Aon Benfield

2014 Annual Global Climate and Catastrophe Report

Impact Forecasting

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Executive Summary

Down Again: 2014 Catastrophe Losses Below Average

Global natural disasters[1] in 2014 combined to cause economic losses of USD132 billion, 37 percent below the ten-year average of USD211 billion. The losses were attributed to 258 separate events, compared to the ten-year average of 260. The disasters caused insured losses of USD39 billion, 38 percent below the ten-year average of USD63 billion and was the lowest insured loss total since 2009. This was the second consecutive year with below normal catastrophe losses. Notable events during the year included major flooding in India, Pakistan, China, and Southeast Europe; billion-dollar convective thunderstorm events in the United States, France, and Germany; winter storms in Japan and the United States; and widespread drought in the United States and Brazil. The top three perils, flood, tropical cyclone, and severe weather, combined for 72 percent of all economic losses in 2014. Despite 75 percent of catastrophe losses occurring outside of the United States, it still accounted for 53 percent of global insured losses, driven by a higher insurance penetration.

The deadliest event of 2014 was a multi-month stretch of flash flooding and landslides that left an estimated 2,600 people dead in Afghanistan. A total of 13 tropical cyclones (Category 1+) made landfall globally in 2014; slightly below the 1980-2013 average of 16. Ten of the landfalls occurred in the Northern Hemisphere, including six in Asia. The U.S. endured one landfall but it was a Category 2 and below major hurricane Category 3+ intensity. The U.S. has now gone a record nine consecutive years without a major hurricane landfall. Also, 2014 ended as the warmest year recorded since global land and ocean temperature records began being kept in 1880.

The catastrophic September flood event across northern India and Pakistan was the costliest single economic loss event of the year causing an estimated USD18 billion[2] in damage. This was the fifth consecutive year that Pakistan registered a billion-dollar flood event.

From an insurance industry perspective, the two costliest insured loss events of the year were spawned by the severe thunderstorm peril in June (Europe: USD3.0 billion) and May (United States: USD2.9 billion).

No region of the world sustained aggregate insured losses above their ten-year averages in 2014. The Americas (Non-U.S.) and Asia Pacific (APAC) were closest to their insured averages; while the United States and Europe, the Middle East, and Africa (EMEA) were well below normal. The top ten insured loss events in 2014 comprised of five severe weather outbreaks (four in the U.S.), two winter weather events (Japan and the U.S.), Hurricane Odile (Mexico), flooding (United Kingdom), and drought (U.S.)

Along with this report, users can access current and historical natural catastrophe data and event analysis on Impact Forecasting's Catastrophe Insight website: **www.aonbenfield.com/catastropheinsight.** The website is updated bi-monthly as new data becomes available.

[1] Natural disasters are defined as an event that meet at least one of the following criteria: economic loss of USD50M, insured loss of USD25M, 10 fatalities, 50 injured or 2,000 homes or structures damaged. See page 7 for more details. All historical loss amounts have been adjusted to 2014 USD unless otherwise stated.

[2] Subject to change as loss estimates are further developed

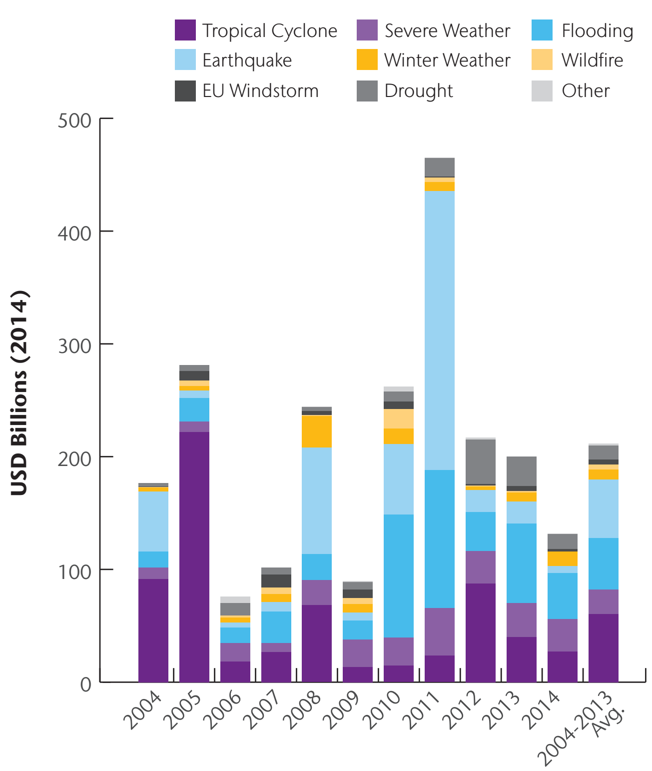
2014 Natural Disaster Events and Loss Trends

Global Economic Losses

Exhibit 1: Top 10 Global Economic Loss Events

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)	Insured Loss (USD)
September	Flooding	India, Pakistan	648	375,000	18 billion	700 million
October 12-14	Cyclone Hudhud	India	68	200,000	11 billion	650 million
July 15-20	Typhoon Rammasun	China, Philippines, Vietnam	206	1,000,000	7.2 billion	300 million
Summer	Drought	China	N/A	N/A	5.2 billion	750 million
February 8-16	Winter Weather	Japan	95	288,000	5.0 billion	2.5 billion
May 13-21	Flooding	Southeast Europe	86	150,000	4.5 billion	250 million
Yearlong	Drought	Brazil	N/A	N/A	4.3 billion	450 million
June 18-20	Severe Weather	France, Germany	6	750,000	4.0 billion	3.0 billion
May 18-23	Severe Weather	United States	0	425,000	4.0 billion	2.9 billion
Yearlong	Drought	United States	N/A	N/A	4.0 billion	1.5 billion
				All Other Events	65 billion	26 billion
				Totals	**132 billion[1]**	**39 billion[1,2]**

Exhibit 2: Global Economic Losses by Peril



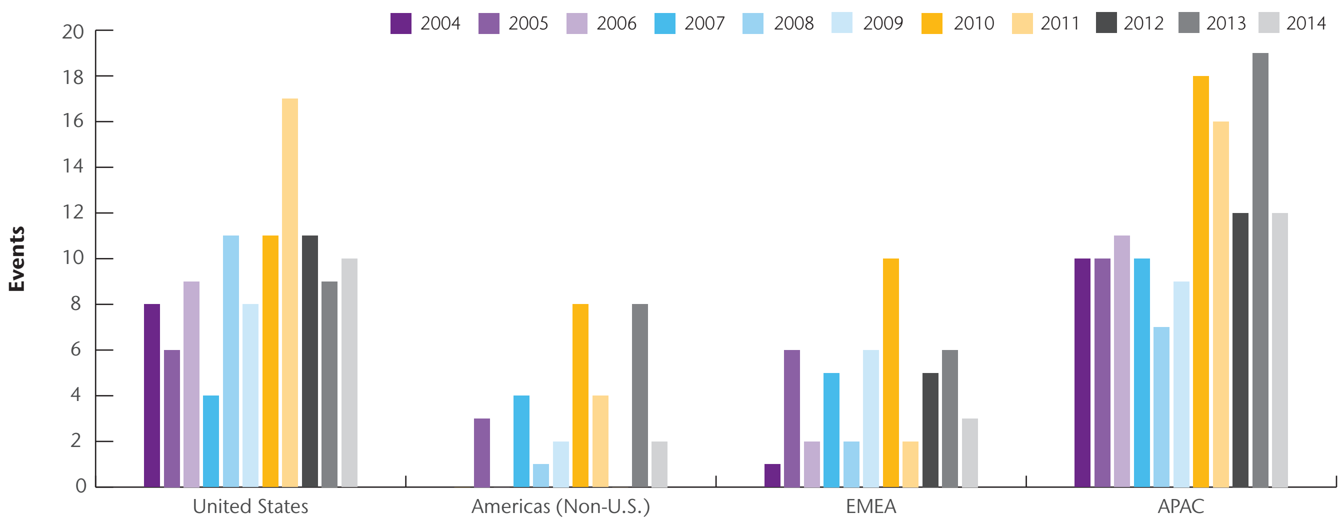
Economic losses in 2014 were driven by the flood, tropical cyclone, and severe weather (thunderstorm) perils, which accounted for 72 percent of global natural disaster losses. Flood was the overall costliest peril, although only two of the top ten costliest events were flood-related. Each caused extensive damage and loss of life. The most economically costly event of the year occurred in the Kashmir region, where September floods caused upwards of USD18 billion in damages in India and Pakistan. In May, record rainfall led to substantial flooding throughout the Balkans in Southeast Europe. Additional major flood events occurred in the United Kingdom, China, and the United States. Other perils that caused aggregate economic losses in excess of USD25 billion were tropical cyclone and severe weather. Approximately 81 percent of all economic losses during the year occurred in either Asia (57 percent) or the United States (24 percent).

Total losses in 2014 were 37 percent below the inflation adjusted ten-year average of USD211 billion. This represents the lowest total economic losses from natural disasters since 2009.

[1] *Subject to change as loss estimates are further developed*
[2] *Includes losses sustained by private insurers and government-sponsored programs*

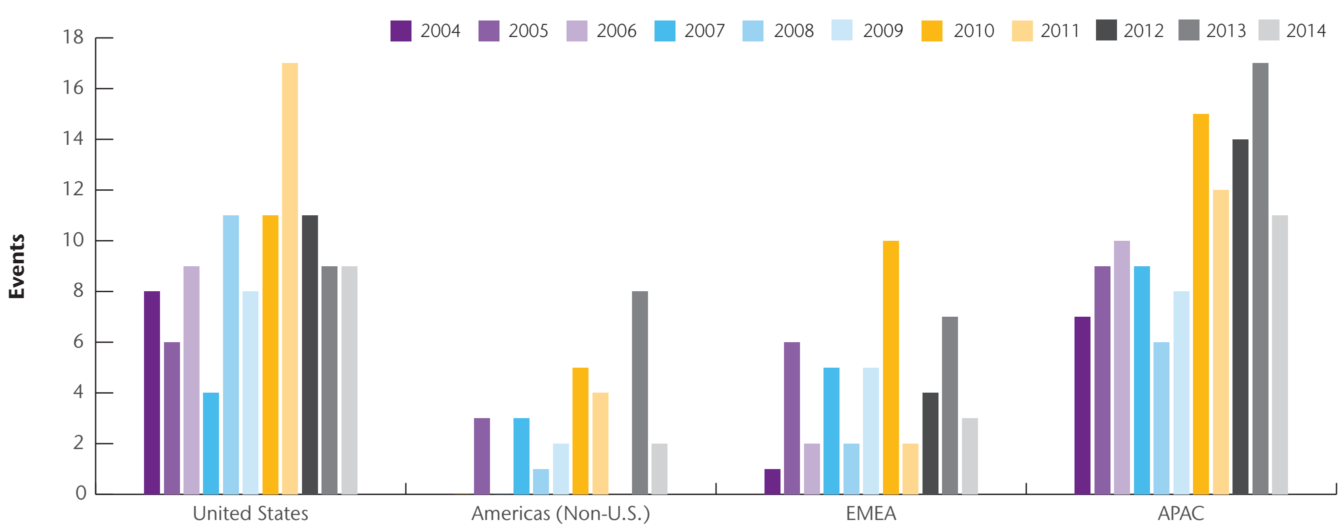
There were 27 individual billion-dollar natural disaster events in 2014, slightly below the ten-year average (29). The tally in 2014 was substantially fewer than the 42 in 2013. APAC endured the most billion-dollar-plus events in 2014 with 12 separate instances, most of which occurred in China. The United States registered 10 billion-dollar events, which was slightly above the 9 in 2013.

Exhibit 3: Billion-Dollar Economic Loss Events by Region (All Natural Disasters)



For weather-only events, there were 25 billion-dollar disasters in 2014, slightly fewer than the ten-year average (27). The tally in 2014 is the lowest total since 2009 (23) and significantly fewer than the 41 in 2013. APAC endured the most billion-dollar-plus events in 2014 with 11 separate instances, with the United States second with 9 such events.

Exhibit 4: Billion-Dollar Economic Loss Events by Region (Weather Only)



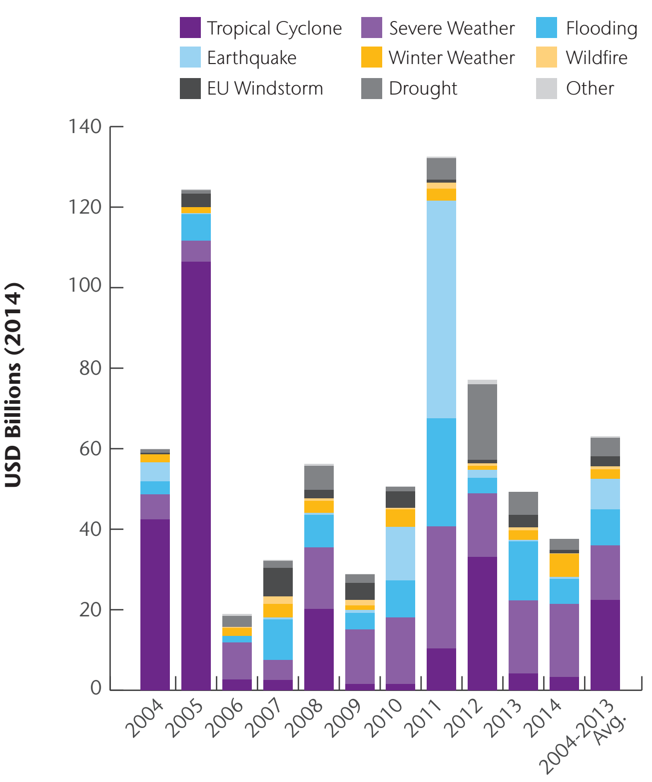
Note: Exhibits 3 & 4 include events which reached the billion-dollar-plus (USD) threshold after being adjusted for inflation based on the 2014 U.S. Consumer Price Index.

Global Insured Losses

Exhibit 5: Top 10 Global Insured Loss Events

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)	Insured Loss (USD)
June 8-10	Severe Weather	France, Germany, Belgium	6	750,000	4.0 billion	3.0 billion
May 18-23	Severe Weather	United States	0	425,000	4.0 billion	2.9 billion
February 8-16	Winter Weather	Japan	95	288,000	5.0 billion	2.5 billion
January 5-8	Winter Weather	United States	21	150,000	3.0 billion	1.6 billion
Yearlong	Drought	United States	N/A	N/A	4.0 billion	1.5 billion
June 3-9	Severe Weather	United States	3	115,000	1.7 billion	1.3 billion
September 10-17	HU Odile	Mexico	5	50,000	2.5 billion	1.1 billion
Apr/May 27-1	Severe Weather	United States	39	115,000	1.6 billion	1.1 billion
April 2-4	Severe Weather	United States	0	160,000	1.5 billion	1.1 billion
Winter 2014	Flooding	United Kingdom	0	420,000	1.5 billion	1.0 billion
				All Other Events	105 billion	22 billion
				Totals	**132 billion[1]**	**39 billion[1,2]**

Exhibit 6: Global Insured Losses by Peril



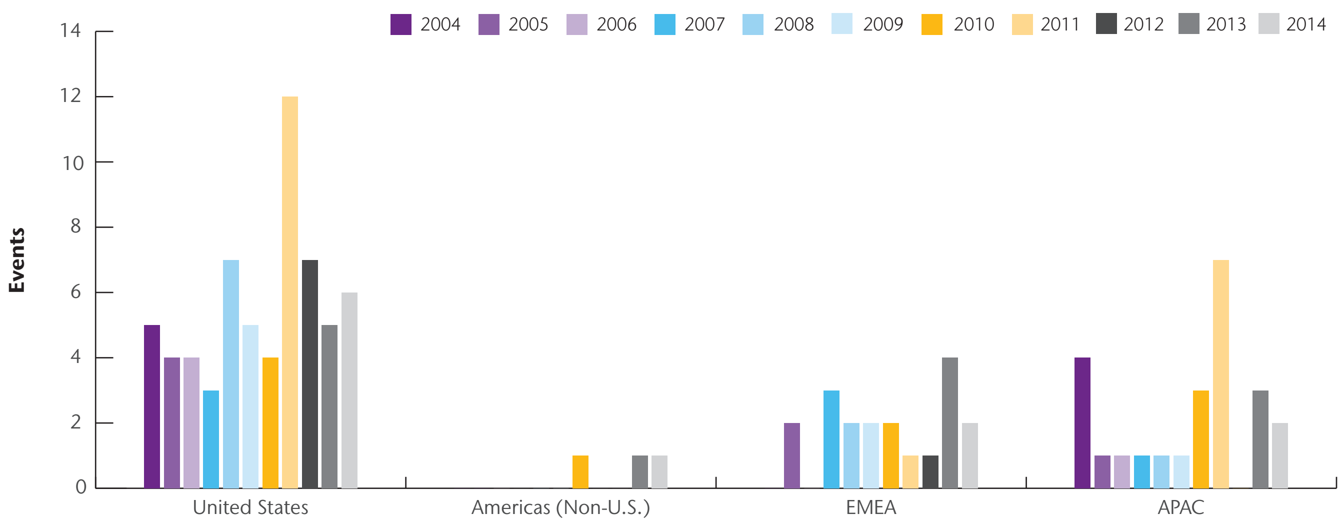
[1] *Subject to change as loss estimates are further developed*
[2] *Includes losses sustained by private insurers and government-sponsored programs*

The costliest global insured event in 2014 occurred in Europe: a significant hailstorm (known locally as "Ela") that impacted parts of France, Germany, and Belgium in June and caused up to USD3.0 billion in losses. This was the second consecutive year that the industry coped with a multi-billion dollar hailstorm in this region. In the United States, a powerful late-May multi-day severe weather outbreak swept across a broad section of the country and caused at least USD2.9 billion in payouts. Six of the top ten insured loss events occurred in the United States, four of which were attributed to severe weather, one to winter weather and one to drought. The exceptional U.S. drought losses are linked to crop insurance payments by the U.S. Department of Agriculture's Risk Management Agency program. Additional notable insured loss events in 2014 included Hurricane Odile, which became the second-costliest hurricane in the history of Mexico's insurance industry, and major flooding across the United Kingdom during the first quarter of the year.

2014 insured losses were 38 percent below the inflation-adjusted, ten-year average (2004-2013) of approximately USD63 billion.

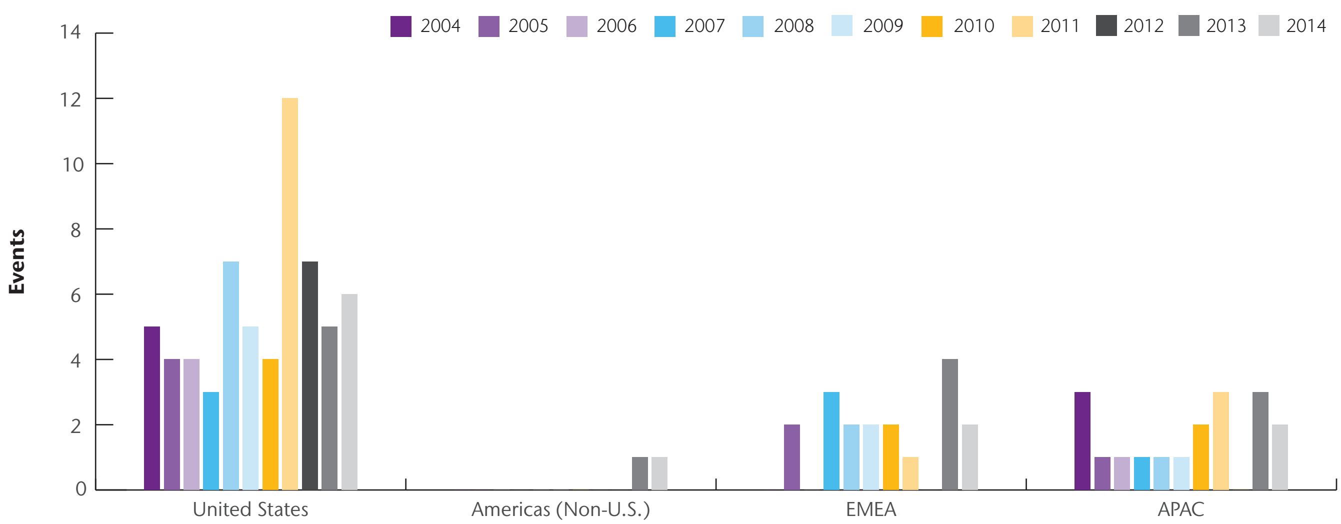
There were 11 billion-dollar-plus insured loss events in 2014. This is slightly below the 13 seen in 2013, but above the ten-year average (10). Of the 11, six occurred in the United States. This is equal to the longer term average. The other five events occurred in EMEA (2), APAC (2) and the Americas (1).

Exhibit 7: Global Billion-Dollar Insured Loss Events by Region (All Natural Disasters)



In terms of weather-only billion-dollar-plus insured loss events, there were also 11 in 2014. This is below the 13 recorded in 2013, but slightly above the 2004-2013 average (9). Of the 11, six occurred in the United States. This is equal to the longer term U.S. average. The other five events occurred in EMEA (2), APAC (2), and the Americas (1). The all-time record is 16, which was set in 2011.

Exhibit 8: Global Billion-Dollar Insured Loss Events by Region (Weather Only)



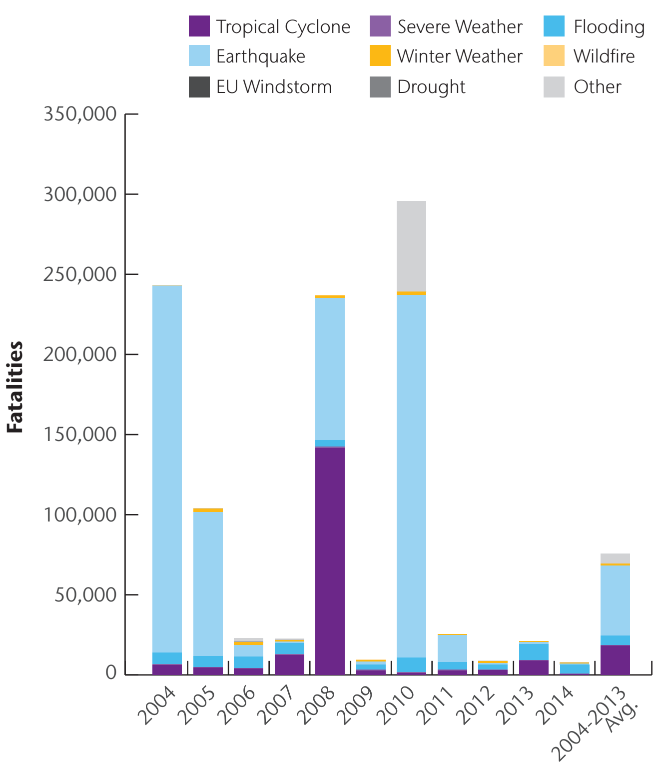
Note: Exhibits 7 & 8 include events which reached the billion-dollar-plus (USD) threshold after being adjusted for inflation based on the 2014 U.S. Consumer Price Index.

Global Fatalities

Exhibit 9: Top 10 Human Fatality Events

Date(s)	Event	Location	Deaths	Economic Loss (USD)
April/June	Flooding	Afghanistan	2,665	240 million
September 2-15	Flooding	India, Pakistan	648	18 billion
August 3	Earthquake	China	617	3.3 billion
Winter/Spring	Drought	Pakistan	248	18 million
August 11-16	Flooding	India, Nepal	214	82 million
July 30	Flooding	India	209	N/A
July 15-20	STY Rammasun	China, Philippines, Vietnam	206	7.2 billion
August 2	Flooding	Nepal	156	15 million
June 6-7	Flooding	Afghanistan	150	N/A
February 8-16	Winter Weather	Japan	95	6.25 billion
		All Other Events	~2,500	95 billion
		Totals	**~8,000**	**132 billion**

Exhibit 10: Global Human Fatalities by Peril



The number of human fatalities caused by natural disasters in 2014 was approximately 8,000. Each of the top ten events occurred in Asia, with the deadliest event being a multi-month stretch of massive floods in Afghanistan that left more than 2,600 people dead. There remains some uncertainty in the exact toll from this event given the enormity of the flood extent. Flooding was the deadliest peril of the year, comprising nearly 73 percent of human fatalities. The 617 casualties from an August earthquake in China was the deadliest event for the peril in the country since April 2010. Other events in the top ten included Super Typhoon Rammasun's impacts in the Philippines, China, and Vietnam, as well as a severe drought event that led to food shortages in parts of Pakistan.

2014 saw a decline in natural disaster-related fatalities from those sustained in 2013, and was an even more substantial 89 percent lower than the 2004-2013 average of roughly 76,000. In the last ten years, major singular events (such as earthquakes in Haiti (2010), China (2008), and Indonesia (2004)) and Cyclone Nargis' landfall in Myanmar (2008) have skewed the annual average.

Natural Disasters Defined and Total Events

An event must meet at least one of the following criteria to be classified as a natural disaster:

- Economic Loss: USD50 million
- Insured Loss: USD25 million
- Fatalities: 10
- Injured: 50
- Homes/Structures Damaged: 2,000

Based on these criteria, there were at least 258 separate natural disaster events in 2014, which was slightly below the 2004-2013 average of 260. The second and third quarters are typically the most active during the year, though the first and third quarters were the most active in 2014. APAC sustained the highest number of events, which is to be expected given the region's large size and susceptibility to natural disaster events. The United States was the second-most active region of the globe.

Exhibit 11: Total Events by Quarter

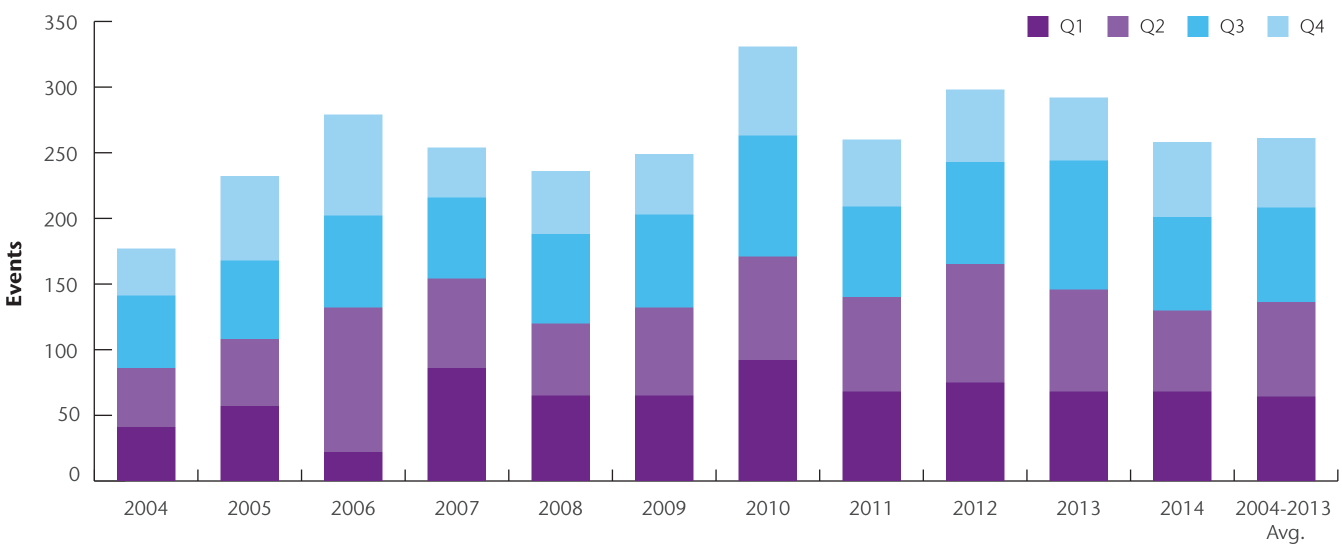
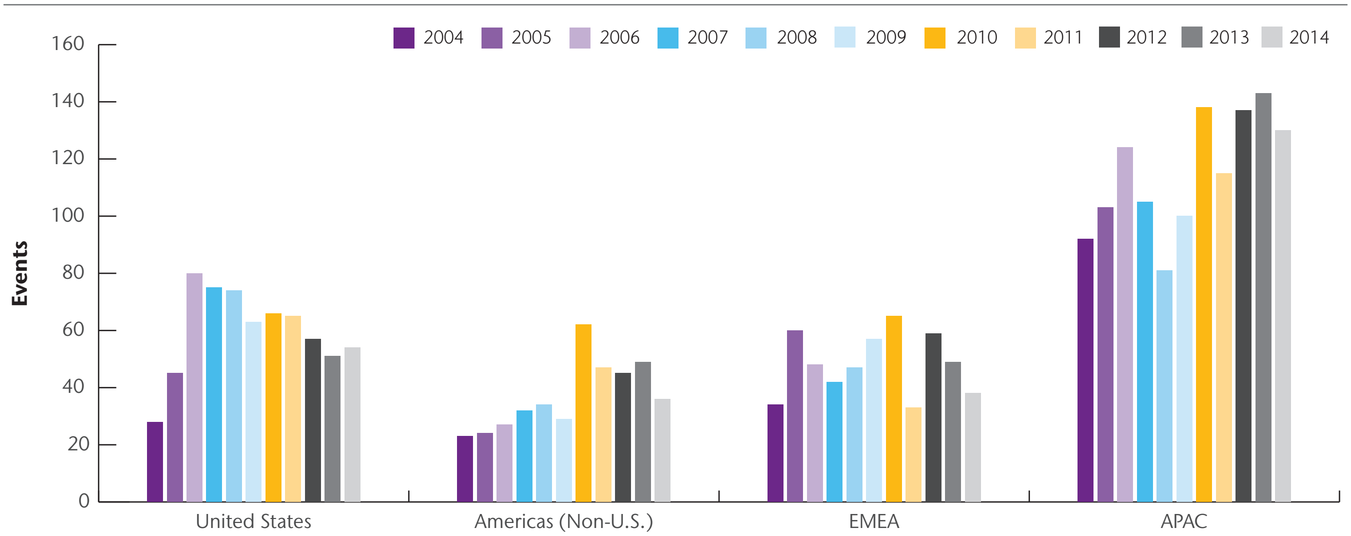


Exhibit 12: Total Events by Region



What Factors Drive Weather Loss Trends?

One of the more passionate discussion topics today surrounds increased weather catastrophe losses. There are many critical variables that are involved in the discussion of increasing weather losses, including climate, population, urbanization, economics, and insurance penetration. Given the vast catalogue of literature available in the public realm published by climate scientists, this piece will instead dig deeper into select non-climate demographic and economic drivers.

Weather Catastrophe Losses

According to Aon Benfield historical data, weather disasters have caused USD3.6 trillion in economic damage on an inflation-adjusted basis since 1980 and annual average economic losses have increased with each decade: USD55 billion in the 1980s, USD103 billion in the 1990s, USD111 billion in the 2000s, and USD180 billion thus far in the 2010s. This data translates to an annual increase of 7.3 percent in nominal dollars and 4.1 percent above inflation on an economic basis. Of the top ten costliest weather years, seven have occurred since 2000. The costliest year came in 2005 (USD273 billion), when one of the most destructive tropical cyclone years in history inflicted catastrophic damage across the southeastern United States.

During the same timeframe, private and public insurance entities have paid out more than USD960 billion in weather-related loss claims since 1980. This equals an alarming 10.9 percent increase in nominal dollars and 7.7 percent above inflation.

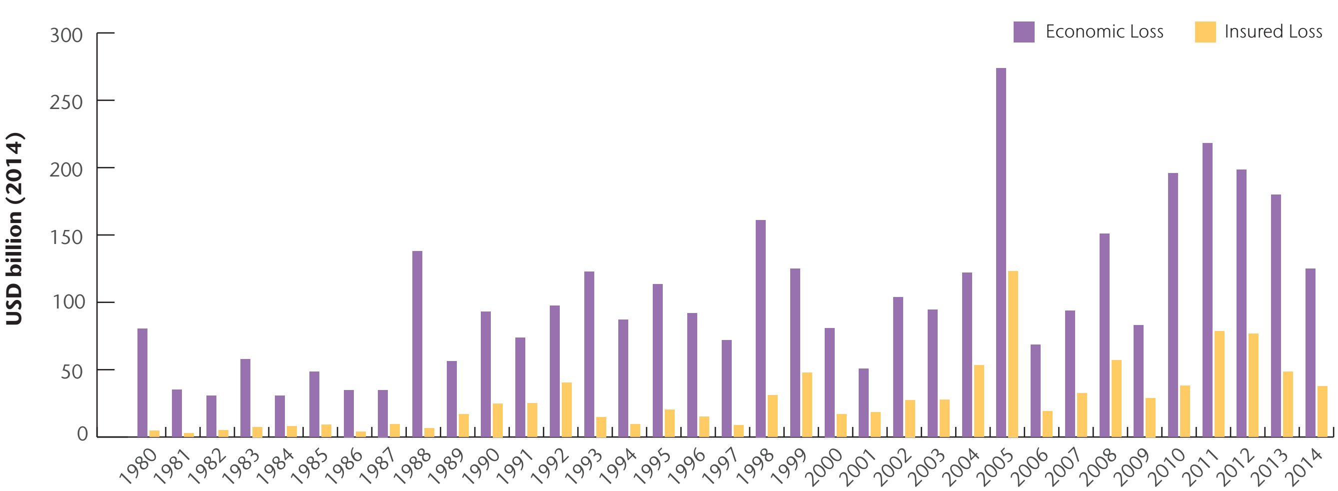
Population and Urbanization

Global population has seen tremendous growth during the past seven decades. In 1950, the population was roughly 2.6 billion, but had surged to 6.9 billion by 2010. This equals a compound average growth rate of 1.6 percent from 1950-2010. The seven billion population threshold was crossed in October 2011, and census estimates believe that eight billion will be reached sometime in the spring of 2024. This represents a slightly lower annual growth rate of 1.0 percent.

In addition to population growth, there has been migration to areas more exposed to weather losses. Today, 44 percent of the current world population, or 3.2 billion people, live within 150 kilometers (95 miles) of an ocean coastline. This is more than the entire global population in 1950. Eleven of the top 15 most populous world cities are located along ocean coastlines. In the United States, a country particularly vulnerable to hurricane landfalls, 39 percent of the population, or 123 million people, live in counties immediately along the coast and 52 percent live in counties that drain to coastal watersheds. A NOAA study indicated that there was a 39 percent, or 34.8 million, increase in coastal shoreline county population between 1970 and 2010. Another 8 percent growth, or 10 million people, is expected by 2020.

Observed trends in the U.S. also appear in Asia but on an even larger scale. The latest census data indicates that more than one billion people presently live in low-lying areas directly along the Pacific and Indian Ocean coasts; this equals more than one-third of the entire global coastal population. China is most at-risk with 400 million people currently residing near the Pacific Ocean. Similar trends are found in Europe, Africa, South America, and Australia.

Exhibit 13: Global Weather Economic and Insured Losses



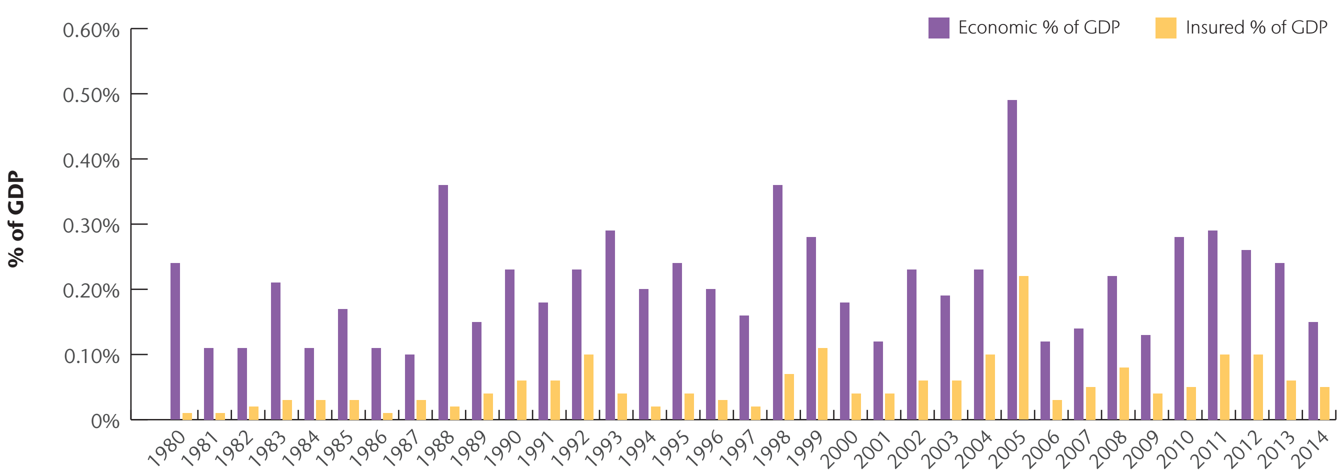
GDP

Global wealth has continued to accelerate for decades, with nominal global GDP increasing by 6.1 percent annually since 1980. Major developed countries such as the United States, China, Japan, India, Germany, Russia, and the United Kingdom have largely driven the global economy as these seven countries comprise nearly 50 percent of global GDP. This across-the-board growth has led to more residential and commercial exposure along coastlines and riverbeds, which are locations most at risk and vulnerable to some of the costlier weather perils such as tropical cyclone or flood.

As a result of these trends, an analysis of losses relative to GDP will give a clearer view of weather catastrophe loss trends. The resultant trends—1.1 percent for economic losses and 4.6 percent for insured losses since 1980 (and only 2.0 percent on an insured basis since 1990)—continue to show some residual annual growth but at a much lower rate than when analyzing the dollar loss values. The residual trend after normalizing for GDP growth is attributable to factors such as urbanization, population shifts into more exposed locations, improved data reporting, and weather and climate changes.

Insured loss to GDP has been increasing more quickly than economic losses. One driver of the increase is the level of insurance penetration. According to a 2013 Aon Benfield Insurance Risk Study, insurance demand increases with economic growth and prosperity. As disposable income and wealth increase, customer demand for insurance also increases, and often at a faster rate. The top 50 economies in the world have an average insurance penetration of 2.0 percent. The top 5 countries have a penetration of 2.3 percent. The study concluded that if all 50 countries moved to at least 2.0 percent insurance penetration, then global premium would increase by 21 percent.

Exhibit 14: Economic and Insured Loss as Percentage of GDP (Weather Events)



Conclusion

Exhibit 15: Weather Loss and GDP Trends

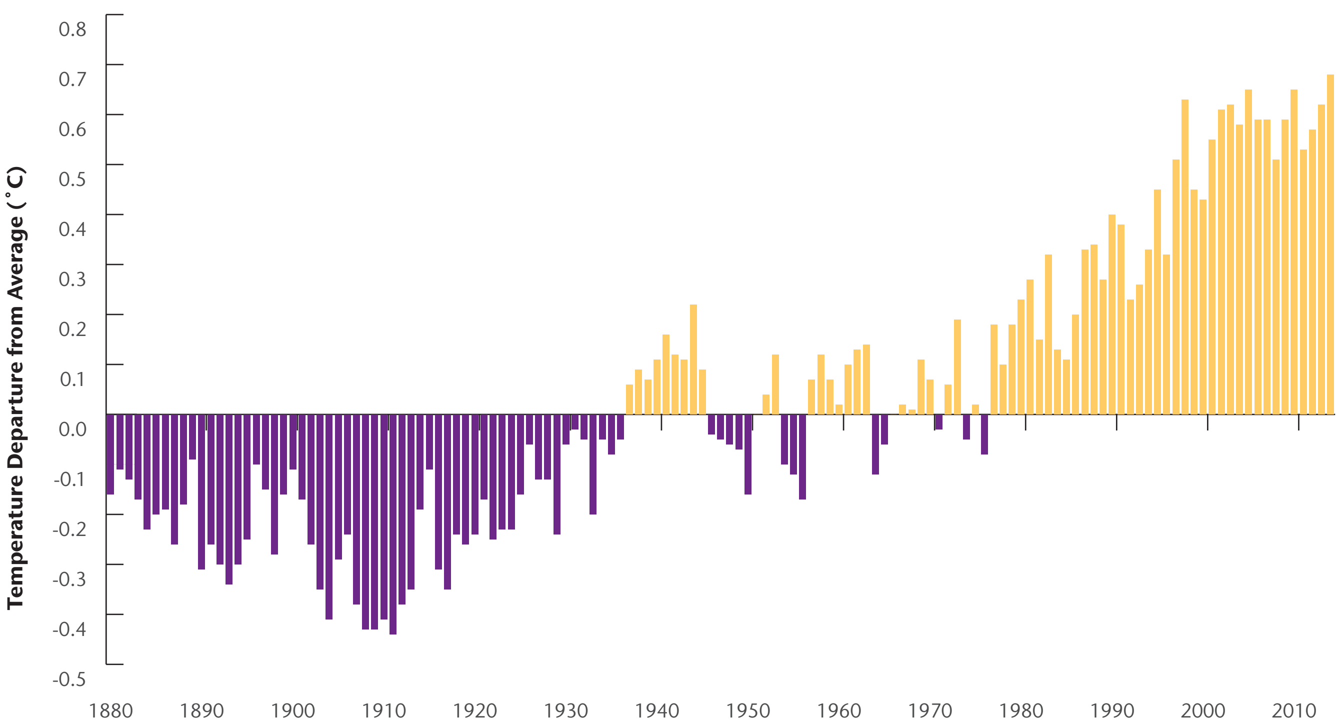
1980-2014	Nominal Loss Trend	GDP Growth Trend	Loss to GDP Trend
Economic Loss	7.3%	6.1%	1.1%
Insured Loss	10.9%	6.1%	4.6%

Weather catastrophe losses are on the increase, and will continue to increase, in the future. The overwhelming driver of these increases is tied to true economic growth, increasing the value of insured assets—and the insurance premium collected—and population migration to more coastal and more urban concentrations—which also result in higher premiums. These effects account for about 85 percent of the loss trend. Additional factors, including weather and climate, contribute to the rest of the loss trend increase.

2014 Climate Review

2014 was the 38th consecutive year of above average global temperatures. Using official data provided by the National Climatic Data Center (NCDC), combined land and ocean temperatures for the earth in 2014 averaged 0.68°C (1.22°F) above the long-term mean, making 2014 the warmest year ever recorded since official data on global temperatures began being kept back in 1880. This breaks the previous record of 0.66°C (1.19°F) that was set in 2010. The anomaly data is used in conjunction with NCDC's 20th century average (1901-2000). The last below-average year for the globe occurred in 1976, when global temperatures registered 0.08°C (0.14°F) under the long-term average.

Exhibit 16: Global Land and Ocean Temperature Anomalies: 1880-2014



Various ocean oscillations influence the amount of warming or cooling that takes place in a given year. The El Niño/Southern Oscillation (ENSO) is a warming or cooling cycle of the waters across the central and eastern Pacific, leading to a drastic change in the orientation of the upper atmospheric storm track. Warming periods are noted as El Niño cycles, while cooling periods are known as La Niña cycles.

According to data from the National Oceanic and Atmospheric Administration's (NOAA) Climate Prediction Center (CPC), 2014 was another year marked by ENSO-neutral conditions that were prevalent throughout most of the calendar year. The current neutral phase has been present since April 2012, following the weakening of a weak-to-moderate La Niña event. At this time, the long-range ENSO forecast models are in general consensus that a weak El Niño phase will develop during boreal winter and extend through the first half of 2015. The Niño-3.4 Index, which measures the temperature of the ocean waters in the central Pacific, is used to determine ENSO cycles.

Overall global tropical cyclone activity in 2014 saw a downtick from recent years, with 83 named storms across all global ocean basins. This was the lowest number of named storms since 2011 and slightly below the long-term 34-year average. The number of hurricanes, typhoons, and cyclones (storms with sustained winds of at least 74 mph (119 kph)) was one above the long-term average of 47. The number of major storms (Saffir-Simpson Hurricane Wind Scale rating of 3, 4, or 5 with sustained winds of at least 111 mph (179 kph)) was also above average with 27 forming during the year. This is higher than the long-term average of 23.

Based on official data from the U.S. National Hurricane Center (NHC) and the Joint Typhoon Warning Center (JTWC) since 1980, the average number of named storms is 86 and the number of Category 1 and above storms is 47. Of those 47 storms, 23 typically strengthen to Category 3+ status.

In terms of global landfalls, 13 storms came ashore in 2014 at Category 1 strength or above. Six of those made landfall at Category 3 strength or above. Landfall averages (1980-2013) include 16 Category 1+ and 5 Category 3+ events.

Exhibit 17: Global Tropical Cyclone Activity

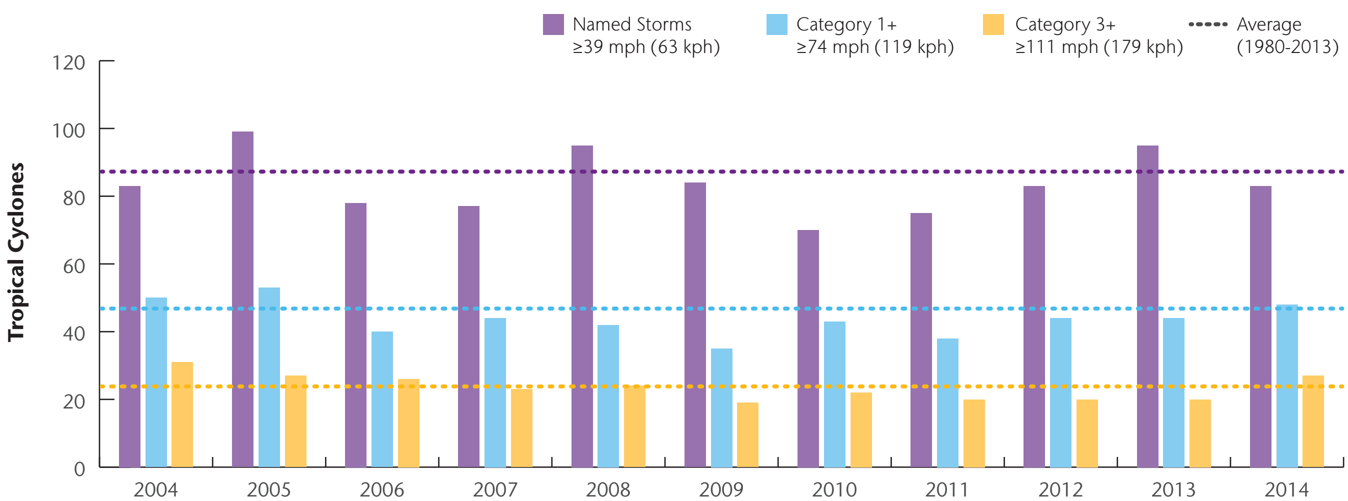
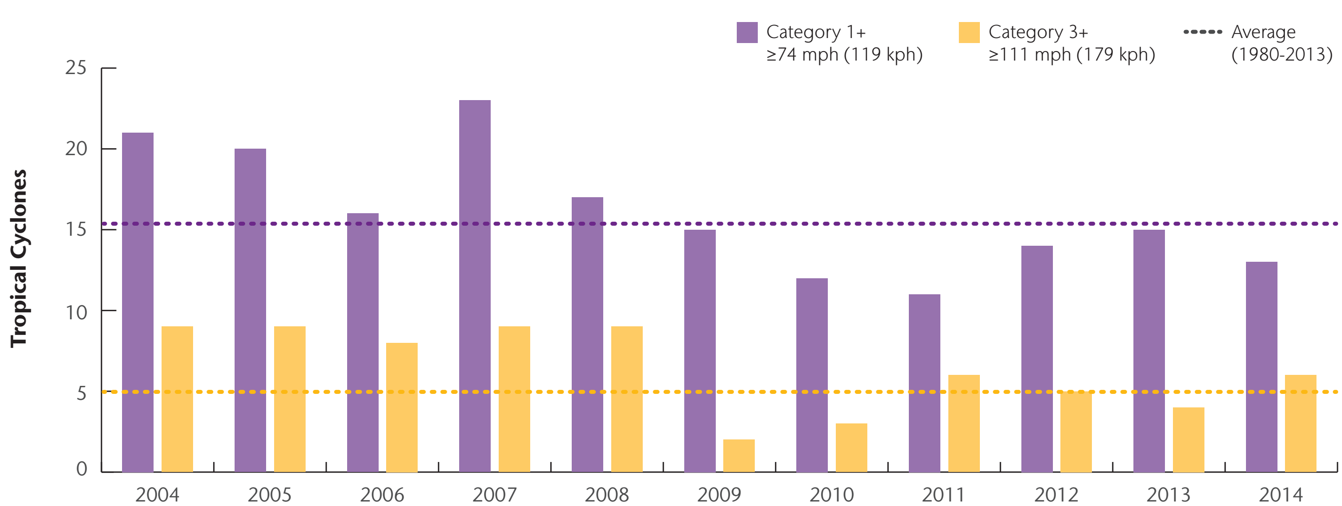


Exhibit 18: Global Tropical Cyclone Landfalls



2014 Atlantic Ocean Hurricane Season Review

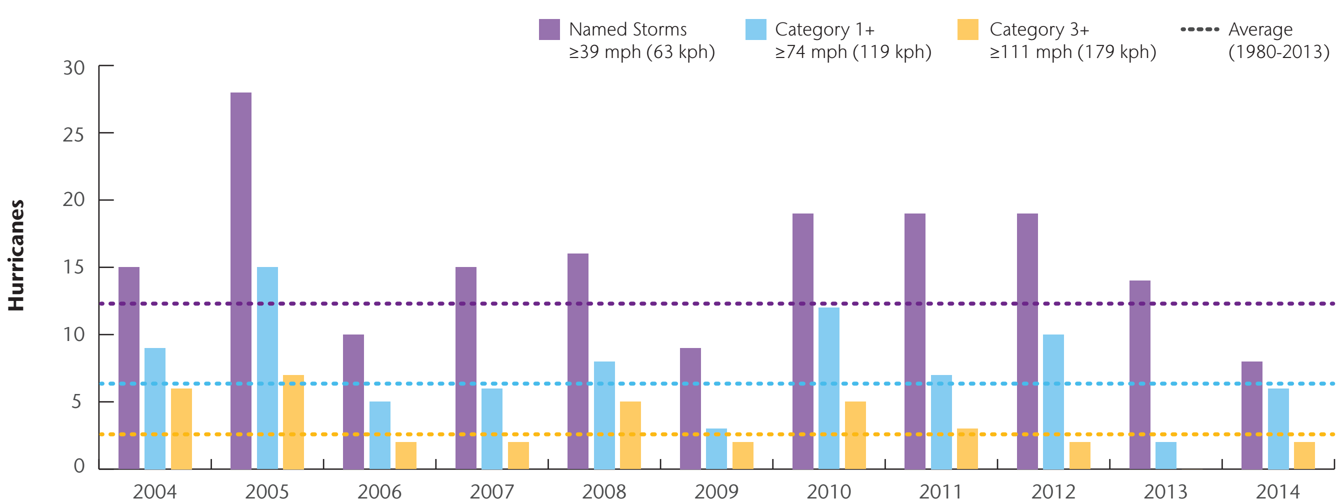
The 2014 Atlantic Hurricane Season marked the ninth consecutive year in which the U.S. did not sustain a major Category 3+ landfalling hurricane, which extends the all-time record by another year. It was also the quietest season in terms of named storms since 1997. The season saw a mere eight named storms and six hurricanes (Category 1+), only two of which strengthened into major hurricanes (Category 3+). The 1980-2013 average for named storms is 13, and the eight recorded in 2014 is 38 percent below the long-term average. The six hurricanes were just below the 34-year average of seven. Similarly, the two major hurricanes that formed were also below the long-term average of three. 2005 continues to hold the record for most hurricanes in a year when 15 formed.

The lack of activity in the Atlantic Basin in 2014 was heavily influenced by pending El Niño conditions in the Pacific Ocean. The El Niño-like conditions brought stronger-than-normal vertical wind shear to the Atlantic Ocean's main development region. The wind shear contributed to overall unfavorable atmospheric conditions that led to the rather benign season in 2014.

The 2014 Atlantic Hurricane Season began with Hurricane Arthur making landfall in North Carolina's Outer Banks region at the start of July. It would be the lone landfalling tropical system in the United States. Hurricanes Bertha and Cristobal followed in August, each of which affected the Caribbean Islands. Tropical Storms Dolly and Hanna both made landfall in Mexico in September and October respectively. Edouard was the first major hurricane in the Atlantic Basin, but it remained over the open waters of the Atlantic. Hurricane Fay and Major Hurricane Gonzalo, which turned out to be the most notable cyclone of the season, both developed in mid-October. Fay made landfall on Bermuda as a weak Category 1 hurricane, followed less than a week later by Gonzalo, which made landfall on the island as a Category 2 storm. Prior to its landfall on Bermuda, Gonzalo had already caused heavy damage throughout the northeastern Caribbean. No fatalities were reported on Bermuda but damage was widespread.

The Atlantic Hurricane Season officially runs from June 1 to November 30. For additional Atlantic Ocean Basin landfalling tropical cyclone data (including U.S.-specific information), see Appendix D.

Exhibit 19: Atlantic Basin Hurricane Activity



2014 Eastern and Central Pacific Ocean Hurricane Season Review

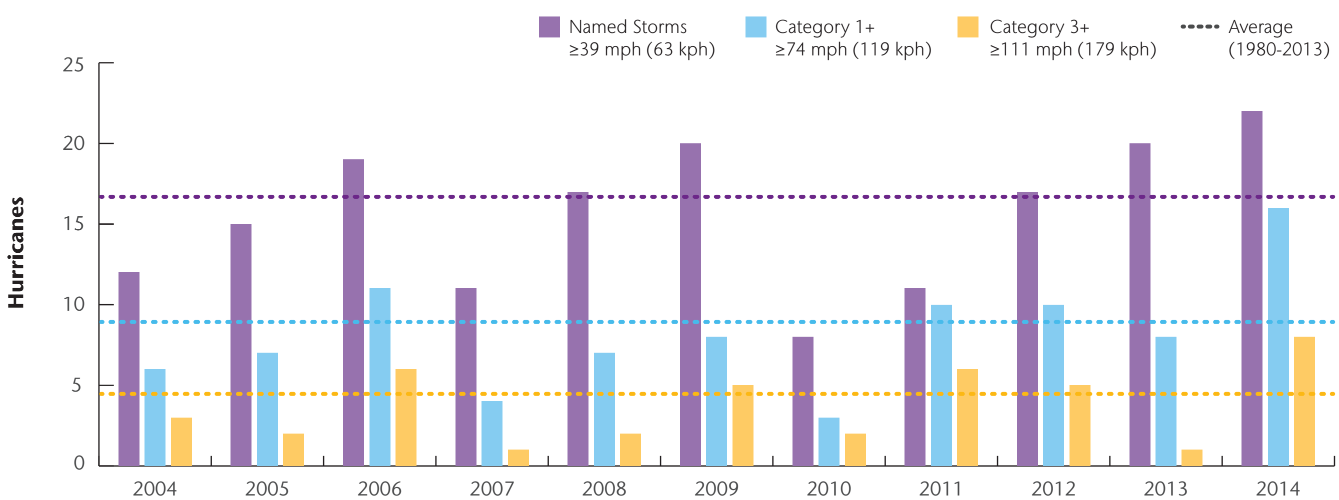
The 2014 Eastern and Central Pacific Hurricane Season was the most active since 1992 with a combined total of 22 named storms forming (29 percent above the 1980-2013 average of 17 named storms). Of the 22 named storms, 16 became hurricanes, 74 percent above the 34-year average of nine. This was also the most hurricanes to form in a single season since 1992. Nine of those hurricanes strengthened to major hurricane status, 105 percent above the 1980-2013 average of four. It was the most major hurricanes to form in the region since 1993. Despite the increased activity there was only one hurricane landfall: Hurricane Odile struck Mexico's Baha Peninsula in September.

The increased activity in the Eastern and Central Pacific Ocean in 2014 was heavily influenced by pending El Niño conditions in the Pacific Ocean. The El Niño-like conditions brought higher-than-average sea surface temperatures and reduced vertical wind shear to the Eastern Pacific Ocean. Both of these factors combined to create favorable conditions for the formation of hurricanes which contributed to an active season.

Despite just one hurricane officially making landfall, the Eastern and Central Pacific Hurricane Season was meteorologically very active. The season burst into action in August when six hurricanes developed, four of which became major hurricanes. During this time, Hawaii was briefly threatened by two hurricanes in the span of a week. Iselle was the strongest tropical cyclone to strike the state since Hurricane Iniki in 1992, and was only the second tropical storm to ever make landfall on Big Island. Hurricane Julio was briefly forecast to strike the archipelago but ultimately tracked south of the islands. In September, the main story was Major Hurricane Odile, which became the strongest tropical cyclone to make landfall on Mexico's Baja Peninsula since 1967's Hurricane Olivia. Odile made landfall as a Category 3 storm and caused extensive damage before the storm's remnants entered the U.S. Southwest and caused flooding. The strongest storm of the season was September's Hurricane Marie which peaked at Category 5 intensity with 160 mph (260 kph) winds—the first Category 5 hurricane in the basin since 2010.

The Eastern Pacific Hurricane Season officially runs from May 15 to November 30, while the Central Pacific season runs from June 1 to November 30. For additional Eastern Pacific Ocean Basin landfalling tropical cyclone data, please see Appendix D.

Exhibit 20: Eastern and Central Pacific Basin Hurricane Activity



2014 Western North Pacific Ocean Typhoon Season Review

Typhoon activity in 2014 in the Western North Pacific Ocean was below the 1980-2013 average and was the fourth lowest level of overall activity observed in the past 34 years. A total of 21 named storms developed which was 22 percent below the 34-year average of 27. Of those storms, 11 became typhoons. This was also below the 34-year average of 17 typhoons and was the lowest number since 2011. Seven of the eleven typhoons reached Category 3+ strength, approximately 22 percent below the 1980-2013 average of nine. Five typhoons made landfall, which was 56 percent of the long-term average, two of which were Category 3, or higher, in intensity: July's Super Typhoon Rammasun (Category 4) and December's Super Typhoon Hagupit (Category 3) which both made landfall in Philippines.

The Western Pacific season was dominated by Super Typhoon Rammasun, which made four separate landfalls (one in Philippines and three at super typhoon strength in China) in July. It also impacted northern Vietnam. Rammasun caused widespread severe damage and was by far the deadliest and costliest typhoon of the season.

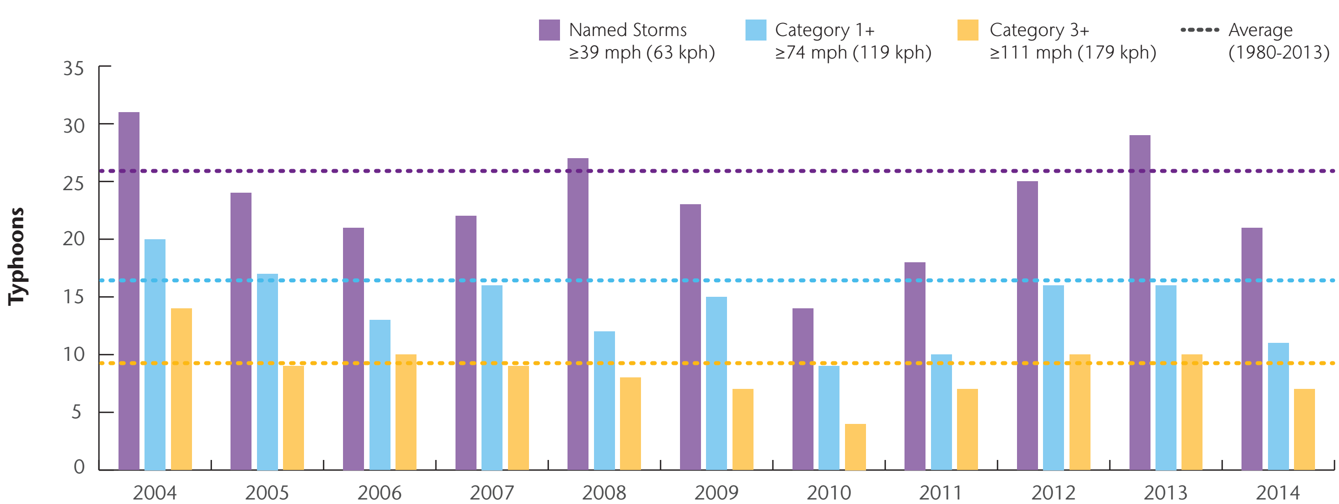
Six additional super typhoons were registered during the season (Neoguri, Halong, Phanfone, Vong-Fong, Nuri, and Hagupit), four of which made landfall in Japan as much weakened storms. Nuri remained over the open waters of the Pacific Ocean while Hagupit struck Philippines in December before dissipating over the South China Sea.

China experienced a relatively active season, with one super typhoon, two typhoons, and two tropical storms making landfall in 2014. Tropical Storm Hagibis struck China in mid-June followed by Super Typhoon Rammasun and Typhoon Matmo in July. In mid-September, Typhoon Kalmaegi tracked through southern China then, finally, Tropical Storm Fung-Wong made landfall in Fujian in late September after previously impacting upon Philippines and Taiwan.

The strongest typhoons of the season were Vongfong (October), Nuri (November), and Hagupit (December) which each attained Category 5 strength with sustained winds of 285 kph (180 mph).

The Western Pacific Typhoon Season officially runs throughout the calendar year, though most activity occurs between the months of May and November. For additional Western Pacific Ocean Basin landfalling tropical cyclone data, please see Appendix D.

Exhibit 21: Western Pacific Basin Typhoon Activity



2014 North Indian Ocean Cyclone Season Review

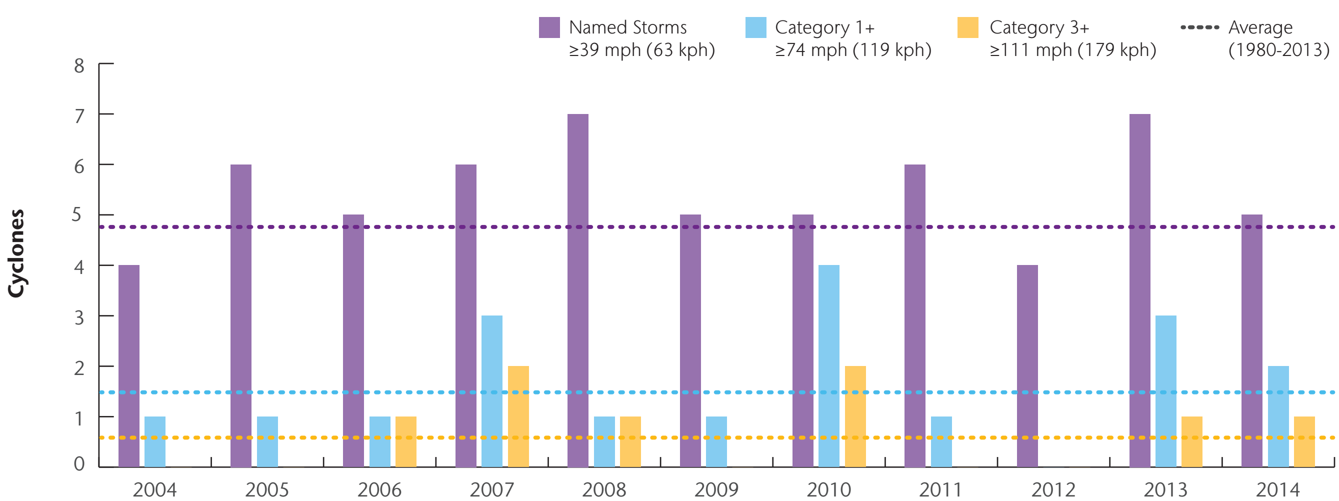
The North Indian Ocean Basin saw average tropical cyclone activity in 2014. Five named storms developed in the region that matches the 1980-2013 average. Of those storms two cyclones formed and both attained Category 4 intensity. Based on the 34-year average, approximately two cyclones (Category 1+) develop per year and one cyclone strengthens to Category 3+ intensity. One severe cyclone made landfall, which is above the 1980-2013 average of one every two years.

The season was highlighted by October's Cyclone Hudhud; a well-forecasted storm that slammed into the eastern coast of India as a Category 4 strength system. The cyclone caused significant damage to residential, commercial, and government property and claimed 68 lives in four states. The fatality count was lower than feared due to the Indian government ordering mass evacuations days prior to the cyclone's landfall.

Two more named storms formed in the region in 2014, Tropical Storm Nanauk and Cyclone Nilofar, both of which remained over the Arabian Sea. Cyclone Nilofar attained the same peak intensity as Cyclone Hudhud but caused minimal damage as it remained over open waters. Some minor disruption to maritime industries was noted.

The North Indian Ocean Cyclone Season officially runs throughout the calendar year, though most activity occurs between the months of April and December. For additional North Indian Ocean Basin landfalling tropical cyclone data, please see Appendix D.

Exhibit 22: North Indian Basin Tropical Cyclone Activity



2014 Southern Hemisphere Ocean Cyclone Season Review

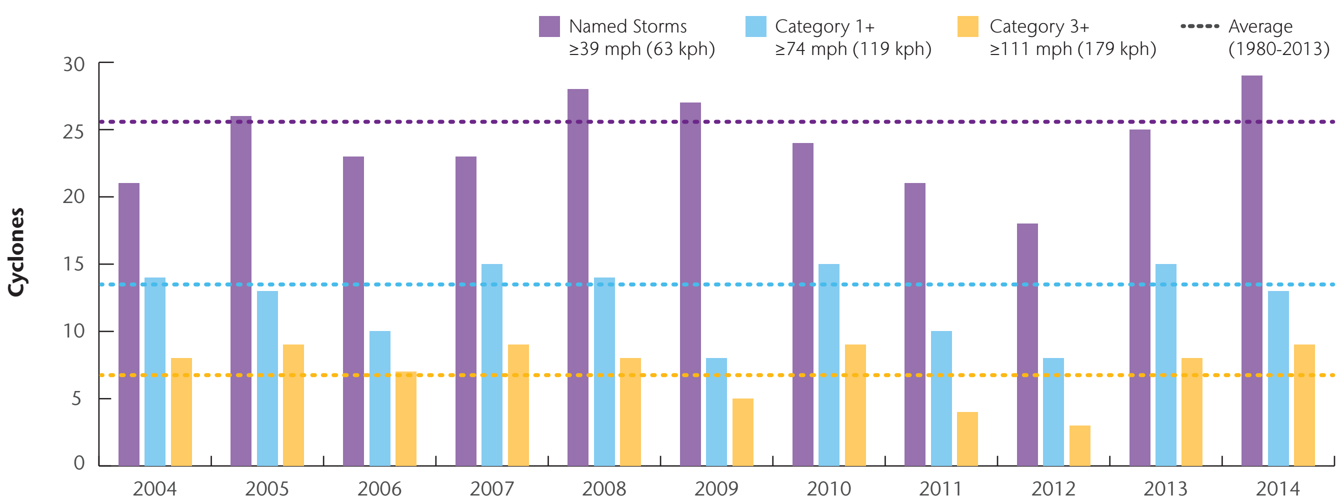
For the first time in four years, the Southern Hemisphere saw slightly above average tropical cyclone activity. A total of 29 named storms developed in the region, which is 8 percent above the average of 27 since 1980. Only 13 cyclones (Category 1+) formed, which was 6 percent below the 1980-2013 average of 14. However, nine cyclones reached Category 3+ strength, which is approximately 32 percent above the 34-year average of seven, and two reached Category 5 strength. It was the first time since 2010 that more than one Category 5 developed in the Southern Hemisphere in a single season. Out of the 13 Category 1+ cyclones, only three made landfall. This was slightly above the 1980-2013 average of 2.5.

Two tropical cyclones (Category 1+) made landfall in Australia: Cyclone Christine came ashore in Western Australia with 160 kph (100 mph) winds (Category 3) near Whim Creek at the end of December 2013; and Cyclone Ita made landfall near Cooktown, Queensland, with 215 kph (135 mph) winds (Category 4) in April. Damage and losses from Cyclone Christine were largely restricted to the mining industry in the Pilbara Region. Cyclone Ita was the strongest cyclone to strike Queensland since 2011's Cyclone Yasi cyclone. Cyclone Ita caused severe losses for the agricultural industry in Queensland and also caused widespread devastation in the Solomon Islands prior to reaching northeastern Australia. Rainfall from Cyclone Ita triggered devastating flash floods that killed 22 people and caused significant damage to property and infrastructure in the Western Pacific island nation.

Outside of Australia, the most significant cyclonic activity occurred in Madagascar. Cyclone Hellen was the strongest tropical cyclone on record in the Mozambique Channel and made landfall in northern Madagascar as a Category 4 strength storm with 235 kph (145 mph) winds. Heavy rainfall and strong winds from Cyclone Hellen caused widespread damage in Mozambique, Madagascar, and the Comoros Islands, killing eight people in total. Cyclone Bruce tied with Cyclone Gillian as the strongest storm in the Southern Hemisphere during the 2014 season with 260 kph (160 mph) winds. Bruce formed near southwestern Indonesia and moved into the Southern Indian Ocean before passing near Cocos Islands.

The Southern Hemisphere Cyclone Season officially runs from July 1 to June 30. (The 2014 season ran from July 1, 2013 to June 30, 2014.) For additional Southern Hemisphere landfalling tropical cyclone data, please see Appendix D.

Exhibit 23: Southern Hemisphere Tropical Cyclone Activity



2014 United States Tornado Season Review

For the third consecutive year, tornado season in the United States was one of the least active since Doppler radar began being deployed in the early 1990s. The years 2012, 2013, and now 2014 are markedly lower than 2011, which was one of the most active years in history. A preliminary count from the Storm Prediction Center (SPC) tallied 881 tornadoes in 2014, 3 percent below the 908 touchdowns in 2013 and a 6 percent decrease from the 939 in 2012. 2014's tally was 21 percent below the 1980-2013 average of 1,114. The use of Doppler radar, beginning in the early 1990s, has led to markedly improved tornado detection. Because of this improved detection, the observed annual average number of tornadoes has risen, and is now approximately 1,300. There were 26 tornadoes rated EF3 or greater in 2014, with no EF5 tornadoes touching down. This compares to the 28 EF3 or greater tornadoes (1 EF5) that struck the U.S. in 2013.

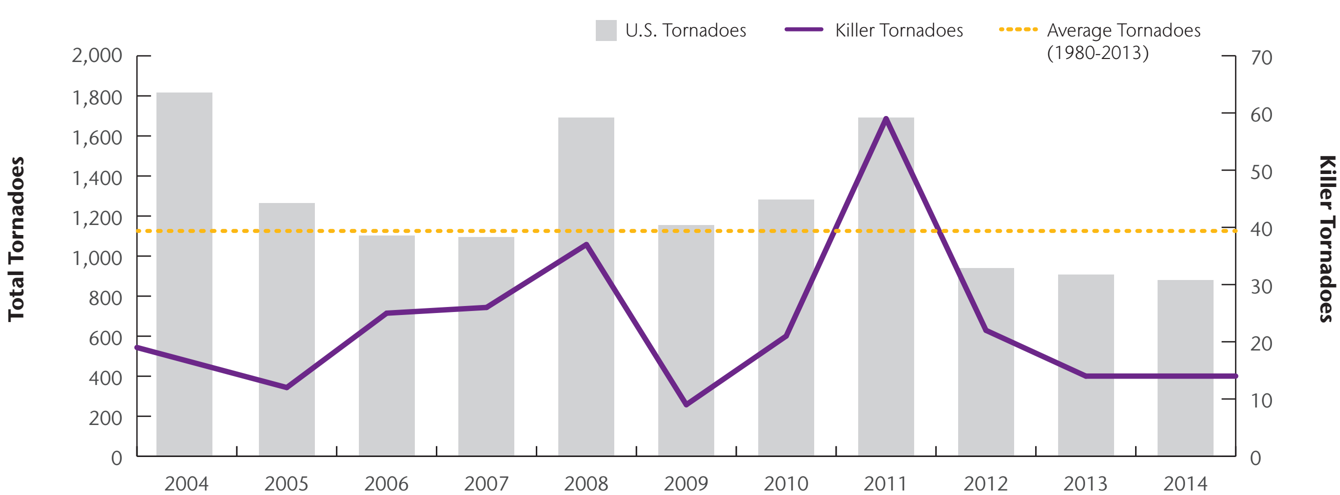
A total of 14 killer tornadoes (tornadoes that caused fatalities) occurred across the United States in 2014. This is equal to the 14 incurred in 2013. The killer tornadoes of 2014 left 47 people dead, which was below the 34-year average of 70. This is also the fewest number of tornado deaths in the U.S. since 2009 (21). Tornado-related fatalities tallied 54 in 2013.

The vast majority of the tornado fatalities in 2014 occurred during the month of April (35). These deaths were registered during multiple outbreaks that tracked across the Plains, Southeast, and Tennessee Valley. The other 12 fatalities occurred in Nebraska (two in June), New York (four in July), Arkansas (one in October), and Mississippi (five in December).

The single deadliest twister of the year came in the state of Arkansas on April 27, where an EF4 tornado with maximum winds of up to 190 mph (305 kph) tracked along a 41.3-mile (66.5-kilometer) path through Pulaski, Faulkner, and White counties. Sixteen people were killed, which made this the deadliest tornado in Arkansas since 1968. The tornado spent 56 minutes on the ground and devastated the town of Vilonia. Hundreds of millions of dollars' worth of damage to homes, businesses, and vehicles was noted, which made this the costliest single tornado of the year. During the same outbreak, another EF4 tornado with maximum winds up to 185 mph (295 kph) left 10 people dead in Louisville, Mississippi.

For additional United States tornado data, including a look at a breakdown of tornado frequencies by month and during ENSO cycles, please see Appendix E.

Exhibit 24: United States Tornado Activity



2014 United States Wildfire Season Review

The number of wildfires across the United States in 2014 was significantly lower than the 1983-2013 average for the third consecutive year. Despite a lower than expected number of fires, the number of acres (hectares) burned per fire was slightly above average. The National Interagency Fire Center (NIFC) reported approximately 63,345 wildfires that burned 3,587,561 acres (1,452,962 hectares) in 2014. This compares to 47,579 fires charring 4,319,546 acres (1,749,516 hectares) in 2013 and the 31-year average of 72,011 fires burning 4,699,855 acres (1,903,441 hectares). 2014 marked a 17 percent decline from the acres burned in 2013.

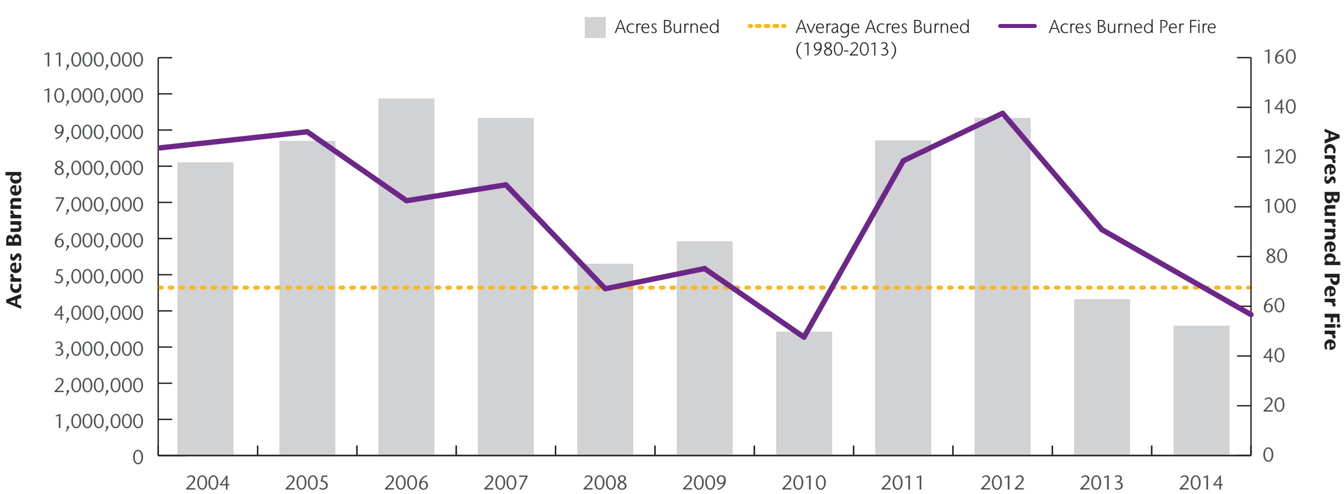
Exhibit 25 shows that the 2014 wildfire season burned an average of 56.64 acres (22.94 hectares) per fire, which was lower than the long-term average of 65.82 acres (26.66 hectares) per fire. This is a noticeable decline from the 90.79 acres (36.77 hectares) per fire in 2013 and the 137.61 acres (55.73 hectares) per fire burned in 2012; the highest burn rate ever recorded. The lowest burn rate remains in 1998, when an average of 16.41 acres (6.64 hectares) burned within each fire, mainly due to heavy precipitation in California early in the year caused by a strong phase of El Niño.

The most significant wildfire activity was again found across the western United States during the first two-thirds of the year, with parts of the Pacific Northwest and California enduring the costliest impacts. One of the most damaging fires came in Washington during the month of July. The Carlton Complex Fire was triggered by lightning strikes on July 14 that ended up destroying 322 homes in Okanogan County. The towns and communities of Pateros, Malott, Brewster, Carlton, and Methow were the most severely impacted as total economic damages and fire costs tallied beyond USD100 million.

It is worth noting that the 2014 U.S. wildfire season was much more benign than initially feared by officials—particularly in California—given the extreme nature of drought conditions and well above-normal temperatures. At one point during the year, the entire state of California was experiencing at least moderate or severe drought conditions and nearly 60 percent was deemed in an exceptional drought by the U.S. Drought Monitor.

For additional United States wildfire data, please see Appendix F.

Exhibit 25: United States Wildfire Activity



2014 Global Earthquake Review

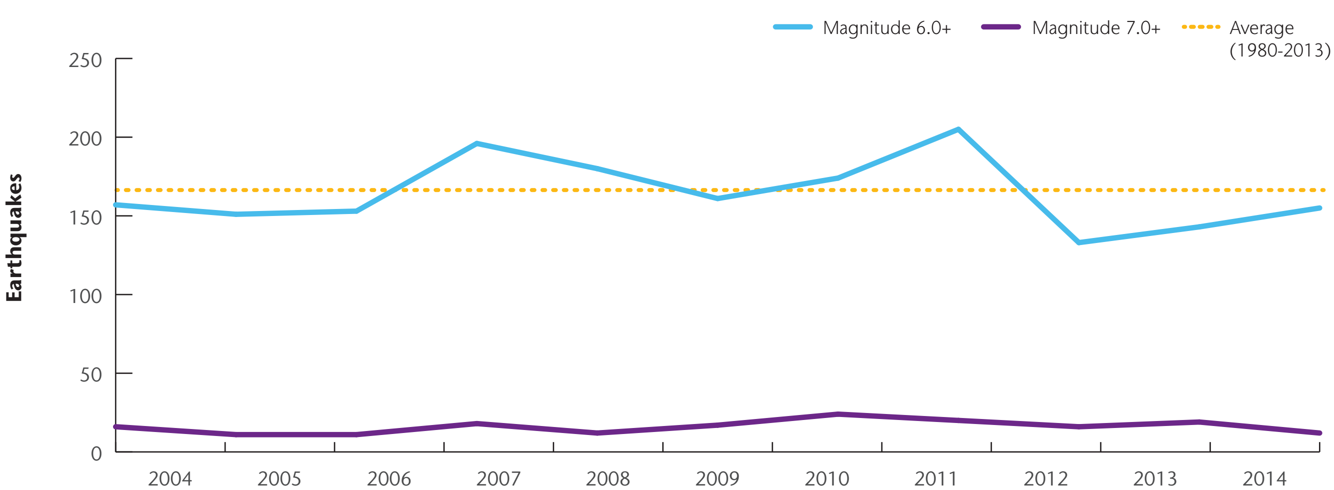
The number of recorded global earthquakes (≥M6.0) was very close to average in 2014. Based on data from the United States Geological Survey's (USGS) National Earthquake Information Center (NEIC) and the Advanced National Seismic System (ANSS), there were 153 earthquakes with magnitudes greater than 6.0, 12 earthquakes with magnitudes greater than 7.0 and one earthquake with a magnitude greater than 8.0. This compares to the 143 (≥M6.0), 19 (≥M7.0), and 2 (≥M8.0) seen in 2013, and the 1980-2013 averages of 141 (≥M6.0), 14 (≥M7.0), and one (≥M8.0).

The strongest earthquake of the year was a magnitude-8.2 tremor that struck just offshore the city of Iquique, Chile on April 1. Despite the megathrust event being felt throughout numerous South American countries, damage was much less than initially anticipated given outstanding building codes and the structural integrity of homes and businesses in Chile. Only small tsunami waves came ashore along the coasts of Chile and Peru.

The deadliest earthquake of the year came on August 3, when a magnitude-6.1 tremor struck China's Yunnan Province. The event left at least 617 people dead in Ludian County as more than 225,000 residences and other buildings were damaged or destroyed. In the United States, the strongest earthquake since 1989's Loma Prieta event struck the greater San Francisco, California Bay Area on August 24. The majority of the damage from the magnitude-6.0 event occurred in the Napa Valley region and overall damage was less than feared at roughly USD1.0 billion.

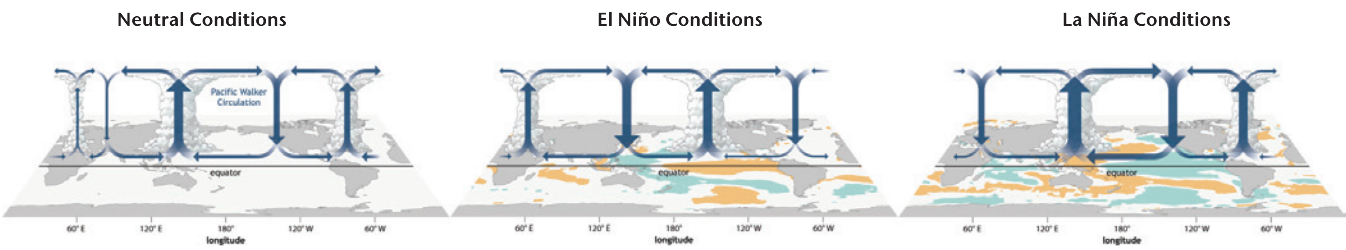
As shown during the past 10 years in Exhibit 26, overall earthquake activity does not tend to show large fluctuations on an annual basis. The USGS cites that a substantial increase in seismograph stations and continued improvements in global technology and communication has greatly strengthened the quality of earthquake data collection. It should also be noted that despite fluctuations in the number of total earthquakes since the early 1900s, the number of recorded major earthquakes (≥M7.0) have remained fairly consistent on a year-to-year basis.

Exhibit 26: Global Earthquake Activity ≥M6.0



El Niño/Southern Oscillation Background

Exhibit 27: Phases of the El Niño/Southern Oscillation (ENSO)



Source: NOAA

There are several atmospheric and oceanic dynamics that impact tropical cyclone development across the globe. One of the main driving climate factors for the globe's weather activity is the El Niño/Southern Oscillation (ENSO), which is an anomalous warming or cooling of the central Pacific Ocean waters that generally occurs every three to seven years, mainly between August and February.

During neutral conditions, surface trade winds blow from the east and force cooler waters that are upwelled from the deeper depths of the Pacific Ocean to the surface across the western coast of South America. Because of the displacement of water flowing to the west, the ocean is up to 60 centimeters (two feet) higher in the western Pacific Ocean as it is in the eastern Pacific Ocean. The warmer waters are forced into the western portions of the ocean, allowing thunderstorm activity to occur across the western half of the Pacific Ocean.

During El Niño conditions, the surface trade winds that normally blow from east to west weaken and sometimes even reverse direction. This allows the warmer waters to remain or even traverse eastward, bringing more frequent thunderstorm activity to the central and eastern portions of the Pacific Ocean. Warm and very wet conditions typically occur across Peru, Ecuador, Brazil and Argentina from December through April. Portions of Central America, Colombia and the Amazon River Basin are dry, as are southeastern Asia and most of Australia. In Africa, El Niño's effects range from wetter-than-average conditions across eastern portions to warmer and drier-than-average conditions across southern portions. In North America, the polar jet stream (the jet stream that is responsible for Arctic outbreaks) is usually pushed northward, keeping cold Arctic air across the northern portions of Canada. Warmer-than-average temperatures typically occur across the northern United States and southern Canada. The subtropical jet stream, which usually sinks southward during the winter months, will drift northward and bring a succession of storm systems across the southern tier of the U.S. and northern Mexico.

During La Niña conditions, the surface trade winds will strengthen, promoting additional cooler water to be upwelled from the depths of the Pacific Ocean up to the surface and forced westward. This forces thunderstorm activity across the Pacific Ocean westward and often brings fewer tropical systems to the central and eastern Pacific regions. Because of the waters' influence on the upper atmospheric jet stream, La Niña's effects, like El Niño's effects, are experienced worldwide. The main effects are usually noted across the western Pacific regions, where wetter conditions are expected, especially during the beginning months of the year. Wet and cool conditions are typical across southern Africa and eastern South America between December and February. With the polar jet stream displaced further south, cool and wet conditions occur across the northern half of the North America West Coast, while dry and mild conditions are experienced for the southern half of the United States into northern Mexico. If La Niña's cycle continues into June, July and August, warm and wet conditions often occur across Indonesia and the southern half of Asia, while cool and wet conditions are found across the southern portions of the Caribbean Ocean.

See Appendix C for ENSO's effects on tropical system frequency for all of the global basins.

Atlantic Hurricane Season Forecasts

Historical Predictions

Abundant media coverage is given to various organizations across the world that issue hurricane season predictions for the Atlantic Ocean Basin. These organizations utilize meteorological and climatic data obtained, in some instances, up to six months in advance to determine how active or inactive the Atlantic Hurricane Season will be in the upcoming year. Several different professional entities issue these forecasts, ranging from governmental agencies to universities to private companies. Three organizations which consistently make their forecasts available to the public are:

- Colorado State University (CSU), a forecast group sponsored by Colorado State University and private companies that is led by Dr. Philip Klotzbach and Dr. William Gray
- The National Oceanic and Atmospheric Administration (NOAA), the United States' official governmental climatological and meteorological office
- Tropical Storm Risk (TSR), an Aon Benfield-sponsored forecast group based in London, England led by Professor Mark Saunders and Dr. Adam Lea

Some of these entities disclose in detail the parameters being used to derive these forecasts, while others cite general factors for the reasoning of their predictions. CSU and TSR provide specific numbers for each year's forecasts, while NOAA provides a range of values.

The forecasts for the last five years made between the period of in late May and early June, along with the actual total number of named storms, hurricanes and major hurricanes are shown in the following tables. The May/June forecast was chosen due to the availability of forecasts from each organization. Additionally, a five-year cumulative forecast is shown to emphasize that long-term forecasting may yield more information on general frequency shifts than short-term forecasting.

Exhibit 28: 2014 Forecasts

	May/June Atlantic Hurricane Season Forecast				
Forecast Parameter	1980-2014 Average	CSU	NOAA	TSR	2014 Season Total
Named Storms	13	10	8-13	12	8
Hurricanes	7	4	3-6	5	6
Major Hurricanes	3	1	1-2	2	2

Exhibit 29: Five-Year Average Forecasts

	May/June Atlantic Hurricane Season Forecast				
Forecast Parameter	1980-2014 Average	CSU	NOAA	TSR	5-Year Season Avg.
Named Storms	13	15	11-18	15	16
Hurricanes	7	7	6-10	7	7
Major Hurricanes	3	3	2-5	3	2

2015 Atlantic Hurricane Season Outlook

CSU and TSR release forecasts for the following year's Atlantic Hurricane Season in early December, and these forecasts are shown below. Beginning in 2011, CSU decided to suspend providing quantitative outlooks for specific numbers of named storms, hurricanes and major hurricanes (Category 3+) in their December analysis. Instead, they now provide climatological probabilities of landfalls for tropical storms and hurricanes in the United States and the Caribbean Islands.

Exhibit 30: CSU 2015 United States and Caribbean Landfall Probabilities (issued December 11, 2014)

Region	Tropical Storm	Hurricanes (Category 1,2)	Hurricanes (Category 3,4,5)
Entire U.S. Coastline	79%	68%	52%
Gulf Coast from the Florida Peninsula to Brownsville, Texas	59%	42%	30%
U.S. East Coast including the Florida Peninsula	50%	44%	31%
Caribbean Islands	82%	57%	42%

Exhibit 31: TSR 2015 Atlantic Basin Hurricane Season Forecast (issued December 9, 2014)

Atlantic and Caribbean Overall Forecast	TSR Average year	TSR Forecast
Named Storms	11	13 (±4)
Hurricanes	6	6 (±3)
Intense Hurricanes	3	2 (±2)
ACE Index	102	79 (±58)

The Accumulated Cyclone Energy Index is equal to the sum of the squares of 6-hourly maximum sustained wind speeds (in knots) for all systems while they are at least tropical storm strength. The ACE Landfall Index is the sum of the squares of hourly maximum sustained wind speeds (in knots) for all systems while they are at least tropical storm strength and over the United States mainland (reduced by a factor of six).

United States

Exhibit 32: Top 5 Most Significant Events In the United States

Date(s)	Event	Location	Deaths	Economic Loss (USD)	Insured Loss (USD)
May 18-23	Severe Weather	Rockies, Midwest, Northeast	0	4.0 billion	2.9 billion
Yearlong	Drought	West	0	4.0 billion	1.5 billion
January 5-8	Winter Weather	Central and Eastern U.S.	21	3.0 billion	1.6 billion
August 11-13	Flooding	Midwest, Northeast	1	2.0 billion	550 million
June 3-9	Severe Weather	Rockies, Midwest, Southeast	3	1.7 billion	1.3 billion
		All Other Events	~225	18 billion	12 billion
		Totals	**~250**	**32 billion[1]**	**20 billion[1,2]**

Economic and insured losses derived from natural catastrophes in the United States were slightly down during 2014 as compared to 2013. For the second consecutive year, the country did not endure a significant disaster event that crossed the USD10 billion threshold. The relative quiet in the U.S. during the past few years can be partially attributed to the lack of hurricane landfalls. The country has now gone nine consecutive Atlantic Basin seasons without a major hurricane (Category 3+) landfall, which is the longest such streak on record. Tornado frequency in 2012, 2013 and 2014 has also been at historically low levels, which is in stark contrast to the devastating year in 2011.

Despite the lack of a "mega" catastrophe, there were several notable events that impacted the United States in 2014. The costliest was a multi-day severe weather outbreak that triggered considerable large hail and straight-line wind damage reports across parts of the Midwest, Rockies, Plains, Southeast, Mid-Atlantic, and the Northeast. The stretch was the costliest insured event of the year, having caused nearly USD3.0 billion in claims payouts by public and private insurers. In total, there were six separate severe weather events that caused more than USD1.0 billion in economic damage.

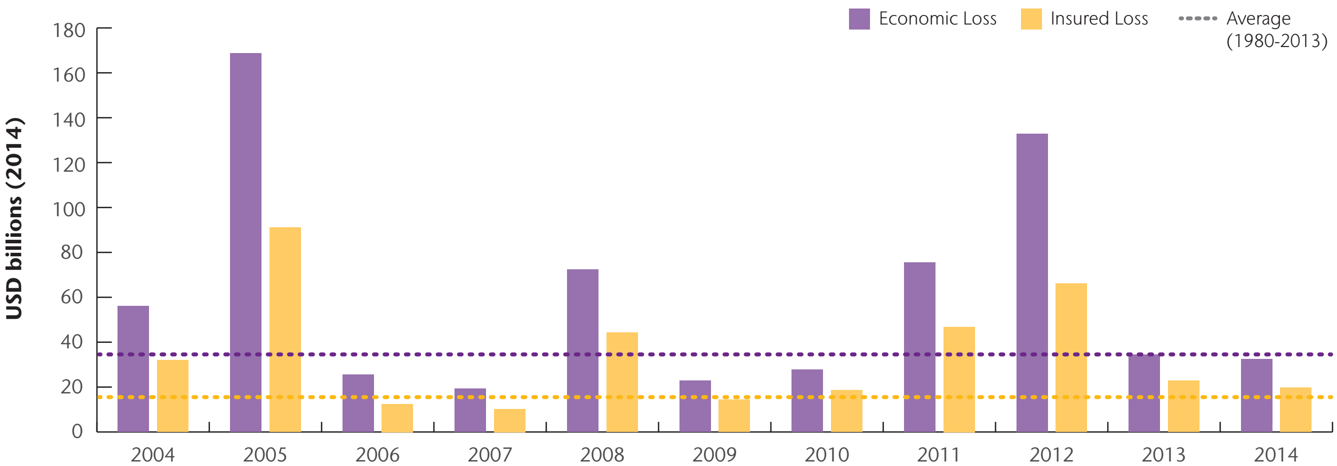
Also, an intense drought impacted much of the Western U.S. as California experienced its hottest and driest 12-month stretch in 120 years of official record keeping. Nearly 60 percent of the state endured months of exceptional drought conditions, with the rest in at least moderate drought levels. The lack of water and extreme dryness led to heavy agricultural damage and other direct economic impacts. On the opposite end of the spectrum, one of the coldest episodes in decades impacted much of the northern, central, and eastern sections of the country during January and February. Multiple arrivals of the Polar Vortex (an upper-level atmospheric feature defined by very cold circulating air at the North and South poles) and areas of low pressure led to bitter cold and heavy snow totals. One stretch in early January caused at least USD3.0 billion in direct economic damage.

Other notable events in 2014 included an August storm system that spawned billions of dollars of flood damage in parts of Detroit, Michigan; Baltimore, Maryland; and Long Island, New York; wildfires in portions of Washington and California; and the largest earthquake (M6.0) to strike San Francisco's Bay Area since 1989.

For a detailed review of all events in 2014, please visit **www.aonbenfield.com/catastropheinsight** and click on "Thought Leadership" to download updated monthly Global Catastrophe Recaps.

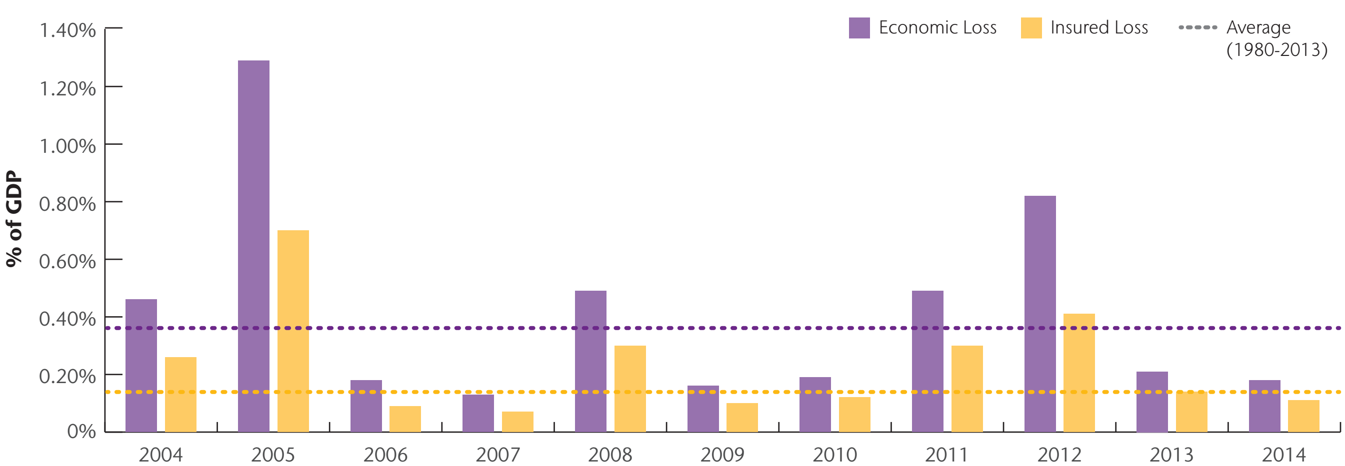
[1] *Subject to change as loss estimates are further developed*
[2] *Includes losses sustained by private insurers and government-sponsored programs*

Exhibit 33: United States Economic and Insured Losses



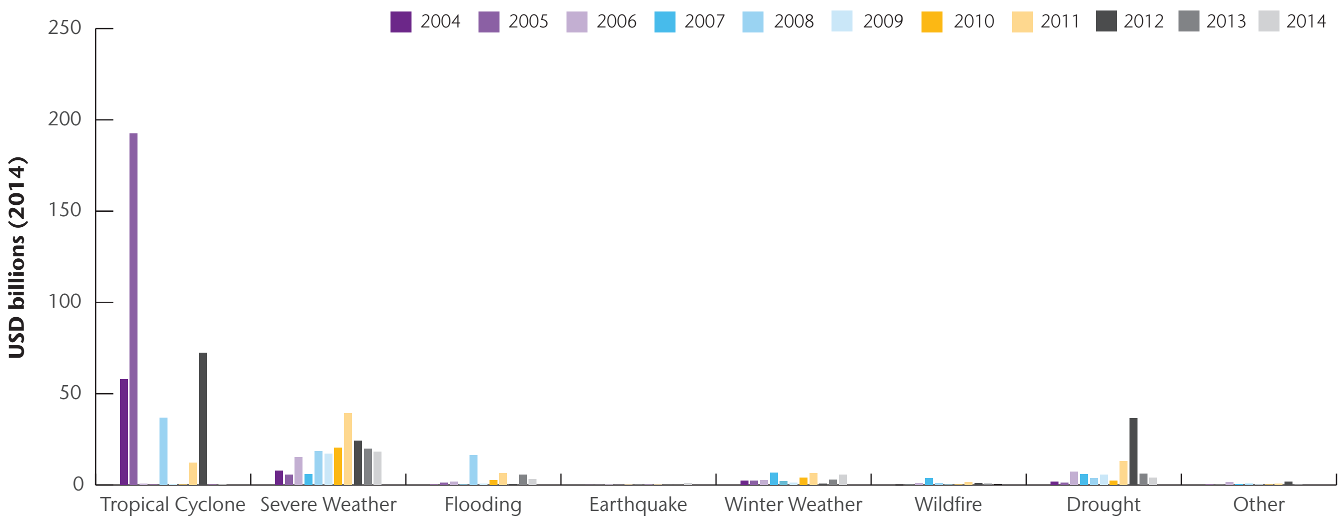
Since 1980, economic losses have increased 3.0 percent annually on an inflation-adjusted basis in the United States. Insured losses have increased at a slightly higher rate of 6.6 percent. These upward trending losses can be attributed to inflation, increasing population and risk exposure, and higher levels of insurance penetration. However, when analyzing loss data during the past ten years, U.S. economic and insured losses from natural disasters have actually shown a decreasing trend (3.6 percent and 1.9 percent, respectively). Much of the decrease can be attributed to the recent decline in major hurricane landfalls and the lack of a significant earthquake event.

Exhibit 34: United States Economic and Insured Losses as Percentage of GDP



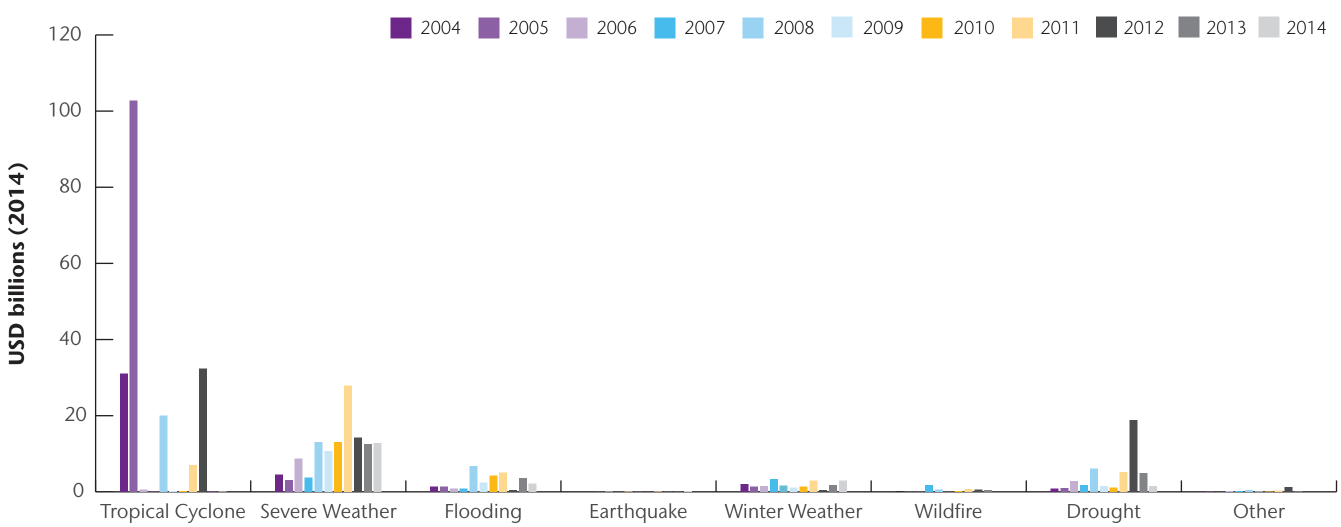
When analyzing natural disaster losses as a percentage of U.S. GDP (World Bank), the rate of growth since 1980 has increased annually by 0.7 percent for economic losses and 4.2 percent for insured losses. However, during the past ten years, there has been a downward trend on both an economic (-4.2 percent) and insured (-2.4 percent) basis.

Exhibit 35: United States Economic Losses by Peril



The severe weather peril dominated economic losses in the United States in 2014 and was slightly above the peril's ten-year average. It was by far the costliest peril of the year. Winter weather was the only other peril type to see above normal losses, with tropical cyclone, flood, earthquake, drought, and wildfire all below recent average. During the past ten years, losses associated with tropical cyclones have been the predominant driver of damage costs in the U.S. (especially in 2004, 2005, 2008, and 2012).

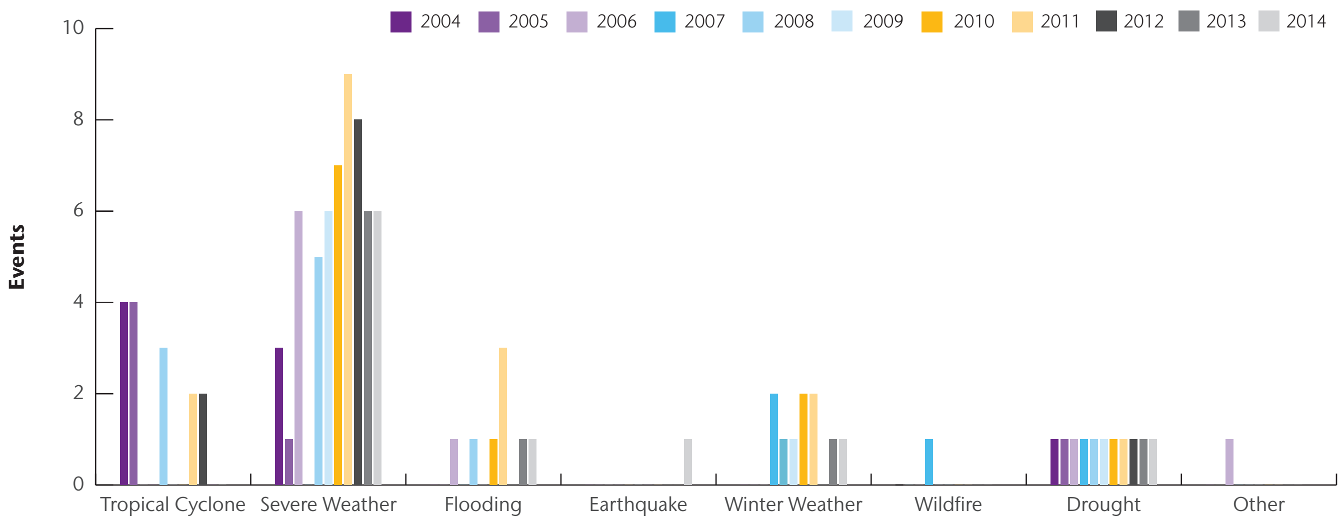
Exhibit 36: United States Insured Losses by Peril



Losses from severe weather again accounted for the majority of insured losses in the United States in 2014. The nearly USD13 billion in insured losses was 18 percent above the peril's ten-year average. Insured winter weather losses were also well-above average and at their highest levels since 2007. The rest of the major perils were well below normal as overall activity was down from previous years. In spite of minimal losses in 2014, tropical cyclones have accounted for nearly 50 percent of annual losses since 2004.

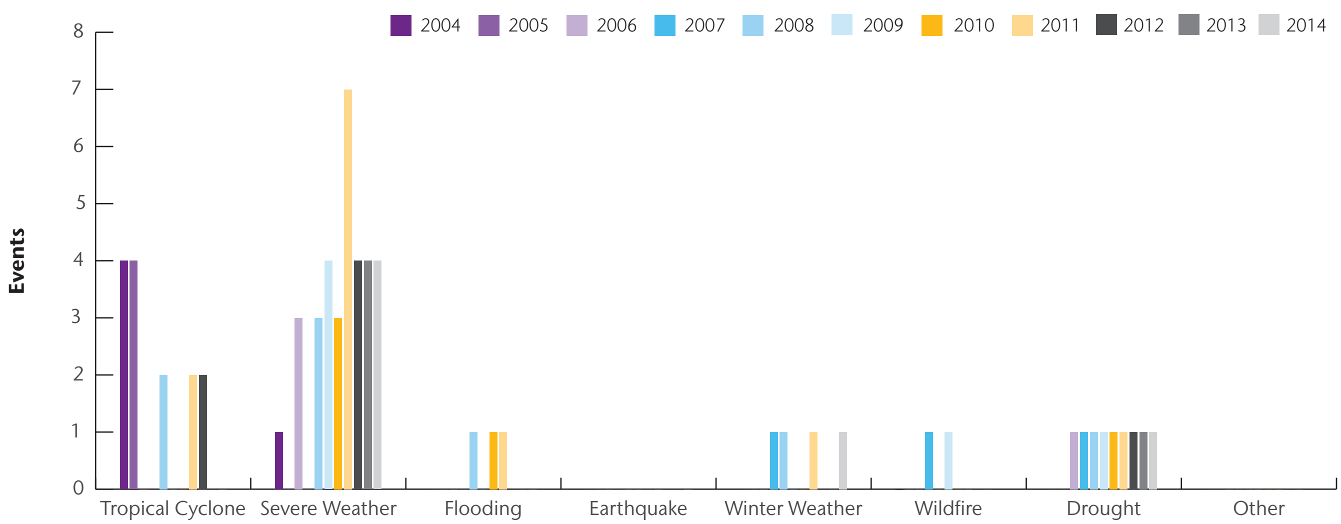
Please note that insured losses include those sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program and the Federal Crop Insurance Corporation (run by the USDA's Risk Management Agency).

Exhibit 37: United States Billion-Dollar Economic Loss Events by Peril



There were ten events that caused at least USD1.0 billion in economic losses in 2014, which was one above the ten-year average. Six were attributed to severe weather, with the earthquake, flood, winter weather, and drought perils each registering singular events that crossed the billion-dollar threshold. The 2004-2013 averages include: severe weather (5), tropical cyclone (2), winter weather (1), flood (1), and drought (1). The San Francisco Bay Area earthquake was the peril's first billion-dollar event since 2001.

Exhibit 38: United States Billion-Dollar Insured Loss Events by Peril



There were six events that triggered insured losses beyond USD1.0 billion in 2014, which also equaled the ten-year average. Four of the events were caused by severe weather, while individual winter weather and drought events occurred. The 2004-2013 averages include: severe weather (3), tropical cyclone (1), and drought (1).

Americas (Non-U.S.)

Exhibit 39: Top 5 Most Significant Events in the Americas (Non-U.S.)

Date(s)	Event	Location	Deaths	Economic Loss (USD)	Insured Loss (USD)
Year long	Drought	Brazil	0	4.3 billion	450 million
September 10-17	HU Odile	Mexico	5	2.5 billion	1.1 billion
June/July	Flooding	Canada (Man., Sask.)	0	745 million	100 million
August 7-8	Severe Weather	Canada (Alberta)	0	600 million	410 million
October 13-17	HU Gonzalo	Bermuda, Caribbean Islands	4	150 million	100 million
		All Other Events	~230	1.6 billion	0.5 billion
		Totals	**~300**	**10 billion**[1]	**3.0 billion**[1,2]

Overall economic and insured losses from natural disaster activity throughout the Americas (Non-U.S.) were considerably lower in 2014 than seen in the previous year. In 2013, some of the costliest events in Brazilian and Canadian history were recorded that led to elevated loss totals both economically and to the insurance industry.

For the second consecutive year, the costliest event in the region was an intense drought in Brazil. Southeastern sections of the country were ravaged by a lack of rainfall that left reservoirs in parts of Sao Paolo state at 3 to 5 percent of storage capacity. Reports from government officials indicated that agricultural damage was minimally USD4.3 billion, and it is noteworthy that roughly 10 percent of planted areas in Brazil are insured. In 2013, historic drought conditions impacted northeast Brazil.

From an insurance perspective, Major Hurricane Odile was the most significant event of 2014 for the Americas (Non-U.S.). The storm made landfall in Mexico's Baja Peninsula at Category 3 strength—tying 1967's Hurricane Olivia as the strongest to ever come ashore on the peninsula—and caused substantial wind, flood, and surge damage throughout the region. Data from the Mexican Association of Insurance Institutions indicated that insurers received claims in excess of USD1.1 billion, which makes Odile the second-costliest event in history for the Mexico's insurance industry. Only 2005's Hurricane Wilma was costlier.

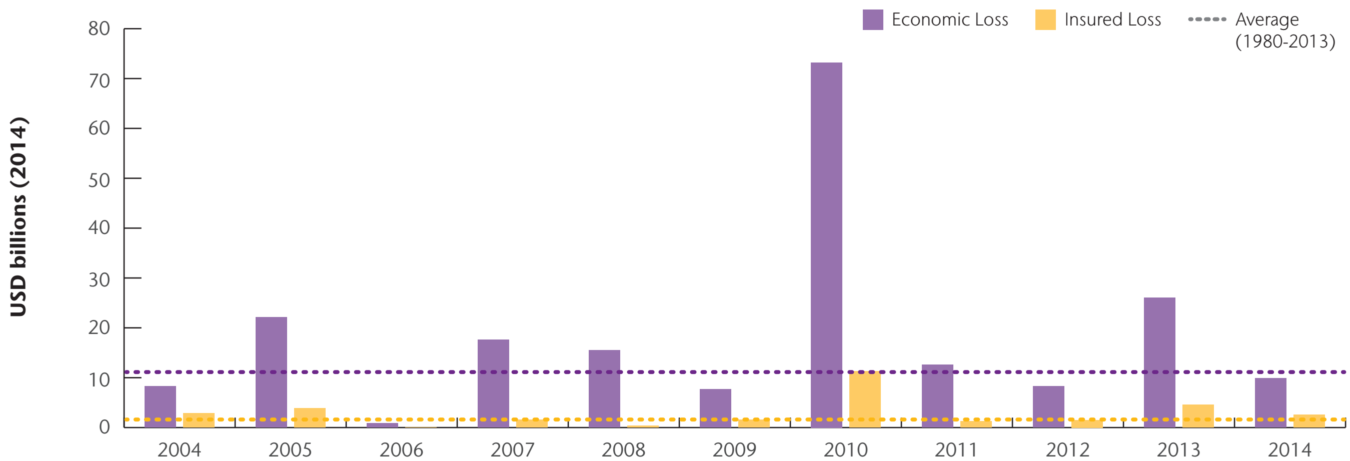
Major Hurricane Gonzalo made a direct landfall on Bermuda during October, though damage was much less than initially feared. The center of the storm crossed the island at Category 2 strength with estimated sustained winds of 110 mph (175 kph); a combination of strong building codes and well-built structures withstood Gonzalo's wind and rain. One week prior to Gonzalo's landfall, Hurricane Fay also made landfall on Bermuda as a minimal Category 1 storm. Fay became the first hurricane to officially make landfall on Bermuda since Hurricane Emily in 1987.

Elsewhere, Canada endured multiple large events during the summer months that included river flooding in the provincial regions of Manitoba and Saskatchewan and a large hailstorm in the greater Airdrie area in Alberta province. However, the events in 2014 were much less damaging and costly than in 2013, where historic floods inundated Calgary and a powerful thunderstorm heavily damaged parts of Toronto. According to data from the Insurance Bureau of Canada, insurers have paid out nearly USD3.5 billion in claims to policy owners in the province of Alberta alone since 2011.

For a detailed review of all events in 2014, please visit **www.aonbenfield.com/catastropheinsight** and click on "Thought Leadership" to download updated monthly Global Catastrophe Recaps.

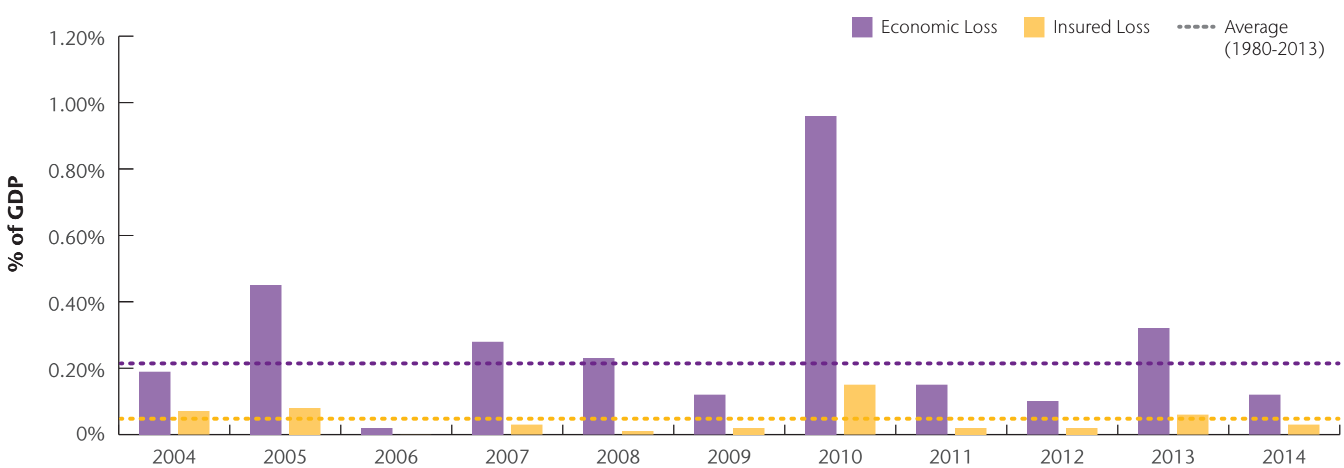
[1] Subject to change as loss estimates are further developed
[2] Includes losses sustained by private insurers and government-sponsored programs

Exhibit 40: Americas (Non-U.S.) Economic and Insured Losses



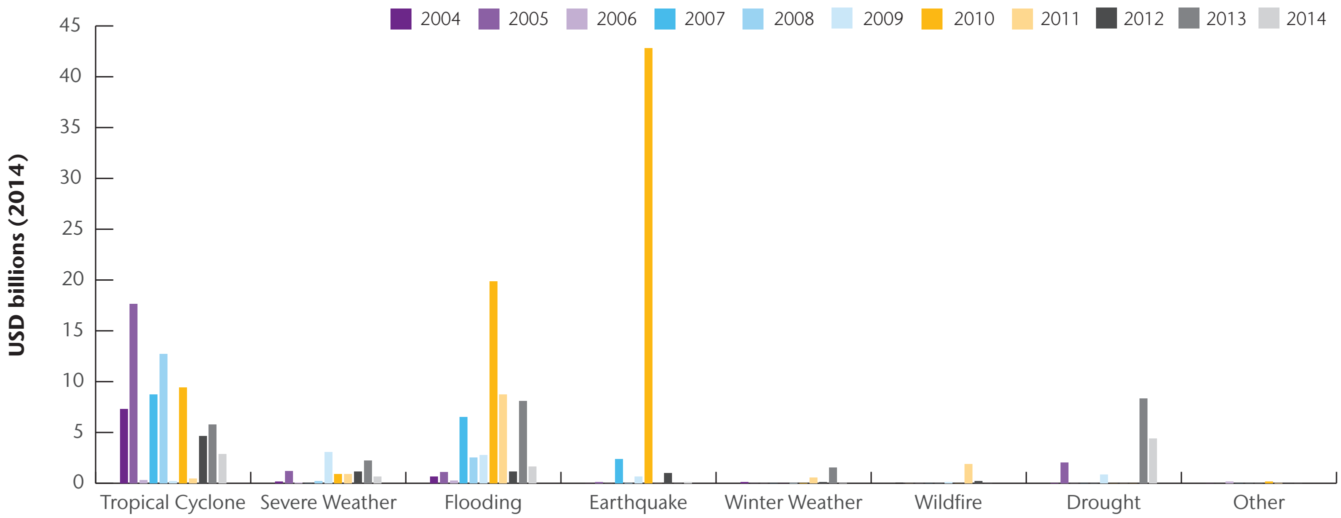
Since 1980, economic losses have increased 4.5 percent and insured losses have increased at a more substantial 13.3 percent. Increases during the past ten years have been even more accelerated: economic (9.1 percent); insured (25.8 percent), though skewed by the 2010 Chile earthquake. These upward trending losses can be attributed to inflation, increasing population and risk exposure, higher levels of insurance penetration (particularly in developing markets in Latin America), and improved data availability. However, in spite of the growing trend of insured over overall economic losses, it is important to note that there remains a very low level of insurance penetration, particularly in Latin America.

Exhibit 41: Americas (Non-U.S.) Economic and Insured Losses as Percentage of GDP



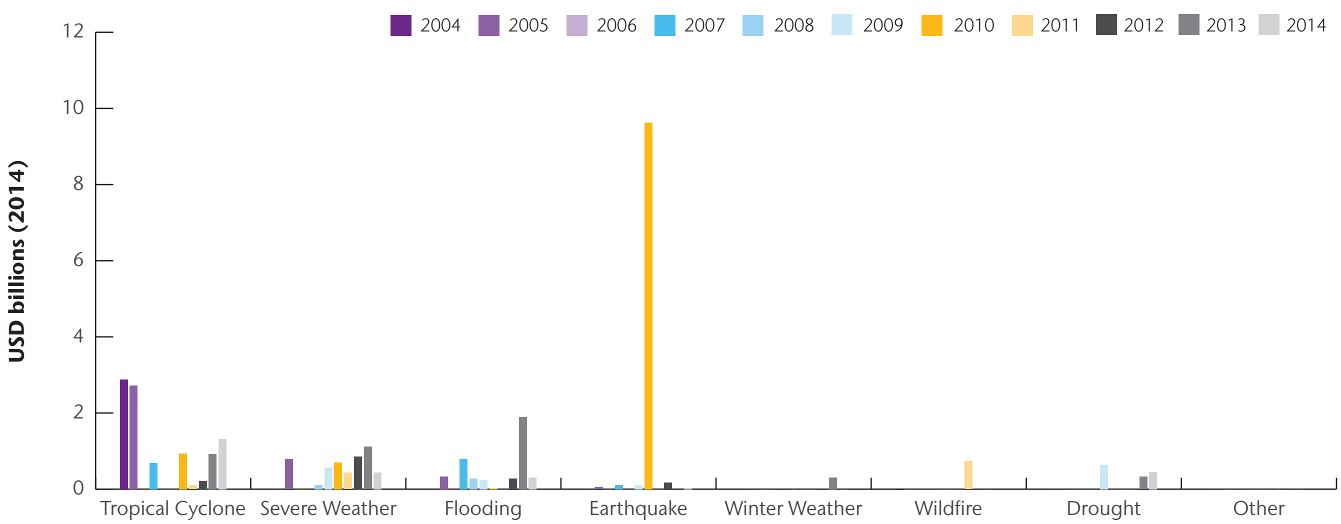
When analyzing natural disaster losses as a percentage of GDP (World Bank) for the Americas (Non-U.S.), the rate of growth since 1980 has remained generally flat annually (0.9 percent) for economic losses, but has increased 9.2 percent for insured losses. The recent ten-year trend averages are much more pronounced at 2.9 percent (economic) and 22.6 percent (insured).

Exhibit 42: Americas (Non-U.S.) Economic Losses by Peril



The only peril to record economic losses above its ten-year average was drought, though tropical cyclone was close to average. The rest of the major perils (severe weather, winter weather, and flooding) were below normal. During the past ten years, the flood peril has been the costliest on an annual basis (USD5.2 billion) though earthquake and tropical cyclone are fairly close behind at USD4.7 billion and USD3.2 billion.

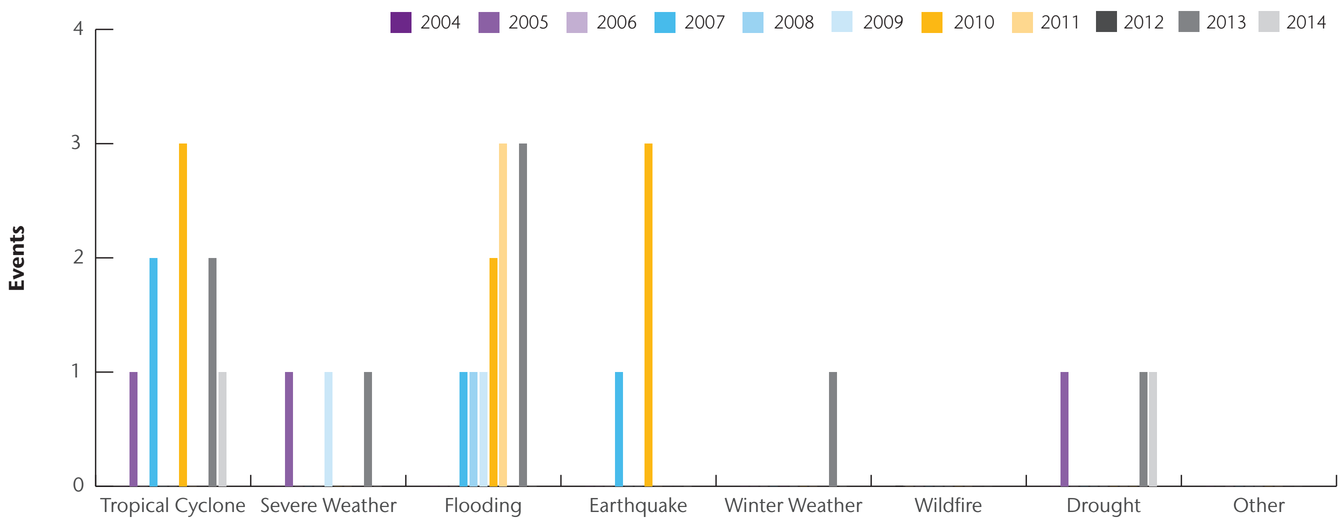
Exhibit 43: Americas (Non-U.S.) Insured Losses by Peril



Insured losses were above the ten-year normal for multiple perils in 2014. Losses from tropical cyclone accounted for the highest percentage of payouts, and it was the only peril to see aggregate losses in excess of USD1.0 billion. The drought peril was the second-highest peril of the year, and also well above recent averages. Severe weather and flooding were both below normal, but relatively close to each of their ten-year norm.

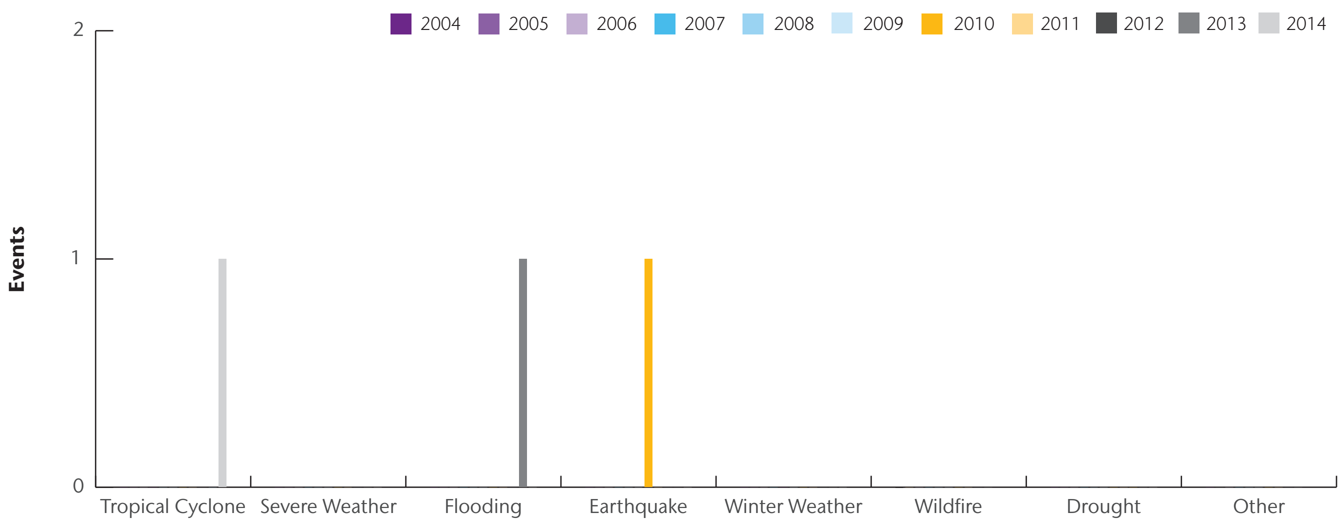
Please note that insured losses include those sustained by private insurers and government-sponsored programs.

Exhibit 44: Americas (Non-U.S.) Billion-Dollar Economic Loss Events by Peril



There were two events that caused at least USD1.0 billion in economic losses in 2014, which was substantially lower than 2013 (8) but near the ten-year average of three. Hurricane Odile's landfall in Mexico and the drought in Brazil were the only two events that crossed the billion-dollar threshold. The 2004-2013 averages include tropical cyclone (1) and flood (1). The other perils occur on average once every two or three years.

Exhibit 45: Americas (Non-U.S.) Billion-Dollar Insured Loss Events by Peril



There was one event that triggered insured losses beyond USD1.0 billion in 2014. Since 2004, billion-dollar insured loss events happen on average once every two years. The combination of lower levels of insurance penetration and lack of available data in Latin America contribute to the lower frequency of such events occurring or being reported.

Europe, Middle East, and Africa

Exhibit 46: Top 5 Most Significant Events in EMEA

Date(s)	Event	Location	Deaths	Economic Loss (USD)	Insured Loss (USD)
May 13-21	Flooding	Southeast Europe (Balkans)	86	4.5 billion	125 million
June 8-10	Severe Weather	France, Germany, Belgium	6	4.0 billion	3.0 billion
Winter	Flooding	United Kingdom	0	1.5 billion	1.0 billion
February 11-13	WS Tini	Western Europe	1	700 million	375 million
January 5-7	WS Christina	Western/Northern Europe	3	500 million	250 million
		All Other Events	~329	4.3 billion	1.0 billion
		Totals	**~450**	**15 billion**[1]	**6.0 billion**[1,2]

Economic and insured losses resulting from natural catastrophe activity in EMEA during 2014 was down from totals registered in 2013. Unlike the previous year, there was not a significant peril event that topped the USD10 billion threshold to help drive the vast majority of the yearly loss. 2014 broke a two-year streak of above ten-year average losses for the region.

For the second consecutive year, the costliest event in EMEA was a European flood disaster. The floods were spawned following the heaviest rains in at least 120 years across portions of southeast Europe's Balkans region. Officials in both Serbia and Bosnia declared the event minimally as a 1-in-100 year scenario after one-third of the entire annual rainfall fell in a matter of days. Aggregate damage totals were approximately USD4.5 billion, though given very low insurance penetration in Bosnia and Serbia, the insured loss was a small fraction.

Another major flood event occurred in the United Kingdom from December 2013 through February 2014, as a series of strong areas of low pressure brought torrential rains, gusty winds and heavy coastal surf. Coastal damage was particularly notable as large waves caused considerable damage to public infrastructure. The worst flooding was relegated to a region known as the Somerset Levels, which is a coastal plain and wetland area consisting of Somerset, South West England to the north and the Mendips and Blackdown Hills to the south. The overall economic costs, as well as the insured loss, were each above USD1.0 billion.

Much of the UK flooding was tied to a very active winter storm season. No fewer than six windstorms impacted the European continent in 2014, with Tini and Christina causing the most damage. Western and northern sections of Europe were primarily impacted as aggregated insured losses from the peril tallied near USD1.0 billion.

Elsewhere, a catastrophic hailstorm swept through parts of France, Germany, and Belgium in June. The storm, known locally as "Ela", led to as many as 750,000 insurance claims filed. The USD3.0 billion in insured losses made this the second consecutive year where a major hailstorm caused a multi-billion-dollar impact for the industry.

In Africa, numerous flood events were recorded in portions of Morocco, Tanzania, Nigeria, South Africa, Sudan, and Algeria. A November and December flood event in Morocco caused economic damages in excess of USD450 million.

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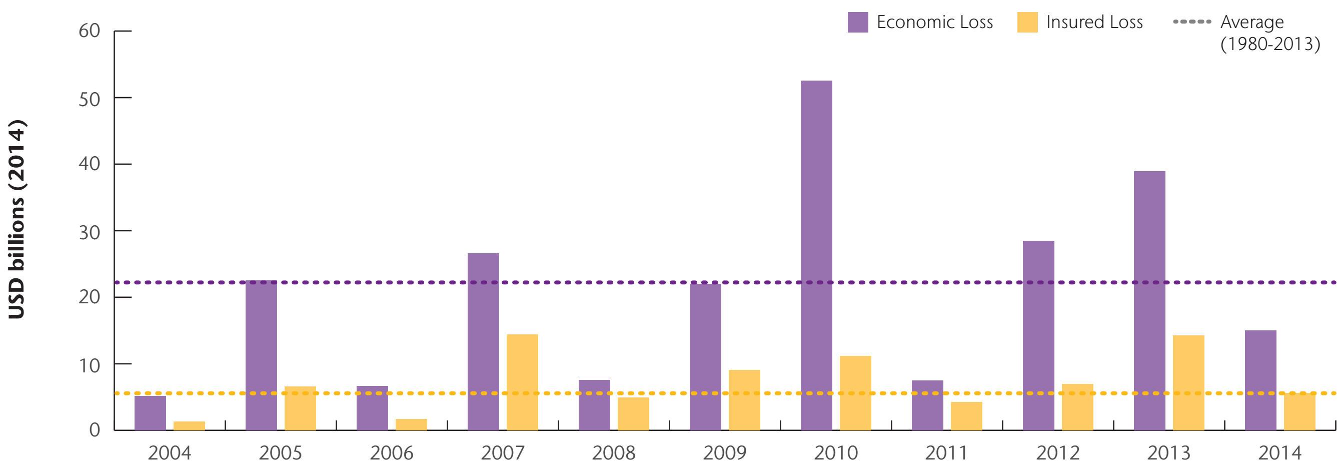
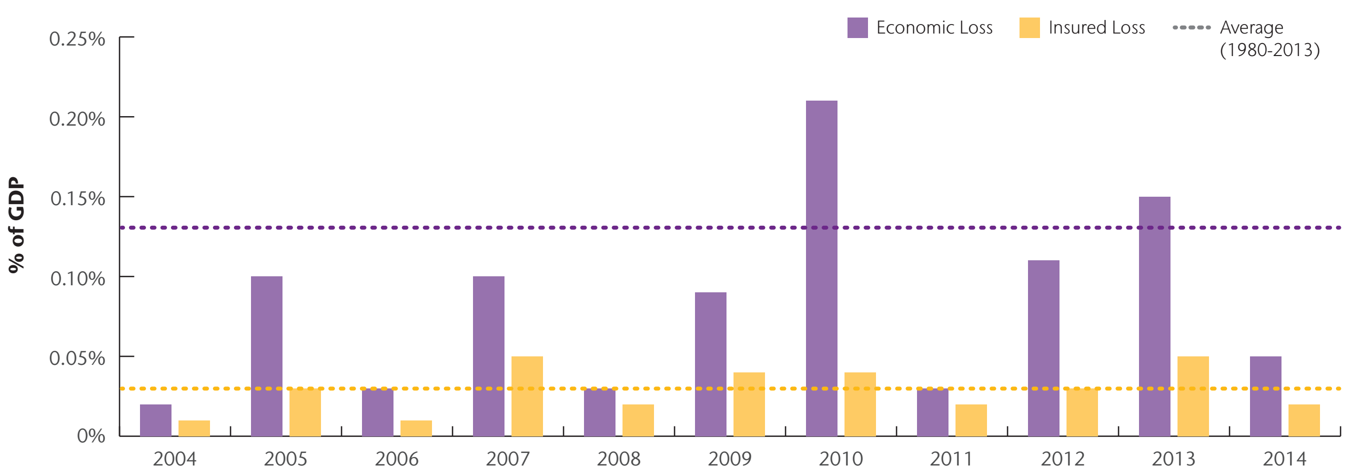
[1] Subject to change as loss estimates are further developed
[2] Includes losses sustained by private insurers and government-sponsored programs

Exhibit 47: EMEA Economic and Insured Losses



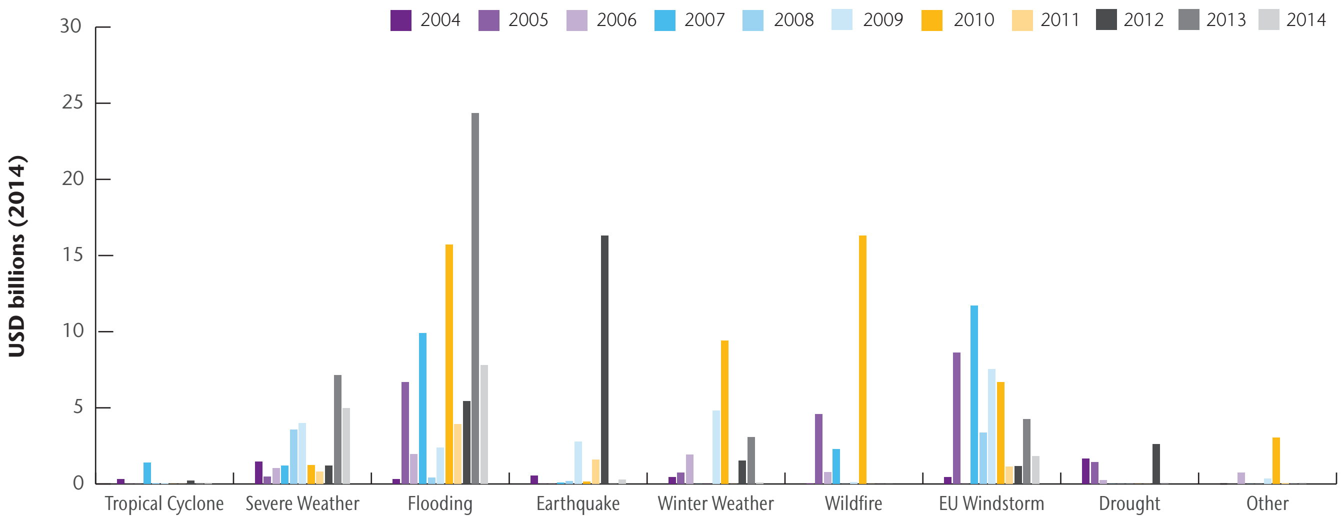
Since 1980, economic losses have increased by 2.2 percent annually on an inflation-adjusted basis in EMEA. Insured losses have increased at a higher rate of 7.7 percent. A largely similar trend level is found when analyzing loss data during the past ten years. On the economic loss side, losses have trended upward annually by 6.2 percent; while insured losses have nearly identically increased by 6.1 percent.

Exhibit 48: EMEA Economic and Insured Losses as Percentage of GDP



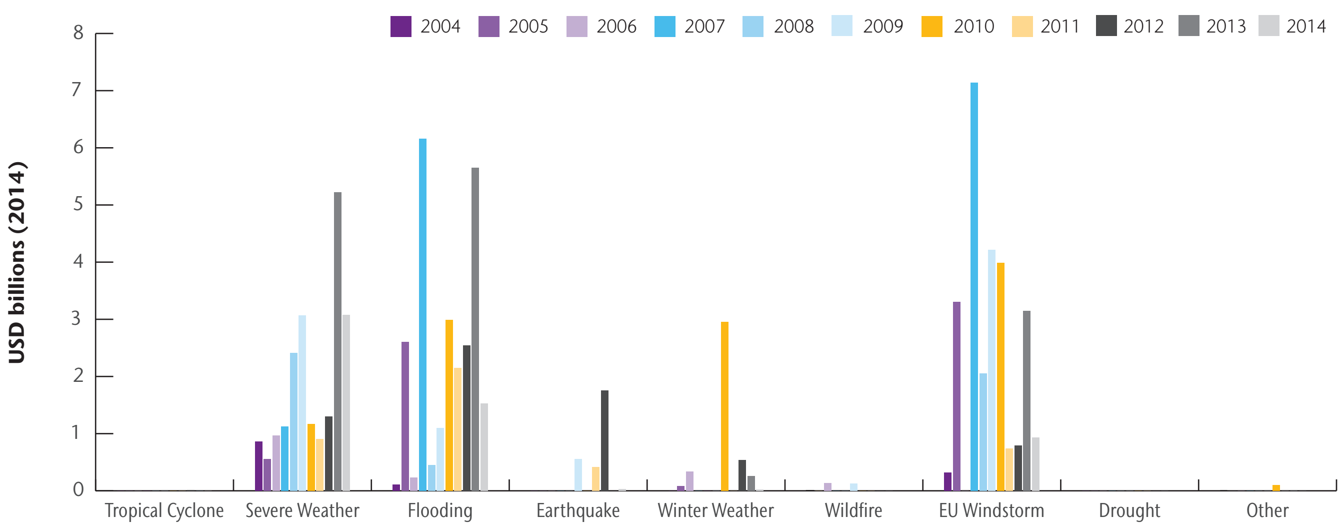
When analyzing natural disaster losses for EMEA as a percentage of GDP (World Bank), the rate of growth since 1980 has shown a slight downward trend in economic losses by 1.1 percent though insured losses have annually increased by 4.6 percent. However, there has been a slightly accelerated growth rate during the past ten years in the region. Economic losses have trended upwards by 4.5 percent and insured losses have trended up at a similar 4.4 percent. Despite these seemingly increased trends over the last ten-year period, it is worth pointing out that the overall losses as a percentage of GDP remain low (having only surpassed 0.20 percent once during this time in 2010). EMEA governments and the insurance industry have been well prepared to manage the associated losses.

Exhibit 49: EMEA Economic Losses by Peril



The flood peril once again led economic losses sustained in EMEA, as flood losses in 2014 were 10 percent above its ten-year average. Losses attributed to severe weather were also well above its recent norm by 127 percent. The European windstorm, wildfire, tropical cyclone, and drought perils were each below normal. Despite the active nature of the European windstorm season, losses were the fourth-lowest year dating to 2004.

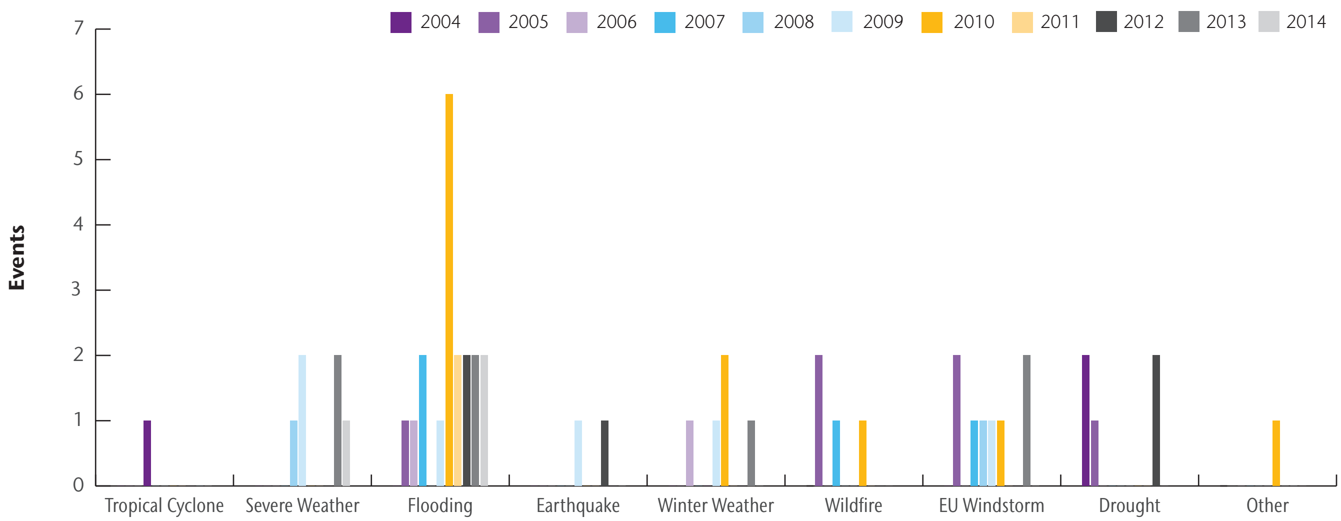
Exhibit 50: EMEA Insured Losses by Peril



Insured losses were above the ten-year average for just one peril: severe weather. Aggregate insured losses for the peril were the second-highest of the last decade and 72 percent above average. The flood and European windstorm perils were the only others to record total losses at or above USD1.0 billion. The rest of the perils were below their recent averages.

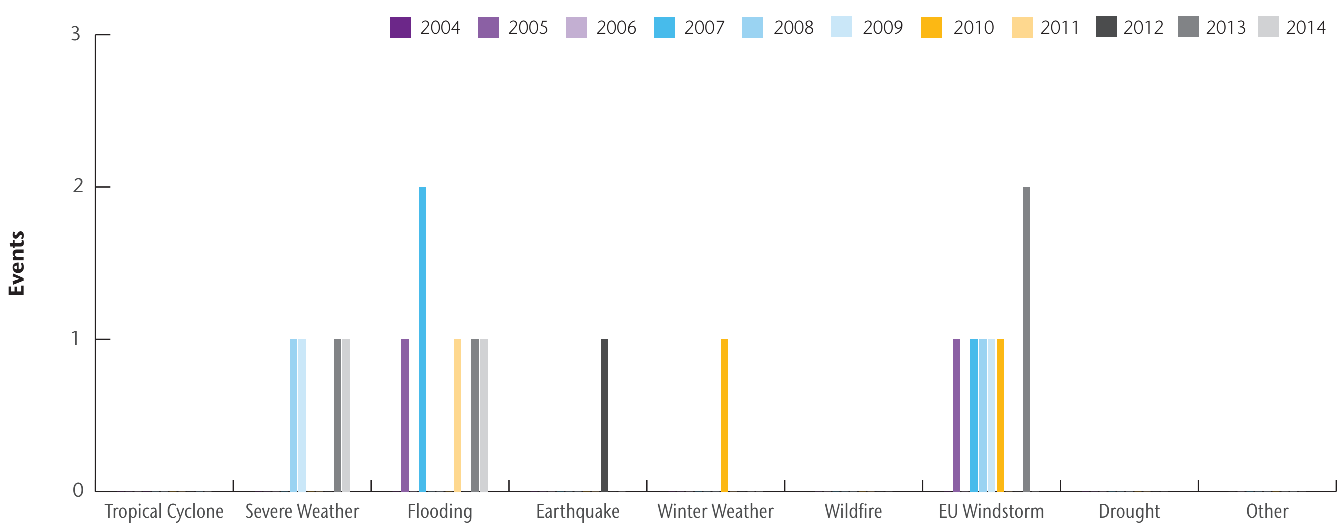
Please note that insured losses include those sustained by private insurers and government-sponsored program.

Exhibit 51: EMEA Billion-Dollar Economic Loss Events by Peril



There were three events that caused at least USD1.0 billion in economic losses in 2014, which were two below the ten-year average of five. This was a notable decrease from the seven in 2013. Flood accounted for two billion-dollar events, and the peril has registered at least two such events every year since 2010. Severe weather was the only other billion-dollar economic loss event in 2014. The 2004-2013 averages include: flooding (2), European windstorm (1), severe weather (1), wildfire (1), and drought (1).

Exhibit 52: EMEA Billion-Dollar Insured Loss Events by Peril



There were just two events that triggered insured losses beyond USD1.0 billion in 2014, or equal to the ten-year average. One event was the multi-billion dollar hailstorm in France and Germany; while the other was a prolonged flood event that swept across the United Kingdom. Based data from 2004-2013, the only perils to average a billion-dollar insured loss event each year are European windstorm and flooding.

Asia Pacific

Exhibit 53: Top 5 Most Significant Events in APAC

Date(s)	Event	Location	Deaths	Economic Loss (USD)	Insured Loss (USD)
September 2-15	Flooding	India, Pakistan	648	18 billion	700 million
October 12-14	CY Hudhud	India	68	11 billion	650 million
July 15-20	STY Rammasun	China, Philippines, Vietnam	206	7.2 billion	300 million
February 8-16	Winter Weather	Japan	95	5.0 billion	2.5 billion
August 3	Earthquake	China	617	3.3 billion	150 million
		All Other Events	~5,300	29 billion	5.2 billion
		Totals	**~7,000**	**75 billion**[1]	**10 billion**[1,2]

Overall economic and insured losses from natural disaster activity in APAC were below average in 2014, which was a reversal from 2013 (slightly above the ten-year norm). The losses in 2014 remain considerably lower than what was registered during the record-breaking year of 2011. One consistent story in APAC surrounds the large disparity between the overall economic loss total and what percentage is covered by insurance. The very high percentage of uninsured damage further highlights the low levels of insurance penetration in APAC, and particularly in regions that are often the most vulnerable to significant natural catastrophes.

In a year that saw several newsworthy events impact APAC, the two costliest each impacted India. The most economically damaging event of 2014 was a massive September flood event that inundated vast areas of Northern India and eastern Pakistan in a region commonly known as Kashmir. Given the enormity of the floods, there remains some uncertainty surrounding the exact economic loss total. At present, combined estimates from Indian and Pakistani government officials suggested economic damages at up to USD18 billion dollars. This total is subject to change given uncertainty surrounding the quality of available data. This represented the fifth consecutive year that Pakistan recorded a billion-dollar flood event. The General Insurance Corporation of India listed insured losses at USD700 million.

Mere weeks after the floods in northern India, Cyclone Hudhud made an landfall in India's Andhra Pradesh state with 130 mph (215 kph) winds.

The Category 4 storm caused significant damage to the major coastal city of Visakhapatnam, though fatalities were much less than initially feared after Indian authorities ordered a massive evacuation. The Indian government preliminarily estimated economic damages of up to USD11 billion, though this total was subject to change.

The costliest insured event in APAC during 2014 occurred in Japan. A series of powerful snowstorms left the heaviest accumulations in more than 45 years throughout several prefectures, including the greater Tokyo metropolitan region. The heavy weight of the snow and ice caused trees to snap and roofs to collapse, causing extensive damage to residential and commercial properties in addition to agricultural interests. Total insured losses were at least USD2.5 billion—making this the fourth-costliest event in the Japanese insurance industry's history.

Elsewhere, China endured Super Typhoon Rammasun which was the costliest global tropical cyclone of the year. Damage was listed at USD7.2 billion. In Australia, Cyclone Ita made landfall in Queensland and caused USD1.0 billion in damage. Most of the sustained damage affected the agriculture industry. In the greater Brisbane metro region, a severe November hailstorm left insured losses beyond USD1.0 billion.

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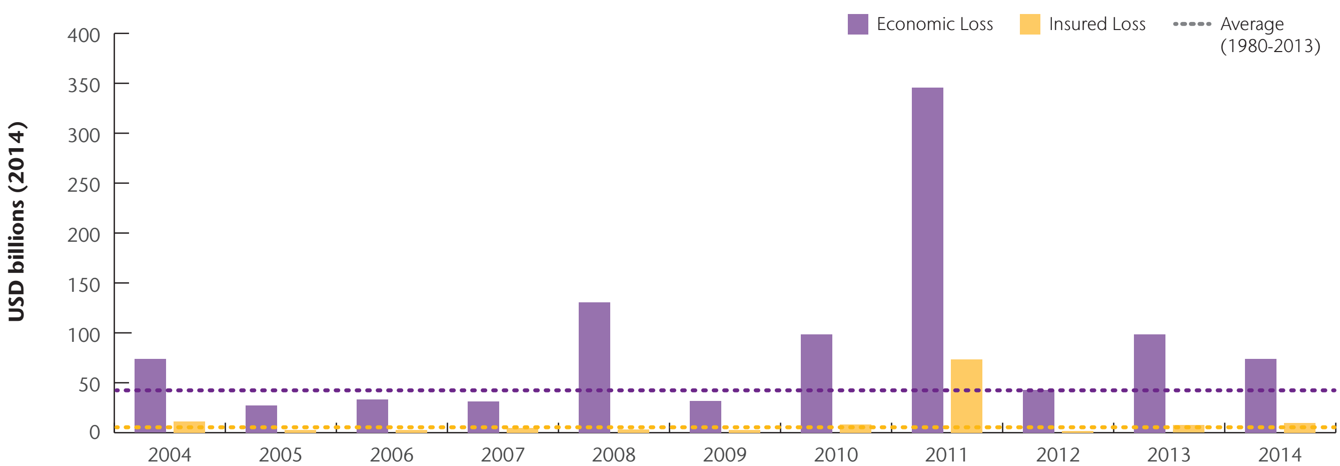
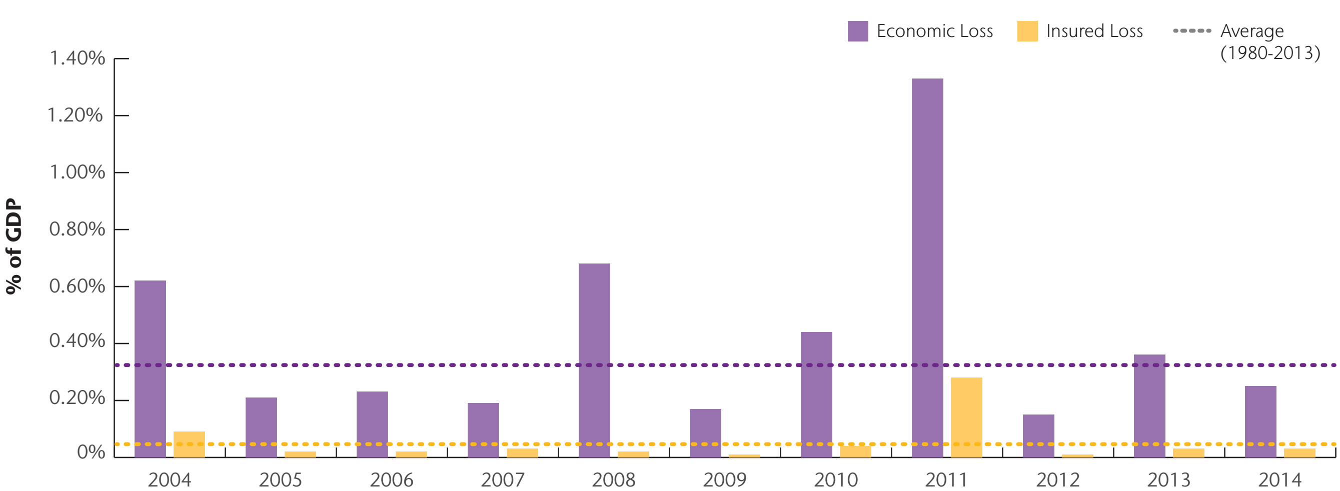
[1] Subject to change as loss estimates are further developed
[2] Includes losses sustained by private insurers and government-sponsored programs

Exhibit 54: APAC Economic and Insured Losses (1980-2014)



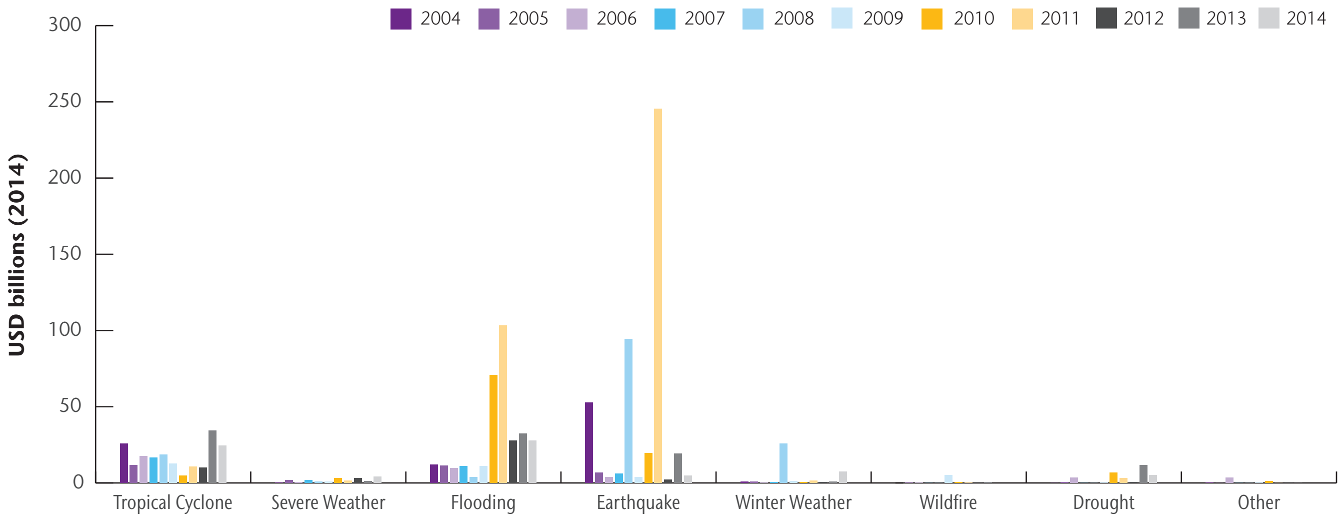
Since 1980, economic losses in APAC have shown an annual increase of 8.2 percent while insured losses have grown at an expedited rate of 12.7 percent. Outside of the outlier years in 1995 and 2011, economic losses in the region have not shown exponential growth over time. With insurance penetration continuing to expand across emerging markets in APAC (most notably in parts of the Far East), it is unsurprising that insured losses have grown at a faster rate since 1980. When looking solely at the last ten years, economic losses have trended higher at a slightly increased 10.2 percent annual rate. Insured losses have shown a faster rate of growth at 13.9 percent.

Exhibit 55: APAC Economic and Insured Losses as Percentage of GDP (1980-2014)



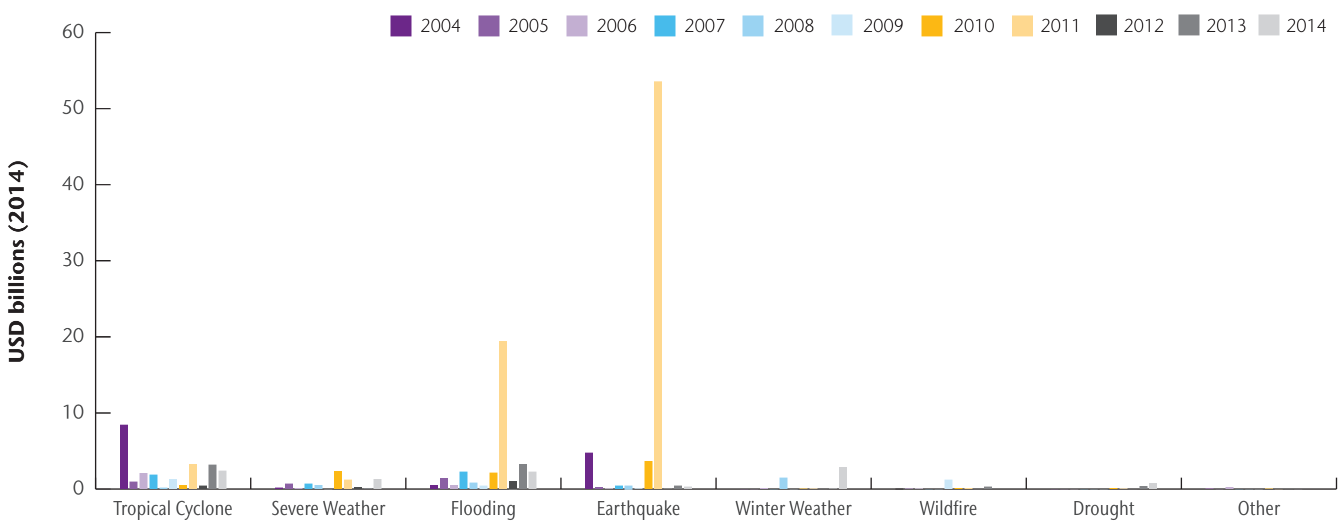
When analyzing natural disaster losses for APAC as a percentage of GDP (World Bank), the rate of growth since 1980 has increased annually by 4.2 percent for economic losses and 8.5 percent for insured losses. During the past ten years, economic losses have shown nearly identical annual increase of 4.1 percent and insured losses increase at 5.8 percent. APAC economies include some of the fastest growing in the world and this has likely had an impact in recent years in regards to the smaller percentages of natural disaster loss to GDP growth.

Exhibit 56: APAC Economic Losses by Peril



The flood and tropical cyclone perils caused the vast majority of economic losses in APAC during 2014, combining to cause 70 percent of damages—though flood was below its decade average. In addition to tropical cyclone, the severe weather, winter weather, and drought perils were also above their ten-year mean. However, earthquake losses were well below the ten-year average, which remains skewed by the historic losses derived from the 2011 Japan earthquake and tsunami. Losses derived from winter weather were at their highest level since 2008.

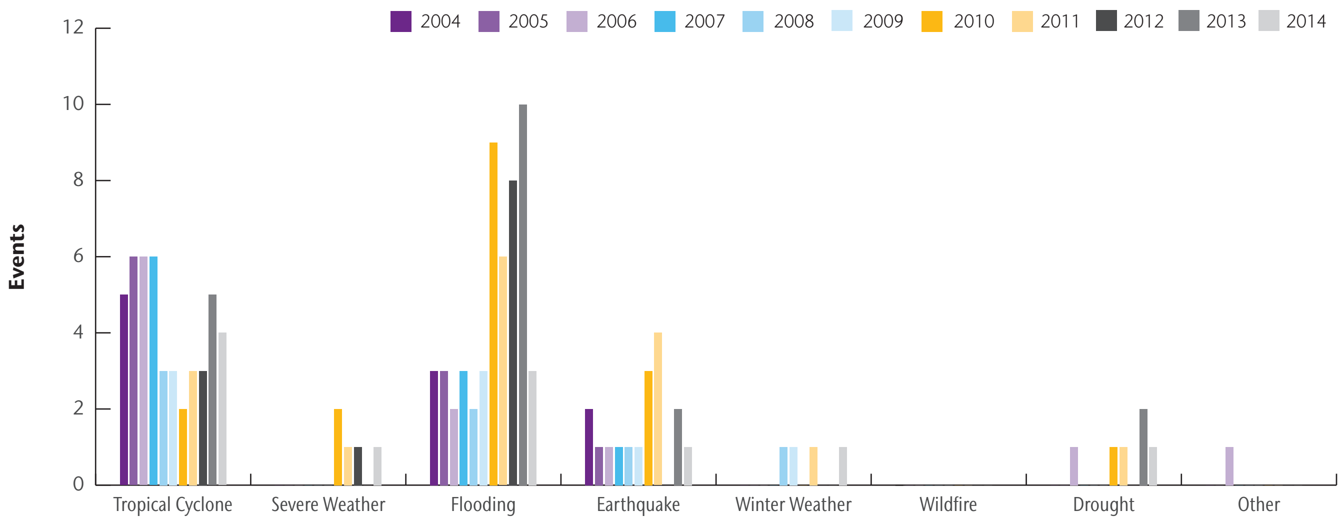
Exhibit 57: APAC Insured Losses by Peril



Several perils sustained above-average losses in 2014. The tropical cyclone, severe weather, winter weather, and drought perils were all higher than their ten-year norms. Winter weather was the costliest insured peril in 2014, primarily due to the substantial loss sustained in Japan. The rest of the perils were all below their ten-year averages. Despite tropical cyclone and flooding economic losses being in the tens of billions (USD), only a fraction of those losses were covered by insurance—signifying the dearth of penetration in the region (particularly in China, India, and Pakistan).

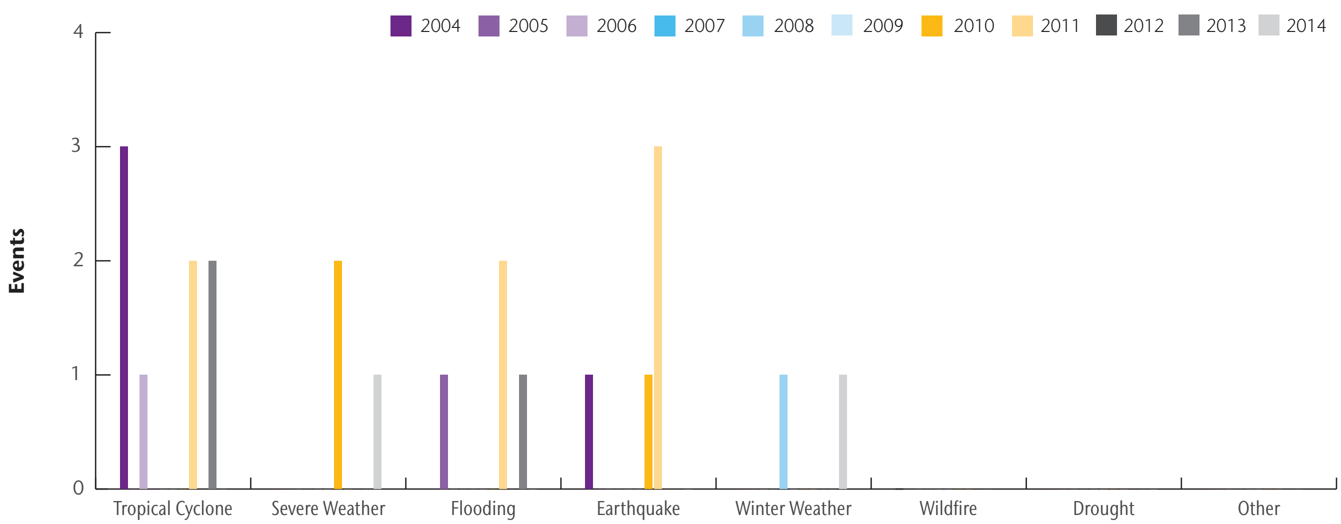
Please note that insured losses include those sustained by private insurers and government-sponsored programs.

Exhibit 58: APAC Billion-Dollar Economic Loss Events by Peril



There were 11 separate events which caused more than USD1.0 billion in economic losses in APAC in 2014, which was close to the ten-year average of 12. This follows the 19 that occurred in 2013. Four tropical cyclone events crossed the billion-dollar threshold; while the other events included flooding (3), severe weather (1), earthquake (1), winter weather (1) and drought (1). The 2004-2013 averages include: flooding (5), tropical cyclone (4), earthquake (2), and drought (1).

Exhibit 59: APAC Billion-Dollar Insured Loss Events by Peril



Despite 11 events causing more than USD1.0 billion in economic losses, only 2 events had insured losses beyond the same threshold. This was equal to the ten-year average. The highest number of insured billion-dollar events occurred in 2011, when a record 7 events were registered.

Appendix A: 2014 Global Disasters

Exhibit 60: United States

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-12/31	Drought	Western U.S.	0	Unknown	4.0+ billion
1/1-1/5	Winter Weather	Midwest, Ohio Valley, Northeast	16	10,000+	200+ million
1/5-1/8	Winter Weather	Midwest, Northeast, Southeast	21	150,000+	3.0+ billion
1/11	Severe Weather	Southeast	2	5,000+	50+ million
1/20-1/22	Winter Weather	Central and Eastern U.S.	4	Thousands+	100+ million
1/26-1/29	Winter Weather	Southeast, Midwest, Mid-Atlantic	13	Thousands+	250+ million
2/3-2/6	Winter Weather	Midwest, Plains, Northeast	9	30,000+	250+ million
2/11-2/14	Winter Weather	Southeast, Northeast	25	50,000+	900+ million
2/20-2/21	Severe Weather	Midwest, Southeast, Mid-Atlantic	1	20,000+	175+ million
2/28-3/4	Winter Weather	Nationwide	12	Thousands+	Millions+
3/1-3/31	Flooding	Montana, Wyoming	0	Hundreds+	10+ million
3/6-3/7	Winter Weather	Southeast, Mid-Atlantic	0	12,500+	100+ million
3/22	Mudslide	Washington	41	50+	10+ million
3/27-3/29	Severe Weather	Midwest, Plains, Southeast	0	100,000+	800+ million
3/28	Earthquake	California	0	Hundreds+	25+ million
4/2-4/4	Severe Weather	Plains, Midwest, Southeast	0	160,000+	1.5+ billion
4/12-4/14	Severe Weather	Plains, Midwest, Southeast	0	100,000+	1.0+ billion
4/27-5/1	Severe Weather	Central/Eastern U.S.	39	115,000+	1.6+ billion
5/7-5/9	Severe Weather	Plains, Midwest	0	25,000+	250+ million
5/10-5/15	Severe Weather	Plains, Midwest, Mid-Atlantic	0	100,000+	950+ million
5/11-5/20	Wildfires	Texas, California	2	400+	100+ million
5/18-5/23	Severe Weather	Midwest, Rockies, Northeast	0	425,000+	4.25+ billion
5/24-5/28	Severe Weather	Southwest	0	25,000+	200+ million
6/3-6/9	Severe Weather	Midwest, Plains, Rockies	3	115,000+	1.9+ billion
6/5-6/6	Severe Weather	South Dakota	0	25,000+	150+ million
6/10-6/12	Severe Weather	Midwest, Plains, Rockies	0	20,000+	150+ million
6/12-6/13	Severe Weather	Texas	0	40,000+	550+ million
6/14-6/19	Severe Weather	Midwest, Plains, Rockies	2	75,000+	775+ million
6/24-6/25	Severe Weather	Colorado, Wyoming, Kansas	0	30,000+	275+ million
6/29-7/1	Severe Weather	Midwest, Plains, Ohio Valley	4	55,000+	550+ million
7/1-7/6	HU Arthur	Eastern Seaboard	0	Hundreds+	10+ million
7/7-7/9	Severe Weather	Central & Eastern U.S.	5	45,000+	350+ million
7/14-8/15	Wildfire	Washington	1	300+	75+ million
7/26-7/28	Severe Weather	Central & Eastern U.S.	0	30,000+	225+ million
8/3	Flooding	California	1	100+	Millions+
8/8-8/10	HU Iselle	Hawaii	1	278+	66+ million

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/11-8/13	Flooding	Midwest, Northeast, Mid-Atlantic	1	70,000+	2.0+ billion
8/19	Flooding	Arizona	0	100+	10+ million
8/24	Earthquake	California	0	5,000+	1.0+ billion
8/31-9/2	Severe Weather	Midwest, Plains, Northeast	0	Thousands+	Millions+
8/31-9/2	Severe Weather	Plains, Midwest, Northeast, Mid-Atlantic	1	Thousands+	Millions+
9/7-9/9	Flooding	Southwest	2	15,000+	225+ million
9/14-9/25	Wildfires	California	0	275+	100+ million
9/27-9/30	Severe Weather	Southwest, Rockies	0	90,000+	1.25+ billion
10/1-10/3	Severe Weather	Plains, Midwest, Southeast	0	35,000+	425+ million
10/12-10/14	Severe Weather	Plains, Midwest, Southeast	2	20,000+	200+ million
10/25	Severe Weather	Northwest	2	Unknown	12+ million
11/1-11/3	Winter Weather	Northeast, Mid-Atlantic, Southeast	0	Unknown	Millions+
11/8-11/12	Winter Weather	Rockies, Plains, Midwest	4	Unknown	Millions+
11/15-11/19	Winter Weather	Northeast, Midwest, Southeast	24	Thousands+	100+ million
11/25-11/28	Winter Weather	Northeast, Mid-Atlantic	1	Unknown	Millions+
12/2-12/4	Flooding	California	0	7,500+	90+ million
12/8-12/12	Winter Weather	Northeast	1	Thousands	Millions
12/10-12/17	Severe Weather	Pacific Northwest, Southwest	3	Thousands	100+ million
12/23-12/24	Severe Weather	Southeast	4	25,000+	250+ million

Exhibit 61: Remainder of North America (Canada, Mexico, Central America, Caribbean Islands)

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/13	Earthquake	Puerto Rico	0	Hundreds+	Unknown
1/1-3/31	Drought	Haiti	0	Unknown	Millions+
3/26	Winter Weather	Canada	0	Thousands+	Millions+
4/10	Earthquake	Nicaragua	1	2,354+	Millions+
4/18	Earthquake	Mexico	0	2,500+	Millions+
5/30-6/2	TS Boris	Mexico, Guatemala	6	Hundreds+	Unknown
6/17	Severe Weather	Canada	0	100+	50+ million
6/28-7/10	Flooding	Canada	0	Thousands+	745+ million
7/5-7/7	HU Arthur	Canada	0	Hundreds+	31+ million
7/7	Earthquake	Mexico, Guatemala	9	20,000+	25+ million
8/1-8/4	HU Bertha	Caribbean, Bahamas	0	Hundreds+	Unknown
8/4	Flooding	Canada	0	2,300+	250+ million
8/7-8/8	Severe Weather	Canada	0	25,000+	600+ million
6/1-10/1	Drought	Guatemala	0	Unknown	58+million
9/2-9/3	TS Dolly	Mexico	0	500+	Unknown
9/4-9/8	HU Norbert	Mexico	3	3,000+	25+ million
9/10-9/17	HU Odile	Mexico	5	50,000+	2.5+ billion
10/12	HU Fay	Bermuda	0	1,000+	Millions+
10/13-10/17	HU Gonzalo	Bermuda, Caribbean Islands	4	Thousands+	150+ million
10/14	Earthquake	Central America	1	100+	Unknown
10/15-10/17	Flooding	Guatemala, Honduras, Nicaragua	36	13,500+	Millions+
10/18-10/19	TS Trudy	Mexico	8	10,000+	Millions+
7/1-11/30	Drought	Jamaica	0	18,309+	10+ million
11/3-11/5	Flooding	Caribbean	14	6,100+	Unknown
11/24-11/25	Severe Weather	Canada	0	5,000+	125+ million

Exhibit 62: South America

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-2/28	Flooding	Bolivia	64	25,000+	100+ million
1/1-4/30	Drought	Brazil	0	Unknown	4.3+ billion
1/12	Flooding	Brazil	24	500+	Unknown
2/15-3/31	Flooding	Brazil, Bolivia, Peru	0	29,500+	200+ million
4/1	Earthquake	Chile	7	13,000+	100+ million
4/12-4/16	Wildfire	Chile	15	2,900+	34+ million
5/19-5/23	Severe Weather	Brazil	0	Thousands+	Millions+
6/7-6/30	Flooding	Brazil, Paraguay, Argentina	15	25,000+	300+ million
8/12	Earthquake	Ecuador	3	Hundreds+	Unknown
8/24	Earthquake	Peru	0	200+	Millions+
9/27	Earthquake	Peru	8	150+	Unknown
10/6	Severe Weather	Colombia	11	Unknown	Unknown
10/30-11/4	Flooding	Argentina	3	Thousands	Unknown

Exhibit 63: Europe

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
12/23-3/1	Flooding	United Kingdom	0	420,000+	1.5+ billion
1/2-1/3	WS Anne	United Kingdom, France	0	Thousands+	100+ million
1/5-1/7	WS Christina	UK, France, Scandinavia	3	Thousands+	500+ million
1/26-1/30	Winter Weather	Central/Western Europe	4	5,000+	Millions+
1/26-2/3	Earthquakes	Greece	0	5,000+	250+ million
2/1-2/8	WS Nadja & Petra	Western/Central Europe	1	Thousands+	410+ million
2/11-2/13	WS Tini	Western Europe	1	Thousands+	700+ million
2/14-2/15	WS Ulla	Western Europe	5	Thousands+	100+ million
4/19-4/22	Flooding	Romania, Serbia, Bulgaria	4	Hundreds+	10+ million
5/13-5/21	Flooding	Southeast Europe	80	150,000+	4.5+ billion
5/24	Earthquake	Greece, Turkey	0	Hundreds+	Millions+
5/27-5/31	Flooding	Russia	0	16,000+	15+ million
6/8-6/10	Severe Weather	France, Germany, Belgium	6	750,000+	4.0+ billion
6/19-6/20	Flooding	Bulgaria	15	5,500+	38+ million
7/8-7/11	Severe Weather	Western & Central Europe	5	100,000+	500+ million
7/26-7/30	Flooding	Western & Central Europe	3	5,000+	135+ million
8/2	Flooding	Italy	4	Hundreds+	Millions+
8/30-8/31	Flooding	Denmark, Sweden	0	5,000+	100+ million
9/4-9/6	Severe Weather	Bulgaria	3	2,000+	10+ million
9/7	Flooding	Italy	2	2,000+	25+ million
9/10-9/14	Flooding	Croatia, Slovenia, Serbia	3	5,000+	Millions+
9/18	Flooding	France	5	Hundreds+	Millions+
10/8-10/11	Severe Weather	Italy	1	Thousands+	500+ million
10/20-10/25	Ex-HU Gonzalo	Western, Central, and Southern Europe	3	Thousands+	42+ million
11/5-11/12	Severe Weather	Italy	3	Thousands	250+ million
11/15-11/19	Flooding	Switzerland, Italy, France, Albania	13	Thousands	100s of millions
12/26-12/29	Winter Storm	Western/Central/Southern Europe	0	Thousands+	Millions+

Exhibit 64: Africa

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/21	Flooding	Tanzania	1	4,086+	Millions+
1/20-2/10	Flooding	Zimbabwe	0	6,393+	20+ million
2/9-2/10	Flooding	Burundi	77	3,790+	Millions+
3/2-3/20	Flooding	South Africa	32	Thousands+	85+ million
3/29-4/1	CY Hellen	Madagascar, Comoros	17	2,000+	Millions+
6/28	Flooding	Nigeria	15	Thousands+	Unknown
7/25-8/4	Flooding	Sudan	17	3,000+	Unknown
8/1	Earthquake	Algeria	6	Thousands+	Unknown
8/5	Earthquake	South Africa	1	Hundreds+	40+ million
8/1-8/31	Flooding	Niger	18	5,511+	Millions
10/25-10/28	Severe Weather	Congo	30	750+	Unknown
10/30-11/12	Flooding	Somalia, Uganda	0	2,500+	Unknown
11/21-12/4	Flooding	Morocco	47	Thousands+	450+ million
12/16-12/20	Flooding	Swaziland, Mozambique	16	1,000+	Unknown

Exhibit 65: Asia

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-2/1	Volcano	Indonesia	32	Unknown	83+ million
1/1-4/30	Drought	Pakistan	248	Unknown	18+ million
1/2	Earthquake	Iran	1	Thousands+	Millions+
1/11-1/20	Flooding	Philippines	79	3,500+	13+ million
1/12-1/15	Winter Weather	China	0	Unknown	89+ million
1/14-1/17	Flooding	Indonesia	20	10,844+	153+ million
1/14-1/21	Flooding	Indonesia	12	38,762+	430+ million
1/15-1/31	Winter Weather	Thailand	63	Unknown	Unknown
1/17-1/20	Winter Weather	India	25	Unknown	Unknown
1/17-1/22	Winter Weather	China	0	Unknown	79+ million
1/19-1/22	Flooding	Indonesia	13	4,000+	515+ million
1/24-1/28	Flooding	Indonesia	26	100+	173+ million
1/31-2/1	TD Kajiki	Philippines	6	427+	3.2+ million
1/1-8/31	Drought	Sri Lanka	0	Unknown	25+ million
2/1-2/7	Winter Weather	Afghanistan, Kyrgyzstan	46	Hundreds+	Unknown
2/4-2/5	Winter Weather	China	0	10,000+	115+ million
2/7-2/14	Winter Weather	China	10	20,000+	675+ million
2/8-2/16	Winter Weather	Japan	95	288,000+	5.0+ billion
2/12	Earthquake	China	0	90,000+	350+ million
2/13-2/20	Flooding	Malaysia	2	5,000+	25+ million
2/14	Volcano	Indonesia	7	12,447+	103+ million
2/17	Winter Weather	South Korea	10	Unknown	11+ million
2/17-2/21	Winter Weather	China	0	5,000+	140+ million
2/22	Flooding	Indonesia	11	2,000+	Millions+
3/10-3/12	Winter Weather	India	17	1,922+	Unknown
3/12-3/14	Winter Weather	China	0	2,000+	50+ million
3/19-3/20	Severe Weather	China	1	5,000+	118+ million
3/23-3/27	Severe Weather	China	0	15,000+	95+ million
3/27-4/4	Severe Weather	China	27	80,000+	161+ million
4/5	Earthquake	China	0	15,000+	80+ million
4/7-4/9	Severe Weather	China	0	1,000+	230+ million
4/11-4/12	Flooding	Tajikistan	15	500+	Millions+
4/14-4/16	Severe Weather	China	0	1,000+	155+ million
4/16-4/20	Severe Weather	China	3	20,000+	156+ million
4/18	Winter Weather	Nepal	16	Unknown	Unknown
4/22-4/28	Severe Weather	China	9	10,000+	452+ million
4/24-5/15	Flooding	Afghanistan	2,665	15,000+	240+ million
4/27-4/28	Severe Weather	Bangladesh	16	1,000+	Unknown

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
5/3-5/7	Winter Weather	China	0	Unknown	417+ million
5/5	Earthquake	Thailand	1	4,000+	62+ million
5/8-5/15	Flooding	China	3	15,000+	450+ million
5/24	Earthquake	China	0	45,000+	60+ million
5/24-5/28	Flooding	China	37	95,000+	1.2+ billion
5/30	Earthquake	China	0	22,000+	Millions+
5/30-5/31	Severe Weather	India	15	Hundreds+	Unknown
6/1-6/7	Flooding	China	33	74,000+	675+ million
6/2	Flooding	Sri Lanka	27	1,487+	Millions+
6/6-6/7	Flooding	Afghanistan	150	2,000+	Unknown
6/9-6/10	Severe Weather	China	1	5,000+	193+ million
6/14-6/16	TS Hagibis	China	0	1,000+	131+ million
6/16-6/18	Severe Weather	China	11	5,000+	94+ million
6/17-6/21	Flooding	China	30	85,000+	925+ million
6/23-6/25	Flooding	China	4	5,000+	75+ million
6/25-6/30	Flooding	China	24	30,000+	483+ million
6/26-6/28	Flooding	India	27	Thousands+	Millions+
6/20-8/31	Drought	China	0	Unknown	5.2+ billion
7/3-7/7	Flooding	China	36	10,000+	547+ million
7/8-7/11	STY Neoguri	Japan	7	1,000+	100+ million
7/13-7/18	Flooding	China	66	80,000+	1.25+ billion
7/15-7/20	STY Rammasun	Philippines, China, Vietnam	206	1.0+ million	7.2+ billion
7/16-7/22	Flooding	India, Nepal	34	Thousands+	Unknown
7/19-7/20	Severe Weather	China	5	5,000+	275+ million
7/22-7/24	TY Matmo	Taiwan, China, Philippines	15	30,000+	570+ million
7/30	Landslide	India	209	44+	Unknown
7/30-8/31	Flooding	Cambodia	45	11,590+	Millions+
8/2	Landslide	Nepal	156	129+	15+ million
8/3	Earthquake	China	617	225,000+	3.3+ billion
8/3-8/4	Flooding	India	35	25,000+	100s of Millions
8/3-8/6	TS Nakri	South Korea, Japan	14	2,000+	Millions+
8/4-8/8	Flooding	Southeast Asia	9	Thousands+	Millions+
8/9-8/11	Flooding	Indonesia	3	2,638+	Unknown
8/10-8/12	STY Halong	Japan	10	7,218+	100s of Millions
8/11-8/16	Flooding	India, Nepal	214	35,000+	82+ million
8/12-8/13	Flooding	China	27	30,000+	487+ million
8/15	Flooding	Pakistan	16	500+	Unknown
8/15-9/10	Flooding	Bangladesh	59	268,000+	150+ million
8/16-8/20	Flooding	Japan	73	8,767+	Millions+

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/18	Earthquake	Iran	0	17,000+	44+ million
8/22-8/28	Flooding	China	10	10,000+	700+ million
8/25	Flooding	South Korea	13	Thousands+	Millions+
8/26-9/12	Flooding	Thailand	10	14,652+	10+ million
9/1-9/6	Flooding	China	65	60,000+	570+ million
9/2-9/15	Flooding	India, Pakistan	648	375,000+	18+ billion
9/10-16	TY Kalmaegi	Philippines, China, Vietnam	31	83,000+	3.0+ billion
9/10-9/17	Flooding	China	50	213,000+	1.4+ billion
9/18-9/24	TS Fung-Wong	Philippines, Taiwan, China	21	12,000+	232+ million
9/20-9/25	Flooding	India	73	Thousands+	163+ million
9/25-9/26	Severe Weather	China	0	Unknown	134+ million
9/27	Volcano	Japan	47	Unknown	Unknown
10/4-10/7	STY Phanfone	Japan	11	3,000+	100+ million
10/6-10/14	STY Vongfong	Japan, Northern Mariana Islands	9	500+	100+ million
10/7	Earthquake	China	1	51,000+	835+ million
10/12-10/14	CY Hudhud	India	68	200,000+	11+ billion
10/14	Winter Weather	Nepal	43	Unknown	Unknown
10/29	Landslide	Sri Lanka	38	66+	Unknown
10/31-11/4	Flooding	Indonesia	1	13,505+	115+ million
11/8-11/10	Flooding	Thailand	0	Thousands	Unknown
11/10-14	Winter Weather	China	0	5,000+	245+ million
11/22	Earthquake	Japan	0	855+	Millions
11/22	Earthquake	China	5	25,000+	Millions
11/22-11/24	Flooding	Indonesia	1	2,084+	Unknown
11/27-11/30	TS Sinlaku	Philippines, Vietnam	4	3,143+	Unknown
11/30-12/1	Winter Weather	China	0	1,000+	81+ million
12/1-12/31	Flooding	Sri Lanka	39	24,513+	Unknown
12/2-12/9	Winter Weather	China, Japan	7	1,000+	135+ million
12/6-12/8	STY Hagupit	Philippines	18	300,000+	115+ million
12/7-12/9	Winter Weather	India	16	Unknown	Unknown
12/12	Landslide	Indonesia	85	105	Unknown
12/13-12/31	Flooding	Thailand	15	10,000+	Unknown
12/17-12/18	Winter Weather	Japan	5	Unknown	Unknown
12/17-12/19	Winter Weather	India	7	Unknown	Unknown
12/17-12/31	Flooding	Malaysia	21	19,560+	284+ million
12/18-12/31	Flooding	Indonesia	2	39,570+	Unknown
12/27-12/29	TS Jangmi	Philippines	65	2,740	17+ million

Exhibit 66: Oceania (Australia, New Zealand, and the South Pacific Islands)

Date(s)	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/10-1/12	CY Ian	Tonga	1	1,130+	48+ million
1/12-1/19	Wildfires	Australia (WA, VIC, SA)	2	350+	25+ million
1/20	Earthquake	New Zealand	0	4,004+	Millions+
1/30-1/31	CY Dylan	Australia (QLD)	0	Unknown	Unknown
2/25-2/28	Flooding	Fiji	0	Hundreds+	2.1+ million
3/4-3/5	Flooding	New Zealand	0	1,000+	30+ million
3/9-3/12	CY Lusi	Vanuatu	12	Hundreds+	Millions+
4/3-4/4	Flooding	Solomon Islands	23	Thousands+	24+ million
4/10-4/14	CY Ita	Australia	0	680+	1.0+ billion
4/17	Severe Weather	New Zealand	0	10,000+	65+ million
6/10-6/11	Severe Weather	New Zealand	0	6,000+	45+ million
7/8-7/11	Severe Weather	New Zealand	0	3,000+	20+ million
10/14-10/15	Severe Weather	Australia	0	Hundreds+	Unknown
11/30	Severe Weather	Australia	0	100,000+	1.25+ billion

Appendix B: Historical Natural Disaster Events

The following tables provide a look at specific global natural disaster events since 1950. (Please note that the adjusted for inflation (2014 USD) totals were converted using the U.S. Consumer Price Index (CPI). Insured losses include those sustained by private industry and government entities such as the U.S. National Flood Insurance Program (NFIP). For additional top 10 lists, please visit **www.aonbenfield.com/catastropheinsight**

Exhibit 67: Top 10 Costliest Global Economic Loss Events (1950-2014)

Date	Event	Location	Economic Loss[1] Actual (USD)	Economic Loss[2] (2014 USD)
March 11, 2011	EQ/Tsunami	Japan	210 billion	222.7 billion
January 17, 1995	Earthquake	Japan	102.5 billion	161.6 billion
August 2005	Hurricane Katrina	United States	125 billion	150.8 billion
May 12, 2008	Earthquake	China	85 billion	93 billion
Summer 1988	Drought	United States	40 billion	81.9 billion
October 2012	Hurricane Sandy	U.S., Caribbean, Bahamas, Canada	72 billion	73.5 billion
January 17, 1994	Earthquake	United States	44 billion	71.3 billion
Summer 1980	Drought	United States	20 billion	60.9 billion
November 23, 1980	Earthquake	Italy	18.5 billion	51.3 billion
July - December 2011	Flooding	Thailand	45 billion	47.2 billion

Exhibit 68: Top 10 Costliest Global Insured Loss Events (1950-2014)

Date	Event	Location	Insured Loss[1] Actual (USD)	Insured Loss[2] (2014 USD)
August 2005	Hurricane Katrina	United States	66.9 billion	80.7 billion
March 11, 2011	EQ/Tsunami	Japan	35 billion	37.1 billion
October 2012	Hurricane Sandy	U.S., Caribbean, Bahamas, Canada	30.2 billion	30.9 billion
August 1992	Hurricane Andrew	U.S., Bahamas	15.7 billion	26.4 billion
January 17, 1994	Earthquake	United States	15.3 billion	24.8 billion
Yearlong 2012	Drought	United States	18 billion	18.8 billion
September 2008	Hurricane Ike	United States	15.2 billion	16.5 billion
June - December 2011	Flooding	Thailand	15.5 billion	16.3 billion
October 2005	Hurricane Wilma	United States	12.5 billion	14.8 billion
February 22, 2011	Earthquake	New Zealand	13.5 billion	14.5 billion

[1] Economic loss include those sustained from direct damages, plus additional directly attributable event costs
[2] Adjusted using U.S. Consumer Price Index (CPI)

Exhibit 69: Top 10 Global Human Fatality Events (1950-2014)

Date	Event	Location	Economic Loss[1] Actual (USD)	Insured Loss[2] (2014 USD)	Fatalities
November 1970	Tropical Cyclone	Bangladesh	90 million	N/A	300,000
July 27, 1976	Earthquake	China	5.6 billion	N/A	242,769
December 26, 2004	EQ/Tsunami	Indonesia	14 billion	3 billion	227,898
January 12, 2010	Earthquake	Haiti	8 billion	100 million	222,570
April 1991	CY Gorky	Bangladesh	2 billion	100 million	138,866
May 2008	CY Nargis	Myanmar	10 billion	N/A	138,366
August 1971	Flooding	Vietnam	N/A	N/A	100,000
May 12, 2008	Earthquake	China	85 billion	366 million	87,587
October 8, 2005	Earthquake	Pakistan	5.2 billion	50 million	86,000
Summer 2003	Drought/Heatwave	Europe	13.5 billion	1.1 billion	70,000

Exhibit 70: Top 10 Costliest United States Natural Disaster Events (1950-2014)

Date	Event	Location	Economic Loss[1] Actual (USD)	Economic Loss[2] (2014 USD)
August 2005	Hurricane Katrina	Southeast	125 billion	150.8 billion
Summer 1988	Drought	Nationwide	40 billion	81.9 billion
October 2012	Hurricane Sandy	Eastern U.S.	71.8 billion	73.5 billion
January 17, 1994	Earthquake	California	44 billion	71.3 billion
Summer 1980	Drought	Nationwide	20 billion	60.9 billion
August 1992	Hurricane Andrew	Southeast	27 billion	45.4 billion
September 2008	Hurricane Ike	Texas, Midwest, Northeast	34.5 billion	37.4 billion
Yearlong 2012	Drought	Nationwide	35 billion	36.6 billion
June - August 1993	Flooding	Midwest, Mississippi Valley	21 billion	34.5 billion
October 2005	Hurricane Wilma	Florida	24.4 billion	29 billion

[1] Economic loss include those sustained from direct damages, plus additional directly attributable event costs
[2] Adjusted using U.S. Consumer Price Index (CPI)

Appendix C: Tropical Cyclone Frequency Comparisons

The following shows how the El Niño/Southern Oscillation (ENSO) affects global tropical cyclone frequencies and also how the Atlantic Multidecadal Oscillation (AMO) affects activity in the Atlantic Ocean Basin. Note that data for the Atlantic and Western Pacific Basins in this section extend to 1950 given the level of quality data as provided by NOAA's IBTrACS historical tropical cyclone database. All other basins include data to 1980.

Atlantic Ocean Basin

Exhibit 71: Atlantic Basin Hurricane Frequency by ENSO Phase

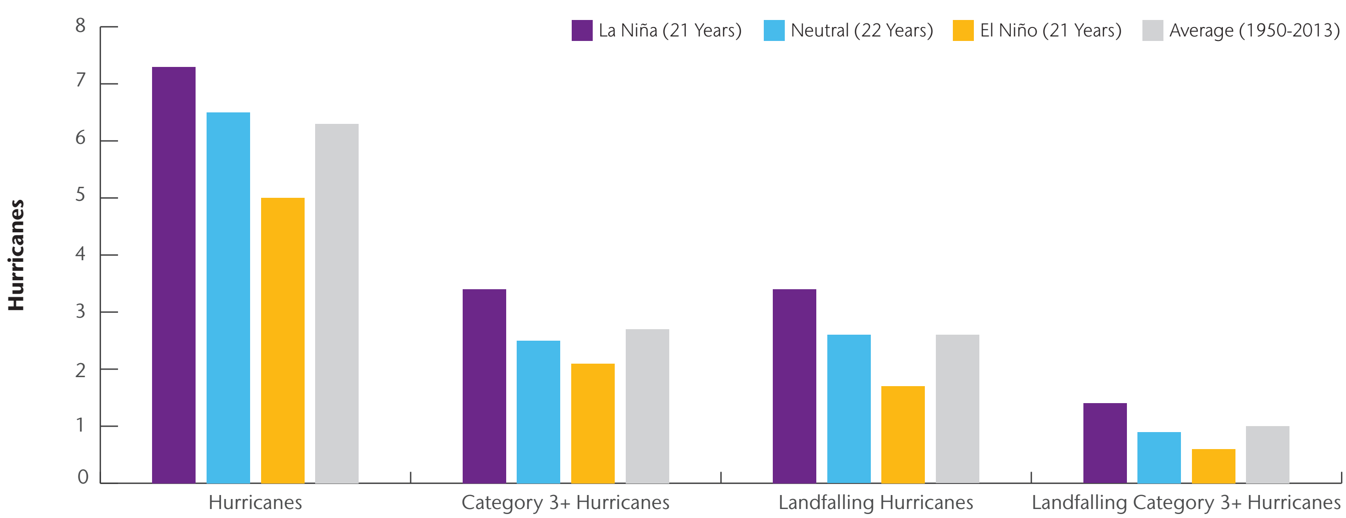


Exhibit 72: Atlantic Basin Hurricane Frequency by AMO Phase

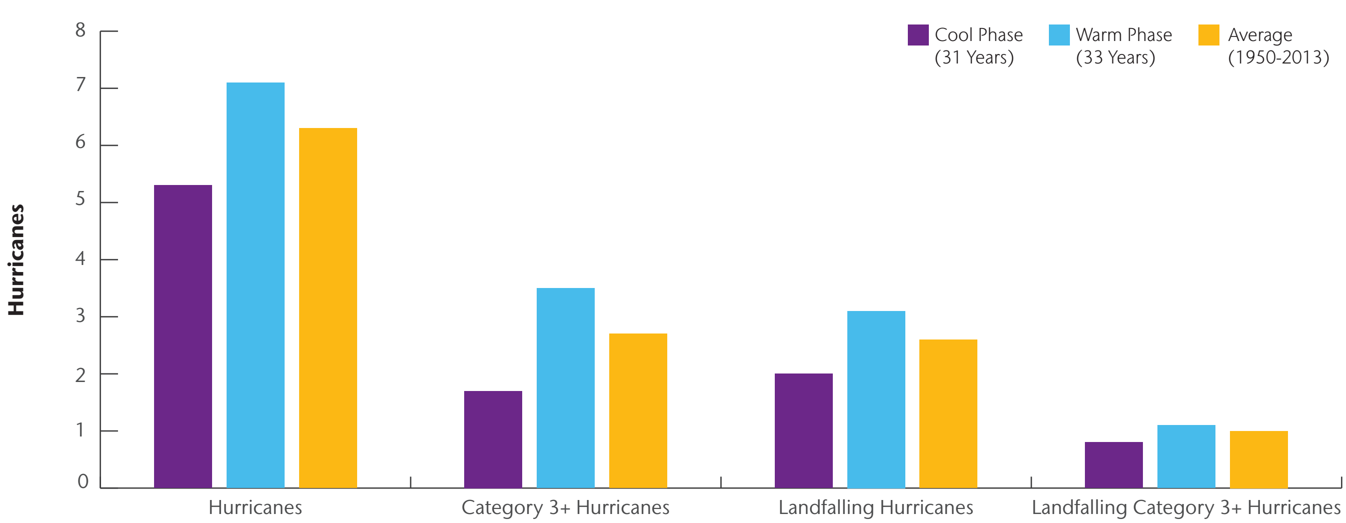


Exhibit 73: United States Hurricane Landfall Frequency by ENSO Phase

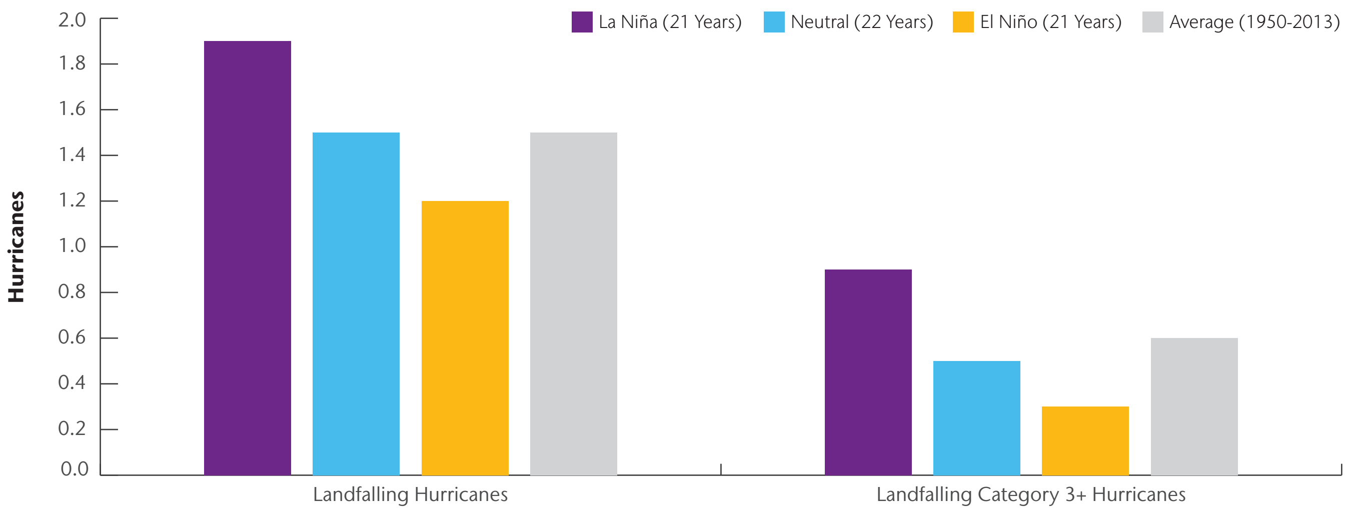
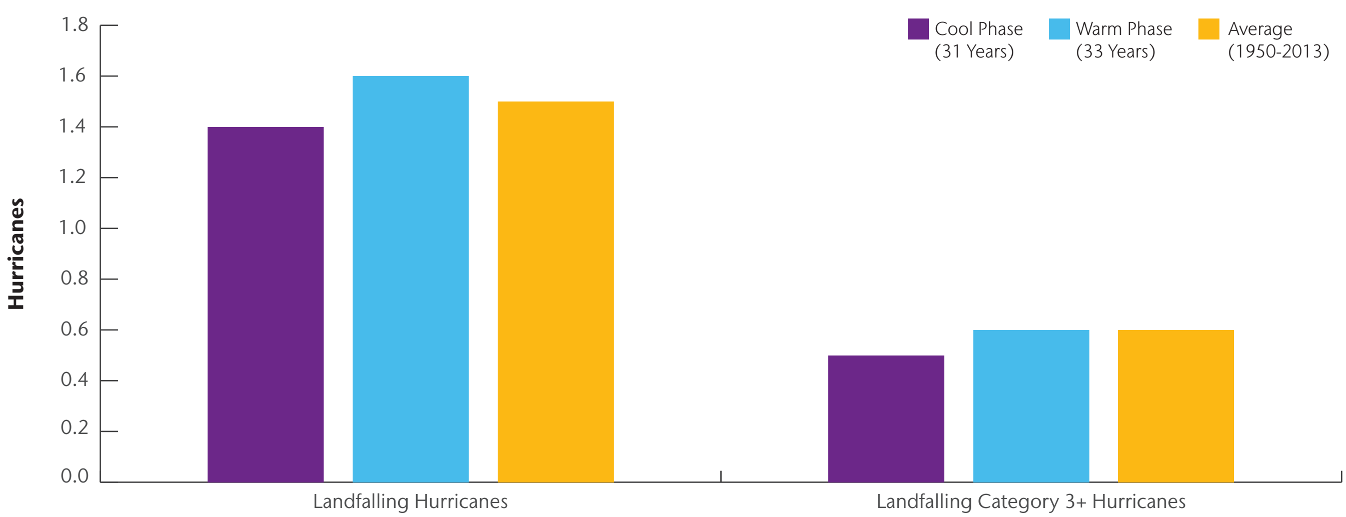
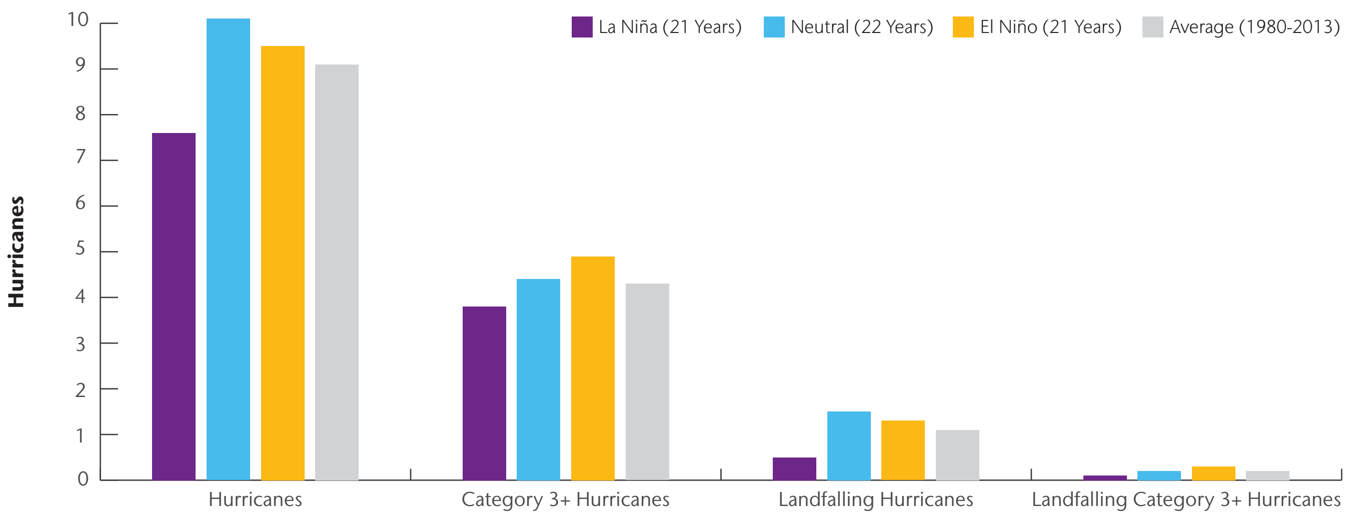


Exhibit 74: United States Hurricane Landfall Frequency by AMO Phase



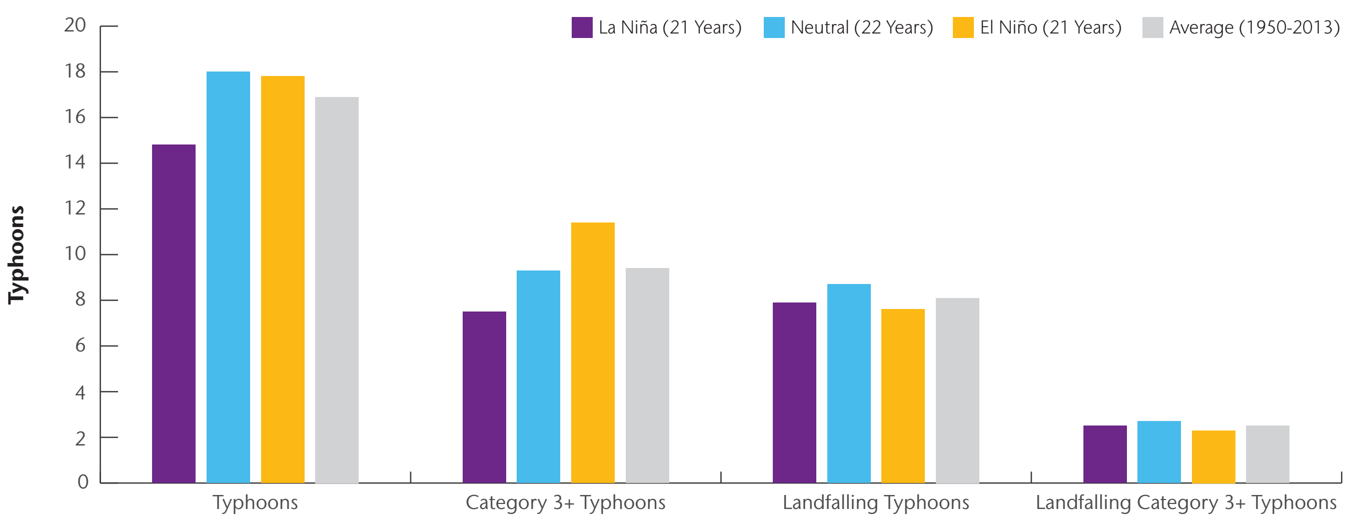
Eastern Pacific Ocean Basin

Exhibit 75: Eastern and Central Pacific Basin Hurricane Frequency by ENSO Phase



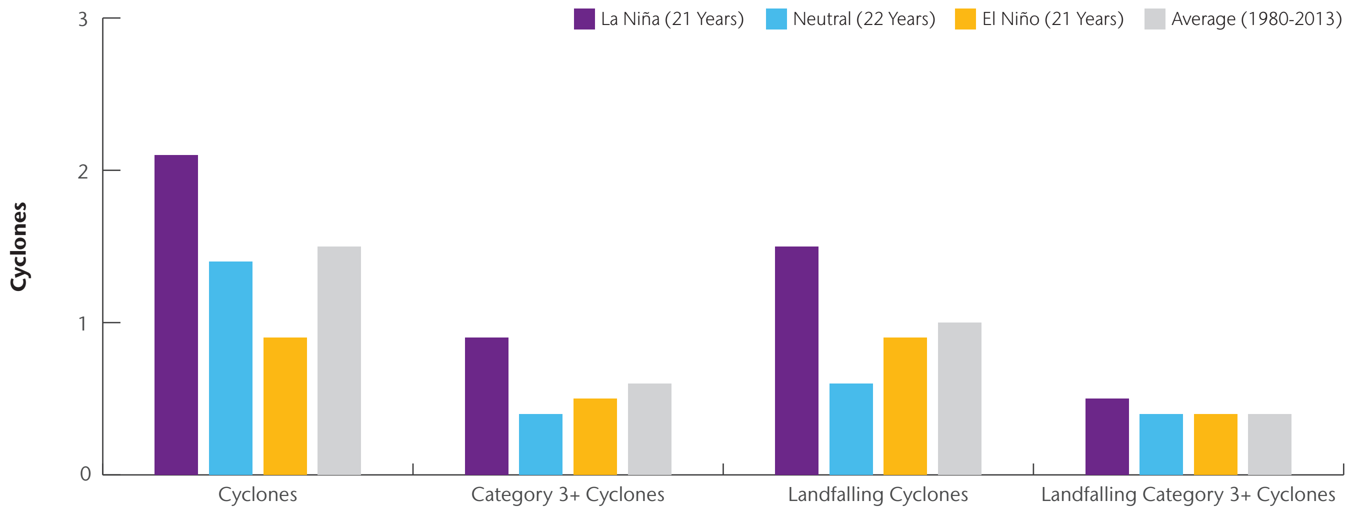
Western Pacific Ocean Basin

Exhibit 76: Western Pacific Basin Typhoon Frequency by ENSO Phase



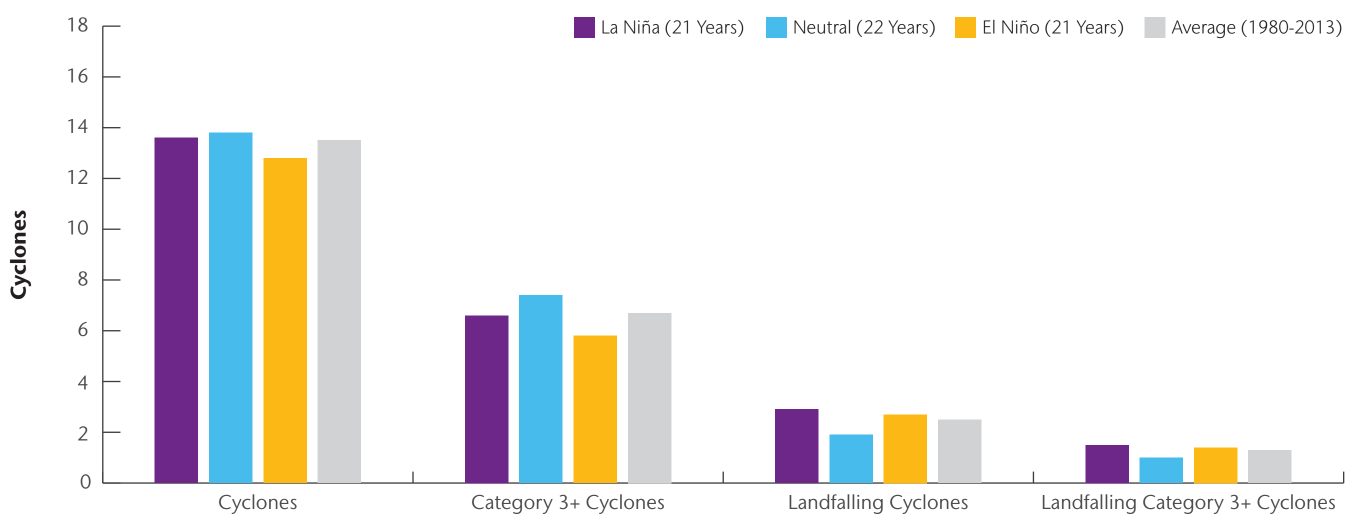
North Indian Ocean Basin

Exhibit 77: North Indian Basin Cyclone Frequency by ENSO Phase



Southern Hemisphere

Exhibit 78: Southern Hemisphere Cyclone Frequency by ENSO Phase



Appendix D: Tropical Cyclone Landfall Data by Basin

The following shows a breakdown of historical tropical cyclone landfall data by basin. Note that data for the Atlantic and Western Pacific Basins in this section extend to 1950 given the level of quality data as provided by NOAA's IBTrACS historical tropical cyclone database. All other basins include data to 1980.

Exhibit 79: Atlantic Ocean Basin Hurricane Landfalls

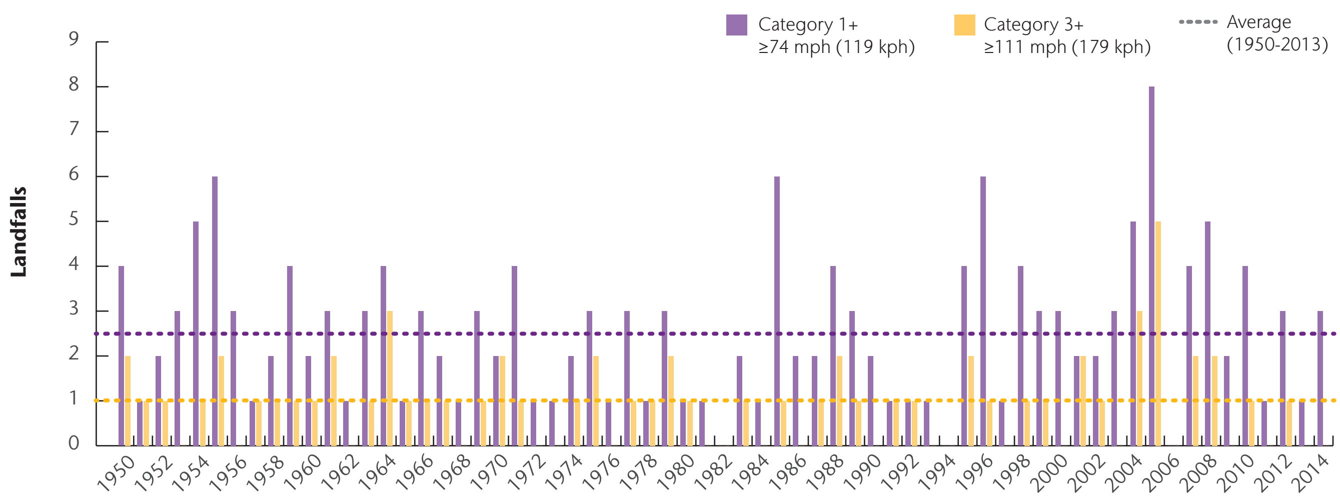


Exhibit 80: United States Hurricane Landfalls

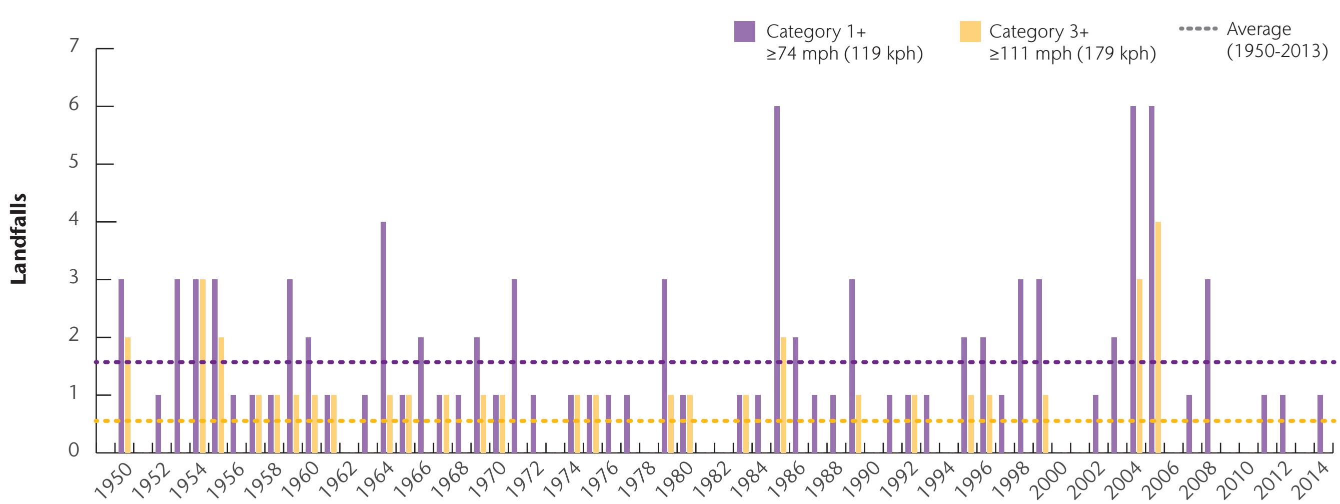


Exhibit 81: Eastern Pacific Ocean Basin Hurricane Landfalls

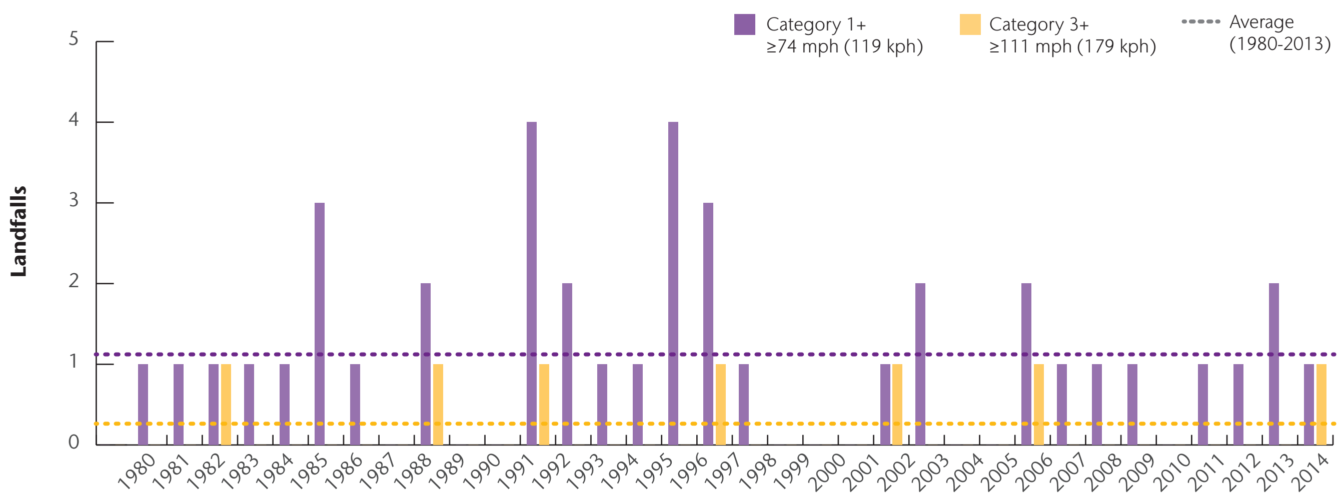


Exhibit 82: Western Pacific Ocean Basin Typhoon Landfalls

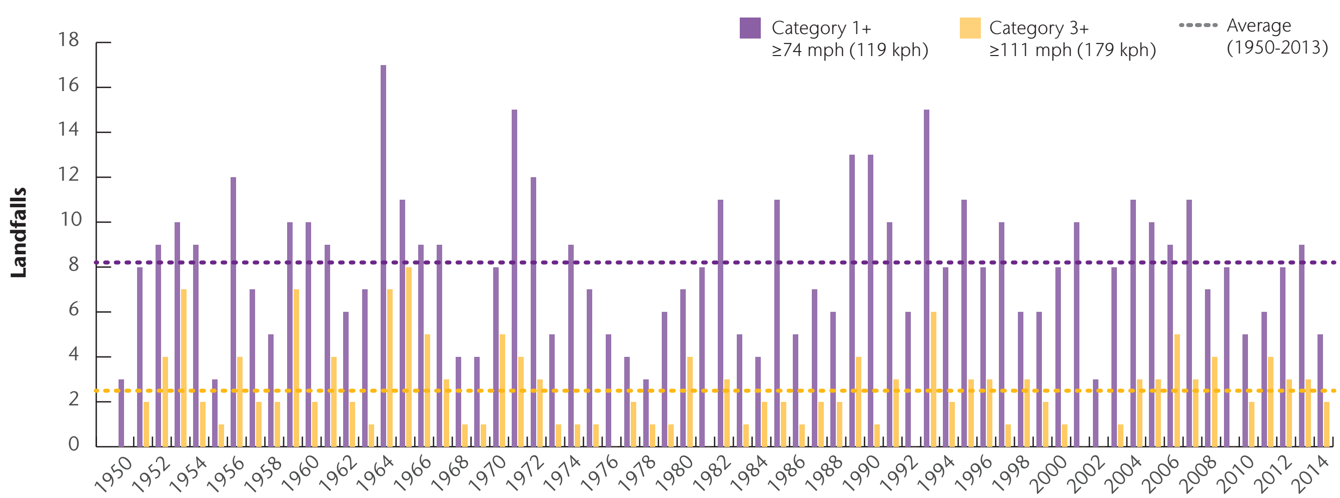


Exhibit 83: North Indian Ocean Basin Cyclone Landfalls

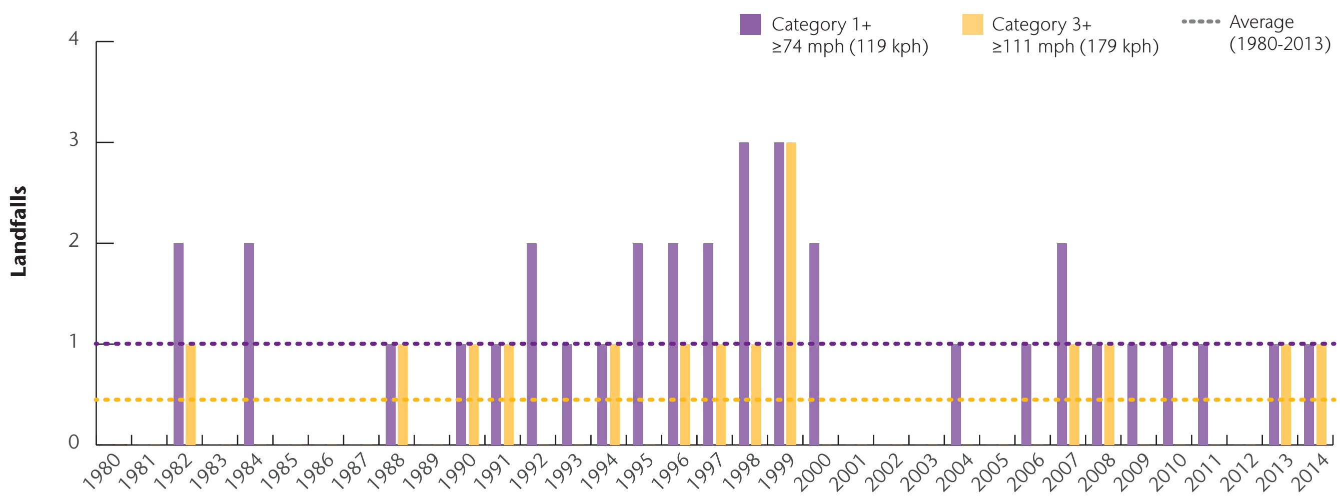
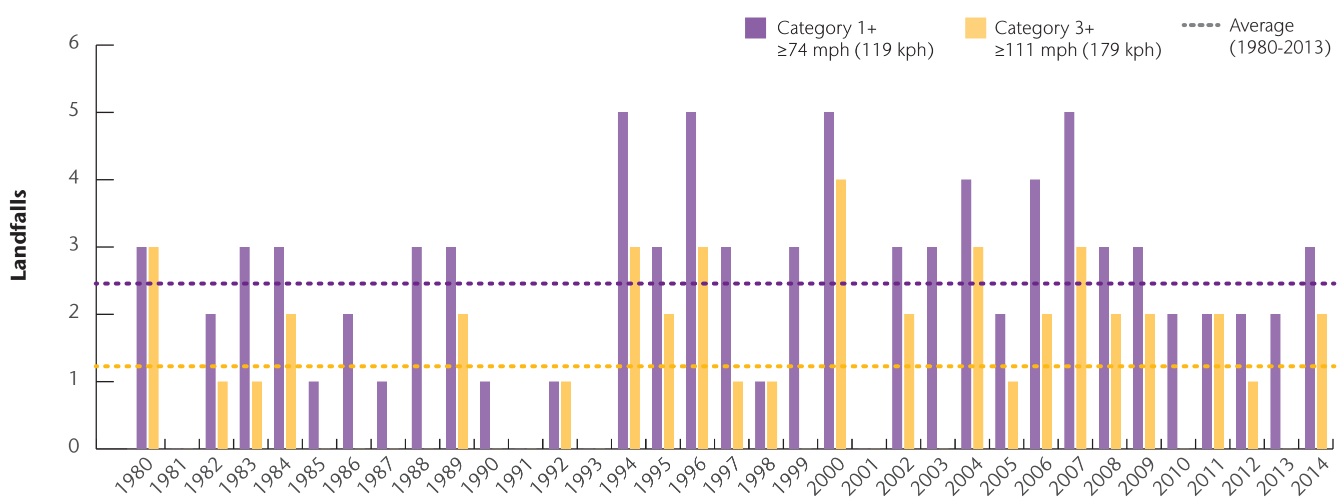


Exhibit 84: Southern Hemisphere Cyclone Landfalls



Appendix E: United States Tornado Frequency Data

The following is a breakdown of U.S. tornado frequency since 1950 as provided by data from the Storm Prediction Center. Also included is the total number of tornado-related fatalities. Please note that advances in technology, particularly the implementation of Doppler radar, have resulted in more precise tornado detection rates—particularly with F0/EF0 tornadoes—since the early 1990s. Data sets prior to this time are typically considered incomplete, especially in regards to the number of tornadoes below F3/EF3 strength. When trying to determine potential tornado frequency trends, a more accurate method is to use tornadoes with F1/EF1 intensity or greater given the larger confidence level in data collection of such twisters (as opposed to F0/EF0).

Exhibit 85: U.S. Tornadoes

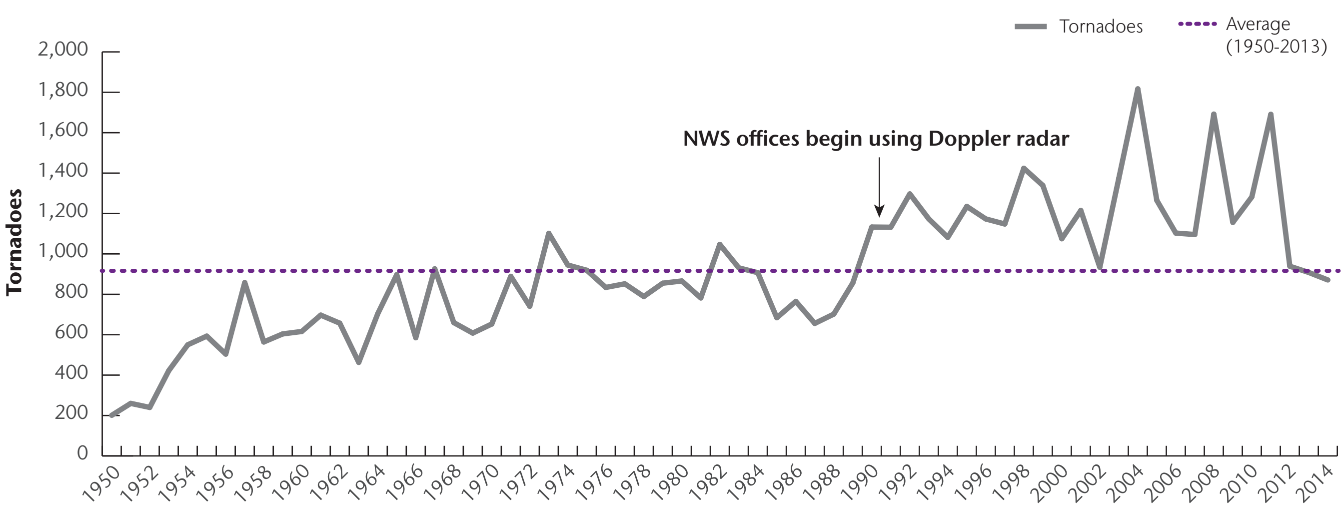
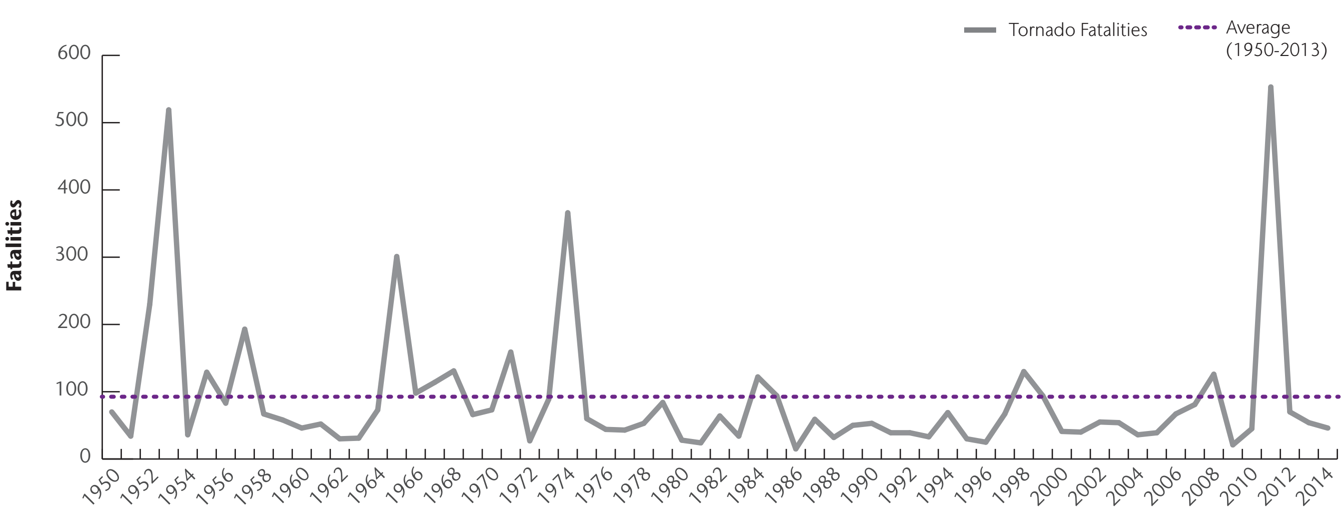
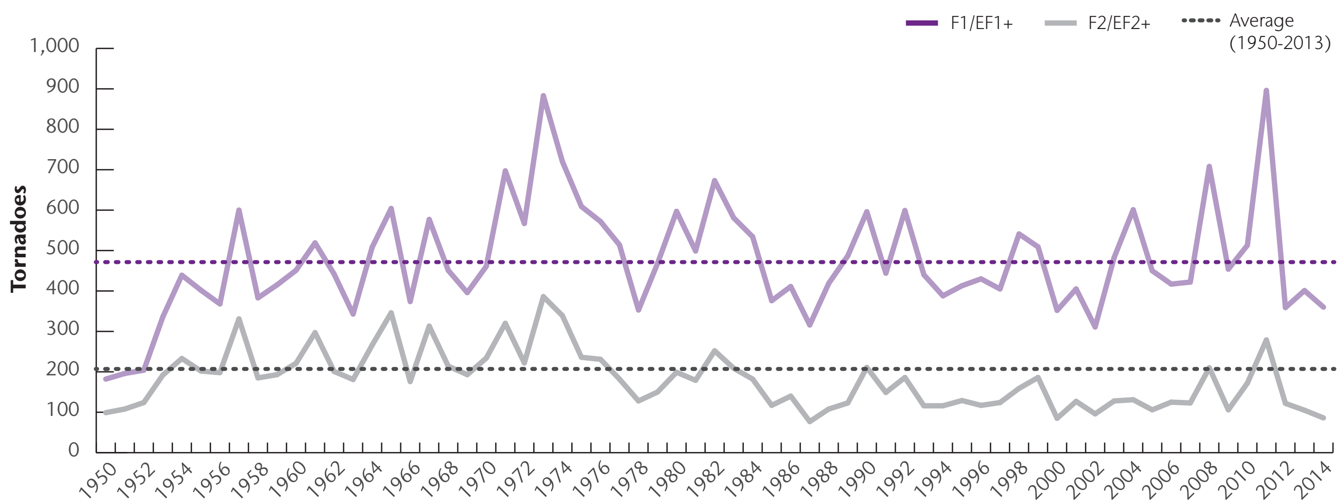


Exhibit 86: U.S. Tornado Fatalities



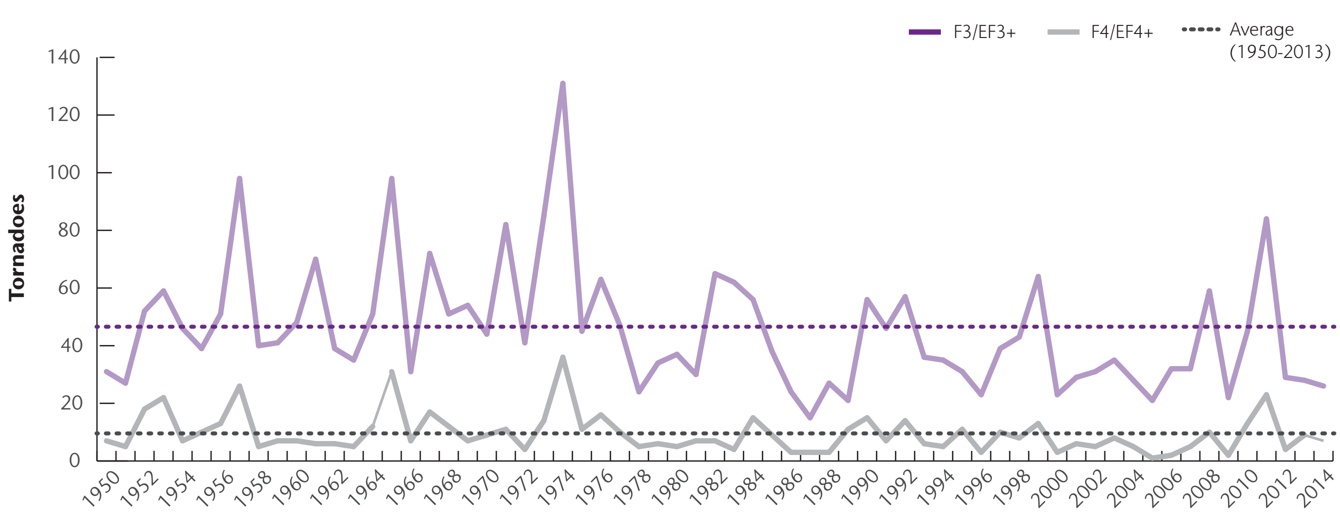
Since 1950, the overall trend of tornadoes rated at F1/EF1 and above has remained nearly flat with a minimal 1.3 percent annual growth. Dependable data since the advent of the Doppler-era in 1990 shows a similar flat annual growth trend at just 0.2 percent. When breaking down data to just the last 10 years, there has been a slight downward trend of 1.6 percent.

Exhibit 87: U.S. Tornadoes by Rating (F1/EF1+, F2/EF2+)



Since 1950, the overall trend of higher-end tornadoes rated at F3/EF3 and above has remained nearly flat and shows a slight annual decrease of 0.8 percent. A comparable 1.2 percent annual decrease is also found when looking at dependable data since the advent of Doppler radar in 1990. When breaking down data to just the last 10 years, there has been a similar nearly flat growth at 0.5 percent.

Exhibit 88: U.S. Tornadoes by Rating (F3/EF3+, F4/EF4+)



Given the level of attention that tornadic activity causes in the United States, there has been increased interest in attempting to determine whether certain atmospheric phases can be used to correlate seasonal patterns. The following exhibits analyze U.S. tornado frequencies in relation to ENSO phases. Based on data from the Storm Prediction Center since 1950, it appears that tornadic activity is slightly elevated during La Niña phases, especially higher-end tornadoes with ratings at or above F3/EF3 strength. However, the number of tornadoes during ENSO-neutral conditions is near the long-term average, and the totals from El Niño phases are slightly below average.

Exhibit 89: U.S. Tornado Frequency by ENSO Phase (Total, F1/EF1+, F2/EF2+)

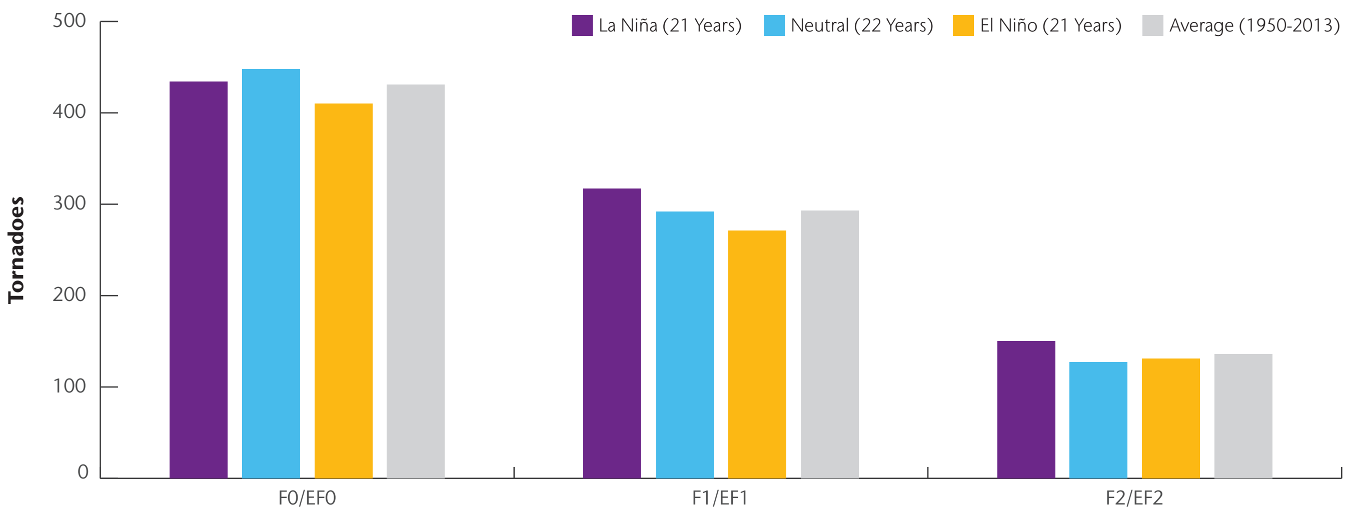
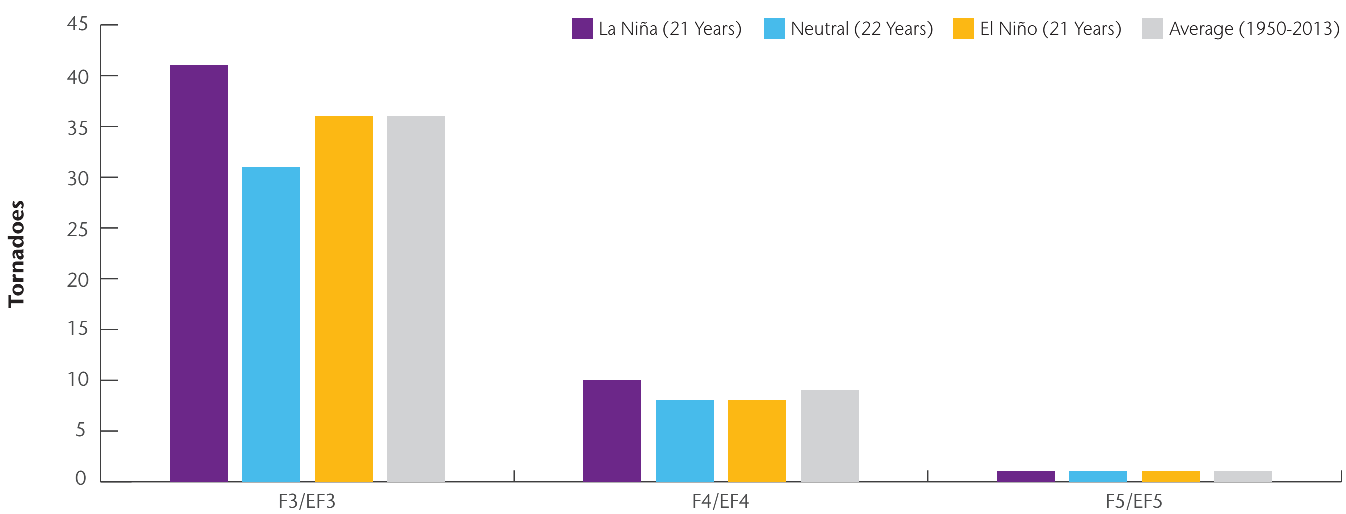


Exhibit 90: U.S. Tornado Frequency by ENSO Phase (F3/EF3+, F4/EF4+, F5/EF5)



Appendix F: United States Wildfire Frequency Data

The following provides a breakdown of United States wildfire frequency activity since 1960 as provided by data from the National Interagency Fire Center (NIFC) and the National Interagency Coordination Center (NICC). As to be expected, the West and Alaska frequently endure the largest amount of burn acreage with the Southwest also seeing regular elevated burn totals. Please note that the NICC maintained wildfire records from 1960 to 1982 before the NIFC began their current method of data compilation from states and other agencies in 1983.

Exhibit 91: U.S. Wildfire Burn Frequency

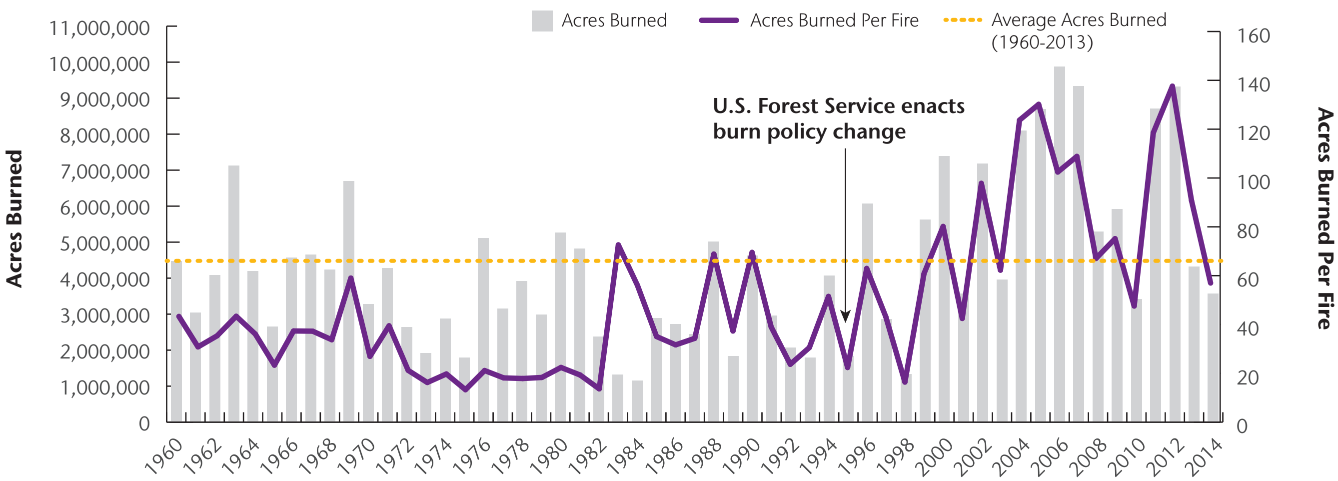
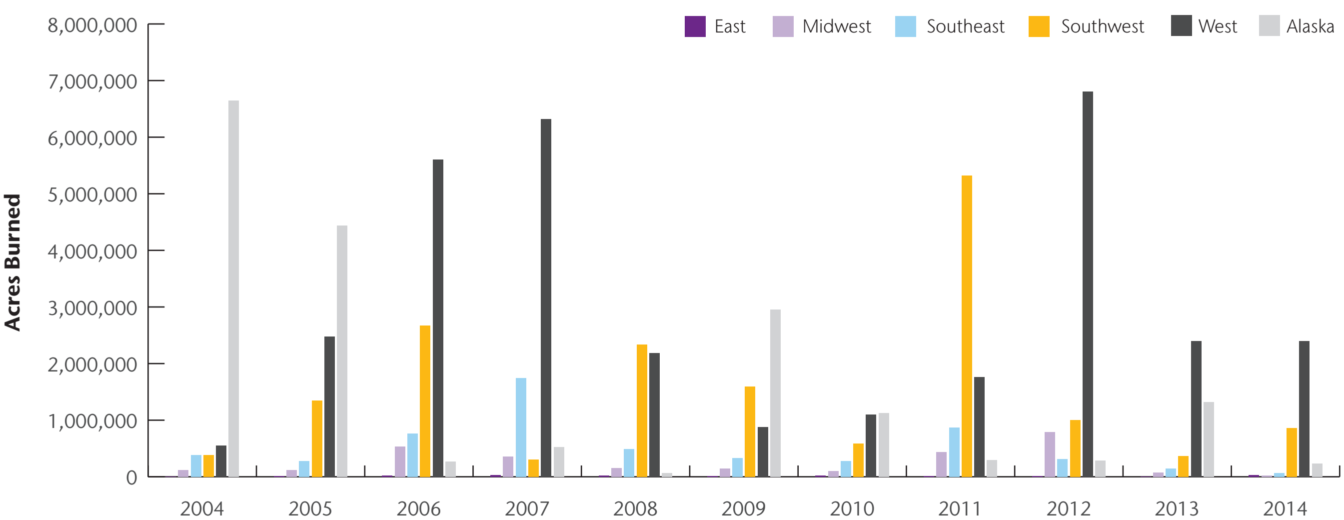


Exhibit 92: U.S. Wildfire Burn Frequency by Region



Additional Report Details

TD = Tropical Depression, TS = Tropical Storm, HU = Hurricane, TY = Typhoon, STY = Super Typhoon, CY = Cyclone

Fatality estimates as reported by public news media sources and official government agencies.

Structures defined as any building — including barns, outbuildings, mobile homes, single or multiple family dwellings, and commercial facilities — that is damaged or destroyed by winds, earthquakes, hail, flood, tornadoes, hurricanes or any other natural-occurring phenomenon. Claims defined as the number of claims (which could be a combination of homeowners, commercial, auto and others) reported by various insurance companies through press releases or various public media outlets.

Damage estimates are obtained from various public media sources, including news websites, publications from insurance companies, financial institution press releases and official government agencies. Economic loss totals include any available insured loss estimates, which can be found in the corresponding event text.

This report use publicly available data from the internet and other sources. Impact Forecasting® summarizes this publicly available information for the convenience of those individuals who have contacted Impact Forecasting® and expressed an interest in natural catastrophes of various types. To find out more about Impact Forecasting or to sign up for the Cat Reports, visit Impact Forecasting's webpage at **www.impactforecasting.com**.

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Impact Forecasting is a catastrophe model development center of excellence within Aon Benfield whose seismologists, meteorologists, hydrologists, engineers, mathematicians, GIS experts, finance, risk management and insurance professionals analyze the financial implications of natural and man-made catastrophes around the world. Impact Forecasting's experts develop software tools and models that help clients understand underlying risks from hurricanes, tornadoes, earthquakes, floods, wildfires and terrorist attacks on property, casualty and crop insurers and reinsurers. Impact Forecasting is the only catastrophe model development firm integrated into a reinsurance intermediary. To find out more about Impact Forecasting®, visit **www.impactforecasting.com**.

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