

BRIEFING 16th JULY 2020

COVID-19: The relationship with the Environment

In the 1960s, the eminent British environmental scientist, James Lovelock proposed that living and non-living parts of the earth form a complex interacting system that can be thought of as *a single self-regulating organism* – a whole, single body where every living creature -insects, animals, birds, bugs, human -lives in perfect harmony with one another; that is “symbiosis”. Unfortunately, as the global population has exploded, men have severely damaged the natural environment by clearing large swathes of land for urban expansion and food production, as well as massive deforestation programs to provide more land as well as wood for dwellings and heating. All this disruption has destroyed the *natural habitat* of many species of both plants and animals and as a result many have become extinct. Thus, the *natural balance and species interactions* on which a healthy global environment depends has been lost-all due to human’s thoughtless activities and this has become increasingly serious as our lifestyles have become more complex and sophisticated.

Scientists have found that every animal carries a large and varied number of viruses, bacteria, parasites and prions, most of which they can normally live with, if undisturbed. However, when the natural habitat of native animals is destroyed, or an animal is killed or badly injured, these viruses etc. can be transferred to other species or “jump”, often with serious consequences for the recipient. This is how viruses, like COVID-19 have spread into human populations. Humans have destroyed natural environments and come into close contact with wild animals and their homes. There have been several serious pandemics over the years, especially during the last century, including SARS in 2003, Swine flu in 2011 and Ebola in 2014, with a new Swine virus recently found in China, but has not been detected in any human hosts. It is now believed that every pandemic has been the outcome of humans destroying the natural environmental balance which is essential for life on earth.

Scientists are becoming more expert at producing vaccines to combat the virulent organisms responsible for infection in people, but unfortunately viruses are constantly changing slightly or mutating, whilst maintaining their virulence. Thus, an effective vaccine against a virulent organism, such as COVID-19, may have to be modified to be effective against the mutant, which seriously complicates and delays the development program and effective treatment. However, there are so many independent groups working on the vaccine at present, hopefully one will quickly hit the jack pot. Meanwhile, keeping your distance from other people, good hygiene and a healthy diet is probably the best advice.

Unfortunately, the serious impact of the COVID-19 pandemic on our lives has put climate change on the back burner, but action here is at a critical stage and increasingly urgent. Temperatures are rising all over the world, especially in Siberia, resulting in melting of permafrost and release of methane, a greenhouse gas, with polar ice melting ever faster, resulting in rising sea levels. There is our recent “Black Summer” in which unprecedented fires destroyed 1/3 of NSW rain forests, killed 484 people and thousands of our native animals, and also destroyed their habitat. During this pandemic, global greenhouse emissions have decreased due to major changes in our lifestyle – closure of industries, less travel, etc. and less demand for energy. This has led to a major economic crisis and massive unemployment but some excellent programs have been produced to maximize use of this newly available work force and help the environment: for example ***manufacture and installation of solar and wind farms to produce emissions-free power*** using our technological expertise in this field, and deriving the energy from our copious supplies of sunshine and wind, rather than fossil fuels. Another practical plan would be to ***improve agriculture and land management*** to increase food production for our growing population and improve water management. It is absolutely critical that global emissions are reduced to zero by 2050 if we are going to prevent temperatures rising above 1.5°–2°C, a point at which conditions for human life will probably become intolerable

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