

BEYOND SANDY: HOW CLIMATE CHANGE HAS AFFECTED CITIES WORLDWIDE - I



In the final days of October, the world gaped in horror at the images of the devastation left by hurricane Sandy. Perhaps the most attention-grabbing were the photos taken of New York: the Manhattan Skyline blacked out, the iconic subway system turned into a virtual swimming pool in what the head of the MTA called “the worst disaster in this agency’s history,” and in the days after, the enormous lines to get on buses into Manhattan.

Other areas were affected too; the entire Northeastern United States was hit hard, and areas as far inland as Chicago reported damage, not to mention the incredible damage suffered by Haiti, Cuba, and other Caribbean nations.

Since Sandy is part of the trend of increasingly strong and destructive hurricanes, a discussion of climate change wasn't far behind. The storm injected the climate change issue into the discourse of the presidential campaign (previously, the issue of Paul Ryan in workout clothes had been more important), and while some in the media continued to deny it, most scientists agreed that climate change contributes to making storms, such as hurricane Sandy, worse.

But global climate change is more than something to be talked about for a couple of days after a destructive storm. Worldwide, it has changed the paradigm of planning and governance, especially for cities.

On the opposite side of the world from New York, the island nation of the Maldives is a place where global warming poses a particularly harrowing threat. If sea levels rise by as little as two meters, almost the entire nation will be underwater, which means that Maldivians have a particular interest in curbing current warming trends worldwide. Steps are also being taken to mitigate the damage of future flooding in the country.

The man-made island of Hulhumalé (pictured below), near the capital city of Malé, has been built at a higher level to fend off future sea level changes.



In addition, flood prevention measures were taken to ensure the safety of the island, such as tree planting and coral reef protection. The Maldivian government is also taking action to protect its citizens from the ravages of higher waters, instituting the “safer island strategy”, which would effectively relocate residents of at-risk islands to better-protected, larger islands. What this means in practice will depend on how the project is executed.

Global warming means problems for many other costal areas too; ice covers in Greenland and Antarctica continue to melt and could raise sea levels dramatically.

Several worst-case scenario maps have been made, but even a sea level rise of one meter could cause massive damage in low lying flatlands and river deltas, which is where many of the world's major cities are located.

This has prompted groups such as architecture firms and consultancies to explore anti-flood measures to be applied at the city-wide level, which include artificial wetlands to be used as park space, doubling as a buffer against rising sea levels. In Buenos Aires, my current place of residence and a city that ironically experienced flooding at the same exact time as the hurricane hit in the US, a failed housing development to be built on an artificial peninsula was later converted into an ecological reserve. Since its creation, the reserve (pictured below) has helped to block rising water levels from the central city. Similar ideas have been floated for post-Sandy New York.



Rising sea levels have also affected supplies of fresh water. In the case of the island nation of Cyprus, higher waters have turned drinking water reserves salty, wreaking havoc for the inhabitants of the island.

In other areas, global climate change means not wetter but drier conditions. Continued heating of the planet could lead to water shortages, prompted by droughts such as those seen earlier this year in the US and England. To combat this issue, a number of new measures are being tested. In the US state of California, a state as famous for its water shortages as for its sprawl, a new law created the California Water Authority Infrastructure Line, which creates a limit beyond which new water infrastructure cannot be built. Since sprawl is much worse for water systems than density, this measure is an effective check on untethered suburban growth. In addition, governing bodies at all levels are implementing expanded regulations on individual water use, as well as initiatives for purchasing water efficient hardware such as faucets and shower heads, as seen in the UK with the update of Building Regulations Part G. The UK government has also put new meters into effect, which help to curb overuse. Innovative programmes also exist in Australia and Singapore.

Source: <http://thisbigcity.net/beyond-sandy-how-climate-change-has-affected-cities-worldwide/>