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Response on Nuclear Attack

- The risk of a nuclear "Armageddon" is at its highest level since the 1962 Cuban Missile Crisis, US President Joe Biden has said. Mr Biden said Russia's President Vladimir Putin was "not joking" when he spoke of using tactical nuclear weapons after suffering setbacks in Ukraine.

“ We have not faced the prospect of Armageddon since Kennedy and the Cuban Missile Crisis.”

“For the first time since the Cuban Missile Crisis, we have a direct threat to the use of nuclear weapons, if in fact things continue down the path they'd been going,” Mr Biden told fellow Democrats.” [From BBC news 7. Oct 2022](#)

- A Russian nuclear strike against Ukraine would trigger "such a powerful answer" from the West that the Russian army would be "annihilated," said Josep Borrell, the EU's foreign policy chief. [From EuroNews 14. Oct 2022](#)
 - *Statements like this make it even more urgent and important to prevent any use of nuclear weapons from any side and to stop further escalation in retaliation.*
 - Appeal on no-any use of nuclear weapons

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Nuclear War and Nuclear Winter

- A nuclear war could lead to global famine:

- recent studies indicate a dramatic affects on food production

- both articles from Nature on Nuclear Winter and global famine available from:

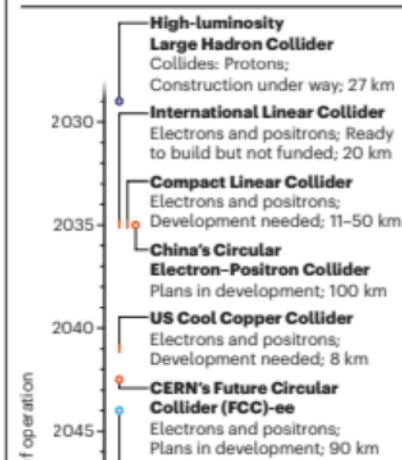
<https://science4peace.com/Public-Events/Entries/2022/10/appeal-no-use-of-nuclear-weapons.html>

particles called neutrinos. Some argued for the go-ahead on CMB-S4, a next-generation survey of the cosmic microwave background.

A call that cut across disciplines was to ensure that a wide range of facilities exists to hunt for dark matter. The failure to find a theoretically predicted kind of dark matter known as weakly interacting massive particles (WIMPs) in the past ten years, either at the massive detectors designed to search for them or at the LHC, means that dark matter must be even more exotic than had been thought.

Physicists want to look for much lighter candidates for dark matter, and to reframe their search to take into consideration that it could exist as a whole family of particles, rather than just one, says Suchita Kulkarni, a dark-matter physicist at the University of Graz in Austria, who attended the Snowmass meeting. Finding it will take a few large and sensitive projects – such as those already looking for WIMPs – and many more small experimental ones, says Micah Buuck, a physicist at Stanford University.

The two-year Snowmass process, to which physicists from around the world submitted 521 papers, was “exhausting, but thrilling”, says Cushman, who is a member of the steering group. Crunch time will come next year, when the US federal Particle Physics Prioritization Panel, known as P5, will use Snowmass’s conclusions – and budget considerations – to make investment recommendations to federal funders.



NUCLEAR WAR BETWEEN TWO NATIONS COULD SPARK GLOBAL FAMINE

A pall of smoke from burning cities would engulf Earth, causing worldwide crop failures, models show.

By Alexandra Witze

Even a small conflict in which two nations unleash nuclear weapons on each other could lead to worldwide famine, research suggests. Soot from burning cities would encircle the planet and cool it by reflecting sunlight back into space. This in turn would cause global crop failures that – in a worst-case scenario – could put five billion people on the brink of death.

“A large per cent of the people will be starving,” says Lili Xia, a climate scientist at Rutgers University in New Brunswick, New Jersey, who led the work. “It’s really bad.”

The research, published on 15 August (L. Xia *et al. Nature Food* 3, 586–596; 2022), is the latest in a decades-long thought experiment about the global consequences of nuclear war. It seems especially relevant now, given that Russia’s war against Ukraine has disrupted global food supplies, underscoring the far-reaching impacts of a regional conflict.

Nuclear war comes with a range of lethal impacts, from killing people directly in atomic blasts to the lingering effects of radiation and other environmental pollution. Xia and her colleagues wanted to look at the consequences farther afield from the scene of war.

They modelled how climate would change in various parts of the world after a nuclear war, and how crops and fisheries would respond to those changes. The scientists analysed six war scenarios, each of which would put different amounts of soot into the atmosphere, and cut surface temperatures by anywhere between 1 °C and 16 °C. The effects could linger for a decade or more.

such as whether people continued to raise livestock or whether they routed some or all crops meant for livestock to humans instead. The study assumed that people would cut back on or eliminate food waste. It also assumed that international trade would stop as countries chose to feed people within their own borders rather than exporting food.

Xia notes that the study relies on many assumptions and simplifications about how the complex global food system would respond to a nuclear war. But the numbers are stark. For even the smallest war scenario, of an India–Pakistan conflict that results in 5 million tonnes of soot, calorie production across the planet could drop by 7% in the first 5 years after the war. In the worst case of a United States–Russia war, calorie production would drop by 90% three to four years after the war.

‘Let’s move to Australia’

The nations most affected would be those at mid- to high latitudes, which already have a short season for growing crops and would cool more dramatically after a nuclear war than would tropical regions. The United Kingdom, for instance, would see sharper drops in the amount of food available than would a lower-latitude country such as India.

One nation that would be less affected is Australia. Isolated from trade in the wake of a nuclear war, Australia would rely mainly on wheat for food. And wheat would grow relatively well in the cooler climate induced by atmospheric soot. On a map in the study showing large portions of the world in red, indicating starvation, Australia gleams an untouched green, even in the severe-war scenarios. “The

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Appeal: no first – no any use of nuclear weapons

No first – no any use of nuclear weapons ([link](#))

In the war against Ukraine, which we condemn in strongest terms, too many people have been killed and too much hate and fear was created and amplified, too many war-crimes have happened. We urge for an immediate ceasefire and humanitarian aid for those who are suffering from the war.

The escalation in words and military actions has brought us very close to the danger of the use of nuclear weapons. In the face of a vast and hardly imaginable global destruction, we as scientists cannot stay silent: Any nuclear attack from any side will create responses and retaliations from the other side, and in a short time millions of people will be killed, huge areas on land and sea will be destroyed and contaminated. Scientific studies demonstrate clearly and undoubtedly, once nuclear weapons are fired, there is no time left for decisions and there is no way back.

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Appeal: no first – no any use of nuclear weapons

Being paralyzed by the nuclear threat, we are facing serious and dangerous crises which need to be solved: The climate crisis with storms, floods or droughts in many countries, with merely no chance for millions of people to survive. The Food, ecosystem, social and energy crises, which affect mostly poor countries.

We need to put all our effort and resources to resolve these issues. As scientists we are committed to research for the benefit of humanity and to engage for a peaceful world in which every being has a future.

We demand from all politicians and political leaders:

- Stop the verbal escalation, stop making any statements and decisions which will destroy the future of all of us, independent of nation, gender, race
- Take scientific advice as a guideline of your decisions, and make decisions which allow a future for all of us.
- Remember the inferno of Hiroshima and Nagasaki and take historical considerations into account.

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Appeal: no first – no any use of nuclear weapons

We demand from all governments, including those in Europe, Russia, US

- **Urgently** declare publicly, to subscribe to the **no-first-use policy** of nuclear weapons or other weapons of mass destruction, and declare there will be no-any-use of these weapons.
- Sign **immediately** the Treaty on the Prohibition of Nuclear Weapons launched by the United Nations.

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Appeal

- Need to strengthen and sharpen the message
 - please comment

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Appeal

- Need to strengthen and sharpen the message
- need more groups for first signatures
 - International
 - IPPNW international
 - ICAN
 - Germany:
 - Naturwissenschaftler Initiative
 - Science4Future
 - VDW
 - etc ?
 - from different countries:
 - Science organizations
 - Peace NGOs ?
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ICAN call

- ENDING NUCLEAR WEAPONS HAS NEVER BEEN MORE URGENT

Nuclear weapons are the most inhumane and indiscriminate weapons ever created, and it is time to end them, before they end us. Recent threats to use nuclear weapons have made us all realize how close to disaster we are. But there is hope.

In the years after the two most serious nuclear crisis in the past (the Cuban missile crisis, and the Able Archer crisis at the peak of the Cold War in the 80s) huge advances were made on nuclear disarmament. This happened because of massive public pressure. Now we face another such crisis. This is our moment to end nuclear weapons for good, and we need everyone to join this movement now - to save the world.

ICAN AT A GLANCE

The International Campaign to Abolish Nuclear Weapons (ICAN) is the international campaign to stigmatise, prohibit & eliminate nuclear weapons. This coalition of over 650 NGOs in 110 countries promotes adherence to and the implementation of the 2017 UN Treaty on the Prohibition of Nuclear Weapons (TPNW), the first and only comprehensive ban on nuclear weapons.

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ICAN call

• Partnership Pledge

Partner organizations agree to:

- Recognise the humanitarian consequence of nuclear weapons
- Support the Treaty on the Prohibition of Nuclear Weapons
- Promote the full implementation and universalisation of the Treaty on the Prohibition of Nuclear Weapons and to identify publicly with ICAN
- Keep ICAN staff informed of plans and activities in support of the ICAN's objectives, and operate non-violently.

Partner organizations are entitled and encouraged to:

- Sign up to ICAN's e-mail list of partner organizations to receive campaign updates and information about decisions of the international steering group and request the steering group to consider any campaign-related issue.
- Request, use and publicize ICAN materials in accordance with ICAN's communications policies, and seek technical and strategic support from the steering group and international staff team.



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WHY JOIN ICAN TO END NUCLEAR WEAPONS

Like climate change and pandemic disease, the terrible risks posed by nuclear weapons constitute a global problem that requires a collective global response. Whatever the interests and strengths of your organisation, there is a way to contribute to nuclear disarmament efforts. ICAN has the wide network, a solid plan, and a Nobel Peace Prize-winning track record of success. With more organizations like yours onboard, we can eliminate nuclear weapons.

WHAT IT MEANS TO BE AN ICAN PARTNER

Any NGO is eligible to become an ICAN partner organization. No joining fee or annual subscription is required. ICAN partners are coordinated, connected, and cooperating on nuclear weapons abolition through the TPNW.

As a partner, you will:

- Receive regular updates, briefings, press points, and social media materials to talk about nuclear disarmament.
- Have access to the diverse expertise across the campaign.
- Be eligible to join the ICAN delegation to United Nations and official meetings.
- Benefit from ICAN training and support programmes, be eligible to apply for small grants to support your organization's activities in universalising the TPNW, and more.

APPLY NOW:



https://www.icanw.org/become_a_partner



partners@icanw.org

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AOB

- Publication strategy in HEP experiments (CERN etc) not yet settled, further discussions ongoing. Decision in coming weeks

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- Science4Peace Webpage: <https://science4peace.com/>
 - [Science4Peace](#) Fund– created last year, with donations from my students
 - source can be used to support with a small amount scientists at risk
 - donations can be made online with PayPal

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Organization

- Science4Peace Webpage: <https://science4peace.com/>
 - Science4Peace Fund: ZOOM account and web page independent of any institution
- Please check <https://science4peace.com/> for further infos:
 - collection of links to statements from research institutions
 - public events (like this one, with slides)
 - any other further infos
- For discussions on Science4Peace matters, please use (and register) at our Signal channel ([Signal registration](#))
- Petition: Stop the escalating spiral
 - available on <https://www.change.org/science4peace>