United Nations is Increasing its Foresight Capacity

By Jerome C. Glenn, CEO
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The United Nations Secretary-General Antonio Guterres’s report Our Common Agenda https://www.un.org/en/content/common-agenda-report/ is the most important UN document for implementing global futures research and foresight as a function of the UN ever produced.

March 1, 2021 The Millennium Project along with the World Futures Studies Federation, the Association of Professional Futurists, and Humanity+ conducted World Future Day: the 24-hour around-the-world no agenda conversation on the future. Among the many suggestions and insights shared that day was the idea of creating a UN Office on Strategic or Existential Threats¹. Ambassador Héctor Casanueva, Chair of the Chilean Node of The Millennium Project proposed that an open letter be sent to the UN Secretary General suggesting a feasibility study to be conducted by the UN Secretariat on the establishment of such a UN Office. The letter was circulated among colleagues of The Millennium Project, the World Futures Studies Federation, and the Association of Professional Futurists. Press releases were issued², listservs discussed the idea, and many futurists referred to the letter in speeches and correspondence.

By August 14, 2021 more than 200 leaders in government, business, academia, and futurists including internet pioneer Vint Cerf, and Nobel Prize Laureate Oscar Arias and other business, political, technological, environmental, and academic leaders around the world endorsed the letter, calling for a new UN Office of Strategic Threats to coordinate global research on long-range strategic or existential threats to humanity, and to their prevention.

September 2, 2021 the open letter from The Millennium Project with the World Futures Studies Federation and the Association of Professional Futurists including 200+ signatories and a background memo was delivered to UN Secretary-General Antonio Guterres.

Subsequently, when Our Common Agenda report was presented by the Secretary-General to the UN General Assembly, we sent an addendum to the open letter explaining how the proposed UN Office on Strategic or Existential Threats fits into and supports the report:

¹ https://www.millennium-project.org/proposed-un-office-of-strategic-threats/
STATEMENT OF SUPPORT FOR “OUR COMMON AGENDA”

From The Millennium Project, World Futures Studies Federation, and the Association of Professional Futures, as addendum to our open letter to the UN Secretary-General Antonio Guterres electronically delivered September 2, 2021 and endorsed by 202 leaders around the world.

1. We celebrate the UN Secretary-General Antonio Guterres report on “Our Common Agenda”, delivered this month to the 76º General Assembly. This UN grand strategy calls for many excellent improvements including a Futures Lab, Summit on the Future, and better preparation to prevent and respond to major global risks.

2. This new emphases on global strategic foresight for humanity is unique in the history of the United Nations and world.

3. We fully agree with the proposal of the Secretary-General that It will be important for the United Nations to issue a Strategic Foresight and Global Risk Report on a regular basis, and propose an Emergency Platform, to be convened in response to complex global crises.

4. We consider that the proposal of 202 leaders from around the world that we presented a few days ago to the Secretary General, calling for a new UN Office to coordinate global research to prevent human extinction, corresponds precisely to the spirit and context of the Report "Our Common Agenda."

5. Although the proposed UN Office is to identify threats to the extinction of humanity and how to prevent them, The Millennium Project keeps track of where we are winning (education, longevity, poverty reduction, etc.) and losing (environment, organized crime, concentration of wealth, social unrest and terrorism, etc.). Our trend analysis shows humanity is winning more that losing, but where are losing is very serious, and one area needing improved research are the threats to long-range human survival.

6. We declare ourselves willing to collaborate in its implementation, making available our entire collection of studies and research over the past 26 years, and the capacity of The Millennium Project, a transdisciplinary foresight think tank that has developed a global network of 68 Nodes (groups of future-oriented individuals and institutions) around the world that have involved over 4,500 experts in its research and follow-up actions, who collaborate daily in future studies for the anticipation and prevention of strategic threats to humanity. It mobilizes its decentralized resources to promote foresight concepts and methods around the world.

7. Specifically, The Millennium Project can contribute to these initiatives and strategic foresight (point 6) in Commitment 8 of the Common Agenda.

8. We propose that the UN Secretariat conducts a feasibility study of the idea of a small office to collect, coordinate, and support research on the threats to human extinction and prevention strategies, and address questions of where in the potential changes in the UN system this might fit.
9. We intend to submit a brief on these threats to your office in the next few days:
   - Weakening of the Earth’s magnetic shield that protects us from deadly solar radiation
   - Massive discharges of hydrogen sulfide (H2S) from de-oxygenated oceans, caused by advanced global warming
   - Malicious nanotechnology (including the "gray goo" problem)
   - Loss of control over future forms of artificial intelligence
   - A single individual acting alone, who could one day create and deploy a weapon of mass destruction (most likely from synthetic biology)
   - Nuclear war escalation
   - Uncontrollable, more-severe pandemics
   - A particle accelerator accident
   - Solar gamma-ray bursts
   - An asteroid collision

10. International cooperation on such research is crucial, especially on how to address these threats. We plan to discuss the proposed UN Office of Strategic Threats around the world through our next *State of the Future* report (20th edition) that is translated into several languages and used as a basis for many conferences, workshops, university courses, training programs, and make their results available to the General Secretariat, to contribute to the objectives of “Our Common Agenda.”

Sincerely,

A brief on ten examples of strategic or existential threats was also delivered to the UN Secretary-General:

**Loss of control over future forms of artificial intelligence**

If the initial conditions of Artificial General Intelligence (AGI) are not “right,” it could evolve into the kind of Artificial Super Intelligence (ASI) that [Stephen Hawking](https://en.wikipedia.org/wiki/Stephen_Hawking), [Elon Musk](https://en.wikipedia.org/wiki/Elon_Musk), and [Bill Gates](https://en.wikipedia.org/wiki/Bill_Gates) have warned could threaten the future of humanity. Artificial Narrow Intelligence (ANI) is the kind of AI we have today: each software application has a single specific purpose. AGI is similar to human capacity in novel problem-solving whose goals are set by humans. ASI would be like AGI, except that it may emerge from AGI and sets its own goals, independent of human awareness or understanding. It may take ten to twenty years to create AGI. Since it may take that much time to create a global governance system to make sure the initial conditions are right, then we should begin working to create such global governance now. Intense pressures of competition
among corporations and states for advanced AI could lead to inadequate initial conditions without such global governance.

**Massive discharges of hydrogen sulfide (H₂S) from de-oxygenated oceans, caused by advanced global warming**
Global warming is beginning to change ocean currents. If this trend continues, water conveyors that bring oxygen to the bottom of the ocean will stop. Micro-organisms that proliferate without oxygen emit hydrogen sulfide (H₂S – a deadly gas) when they die. This, plus ozone depletion, may have killed 97% of life during the Permian extinction ix. Also in our future could be desperate attempts at geoengineering that go astray.

**Weakening of the Earth’s magnetic shield that protects us from deadly solar radiation**
The Earth’s magnetic fields weaken as the magnetic poles reverse. The last reversal was 42 million years ago iv, and scientists predict the Earth is due for another one. The process of reversal can take hundreds of years, during which time humanity and all life will be vulnerable to deadly radiation vii. worldwide.

**Malicious nanotechnology (including the "gray goo" problem)**
There are two approaches to nanotechnology: big machines, making nanotech that we have today, and atomically precise manufacturing and self-assembly that we do not have yet. Theoretically, the second version could take CO₂ from the air, strip out the oxygen, and make massive carbon nano-tech structures, with nothing to stop it. This uncontrolled self-assembly is referred to as the gray goo problem viii.

A single individual acting alone, could one day create and deploy a weapon of mass destruction (most likely from synthetic biology)
Synthetic biology that mixes genetic material from different species could make a new kind of virus living outside the body for deployment around the world, with a long incubation period. National technical means can identify and disrupt such actions, but probably not all. Improving applications of cognitive science and child development psychology could reduce such insane people, but not all. Families and communities can also help reduce the number of such mass killers. Technologies will continue to become more powerful, decentralized, and easier to use ix, so strategies to prevent misuses should increase—globally—as well.

**Nuclear war escalation**
Although nuclear war was prevented between the USSR and the USA, the number of countries with nuclear weapons has grown to nine: United States, Russia, France, China, the United Kingdom, Pakistan, India, Israel, and North Korea. Since there are political tensions among several of these the possibility of war is not zero. In addition to deadly radiation, Carl Sagan x and other scientists explained that firestorms created by the nuclear explosions would fill the atmosphere with sufficient smoke, soot, and dust circling the globe interrupt plant photosynthesis stopping food supply.

**New Uncontrollable, more-severe pandemics**
As synthetic biological research advances and proliferates, the ability to create (by accident or design) immune pathogens that continually mutate increases the possibility, although remote, of human extinction. Human-caused environmental changes could also lead to pathogens that could also lead to our extinction\textsuperscript{xii}. While no single pandemic is likely to extinguish humanity, they may do so in combination with other catastrophic threats.

**Particle accelerator accident**
Some scientists consider it possible that future participle accelerator experiments could possibly destroy the Earth and even open a blackhole or create a phase transition which could tear the fabric of space. Cold Spring Harbor Laboratory altered is research program when they found an extremely unlikely chance of opening a blackhole, but they determined the possibility was not zero.

**Gamma-ray bursts**
When two stars collide, a gamma-ray burst originating thousands of light years away, could sufficiently damage the protective ozone layer to kill life on Earth. According to Dr. Adrian Melott of the Department of Physics and Astronomy at the University of Kansas, "We don't know exactly when one came, but we're rather sure it did come—and left its mark." The WR 104 star system could cause such a gamma-ray burst in the future. The Sun could also emit high-energy flares, damaging our ozone layer.

**An asteroid collision**
An asteroid large enough to end humanity missed the Earth by six hours on March 23, 1989. If it would have hit the Earth, the impact would have been the equivalent of a thousand of our most powerful nuclear bombs. NASA is identifying and tracking such threats now. Although some have proposed attacking an asteroid with an explosive device, that could result in multiple hits on the Earth. Instead, research to find effective ways to change its course may prove safer.

"If humans one day become extinct from a catastrophic collision…Not because we lacked the brain power to protect ourselves but because we lacked the foresight. The dominant species that replaces us in post-apocalyptic Earth just might wonder, as they gaze upon our mounted skeletons in their natural history museums, why large headed Homo sapiens fared no better than the proverbially pea-brained dinosaurs."

-- Neil deGrasse Tyson (from Lifeboat Foundation\textsuperscript{xvii})

SG Antonio Guterres responded by asking that I meet with Ayaka Suzuki, Director of the Strategic Planning and Monitoring Unit in the Executive Office of the Secretary-General (EOSG) and the staff responsible for implementing the Common Agenda. A series of meetings have occurred to date focusing on how to the help implementation of the six foresight elements of the Common Agenda:

1. UN Summit on the Future
2. Futures Lab
3. High-level Advisory Board led by former Heads of State and/or Government
4. Special Envoy for Future Generations
5. Trusteeship Council as a multi-stakeholder foresight body
6. Strategic Foresight and Global Risk Report every five years

Section B of the report, addressing Major Risks of Our Common Agenda item 98 says:

“An effort is warranted to better define and identify the extreme, catastrophic and existential risks that we face. We cannot, however, wait for an agreement on definitions before we act. Indeed, there is an ethical imperative to act in a manner compatible with the dignity of human life, which our global governance systems must follow, echoing the precautionary principle in international environmental law and other areas. The cost of being prepared for serious risks pales in comparison with the human and financial costs if we fail.”

Hence, the thrust of the proposed UN Office of Strategic Treats is in the UN report. The question is how it and other foresight elements can be implemented. Asking your Minister of Foreign Affairs to have their Permanent Representative to the UN endorse the report in the UN General Assembly could help prevent this report from being one more left on the shelf to gather dust. We have never had a UNSG so aware of the role of foresight and willing to put it out front in UN reform.

Futurists should make a major effort to support this so that it is not one more opportunity that slips through our fingers. The Millennium Project will include the proposed UN Office on Strategic and Our Common Agenda in its next *State of the Future* (20\textsuperscript{th} edition) report. This is translated into several languages and used as a basis for many conferences, workshops, university courses, training programs around the world. In the meantime, please read UN’s Our Common Agenda and share your views with your Ministry of Foreign Affairs.

**Appendix:**

Open letter proposal the UN Secretary-General to create a United Nations Office on Strategic Threats

September, 2021
Secretary-General Antonio Guterres
United Nations

Dear Mr. Secretary-General:

Long-range strategic threats to the survival of humanity are well-documented, ranging from the potential of advanced artificial intelligence growing beyond human control to weakening magnetic fields that protect life on Earth.

Although the United Nations includes agencies that are addressing many of the problems facing humanity today, there is no central office to identify, monitor, anticipate, and coordinate research on long-term strategic threats to humanity.
A UN Office on Strategic Threats, which would centralize and coordinate information and prospective studies on a global scale, could serve international agencies, multilateral organizations, nation-states, the private sector, academia, and humanity in general. We think that the Office could be created without putting pressure on the budget of the organization, reallocating resources and coordinating its work with universities and research centers around the world.

This idea was raised and discussed in detail during World Future Day, March 1, 2021, a 24-hour conversation of nearly a thousand experts from 65 countries, organized by several international associations of futurists and think tanks to discuss strategies for improving the global future.

The signatories of this open letter – academics, diplomats, scientists, and experts in foresight and strategy from different countries and sectors – ask Your Excellency to welcome and facilitate the adoption of a UN General Assembly Resolution at this September’s General Assembly that would give the General Secretariat the mandate to conduct a feasibility study on establishing a UN Office on Strategic Threats.

Sincerely,

The Millennium Project, World Futures Studies Federation, and Association of Professional Futurists

List of Signatories endorsing this recommendation is available at: https://www.millennium-project.org/5672-2/

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4 https://www.technologyreview.com/2020/10/15/1010461/artificial-general-intelligence-robots-agi-deepmind-google-openai/
5 https://www.sciencedirect.com/science/article/abs/pii/S0921818112001452
6 https://www.sciencenews.org/article/earth-magnetic-field-reversal-mass-extinctions-environment-crisis
8 https://iopscience.iop.org/article/10.1088/0957-4484/15/8/001
9 https://books.google.com/books?id=bUbiDgAAQBAJ&amp;pg=PA161&amp;lpg=PA161&amp;dq=A%20single%20individual%20acting%20alone%2C%20who%20could%20one%20day%20create%20and%20deploy%20a%20weapon%20of%20mass%20destruction&amp;source=bl&amp;ots=7msNSpXKBq&amp;sig=ACfU3U3APQVobcrXZUL6EfiBbXwHA2-yHA&amp;hl=en&amp;sa=X&amp;ved=2ahUKEwix7OTi74nzAhUCFVkFHV-rCQcQ6AF6BAgCEAM#v=onepage&amp;q=A%20single%20individual%20acting%20alone%2C%20who%20could%20one%20day%20create%20and%20deploy%20a%20weapon%20of%20mass%20destruction&amp;f=false
10 https://www.atomicarchive.com/science/effects/nuclear-winter.html
13 https://press.princeton.edu/books/hardcover/9780691180441/on-the-future
15 https://www.nasa.gov/vision/universe/starsgalaxies/gammaray_extinction.html
16 https://www.nasa.gov/planetarydefense/dart
17 https://lifeboat.com/ex/asteroidshield#overview