WORLD PEACE

Strategic Focus Ecological peace

Phuro Innovations

Centre for Energy
Climate change & Space

PHURO MANIFESTO

World Peace - Phuro Innovations
International days and weeks serve as opportunities to educate the public on critical issues and unite political will and resources to tackle global challenges. Over the past nine seasons, Phuro Innovations has harnessed these occasions as potent tools for communication in India.

Amidst today's rapidly evolving global landscape, Phuro Innovations has spearheaded the development of a Knowledge Graph focusing on "social-economic impact" in South Asia. To bolster India's capabilities, we have adopted a trampoline approach instead of a conventional ladder, aiming to expedite progress and secure a prominent economic standing. Though Climate Change may be imperceptible, it profoundly impacts our daily lives. While we navigate the complexities of "today's normal," we are proactively shaping "tomorrow's normal" through compassionate actions and equitable policies, easing the transition for a more sustainable and prosperous future.

Presenting Strategic Focus - Ecological Peace; Phuro Innovations aspires to become a pivotal entity in Energy, Climate Change, and Space endeavors in India & South Asia. Our recent submissions to the Prime Minister's Office underscore the urgent need for responsive solutions in the face of a challenging present.

With a decade-long commitment to social impact initiatives, we recognize the necessity of evolving into a forward-looking institution, catalyzing positive transformation and fostering consensus on climate change. Our track record demonstrates our efficacy in driving impactful change over the years. Phuro Innovations stands as a comprehensive solution provider, dedicated to mitigating violence, promoting trade, and enhancing energy efficiency to combat the exacerbated inequalities exacerbated by climate change.

This World Peace Day, our focus is on fostering Peace with Space. Reflecting on recent air disasters in Nepal and NASA's findings on Methane emissions, we acknowledge the correlation between these tragedies and the escalating atmospheric temperatures caused by greenhouse gases. It is reported that developing nations would require about $2 trillion per year in decarbonization investments. The US's environmental protection agency & National Science Foundation funds core climate research . Once the Research is done, entrepreneurs raise money from debt / equity etc post developing marketable solutions & products.

As methane poses a severe threat, being 80 times more potent than carbon dioxide and persisting in the atmosphere for two decades, urgent action is imperative. The global imperative, as outlined in the Paris agreement, is to reduce methane emissions by 45% by 2030 to limit global warming to 1.5°C.

NASA’s reports on Methane emissions highlight the imminent risks posed to rice paddies and agriculture in India, as well as the rapid industrial growth in China. Immediate measures must be implemented to address these challenges effectively. By fostering empathy towards the present, we can collectively forge a brighter, sustainable future.

Sponsorships / Strategic Advice

India@phuroinnovations.com

World Peace Discussion
Warning about Planet Earth

Space Power - Outer Space Governance
Restrict unnnessary technologies

Energy Transition -Oil of the Future
Green Hydrogen - Net Zero

Nuclear Weapons - Illegal
Join UN Treaty

$2 Trillion Decarbonization Investment in india from where ?

We have the solutions
Centre for Energy, Climate Change & Space

www.phuroinnovations.com

WORLD PEACE DAY

SPACE POWER

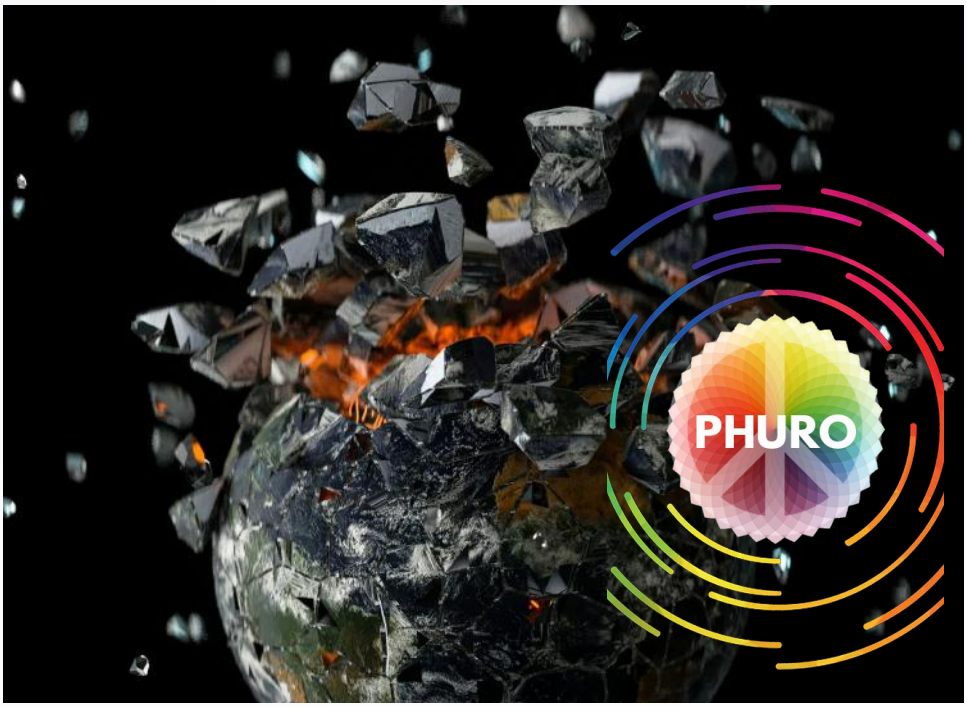
RENEWAL

Outer Space Governance - Renewal ?

The Intent of this white paper by Phuro Innovations is to intervene and build Knowledge Graph to avert fast paced Climate change causing unnatural destruction which is manmade. The Document focuses on unncessary technologies which are being developed to harm the humanity more; specially in SouthAsia and China

Hence a scientific approach is adopted to advocate sound and efficient governance of certain technologies like outer space & nuclear weaponry to make a positive contribution to India's democratic modernization.

Our white paper will ensure that we build capacity of leaders who can ensure space remains peaceful and clean, and will restrict space activities to benefit humanity. The end goal would be to facilitate global consensus and common effort with regard to outer space exploration and utilization.



Initial Thought Provokation

What's interesting in this futuristic plan is that today, Beijing lags behind SpaceX, but it is determined to catch up and compete with its rivals by establishing a new state-owned enterprise (SOE) named China SatNet.
Since Methane & Carbon Dioxide is seen all over in our region it thus becomes very critical for us citizens to intervene and request for stopping this damage further.

The mission of China SGuatNet is to build out China's "mega-constellation" Guowang ("national network")

Getting Started

It is important to understand the motivation for every cause, thus a study ranging from Constitution of China, its Cultural history, foreign policy and China's place in international affairs were studied well before writing this white paper.

This is done in order to build a case good enough for regional governance for building peace treaties with China on Climate Change. It is very important from Climate Change perspective, as we both are methane & carbon emitting nations and in proximity to Himalayas which are a very basis of life.

If we can maintain peace in South Asia by leveraging this knowledge graph, we are truly global then.

The future stability and geopolitical orientation of Energy, Climate Change & space becomes critical and is the main focal point of Phuro Innovations now.

Highlights

China has already registered a request for additional satellites, with the International Telecommunications Union. That is roughly 1,000 more than what has so far been authorized for Starlink - 12,992 satellites into orbit.

It is also empowering local governments to build production parks for the space industry and launch an ecosystem of companies and startups (GalaxySpace in particular) across the nation.
It has other challenges like financing the industry and It becomes thus critical for the World Governments to know that this kind of competition for space power may devastate our atmosphere further which is dangerous for humanity and planet earth. A poor region can further be devastated by climate change.

KEY FEATURES EXPLAINED

Lets look at the situation in China, which now provides a variety of launch vehicle services. The Long March-11 carrier rocket has achieved commercial launch from the sea; the Smart Dragon-1, Kuaizhou-1A, Hyperbola-1 & CERES-1. Successful flight tests on reusable launch vehicles have been carried out and several other commercial vehicles have also been launched. China says it will continue to strengthen research in the sky technologies for reusable space transport systems to conduct more test flights accordingly. China will continue to improve its space infrastructure, and integrate remote-sensing, communications, navigation, and positioning satellite technologies.

It will also send into space new-generation manned carrier rockets, high-thrust solid-fuel carrier rockets, and speed up the R&D of heavy-lift launch vehicles thereby expanding the launch vehicle family.

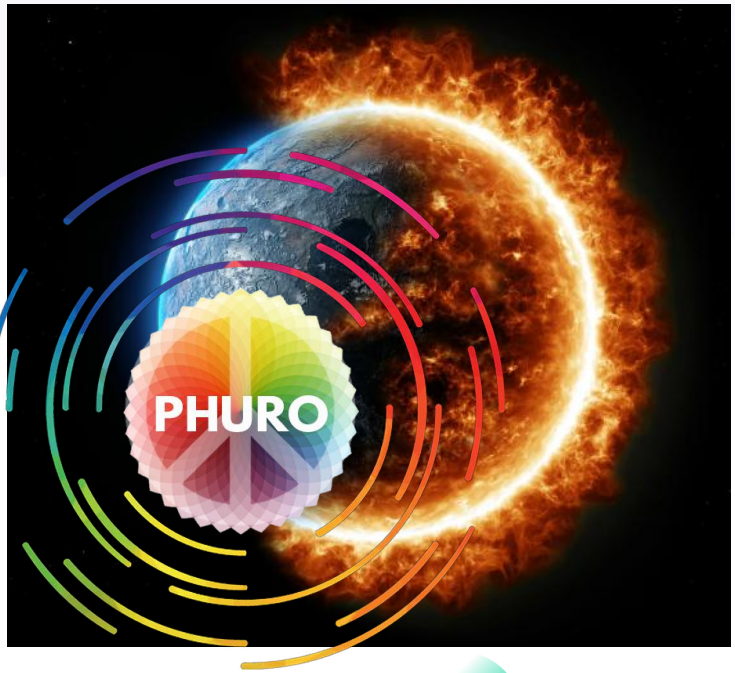
China has made steady progress in developing fixed communications and broadcasting satellite network, which now covers more areas with greater capacity. Tiantong-1 02/03 satellites, operating in tandem with the Tiantong-1 01 satellite, to provide voice, short message and data services for hand-held terminal users in China, its neighboring areas, and certain parts of the Asia-Pacific.

In the next five years, It will also Develop satellites for geostationary microwave monitoring, new-type ocean color observation, carbon monitoring of the territorial ecosystem, and atmospheric environmental monitoring· It will also Build a satellite communications network with high and low orbit coordination, test new communications satellites for commercial application, and build a second-generation data relay satellite

China will continue to implement its manned spaceflight project.
China has done extensive research on international space law, and participated in formulating international rules regarding outer space and International Telecommunication Union standards. This way they are strategically contributing to a fair and reasonable global governance system which also includes studying and formulating regulations on the management of satellite frequency and orbit resources.

Support & Feedback

Apart from formulating rules on international issues in the fields of space environment governance, space traffic management, near-earth objects monitoring & response, planet protection and the development and utilization of space resources.; China will also expand cooperation in the fields of asteroid & interplanetary exploration. China has also taken a lead to conduct personnel exchanges and training in the space industry.
Thus increasing its global influence in controlling space power which could perhaps be misused if India doesnt participate in the International Space dialoges now. This is because India has always played a fair and environmentally sustainable role in geopolitics and hence needs to tighten its grip on this new subject. A subject which is developing rapidly and has a very strong impact on World Peace.



Feedback and Updates

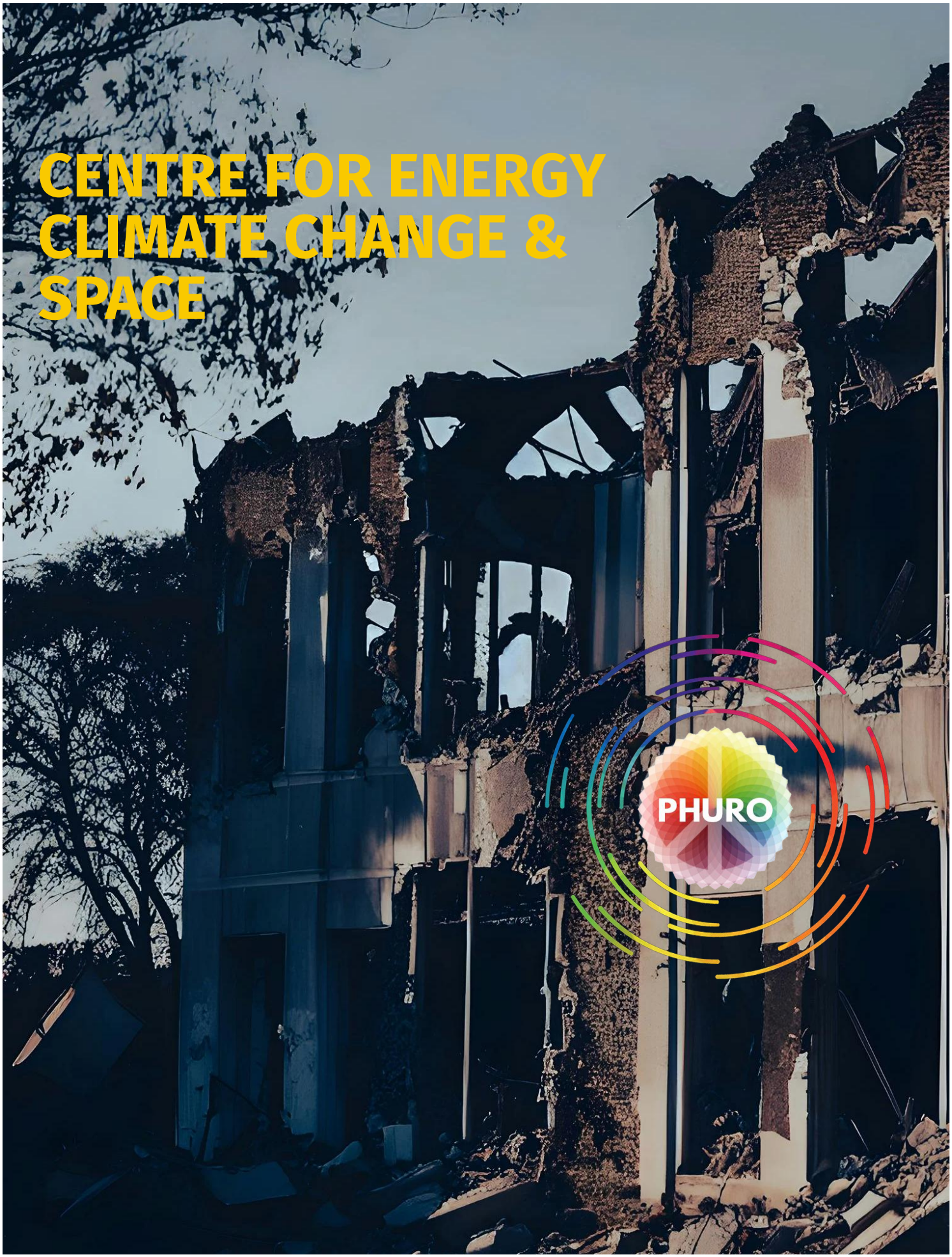
China’s Outer space quest also supports the activities of international organizations such as the International Telecommunication Union, Group on Earth Observations, Inter-Agency Space Debris Coordination Committee, Consultative Committee for Space Data Systems, International Space Exploration Coordination Group, and the Interagency Operations Advisory Group.
China has carried out support cooperation within the fields of compatibility, interoperability, monitoring, assessment, and joint development of China's BeiDou Navigation Satellite System, the United States' Global Positioning System, Europe's Galileo system and Russia's GLONASS system.
China is also conducting satellite navigation cooperation with countries such as Pakistan, Saudi Arabia, Argentina, South Africa, Algeria, and Thailand.
It has built satellite research and development infrastructure with countries including Egypt, Pakistan and Nigeria. It has pressed ahead with the construction of the Belt and Road Initiative Space Information Corridor, and opened China's space facilities to developing countries. It will give priority to developing communications satellites for Pakistan and help in constructing the Pakistan Space Center and Egypt's Space City.

WORLD PEACE DAY

NUCLEAR WEAPONS

ILLEGAL

UN treaty on Prohibition of Nuclear Weapons


CENTRE FOR ENERGY
CLIMATE CHANGE &
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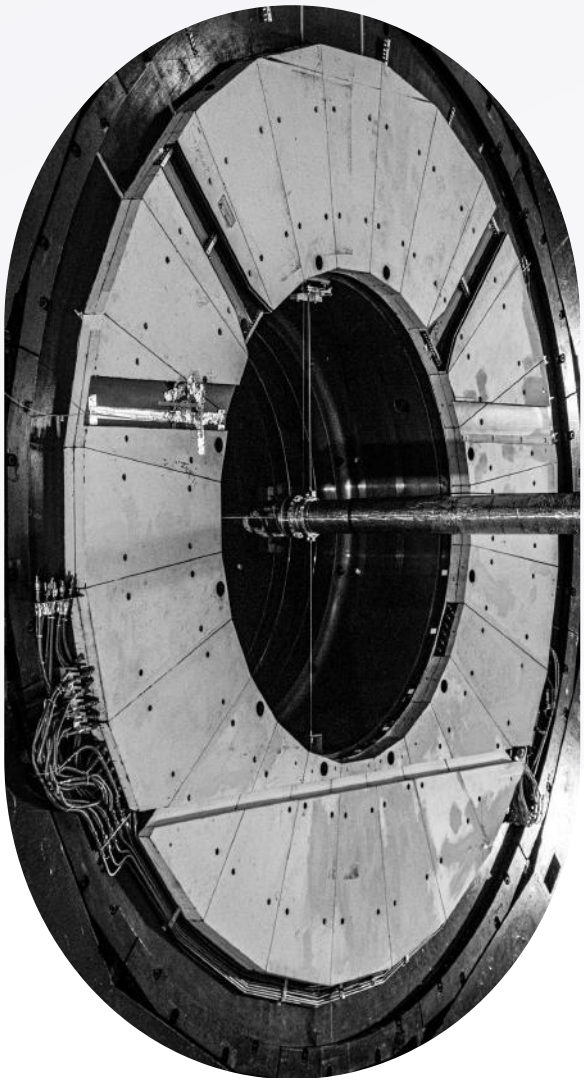
PHURO

Nuclear Bomb

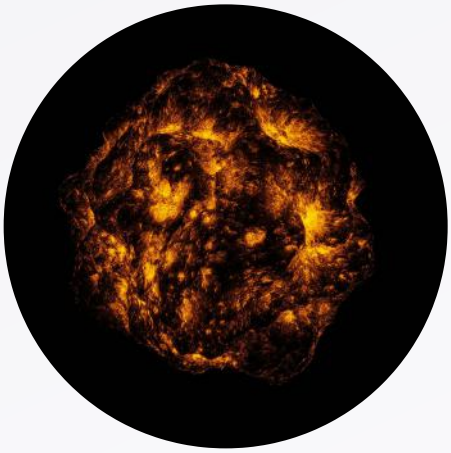
It takes around 10 seconds for the fireball from a nuclear explosion to reach its maximum size. A nuclear explosion releases vast amounts of energy in the form of blast, heat and radiation; a shockwave hundreds of kilometres an hour. The blast kills people, and causes lung injuries, ear damage and internal bleeding to people further away from the site. Intense thermal radiation vaporizes everything. The extreme heat causes severe burns and ignites fires which turn in to giant firestorm. Underground shelters fail due to lack of oxygen and carbon monoxide poisoning.



Highlight

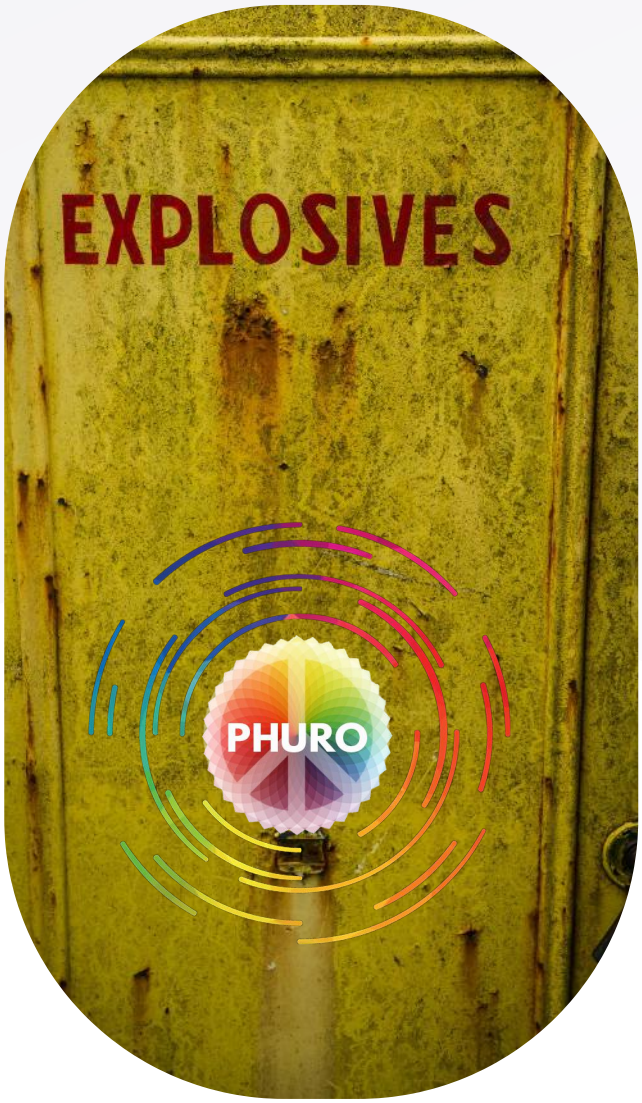
The use of less than one percent of the nuclear weapons in the world could disrupt the global climate and threaten entire population with starvation in a nuclear famine in the long-term. The detonation of thousands of nuclear weapons could result in a nuclear winter, which would destroy our fragile ecosystem.

Support and Feedback



Wether they are detonated or not , nuclear weapons cause widespread harm to public health and environment. Nations which with nuclear weapons are unable to fully control them, making them a constant liability. For example - an unauthorized use; non-sanctioned use of nuclear weapons by a non-state actor

OR Accidental use, i.e. Human/ Technical error or malfunction.



Feedback and Updates

The production of nuclear weapons includes Producing the explosive materials used in nuclear weapons which leads to long-lasting radioactive pollution.

The horrific devastation and suffering witnessed in Hiroshima and Nagasaki in 1945 by Japanese Red Cross and ICRC medical staff, as they helped tens of thousands of dying and wounded people, has left an enduring mark on the entire International Red Cross and Red Crescent Movement. They have been advocating for the prohibition and elimination of nuclear weapons over the last 75 years.

Case Study - What Happens

In 1948 and 1958, the US dropped 43 nuclear bombs in Enewetak Atoll after evacuating people from their homes. During the clean-up of the debris and nuclear waste, six men died. Post that the US government issued a report, stating: “It took 4,000 U.S. servicemen & three years to scoop up 33 Olympic-sized swimming pools’ worth of irradiated soil. This is just one example amongst many, including Maralinga, Australia; Mayak, Russia; Sellafield, UK; Mount Mantap; Semi region of Kazakhstan. This further leads to decreased agricultural production and damage to marine life resulting from the contaminated soil & water.

Damage

The effects of nuclear weapons are not limited to mere soil & water contamination. Its not only lethal for humans, it also kills animals and plants. In some sensitive plants, nuclear radiation can cause deforestation – wiping out all plants. For example, Chernobyl was surrounded by a pine forest, a species of trees highly sensitive to radiation, which was destroyed by radiation.

The animals and plants that come under the effect of radiation die as a result and become part of the soil as fertilizer. Their radiation contaminates the soil and thus the crop cultivation leads to food poisoning. This took place in Kazakhstan where the exposure of nuclear waste caused vegetation contamination.

Case Study -Soil

What is "long-term" contamination which gets created due to nuclear testing.
A case study to look at is that of Mururoa and Fangataufa, where these tests were conducted and even after 50 years, the soil is still contaminated. There are also government imposed restrictions on locals inhabiting certain areas because of the effects of radiation.
Apart from that, the US had to spend millions of dollars on the clean-up project in the Mururoa and Fangataufa territories. The immense data available on all the testing sites that were used for nuclear testing in the 1900s provide sufficient evidence to conclude that its time to implement the Ban worldwide.

Recommendations

International law provides protection to the environment during armed conflict,through Rules 43, 44, and 45 of the Customary International Humanitarian Law Study, 2005 ("ICRC").These Rules establish the responsibility of States to protect the environment during armed conflict. Rule 43 creates an exception for "military objective" but with the limitation that the harm to the environment should not exceed the military advantage. This is, however, a very subjective test with no set criteria for defining military objectives. It varies on a case-to-case basis. Rule 44 established a general duty of care towards the environment. Rule 44 is not weapon specific, therefore, applying it to nuclear weapons will be significant. Rule 45 prohibits widespread damage to the environment providing the responsibility that "due regard to the protection and preservation of the natural environment" must be given.
These rules have the potential to prohibit the use of nuclear weapons if the international community and international courts take heed of them.

UN Treaty on the Prohibition of Nuclear Weapons

Solution: Ensure that India & China join the Ban to save our regions atmosphere from further damage. Its a cause that goes beyond power now and is in favor of our regions and its environment. Reduction in Nuclear weapons will directly reduce the unnecessary expenditure in their development, maintenance and dismantlement. This financial resource can be allocated to other sustainable technologies and business's. eg healthcare and education to develop a nation.

Solution: Ensure the financial sector stops funding the companies that produce these weapons. They can allocate funds to avert climate change by funding green technologies.

Solution: Green Hydrogen is zero carbon & methane emitting fuel, which needs help in development at fast pace. The funds can be reallocated from Nuclear Weapons and restricting space explorations. By effective allocation of finances we can ensure peace is more profitable at the same time it saves our environment. Thus making it a compelling business case for governments, financial institutions and investor community.

WORLD PEACE DAY

GREEN HYDROGEN

NDC'S

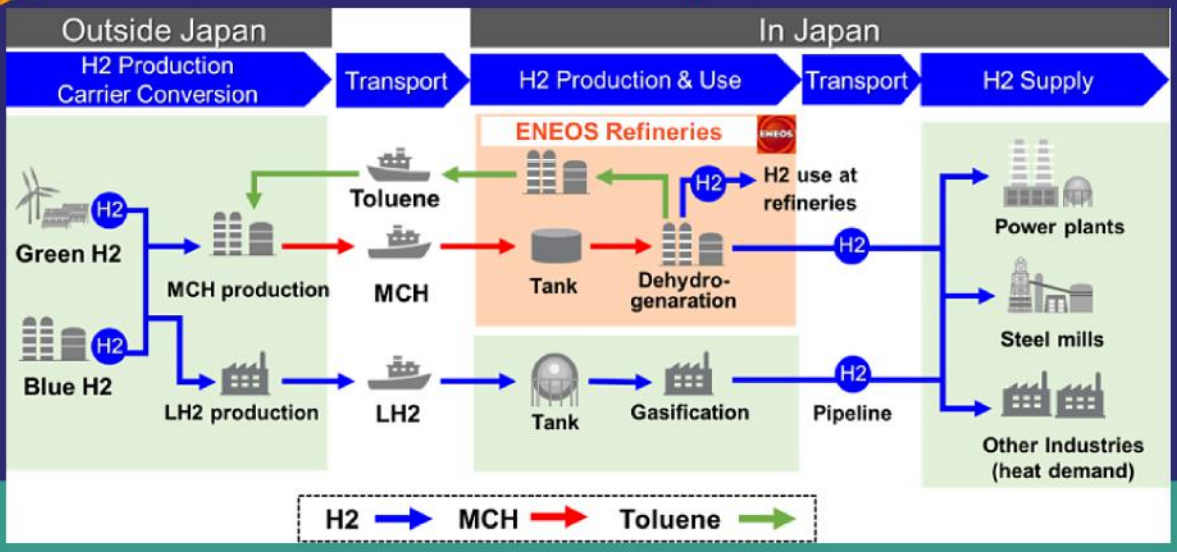
Reallocation & Investment

BLUE HYDROGEN (Natural gas)

Transpotation, power generation & chemical production

METHANE - Hydrogen & CO2

Live Case Study



GREEN HYDROGEN (Renewable Sources, Solar & Wind)

Household Consumption, Transpotation; Trucks & Railways

WATER - Hydrogen & Oxygen

NEED - KNOWLEDGE FUNDING / TECHNOLOGIES	ENAPTER AEM
PRESENT STATUS - GREEN AMMONIA	As we Invest / Raise more funds in this technology. We can save South Asia from further devastation
FUTURE STATUS - Business Case Urgency	Europe is doing good & America will find its way South Asia is traditional, slow & under extreme threat; NASA, World Bank, IMF dashboard on climate Change

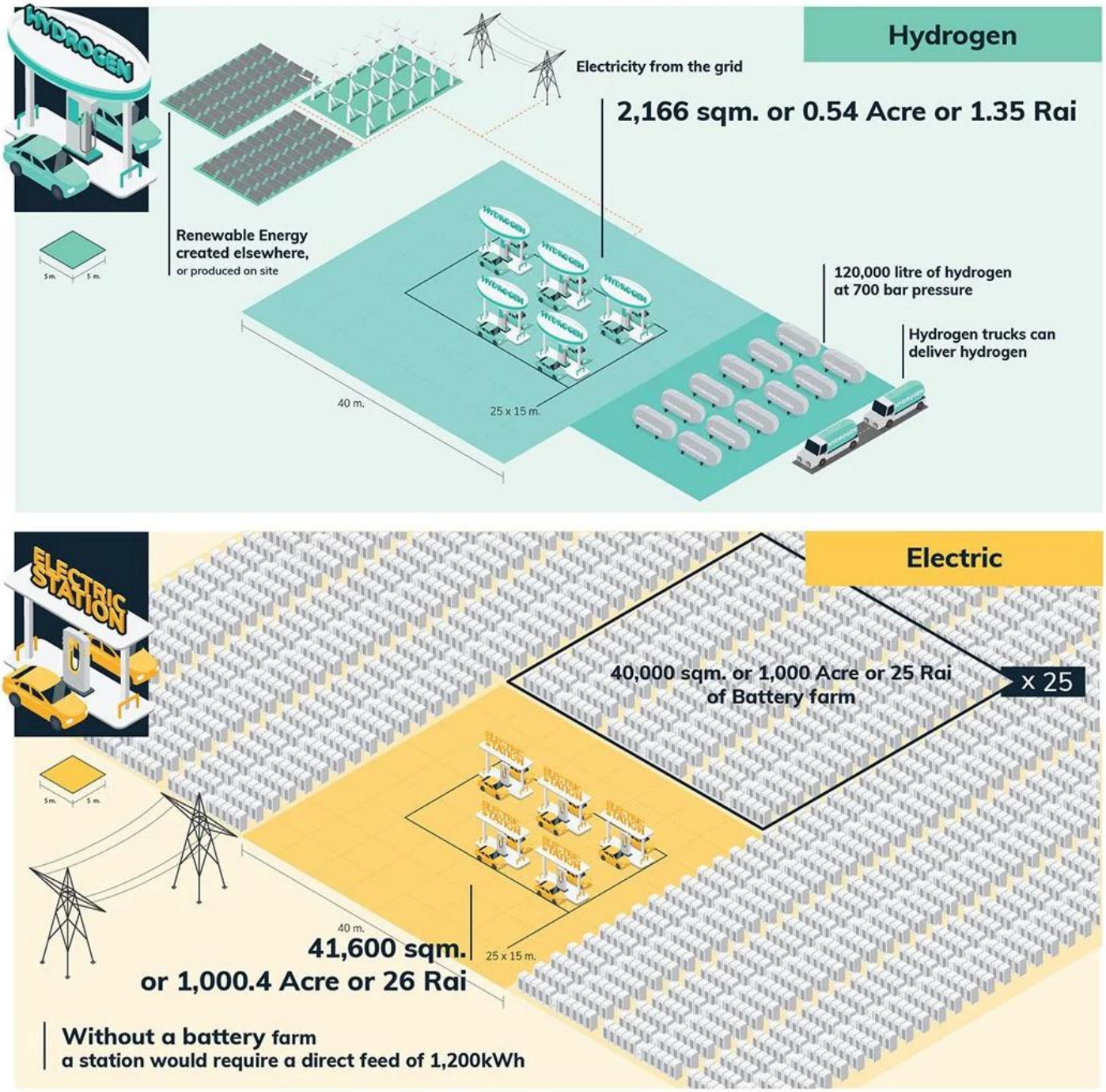


Image Credit Enapter
Comparison EV vs Hydrogen

ENERGY STORAGE COMPARISON

Characteristics



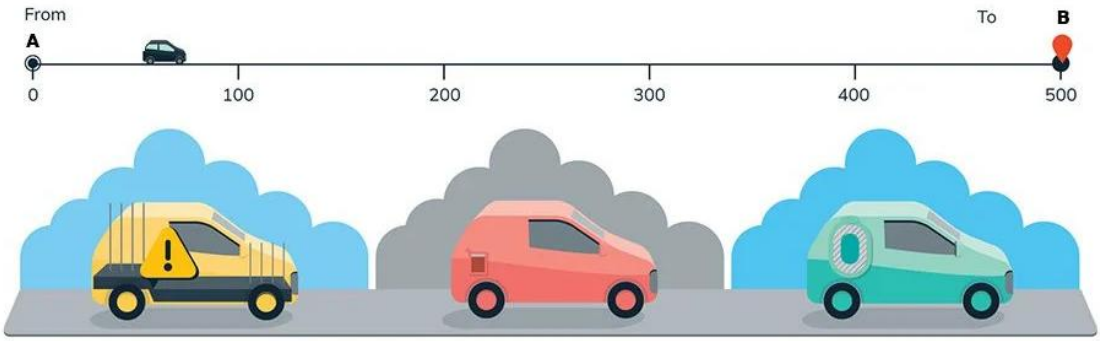
	BATTERIES	DIESEL	HYDROGEN STORAGE
Energy density	0.05 kWh/kg	13 kWh/kg	33.3 kWh/kg
Safety	• Complicated management system • Small window of safe operation condition	Safe and easy to handle	Safe and easy to handle, similar to CNG, LPG, etc
Environmental impact	Some dangerous materials, no recycling concept for lithium battery enabled	Dirty, noisy	No concerns
Degradation	Degrades happen, performance drops over time, required replacement every few years	High maintenance, short lifetime, frequent replacement	10,000hr+ 100 years tank Degrades slowly, 10,000hr+ lifetime for machines, 100 years for steel tanks
Strorage time	Loses charge over time	Diesel will degrade through time within 6-12 months	Can store energy indefinitely

Applications

Short-term backup (less than 4 hours)	Suitable	Suitable	Available power is determined by fuel cell
Long-term backup (more than 4 hours)	Big and expensive	Dirty, noisy, high maintenance	Suitable
Seasonal storage	Impossible	Dirty, noisy, high maintenance	Suitable

VEHICLE COMPARISON FOR 500 KM DISTANCE

Energy for a Passenger Car of 500 km Range



	ELECTRICITY	DIESEL	HYDROGEN
Fuel Usage	100 kWh	37 Litre	6 Kg @ 700 bar pressure
System weight & capacity	weight 830 Kg, volume 760 L	weight 43 Kg, volume 46 L	weight 125 Kg, volume 260 L
Fuel weight & volume	weight 540 Kg, volume 360 L	weight 33 Kg, volume 37 L	weight 6 Kg, volume 170 L
Time to refill	12 hour / 50 min	3 min	3 min

Recycle and Environmental Issue

	BATTERY	DIESEL TANK	HYDROGEN TANK
Life span of energy source	Short	Long	Long
Recyclability	Difficult disposal	Can recycle the tank	Can recycle the tank
Carbon emission	0 emission locally	500km will give 6.6 kg of CO2 emission	0 emission locally

World Peace

Strategic Focus - Ecological Peace

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