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How to Think Like the Dutch in a Post-Sandy World

By RUSSELL SHORTO APRIL 9, 2014

In December 2012, Shaun Donovan, the secretary of Housing and Urban Development, was on vacation in Berlin when he decided to detour to the Netherlands. He wanted to get a firsthand sense of the famed Dutch approach to water management. Hurricane Sandy struck six weeks before, and in the aftermath, President Obama asked him to lead a task force, whose objective was not just to rebuild but also to radically rethink the region's infrastructure in light of climate change.

In the Netherlands, a man named Henk Ovink offered to be Donovan's guide. Ovink was the director of the office of Spatial Planning and Water Management, meaning, essentially, that it was his job to keep the famously waterlogged country dry. As he learned about various Dutch innovations, Donovan was struck by the fact that Ovink looked at water as much in cultural as in engineering terms, which was a function of the centuries-old need of the Dutch to act together for protection.

For his part, Ovink said it dawned on him during Donovan's visit that the post-Sandy turmoil in the U.S. was an opportunity. Dutch water-management experts have done such a good job of protecting their country that they rarely get to practice with water crises — whereas America was facing something monumental that as a culture it didn't yet grasp. When Donovan arrived back in the U.S., he opened an email from Ovink that said, in effect, "I hope this isn't too forward, but could I come work with you?"

I first met Ovink in Amsterdam last April, as he prepared to set off for

Washington to begin his new job as Donovan's senior adviser. Ovink is a compact man with a shaved head and a bird-of-prey gaze who moves as if he were struggling to keep his wiry energy in check. He was raised in the low-lying, rural, eastern part of the Netherlands, where a glimpse out any window makes apparent the country's relationship to water. His father, grandfather and great-grandfather were all architects. He began to study art and math, then bowed to the inevitable and turned his attention to architecture. He entered government as director of housing and planning for the province of South Holland. Colleagues describe him as driven, smart, fast-talking, single-minded. When I asked him what he does in his spare time, he said: "I like work. Sometimes I say to myself, 'Henk, where are the hobbies?'"

He was clearly eager for the challenge of persuading a giant country that it needs to live with water and not simply resist it. But he was skeptical about anyone's ability to effect meaningful change in the United States. He had recently taken an exploratory trip to the Far Rockaways, with a team of American engineers that was rebuilding storm walls damaged by Sandy. "These are the same walls that broke before?" Ovink asked. "Yes!" came the reply. "And what if they break again?" "We'll rebuild them again."

Beyond that, Ovink feared that politics might undermine any chance to encourage new thinking about water management. "When I mentioned climate change to one official," he said, "she almost hit me." He characterized some of the wishful thinking he believed he would be dealing with as: "Don't hire a Dutchman — believe in angels."

Dutch battles against water led his country to develop a communal society. To this day, Water Boards, which date to the Middle Ages, are a feature of every region, and they guide long-term infrastructural planning. American individualism, on the other hand, has yielded a system in which each municipality has a great deal of autonomy, making regional cooperation difficult. "The vulnerabilities are regional," said Judith Rodin, the president of the Rockefeller Foundation, which is the main funding organization working with Donovan's team. "Yet we have individual community rule, and very little incentive to get out of that."

But the need to apply new thinking in the U.S. couldn't be greater, Ovink said. Climate scientists predict that by the end of the century, sea levels will rise by between one and a half and four feet. New York City could see storm surges up to 24 feet. Miami Beach could be under water. "Water has not been a policy issue in the U.S.," Ovink said. "That's because you're mostly all above sea level. But what if the sea level changes?"

To get a sense of what a Dutch approach to the East Coast of the United States might look like, I stood, one sparkling day last June, at the edge of the Waal River, a tributary of the Rhine, in Nijmegen, a Dutch city on the German border. The Waal, which serves as the link between Rotterdam's port and many German cities, is Europe's busiest river, and a steady parade of container ships moved past. The water was high at this moment. The fact that the river both bends and narrows here has always meant a tendency to flood at Nijmegen. Twice in the 1990s, there were severe floods; during one, 250,000 people were forced to evacuate. After that, there was a consensus that something had to be done.

Dutch skill at water management goes back to the dikes, dams and windmills with which they reclaimed much of their land from the seas and rivers starting in the Middle Ages. In the 1950s, they constructed the Delta Works, a revolutionary series of storm-surge barriers along the North Sea coast. But thinking has evolved since then. With the increasing threat caused by climate change, Dutch engineers have developed strategies that go beyond simply trying to keep water out. The city of Rotterdam, for instance, is building floating houses and office buildings and digging craters in downtown plazas that will be basketball courts most of the year but will fill up with runoff during high-water periods, taking the strain off the surrounding streets.

The plan being put into place in Nijmegen and 38 other sites is called Room for the River. A wide trench is being cut through the city where the river bottlenecks — 50 farms and a number of residences are being relocated — and by summer 2015 an island will come into being. The island will form a new section of the city: Higher areas of it may contain apartment buildings; other, lower-lying sections will be developed into parks and beaches. During flood periods,

the lower sections of the island will simply be engulfed by water. The new embankments in this lower area will be stepped, in part so that people can relax there and enjoy views of the city center, but also to encourage daily awareness of the ever-changing water level.

When the plan was first presented, the reaction in the community was anger. To the Dutch, dams and dikes mean security. Actually allowing the water in went against centuries of ingrained thinking. But after a collaboration between city planners, community groups, the national ministry in charge of infrastructure and the region's water board, the town as a whole came around to the idea that because the world had changed, water management had to change as well. "Technically this isn't a very innovative project," Mathieu Schouten of the city's development office said. "It was the process that was innovative."

When the final design was unveiled at a community meeting in 2009, it included both expansive recreation areas and a level of security from water that promised to make the city attractive to new companies. Those who were initially most resistant to the project — residents of Lent, the community that was to be trimmed to make way for the river — started to clap. "The Applause of Lent," as the local newspaper called it, signaled what Ovink and other Dutch planners had been working toward: the acceptance of climate change as a way of life, and the dawn of a 21st-century approach to living with nature.

As we stood at the river's edge, away to the east behind us scenes of chaos were unfolding as unprecedented late-spring flooding caused deaths and mass evacuations in eastern Germany, the Czech Republic, Poland, Austria and Hungary. But here, at perhaps the river's most flood-prone spot, all was calm. When the project is complete, it should ease flooding concerns not just in Nijmegen but in Germany and beyond.

Last October, six months after Ovink came to the U.S., he stood onstage in an auditorium at New York University and gazed out at more than a thousand people: mayors, engineers, urban designers, power-company representatives, students and community activists. They jostled shoulder to shoulder to study large panels colorfully outlining approaches for dealing with beaches, rivers and cities. The crowd for the breakfast gathering was so much bigger than organizers

expected that there was near chaos when the coffee ran out.

To Ovink's amazement, virtually all relevant parties in the Northeast have grown receptive to what he has to say, with nary a word about angels. "It's weird!" he said with evident satisfaction.

Last summer, the Hurricane Sandy Rebuilding Task Force issued its report of recommendations for long-term change in the U.S., and it was filled with Ovink-like ideas. Among the recommendations: The Northeast has to work more to utilize existing ecosystems, like dunes and undersea barriers. Artificial storm-surge barriers need to be created in some places, but only as part of the larger regional picture (for example, if a barrier had gone up near the Verrazano-Narrows Bridge between Staten Island and Brooklyn during Sandy, it could have actually increased flooding in Manhattan). The recommendations also include things like revamping wastewater treatment, making the electrical grid less vulnerable and designing new affordable housing. Small details — like programming elevators not to go to the basement if there is flooding — are given attention. And water containment has to be layered into the urban landscape. Dutch cities now build huge reservoirs under new parking garages. "Every time you rebuild," Ovink said, "you have to think about water."

The new buzzword that accompanies all of this — "resiliency" — is intended as a nonpolitically charged way of getting at issues underlying climate change: the need to rebuild in ways that take ecology, economy, infrastructure and weather uncertainty into account. Much of the credit for the change in thinking has to go to Hurricane Sandy itself, which hit in one of the richest, most populous parts of the country and also the center of American media. And it came after a series of catastrophic events — Hurricane Katrina and other storms, but also 9/11 and the banking crisis of 2008 and the subsequent global economic downturn — which, taken together, seemed to solidify the feeling of living in an age of chronic uncertainty.

But Ovink is the man who has harnessed that energy. "We just do whatever Henk tells us," Donovan said with only a slight smile. Realizing that the best ideas would come from a range of thinkers, Ovink instigated a design competition, called Rebuild by Design. Some 148 teams made up of experts in a

variety of disciplines — architecture, urban design, engineering, ecology, communications — put forward ideas for rethinking development in the areas affected by Sandy. An innovative aspect of the competition was that the teams did not present actual projects to be judged. To do that would be to design with past crises in mind, which is too stiff an approach, given the uncertainties of climate change. (One of Ovink's mantras is: "We need to use the future as a reference, not the past.") Instead, they identified sets of problem points and areas of research.

Ten teams were given funding for field research toward scalable solutions to the region's problems. One team has focused on waterfront communities in New York City and is researching ways to decentralize electricity and other utilities, which would make neighborhoods more self-sufficient in a storm. Another plan would create a protective U that would wrap around Lower Manhattan, comprising parkland and retraction walls. Another has proposed new models for New Jersey's coastal towns that reimagine the beachfront: redeploying dunes, upgrading cities' water-storage capabilities and making boardwalks do double-duty as sea barriers. In the coming weeks, a final selection of projects will receive funding, and while the goal is to implement the designs in the region hit by Sandy, the long-term plan is to adapt them to other settings across the country.

For all the unexpected support Ovink and his ideas have received, some observers still maintain skepticism about how much change can be effected here, and how fast. "When I heard about Room for the River, and that Dutch farmers said, 'O.K., we'll allow our fields to be flooded in order to protect the city,' I thought, you're going to have a harder time with that kind of thing in the U.S.," said Armando Carbonell, a senior fellow at the Lincoln Institute of Land Policy. A prime example of the American resistance to regional thinking is New York City's response to Sandy: a 438-page report packed with 250 recommendations, which would achieve many of the goals that Ovink champions. But the report said little about cooperating with the wider tristate region. In an ideal Henk Ovink world, it would have been written in close consultation with neighboring jurisdictions. As it was, the city's report, as well as one issued by New York State, "express this fantasy that New Jersey doesn't exist, not to mention Connecticut," said Eric

Klinenberg, director of the Institute for Public Knowledge at New York University, a research center that works closely with Ovink.

Samuel Carter, an associate director at the Rockefeller Foundation, underscored that the very concept of regional planning is still a work in progress in the U.S. “A lot of people feel that it goes against the American character,” he said. Ovink experiences that pushback on a regular basis. He told me that not long ago he was in New Jersey talking with residents hit by Sandy who were raising their houses on stilts. He laid out for them a future situation in which, rather than have each homeowner undertake such difficult and expensive work, the community would embrace measures to protect an entire region from flooding. The response, he said, was, “That would be a socialistic approach.”

Nevertheless, Ovink said he believed this country’s individualistic attitude is in the process of giving way to the realities of climate change. One place he is paying close attention to is Hoboken, N.J., which sits right across the Hudson River from Manhattan and is particularly vulnerable to flooding. During Hurricane Sandy, 80 percent of the city was under water, and at least 90 percent of the residents were without power. In trying to recover and rebuild, Hoboken’s mayor, Dawn Zimmer, was schooled in how the American system is often at odds with communal solutions. The Federal Emergency Management Agency had money available, but there was a catch. “They were willing to give me funds to protect the fire station and the senior-citizen center,” she said. “That money could help get me an additional pump to protect all of Hoboken, but I couldn’t use it for that. Their policy goes against protecting communities.”

Zimmer became a fan of the approach developed in cities like Nijmegen. She has a holistic vision for Hoboken, which would attack the city’s problems from several angles. She wants buildings to install green roofs, covered with vegetation, to soak up rainwater. More trees in the urban landscape would help as well, and permeable sidewalks would allow water to drain. The city has spawned a volunteer group that is creating a “mesh network” of linked Wi-Fi spots to serve as an emergency communication system. Zimmer said she wanted to see cooperation across the whole region. “But I’m practical,” she said. “I think that’s going to take at least 10 years.”

In the meantime, Ovink said he was interested in Hoboken because the city could serve as a test case: regional planning in miniature. One of the Rebuild by Design teams has developed a plan for the whole city that would erect barriers and pumps, turn existing parks into water-containment basins, create a green belt of parkland around Hoboken to soak up excess water and reconceive the electrical grid. “Dawn Zimmer has the opportunity to deliver proof of a comprehensive approach within her jurisdiction,” Ovink said. “If Hoboken doesn’t flood when the next big storm hits, she can show everyone else that this works.”

Others, including some of Ovink’s biggest fans, caution that significant cultural change still has to occur before his vision takes root here. “It’s a long shot,” Eric Klinenberg said. “The only reason to think it will work is that we know if it fails, we’re essentially doomed.”

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