

# **A Sustainable Environment: Our Obligation to Protect God's Gift**

by  
George P. Nassos

## **We Must Adapt and Be More Resilient Because of Climate Change**

As I have mentioned in previous articles, global warming – or climate change – has been an environmental concern for many years. The first meeting on this issue attended by over 200 countries was in 1992, and the result has been recommendations on reducing carbon emissions. Unfortunately, there has been insufficient effort to adopt these recommendations or they have just been ignored. There are still many people who are deniers of climate change. The recent cold winter in the Midwest seemed to confirm their belief that global warming does not exist. However, if they were to see a world map showing this winter's temperature relative to the average, they would change their mind. About 30% of the world experienced an average winter. The eastern half of the United States was much cooler than average, but the rest of the world was either much warmer than average or experienced record warm temperatures.

One of the results of climate change is the increasing number of extreme weather conditions. A few years ago we were hit with Katrina in the Gulf area followed by Sandy along the East Coast. This year we have had torrential rain storms in the South and droughts in the West. Australia recently experienced a record heat wave, and the Himalayas do not generate as much snow as in past years. Consequently, the rivers formed from this melting snow are not as deep and cannot provide the necessary water for China's agricultural fields.

A recent report titled the National Climate Assessment indicates that the effects of climate change are currently being experienced. The report states that Americans are already feeling the effects of global warming, but this certainly must be the case worldwide. An example of these effects is heat stress events, forcing people with respiratory illnesses to turn to devices such as inhalers or to hospitals. It is leading to more severe allergies and waterborne illnesses as pathogens increase. Also, thirty percent of carbon released into the atmosphere is sucked up by the ocean, leading to acidification that's killing coral and shell life. Coral protects young fish from predators, and tiny shellfish, at the bottom of the food chain, help feed entire ecosystems. So it is already happening.

If we are concerned that adapting to climate change may not be possible in certain situations, then we must develop a resiliency to these expected changes. The recent report states that the average U.S. temperature has increased 1.3 – 1.9° F. since 1895 and most of that in the past 44 years. By the end of the century, temperatures could be up to 5 degrees higher if the nation acts aggressively to reduce greenhouse gas emissions from industry or up to 10 degrees if emissions are high. This could cause a sea-level rise of one to two feet by 2050 and up to four to

six feet by the end of the century depending on what action is taken to mitigate the increase in carbon emissions.

Some countries have already taken action like The Netherlands, and Rotterdam in particular. Their whole city is below sea level, so they've had to deal with climate change faster than anybody else. This is something that the U.S. must consider with respect to cities like New Orleans and San Francisco. In reality, we should consider resilient plans for all of the coastal cities, particularly along the East coast down into Florida. Unless we are prepared, we may find many of these cities under water.

Some of the cities have already taken action by creating a new position of Chief Resilience Officer. The first such officer is in San Francisco, and he is not only concerned with water issues but also earthquakes. How do you protect the citizens and infrastructure from the impacts of climate change? The Rockefeller Foundation has become very concerned with this issue and has created the Rockefeller Foundation's 100 Resilient Cities Centennial Challenge. Their \$100 million investment will fund 100 chief resilience officers in selected cities worldwide, along with a suite of other services in an effort to build future-proof cities.

Many cities and companies have Chief Sustainability Officers, but if those positions are not sufficient to mitigate the impact of carbon emissions, we must now have Chief Resilience Officers. These are the people responsible for planning and implementing strategies for organizations to become sustainable and/or resilient to protect our environment.