An Integrated Architecture for a Global Clean Energy Transition

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Chakrabarty’s *One Planet, Many Worlds* identifies the rub: we have one earth, one sea, one atmosphere, and are hurtling toward catastrophe. But many worlds have caused and continue to cause – and suffer – in myriad different ways. In considering how to confront the challenge, it is important to realize those worlds have many different socioeconomic positions. That means that steps to avert the worst must, and should, be as varied as the worlds we inhabit. As we often hear in international climate negotiations, we have common but differentiated responsibilities, a notion that should be reflected in the architecture for a clean transition and for transformative financing.

A first overarching and shared principle must be a commitment to achieving a just transition to clean and sustainable economies. Despite the likelihood of debates on many of these terms - what is just? clean? sustainable? – the principle stands.

A second overarching and shared principle, and one to which I will devote a few more words, is the need to address the transition holistically. Because fossil fuels and other potent greenhouse gasses are entangled in all dimensions of our economies and ways of living, climate strategies must go beyond counting carbon and its equivalents and grapple with a wide range of socioeconomic differences.

**Holistic Strategies**

While we live on one earth and there is, at least in theory, one “science” that tells us how greenhouse gasses change the atmosphere and our climate, science and technology alone will not solve the climate crisis. The process of transitioning to clean energy economies is not only about solar deployment and electric cars; it will be a deeply social, economic, moral, and political process. As Pope Francis stated in his encyclical, *Laudato Si’*: On Care for Our Common Home:

> Given the scale of change, it is no longer possible to find a specific, discrete answer for each part of the problem. It is essential to seek comprehensive solutions which consider the interactions within natural systems themselves and with social systems. We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental. Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature. (Par. 139).
Holistic strategies are thus essential to achieving just transitions, transitions that realize opportunities and address inevitable disruptions.

How these common principles play out in each of our many different worlds will vary. Chakrabarty addresses differences grounded in the history of development and the colonialism and extraction that fueled it. Although all nations now share an obligation to address their contribution to climate change, it is clear that international history (and our interpretation of it) informs our sense of differing national responsibilities to reduce emissions.

Other differences, beyond the developed/developing divide, are also critical to climate strategy. The shape of a clean energy transition will vary with economies, lifestyles, values, and social dynamics. As is widely accepted, the roadmap will be very different in states suffering from energy scarcity, where households and businesses lack sufficient energy to thrive, than it will be in states where most households and economies consume unsustainable levels of energy and resources that go beyond what’s necessary for a quality life. In some parts of the world, women and children walk miles to collect scraps of wood with which to cook food, over cook stoves that poison their lungs, and lack electricity to light dark evenings. A clean transition in this context means increasing energy access through, perhaps, small-scale distributed solar. In contrast, in societies consuming unsustainable levels of resources, measures like enhanced public transit and strict building and appliance standards would reduce unsustainable energy consumption.

Opportunities for less energy-intensive forms of urban design will depend upon a society’s urban versus rural character. For example, concentrated development with robust public transportation is viable in urban but not rural areas. Implications for workers and economies will depend on the degree of existing reliance on fossil fuels and the location and nature of clean economy business and employment opportunities. Communities and states that have relied on fossil fuel development, like mining, drilling, refining, or processing, for employment and tax revenue could be seriously impacted by declining fossil fuel demand. A key element for a just climate strategy will be steering new clean energy opportunities to these areas and assessing alternative economic development opportunities. Climate strategies can also target emission reduction strategies where they will accomplish the most good - to the communities suffering the health consequences of our current energy patterns. The list of factors that could differentiate climate strategies goes on.

These differences can exist within countries as well as among nations. In the United States, for example, the nation’s collective wealth masks dramatic disparities in wealth and the high energy burdens that low-income residents endure. Racial discrimination has created concentrated pockets of poverty and pollution that continue to thwart opportunity. Some regions of the country have been heavily dependent upon fossil
fuel extraction and production and could face deep disruptions in a transition away from fossil fuels. Some areas are rural and isolated; others are dense and urban, and many areas are suburban – dependent upon cars and spacious homes. Parts of the country face weather extremes: hot, cold, or some of each.

A common commitment to a just transition and to holistic strategies to achieve that transition provides a framework for navigating the very different conditions in all the worlds in our world. To achieve these goals, very different and highly tailored strategies are necessary to take advantage of the opportunities a clean transition presents – new jobs, cleaner air, stronger communities and economies – and to avoid the risks – displacement, poverty, or new forms of environmental harm.

Transformative Financing

I end with a few words on a big topic: How the differences among our worlds translate into differing global responsibilities for financing this just transition. Climate finance has been a key pillar of international climate agreements, through which nations in the Global North have established funds, like the Green Climate Fund and the Adaptation Fund, to provide climate mitigation and adaptation resources for the Global South. The reasons why richer nations should provide financing for poorer nations are well known, but bear repeating:

Corrective justice: Even if some relatively poorer nations are now contributing high levels of emissions, the cumulative build-up of carbon and other greenhouse gasses in the atmosphere was caused by industrialized nations. And industrialized nations’ greater wealth was built upon the exploitation of resources in poor nations, providing a further “corrective justice” rationale for financing.

Distributive justice: The status quo is that some nations enjoy high standards of living and other nations struggle to survive. A global climate strategy that tells poorer nations that they “need to stay where they are,” after industrialized nations have already enjoyed the benefits of industrialization, is untenable as a matter of distributive justice. As Chakabarty states, “[t]he moral justification for need of access to various forms of energy comes … from the need to support the lives of eight billion humans who currently inhabit the planet....” (80) Poorer nations need support to develop in ways that do not exacerbate global warming.

Pragmatic utilitarianism: For those unconvinced by theories of justice, pragmatic utilitarianism provides a complete justification for richer nations supporting climate mitigation strategies in poorer nations. We are one planet, and emissions from poorer nations pour into the same atmosphere that controls richer nations’ climate. When seas expand and the poles melt, that sea level rise will overtake the shores of richer nations as well as poorer nations. Droughts and floods hit the poorest the worst, but
they don’t spare the rich either. Because poorer nations cannot finance a clean transition on their own, the only way richer nations can ensure that their own efforts are not in vain is to help those without the funds to transition or to develop sustainably.

Chakrabarty juggles our simultaneous oneness and plurality. As he concludes, “[h]umans are many, divided in multiple ways and yet connected.” (106) He urges us to “make kin,” to embrace our commonality with one another and with the one earth we all depend upon, while grappling with our differences and their implications. Collective action across our differences is imperative but must, at the same time, embrace rather than ignore the differences that define our many worlds.