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Editorial

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The Oil Industry Needs Your Help To Protect It from Climate Change

The climate is changing, and not in a direction that will help nature's stressed ecosystems or the human-built infrastructure. There will be more flooding, increased food shortages, wildfires, mass die offs of coral reefs, increased deaths from the heat, and greater poverty. We know this will happen, but progress to address climate change remains far too slow.

Scientists are trying to put numbers on these changes to make them less abstract, but sometimes I wonder how much that helps. When we read that the atmosphere will warm by 2.7 °F (1.5 °C) by 2040, it seems as if we do not need to worry about things until 2040. Unfortunately, an extra 2.7 °F does not sound too awful on a cold day in February in the northern United States. The most severe impacts of climate change were previously estimated to happen once the mean temperature increased by 3.6 °F (2.0 °C), but a new report by the IPCC suggests that these dire consequences will happen much sooner, when we reach a change of 2.7 °F. But this is not a magical number, as climate change impacts are already well underway. For example, between 1980 and 2009, more than 2.8 billion people were affected by flooding, and more than half a million people died in events related to flooding. The number of floods is steadily increasing with climate change.

Sea level rise is one of the most critical changes that will affect most people directly, or indirectly, in the world. For sea level rise, the often quoted number is an increase of 0.32 cm per year, which sounds like a small number. Recent estimates, however, suggest a total rise of 2 m (6.4 ft) by 2100. Think about being at a beach in North Carolina (a state that does not allow consideration of accelerating sea level rise in development of policies for coastal areas), and imagine the impact of an average water rise well over your head. It could be even worse. Meltwater from the Antarctic could drive sea level rise to as much as 4 m (13 ft), which would make the "average" 5.5 cm per year. Approximately 80% of the world population lives within 100 miles of the coastline. A mean sea level also does not account for tides, which can easily reach another 2 m higher in some parts of the world, or large storm surges that can add an additional 4 m of water.

One response to climate change is to ignore it, and just build walls to keep the seawater out. There are a few problems with this solution. First, building a wall can also keep water in, and when it rains that water needs to get out quickly or inland areas will flood. Rivers need to run into the sea, so if we build walls to keep the sea out, we will also need to build walls all along our rivers to keep them from overflowing their historical banks. Second, building walls along our coasts could wipe out precious coastal ecosystems that depend on tides and intermittent exposure to air or water. Third, building walls is expensive. Who will pay for them?

The new IPCC report estimates that dealing with outcomes of climate change will cost US$54 trillion. Such a large amount of money could come from only taxes or industries seeking to protect their investments. In an interesting irony, however, the oil industries in Texas are calling for the surrounding communities to build and pay for sea walls around their oil refineries. Most of the oil refineries in Texas are along a 60-mile stretch of coastline that spans the edge of Louisiana to south of Houston. Texas is seeking to use $12 billion in public funds to build seawalls to protect these refinery areas and has already fast tracked $3.9 billion to build three storm barriers. Those taxpayer-funded expenditures are happening now, not in 2040 or 2100.

Some other numbers to consider within the context of climate change and fossil fuels are energy subsidies. In the United States, taxpayers continue to subsidize the fossil fuel industry at $20 billion per year, with the G7 countries providing as much as US$100 billion. If the global expenditure just remains constant, that translates to US$2.2 trillion globally by 2040 for the industries helping to drive climate change. In contrast, the United States spends only US$190 million annually on solar energy research. Whether any of these numbers have any meaning for you, one thing is clear: it would be far better to spend money transitioning to non-fossil fuel energy sources than it would be to pay for walls to keep the sea out or repair catastrophic damage that will result from continued climate change.

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Notes

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