

New Orleans Times-Picayune
November 13, 2005

The Dutch swore it would never happen again

1,835 dead. 43,000 homes damaged. 70,000 evacuated. In 1953, a catastrophic flood decimated the Netherlands' extensive system of dikes and dams.

By John McQuaid, Staff writer

OUWERKERK, NETHERLANDS -- In the early morning hours of Feb. 1, 1953, a huge storm surge struck the Dutch coastline. Though it was midwinter and far from the tropics, the dome of water was driven by a North Sea storm that had many characteristics of a hurricane. With 60-mph winds blowing clockwise around the storm's central "eye," a spring tide had pumped up the surge to record heights approaching 14 feet.

Gales pushed the surge dead on the Netherlands' most vulnerable spot, its southwest coast -- an archipelago of low-lying islands and polders, drained areas ringed by dikes. Dotted with dozens of cities, towns and farms, the area was home to hundreds of thousands of people.

Water flowed far inland through open estuaries and penetrated hundreds of smaller open conduits, including shipping channels and canals. Many dikes were overtopped and then breached. Others, brutally pounded for hours by waves, simply collapsed. Walls of water poured into inhabited areas. Most residents had no warning before the water reached their doorsteps.

It was the start of the worst disaster in modern Dutch history. More than 1,800 people died, and hundreds of thousands were displaced by the flood that followed. Photographs from the time -- water pouring through dike breaches, thousands stranded on rooftops, piles of waterlogged corpses -- eerily foreshadow New Orleans' recent traumas.

But the 1953 flood also sparked a push to rebuild that offers hope for New Orleans. It deeply scarred the national psyche, and after the waters receded, Dutch authorities vowed to reinvent the nation's flood defenses to prevent such a disaster from ever striking again. The result, completed less than a decade ago, is the Delta Works, a \$14.7 billion network of barriers, dams and other structures designed to repel North Sea storm surges.

The catastrophe reverberates today in debates about the Netherlands' long-term safety and in the memories of its victims, who remain an important political voice in shaping flood-control policies.

The 1953 Flood Museum in Ouwerkerk, opened two years ago to mark the disaster's 50th anniversary, sits behind a repaired, 1,400-foot dike breach and is housed in a World War II-era U.S. military caisson, a large, reinforced-concrete structure that was used to patch the hole.

'Roaring wall of water'

Pieter Flokweert was 16 at the time of the flood, the elder of two sons of a farmer in the town of Nieuwerkerk, about three miles from Ouwerkerk. He said he and his family had heard radio reports about the storm hitting the English coastline, where it also did great damage, so they expected trouble. On Sunday morning around 5, church bells started ringing.

"The wife of the man in charge of the local water board told us we had to get the hell out of there," Flokweert said. "Men were going with all kinds of equipment -- spades, bricks - - to get to the dike, which was on the verge of breaking. Five minutes later our feet were getting wet. The dike was already breaking."

Flokweert and his family shoed their animals out of the barn and retreated to the attic of their house. Around 11 a.m. the dike breach widened and water started rising fast. It converged with the flow from another breach as it coursed through town, eventually reaching a height of more than 12 feet.

"At 2 o'clock in the afternoon, we saw the first houses collapsing around us. By 4 o'clock, the whole area was devastated," he said. "We saw a neighbor's house collapse. Its inner walls gave way, then the roof lost support and collapsed. A funneling effect caused refuse and debris and people to flow past the house."

Other places were hit far worse. When the dike protecting the town of Stavenisse broke, "a roaring wall of water 12 feet high moved toward the village," according to an account published later that year. "Demolishing the prosperous farmhouses lying in the shelter of the dike, the moving wall carried the ruins of those sturdy buildings into the village, where beams, doors, railings and furniture became battering rams which ultimately shattered the smaller and more frail houses in the narrow streets."

Two hundred residents -- virtually the whole population -- drowned.

Not down with the ship

As surge water flowed inland up a tributary of the Rhine into the lowest area of the country -- 20 feet below sea level -- it threatened to burst through a river dike, flooding one of the country's most densely populated areas, including Rotterdam. When the dike began to breach, the mayor of Nieuwerkerk an den IJssel commandeered a river ship and ordered the captain to steer it into the hole. It worked: The ship plugged the breach.

Across the region, thousands of people were stranded. In the hours after the flood, hundreds of fishermen and other local people fanned out over flooded areas in small boats. In the town of Zeirikzee, a few miles away, fisherman Wim Schott van Sluis, then 24, was plying the floodwaters in a rowboat that held seven, ferrying people from their roofs to nearby high ground.

Before the water rose -- about 7 feet in his house -- he said, he had put his wife and 5-month-old son on his 75-foot mussel dredger in a sheltered navigation channel. Zeirikzee is on high ground, and by late morning the water had already begun to recede. "Someone said, in the city, people can go from one roof to the next, but out in the polders, there was a much greater need," he said. "When we went out there, we saw all the people on rooftops. We didn't expect such a sight coming from the city and high ground."

Rescuers loaded their rowboats on trucks, drove over high ground to points adjacent to flooded villages, ferried people to safety, then drove them to Zeirikzee.

Van Sluis ferried people round the clock for days, his wrists swollen from rowing. He saved 45 of the 100 residents of a village called Kapelle and gathered information about the others to pass on to the living.

"Everything was dead. It was snowing," he said of the scene in the flood zone. "There were all these small single-story houses and people were sitting on the highest point, one leg on either side." A woman van Sluis rescued had just delivered a baby on a pool table.

Nation rises to respond

Though communication lines were mostly down, the vast scale of the disaster was clear to Dutch authorities by midday Sunday, and an enormous relief effort was mobilized. Traveling by car, boat, plane and helicopter, Queen Juliana made her way to the disaster zone, donning rubber boots to trudge through the mud and offer support to victims.

In Niewekerk that afternoon, the Flokweert family watched a wind gust turn their barn around and collapse the roof, Flokweert said. "When the barn gave way, waves hit the attic and we realized we could not stay."

"Around 2 a.m., the moon came out a little bit," he said, and it became evident that the flood, once at the eaves of their house, had begun to recede. They waded through icy, neck-deep water to a nearby house on higher ground and joined 18 people who had been crowded into the attic.

The elderly couple who opened their home to neighbors had also opened their clothes closet. "The man was short, chubby and fat, and I was tall and slim," Flokweert said. "His long pants came only to my knees. The waist was twice as big as mine. But I was happy to have them."

On Tuesday morning a fisherman took them to Zeirikzee, which had become a gathering point for refugees. That day, Feb. 3, a huge airlift was begun to evacuate about 70,000 people from the region, an effort that took 10 days.

Recovering the dead

Flokweert's family remained, however, because he and his father wanted to work. Flokweert got a job on dike repair, while his father worked at identifying corpses. He would bring the photos of decaying, waterlogged bodies home at night.

"It was not a good situation for a young 16-year-old to see all those corpses," Flokweert said. "I still remember the smell of Lysol on him. In hindsight, perhaps we should not have stayed."

They moved about in a moonscape of ruins. The dikes were breached in 400 places, and 67 washed away completely. In all, about 43,000 homes and farms were damaged

and 10,000 others were beyond repair, many of those pulverized. Farmlands lay fallow, covered with sand and contaminated by saltwater.

The principal economic activities were cleanup and dike repair. Hulking Phoenix caissons that had seen service during the Normandy invasion were brought in from Great Britain, providing the ideal plug for breached dikes.

"The first sign of hope came when I was walking through Zeirikzee in April or May," Flokweert said. "I heard the sound of a dredger clearing the navigational channel and moving in the caissons. Then more big stuff started moving in, heavy equipment." The dikes were repaired by the following November, nine months after the storm hit. Call to action

Meanwhile, the nation had begun debating what went wrong. "In the press -- in the newspapers the radio, the television -- there was a big discussion over who was responsible for this and how can we avoid it for the future," said Kees van der Maas, a retired newspaper editor who as a 15-year-old was evacuated from Zeirikzee after the flood. "Almost everybody came to the conclusion that we have to take some heavy measures."

It took the hard-hit Zeeland region years to get back on its feet. The Flokweerts could not resume farming until 1955.

"People scattered," Flokweert said. "Some found new jobs in evacuation areas and stayed there. Sand covered the agricultural fields and had to be removed." Young people who might have taken up farming enrolled in schools and never returned.

Today, flood memorials abound in Zeeland. In all, 289 gravestones in the cemetery in Nieuwerkerk commemorate those from the area who drowned, including many in Flokweert's extended family. Granite markers, lying flat on the ground and engraved only with names and birthdates, commemorate the elderly, the middle-aged and the young, including toddlers and babies. Many are marked "VERMIST" -- "missing."