Chinese coal data cast doubt on CO2 stalling

OSLO/BEIJING: When the International Energy Agency reported in March that global carbon emissions had stayed flat in 2014, even as the world economy grew, the news was hailed as a turning point in the struggle to curb climate change. But more recent data about Chinese coal consumption, seen by Reuters, raise doubts about whether that historic decoupling of economic growth and carbon emissions from energy use actually occurred.

One of the keys to keeping carbon emissions flat in 2014 was significantly lower coal consumption in China, the world's top greenhouse gas emitter: a 2.9 per cent drop, reported in preliminary Chinese data in February. It was the first fall in coal use by China this century. And it was good news for the UN climate conference meeting in Paris in December with the aim of stopping temperatures rising more than 2 degrees Celsius above pre-industrial levels: the limit beyond which scientists say the world will suffer ever-worsening floods, droughts, storms and rising seas.

But in May, China's National Bureau of Statistics (NBS) released a China Statistical Abstract, not available online but only on paper, showing that coal consumption edged up by 0.06 percent from 2013. Just that difference between two sets of NBS data would in turn lift global emissions growth in 2014 from a flat line to about 0.5 per cent, in line with an estimate by oil company BP in a report in June.

That global growth rate is still low, but would undermine the arguments of many, from environmental groups to governments, who have cited the IEA data to support the idea that cuts in carbon use need not necessarily hamper economic growth. When the IEA report first came out, the agency issued a statement trumpeting that carbon emissions from energy had stalled in 2014, marking "the first time in 40 years in which there was a halt or reduction in emissions of the greenhouse gas that was not tied to an economic downturn."

Carbon Puzzle

Until now, many foreign researchers have been unsure which set of Chinese data to trust. Both put 2014 coal consumption at 2.81 billion tonnes, but each infers a different change from 2013. Jiang Kejun, a senior researcher with the Energy Research Institute, a think-tank under the National Development and Reform Commission, told Reuters both were correct. He said the 2.9 percent decline referred to the quantity of all coal used, but the 0.06 percent rise in the Abstract referred to the energy released by burning coal, expressed in standard tonnes.

Since China does not publish its annual greenhouse gas emissions, it is still hard to know how to convert coal use to carbon dioxide (CO2) release, but Glen Peters of the Center for International Climate and Environmental Research in Oslo said the Abstract's number was a better guide. The coal burnt in 2014 was of higher quality because China introduced new rules late last year banning the sale, transportation, import and combustion of low-grade coal. And a tonne of high-quality anthracite coal releases much more carbon when burnt than a tonne of low-grade lignite. "There's a lot riding on one single number," Peters said. "It's the difference between being able to say 'We're getting on track for 2 degrees' or not."

Big Revision?

A report last month in the journal Nature did say international organisations may be overestimating China's emissions, partly because China's coal is lower quality than assumed and so releases less carbon when burnt. The IEA says it is now awaiting Chinese data from an energy census and other revisions before issuing any update. "We are aware that there is the potential for a big revision, not only for the 2013/2014 growth rate but also for a longer time series," IEA spokesman Greg Frost said.

BP used the Abstract's numbers in a report last June that found world emissions rose 0.5 percent in 2014, according to BP spokesman Toby Odone. That would still be the lowest rise in any year since 1998, other than the year following the 2008 financial crisis. But Reuters calculations show that, using China's figures from February, BP would have concluded world emissions dipped 0.1 percent between 2013 and 2014. — Reuters

Spread of deserts costs trillions, spurs migrants

OSLO: Land degradation, such as a spread of deserts in parts of Africa, costs the world economy trillions of dollars a year and may drive tens of millions of people from their homes, a UN-backed study said yesterday. Worldwide, about 52 percent of farmland is already damaged, according to the report by The Economics of Land Degradation (ELD), compiled by 30 research groups around the world. It estimated that land degradation worldwide cost between $6.3 trillion and $10.6 trillion a year in lost benefits such as production of food, timber, medicines, fresh water, cycling of nutrients or absorption of greenhouse gases.

"One third of the world is vulnerable to land degradation; one third of Africa is threatened by desertification," it said. Such degradation, including from clearance of tropical forests, pollution and over-grazing "can also lead to transboundary migration, and eventually create regional conflicts", it said.

The report cited a 2012 UN finding that up to 50 million people could be forced to seek new homes and livelihoods within a decade because of desertification. "Increased land degradation is also one of the factors that can lead to migration and it is being exacerbated by climate change," European Environment Commissioner Karmenu Vella said in a statement about the report. Zafar Adeel, director of the UN University's Institute for Water, Environment and Health which contributed to the ELD report, told Reuters that it was hard to pin down exact reasons for migration, for instance refugees fleeing Syria for Europe. "We now have multiple factors - social, conflict - as in the case of Syria," he said. In May, a study in the US journal Proceedings of the National Academy of Sciences highlighted the link between drought, man-made climate change and conflict in Syria.

"Human-induced climate change made a multi-year drought the most severe in the observed record," Colin Kelley of the University of California, Santa Barbara, who led that Syria study, told Reuters. "The severity of this drought started a cascade of events, namely an agricultural collapse, a mass migration of farming families to the cities in Syria's west, and ultimately conflict," he said.

Much of the estimated lost trillions of dollars from land degradation in Tuesday's study falls outside conventional measures of gross domestic product - such as "free" pollination by insects or water purification by forests. "We need to take a much broader approach to managing the planet" including a price on natural services, said Robert Costanza, an author at the Australian National University. — Reuters

WASHINGTON: Environmental activists protest the Obama administration's plans to allow new fossil fuel drilling on public lands and oceans, during a demonstration held by the "Keep it in the Ground" coalition in front of the White House yesterday. — AFP

A picture taken on July 14, 2015 shows tourists walking to visit an ice cave next to blankets wrapping up the Rhone Glacier which has been shrinking under the summer sun near Gletch. — AFP

Blankets cover Swiss glacier in vain effort to halt ice melt

RHONE GLACIER, Switzerland: From afar, the Rhone glacier looks pristine, but on closer inspection the surface is covered with white blankets to slow the melting of the rapidly retreating ice. The dusty, white fleece covers stretch out over a huge area near the glacier's edge, some in rumpled piles alongside sand, rocks, a few wooden planks and a ladder on its side. With a red and white Swiss flag providing the only dash of colour, they looks like tents in a vast deserted refugee camp, out of place in the Alpine setting.

But hiding underneath the blankets is a Swiss tourist attraction: A long and winding ice grotto with glistening blue walls and a leaky ceiling that has been carved into the ice here each year since 1870. "For the past eight years, they have had to cover the ice cave with these blankets to reduce the ice melt," said David Volken, a glaciologist working with the Swiss environment ministry, poking at a piece of cloth lying near the path that leads to the cave's opening.

The blankets, he said, reduce the ice melt by as much as 70 percent, explaining why the covered cave towers far above the nearby centre of the glacier tongue, which slopes lazily into a pine-green lake. But while the blankets help slow the melting and allow the ice grotto to remain open through the hot summer, they are a very temporary fix.

'Dying Mountain'

"It will slow things down for a year or two, but one day they will have to take away the blankets because the ice underneath will be gone," said Jean-Pierre Guignard, a 76-year-old tourist from the Swiss town of Lausanne. He recalled seeing the glacier for the first time in 1955. The tongue then reached far down the steep mountainside, which today is hammered by a roaring waterfall pouring from the glacier lake and marking the starting point of Europe's mighty Rhone river. "It has been heartbreaking to see the glacier shrink, and today it is really painful to see it covered in blankets, to see this vain battle to save a dying mountain," he told AFP.

A full 1,400 m down the mountain side, near the small village of Gletch, a wooden post signals where the glacier once ended back in 1856. Since then, the Rhone glacier has lost around 350 m in ice thickness - around 40 m in the past decade alone. It is not the only Alpine glacier feeling the heat. Studies show that around two-thirds of the ice volume in the Alps has vanished since 1850. "The Rhone glacier is quite typical of what is happening in the Alps," said Matthias Huss, a glaciologist at Fribourg University. "We are seeing less new ice created in higher altitudes even as the lower parts of the glaciers are melting at an accelerated pace."

World leaders will gather in Paris later this year to try to agree to a plan to restrict the global warming blamed for the mass glacial melt and other dangerous shifts in the environment. The overarching goal is to limit average warming to two degrees Celsius over pre-Industrial Revolution levels. But for the Alpine glaciers, it is likely already too late since the Alps, like the Arctic and the Antarctic Peninsula, are considered hotspots that are warming at least twice as quickly as the global average. Wearing a t-shirt under the glare of the sun, Volken said the Rhone glacier loses between 10 and 12 cm of ice thickness on a hot day. And the new lake that has formed at the edge of the glacier, as well the darkening of the ice - a result of impurities mixing in as it melts and freezes again - only speed up the process since they help the glacier absorb more of the sun's radiation.

Blankets Not Enough

"In the last three weeks, the glacier has melted back six metres," said Volken, pointing to the rocky surface recently covered in ice. Each year, the glacier loses between five and seven metres in ice thickness, and within the next decade it is expected to lose half of its current volume. "By the end of the century, only about 10 percent of the current ice volume will remain," Volken said. Unlike the melting in the Antarctic and the Greenland ice caps, that of the Alpine glaciers will have little impact on global sea-level rise. If all of the region's glaciers melted, this would add only about 0.3 mm to ocean levels, Huss said. But he quickly added that the local impact will be dramatic. The Alps function as a water tower that stores water, releasing it when it is most needed - in the hot and dry summer months. — AFP