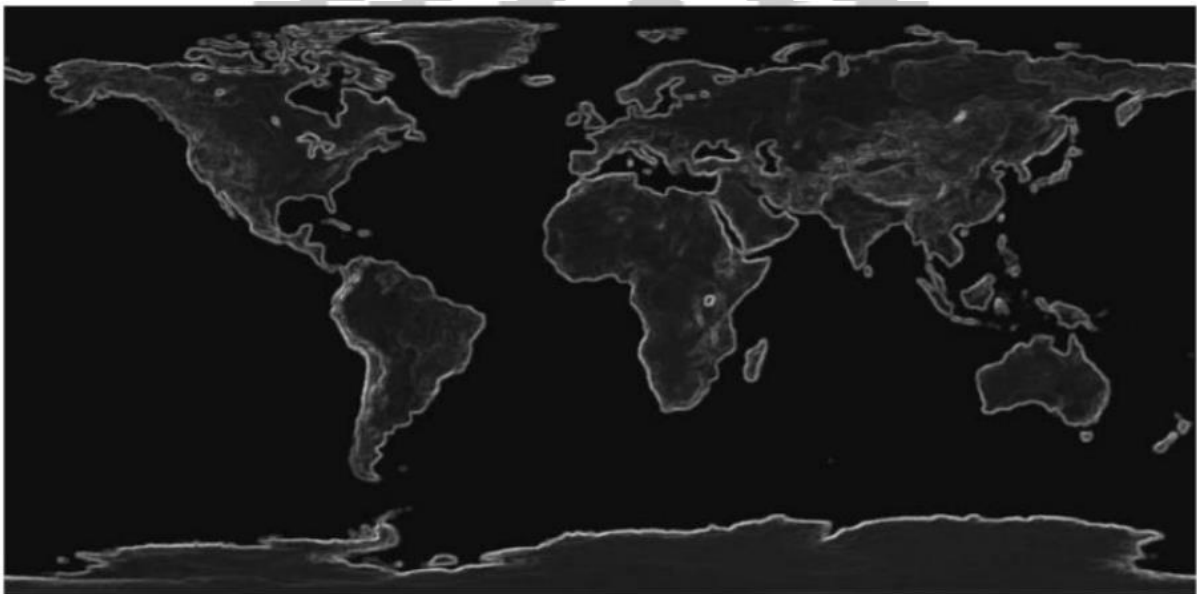




INHIBITING CLIMATE CHANGE IN THE POST COVID ERA: A BASE & TRADE SYSTEM

Individual incentivization and collective action for solving the Climate
Change crisis

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**JUNE 20, 2020
PROJECT STATECRAFT**



I. INTRODUCTION

The visible Himalayas, breathable air in Delhi, garbage free Ganges, and clean beaches in Mumbai are temporary results of the lockdown, and expectation of a permanent change is but a hope, until robust policy action and individual efforts are carried out. The lockdown which was caused as a result of the ongoing COVID pandemic, has been a short term boon for nature. Lockdown massively reduced the consumption of resources including but not limited to fossil fuels, and natural products. This reduced consumption reinforces the importance of Sustainable Development Goal (SDG) 12 on responsible consumption and production. However, this reduced consumption and human activity is a temporary situation and following the end of this pandemic, the activity and consumption are bound to surge unless we rebuild ourselves better.

As the world battles the public health crisis at hand, plans and ways to recover from the economic and social hit that the global community has withstood, are in deliberation. Rebuilding the economy, backed by social learnings from the COVID crisis, and by paying due consideration to the environment is extremely important. The efforts need to be taken at multiple stages - legislation, administration, corporate and individual stages. The idea is to incentivize individuals, corporates, and governments to contribute towards climate change by utilizing the funds, behavioral changes, and opportunities made available in the post COVID world. Today, if governments across the world do not propose environment-centric economic stimulus packages, the discourse on climate change would certainly take a backseat.

This paper elaborates on the effects of the pandemic on the economy, while comparing it to the economic conditions during the climate crisis. It explains the importance of containing climate change in preventing such outbreaks in the future. The paper further elaborates the effect of individual effort and localised energy systems to enhance climate action in the post COVID era. The paper further details the importance of incentive to promote individual efforts, while elaborating on the implementation of a green credits system reinforced with a Base & Trade Mechanism. The paper concludes with the positive effect that this policy could have on the rebuilding world.

II. HOMOGENITIES BETWEEN CLIMATE CHANGE & PANDEMICS

The current pandemic was successful in furnishing us with a preview of an impending situation when a full fledged climate crisis engulfs the planet. Parallels can be drawn, such as the ones entailing simultaneous exogenous shocks to supply and demand in the market, to global transmission and amplification mechanisms, and disruption of supply chains around the globe, between a pandemic and a climate crisis. Pandemics and climate risk are both systemic in nature, meaning that their direct manifestations and knock-on effects propagate fast across our interconnected world. Both, a climate crisis, and a pandemic are nonstationary, meaning the distributions of their occurrences rapidly shift and prove to be extremely inadequate or insufficient for future projections in terms of economy and broader human development.

Climate crisis and Pandemic are both nonlinear, as their socio economic impact grows disproportionately and catastrophically following the breach of certain thresholds such as hospital capacity to treat pandemic patients, or submerging of smaller island nations leading to a global refugee crisis. They are both massive risk multipliers, as they highlight and exacerbate untested vulnerabilities inherent in the financial and healthcare systems and the real economy



as well. They are both regressive, as addressing them requires the same fundamental shift, from optimizing largely for the shorter-term performance of systems to ensuring equally their longer-term resilience, and the costs of a global crisis are bound to vastly exceed those of its prevention (Dickon 2020).

III. CLIMATE CHANGE: DISRUPTING THE MAN-WILD BALANCE

Closing the gap between human civilization and wildlife creates a wide open window for transmission of Zoonoses through various zoonotic agents, and direct human interaction with the wildlife. According to the World Health Organization, Zoonoses is any disease that is naturally transmitted from wildlife to the humankind. Zoonoses with a massive wildlife reservoir constitutes a major public health problem, which affects all continents. (Kruse 2004) The total number of zoonoses is unknown, but research in 2001 catalogued 1,415 known human pathogens, out of which 62% were of zoonotic origin. With time, more and more human pathogens are found to be of animal origin. Moreover, most emerging infectious diseases in humans are zoonoses. (Taylor 2001)

In recent years human infectious disease outbreaks have risen with outbreaks of Ebola, bird flu, Middle East respiratory syndrome (Mers), Rift Valley fever, severe acute respiratory syndrome (Sars), West Nile virus and Zika virus all having crossed from animals to humans. A 2007 study of the 2003-03 SARS outbreak identified presence of the Sars-CoV-like viruses in horseshoe bats, together with the culture of eating exotic mammals in southern China, as a timebomb which detonated with the COVID outbreak.

Deadly diseases exist in the wildlife and climate change is going to mess the balance up. Widespread logging of forests, constructing expansive infrastructure, and taking away the wildlife hubs for commercial and residential practise, a common practise amongst the nations unconcerned with climate change will accelerate the entry of Zoonoses. To prevent further outbreaks, both global heating and the destruction of the natural world has to end, as both drive wildlife into contact with people. In addition to this putting an end to live wildlife and animal markets along with illegal global animal trade is necessary for further prevention of outbreaks.

It remains evident that policy interventions that would incentivize the private actors, individuals, and governments to act against activities that would heighten the outbreak risk without compromising on the economic opportunities and giving up industrialisation are necessary. Controlling the spread of urbanization and industrialisation must be done through efforts of the government and individuals.

IV. PROTECTING THE CLIMATE, ONE INDIVIDUAL AT A TIME

Creating opportunities for individuals to pitch into the climate movement will be instrumental in ensuring the movement's success in the years to follow. Renewable energy is the most crucial area where individual incentivization through policy interventions can be undertaken in an efficient manner. Just motivating individuals to take up renewable and clean energy solutions is a half baked measure, and needs to be reinforced with incentivization that drives widespread change.

The COVID imposed lockdowns and its miraculous effects on the environment are a testament to the positive effect of controlled consumption of resources. This crisis presents us with an



opportunity to reduce reliance on centralised energy sources that relies on fossil fuels and move towards localised energy solutions sourced from renewable sources such as the sun, wind, running water, tides, and oceans. Michael Grunwald of POLITICO discovered that installing solar panels on his roof prevented 81 tons of carbon emissions in nearly three years, a period during which U.S. emissions amounted to nearly 20 billion tons. He noted that individual change alone can't fix the climate, but the climate can't be fixed without it either. (Grunwald 2020)

The beginning of the 21st Century's second decade prompted the reliance of health systems on central energy systems, and failure of the same could be disastrous for the human kind. Policymakers must realise that our societies will be better able to cope with future crises if energy systems are localised. Access to non-grid reliant energy has been a saviour in instances involving disasters such as the Australian bushfires, and recently the COVID crisis in certain parts of the world.

One of the biggest perks of localised renewable energy systems is the ability to be undertaken at a smaller scale individually, and not just through traditional methods by massive industries and the government. Localised renewable energy-based systems are more resilient to climate shocks. Collaboratively building localised, more resilient energy systems will lead to better healthcare, as well as reduced emissions. Incentivizing individuals to take up implementing these solutions through schemes larger than just tax breaks, and subsidies, with direct monetary benefits would play an instrumental role in promoting the same.

V. RESTRUCTURING ECONOMY, THE GREEN WAY

Economic stimulus to the real economy, rather than just the financial markets is extremely important in the Post COVID recovery. The current pandemic has put the world in a situation similar to the Great Depression, and post-World War II recovery rather than the 2008 Financial crisis, or the dot com bubble burst of 2000. This necessitates the governments to stimulate medium, and small scale industries along with infrastructure development.

Infrastructure development could be left in a limbo in the post COVID recovery as the private developers will be hesitant to invest owing to massively increased risk, and equally lower risk sharing amongst the investors, contractors, government, and the people. This could hurt the agenda of development, and beat the hopes of sustainable and green infrastructure development to a pulp. This could be avoided with the government supporting companies with more risk sharing while leveraging an increased focus on green development for recovering from the crisis better.

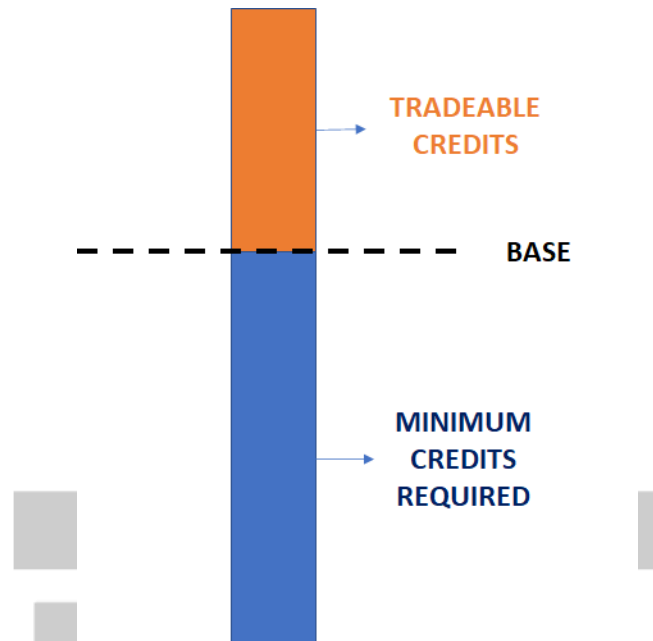
Investing in a system that could keep a track of green development by infrastructure developers would play a huge part in ensuring compliance with environmental standards for sustainable development. As pointed out above, the focus on keeping the wildlife, and urban development is increasingly important for both the environment and public health, the land occupied for Greenfield projects needs to be incorporated in determining the environmental harm a project could do, and taken into consideration while developing this system.

The government should invest in the development of a Base & Trade System for determining and containing the environmental harm caused by Greenfield and Brownfield infrastructure projects. The Base & Trade system would open avenues to involve the people in the process of

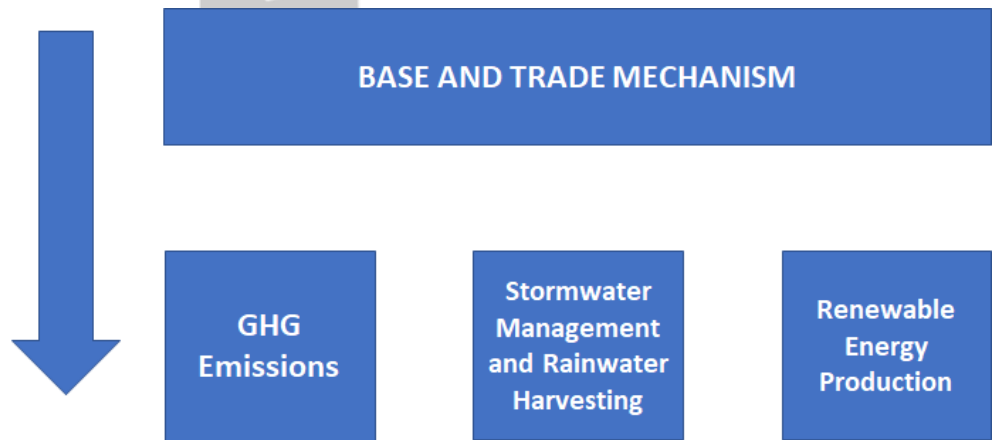


infrastructure development through direct monetary benefits, amongst other already available tax breaks, and subsidies.

VI. BASE & TRADE SYSTEM: A POLICY INTERVENTION



Base-and-trade is an environmentally and economically friendly approach to capping and controlling greenhouse gas emissions, improving rainwater harvesting, encouraging renewable energy and initiating stormwater management which are the primary causes of climate change. It is a policy move aimed at controlling climate change from a cluster of sources that cause the harm. This system sets a base limit on the minimum amount of environmentally sound and green technologies and techniques that an individual, a company, or a project must commit to for a stipulated period. This system would incorporate methods to curb the spread of urbanization that thins the veil between wildlife, and humans which is a matter of grave concern for both the environment and public health. This system can incorporate techniques, and technologies to contain and prevent environmental harms such as Greenhouse Gas emissions, Stormwater management and rainwater harvesting, and Renewable energy production.



VII. INCENTIVE CREATION



The base puts a minimum limit on the technologies and techniques that the participants of the scheme commit to depending on the size of the project and the harm it causes to the environment. The trade, on the other hand, builds a ready market for green credits helping projects, industries, companies and factories to innovate to meet their minimum base limit, and expand over the same for lower prices. Certain industries and projects that do not wish to invest in infrastructure of their own to meet the criteria will be able to buy the credits from others in the region, thus creating direct monetary benefits and incentives for smaller projects and individuals to commit to green technology, and infrastructure development that exceeds their minimum limits.

This system can be expanded to projects of varied geography and demographics by incorporating rainwater and stormwater management, along with renewable energy production. This system can be run by establishing an independent agency to overlook the implementation of the policy while also determining the base for various projects. The system needs to be reinforced in the beginning by allocating credits to the existing projects, and making it necessary to be renewed for Brownfield development, and earn in case of Greenfield development.

VIII. ACCOUNTABILITY, SIMPLICITY AND PREDICTABILITY

The accurate reporting and measurement of green technologies and techniques with unswerving enforcement of penalties for non-compliance and fraud is vital. Transparency on the part of companies and individuals is very extremely important. Accountability provides for additional scrutiny to verify enforcement as well as encourage compliance. Accountability calls for continuous assessment of the base-and-trade program to ensure that the system makes progress towards achieving its environmental goals.

The rules and policies should be easy to understand and easy to enforce. Markets function better and costs of transaction are generally reduced when rules are simple, clear and easy to understand by all parties involved. Additionally, the environment will be protected effectively when the rules are consistently enforced. Simplicity and predictability of rules should be applied to all the various elements of the system including the trading rules, penalty assessment and reporting requirements. Program implementation and operation is more certain, effective and less costly when the rules are simple, clear and understood by everyone.

IX. CONCLUSION

There is a misunderstanding that this pandemic will lead to an automatic reduction in emissions, thereby, solving the climate crisis. It must be understood that if it takes a global pandemic to reduce the level of emissions, the problem of climate crisis is far more severe than what we perceive. Collective action through individual support along with corporates, government, and policymakers can fix the current crisis that we face. The Base and Trade System, if implemented properly could bring a new dawn for the climate change movement. Incentivizing the people to participate while bringing strict legislation on the corporates, industries, and infrastructure developers is instrumental to the success of this policy. The inclusion of technology in order to maintain compliance and analysis would boost the market further, and invite investments further in a sustainable and environment friendly market of infrastructure development.



X. NOTES

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