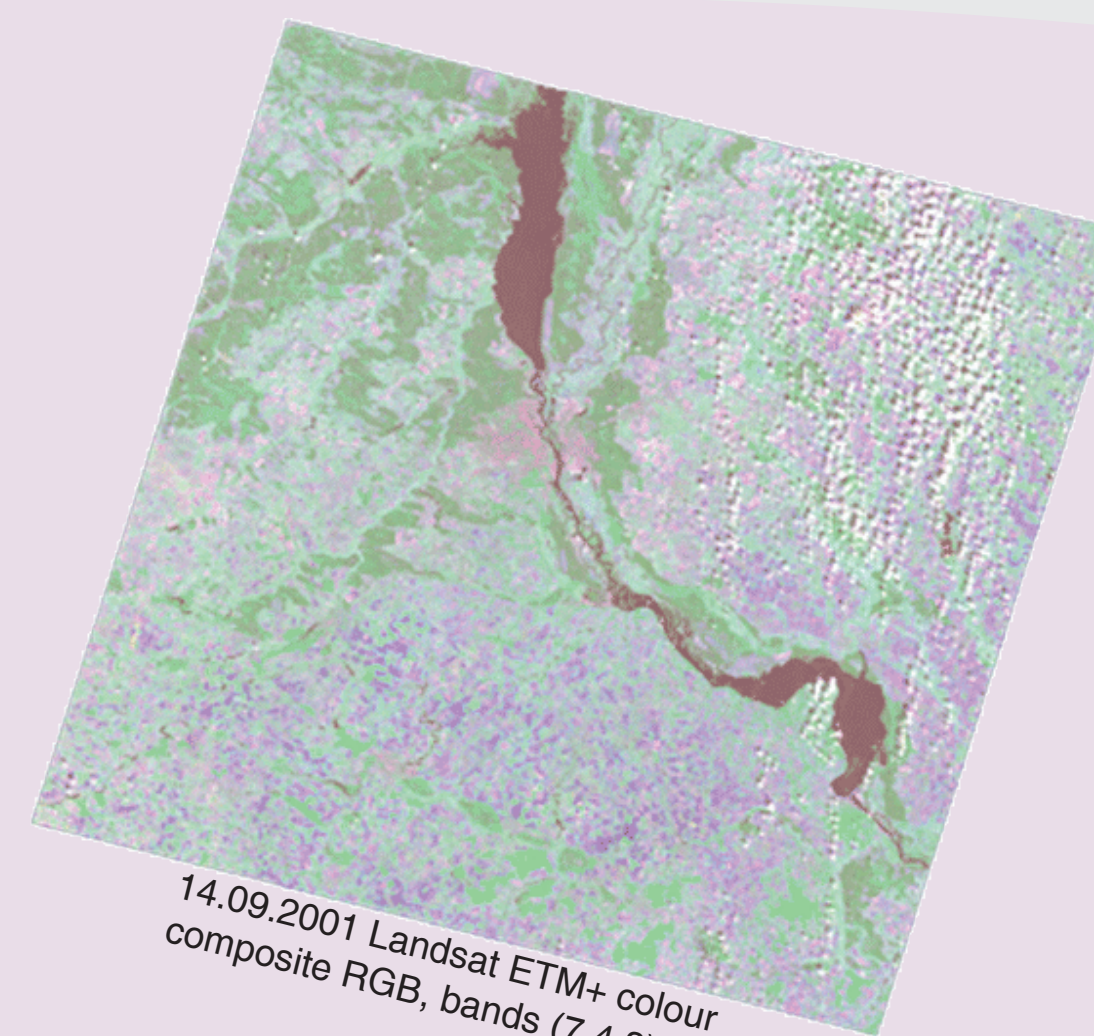
Kiev: Urban growth and waste management



Kiev (or Kyiv), Ukraine's capital and largest city, is located in the north-central part of the country on the Dnieper River. It is Ukraine's leading centre for industry, commerce, science and education.

The city grew enormously between 1950 and 1980. A powerful technological complex with dozens of industrial companies was created, employing many highly skilled personnel. Kiev also became an important military centre for the Soviet Union.

Because these developments created a large demand for labour, migration increased from rural areas in both Ukraine and Russia. Given that land had no formal value under socialism, planners were not motivated to economise on space. Massive suburbs and an extensive transportation system were built to accommodate the expanding population, although many rural buildings and tree groves survived in the city's hills. The 1986 Chernobyl nuclear disaster, 100 km to the north of Kiev, brought in thousands of refugees from the accident zone. In 1991, Kiev became the capital of an independent Ukraine.



14.09.2001 Landsat ETM+ colour composite RGB, bands (7,4,3)

The Kiev City agglomeration is situated in the central part of the eastern European plains and is surrounded by a nearly continuous belt of forests.

According to the 2001 census, Kiev is home to about 2.6 million people. Other estimates based on recent migration patterns place its population at closer to four million people. Rapid urban expansion together with the economic transition and the privatisation process have created urgent environmental problems for the city. These include air pollution from energy and transport emissions, pollution of surface and underground waters by sewage and a decline in biological diversity.

Another key environmental challenge for Kiev is coping with consumer, industrial, toxic, radioactive and other wastes. In 1998, some 300 enterprises and organisations in the municipality were using technologies, whose by-products include radioactive waste. In addition, within the city limits there is a state-owned centre for depositing radioactive wastes transported in from around the country. A lack of effective new technologies for treating wastes as well as a lack of space for landfills is causing waste to accumulate on city land, and unsanctioned dumps of toxic industrial wastes pollute the area's soil and water. There is an urgent need for more specialized waste-treatment facilities.



Photo: <http://upload.wikimedia.org>

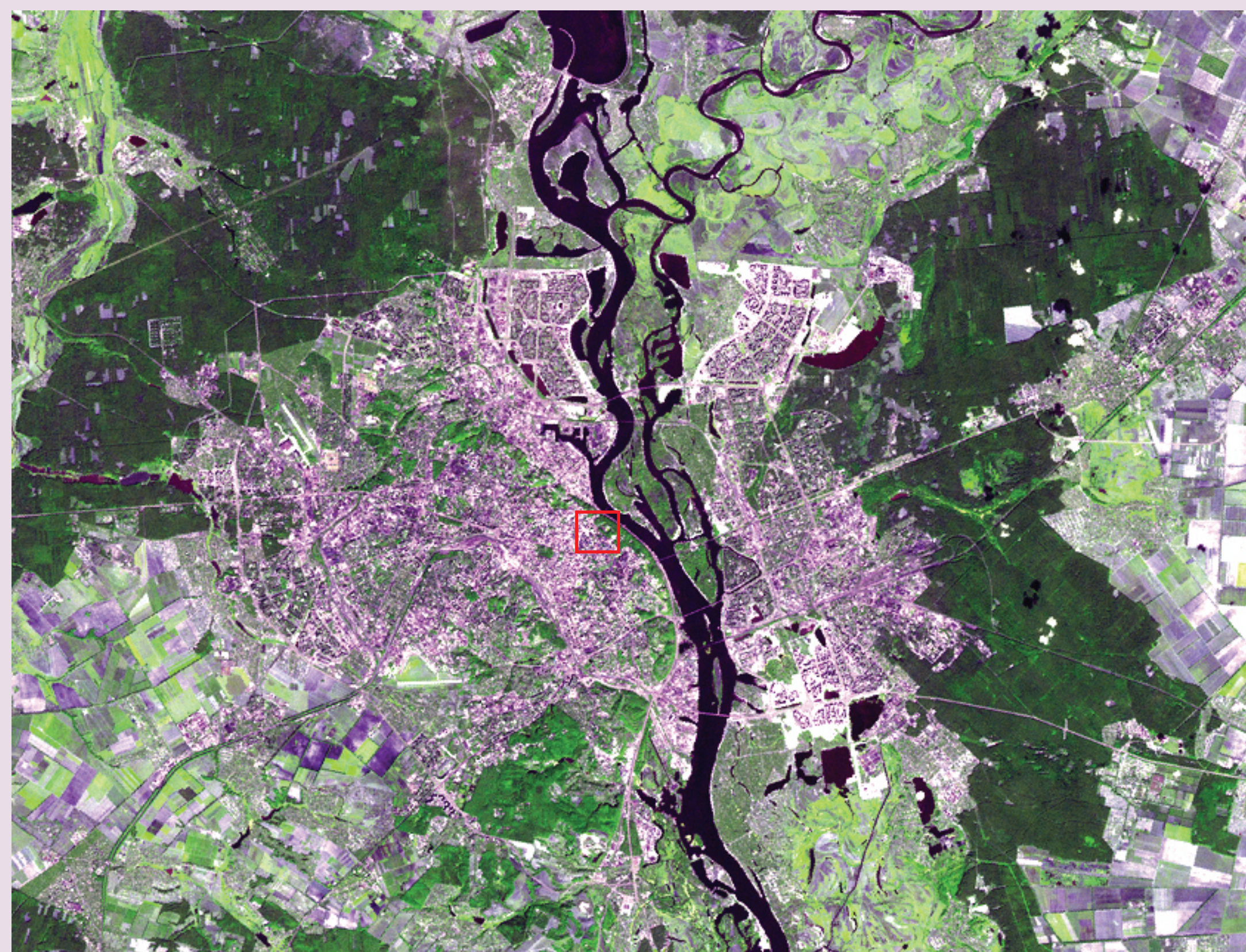


23.10.1975 Landsat MSS natural colour composite RGB

1975 Extensive areas of forested park, both natural and replanted, lie within the city limits. Different vegetation zones occupy 43% of Kiev's municipal territory. The Dnieper River forms a branching system of tributaries, islands and harbours. The older right-bank (western) part of Kiev is hilly, with ravines and small rivers. The left-bank (eastern) part of the city is built in a valley. Some parts of the left bank have been reinforced with sand and dams.



Photo: <http://en.wikipedia.org>



14.09.2001 Landsat ETM+ natural colour composite RGB

2001 One particularity of Kiev is the significant decentralisation of its urban network and its territorial differentiation. Alongside closely built-up old regions, peripheral territories are covered by woods or meadows. Several satellite towns and smaller settlements surround Kiev. Comparing the images from 1975 and 2001 shows significant urban expansion in both the northern and southern parts of the city, as well as a considerable amount of construction spreading into the vegetated zones. This puts increasing pressure on natural reserves, an important factor in the considerable decline of biological diversity in the Kiev agglomeration.



Kiev City Centre

March 17, 2002



GRID
Europe
<http://www.grid.unep.ch>

DIVISION OF EARLY WARNING AND ASSESSMENT

Prepared with the support of the Swiss Agency for the Environment, Forests and Landscape
For more information, please contact: Saman Salari Sharif, UNEP/DEWA-GRID-Europe,
International Environment House, 11 Chemin des Anémones, 1219 Châtelaine, Switzerland
Tel +41 22 917-8294
Fax +41 22 917-8029
E-mail infogrid@grid.unep.ch