RESOURCE SECURITY WATCH

The American Foreign Policy Council's Review of
Changes to the Global Stratigic Environment

# Resource Security Watch: No. 11

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**Related Categories:** Cybersecurity and Cyberwarfare; Democracy and Governance; Energy Security; China; Iran; Southeast Asia

## THE HIDDEN COST OF CRYPTOCURRENCY
Cryptocurrencies such as Bitcoin and Ethereum are becoming more and more commonplace as an alternative monetary measure. Yet these instruments come with a hidden environmental cost, because they require huge expenditures of energy to extract. Proof-of-Work, or "Mining," is a process in which computers calculate complex algorithms (a hash function in the case of Bitcoin) to try and guess a specific numeric value. Once the right value is discovered, the miner is awarded some of the currency - which, in the case of Bitcoin, is worth a significant amount of money.

The process is extremely energy-intensive; mining activities relating only to Bitcoin, for example, use around 32 terawatts a year, which is enough energy to power three million American households. Moreover, as Bitcoin or other cryptocurrencies become increasingly popular in both licit and illicit markets, this energy consumption is expected to grow. (CNN, December 7, 2017)

## TEHRAN'S TOXIC AIR
The Iranian regime was forced to shut down elementary schools and cancel sporting events in Tehran for two days in December due to severe air pollution in the nation's capital. The airborne concentration of fine particles in the city reached 185 micrograms per cubic meter, far exceeding the World Health Organization's advised limit of 25 micrograms per cubic meter a day. The regime also closed mines and factories in order to reduce air pollution, and advised the elderly, children, and pregnant women to stay home. Iran's air pollution is not as rampant a problem as that of either India or China, but still poses significant health risks. (phys.org, December 17, 2017)

## RECLASSIFYING CLIMATE CHANGE
The Trump administration is tilting away from treating climate change as a national security issue. In mid-December, President Trump formally announced that his White House had removed climate change from its list of national security threats confronting the United States. The decision rolls back the policies of both the Obama and George W. Bush administrations, which took into account the potential effects of the phenomenon on such potential strategic challenges as population migration and inter-state tensions. It also puts the White House at odds with the U.S. military, as both the Army and Navy have stressed the need to account for climate change in their strategic planning. (Associated Press, December 18, 2017)

## CHINA MOVES TO MANAGE CARBON EMISSIONS
In an effort to better manage carbon emissions, China has launched the world's largest carbon trading market. The initiative - which sets a price on the country's largest greenhouse gas emitters - is designed to monitor and regulate the Chinese state-owned power generation sector. The first phase of the project covers only power generation, but - if successful - the initiative will later be expanded to incorporate other fossil fuel producing sectors as well. Nevertheless, the move (which will cover 1,700 utilities) marks a significant effort to limit pollution on the part of the world's largest carbon emitter. (Bloomberg, December 19, 2017)

## INDONESIA'S SINKING CITY
Indonesia now faces not only rising sea levels, a phenomenon that has long plagued the island nation, but also the sinking of its capital city, Jakarta. The primary cause of the problem stems from the fact that Jakarta residents - lacking sufficient clean water - have taken to digging illegal underground wells, which have started to drain the aquifers upon which the city rests. With approximately 40 percent of the city is below sea level, the trend has potentially catastrophic consequences. The problem, moreover, is at its worst in North Jakarta, a central hub of Indonesia's economy and home to millions of people. If the sinking is not addressed, experts predict, North Jakarta will be completely underwater within a decade. (*New York Times*, December 21, 2017)