**Collective action needed to meet existential threats**

Two threats loom large as the third decade of the 21st century begins. While they manifest in starkly different ways, both are the product of human behavior. Both will profoundly shape our lives in the years to come — and there is little sign that we as a species are addressing and mitigating the consequences of either challenge. And, most alarming, only collective action will work. No matter how motivated some of us may be, failure to work together will ensure that these challenges overwhelm us.

The first challenge is that of climate change. 2019 will be remembered as the year that we passed a tipping point in global warming. Global greenhouse gas emissions continue to rise yet governments continue to refuse to take the threat seriously. Experts believe that climate change constitutes “an existential threat to civilization” and the world faces “a planetary emergency.” Average temperatures around the world have already risen 1 degree Celsius from pre-industrial levels and experts believe those emissions must be cut by 25 percent over the next decade to keep warming under 2 degrees; they must be halved to keep temperatures from rising just 1.5 degrees.

Climate change is transforming the planet. Biodiversity is experiencing an existential threat, with 1 million plant and animal species at risk of extinction. Oceans are changing too as waters become warmer. Fish, coral and other forms of marine life are migrating or dying. Ecosystems are being altered and the effects are impossible to predict.

Meanwhile, polar ice sheets are melting, with the thaw in Antarctica threatening to raise sea levels by more than five meters by 2300. New, more accurate measurements indicate that far more coastal land is at risk of submersion. In Japan, for example, 27 percent of the population of Nagoya will be affected by rising sea levels, along with 26 percent of Osaka residents. The country will lose nearly all its beaches — leaving less than 10 meters in half its coastal zones — by 2065.

Yet despite the growing evidence of the threat posed by climate change, governments procrastinate and pass the buck. There is no sign of the emergency response that is required. Even Japan, which has prided itself for having a special relationship with the environment and has historically led in environmental diplomacy, is guilty of complacency. Japan relies on coal for about one-third of its electricity generation — it currently has 46.5 gigawatts of coal capacity and another 11 gigawatts is planned. It is the only Group of Seven economy that is building new coal plants and it is a major exporter of coal plant technology. Japan should be leading the effort to respond to this crisis. Instead, its energy polices may exacerbate it.

The second danger is the increasing role of technology in our daily lives and its almost infinite capacity for disruption. Ironically, while technology is heralded as the likely fix to climate ills, it has also been deployed in forms and ways that prevent the formation of consensus that would allow countries to tackle the problem. For example, the media has been weaponized to divide and alienate societies, tearing apart their social fabric and facilitating a slide into paralysis or chaos. Climate change is just one issue that can be used as a wedge to divide a nation.

But we must be alert to new dangers posed by emerging technologies. Privacy is disappearing as ubiquitous devices leave a digital footprint — or fingerprint — wherever we go, in the real world or online. Governments and businesses are acquiring deep and ever increasing insight into who we are, where we go and even how we think. That data is piling up and can be used to either improve our lives or invade them.

In some cases, the distinction between the two is blurred. The marriage of sensors, big data and AI offers the potential for real-time surveillance, which can provide unprecedented security or George Orwell’s Big Brother. This threat has long been mooted — Orwell first published his dystopian take on the future in 1949 — but the enabling capabilities now exist. Technological authoritarianism is a real prospect and for some countries it is an increasingly profitable export.

While these are two disparate threats, there is one common denominator: Both are man-made. And both will become even more threatening if we continue the laissez-faire approach that fails to intervene and bend both phenomena toward more sustainable trajectories.