

## **Fluvial Terraces: The Foundation of Snow Country**

Tokamachi sits on geological structures called fluvial terraces, which are “steps” of flat land that rise up on either side of a river. Nine broad terraces rise from the Shinano River basin, each step clearly shown by bands of dark green forest on the slopes and the checkerboard pattern of rice paddies on the flats. This geography made snow country suitable for human habitation, as level ground makes it easier to build shelters and grow crops.

The fluvial terraces in Tokamachi were formed when land pushed up by tectonic movement was subsequently eroded by a river cutting through it. The terraces in Tokamachi began to form some 400,000 years ago, following an eruption of nearby Mt. Naeba. The Shinano River and its tributaries flowed through the area, eroding the volcanic ash and stone and creating an alluvial plain at the foot of the mountains. Because the plain lies along a major fault line, the movement of tectonic plates pushing against each other periodically caused the land to crumple, transforming the plain into elevated terraces. The river, always seeking to flow to low ground, shifted its course, eroding a new bed over time. The process repeated several times over the millennia, creating the shape of today’s terraces.

When people first came to this area more than 10,000 years ago, the terraces provided flat land to live on. Around 300 BCE, the inhabitants began to raise crops. The terraces’ soil proved quite fertile, with a base of volcanic ash enriched by minerals carried down from the mountains by river water and snowmelt. Despite the difficulties of Tokamachi’s snowy winters, this rich landscape provided a firm foundation for people to survive and flourish.