

Welcome to this week's presentation and conversation
hosted by the
Canadian Association for the Club of Rome,
a Club dedicated to intelligent debate and action on global issues.

Our Existential Crisis: what is to be done?

Our speaker today is Julian Cribb, AM, a prolific author and science communicator, member of many science organizations, and winner of many awards. A newspaper editor by trade, he was science editor for The Australian newspaper, director of national awareness for CSIRO, and president of Australian professional bodies for agricultural journalism and science communication. For two decades his main focus has been the self-inflicted existential emergency faced by humanity.

He is a co-founder of the [Council for the Human Future](#). Humanity's capacity to inflict mass harm on itself has been accelerating since the mid-20th century and is now approaching a state where it can wreck civilization and, potentially, eliminate our species. Julian Cribb explores solutions to our greatest existential emergency.

Mr. Cribb's presentation will be followed by a conversation, questions, and observations from the participants.

CACOR acknowledges that we all benefit from sharing the traditional territories of local Indigenous peoples (First Nations, Métis, and Inuit in Canada) and their descendants.



2022 Aug 03

Zoom #110



Our existential crisis

What is to be done?

JULIAN CRIBB AM FRSA FTSE - CACOR, AUG 3, 2022

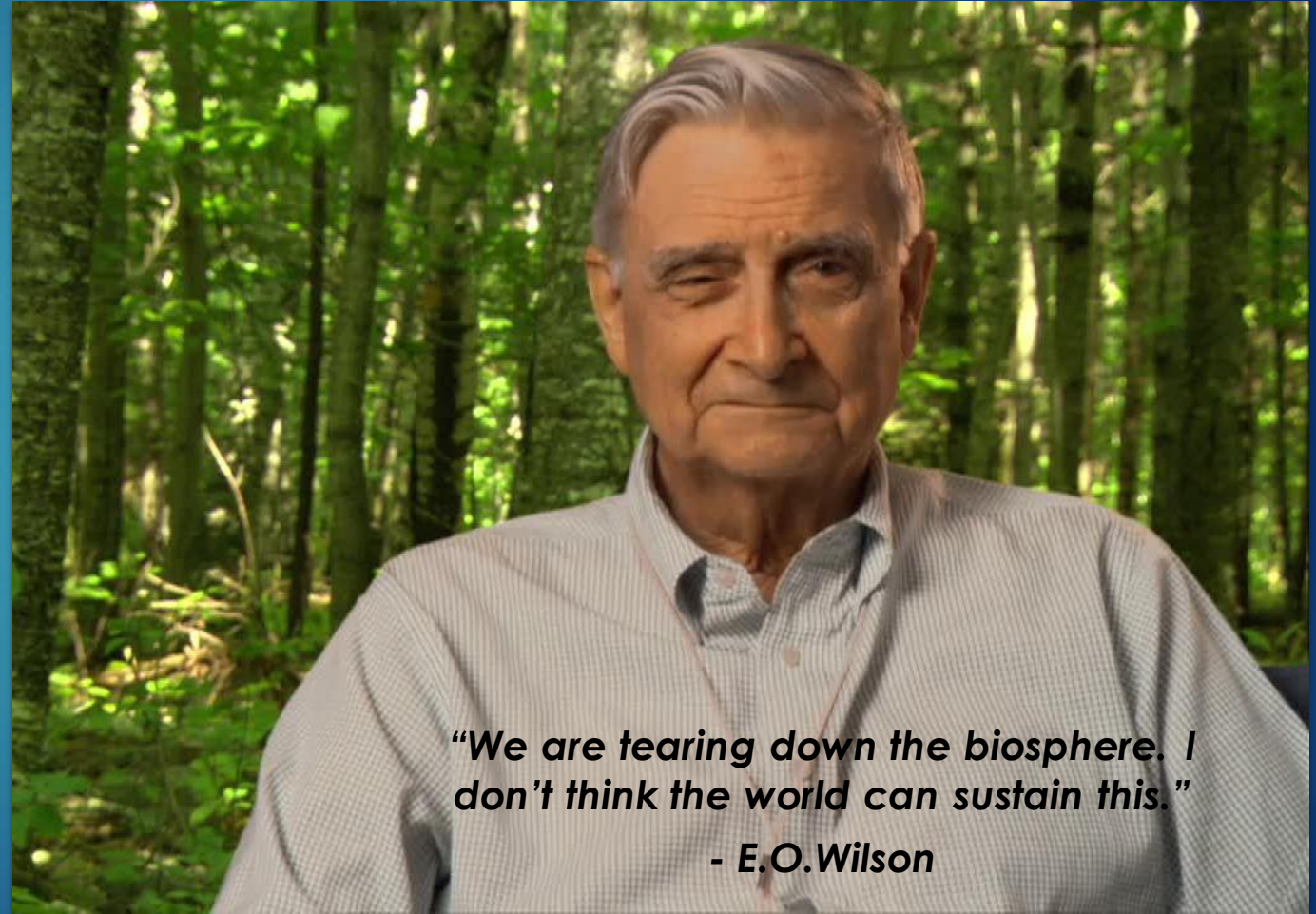


10 mega-risks

- ▶ 6th Extinction
- ▶ Resource scarcity
- ▶ Nuclear arms race
- ▶ Global heating
- ▶ Global poisoning
- ▶ Food failure
- ▶ Pandemic diseases
- ▶ Uncontrolled technologies
- ▶ Overpopulation
- ▶ False beliefs

Extinction and eco-collapse

- ▶ We have wiped out 60% of all mammals, birds, fish and reptiles since 1970.
- ▶ Extinction rates are 1000 to 10,000 times normal
- ▶ Extinction now 3x faster than dinosaur eclipse
- ▶ Ecological collapse threatens human existence as well as wildlife.



Hothouse Earth



- ▶ Carbon emissions rising faster
- ▶ On track for +4-5 degrees by 2100
- ▶ CO₂ 40 Gt/yr, now 419 ppm
- ▶ Earth 'now trapping twice the heat of 2005'
- ▶ Polar melting and sea level rising faster than predicted
- ▶ < 5 trillion tonnes of methane in tundra, seabed, swamps: now escaping
- ▶ Human survival at +5 degrees C: > 1 billion people

The methane 'bomb'

Poisoning a Planet

- ▶ < 220 billion tonnes of human chemical emissions
- ▶ 350,000 man-made chemicals
- ▶ Chemical output to double by 2030.
- ▶ Chemical deaths 9-12 m a year
- ▶ Worst case of mass manslaughter in history
- ▶ Human IQ falling
- ▶ Brain diseases now pandemic



Resource scarcity



Andean salt lakes: being destroyed by lithium mining for your EV or mobile.

Most of earth's resources running out:

- ▶ Global water crisis by 2030, affecting of half of humanity
- ▶ Soil loss 45-75 billion tonnes/yr
- ▶ Forest loss 10 m ha/year
- ▶ Global fish catch shrinking
- ▶ 1.3 billion tonnes of food wasted
- ▶ Ocean Dead Zones tripled since mid-20th century to 760
- ▶ Humanity consumes a full year's resources every 7 months.

Mounting nuclear peril

- ▶ Nuclear Threat 'highest since WW2'
- ▶ Global arsenal: 13,800 warheads
- ▶ 50-100 nukes can cause global starvation
- ▶ 8 nations equipped to terminate civilisation
- ▶ Deadly new weapon systems
- ▶ **No universal agreement to disarm**

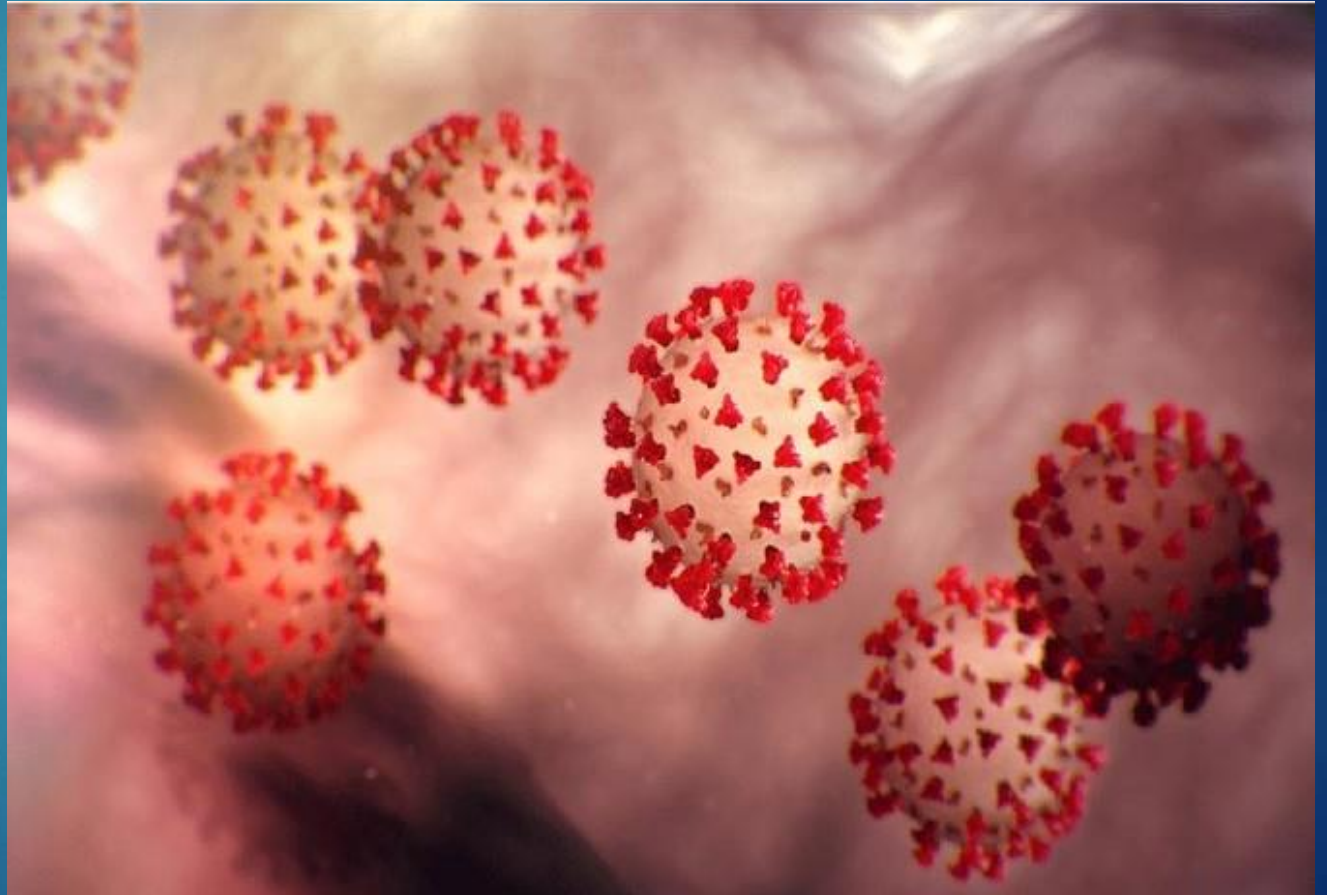


**IT IS 100 SECONDS
TO MIDNIGHT**



Pandemic disease

- 6 pandemics since 2000
- Causes:
 - Overpopulation
 - Environmental destruction
 - Megacities
 - Travel
 - ? Bad science
- New, worse plagues likely: WHO



Population: crisis driver



- ▶ Population 8 bn in 2023, up from 2.5 bn in 1950
- ▶ Record rates of growth
- ▶ Drives all the megathreats
- ▶ Fertility rates starting to fall worldwide voluntarily
- ▶ 'Peak people' due in late 2060s
- ▶ Human population must return to 2.5 bn to avoid a crash.

Food insecurity



DEMAND:

- +130,000 more people/day
- More babies + longer lives
- Rich eat 35,000 more meals
- Meat demand soaring in NICs
- **Global food demand to double by 2060s**

CONSTRAINTS:

- 'Peak water' (2025)
- 'Peak land' (2050)
- 'Peak Phosphorus' (2060)
- 'Peak fish' (1994)
- 'R&D drought' (now)
- 'Capital drought' (now)
- 'Climate extinction' (now)



Technology Threats

- ▶ Artificial intelligence
- ▶ Universal surveillance
- ▶ Man-made plagues
- ▶ Nanopollution
- ▶ Killer robots, nuclear drones
- ▶ Megacity collapse



Misinformation

- ▶ Mass delusion and disinformation now inundate human discourse
- ▶ They disable government, reject science, wreck democracy, damage society.
- ▶ Purpose-built 'lie factories'
- ▶ Media profits from spreading lies
- ▶ Misinformation is destroying our ability to save ourselves.

Solutions exist

- ▶ Solutions exist to all the megarisks
- ▶ All can be mitigated through worldwide action
- ▶ All risks can be mitigated by behavioural changes
- ▶ To solve the problems we must first understand the risks
- ▶ All 10 risks must be solved together

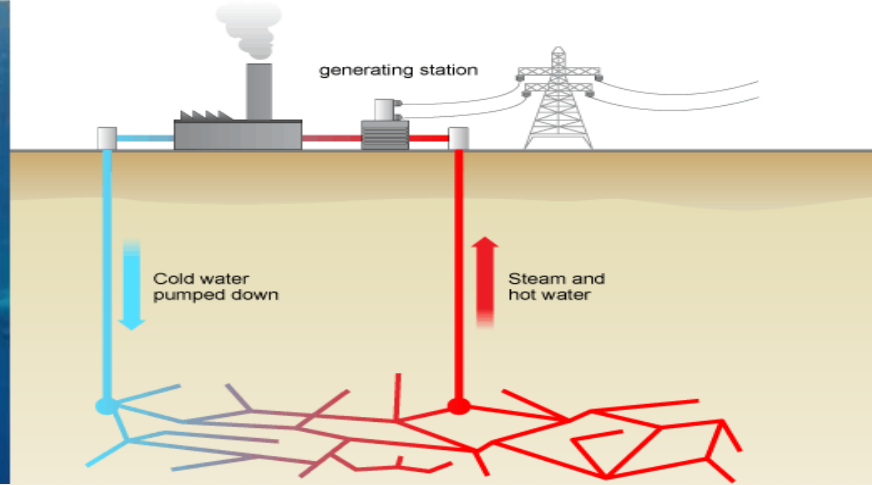


1. Ban ALL nukes and WMDs



- ▶ Outlaw and destroy all nuclear weapons, stocks & materials.
- ▶ Convert from Uranium-based energy to safer systems
- ▶ Outlaw and destroy all chemical and biological weapons and stocks
- ▶ Global surveillance of nations and groups posing a risk of WMD terrorism
- ▶ Global citizens' movement to monitor WMD and exert political pressure for abolition.

2. End fossil fuel use



3. Create The Circular Economy



- ▶ Waste nothing: want nothing
- ▶ New technologies to recycle metals, timber, nutrients, concrete, water etc
- ▶ An end to pollution.
- ▶ 'Peak People' in 2060s heralds declining demand for material goods, and an 'end to mining'.
- ▶ 'Creative Economy' founded on ideas, not things.
- ▶ Introduce an Earth Standard Currency

4. RENEWABLE FOOD



5. Re-wild half the planet



6. Clean Up the Earth

- ▶ Form a 'Clean Up the Earth' Alliance
- ▶ A new Human Right 'not to be poisoned'
- ▶ Eliminate all fossil fuels
- ▶ Eliminate toxins from food chain
- ▶ Preventative healthcare
- ▶ Train young scientists to 'first, do no harm'
- ▶ Educate kids to choose safe products
- ▶ Reward industry by buying green
- ▶ Zero waste, green chem, product stewardship
- ▶ Test all chemicals for safety



7. Reduce population by 75%



- ▶ Voluntary reduction is preferable to catastrophe
- ▶ It is achievable with education and family planning for all
- ▶ No living creature has ever had a population spike like ours without a crash
- ▶ Earth's carrying capacity < 2-3 bn at present rates of consumption
- ▶ "Have one child less" + universal free family planning.

8. Prevent future pandemics

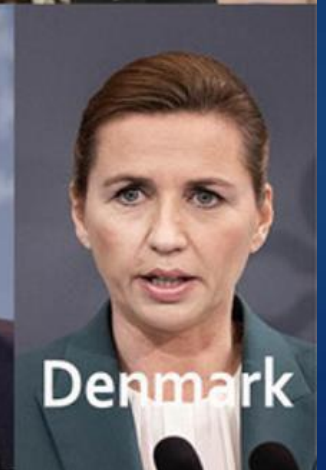


- ▶ Reduce human population
- ▶ Limit travel
- ▶ End environmental destruction
- ▶ Ban dangerous scientific experiments
- ▶ Establish early warning system

9. Put Women In Charge

“To survive, humanity now needs
The Age of Women.”

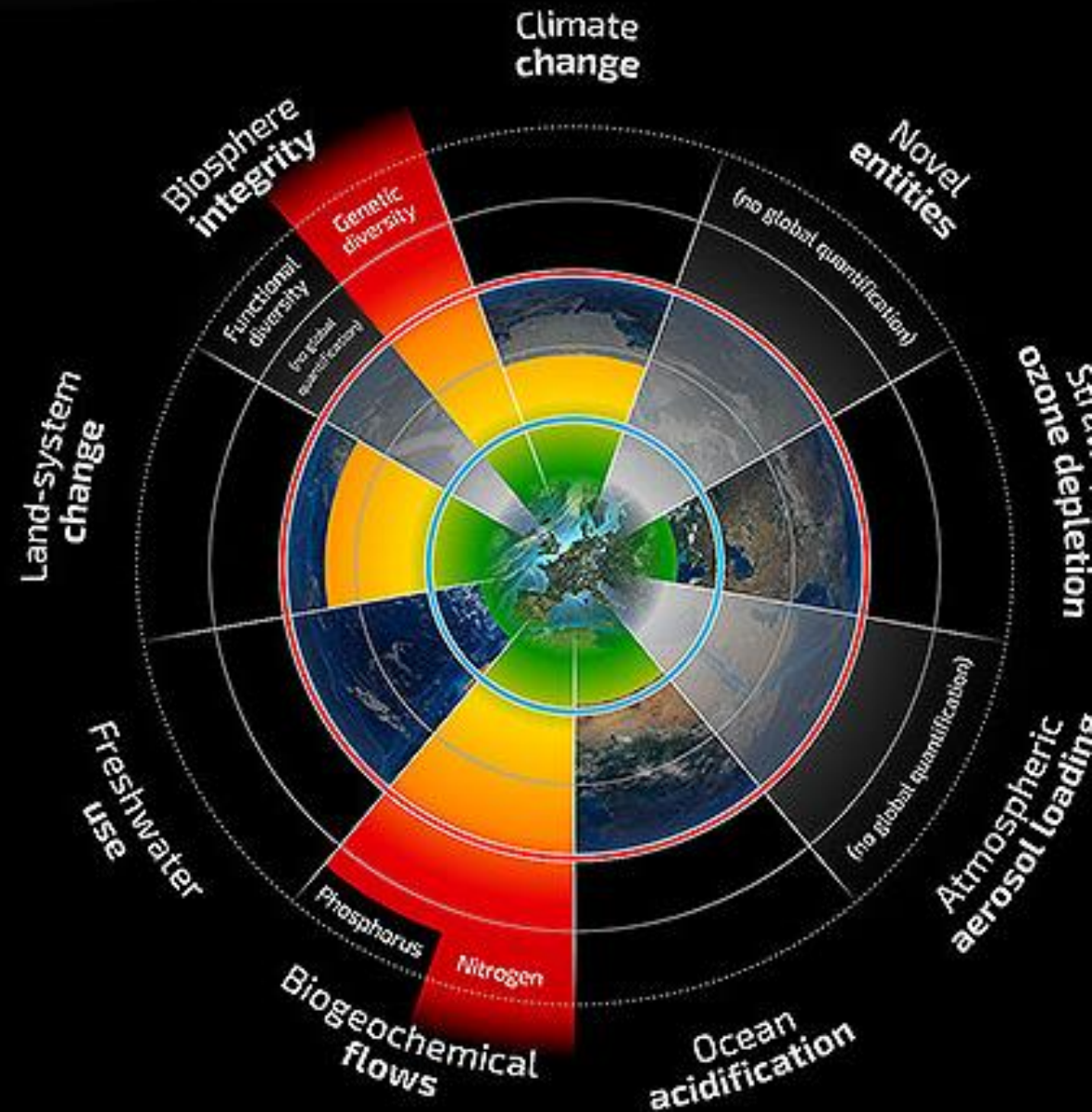
- ▶ Women **don't**: start wars, make poisons, emit so much carbon, fell forests, wreck landscapes, empty oceans, kill wildlife...
- ▶ **Women do**: think about needs of future generations
- ▶ > More female leaders in business, politics, religion and society will favour human survival and sustainability
- ▶ More males who think like women.



Yes, science communication can save the Earth...

- ▶ All solutions to catastrophic threats are based on science
- ▶ Humanity can only survive if:
 - ▶ We all understand the problems
 - ▶ We all know the answers and what to do
- ▶ Our task is to communicate survival science to 8-10 billion fellow humans and 190+ governments

'Global boundaries'





Act Together

- ▶ No government yet has a policy for human survival
- ▶ Need a science-based ***Earth System Treaty***
- ▶ We are all in this together
- ▶ We can save billions of lives.