

A sober look at the dangers of the future

When It Rains, It Pours

It's the kind of day that can happen to anyone. You turn on your hairdryer as usual, but after a few seconds the oldish appliance suddenly goes haywire. The surge it sends into the power network short-circuits the upstairs neighbor's equally well-used washing machine, switching on the spin cycle and damaging the drum. Water covers the floor, leaking into cracks in the old cement and seeping into the aged electrical wiring system, ultimately knocking out power in the whole building. One could just call all this rotten luck, a classic case of Murphy's law in action. But on the other hand the whole series was the result of over-exploitation of each of the elements in the system. When it rains it pours - but especially so when mistakes and neglect pile up. That was the case back in 2008, when Lehman Brothers went bankrupt and the world economy collapsed like a tower of dominoes. But things could get even worse: our whole civilization could collapse, should we someday run out of one of our key mineral resources.

It is not clear which one will be the first to go short, but the most likely candidate is petroleum. The dearth will probably come as just as much a surprise as the banking crisis, and for the same reason: due to market-controlling oligopolies hiding the truth. Once demand exceeds supply, fuel prices will rise several times over within just a few years. This will lead to higher food and energy prices, which in turn could trigger social unrest. This might already be happening: the lack of reaction from the OPEC countries to soaring oil prices suggests they are unable to pump more because their deposits are nearing depletion. Fewer new deposits are being discovered each year, whereas demand is quickly on the rise - especially in India and China.

Meanwhile the world is still unready to switch to other sources of energy. The only easy substitutes for liquid fossil fuels are bio-ethanol and biodiesel, but significantly expanding the land used to grow oil palms and sugar cane can only - scientists calculate - come at the expense of mass deforestation or less acreage for food cultivation. New car designs still remain unprofitable: hydrogen power because of technological barriers and the need to create a new hydrogen production and distribution network, electric power because of the high cost of state-of-the-art batteries and the power industry's unreadiness to support such electricity

consumption. Once we start to run short on oil, the world will inevitably be plunged into an energy crisis. That does not bode well for the future, especially given the existing economic woes in the US and Europe.

We might also run out of water, because global warming is causing the world's glaciers to melt. The permanent snow cover atop the highest mountains guarantees not just good skiing conditions but also the existence of rivers that spring from it. If it melts away our rivers could become just seasonal flows - and droughts will become increasingly intense due to climate warming. Switzerland, for instance, will surely manage to cope, but the Middle East, which already suffers from chronic shortages of fresh water, faces the specter of armed conflicts and an exodus of population.



Humanity is like someone living on credit he will never manage to repay

The world also needs to reckon with the prospect of food shortages. Most people in developed countries live in the cities, with food production being handled by a small number of farmers who all sow their vast fields with the same crop species. If a new disease or pest should attack one of them, it will spread very rapidly. Crops may also be destroyed by increasingly frequent natural disasters linked to climate warming. The bees needed to pollinate these endless fields of rapeseed and rows of apple trees could also die out - such a phenomenon is already being observed and is

thought to be pesticide-related. In developed countries, the mere rumor of crop failure is enough to cause the supermarket shelves to go bare. In Third World countries crop failure can mean famine and plagues, which could easily touch off an epidemic.

It is extraordinarily unfortunate for us that changes related to global warming are coinciding with the progressive exhaustion of world petroleum supplies. At a time when so many foundations of our existence are wobbly and unsteady, the collapse of one of them will quickly bring others tumbling down as well. To make matters worse, politicians are unable to agree on any steps to take to soften this clash with brutal reality when it comes. Humanity is like someone living on credit he will never manage to repay. Catastrophe lurks just around the corner. It really will not take some large meteorite to bring an end to the reign of humans on Earth - it will be enough for just one domino to fall.

Andrzej Pieńkowski
popular-science journalist