

*How China can prevent Climate Catastrophe,
opportunity and contingency*

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The struggle against fossil fuels

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Abstract

China is now the world leader with green capital actually creating renewable energy technologies, but this green capital is still coupled in the Chinese economy with powerful sectors dedicated to continued implementation and imports of fossil fuels as well as an ambitious plan to build hundreds of new nuclear fission reactors. Recognizing the debate around China's system being state capitalist or "socialist with Chinese characteristics", can China emerge to fulfill its claim that its goal is a new ecological civilization, as well as become the global leader opening a global ecosocialist path ?

In particular, China has the potential of implementing solar energy infrastructure in the deserts of the Middle East in her Belt and Road Initiative, mainly in the form of concentrated solar power. The creation of this renewable energy capacity could supply electricity to much of the world as well as power direct air capture of carbon dioxide with permanent burial in the crust, critical to having any chance of not breaching the IPCC warming target of 1.5 deg C (1).

This contingency will likely only be realized with class struggle led by China's working class and allies guided by an ecosocialist agenda along with a shift to demilitarization of the global economy. Likewise, the potential emergence of China as the global leader of struggle for climate security will inspire the transnational working class and its allies to champion a global Green New Deal to make this goal possible.

(1) The China Solar Thermal Alliance, an ongoing initiative to build Concentrated Solar Power (CSP) in deserts: <http://en.cnste.org>; Fox, D. (2021) Rare Mantle Rocks in Oman Could Sequester Massive Amounts of CO₂, Scientific American, July 1, <https://www.scientificamerican.com/article/rare-mantle-rocks-in-oman-could-sequester-massive-amounts-of-co2>; 2021 AIMS Energy paper "Can the 1.5 °C warming target be met in a global transition to 100% renewable energy?" at <https://www.aimspress.com/article/doi/10.3934/energy.2021054>.



To solve climate, first achieve peace

“...the future of the planet is inextricably intertwined with international conflict.”

(And cooperation between the U.S. and China is imperative!)

EDITORIAL

SCIENCE APRIL 1, 2022

*“IPCC’s conservative nature masks true scale of action needed to avert catastrophic climate change”,
Kevin Anderson’s assessment of the latest IPCC synthesis report.*

Anderson is a leading climate scientist at the University of Manchester, UK.

There is still a chance to keep warming at no more than the 1.5°C target, but tipping points to climate catastrophes much worse than we are witnessing now will kick in if this target is breached. However, according Anderson, this IPCC report is too optimistic and neglects the interests of most of humanity living in the global South.

Anderson estimates there is a 50 percent chance of meeting the 1.5°C target if global carbon dioxide emissions are reduced to zero by 2040. Note, zero, not “net zero”! Note this assumes a remaining carbon budget of 380Gt CO₂, starting January 2023.

Anderson, Kevin 2023, ‘IPCC’s Conservative Nature Masks True Scale of Action Needed to Avert Catastrophic Climate Change’, *The Conversation*, 24, March, available at: <<https://theconversation.com/ipccs-conservative-nature-masks-true-scale-of-action-needed-to-avert-catastrophic-climate-change-202287>>. Anderson and Dan Calverley, 2022. <https://climateuncensored.com/how-alive-is-1-5part-one-a-small-budget-shrinking-fast/>.

A More Recent Assessment

“We conclude that the RCB [remaining carbon budget] for a 50% chance of keeping warming to 1.5 °C is around 250 GtCO₂ as of January 2023, equal to around six years of current CO₂ emissions.”

(Source : Lamboll, R.D. et al. 2023 Assessing the size and uncertainty of remaining carbon budgets. Nature Climate Change, doi: 10.1038/s41558-023-01848-5)

BBC News report on this study:

“Earlier this year, the Intergovernmental Panel on Climate Change, the UN's key advisory body, projected that the world could only emit another 500bn tonnes of carbon and have a 50% chance of keeping warming under the 1.5C figure. As the current annual level of emissions is around 40bn tonnes, the IPCC projected that the threshold would be crossed permanently by the middle of the next decade. But this new analysis suggests it will be much sooner than that. The researchers looked at the fact that the IPCC only included data up to 2020, so they adjusted the budget downwards to account for the carbon used over the last three years. They also re-examined the role of other, non-carbon factors that impact warming. (<https://www.bbc.com/news/science-environment-67242386>)

But is the Ukraine war opening a path to renewables?

Renewables Will Overtake Coal by Early 2025, Energy Agency Says

In a new report, the international group said that solar, wind and other renewable sources will expand much more swiftly than forecast last year.

Worldwide, growth in renewable power capacity is set to double by 2027, adding as much renewable power in the next five years as it did in the past two decades, the International Energy Agency said.

China alone is forecast to install almost half of the new global renewable power capacity over the next five years, based on targets set in the country's new five-year plan. Even still, the country is accelerating coal mining and production at coal-burning power plants*.

*<https://www.nytimes.com/2022/11/03/business/energy-environment/china-coal-natural-gas.html>. (Source: <https://www.nytimes.com/2022/12/06/climate/iea-renewable-energy-coal.html>)

The current Israeli genocidal war on the people of Gaza makes the goal of climate security even more challenging

See my 2011 article with a new introduction:

The Path to Climate Security Passes Through Gaza (http://www.theearthisnotforsale.org/climate_security_through_gaza.pdf)

Abstract

The stakes are very high for a just and peaceful resolution of the struggle for full recognition of the individual and collective rights of the Palestinian people. Achieving this goal is not only critical for the securing of life, rights and sustainability of all living in Palestine and the broader region. The struggle for justice in Palestine also lies at the heart of global movements against imperialism, occupation, war and militarization of the global political economy that threatens us all. The Israeli occupation of Palestine and military aggression in the region is a central part of the US-European imperialist agenda. Only global equity and cooperation made possible by the termination of this agenda will create the possibility of preventing catastrophic climate change. Thus, the convergence of the climate security, environmental and ecological justice, peace, anti-occupation, Palestine solidarity, and anti-imperialist movements is imperative while we still have time to act.

Good news for climate comes from the world's greatest user of coal

“This year alone, China could add more solar power than the cumulative total in place in the United States. Last year, the increase in China's solar and wind power nearly matched the amount of electricity used in many of the world's major economies, including South Africa, Australia and Spain. This dizzying pace means China's carbon dioxide emissions will peak years ahead of its 2030 target. And where one global power leads, others are compelled to follow.”

<https://www.washingtonpost.com/opinions/2023/07/13/china-renewables-ev-peak-emissions/>

Hannah Ritchie July 13, 2023, Washington Post

So can China become the global leader for climate security ?

Instead of her plan to build 100s of nuclear reactors, rather rapidly phase out coal, and cooperate in the Middle East to build solar power in the Arabian Desert to supply electricity to the whole region and Africa, while powering DAC and permanent burial of carbon in Oman, a new Belt and Road initiative?

“Rare Mantle Rocks in Oman Could Sequester Massive Amounts of CO₂”

(<https://www.scientificamerican.com/article/rare-mantle-rocks-in-oman-could-sequester-massive-amounts-of-co2/>)

See my article at: <https://mronline.org/2023/04/11/how-china-can-prevent-climate-catastrophe-moving-humanity-toward-global-ecological-civilization/>



Why the peridotite deposit of Oman?

A recent IPCC report “calls for ‘radical decarbonisation’ with a fast phase out of fossil fuels without carbon capture” . This mode of CO₂ carbon capture referred to in this report is from industrial processes and power stations. However, we are proposing a form of “Negative Emission Technology” (NET), namely,

Direct Air Capture (DAC) of carbon dioxide, which entails the permanent burial (of carbon) in the crust powered by renewable energy.

Peridotite mineralisation is a natural process. CO₂ dissolved in rainwater is reacting with peridotite all the time, but in nature it can take decades to mineralise even a small amount of CO₂. However, the proposed NET can accelerate this process to mineralise CO₂ in less than one year. Minerals in the peridotite, namely olivine and pyroxene react with carbon dioxide extracted by DAC technology and water (derived from seawater) to form serpentine and calcite, resulting in:

permanent storage in the crust of atmospheric carbon dioxide.

CONCENTRATED SOLAR POWER (CSP)



The potential Concentrated Solar Power (CSP) capacity in the Middle East Deserts

The China Solar Thermal Alliance is an ongoing initiative to build CSP in deserts. They computed a total of an annual 23,398 terawatt-hour generated by CSP corresponding to a land area of about **11 percent of the Sahara Desert equal in energy generation to an annual 2.7 terawatt-year**, approximately the present annual global electricity consumption level (the present annual primary global primary energy consumption level is 19 terawatt-year).

This Saharan land area devoted to CSP could be reduced by siting concentrated solar power on other deserts including the Arabian Desert.

Global Renewable Energy Level by 2040: 800-1000 EJ = 25.4 -31.7 TW year (present level: 19 TW, 80% fossil fuels)
In power units, 2.2 to 6.8 TW have the capacity to drawdown with DAC 20 billion tons of CO₂ every year, the IPCC upper limit of the flux needed to not breach the 1.5 deg C warming target in this century.

(from out pending modeling paper)

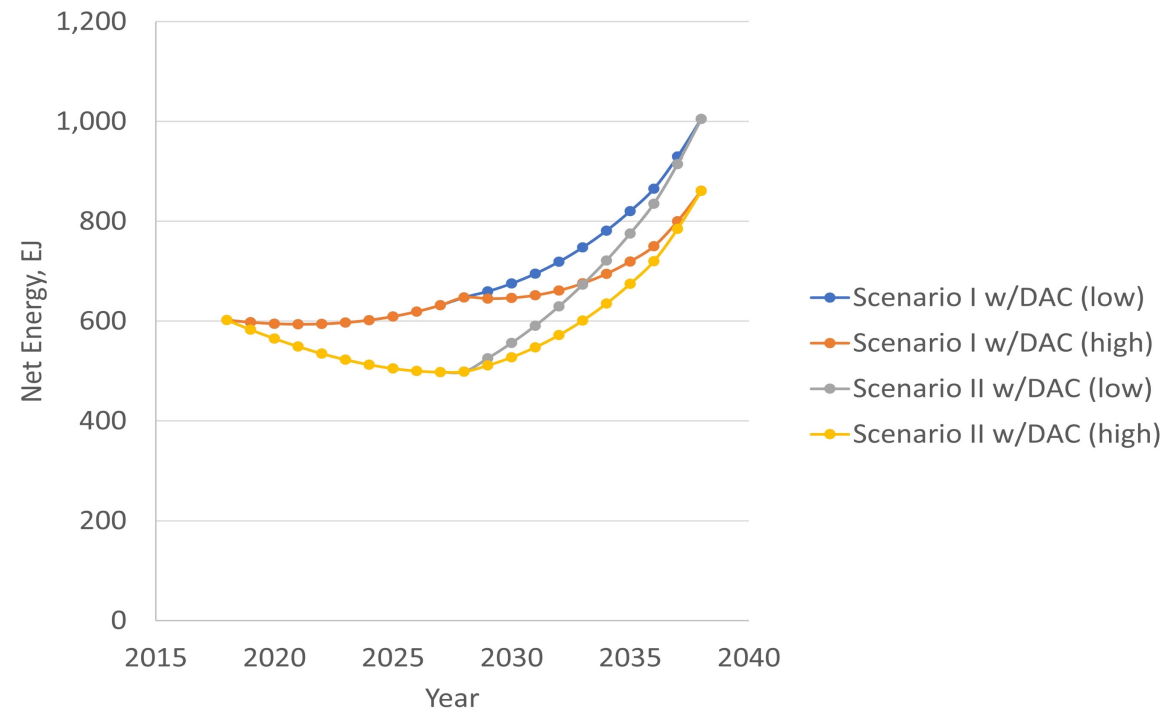


Figure 2. Net Energy Available (with $F_{ff} = 0.03$)

Net energy = Total Energy Production – Energy Diverted for DAC

Preventing Climate Catastrophe (warming above 1.5 deg C) requires:

Global demilitarization, solarization of energy supplies and agroecologies replacing industrial/GMO agriculture

To eliminate energy poverty and have the capacity to confront climate adaptation and mitigation, **more energy than now consumed is needed**

Renewable energy sources: wind power (mainly sited in oceans), photovoltaics and concentrated solar power

A global solar transition replacing the present unsustainable energy supplies (80% from fossil fuels) must be parasitic on these supplies, just as the industrial fossil fuel revolution was parasitic on biomass energy, so-called plant power, until it replaced the former supply with sufficient capacity.

Mainly because of its lower greenhouse gas emission footprint compared to coal and natural gas, **the preferred fossil fuel to make a solar transition is conventional oil (excluding tar sands, and dangerous drilling on deep water continental shelves and in the rainforest). No more than 5% of proven oil reserves is needed to meet the warming IPCC target of 1.5 deg C; see our AIMS Energy paper). Exploration and development of new oil extraction sites should be vigorously opposed.**

Oil rich countries in the Mid-East and South America (e.g., Venezuela) will be valuable partners in this solar transition by providing the needed petroleum.

But a global regime of equity and cooperation is required!

Reloading Lenin, Eco-Leninism today, the Global Green New Deal as a terrain for transnational class struggle:

*To defeat fossil capital and its political instruments, make green capital an ally, while confronting its extractivist agenda in building capacity of the global working class and its allies as a hegemonic force for **ecosocialist** transition:*

“The more powerful enemy can be vanquished only by exerting the utmost effort, and by the most thorough, careful, attentive, skillful and obligatory use of any, even the smallest, rift between the enemies, **any conflict of interests among the bourgeoisie of the various countries and among the various groups or types of bourgeoisie within the various countries, and also by taking advantage of any, even the smallest, opportunity of winning a mass ally, even though this ally is temporary, vacillating, unstable, unreliable and conditional.** Those who do not understand this reveal a failure to understand even the smallest grain of Marxism, of modern scientific socialism in general.”

(p.23, ‘Left-Wing’ Communism: An Infantile Disorder, V.I. Lenin, Resistance Marxist Library, Resistance Books 1999, bold added)

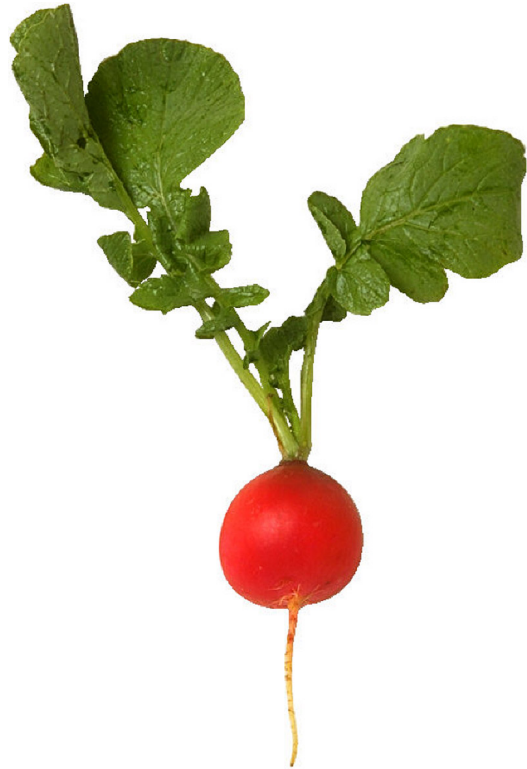
Conclusion

We show with our model calculations that this proposed project led by China in the context of her Belt and Road Initiative on technical grounds has the potential to provide global climate security by not breaching the 1.5 C warming target thereby minimizing the growing threats to human civilization and biodiversity as we know it.

However, success in this regard is obviously contingent on a near future dramatic change from the present tensions between the United States and China going forward to a new global regime of cooperation and peace.

All peace-loving people around the world should consider their responsibility to help create this future for the youth and generations to come in this century. The alternative is a world of climate hell with climate catastrophes occurring on a much bigger scale than now witnessed.

Radical and Radish have the Same Root



Be as Radical as Reality Itself!

Readings

Our book *The Earth is Not for Sale*, <https://www.theearthisnotforsale.org/>

My most recent book, *The Global Solar Commons*

(<https://www.theearthisnotforsale.org/solarcommons2021.pdf>)

My interview: <https://www.jamesgdyke.info/degrowth-ecosocialism-a-discussion-with-david-schwartzman/>:
Degrowth & Ecosocialism: a discussion with David Schwartzman and James Dyke, Assistant Director of the
Global Systems Institute, University of Exeter

My presentation "Degrowth in a renewable energy transition?", Global Systems Institute, *Univ. of Exeter*
(April 4, 2022) based on <https://climateandcapitalism.com/2022/01/05/a-critique-of-degrowth/>, at
https://theearthisnotforsale.org/dschwartzman_exeter42022.pdf

Our AIMS Energy article (November 2021):

Can the 1.5 °C warming target be met in a global transition to 100% renewable energy?

<https://www.aimspress.com/article/doi/10.3934/energy.2021054>

A few of my most recent articles:

<http://www.globalecosocialistnetwork.net/2022/04/10/revisiting-military-greenhouse-gas-ghg-emissions/>

<https://thedcline.org/2022/01/31/david-schwartzman-revisiting-a-green-new-deal-for-dc-in-2022/>

<https://peopleandnature.wordpress.com/2022/02/17/roads-to-an-energy-commons-a-pamphlet/>

Supplementary Slides

Scenarios for Combating Global Warming: China's Critical Role as a Leader in the Energy Transition

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Abstract. China is now the world leader with green capital actually creating renewable energy technologies. Can China emerge to fulfill its claim that its goal is a new ecological civilization, as well as become the global leader to reach climate security? We address this possibility. In particular, China has the potential of implementing solar energy infrastructure in the deserts of the Middle East as part of her Belt and Road Initiative, mainly in the form of concentrated solar power. The creation of this renewable energy capacity could supply electricity to much of the world as well as power direct air capture (DAC) of carbon dioxide with permanent burial in the crust, in particular using the ultramafic deposits in Oman. This realization would increase the chances of not breaching the IPCC warming target of 1.5 deg C, of course only if coupled with termination of fossil fuels as early as possible and their replacement globally with renewable energy supplies. In this context, we model this DAC-driven drawdown of atmospheric carbon dioxide in the context of a 20-year transition to a global renewable energy supply. showing that it is possible to create sufficient renewable energy capacity to continue this drawdown for the rest of the 21 st century thereby reducing atmospheric carbon dioxide to safe levels.

This contingency will likely only be realized with a shift to demilitarization of the global economy. Likewise, this potential emergence of China as the global leader of the struggle for climate security would likely inspire the struggle for a global Green New Deal to make this goal possible.

The estimate of 5.5% for global military emissions (Parkinson, 2020) is apparently based on the inclusion of manufacturing the materials for the military industrial complex (MIC). However, if non-military related manufacturing had substituted for military in this period, focused on for example civilian infrastructure, namely bridges, urban housing, rail and public transport, roughly the same emissions would have occurred as from the military manufacturing sector. Further, **degrowth of the MIC will entail in a global GND a shift of material resources, such as steel to peaceful development of infrastructure. And the termination of fossil fuels with a renewable energy transition has the potential of eliminating GHG emissions in particular in steel and concrete production in a demilitarized world.**

(See my article “Revisiting Military Greenhouse Gas (GHG) Emissions” at <http://www.globalecosocialistnetwork.net/2022/04/10/revisiting-military-greenhouse-gas-ghg-emissions/>).

Even if the Pentagon goes “green”, military spending and the Military Industrial Complex Imperial Agenda are the critical obstacles posed by the MIC, not the sizable GHG emissions of the Pentagon itself. Most of all, global cooperation needed to prevent much worse climate catastrophes than we now witness is being blocked by this imperial agenda.

Parkinson, Stuart (2020) The carbon boot-print of the military. Responsible Science No.2, Winter. 18-20, <https://www.sgr.org.uk/resources/carbon-boot-print-military-0>.

INDEFENSIBLE: The true cost of the global military to our climate and human security

Report researched by Dr. Ho-Chih Lin and written by Dr. Ho-Chih Lin and Deborah Burton

Version: October 2020 (original version written in May 2019)

<https://thefivepercentcampaign.files.wordpress.com/2020/12/indefensible-the-true-cost-of-the-global-military-to-our-climate-and-human-security.pdf>

““it is reasonable to estimate the carbon ‘bootprint’ of the **global military-industrial complex** to sit somewhere between 3% and 6% of the global total greenhouse gas emissions, most likely at 5%. (p.19)

We estimate the carbon footprint of global military-industrial complex in 2017 to be 445 million tonnes of CO₂ equivalent, accounting for about 1% of the total global carbon emissions...whether the global militaries’ carbon footprint is 5% or 1%, it all leads to the same conclusion in this devastated climate changed world. “ (p.20)

*In part a result of Putin's Criminal War on Ukraine
(Shift from Russian natural gas to LNG exports):
"US fracking boom could tip world to edge of climate
disaster"*

<https://www.theguardian.com/environment/2022/may/11/us-fracking-climate-fossil-fuel-gases>

140bn metric tons of planet-heating gases could be unleashed if fossil fuel extraction plans get green light, analysis shows

Who is the winner so far in this war?

U.S./Nato, militarism: note boost in military budgets, and enlargement of Nato (Finland in, Sweden pending) and of course *Fossil capital*

Note increase in new fossil fuel investments as investments in renewable energy reaches record high:

Energy Transition Investment Now On Par with Fossil Fuel

Feb. 10, 2023

“Fossil fuel investment grew by \$214 billion year-on-year against a backdrop of high commodity prices and still paled compared to energy transition spend which was up \$261 billion. Total outlay for fossil fuels stood at \$1.1 trillion, according to BNEF estimates based on IEA inputs, matching that of energy transition.”

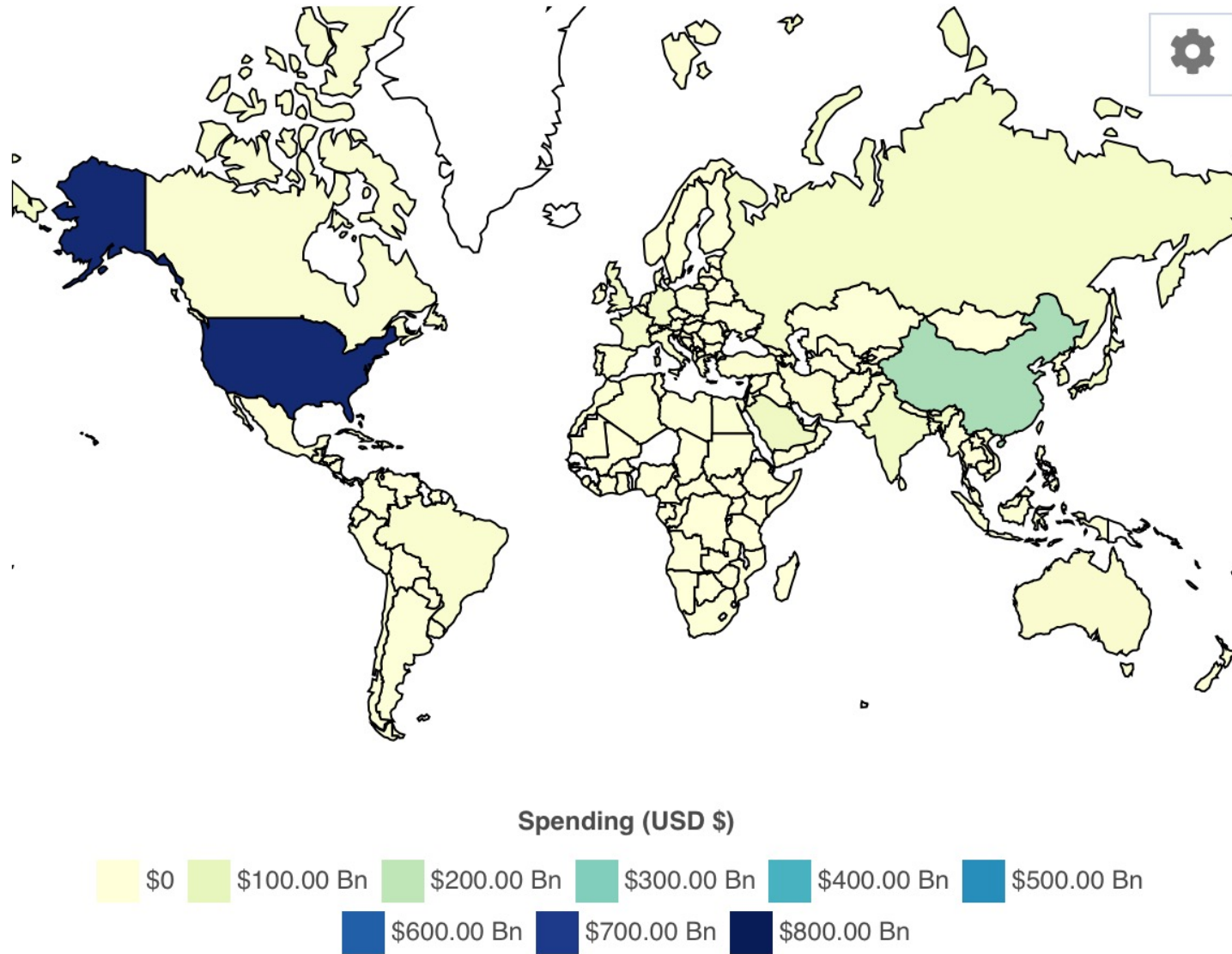
(<https://about.bnef.com/blog/energy-transition-investment-now-on-par-with-fossil-fuel/>)

Military Spending Increasing

“After Russia invaded Ukraine, several European countries announced increases to coming military budgets. The war is likely to accelerate an ongoing upward trend in global military spending; in April, SIPRI estimated global military spending to reach \$2.1 trillion in 2021, an all-time high.”

<https://www.sipri.org/events/2022/SSC22-military-spending-ukraine>, November 8, 2022)

Military Spending by Country 2023



<https://worldpopulationreview.com/country-rankings/military-spending-by-country>

COP27: War causing huge release of climate warming gas, claims Ukraine

(Nov. 14, 2022, <https://www.bbc.com/news/science-environment-63625693>)

“The war has led directly to emissions of 33 million tons of greenhouse gases that warm the Earth's atmosphere, claimed Ruslan Strilets, Ukraine's environmental protection minister.”

In comparison, in 2019, before the pandemic, the DOD emitted 55 million tons (p.305, Crawford, *Pentagon Fuel Use, Climate Change, and the Costs of War*. MIT Press, 2022).

What is the main obstacle to preventing catastrophic climate change?





***Militarized Fossil Capital,
A Zombie stalking the planet,
ravaging humans and nature***

In John Milton's *Paradise Lost*, Moloch is one of the greatest warriors of the fallen angels
"First MOLOCH, horrid King besmear'd with blood
Of human sacrifice, and parents tears, "

William Blake, 1809, *The Flight of Moloch*, watercolour, 25.7 x 19.7 cm. One of illustrations of *On the Morning of Christ's Nativity*, the poem by John Milton:



***The Military Industrial (Fossil Fuel Nuclear
State Terror and Surveillance) Complex***

Or “MIC” for short, aka

the Molochian Instrument of Carnage

Or Moloch of Mass Murder...

We are now living in the
CAPITALOCENE

***Humanity faces this challenge at the beginning
of the 21st century:***

Can the monstrous boulder of ***militarized fossil
capital*** be pushed down the slope to its well-
deserved sedimentary cemetery of prehistory on
a path that minimizes the destruction of nature
and humans?

*The Military Industrial (Fossil Fuel Nuclear State Terror and Surveillance) Complex (MIC) is a block to achieving **global cooperation** for rapid curb on global greenhouse gas emissions and a full transition to wind/solar power.*

*As the instrumental arm of the Imperial foreign policy of the MIC, the Pentagon/NATO along with the now greater than \$2 trillion per year in global military spending are the critical obstacles posed by the MIC, not the sizable, but widely exaggerated greenhouse gas emissions of the **Pentagon itself** (see my article:*

<http://www.globalecosocialistnetwork.net/2022/04/10/revisiting-military-greenhouse-gas-ghg-emissions/>)

How much do the global military actually contribute to GHG emissions?

Crawford (2019)'s report gives an estimate for the Pentagon of 1.267 billion metric tons of GHGCO₂ equivalent emissions (including installations and operations) since the beginning of the "Global War on Terror" in 2001 through 2017. This corresponds to no more than 0.17% of the cumulative total of global GHGCO₂ equivalent emissions in that period equal to 763.2 Gt GHGCO₂ equivalent emissions (Olivier and Peters, 2020, Table B.1, p.70). Adding the contribution of U.S. war manufacturing for the same period of 2.6 billion metric tons of GHGCO₂ equivalent emissions (p.20, Crawford, 2019), **the total Pentagon GHG emissions from 2001 through 2017 amounted to 0.5% of the cumulative global total GHG emissions.**

<http://www.globalecosocialistnetwork.net/2022/04/10/revisiting-military-greenhouse-gas-ghg-emissions/>

Crawford, Neta C. (2019) Pentagon Fuel Use, Climate Change, and the Costs of War, <https://watson.brown.edu/costsofwar/papers/ClimateChangeandCostofWar/>.

Neta C. Crawford, 2022, *The Pentagon, Climate Change and War*. MIT Press.

Military, the global polluter!

The global negative impact of military-generated pollution is immense. This includes radioactive and chemical pollutants associated with military production and activities on bases. For example, military-derived forever chemicals (Per- and polyfluoroalkyl substances, “PFAS”) have contaminated ground and surface waters around the world, resulting in unsafe levels in fish and seafood because of bioconcentration (<https://www.militarypoisons.org>), with growing evidence of harm to human health, such as suppression of the immune system (Beans, 2021).

Also see: US Military Pollution/ The World’s Biggest Climate Change Enabler (2021)
<https://earth.org/us-military-pollution/>

The MIC is likely the biggest single obstacle to preventing C3:

- 1) The MIC is the present core of global capital reproduction with its colossal waste of energy and material resources.
- 2) The integration of fossil fuel/nuclear industry in MIC.
- 3) The MIC's dominant role in setting the domestic/foreign policy agenda of the United States, with no evidence of weakening in the present administration.
- 4) **Pentagon as the “global oil-protection service”** for the U.S. imperial agenda (Klare), or even for the transnational capital class itself. Also protection service for strategic metals
- 5) *The Imperial Agenda blocks the global cooperation and equity required to prevent C3.*

A Global Green New Deal

The image part with relationship



“what can we do now in order to be able to do tomorrow what we are unable to do today?”

— Paulo Freire, [Pedagogy of Hope: Reliving Pedagogy of the Oppressed](#)

Pushing towards the ecosocialist horizon entails struggles for *democratic social management of society at all levels, more socialism, less capitalism.*

A fruitful strategic goal is the **Global Green New Deal**, an area for multidimensional class struggle to prefigure the future in the present by expanding the commons, virtual and material.

The reformability of really existing capitalism must be tested by actual class struggle, *in other words by defending and expanding democracy in the social, political and economic spheres.*

*Mapping out a path to a just green recovery, to a **Global Green New Deal** and an **eco-socialist** transition leaving fossil capitalism in prehistory where it richly deserves to be.*

Potential Stages of a Global Green New Deal

1st NeoKeynesian (applying Modern Monetary Theory),

Goal: **defeat Militarized Fossil Capital**, by a broad alliance including “green” capital

“Green” capital must be challenged all along the way, to optimize environmental, worker and community protection, while progressively eroding its power to manage this transition, until full social management is in place.

*Growing strength of organized labor from renewable energy/green infrastructure jobs, **the Global GND as an arena of transnational class struggle, led by the working class and its allies in particular the indigenous communities.***

Growth of community control of renewable energy supplies, agroecologies replacing industrial agriculture.

Demilitarization and termination of fossil fuel consumption begins, freeing up vast resources, financing. Transfer of resources from the Global North to the South.

2nd Nationalization of Critical Sectors of the Economy, especially Energy

3rd Global ecosocialist transition led by the transnational working class and its allies