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RECONCILING INTERESTS: PEOPLE, PLANET AND POLITICS

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ABSTRACT

This paper concerns with the ways the climate change models are constructed, and how these models address the socio-political factors impacting the people of the world. Further, the paper seeks to understand the ways politicians create and implement climate policies. In light of this, the paper suggests remedies and recommendations which might guide climate policy makers in reconciling conflicting interests of politics, planet and humanity.

Keywords: Decarbonization, Conference of the Parties (COP), Dynamic Integrated model of Climate and the Economy (DICE), Intergovernmental Panel on Climate Change (IPCC), Regional Integrated model of Climate and the Economy (RICE), United Nations Framework Convention on Climate Change (UNFCCC).

INTRODUCTION

The year 2021 has been very significant for the planet. It saw the release of the Sixth report of Intergovernmental Panel on Climate Change (IPCC), raising an alarm bell on the present state and forecasted future of the environment. It also saw the world leaders coming together for the Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), discussing and deliberating upon the climate finance, decarbonization commitments, Net Zero Targets, and ambitious push for clean alternative energy.

Despite the constant discussion and ever-increasing awareness, the tangible benefit expected to accrue from these negotiations has been negligible. The COP26 concluded with the promise of $100 billion in the green fund. Contrast this with the fact that India alone requires over $10 trillion to meet the Net Zero target set for 2070.

It is quite disconcerting to see the systematic failure of global politics to act upon the needs of the environment. Studies show that postponing a global agreement to 2020 possibly raised global mitigation costs by at least about half and a further delay of such decision-making to 2030 renders ambitious climate targets infeasible to achieve (Jacob *et al.*, 2012).Thus, it

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becomes necessary to undertake a detailed study to dig deeper and find the root cause in order to answer why politics continues to fail the targets decided; and why is it that even though people understand the urgency of the situation, no action is visible.

This paper presents a perspective that is often overlooked. It is the realisation that while climate change models (which are utilised while setting these targets) rely on scientific research and technological development, they often overlook the agents that lie at the root of successful implementation—the people and the politicians.

Therefore, the objective of this paper is to carry out a systematic study to understand firstly, how these climate change models are constructed, incorporating scientific and social variables. However, it is visible that these models are not free from caveats, technical, ethical and political. For the purposes of this article, we would focus on understanding how these address the socio-political factors impacting the people of the world, who stand at the receiving end of the climate policies ensuing from these models. It is also pertinent to understand how politicians create and implement climate policies, while keeping in mind that they are also cogs in our intricate society, acting in self-interest. Finally, as we understand the restrictions and roadblocks put forth by the intricate interaction of these elements, we move towards suggesting remedies and recommendations which could guide policy makers in reconciling conflicting interests of people, planet and politicians.

THE PLANET

The first step towards deciphering the cause of failure is to understand its origin. Therefore, it is important to discuss the mechanism through which these targets come to exist in the first place. These targets are based on predictive forecasting models which incorporate a wide gamut of variables to provide an achievable estimate. The models used in climate change research are referred to as Integrated Assessment Models (IAMs). It is an interdisciplinary research methodology that constructs mathematical equations of socio-economic relations, along with incorporating environmental science elements (Nordhaus, 2013a). IAMs have undisputedly revolutionised climate change research and economic modelling. They reflect complex interactions and provide for the causal impact of economic activity on the environment, such as emissions, atmospheric concentrations, etc., which, in turn, have a spillover effect on human and natural systems.

These models are intrinsically economic models, guiding policy decisions that would help countries achieve climate targets such as Net-Zero by incorporating least cost, high-efficiency processes, working in a given environment, over a couple of years. Naturally then, these dynamic models necessarily include technological advancements and their impact on achieving these targets on time. There are two main models which are heavily utilised in climate research—Dynamic Integrated model of Climate and the Economy (DICE) and the Regional Integrated model of Climate and the Economy (RICE)—contributed by William Nordhaus, who won the Nobel Prize in Economic Sciences in 2018. DICE incorporates the economics of climate change from the perspective of neoclassical economic growth theory. Factors such as investments in capital, education, and technologies act as inputs to help determine how to reduce consumption today in order to increase consumption in the future. The RICE model

has the same basic economic foundation but provides for regional variation based on diverse geophysical structures that may exist (Nordhaus, 2013b).

It is clear that inferences drawn from these models are extremely significant in policy making; and these inferences are directly contingent upon the variables put into the model. Who decides these inputs and how are these decided? The fact is that this decision largely depends on the choice of the modellers—which leads to socio-political repercussions. Economic IAMs attempt to include social cost of carbon (SCC) or discount for societal costs of mitigation and adaptation, but if the determination of the SCC is variable from one researcher to the next, then are these models equitable, just and universally applicable?

Critics, therefore, claim that scientific uncertainty, which is inherent in the construction of IAMs, is "*met with arbitrary assumptions and ethical uncertainty with normatively indefensible judgments, causing model results to be inherently biased and motivated by political interests*." (Beck and Krueger, 2016).This is exactly the concern that this paper seeks to analyze in detail, while understanding the complex interplay of social norms and political incentives in climate action.

THE PEOPLE

People lie on the receiving end of climate policies formulated through IAMs. Then, it does not seem surprising that it is necessary to understand two major things—how would people respond to climate policies, and how would they be impacted by these policies.

To answer the first question, we must understand the premise while working with humans: while economic models continue to rely on the shockingly simple assumption that people are 'rational optimizers', the truth could not be further away from that. Adapting to a sustainable lifestyle demanded by climate change is a massive behavioural challenge for humans. The reasoning is rooted not only in common knowledge, but is backed by studies in psychology, sociology and behavioural economics. People inherently suffer from inertia i.e. display reluctance to shift from their traditional lifestyle, even if they are aware of the environmental impact caused by some of these practices. This is in addition to external constraints like limited knowledge, complex procedures, high financial costs and delayed feedback. This is even more pertinent to address since intention to adopt alternative sources of energy has various degrees of response: some people do not know about better sources, some know about the sources and yet choose not to invest in superior sources; and some who know and actively invest in these sources. Most people lie on the second level—they know about better practices and yet do not have sufficient willingness to adopt a better lifestyle for the sake of the environment.

Why are we mentioning social constraints that seem obvious and have been heavily spoken about in public discourse? Because while discussions and deliberations focus on 'awareness campaigns', the scientific models that devise long-run targets fail to accommodate for the time it takes to instil social and behavioural change. Our models are optimistic about the rate at which humans adapt to new technologies and that is one feather that adds to their cap of imminent and consistent failure. The real world is constrained by limited information and vested interests, leading to complicated computational implications for models like IAMs. But if models do not reflect the true state of society, how can society replicate the goals dreamt by

these models?

The second question is concerned with the impact on the people due to climate policies and the response is by far the most important argument in this article. The fact is that *Climate policy creates Winners and Losers.*Let's take for example, decarbonization as a policy objective. Price adjustments in the form of carbon tax changes prices prevailing in the market. While carbon tax as a policy has proved to have some impact in reducing emissions, it has also exacerbated inequalities in the society. Neoclassical economic theory on free markets has often suggested that winners and losers emerge as a natural consequence of short-term adjustments. As prices adjust, both producers and consumers are impacted and for the worse. Small producers in developing countries pay for historically unequal emissions produced by industrialized nations; while low-income consumers suffer from high cost of living. The argument is not to say that Carbon Tax is bad in principle and should not be implemented; rather, it is that implementation of climate policies imposes high social costs, which is difficult for developing countries to sustain. The benefits of reduced emissions is not a visible, tangible benefit and therefore lacks a feedback loop for people who face the brunt, making it even more difficult to ensure effective enforcement of the much needed policy. Global climate change research must then accommodate for these inherent psychological constraints and control for intrinsic human motivations while suggesting future course of actions. It might be a Herculean task, but it would be realistic in presenting the world as it is. This realization helps us reconcile the contradiction between environmental intent and environmental action. While people want to protect the environment, in the trade-off between tangible financial incentives and the intangible benefit of a better world, the former wins each time.

THE POLITICIANS

People face the consequences of policies created by politicians. So naturally, the logical next step is to understand the incentives of politicians and how climate models incorporate their self-interest. This discussion leads to a unique interaction between the political economy of the 21st century with environmental action. The IAMs fail to incorporate the fact that global climate change does not occur in a political-vacuum. Continued political disagreements can raise the cost of decarbonization by delaying policy action. Studies have also shown how variations in the quality of governance affect the size and allocation of policy costs.

To continue with decarbonization, suppose a policymaker is required to focus on decarbonization of the automobile industry, but hosts the biggest car-producing factory in their constituency; this poses a political dilemma where vested interest in being re-elected to power will more often than not, supersede climate consciousness (Peng *et al*., 2021). This example can easily be scaled up to find parallels in international negotiations at the climate summits such as COP 26. Politicians from small developing countries rise to power on the promise of economic growth, fuelled by rapid industrialization which relies on heavy utilisation of fossil fuels.

The construction of IAMs therefore must incorporate power relations which exist in society and influence response to climate policy. Political willingness to take action can have a tremendous impact on the world's environmental future. On one side, climate-driven policy

initiatives can lead to targets being met before the deadline, while politics-driven policies will fail the coming generations yet again. This includes factors like strength of political will, and stability of political structure in a particular country. If people in a country are stuck in a prolonged civil war, the climate agenda will be on the far bottom of the list of urgent concerns to address.

THE POLICY

In light of this in-depth discussion, it becomes pertinent to address how researchers, scientists and policymakers will be impacted by arguments put forth here. Researchers must examine the trade-offs between these agents and the need for urgent climate action. It is of essence to create models which can more closely reflect the real world, to ensure better policy decisions. Our creation of the conundrum encourages us to call for politically durable strategies. As the quality of our models improves, through inclusion of dynamic variables, climate policies would become better. This will equip our politicians to make achievable promises and ensure a better future for the environment.

IAMs are no doubt important tools for understanding the implications and policy aspects of climate change. They have fundamentally transformed the way economists and environmentalists approach climate policy. However, it is now necessary to ensure that IAMs become reliable, accurate and provide for values of climate justice, social inequalities, intrinsic motivations and reflect the true state of the world.

CONCLUSION

Climate policy analysis and modelling is one of the most challenging scientific themes in this decade. It plays a crucial role in determining the future of our world in an extremely literal sense, while at the same time has a significant impact on all aspects of human life as we know it. In our discussion, we have attempted to understand how climate models come into existence in the status quo and the various variables that are considered in their creation. These mathematically complex computations continue to remain economic models based upon idealistic foundations of human life. This result encourages us to explore the limitations of IAMs from the context of socio-political agents influenced and impacted by climate change—the people. We see that people suffer from behavioural and psychological biases, which restrict their ability to adopt sustainable technologies. This contrasts with rational assumptions incorporated in IAMs which lead to an optimistic timeline required to instil behavioural change. Further, we realise that even the best climate policies which have proven to be effective in achieving their 'environmental' objectives, suffer from social costs—leading to winners and losers. This result forces us to discuss economic inequalities and high costs of production, often borne by consumers and producers in developing nations. In the trade-off between self-interest and collective interest, self-interest always tends to win and as such the environment suffers. This discussion of intrinsic motivation is necessary since, again, IAMs assume human beings to be inherently utilitarian and altruistic agents. Next, we have addressed politicians as one of the key actors, as writers of climate policy, driven by political interests. IAMs present models of socio-political interactions in a vacuum without incorporating contrasts between opposing political and environmental objectives. Finally, after an exhaustive deliberation of intricate

interaction between people and politics, we have undertaken the Herculean task of providing a mechanism to reconcile interests. While it is difficult to change the behavioural structures of agents, modifying models and policies is still achievable. Intrinsic trade-offs between people, planet and politics must find an equilibrium for the sake of the future generations.

IAMs have several limitations and we have only discussed a few. If researchers find a method to incorporate dynamic factors like those discussed in this article, IAMs would continue to be the gold standard for evidence-based climate policy analysis and formulation. If we succeed in creating such robust models as envisioned in this paper, then climate negotiations, promises and targets set in the climate summits will cease to be false hopes. They would instead be future realities.

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