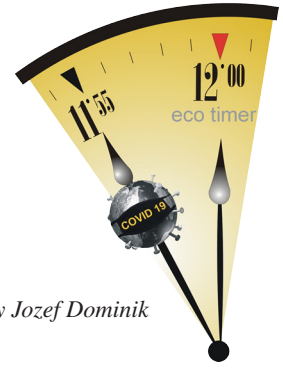


Five Minutes Before Twelve

Motto: "Only when the last tree falls, the last river is poisoned, and the last fish is caught, will we understand that money cannot be eaten."

Divination of the Cree Indian tribe



by Jozef Dominik

About

Today's topic - coronavirus, whether we admit it or not, is currently a serious societal phenomenon. The ultimate extent and the consequences of the crisis are not yet foreseeable. The facts change daily. The whole situation in the world as at the end of May 2020 is shown in **Fig. 1**. It needs no comment. Alarming is not only the extent, but especially the increasing tendency to spread the pandemic.

The number of cases of coronavirus infection particularly in Europe exceeded 1.5 million. The "old continent" is thus one of the most affected in the world. The situation in the 6 countries of Europe and in Taiwan (TW), Russia (RU) and USA is shown in **Fig. 2** (source: WORLDOMETER, expressed in the number of infected population in %, which is the only objective comparison).

Consequences

The corona pandemic has a firm grip on social and economic life in the world. The ultimate extent and consequences of the crisis are currently not foreseeable. One of the biggest risks at this time is uncertainty.

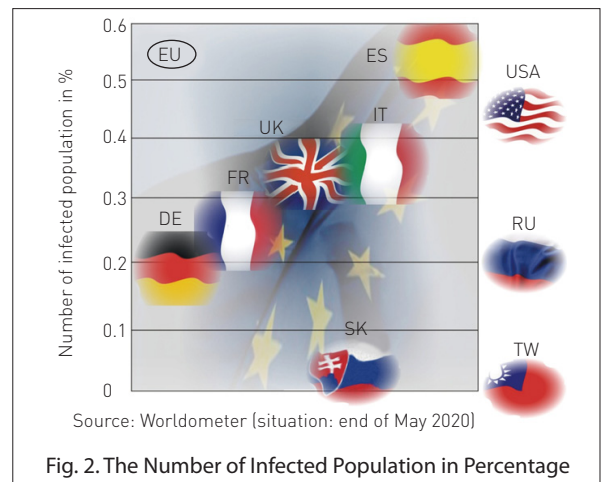
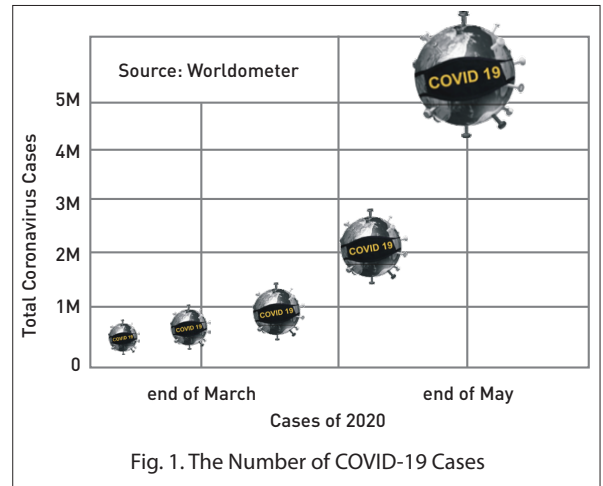
Pleasing it is that thanks to effective measures consisting of rigorous protection already in place to keep the pandemic at a bridle. "The countries of Central and Eastern Europe reacted before the epidemic began. Slovakia, for example, acted very, very quickly," the Financial Times quoted Professor Martin McKee from the London School of Hygiene and Tropical Medicine. Similarly, Taiwan has made a rapid action. The government locked up the airports. Inevitably, however, this has a negative effect on economic activities and that kills some of the trade between manufacturers and overseas companies. That results in forcing some companies to lose revenues and making a portion of employees lose income.

Most car manufacturers had to stop production for a short period of time (KIA Slovakia for example) due to a lack of assembly parts imported from abroad. VW also had to temporarily stop its stores in Europe (ES, SK, CZ) for fear of a pandemic. The carmaker Peugeot (SK) also stopped working and sent employees home with a salary of 65% of the original salary. Fiat Chrysler Automobiles reported a net loss of 1.69 billion euros for the first three months of the year. In the same period last year, the company recorded a profit of 508 million euros. Of course, such a situation also has a negative impact on manufacturers and suppliers of fasteners. Agrati, IT, one of the most important manufacturers of screws for the automotive industry decided the lockdown of the operations, due to the outbreak of the COVID-19 emergency.

Machinery production switched to the so-called "Kurzarbeit" (short-time work).

"The construction industry is facing the most difficult times," says Prof. Norbert Gebbeken, President of the Bavarian Chamber of Engineers. "Construction projects are naturally designed to be long-term, so that many offices are still working on projects that started before the Corona crisis. We are very concerned that there won't be new orders soon."

All this had to have a negative effect on the overall economic situation of individual countries. However, it is not just an economic consequence.



As Prof. MUDr. Eva Rozborilová says, "... although the corona will pass away like any viral disease in the past, we will continue to die of oncological, metabolic and cardiovascular diseases. All these diseases are associated with climate, diet and life style. Humanity will slow down, and maybe it's the purpose of the flu, no matter who triggered the virus. We need to really think about how our grandchildren and their grandchildren will live".

And the world-famous traveler and film director Pavol Barabáš, laureate of more than 250 international awards for film shots of the planet Earth, summed it up in one sentence: "We have pushed aside the harmonious relations between civilization and nature as an obstacle to economic growth".

And what does the author say? "We have degraded nature to the position of a slave".

Hard times have come for all areas of life, including trade fairs and symposiums organizers. Due to the spread of the new corona virus, numerous trade fairs and other major events had to be canceled or postponed this year. For example, fastener fairs in USA, France and India this year were postponed due to the COVID-19 virus. Digital offers will not replace real trade fairs, they will complement them only.

The pandemic has wiped out almost a third of global oil demand through lockdowns and travel bans, landing a direct hit on a sector already in the grip of its own crisis.

The situation is all the more complicated because there is still no effective vaccine and the origin of the virus is not clearly known. There are only assumptions and conspiracy theories:

Table 1. Conspiracy Theories

Conspiracy Theories			
Calculated & developed in the laboratory	Force majeure	Random transmission	Human pollution

It is not within the competence of this article to draw conclusions in every case, but it is clear that nature cannot be plundered indefinitely. In the end, it always triumphs over human stupidity. Nature cannot be bound with impunity as a criminal (Fig. 3) or endlessly looted.



Fig. 3. Bound Tree

Nature can take cruel revenge. This has been the case in the past and is probably the case now. Let's look at the current environmental situation and its changes this year (Table 2).

Environment Situation in 2020 (source: worldometer)

Table 2. Environment Situation

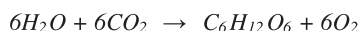
This year - 2020	End of April	End of May
Forest loss [hectares]	1,735,930	2,079,000
Land lost to soil erosion [hectares]	2,337,032	2,799,000
CO ₂ emissions [tons]	12,064,113,183	14,453,467,000
Desertification [hectares]	4,051,302	4,797,000

No comment. What is actually happening to our mother Earth as a result of economic activity (See Sankey diagram in Fig. 4)

As seen, a person's economic activity is associated with induced production harmful substances. The higher the desire for wealth and prosperity, the greater the risk of devastation.

These are mainly the development of motoring, aviation and energy and the associated CO₂ emissions, which, in addition to steam, methane NH₄ and N₂O, are primarily responsible for the greenhouse effect.

Carbon dioxide is normally at least as important to life on Earth as water. Understandably, this means the natural metabolism between flora and fauna, which takes place through photosynthesis, the most important process on Earth in terms of life. Chemically it can be expressed as follows:



It can be said that there is a balance between O₂ and CO₂ in nature. The one who disturbs the balance is human economic activity.

Paradoxically, the coronavirus helps nature. According to various world agency reports, the measures taken against this latest plague of humanity have caused an improvement in the atmosphere, the return of animal species, including freshwater and marine species, to places where they have long since disappeared.

The coronavirus therefore helped nature. Of course, not directly, but thanks to the measures taken. Those measures were taken by the mankind and nature immediately repaid them. Isn't this a clear signal to get rid of this mess? Nature literally provides us with instructions.

Environment and Materials

It has been stated countless times on various forums what enormous material damage is caused by corrosion. In particular, steel structures and especially screw connections are sensitive to the aggressiveness of the external environment (Fig. 5 and Table 3). Although it is not exactly possible to prove that anti-virus measures have helped not only living but also inanimate nature, it can legitimately be assumed that they are equally beneficial.

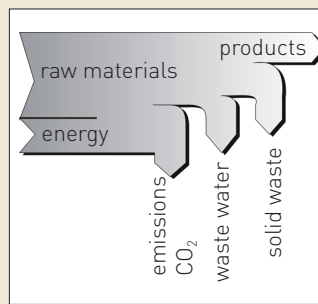


Fig. 4. Sankey Diagram



Fig. 5. Material Damage by Corrosion

Table 3. Material Loss Per Year

Environment	Material loss per year [µm]			
	Zn	Brass	Copper	Non-alloy steel
Country air	1 - 3	⋈ 4	⋈ 2	⋈ 80
City air	⋈ 6	⋈ 4	⋈ 2	⋈ 270
Industry air	6 - 20	⋈ 8	⋈ 4	⋈ 170

This table clearly documents the dependence of material losses on the aggressiveness of the environment. Even a well-known expert Prof. Peter Jost in his colossal work The Jost Report said that corrosion, friction and wear cost the world astronomic sums of money every year. Unfortunately, even the largest authorities in the field of climatology could not convince. Neither did Günter Verheugen, a former European Commissioner for Industry, who said: "I firmly believe that politicians should create the conditions to make environmental protection attractive to businesses." Until "Mr. COVID 19" had to come to convince.

Conclusion

"Five Minutes Before Twelve" is the title of this post which indicates the severity of the current pandemic situation. Maybe it's a little far-fetched, but in any case, the coronavirus is a warning to humanity.

Thanks to extensive preventive measures and an effective vaccine, we will certainly manage the pandemic, but that is only the solution to the consequence. Wouldn't it be better to address the cause?