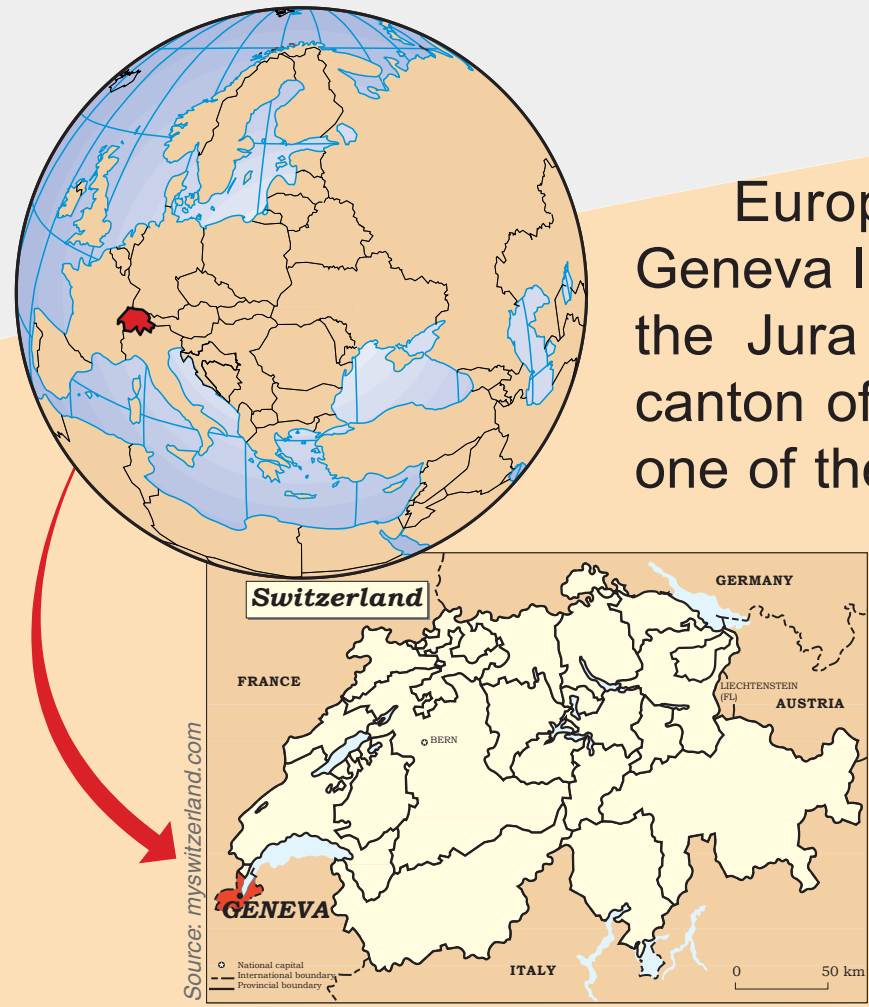




Geneva: Urban sprawl and pressure on the surrounding countryside



Wrapped around the southwest tip of western Europe's largest lake, the City and Canton of Geneva lies in a basin wedged in between the Alps and the Jura range. Geneva is the sixth most populated canton of Switzerland (434,473 inhabitants in 2003) but one of the smallest in area. It shares a border of 5.6 km with the Canton of Vaud in the north but is otherwise entirely surrounded by French territory.

Geneva hosts many international organizations, including the European headquarters of the United Nations, the International Committee of the Red Cross (ICRC) and the European Laboratory for

environment. In Geneva, these problems are accentuated by the cross-border nature of the urban agglomeration. The Canton has adopted a policy of territorial development favouring "urbanization towards the interior", or inward urbanization. It is fighting against the dispersal of the built zone and trying to preserve as much of the agricultural zone as possible. Geneva's goal is to gradually increase the density of the urban centre and the suburbs and promote a continuous urban space, while allowing some degree of development in outlying villages.

This policy has made it possible to limit harm to the countryside - but contributes to the unmet demand for accommodation. The Canton has reclassified limited parts of the agricultural zone that are contiguous with the built zone, but even this has not sufficed. As a result of the housing shortage, real estate prices are high and rising.

Despite its efforts to promote inward urbanization, the Government finds that over the last ten years the population has been increasing more in the suburbs than in the centre. Consequently, traffic problems are worsening, with major congestion at peak hours in the morning and evening on both major and minor access roads.

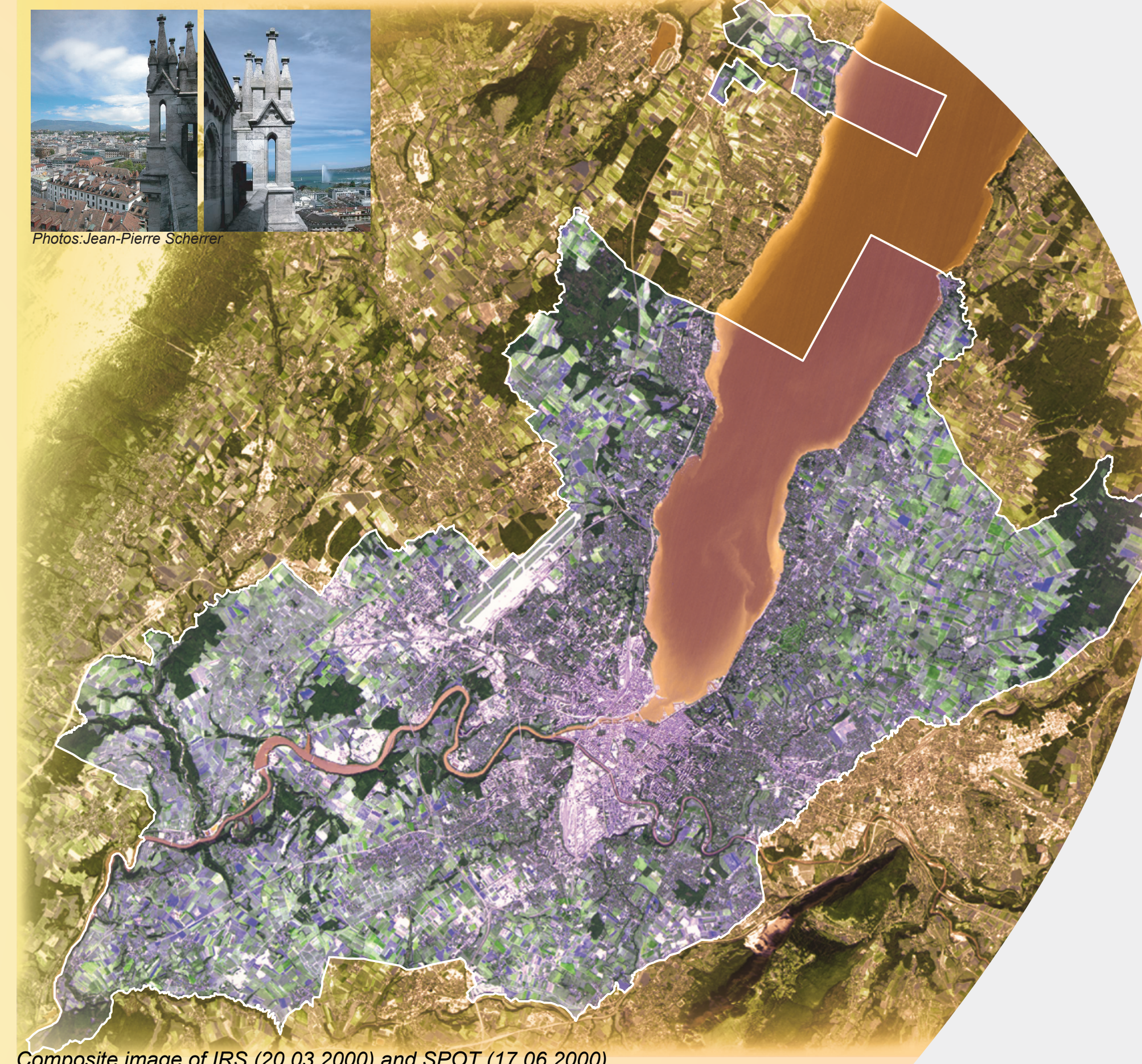
Today, with the Swiss-European bilateral accords and facilitation of regional mobility, the border no longer acts as a restriction to Geneva's development. Geneva's limited space will continue to make the undeveloped

Particle Physics (CERN). In addition, many foreign firms have relocated to Geneva to take advantage of its favourable tax regime.

Geneva accounts for 75% of all jobs in its cross-border basin but houses only 57% of its population. While a magnet for employment, Geneva lacks sufficient land to construct enough new housing. Neighbouring territories, however, do have space available for building. During the last few decades, the agglomeration of Geneva has increasingly exceeded its cantonal borders, spreading into the Canton of Vaud and neighbouring France.

Despite the resulting influx of foreign workers, immigration and growth have remained relatively stable from 1990 to 2000 when the population increased on average nearly 1% per year. But in 2001, Geneva registered its highest recent growth rate of over 2%, while the increases in 2002 and 2003 were 1.3% and 1.6%, respectively.

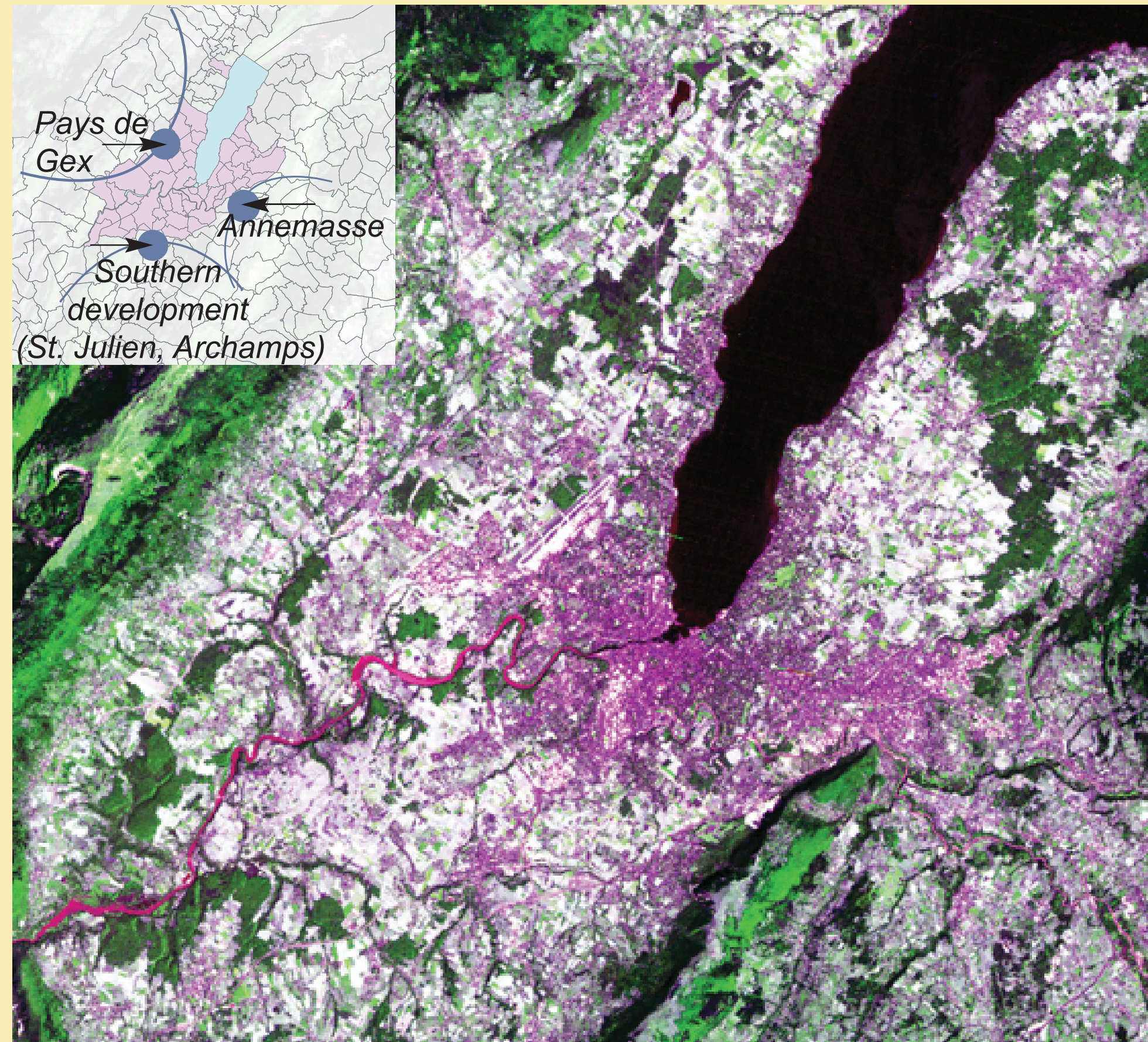
Suburban development, put pressure on the agricultural lands and natural



Composite image of IRS (20.03.2000) and SPOT (17.06.2000)

lands of neighbouring France, which also offer a lower cost of living, increasingly attractive.

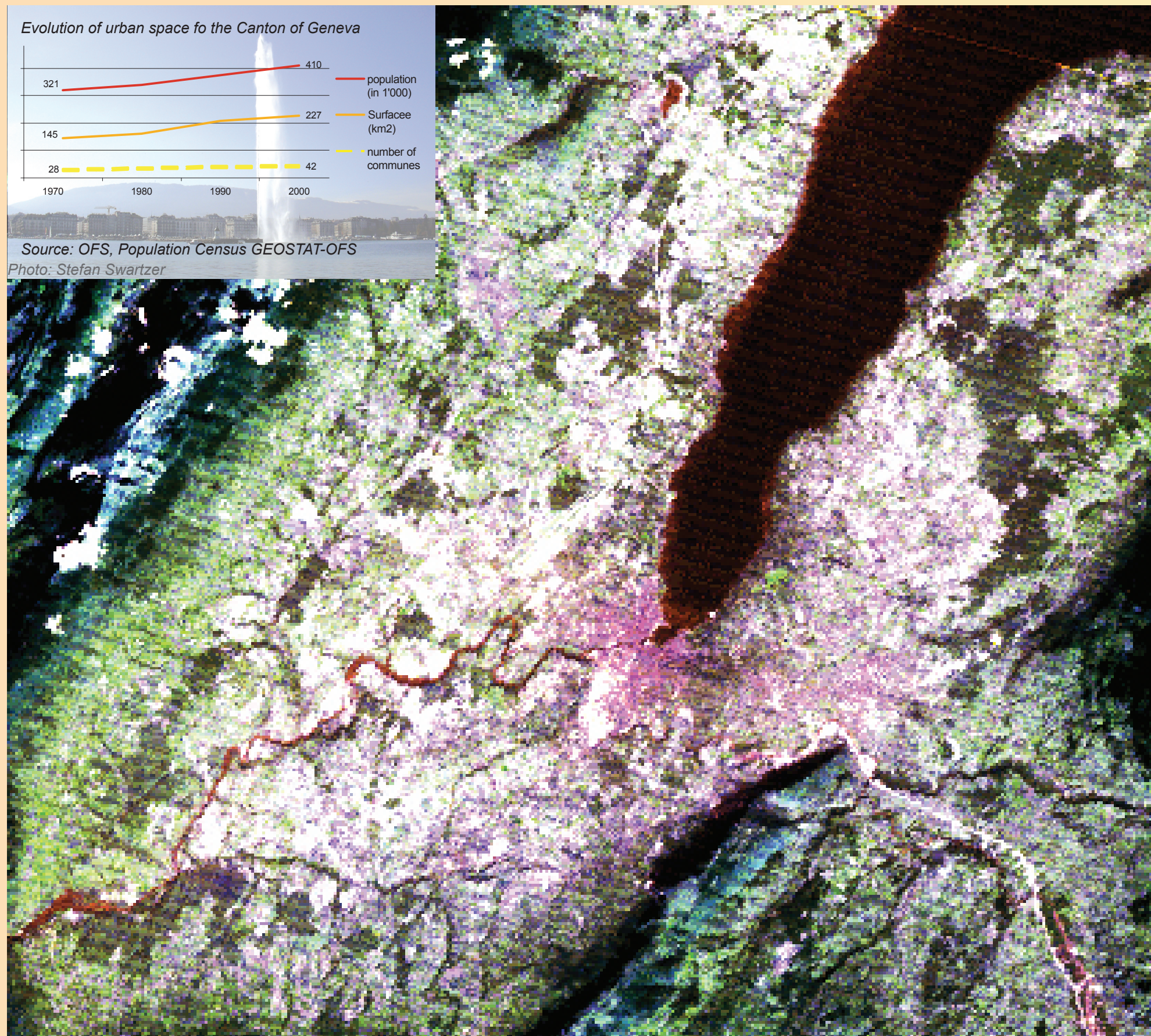
Swiss and French authorities face the challenge of coordinating their efforts against uncontrolled development, which would risk irreversible impacts on the environment, the quality of life and the region's agricultural nature and socio-economic fabric.



17.07.2003 Landsat ETM+ Natural colour, Equalised histogram

As illustrated in the above Landsat satellite image of 2003, five kilometres from downtown Geneva, on the "Geneva - Pays de Gex" axis, the contrast in land use on each side of the border is striking. The very dense construction on the Swiss side is squeezed against the airport, while on the French side urbanization is limited and the landscape is punctuated by old villages and villa zones alternating with farmlands and forests. The double obstacle of the international border and the four kilometres of airport runways create this striking contrast - although the growing pressures suggest that these barriers may no longer suffice to bar expansion into the surrounding French territory.

As the Geneva - Pays de Gex and the Geneva - Annemasse axes become saturated, urban expansion is bulging towards another axis in the south and southwest of Geneva (St. Julien, Archamps).



09.10.1972 Landsat MSS Natural colour, Equalised histogram



21.07.2001 Landsat ETM+ colour composite RGB, bands (1,2,3)



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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

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