The New York Times | https://nyti.ms/2rQvM89

EUROPE | CINQUE TERRE JOURNAL

To Save Its Cliffside Towns, Italy Revives the Art of Terracing

By GAIA PIANIGIANI JUNE 6, 2017

VERNAZZA, Italy — The teenagers panted heavily as they climbed up the steep slope in the early morning, the Mediterranean sun glittering on the sea far below. Along the way, they stopped to survey the stone walls bordering the winding roads, carefully taking measurements.

"When you rebuild a wall, you dig among the rubble until you find the original corner stones, and start from there," their guide, Margherita Ermirio, instructed them. "No cranes, no cement, right?" she teased them, as they laughed.

After several years abroad, Ms. Ermirio, 32, has returned to her hometown, Vernazza, one of five villages that make up Cinque Terre, the stunning, vertical, gravity-defying cluster of homes that cling to the cliffs of Italy's northwestern coast.

She has since become the pillar of a local battle to restore and preserve an old and essential but dying art in much of Italy: terracing.

The dry stone walls she is teaching young people to build do more than form the picturesque landscape that has made Cinque Terre famous. The different-size plots — angled to dovetail harmoniously, positioned to carefully caress the contours of the hillsides and bordered by dry stone walls — prevent this unique and improbable place to live from sliding into the sea.

Ms. Ermirio's daily mission, as part of a Unesco-sponsored youth program, is not only to help restore those walls but also to cement this younger generation's connection to their land, and to teach them why the walls are crucial to their life here.

Cinque Terre, on the cliffs northwest of La Spezia, is famous for its vistas of pastel fishermen's homes and the blue and white wooden boats anchored in miniature harbors. But it is the terraces hugging the slopes high above the blue waters that have for centuries allowed the land to be cultivated, with vineyards and apple and lemon groves.

The centuries-old, permeable dry stone walls that border those plots are vital to Cinque Terre's survival. They absorb needed water from heavy rains, while allowing the runoff to flow gently downhill, preventing the land from washing away.

Since the 1960s, however, many of the farmers who once worked the land have abandoned their steep plots and moved to cities for better-paying factory jobs. The ancient walls have been largely abandoned, too, leaving them in dangerous disrepair.

Today, 8 percent of the entire region of Liguria, where Cinque Terre is, is terraced. Roughly half of that area has been forsaken.

Given its peculiar boot-shape peninsula, jagged coastline and manifold mountain chains, Italy is believed to have the most terraced land in Europe, with more than 100,000 miles of dry stone walls — 20 times the length of the Great Wall of China.

Liguria, a narrow half-moon-shaped region bordering France, has the highest concentration, and its terracing is in poor shape, leaving the villages increasingly vulnerable to landslides during heavy rains. In Vernazza, almost half of the terracing is in ruins.

"During the flood, the stone walls came down to the beach, mixed up with mud and water. The mud reached the first floor here," Ms. Ermirio said, giving a tour

and recalling the infamous flood of 2011, when tons of mud invaded the village's main road, shops and homes, cutting off the area and taking three lives.

Since then, Ms. Ermirio has agreed with the various landlords to take over and fix up hundreds of abandoned parcels to prevent landslides, but also to show to the younger generations that agriculture is still possible in Cinque Terre.

"We always need to rebuild stone walls here, and always will," said Vittorio Ermirio, a former swimming champion and Margherita's father, addressing the students in his vineyards, where he makes Ligurian white wine for his own consumption.

"But it takes so much effort," said Francesco Bertoneri, a 16-year-old student with fashionable sunglasses on. He was gasping at the end of his climb on a trail with vines on one side and an abyss on the other.

"This is our land," Mr. Ermirio replied, smiling broadly.

Mr. Bertoneri and his class have been studying terracing in Cinque Terre from a historical perspective, comparing 18th-century maps with Google Earth's most recent images.

From the measurements taken during the field trip with Ms. Ermirio, the students will design a three-dimensional orography of the area.

Her work has been done in partnership with several local and global institutions, including the Liceo Scientifico Antonio Pacinotti, the high school in the nearby city of La Spezia where the students study, as well as the international volunteer project SocialErasmus.

"It is important to raise awareness at any level," said Mauro Varotto, a geographer at the University of Padua and co-founder of Italy's branch of the International Terraced Landscapes Alliance.

"At present, it's an effort from the bottom, from citizens. Hopefully one day we'll have schools for dry-stone building like in France," he said.

In Italy, only at the foot of the Alps, in the region of Trentino, have authorities recently created a public school for dry-stone building. So far, it has certified 15 local artisans.

Other areas, lacking a proper educational path, have been rescued by Italian creativity.

Along the Brenta River in the northeastern region of Veneto, local residents have been allowed to "adopt" a parcel, with a pledge to clean and maintain it.

In some areas, including Cinque Terre, a handful of migrants is being trained to clean up the stone walls.

"The dry stone walls used to be the only way to cultivate in certain territories, now we rediscover them to make our landscape more true to what it was, and lure tourists," said Iva Berardi, one of the school's creators and director of the Trentino Mountain Academy.

"Our goal is to spread knowledge," she added, "and we do it through teaching something that before was passed from father to son."

Ms. Ermirio had to fight to acquire that knowledge for herself. Her father was taken up on the hill to build dry stone walls when he was a little boy, but the tradition faded away as his daughter grew up.

In Cinque Terre, Anselmo Crovara, 82, has made himself the custodian of the region's history.

In his attic, he keeps what is known locally as the Memory Archive — a collection of antique items from traditional Ligurian daily life — portable candle lamps, 19th-century sewing machines, cow shoes, grappling hooks used to make walls.

"I keep things to keep that knowledge," he said when asked why he started building up his collection.

Mr. Crovara was born in his family's penthouse apartment overlooking the sea and the roofs of one of Cinque Terre's famed towns, Manarola, and plans to die there.

He learned to build dry stone walls when he was a little boy, from his mother, who was one of the few women who had mastered that art.

As long as he can remember, the landscape of green vineyards that follow the curve of the steep hillside has never been altered, he said.

In one of Mr. Crovara's pictures from 1942, black and white vineyards border the steep slopes that end in the water.

"You see, a stone is a monument," Mr. Crovara said. "It is heritage here."

Correction: June 6, 2017

An earlier version of a picture caption with this article misstated the year of a flood depicted on a poster. It was 2011, not 2012.

A version of this article appears in print on June 7, 2017, on Page A4 of the New York edition with the headline: To Save Its Cliffside Towns, Italy Revives the Art of Terracing.