

## The Asia-Pacific in the Eye of Super-storms スーパーストームの目におかれたアジア太平洋地域

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Super-storm Haiyan made a devastating landfall in the east-central Philippines on November 8, leaving behind a trail of death and destruction that has draped the whole country in a pall of grief. The Philippines has since been reeling from this disaster. The typhoon buffeted the most vulnerable of Filipinos, 40% of whom live below the poverty line (<http://onpoint.wbur.org/2013/11/13/typhoon-haiyan-philippines-climate-change>) (i.e., \$1.25 a day). Many of them fished for living. Their livelihood compelled them to live dangerously close to the shoreline of western Pacific. The highest ground on which some of them found their perch was just one meter above sea level. When the storm swelled, with waves as high as six meters, its poor victims were defenseless. The crashing walls of water swept away all that they possessed. The cumulative losses in lives and livelihoods, homes and hearths, businesses and infrastructure have no parallel in Philippines history, just as Haiyan has no precedent in the annals of meteorology. As of now, 13million Filipinos, of whom 5 million are children

(<http://www.wfla.com/story/23991224/typhoon-haiyan-a-crisis-by-the-numbers>), have been scarred by the destructive fury of Haiyan, while 600,000 have been rendered homeless (<http://www.economist.com/news/asia/21589916-one-strongest-storms-ever-recorded-has-devastated-parts-philippines-and-relief>). The number of deaths may climb past 10,000.



The staggering scale of humanitarian crisis that followed Haiyan's landfall was well beyond the capacity to respond of the underresourced and overstretched Philippine government. Oxfam (<http://onpoint.wbur.org/2013/11/13/typhoon-haiyan-philippines-climate-change>) found it even overwhelming for the global humanitarian assistance system. The largest brunt of recovery efforts, however, fell on the Philippines itself,

which Haiyan had already bled of precious resources. As of November 16, its economic losses alone were valued at a whopping \$15 billion

(<http://rt.com/business/philippines-hurricane-economic-losses-581/>) that is 5% of the Philippines's Gross Domestic Product (GDP) of around \$300 billion. In the face of a slow-down in global and regional economies, it will take the country many years of hard work before it recovers its bearing. Future forecasts are even more sobering for average Filipinos and their leaders. As a nation of 7,100 islands, the Philippines sits on the front line of global climate change. This tragically means typhoon Haiyan is not the last of nature's bites that Filipinos will have to endure. As climate change begins to impose dire costs, more such disasters loom ever larger on the horizon. The Philippines has already borne the brunt of worsening climate change in economic losses of \$1.6bn a year--from increasingly frequent and intense typhoons.

### Ground Zero of Climate Change

The Philippines is among the Asian nations that seem to have become ground zero for climate change. Many coastal and island nations in Asia are already among its fellow sufferers. In the Bay of Bengal, Bangladesh has become the most exposed country to worsening climatic events. Year after year, it is battered by cyclones of ever higher intensity and ever greater frequency. In a single event of extreme weather, hundreds, and

sometimes thousands, lose their lives. Besides, economic and social dislocation visits upon the millions, leaving them stranded for months, and even years. If global mean warming exceeds 1.5 degree Celsius, the largest chunk of coastal Bangladesh will begin to teem with "climate refugees." By Bangladesh (<http://www.theguardian.com/environment/2009/nov/30/rich-west-climate-change>)'s own reckoning, 20 million of its citizens may face climate migration over the next 40 years, for whom it proposes their "managed migration" to western countries. Rajendra Pachauri (<http://www.theguardian.com/environment/2009/nov/30/rich-west-climate-change>), Chairman of the Intergovernmental Panel on Climate Change (IPCC), lends his voice to Dacca's call. He asks western governments to give the "managed migration" a serious consideration.

Even worse, the island nation of Maldives (<http://www.theguardian.com/environment/2009/mar/15/carbon-emissions-climate-change?uni=Article:in%20body%20link>), which is barely 1.5 meters above sea level, will vanish from the face of the earth in the next 50 years, as the global average temperature continues to rise. A nation of 1,200 islands, Maldives has already seen 30 of its islands swept away in the tsunami in 2004.



**A low lying archipelago with more territorial sea than land, the Maldives is exposed to the risks of intensifying weather event.**

Five years after, in 2009, Maldives's President Mohamed Nasheed (<http://www.theguardian.com/environment/2009/mar/15/carbon-emissions-climate-change?guni=Article:in%20body%20link>) struck the world with a blunt call for ending fossil fuel consumption to save his country of 328,000 people: "If the world can't save the Maldives today, it might be too late to save London, New York or Hong Kong tomorrow (<http://www.theguardian.com/environment/2009/mar/15/carbon-emissions-climate-change?guni=Article:in%20body%20link>)." He pledged to make his nation carbon-neutral, running it on 100% renewable energy. Anticipating challenges that could forestall passage to a carbon-free Maldives, he reasoned: "Going green might cost a lot but refusing to act now will cost us the Earth." He was deposed in a coup in 2012. He again lost a presidential bid in November this year as beneficiaries of the status-quo managed to keep him out of power. Nobody

knows "who" won the Maldives's election, but everybody knows who lost it and why. President Nasheed nonetheless, retains his role as a climate crusader, whom many revere. The Hollywood Director Jon Shenk honored his work for climate justice in a memorable documentary, *The Island President* (<http://theislandpresident.com/>).

Like the Maldives, Sri Lanka also is precariously perched in the heart of the Indian Ocean that makes it no less vulnerable. Known for its stunning scenic beauty, this island nation has long been convulsed in a self-destructive war. It has just staunched its bleeding, but it still has a long way to go to bind up the deep wounds. At the same time, Sri Lanka has many bright spots. It leads south Asia in economic development (measured in per capita income), social progress (measured in adult literacy), gender equity, and climate-readiness. It is a Kerala -- the beauty spot of south Asian social democracy -- on the national scale!! Yet climate-induced disruptions stare at it as the greatest threat (<http://www.theguardian.com/world/2013/nov/13/climate-change-sri-lanka>) to its survival over the next half century. "Its agriculture, fisheries, and tourism are particularly vulnerable to rising sea levels and weather-related disasters," reports Guardian (<http://www.theguardian.com/world/2013/nov/13/climate-change-sri-lanka>). Likewise, the coastal communities of India and Pakistan -- in that order -- run the same risk of being deluged as

sea levels rise. In 2010, Pakistan experienced a different kind of climatic event of a one-in-100-years flood that forced 20 million of its residents from their homes, and cost the country \$20 billion (one-tenth of Pakistan's GDP of \$200 billion in 2010) in economic losses.

### **Climate Change stalks the African Continent**

Fragility of the African continent is even more sobering. Drought, desertification, livestock fatalities, infectious diseases, food shortages and water scarcities already stalk the length and breadth of the region. Climate change is sharpening the lethality of these murderous challenges, and exacerbating the conditions of environmental decline in general. The giant nations of Africa, such as Congo, Libya, Nigeria, Somalia and Sudan, are already in the throes of ecological depletion. Their political conflicts are deeply anchored in their fragile ecologies. However, African sufferings may go unnoticed, as they are less likely to suffer visually spectacular disasters on the scale of Hurricane Katrina, Super-storm Sandy or Typhoon Haiyan. Climate-induced disasters may yet trigger epidemics, large-scale human fatalities, or mass migration that would thrust the continent on to the world's retina. It will likely occur because of sudden overheating of the continent. It must be remembered that Africa is already the warmest continent on the planet. Libya is the continent's thermal power house, whose citizens are known to have endured the world's peak temperature.

Just as a few degree warmer water in the Atlantic or the Pacific can spell disasters, so can a few degrees warmer atmosphere. For all these reasons, Africa is as much in the eye of superstorms as are Asian nations. Africa stands threatened by the warming of the atmosphere that can set off a trajectory of destructive events. It is particularly fraught with climatic threats of epidemics, human fatalities, or mass migration, compounded by political conflicts that sear the entire continent.

### **The Science of Typhoons**

A section of meteorologists are still dismissive of causal links between climate change and the production of cyclones, typhoons, hurricanes or super-storms like Haiyan. Such dismissals, however, only feed into climate skepticism. The science of typhoons and climate change is quite clear. When the IPCC released its fifth assessment report (<http://www.ipcc.ch/report/ar5/wg1/#.UorpfWbnZIY>) on September 27, it confirmed warming of the atmosphere and overheating of the oceans -- the latter is responsible for the production of cyclones. When sea surface temperature hits 26 degree Celsius (<http://theenergycollective.com/users/jim-baird>), a cyclone is formed. When oceans are a few degrees warmer than normal, superstorms begin to brew. Superstorm Sandy (<http://theenergycollective.com/jim-baird/303591/wanted-climate-bounty>) burst out of the

Atlantic coastal water that was about 3 degree Celsius warmer than normal. Similarly, surface temperature of the western Pacific (<http://theenergycollective.com/jim-baird/303591/wanted-climate-bounty>) was 1 to 5 degree Celsius warmer in 2013 than its average range in 1980-2000. Warmer oceans evaporate faster to power the storm, and warmer atmosphere holds more moisture to cause rainstorms.

The atmospheric scientist Kerry Emanuel (<http://onpoint.wbur.org/2013/11/13/typhoon-haiyan-philippines-climate-change>) at Massachusetts Institute of Technology (MIT), who also serves on the IPCC, sees clear connections between the warming of the oceans and the production of high velocity winds and storm surges as witnessed in Haiyan. He went so far as to suggest that developing nations such as the Philippines are suffering for the sins of developed countries that followed the path of carbon-heavy development. He stopped short of suggesting compensation for climate mitigation to developing nations.

### Financing Climate Adaptation

But financing of climate adaptation has been an important part of climate change talks since the Copenhagen Conference in 2009. Haiyan's landfall only added to the urgency of this need, which happened to time its landing with climate talks (COP 19) in Warsaw, Poland, on November

11-22. These talks are held each year in the run up to crafting a binding climate treaty in 2015 to replace the Kyoto Protocol. One important outcome of the Copenhagen Conference was the financial commitments by developed nations to help less affluent nations in adapting to climate-induced disruptions. Initially, developed countries committed \$30 billion for 2010-12, and pledged to increase this commitment to \$100 billion a year by 2020 ([http://www.theecologist.org/News/news\\_analysis/2158539/cop19\\_poor\\_countries\\_in\\_the\\_dark\\_on\\_climate\\_finance.html](http://www.theecologist.org/News/news_analysis/2158539/cop19_poor_countries_in_the_dark_on_climate_finance.html)). Oxfam, however, deflated such hopes in an analysis ([http://www.theecologist.org/News/news\\_analysis/2158539/cop19\\_poor\\_countries\\_in\\_the\\_dark\\_on\\_climate\\_finance.html](http://www.theecologist.org/News/news_analysis/2158539/cop19_poor_countries_in_the_dark_on_climate_finance.html)) which showed that developed nations had begun to wriggle out of even a modest commitment of \$30 billion spread over multiple years. It further dampened any prospect for redeeming the grand pledge of \$100 billion a year in climate finance by 2020.

### Disaster Capitalism

These public commitments are likely to be relegated to transnational financial capital. Some saw the first sign of it in choosing Poland, which stands out for its pro-business, climate-skeptic, coal-fired development ([http://www.theecologist.org/News/news\\_analysis/2158539/cop19\\_poor\\_countries\\_in\\_the\\_dark\\_on\\_climate\\_finance.html](http://www.theecologist.org/News/news_analysis/2158539/cop19_poor_countries_in_the_dark_on_climate_finance.html)) trajectory, as the site of climate talks. No wonder that at, the United



Nations' climate talks in Warsaw, discussions were focused on "mobilizing private finance such as loans and equity investments ([http://www.theecologist.org/News/news\\_analysis/2158539/cop19\\_poor\\_countries\\_in\\_the\\_dark\\_on\\_climate\\_finance.html](http://www.theecologist.org/News/news_analysis/2158539/cop19_poor_countries_in_the_dark_on_climate_finance.html))."

Private finance hotly pursues profits even in the midst of people's sufferings. It is no coincidence that risk management companies that specialize in "catastrophe modeling" are proliferating. The chief research officer (<http://rt.com/business/philippines-hurricane-economic-losses-581/>) of one such company gloomily noted meager financial prospects in rebuilding the Philippines: "The economic activity of reconstruction itself is much lower [in the Philippines] than it would be in a rich country where everybody's using insurance and claims assessors and getting quotes from builders. A lot of people [in the Philippines] will end up mending their own houses." Naomi Klein famously described this profit-riven approach to human tragedies as "disaster capitalism."

### **"End this Madness!!"**

The IPCC in its fifth assessment report concluded with 95% certainty that humans are at the root of climate change. This conclusion seems an official inauguration of Anthropocene, the age of human extravagance, in which humans have evolved or (more appropriately) devolved into a geological force on the scale of volcanoes, earthquakes, and tsunamis to have altered the atmosphere,

hydrosphere and biosphere. In the process, this hubris has hung a huge question mark over the very survival of the human race on this planet. Yet all humans are not equally destructive; nor are they equally vulnerable. Many, as in the Philippines, are victims of the actions of the few who are driving climate change and planning to profit from it at the same time. Among them, the fossil fuel industry and its beneficiaries, who are accumulating \$1.9 trillion a year in subsidies (<http://www.imf.org/external/np/sec/pr/2013/pr1393.htm>), in addition to immense profits, sit atop. Climate change is the sin of their profiteering, for which the global poor are atoning with their lives. As the Philippine delegate to the United Nations' climate talks in Warsaw tearfully pleaded, this madness must end

(<http://www.telegraph.co.uk/news/worldnews/asia/philippines/10443293/Typhoon-Haiyan-Philippines-climate-change-commissioner-breaks-down-at-UN-talks.html>). It doesn't make sense to sacrifice the primary Earth economy for the illusory secondary human economy that is measured in the piles of worthless paper money built by "quantitative easing" (printing money).

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