REPAIRING THE MIRROR

Intemerate Accounting and Reparations

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17Summary and Recommendations

Summary

The purpose of this paper is to explore how intemerate accounting can contribute to deepening our understanding of - as well as help to develop ways of arriving at appropriate values and estimates of - ecological and climate reparations. In describing the problem of ecological and climate reparations, the paper presents an argument for specific ecological reparations for global South countries based on the historical imposition of monoculture and its specific impact on development outcomes and vulnerabilities to the global phenomena and localized impacts of climate change. It then proceeds to develop an outline of the criteria for accounting and other implementation mechanisms that seek to address the issue of climate reparations, before outlining and evaluating two strategic options in relation to their alignment with NIFEA priorities such as debt relief, global financial and economic governance, holistic conceptions and indicators of progress, transfer of resources from rich to low-income countries to support investments in sustainability, carbon taxation and support to climate mitigation and disaster relief. The paper ends with recommendations on the integration of the intemerate equation into WCC advocacy efforts to address issues of reparations, restoration, remediation, reclamation, revitalization, redistribution and repatriation, noting that the IA approach provides clear pathways for ending multi-leveled social impacts of systemic cycles of violence and addressing the triple-threat of climate change, biodiversity and habitat loss, and rising geopolitical conflict.

Recommendations

This paper asserts a three-tiered program for the ecological-economic justice policy space. First, it seeks to make a case for implementing an ecological accounting program to *repair systemic ecological and economic violence*. Second, this paper prescribes an equation to *restore our ecological biodiversity and climate goals* by government agencies as well as ESR accreditation programs in our private sector. Third, it provides a practical solution for *funding reparation programs* in a way that is fair, just and equitable for both the current global economic system as well as indigenous, customary, and impacted peoples and communities. The paper recommends:

- Integration of the intemerate equation into WCC in its work to promote ecological and economic justice, tax justice and advocacy for reparations.
- Use of intemerate accounting equation to recognize the economic and ecological interdependence of industrialized and global South countries and as the basis for the development of long-term infrastructure
- Use of IA to reduce costs of transition to sustainable and diversified industrial and economic practices
- Development of alternatives to regressive carbon taxation and universal basic income through intemerate price deflation and capital gains

IA is conceived here as a program that is scalable and can be pursued within both local and national frameworks. Understanding that there should be various methodologies for disentangling ecological statistics from the data, our program should prove that measuring peoples' interactions with their environments will provide a far more equitable accounting indicator from the plethora of commodity-based indicators that seeks to add value to our national accounts.

Glossary

ACP	Africa, Caribbean, and Pacific
ACS	Association of Caribbean States
ARIES	Artificial Intelligence for Environment and Sustainability
AU	African Union
BRI	Belt and Road Initiative
BRICS	Brazil, Russia, India, China, South Africa cooperation
CARICOM	Caribbean Community
CBD	Convention on Biological Diversity
CDB	Caribbean Development Bank
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COP	Conference of Parties
IA	Intemerate Accounts/Intemerate Accounting
ED/RD	Environmental Degradation/Resource Depletion
EEA	Ecological Economic Accounting
EPA	Environmental Protection Agency
ESG	Environmental and Social Governance
FPIC	Free, Prior and Informed Consent
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IMF	International Monetary Fund
IUCN	International Union on Conservation of Nature
NELD	Non-Economic Loss and Damages
NIFEA	New International Financial and Economic Architecture
NOAA	National Oceanic and Atmospheric Administration
OECS	Organisation of Eastern Caribbean States
OECD	Organisation for Economic Co-operation and Development
PCC	Pacific Conference of Churches
PIF	Pacific Island Forum
SDG	Sustainable Development Goals
SEEA	System of Environmental Economic Accounting
SNA	System of National Accounts
UAG	Université des Antilles et de la Guyane
UNCTAD	United Nations Conference on Trade and Development
UNSD	United Nations Statistical Division
UWI	The University of the West Indies
WCC	World Council of Churches
WTO	World Trade Organization

A. Problem/Opportunity Identification

In her excellent review of literary and scholarly production around oil dependency, Iselin Stronen describes the phenomenon as such: "As nature-exporting states in the Global South, these countries are defined by nominal political independence in par with economic dependence, which effectively left them in a temporal side split between the longitude of social transformation and the immediate need for capital inflow (Stronen, 2020: 20). This description can be applied more generally to nations, particularly income-poor and vulnerable communities, that rely on the exploitation of the natural environment, often in the form of soft and hard commodity monocultures (UNCTAD, 2021). Our communities are faced with the paradox that while these resources make valuable contributions to our livelihoods, comfort, growth and development, they come at social and environmental costs, witnessed in the form of poor-quality environment, erosion, pollution, degradation and other man-made occurrences which have continued to threaten human existence. How then do we avoid losses, retain our cultural values, maintain social wellbeing and retake much of the value of our resources whilst at the same time improving our socio-economic conditions?

In presenting the case for specific ecological reparations, we argue that this paradox is the result of history, rather than destiny. We submit that the economic and ecological fragility of the South is not due to location, insularity and unsuitable climate, but to the specific strategies employed in its integration into global trade and value chains. First, natural resource exploitation by imperial-colonial activities in the ACP was a deliberate act of concentrating economic activity and entrenching dependence. Then, the solutions provided in the post-colonial era (development via natural resource-based tourism and/or industrialization as second-tier natural resource and labour exploitation) serve to further compound and entrench natural resource dependence, especially with the massive outflow of returns to foreign investors and international creditors. The concentration of natural resource exploitation in ACP countries is a documented strategy among imperial countries.

Deliberate strategies of imperial supply and value chains concentrated natural resource extraction and primary production in the South and discouraged investment and infrastructure for other sectors, or for non-industrial, non-export-oriented production or use of these resources. In some cases, the natural fauna of ACP countries was altered to give way to the production of export-oriented crops. It is our argument that monoculture is a space of violence, appropriate for polities engaged in violent struggle or the preparation for such. Indeed, monoculture is not an appropriate approach for permanent or sustainable settlement, but rather for the production of maximum profits in the interest of short-term commercial and financial gain.

The industrial base of ACP countries has come to feature a dual focus on natural resources with the advent of modern tourism. The importance of biodiversity and natural resource conservation now extends from primary to tertiary or service-level industries in the South. This continued export-driven focus has had similarly deleterious effects on the recognition of local and traditional knowledge. The livelihoods and social and cultural identities of many inhabitants of ACP countries have been tied to their relationship with the land, exacerbating the impact of natural resource degradation beyond the economic realm, and contributing to internal displacement and urbanization, poverty and political instability. These social and economic difficulties have compounded and have been compounded by the impact of postcolonial imposition of trade, financial and investment regimes which have served to

weaken efforts to develop non-extractive industries and removed incentives to invest in local capacity to provide ecological services. This combination of debt-led policy imposition, currency speculation and, at times, direct politico-military intervention, has direct impacts on potential for sustainable social development (gender relations, child welfare, education, rule of law, infrastructure, democratic institutions, media and literacy, and health) and sustainable political and economic models in the global South. This crisis of governance can be directly related to trade, military and cultural strategies employed in the globalization of Western imperial power.

The Anthropocene has emerged as a discourse which attempts to place the results of monocultural spatial organization into the realm of geological time, without recognizing the reification of the highly contingent nature of a single form and approach to political economy employed by a powerful minority (Ferdinand, 2019). Reparations give formal recognition to the historical reality that a small and identifiable group within humanity, rather than humanity itself, was responsible for the adoption of technologies and modes of production which contribute directly to the generation of the existential threat of climate change (Malm, 2016) as the imposition of monoculture which has engendered the artificial fragility of countries of the global South in the face of anthropogenic climate change. It is this double responsibility, as well as the compounded impacts of climate change on nature export-dependent economies and societies of the global South that constitutes the heart of the case for specific climate reparations.

The potential economic and political impact of reparations and ecological accounting necessitate attention to the current geopolitical struggle over writing the rules of the global economy. The COVID-19 pandemic, rather than offering a break from the conduct of international relations, has in fact confirmed existing trends in inter-state competition. The development and distribution of COVID-19 vaccines, in particular, have emerged as a new theatre of geopolitical and geoeconomics struggle, pointing to the securitization of global health. Since the signing of the Paris COP and the formation of the SDGs, China has also aligned its development priorities to meet these goals. While there has been some contestation over China's motivations, we have seen institutional support from, for example, the WTO to exempt rules of trade that have put barriers against state-owned investments when it comes to renewable energy technologies, just as it has with life-saving technology and goods to enhance global vaccine distribution against the coronavirus. Much of the geopolitical struggle against China, for example, is arguably aimed at curtailing China's regional influence in renewable energy, vaccines, access and infrastructure, popular among its development partners. Ostensibly, many also view China as an existential threat undermining the investment gains made after the collapse of the Soviet Union.

This global vaccine struggle is also premised on the inability of most countries in the global South, with the notable exception of Cuba, to successfully engage in adequate pharmaceutical research and development to confront the crisis, further demonstrating the security and geopolitical risks associated with monocultural dependency. COVID-19 has undermined the 'production of the real', and replaced it with a more realistic reckoning of the interrelationship of ecological and social realities of our time. The continuing evolution of the pandemic and the international response do provide elements to consider in the argument for reparations. On one hand, the novel coronavirus probable genesis in deforestation practices suggests that the climate change-health nexus represents another possible zone of fragility for global South as biodiversity and habitats are continually compromised due to indiscriminate exploitation of natural resources. On the other, the global response to COVID-19 demonstrates that rapid and politically significant actions in terms of policy changes, research and

development and legal reforms, as are needed to address the advance of man-made climate change or to implement systems of ecological reparatory justice, were indeed possible in the face of a recognized global threat to human security.

B. Analysis of Policy Options

Reparations present a legal and logistical challenge of determining and quantifying national and corporate responsibility in a context of multinational and global flows of capital. Reparations would take the forms of a) reparatory policies and legal instruments which restrict the probability of recurrence of the damage; b) reparatory institutions which administer the policies, but also provide opportunities for restoration of lost knowledge and development of new or traditional models of value production and exchange; c) damage awards. Useful solutions in light of this problematique would address and help simplify the logistical challenges, and provide a cognitive framework for imagining the forms in which the financial and structural elements of reparations would intersect and function.

While monetary acts of reparations attempt to fulfil some spirit of justice, it is debatable as to whether a value-based accounting of loss, by itself, is a just metric for reparations. Reparations must provide for the kind of systemic change necessary to break out of cycles of unjust behaviour, and seek to restore, repatriate, and repair the damage caused by systemic abuse and violence. Myriad issues around economic and ecological justice are both historically determined and reinforced through institutionalized legal and economic regimes predicated upon the incoherent principles of an already shaky foundation upon private property, exclusion and the free market. It has been long evident that this system, while privileging a few, has dramatically failed the wider population and the sanctity of our ecological biodiversity. If we are to prevent a climate collapse, it must include redistributive tax policies that provide for greater global equity amongst peoples and regions, a much stronger regulatory regime to reverse climate change, and the global incentive to restore our ecological biodiversity. The spirit of justice embodies systemic change and if we are to break out of these hegemonic cycles, we need to promote something transformative, something that will allow us to transition from one system to the next. The introduction of a new accounting methodology could be the very tool used to promote ecological and economic justice. As we approach the intemerate equation, we must ask whether we can tangibly hold this equation up as a mirror for Truth and Reconciliation and pave an accounting of reparation that embodies the true spirit of Justice. If national accounting is a mirror to the economy, then we need to repair that mirror to better reflect our interactions with our environment.

Strategic Option 1: Ecological Multilateralism - UN System of Environmental and Economic Accounting (SEEA)

The United Nations has long understood that States have an international responsibility in regard to the environment and has sought to institutionalize financial arrangements for international environmental

cooperation. Mandated by some very key United Nations General Assembly resolutions passed in 1972, the UN Statistical Division (UNSD) created a System of Environmental and Economic Accounting (SEEA) that would ultimately revise how we account for our Gross Domestic Product (GDP), the hallmark indicator of our national accounting systems. The System of Environmental Economic Accounting (SEEA) is what makes integrating ecological indicators into national accounts possible. The SEEA was adopted by the UN Statistical Commission in 2012 and is an internationally agreed upon statistical framework measuring the environment and its interactions with the economy. The objective of the SEEA is to:

> "Explore how sets of statistical accounts can be compiled which will permit investigation and analysis of the interaction between the economy and the environment. Only by integrating the two areas can the implications of sustainability of different patterns of production and consumption be examined or, conversely, can the economic consequences of maintaining given environmental standards be studied. Policy makers setting environmental standards need to be aware of the likely consequences for the economy. Those determining the development of industries making extensive use of environmental resources either as inputs or sinks, need to be aware of the long-term environmental effects."

As a means of quantifying reparations, the SEEA helps us understand how to place a value on biodiversity and degradation and how to incorporate it into the national accounting system. By integrating this statistical data with national accounts, these new accounting aggregates will not only provide us with a greater determination of how to value our regional equity, but give us greater capacity in the struggle over the ecological well-being of our planet as well. One of the fundamental challenges of ecological accounting is how to account for Environmental Degradation and Resource Depletion (ED/RD). Accounting for them as deficits to our GDP, for example, would by itself, begin to reverse the factors leading to climate change. However, it was also understood that adopting this accounting revision would lead to shocks to our economic system as industrial growth and profit margins of industrialized economies would be most impacted.

Harmonizing with the SEEA, all of the 17 SDGs and the Paris COP include a number of statistical indicators, many of which could be used to advance the economic weight of environmental protections, household work, rights-based evaluations, full-employment factors, food and water security, and health, all measurements that could create far more equitable measuring between the advanced economies and the developing countries and emerging economies, if we moved away from consumption as being the highest weighted indicator. Understanding that the rules have not yet been set when it comes to ecological accounting, earlier this year, the SEEA launched their Artificial Intelligence for Environment & Sustainability (ARIES), which is an integrated, open-source modelling platform for environmental sustainability, where researchers from across the globe can add their own data and models to web-based repositories. The SEEA platform appears to be a useful tool for ecological-economic accounts, one that can be used under different economic systems, thereby escaping the political economic trappings of the current geopolitical conflict. In addition to the SEEA, the US EPA has published a fairly comprehensive methodology for understanding remediation approaches to sites requiring clean-up and restoration. The US EPA Superfund program began in 1980 when Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the program was given the authority and funds for cleaning up contaminated waste. The program was funded by a tax on the chemical and petroleum industries, but the tax expired in 1995, and subsequently came through appropriations from government general revenue. The Superfund program was given the authority and funds to hold polluters responsible. By 1999, annual appropriations decreased by over a billion dollars, from $2.3

billion to just under $1.2 billion, all while FDI increased in the US by over $800 billion dollars. Currently the Superfund Trust has a balance of $225 million.While the goals and scope of this analysis is primarily located within the boundaries of federal remediation processes, the EPA provides a constructive guideline for how we interpret and measure the metrics for remediation of the various factors that require intervention (Gordner, 2021).

Strategic Option 2: Critical Money - Intemerate Accounting

Money, like accounting, allows us to measure the cost and results of alternatives, track progress towards our goals, and improve the quality of a society's decision-making. As a unit of account, money also represents a heuristic tool that is useful in measuring forms of social and economic power. Intemerate Accounting (see Saiki, 2020) is based on the argument that the accuracy of our unit of account is positively correlated with the quality of our collective decision-making. This argument assumes that money is at least sufficiently influential on our calculations of costs and benefits, but does not assume that it is the only factor involved. Intemerate accounting widens the number of variables included in the ontological definition of money, and seeks to provide a framework for a more accurate accounting of the economic performance of cities, regions and businesses based on migration, environmental and trade indicators. Intemerate accounting proposes to establish an economic baseline for biodiversity that attributes value inclusive of labour, stewardship and management of statistical data. Unlike accounting schemes that offset the degradation of ecosystems and the depletion of resources linked to climate change against carbon trades, climate bonds, or privatization, the intemerate baseline approach proposes a value for ecological biodiversity and accounts for the restoration and preservation of this value. This approach inversely mirrors how national accounting systems value the restoration of degradation and depletion. In contradistinction to the SEEA's approach to improving actions through improved information, *intemerate accounting is based on the thesis that ecological accounting will only be effective if it increases communities' sense of engagement and efficacy in recording, safeguarding, and increasing ecological value*.

Intemerate Taxation: From Carbon Taxes to Reparatory Price Deflation

Carbon taxes, at least in the manner in which they are currently applied, are counterproductive in terms of reparatory justice. The inability of current fiscal techniques to address ecological value is exemplified by the Yellow Vest (Gilets Jaunes) movement of France, which emerged in part as a result of the regressive effects of carbon taxes on low-priced energy with limited substitutes. For citizens that are obliged to use fossil fuels for their livelihoods, and especially in the present situation of uncertainty and possible recession, the levying of additional taxes to support the environmental cost of carbon emissions and energy consumption defied common sense and threatens to position climate change mitigation as an activity that is inimical to working class and global South interests. Intemerate accounting offers an alternative solution. This involves using the intemerate accounting equation to indicate a decrease in the value of a good whose production or consumption involves a negative impact on wellbeing or an increase of intemerate offsets, including reductions to baselines for biodiversity, forest cover, soil quality and resilience, marine and air pollution and carbon emissions. This harm would be reflected in

targeted deflation, where money would increase in value in direct relationship to the products or services supplied by the polluting activity.

The result of this targeted price deflation would be that consumers would find the value of their money increase significantly in proportion to the price of goods which decrease in intemerate value. This approach also opens up a new space of innovation in progressive dynamic pricing and value chain analysis. The intention is to increase demand at this lower price, creating utility for consumers, while acting as a clear signal to producers and supply chain operators by reducing or eliminating profit margins. For publicly traded firms, the implications for stock valuation are significant, and investors will have a space for integrating intemerate accounting into futures and other derivative instruments. When combined with the intemerate value of non-proven energy and mineral reserves, the cost-benefit of extraction and natural resource exploitation, as well as other forms of carbon-emitting economic activity, will be shifted significantly. The anticipated decrease in profitability of non-sustainable commodities would reduce returns to FDI in the global South in polluting or 3D industries which affects both monetary stability in the global South (Akyuz, 2017) and the relative cost of these industries' replacement and/or conversion. It would also contribute to justifying significant and immediate investment in sustainable and renewable production throughout corporate and industrial supply chains, and drive gradual replacement by removing the profitability of declining non-renewable concerns in electricity and heating, agriculture, agriculture, road transportation, oil and gas production, livestock and fashion. Diminished returns to sales taxes would be offset by increasing demand for these products, which would allow for support for capital purchases outside of the banking system or equity markets, both of which are ill-suited for the refitting of machinery or energy supply systems. These capital purchases will not be geared toward the acquisition of labour-replacing machines, as this would also drive a reduction in the velocity of money by decreasing availability of capital, wages and payments to households.

Intemerate Finance: From Universal Basic Income to Reparatory Capital Gains

The financial system stands to benefit greatly from the introduction of intemerate accounting. Central Banks are at the core of this. However, this shift requires Central Banks to be integrated into the wider context of data collection around the demands of intemerate accounts. The valuation of intemerate stocks allows for these stocks to be securitized, and bonds issued in anticipation of the maintenance of this intemerate value, and the accruing of value as services to the environment continue. These bonds enter into the economy in two ways, which based on discussions within the University will be balanced to ensure efficiency, diversity and sustainability in relation to social relationship and relations with the environment.

In one channel, intemerate stocks can be channelled into dividends for peace or productive conflict (as the human activity of reducing conflict or armed struggle has significant implications for the maintenance of intemerate value), as well as care, social and reproductive work. It is expected that the recognition of care, social and reproductive work would reduce pressure on the productive or exchange economy. This would not preclude the creation of business activities around care, social or reproductive work, including education, professional caregiving and comic relief. However, engagement in such activities would attract capital gains outside of their exchange value. In the second channel, governments or central banks can exert taxation on the capital gains from intemerate securities to compensate for downturns in productive performance. As described earlier, in the event that productive

activities harm the reproduction of intemerate capital, the supply of money will be decreased in relation to the reduced transmission of value from the intemerate sector to the productive sector.

Also important in the Intemerate Accounting equation is the concept of equalization. Equalization on its own addresses some of the arguments raised by proponents of Universal Basic Income (UBI) while addressing some issues that they tend to ignore, namely the capacity of non-industrialized nations to provide universal incomes to citizens. Under equalization, the average GDP of the ACP countries would be equalized with that of OECD countries (Saiki, 2020: 28-29), creating almost immediately a reparatory effect that recognizes the interdependence of wealth creation and destruction in the modern global economy.

A key element of the relationship between intemerate securities and non-market work would be mathetics and stewardship. The continuity of proper governance, political and social participation, research and data collection and analysis is a core assumption of sustainability. As a result, participation in environmental stewardship and learning, including that which is performed by girls, boys and young people, would be calculated as capital gains relative to the network, energy, information and knowledge that derives from and is essential to our relationship with the environment. This means that participation in learning and formal education, as well as services to the environment would allow actors in the economy to acquire capital stocks, which at the point of majority, can be converted in whole or in part into assets and money in the productive economy, allowing for the combination of resources to form social, financial or commercial institutions. These assets cannot be leveraged or extracted by other parties, and are inalienable to the actor involved. In the wake of the transatlantic trade, indigenous genocides and in a reverse Rawlsian paradigm, we must assume that people will not always be valued as humans. Instead, we must assume that they may be valued as capital goods, trees, machines, cattle or other non-human entities. This ‘reparatory’ logic means that the treatment of the non-human world must be equitable in such a way that humans who are no longer defined as such will still be treated in a dignified manner. Inversely, we could also argue that near-future economies would repudiate the separation between human and non-human as we could conceivably re-engage in the world as a mutual co-habitant, a numerical expression representing the global health of our ecological biodiversity.

Intemerate Accounting represents a strategy of both meeting the ends of justice while also acting as a means of justice through its use of equalization, and focus on community data ownership, participation and responsive pricing. IA would not address variations of aesthetic and sacred value across cultures, but provide a framework for allowing traditional societies to maintain their economic viability through the collection of data and reproduction of their physical environment.

C. Recommendations

Ecological accounting is the foundation that we, as an interdependent global society, require to determine economic value and to safeguard that which cannot be given price. Ambivalent approaches to reparations are inherently contradictory, and rely heavily on voluntary, North-led mechanisms which have been shown to malfunction in the case of the development and implementation of the SEEA and the Paris Agreement.

The SEEA and our preferred approach to ecological accounting both spring from the recognition that the valuation of national production cannot be limited to the prices of goods and services exchanged. This is because these values are unreliable indicators of the overall impact of production on our lives and our planet, being based on the exchange prices of labour, land and other factors or resources which are in turn skewed by exchange rates, historical conventions and the relative scarcity of the item in the market in which it is purchased and consumed. The logic of the SEEA is, as often repeated in its foundational documents, the provision of reliable data and information to facilitate decision-making. Indeed, the document does provide a clear definition on ecosystems, their extent, condition and interaction with the economy. We applaud the effort to develop a platform that would allow adoption of environmental-economic accounting by national statistical offices and countries across the globe. However, the IA option allows for both the accounting of (1) ecological phenomena and (2) global inequalities between nations. These are the specific issues it seems most apt to address, and these are the issues that would bridge climate change and arguments for reparations. With the IA option, our starting point therefore is not only the inequalities between north and south and/or so indigenous and scientific knowledge but also how current and emerging efforts to account for the environment address these inequalities. IA's particular problem relates to the accounting of the environment and how it can be used to address global inequalities with the implicit assumption that all ecological accounting efforts will protect the environment.

Establishing a data baseline that measures the point at which our interaction with the environment was more sustainable would allow us to account for the changes to our environmental wellbeing and measure them as offsets in our national accounts, or the amount at which our environment is out of line. Utilizing this data, we could measure and quantify the costs of reducing these offsets towards restoring our environment; that is, what investments in infrastructure, technology and labour would be necessary to restore our environmental indicators back to the baseline. Managing our ecological and statistical data will enhance our national accounts and will be both scalable and inclusive of labour, business, and governance.

One of the key challenges of Intemerate Accounting is the question of who would pay. In effect, reparations complete the circle for the implementation of IA, while IA provides a robust basis for quantifying climate reparations. Indeed, as long as we can establish a methodology for accounting for a data baseline in our region, we would know that the value or our environmental data is directly proportional to the assets and revenue of urban and industrial centres that contribute to environmental degradation and depletion. In other words, the health of our planet may be dependent on cities and industries immediately providing capital for us to account for and restore our environment. There is no better example of how to achieve economic equilibrium in equitable and fair trade than by valuing all of the externalities around our ecological biodiversity in proportion to the assets of cities and large urban areas. As this exchange continues, the value of our ecological data will likely adjust to an equilibrium that will bring equity between the regions.

Intemerate Accounting does not take into consideration the full range of variables or macro-factors that allow for successful economic and social life. However, by better integrating issues relative to environmental sustainability into the calculation of national accounts and economic options, we do provide pathways for addressing the sustainability of social bonds or networks, energy, time and other non-exchangeable factors are today not assigned a value in the practice of accounting for wealth or wealth creation. These pathways are based on a theory of change that posits that the adoption of an improved ontology or methodology of accounting is not based solely on the empirical evidence of the insufficiency of present methods, or the consonance of the proposed method with economic processes.

Beyond the modal differences between policy and academic circles, the discarding of disproven social and economic theories is often slowed by the momentum of interests and conceptual frameworks which have been baked into policy, institutional directives and training. Implementing intemerate accounting will also involve the accommodation of established social and political interests. Intemerate accounting therefore offers an alternative to politicians and economic planners to dependence on elite funding, provides increased security and access to agricultural producers and small business in all categories, allows for the integration of social minorities and migrants to the benefit of settled communities, provides for an enhanced and integrated role for academia in the implementation of the intemerate accounting system, and distributes the costs of ecological adaptation and mitigation progressively across societies and within the world system.

D. International Advocacy & Engagement Implications

When we consider what options may be available for the WCC in its work to promote ecological and economic justice, tax justice and advocacy for reparations, Intemerate Accounting may provide the relevant program for the resource poor countries of the Global South and other impacted areas.

In line with the 2012 São Paulo *Statement: International Financial Transformation for the Economy of Life*, the Intemerate Accounting framework affirms the fundamental economic and ecological principles that led to the promotion of this statement, and the details of the intemerate equation itself should provide for greater integration between NIFEA and the Intemerate Working Group.

One of the points in the Statement that is worth exploring is the issue of debt and financialization. While there are certain conditions of Paris Club, IMF, or other institutional debt that should be forgiven, and other forms like vulture fund debt which should be outlawed, I would propose that for the implementation of an intemerate accounting scheme, debt deferment may be a preferable option.

Developing countries do not have the capacity to build out infrastructure or participate in the kind of collaborative platforms that advanced economies have. The lack of coherent enforcement mechanisms, management and monitoring technologies, access to relevant legal venues that have fair and appropriate dispute settlement mechanisms, pathways for research and development, indigenous intellectual property rights or consent processes, compliance, and auditing infrastructure: these are important governance tools that developing countries have generally been unable to afford. Advanced economies—the OECD countries—have promoted the rule-making apparatus in financial and trade sectors, and it is precisely the privileging of one set of rules for one economic grouping that has exacerbated conditions of underdevelopment and economic vulnerability for those countries excluded from the club.

Having said that, it is important to recognize that supply chains and markets are as old as civilization, and while rules of trade and exchange have continued to shift over time, the basic elements of exchange have remained relatively intact well beyond empires. Handshake agreements, words of honor, exchanges in protocols have long bolstored economic interactions amongst and between peoples, and that includes debt. Rules over debt as laid out by the IMF or worse, exploitive Vulture Fund agreements, rely upon deplorable legal agreements upheld in international courts, and we should abolish the types of debt that are punitive and set unreasonable terms of repayment.

Poor countries need infrastructure, and as both a form of reparations as well as equalization, a debt deferment strategy could be employed where advanced economies who have the capacity to build out infrastructure, could participate in a fair exchange of creating an ecological infrastructure that would promote coherence, enforcement, management, monitoring, R&D, all the tools that advanced economies have but within the rule making motivations of developing countries. The ACP, IUCN, UNCTAD and many regional and sub-regional venues would be appropriate spaces to introduce an intemerate accounting scheme. At this time, advanced economies are too entrenched in their own motivations to transition into something new, but developing regions are hungry to implement some kind of infrastructure that would benefit its ecological, national, regional, and cultural priorities. Additionally, even within advanced economies, indigenous groups could benefit from an intemerate accounting scheme that would provide sustainable economic interactions with peoples in developing and emerging economies.

As a form of reparation, deferred debt repayment can be a reasonable motivator to implement the kind of systemic changes that are in line with the Sao Paulo Statement, and as investments in our ecological wellbeing proves to be financially viable, advanced economies could begin to transition towards developing countries, rather than bullying the world to adopt a convoluted carbon-based market system that continues to benefit and reward the very same people that perpetuated this crisis to begin with.

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