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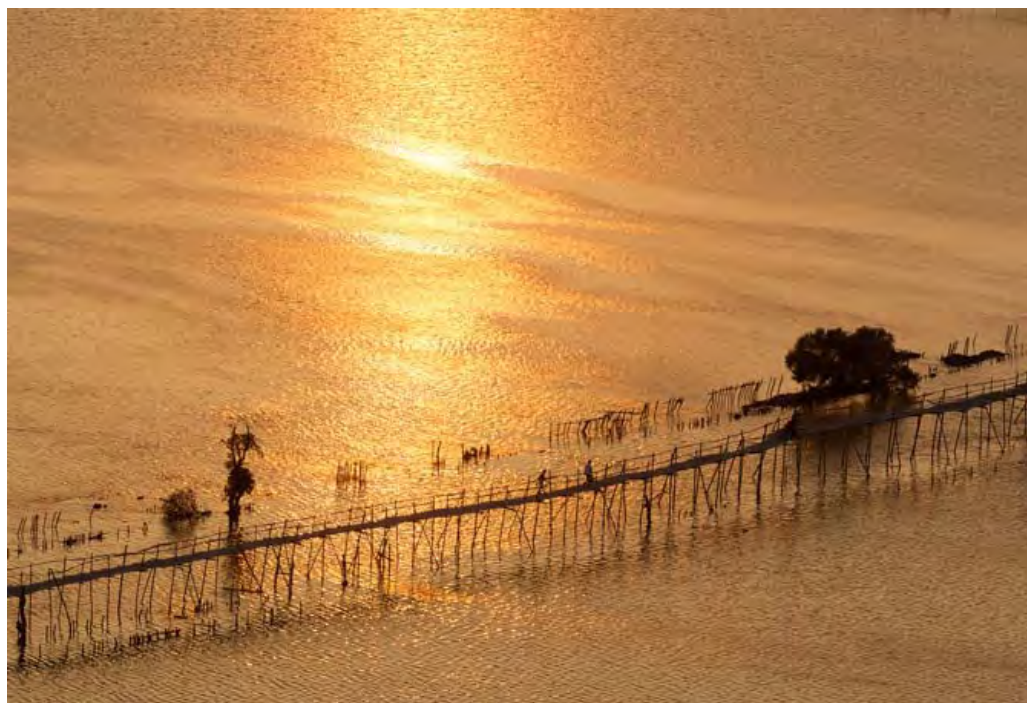
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MANILA, PHILIPPINES

Photograph by George Steinmetz

As seawater warms, its volume increases. This thermal expansion accounts for around a third of the current sea-level rise.

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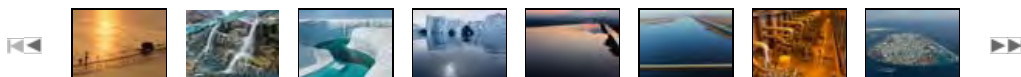
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TAHUMMING GLACIER, BRITISH COLUMBIA

Photograph by James Balog, Extreme Ice Survey

Melting mountain glaciers contribute another third. By 2100 they'll probably add a few inches to sea level—but not feet. They don't contain that much ice.

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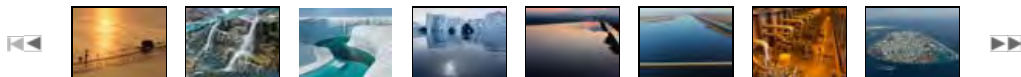
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BIRTHDAY CANYON, GREENLAND

Photograph by James Balog, Extreme Ice Survey

It's a small contributor now, but its surface has started melting in summer—a worrisome sign. The ice sheet contains enough water to raise sea level nearly 25 feet.

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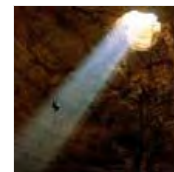


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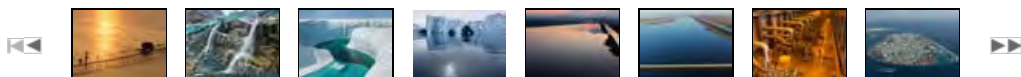
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PINE ISLAND GLACIER, WEST ANTARCTICA

Photograph by Maria Stenzel

East Antarctica seems fairly stable. But parts of West Antarctica's ice sheet are being undermined by a warming ocean. Its future, like Greenland's, is very uncertain.

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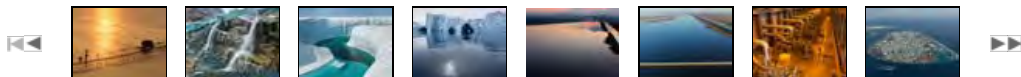
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Photograph by George Steinmetz

These cypress trees in a marsh east of New Orleans probably succumbed to salty water seeping in from the Gulf of Mexico even before Hurricane Katrina hit in 2005. But when Katrina's storm surge breached a nearby levee, it dealt a devastating blow to the rest of the marsh.

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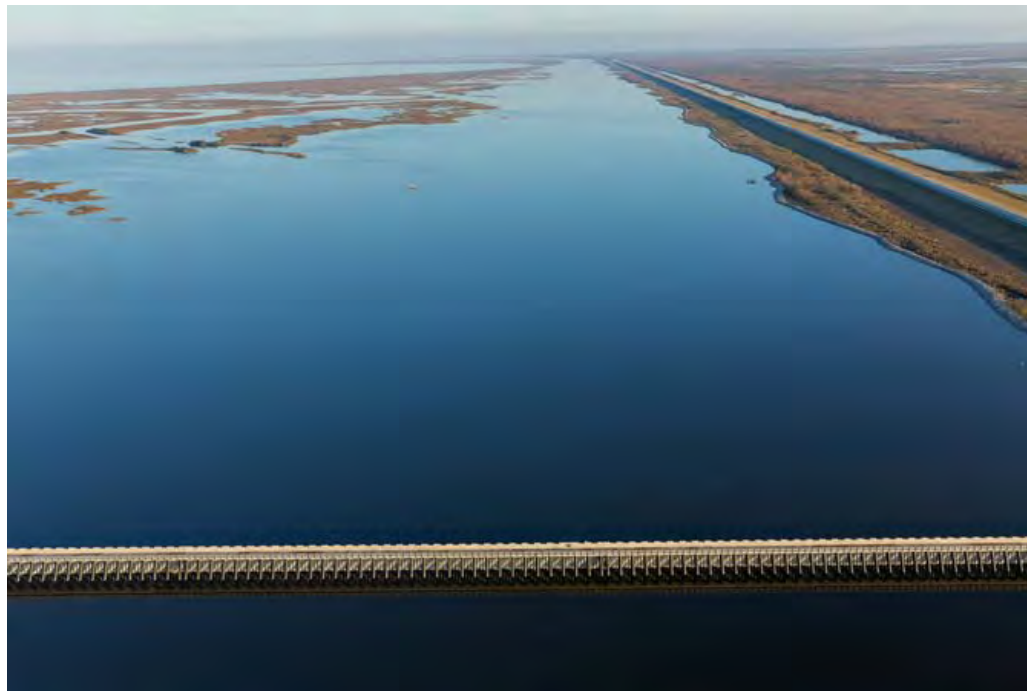
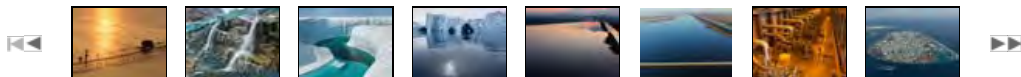
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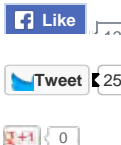
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Photograph by George Steinmetz

This abandoned channel, known as MRGO, was once a shortcut for ships to the Gulf of Mexico. During Katrina it became a shortcut to New Orleans for the storm surge. Along with an intersecting channel, the Gulf Intracoastal Waterway, it funneled floodwater into the eastern parts of the city. A new 1.8-mile-long flood barrier now cuts across both channels.

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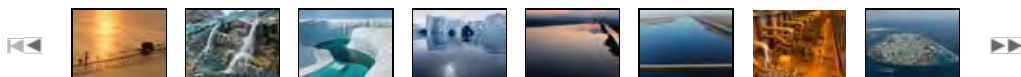
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Photograph by George Steinmetz

The 11 diesel pumps housed in another new storm-surge barrier, this one south of New Orleans, can discharge 150,000 gallons of floodwater per second. In operation since 2011, the barrier helped protect the city's suburbs from Hurricane Isaac's storm surge last year.

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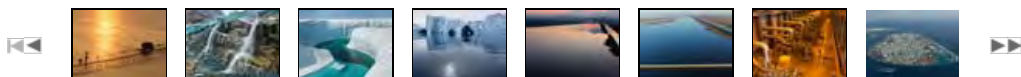
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Photograph by George Steinmetz

A seawall now protects Maale, capital of the Maldives, an Indian Ocean archipelago that is the lowest, flattest country on Earth. By 2100 rising seas may force Maldivians to abandon their home. More than 100,000 live

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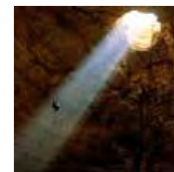


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Photograph by George Steinmetz

Dangerously exposed to the next typhoon, squatter families crowd waterfront shanties in Manila, the Philippines. Global sea-level rise is amplified there by rapidly subsiding land.

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Photograph by George Steinmetz

Two curved steel gates, each more than 350 feet long, can swing shut to protect St. Petersburg, Russia, from Baltic Sea storms, which have flooded it repeatedly over the past three centuries. Completed in 2011, the gates

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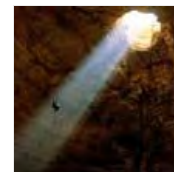


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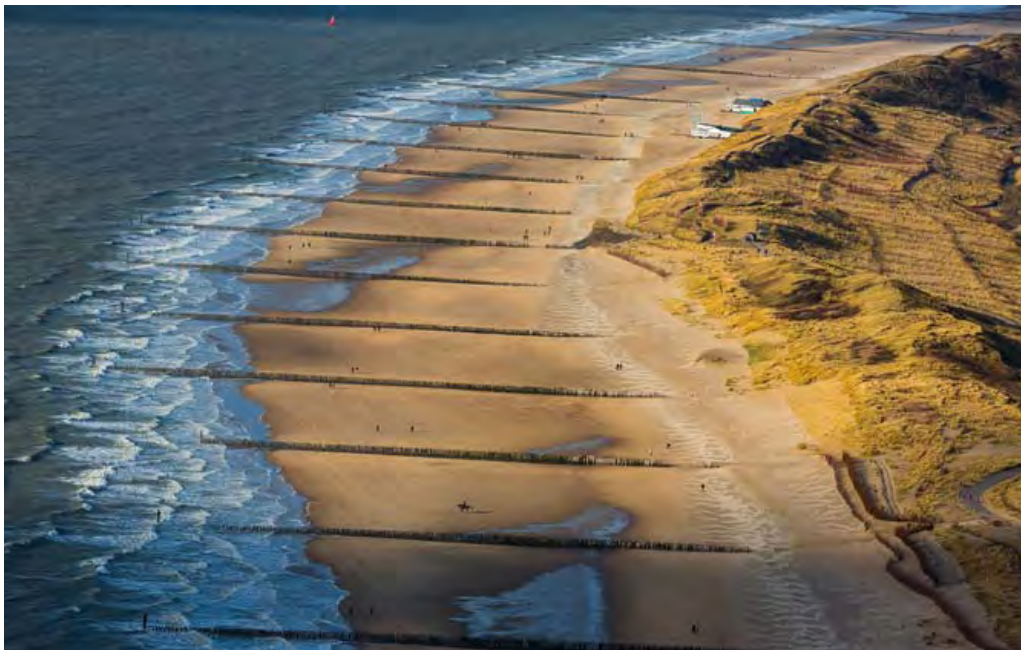
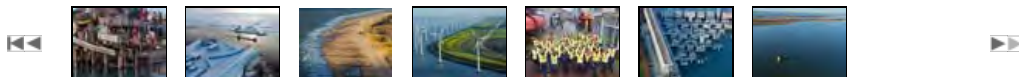
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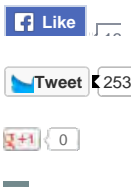
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WALCHEREN ISLAND, THE NETHERLANDS

Photograph by George Steinmetz

For nearly a thousand years the Dutch have been reclaiming land from the sea—and occasionally losing some. A catastrophic flood that killed more than 1,800 people in 1953 spurred the country to develop the world's most elaborate and sophisticated system of dikes and other defenses. The most critical structures are built to withstand a 1-in-10,000-year storm. Here, rows of pilings along a Dutch beach trap sand and help build up the

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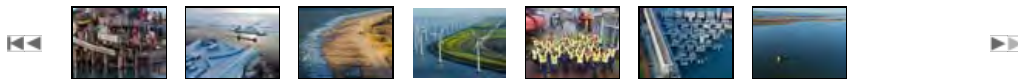
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FLEVOLAND

Photograph by George Steinmetz

Flanked by windmills, this dike protects farmland that is almost entirely below sea level. Dikes and continuous pumping keep more than a quarter of the country from reverting to swamp or open water.

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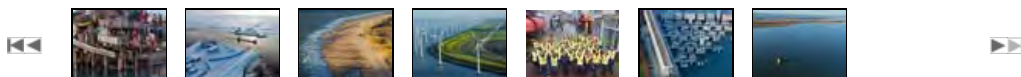
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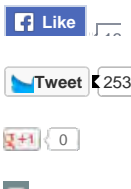
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KAMPEN, OVERIJSEL

Photograph by George Steinmetz

The control of dikes—and the power to levy taxes to maintain them—rests with community water boards that predate the existence of the Netherlands as a nation. These volunteers are trained to contain a breach within three hours.

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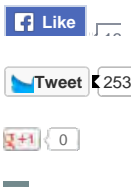
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IJBURG, AMSTERDAM

Photograph by George Steinmetz

Small docks and communal walkways link the floating houses built on a lake in east Amsterdam. Secured by sliding collars to steel pilings, the houses can rise and fall during floods and storms.

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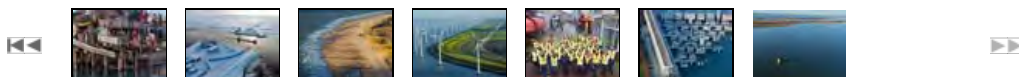
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Photograph by George Steinmetz

An abandoned house still stands on Tiengemeten Island in South Holland, where the government intentionally broke the dikes to create a rare slice of wilderness in a country shaped by humans.

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