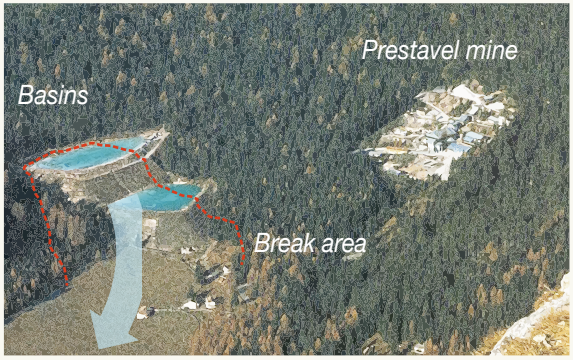
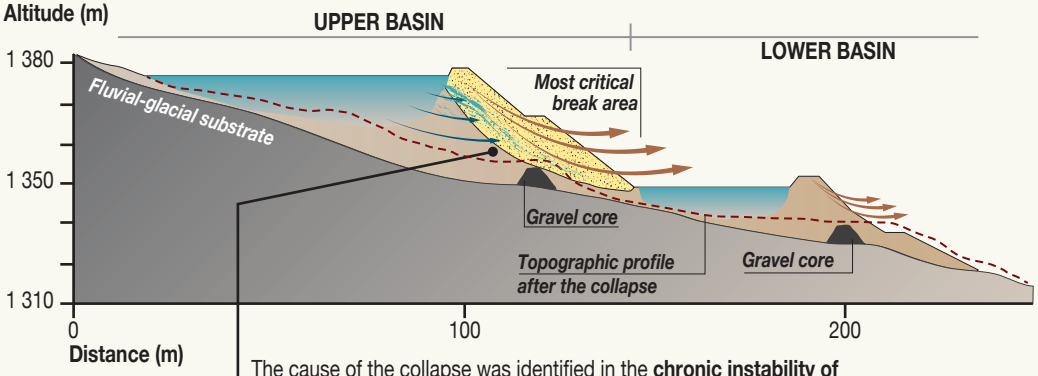
Val di Stava dam collapse



In July 1985, the embankment of the upper decanting basin dropped, causing the collapse of the lower one as well. This released a mass of about **180 000 m³ of water and mud pouring** at a speed of about 90 km/h in the valley below. Along the route, another 40 000-50 000 m³ of erosion caused the destruction of buildings and hundreds of trees.

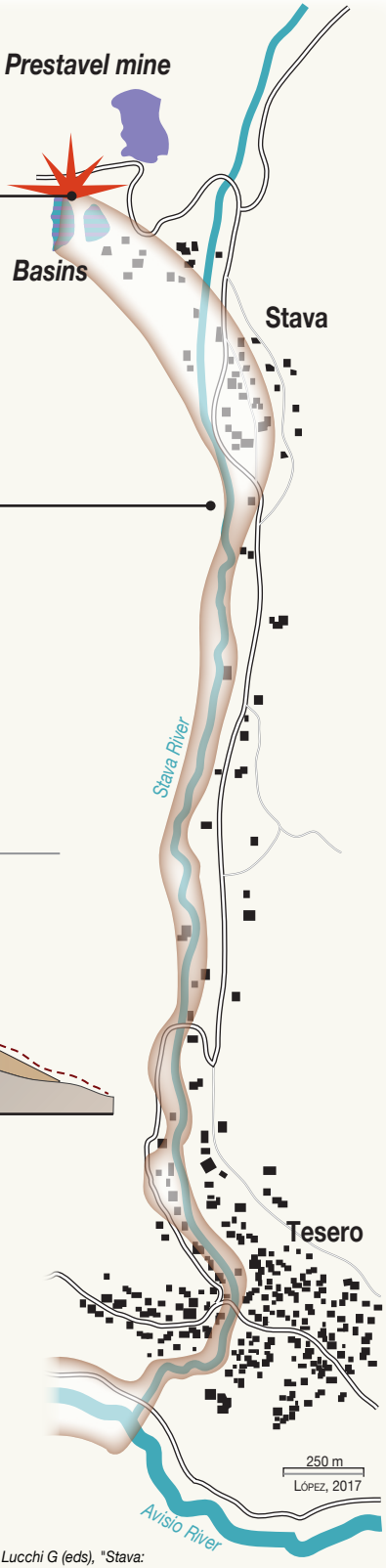


Mudflow caused the **death of 268 people** (including 59 under-18s), the complete destruction of 3 hotels, 53 houses, 6 sheds and hundreds of trees. In addition, 8 bridges and 9 heavily damaged buildings were demolished. A **layer of mud** between 20 and 40 cm thick covered an area of approximately **435 000 m²** for a length of 4.2 km.



The cause of the collapse was identified in the **chronic instability of landfills**, and in particular the upper basin, which did not have the minimum safety coefficients needed to avoid the collapse. In over 20 years, landfills were never subjected to a series of stability checks.
Among others, the causes of instability have been identified in:

- the humid nature of the soil, which did not enable sludge drainage;
- the incorrect construction of the upper reservoir embankment and in the proximity to the lower one;
- the excessive height (34 m) and slope (up to 40°) of the embankment;
- the incorrect location and maintenance of the overflow pipes of decanting waters.



Sources: *Fondazione Stava1985 (http://www.stava1985.it); Chandler J, Pellegrini M and Tosatti G, 1995, Le cause del disastro, in Lucchi G (eds), "Stava: Perché la genesi, le cause, la responsabilità della catastrofe di Stava negli atti dell'inchiesta ministeriale e nelle sentenze del procedimento penale", pp. 221-230, Curcu & Genovese, Trento.*