

A Global Just Transition From Fossil Fuels Concept Note



Renewable energy transition | Just transition | Economic Diversification



Niclas Hällström, WhatNext?

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The [Fossil Fuel Non-Proliferation Treaty Initiative](#) recognizes that the climate crisis constitutes an existential threat as serious as the threat of weapons of mass destruction. It requires comprehensive responses similar to the way the world negotiated nuclear disarmament treaties, and a clear focus on the *production* of the fossil fuel “stockpiles” – something that has largely been neglected until now.

One of the powerful features of the Treaty Initiative is its boldness and comprehensiveness – it takes a holistic, systems approach to ending expansion, the phasing-out of existing fossil fuels, as well as the required transition, including expansion of renewable energy supplies in just and equitable ways. The Treaty Initiative is structured around three main pillars:

- I. **Non-proliferation** – An immediate end of exploration and expansion into new reserves of fossil fuels
- II. **Fair phase-out** – equitable, managed phase-out of fossil fuel production by regulating fossil fuel supply, placing limits on extraction, removing subsidies for production, dismantling unnecessary infrastructure, and shifting support to safer and more sustainable alternatives.
- III. **Global just transition** – A peaceful and just transition to 100% renewable energy with clear paths and proactive plans to support workers and communities, enable economic diversification and foster alternative development trajectories.

Together, all three Pillars represent the likely most significant and comprehensive Infrastructure and societal transformation in the history of humankind. They would change the economic and energy underpinnings and end the fossil fuel dependence that has dominated national and global economies since the Industrial Revolution.

So far the attention of civil society and policymakers has focused primarily on the first two pillars. It will be increasingly relevant for the Treaty Initiative to highlight the third pillar. This third pillar of ‘global just transition’ pillar includes three *dimensions*.

- a) An **energy transition** with ambitious deployment of people-centred, socially and environmentally appropriate **100% renewable energy systems**
- b) Ensuring **equity and a just transition** for people in sectors affected by phase-out of fossil fuel production (i.e. fossil fuel sectors, industrial agriculture etc.) as well as people impacted by the renewable energy transformation, including people in other countries and at sites of extraction.
- c) Design and rapid implementation of overall transformative pathways and real solutions across sectors to allow **economic diversification and development alternatives**, away from fossil fuels towards zero-carbon societies.

These elements are interrelated, making up the necessary conditions at the international level, to enable these transitions to take place in every country, and to ensure no worker, community or country are left behind — **a global just transition**.

This document provides a summary of some of the key elements, points of context, questions of framing and challenges and opportunities associated with Pillar III, produced as part of a larger strategy development process by Niclas Hällström (Director of WhatNext?), as well as reflections on the broader context of the climate crisis and the need for a fossil fuel treaty. It is part of an ongoing programme of work to develop Pillar III strategy and interventions needed at a global scale to enable a fair phase out of fossil fuels (see also the report from three Pillar III workshops held in June/July 2021: <http://www.fossilfuel treaty.org/pillar-3-workshops-summary>).

Overview and summary of key points in relation to Pillar III

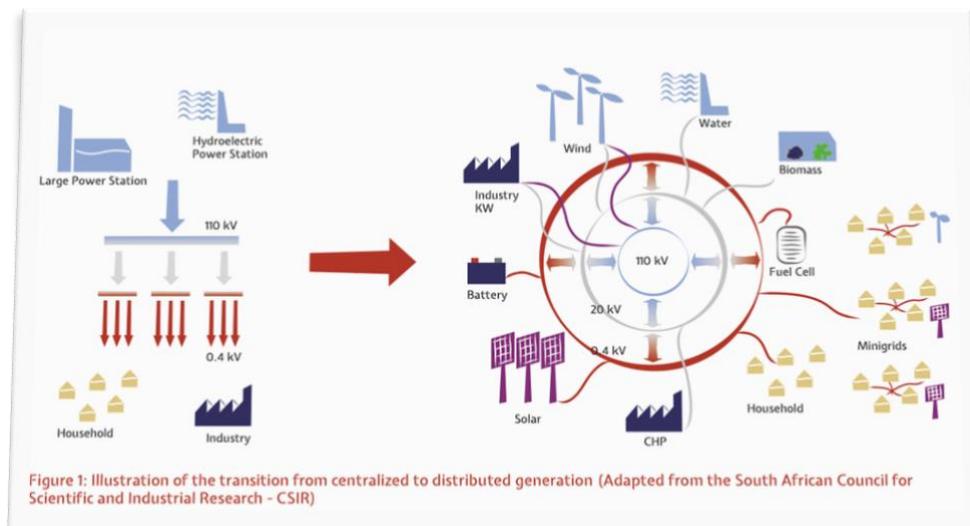
The following points provide a summary of some of the main conclusions of the larger context and strategy work.

Pillar III – cross-cutting points

- A condition for any success in stopping expansion and phasing-out fossil fuels is a rapid transition to **100% renewable energy** through equitable **just transitions** for workers and communities as well as transformation of **wider socio-economic systems**, as part of a globally just transition in which all countries do their **fair share**.
- Ensuring appropriate, renewable energy to the billions of people who still lack **sufficient access to energy** must underpin the Treaty Initiative. Electrification of cooking, including establishment of renewable energy powered micro and mini-grids must be enabled for the billions of people who still lack clean cooking facilities. A strategy that takes away or denies people access to new energy at sufficiency levels, is wrong and destined to fail.
- All countries must immediately plan and begin implementation towards **real zero emissions**, with comprehensive plans across all sectors and that do not rely on risky, unproven technologies or off-setting emissions to others. Low-income countries need to do so with firm commitments from wealthy countries for support to be provided through **enhanced international cooperation** in accordance with **equity** and fair shares.
- The transition to renewables is a monumental challenge – an even larger undertaking than stopping fossil fuels alone: it is about a **transformation and restructuring of sectors across all our societies** and reassessment of the very idea of “**development**” and “**progress**” and the way the global economy is organised.¹
- Pillar III can only succeed through concerted **international** cooperation, while **local** and **national**-level actions are critical to any success. Capacity mobilization and building within each society is key.²
- Global, national and local **equity** must be at the core of the Treaty Initiative and all Pillar III efforts. Unless countries and communities within them experience the transition to be broadly fair, there is not going to be a transition. A fair approach will help us to address the climate crisis, and realise the major opportunities it presents to build a more just and equitable future.

Renewable energy systems and energy democracy

- The renewable energy models of tomorrow will need to be different from today’s centralised models. 100% renewable energy societies can and need to be more **distributed** and **decentralised**, with more **diversified** ownership.
- Tomorrow’s energy systems should at the core be driven by **interconnected** and smart, distributed renewable energy provision at **smaller scales** in **massive numbers** together with large renewable energy plants (on and off-shore wind farms, large solar PV and concentrated solar power plants) under condition they are **socially** and **environmentally** appropriate.³



From LDC Renewable Energy and Energy Efficiency Initiative for Sustainable Development Framework

- Renewable energy can be an effective means for **democratisation** and economic diversification that drives **local economic development** and **wellbeing**. The transformation must support diversified ownership of energy production that include households, farmers, communities, cooperatives, schools, hospitals and other public entities as well as new, smaller renewable energy companies who may be **both producers and consumers** of energy.
- **Community energy, cooperatives, non-profit** customer-owned enterprises and innovative **public schemes** are flourishing in many parts of the world and can become significant drivers of the renewable energy transition – from small to utility scale. The current, disproportionate focus on private sector and foreign investments by many governments, multilateral development institutions and think tanks must be rectified.⁴
- The **new, smart, people-centred**, and more **distributed** renewable energy societies of the future are cutting-edge and symbolises real progress. A positive, self-reinforcing narrative of what it means to be succeeding and ahead of the curve can be advanced by insightful political leaders, supported by Treaty Initiative efforts.
- Access to sound, clean, environmentally and socially appropriate renewable energy is a **right** for both individuals and energy-deficient communities, which merits significant public ownership and provision of energy for the **common good**.

The renewable energy transition

- Renewable energy (particularly Solar PV and wind) are now **cheaper** than new-build coal across all continents, and is **set to become even cheaper**.⁵ The technical and economic potential for renewables is enormous (they could theoretically cater to all energy needs up to 100 times current global energy demand). Yet, while renewables are growing the fastest, they are doing so from a very **low level** of total energy production (1% for wind and 0,5% for solar). **Fossil fuels** are still growing **twice as fast** in absolute terms.⁶

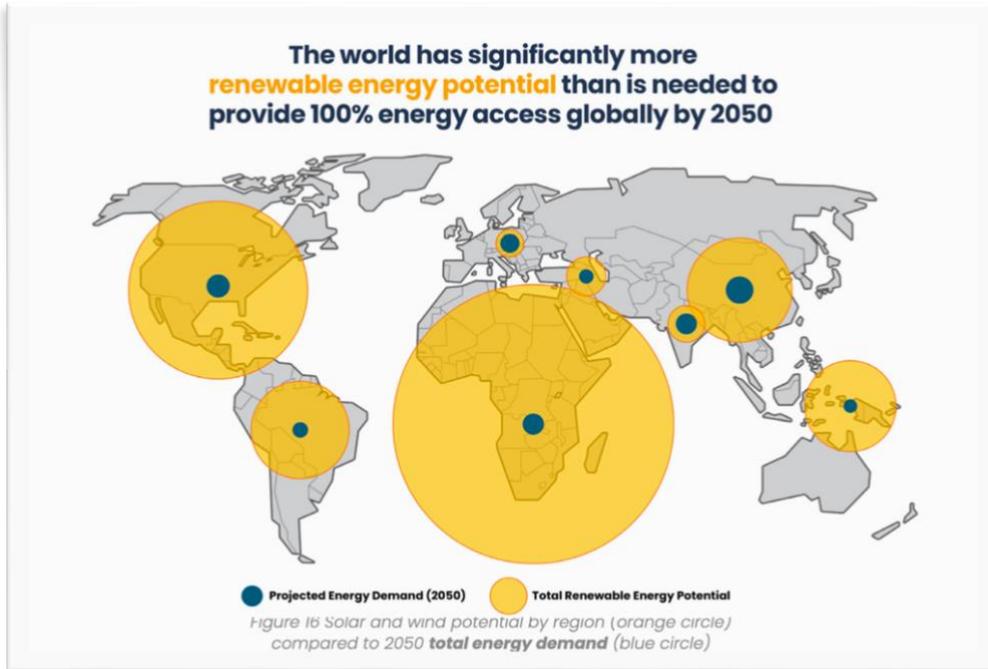


Figure from the report *Fossil Fuel Exit Strategy* (Teske and Sarah, 2021).

- Renewables have been most successful in the **electricity power generation** sector where they constitute around 11%, excluding hydropower (27% including hydropower), and where the rapidly falling costs are making renewables the **cheapest option**, and continue to do so. However, energy for **heating** and **cooling** and **transport** constitute the bulk of the world's energy consumption (83%) and have been largely **neglected** in terms of renewables.⁷

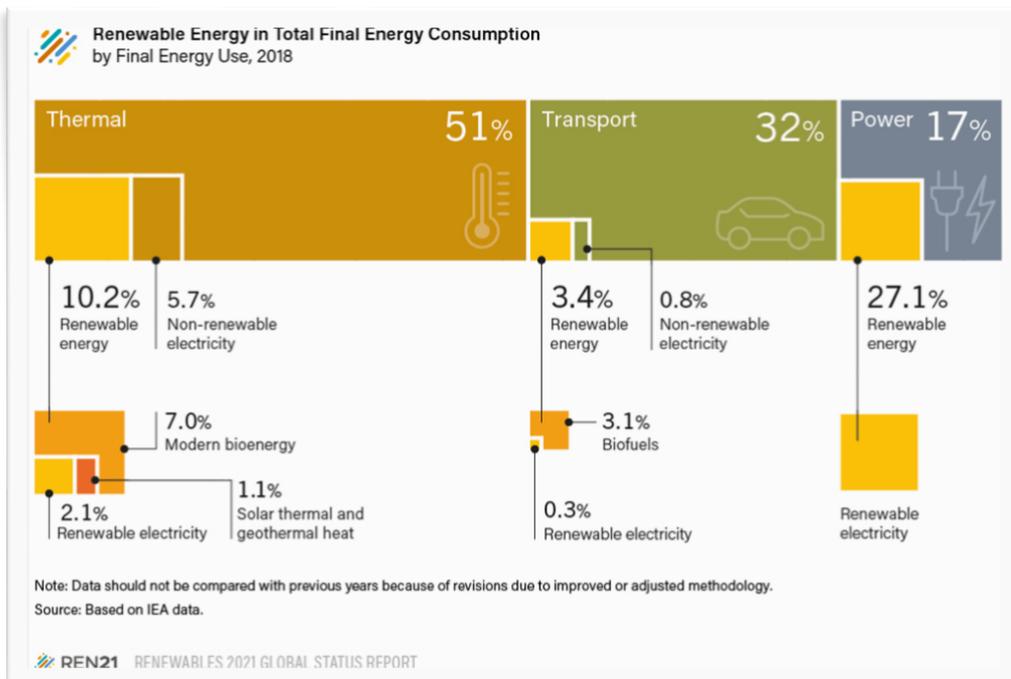


Figure from *Renewables 2021 Global Status Report*, REN21

- The transition to **100% renewable energy** globally within the timeframe and scale to keep global warming below 1,5°C without assuming overshoot, nuclear power or risky or non-existing carbon dioxide removal technologies such as Bioenergy with Carbon Capture and Storage (BECCS) is possible, but requires **immediate action** and **deep transformation** of our societies across all sectors.⁸ Scenarios by international organisations such as IRENA and the International Energy Agency confirm tremendous potential for renewables but include problematic assumptions that result in less ambitious trajectories, which will need to be corrected.⁹
- 100% renewable energy transition scenarios necessitates stringent **energy efficiency** measures in every sector and reductions in per capita energy use that **curb overconsumption** and **wasteful lifestyles**. Currently obscene inequity in terms of **per capita energy use** must rapidly **converge** towards sufficiency and energy consumption for responsible well-being.¹⁰
- Clear **visions, long-term planning, and 100% renewable energy targets**¹¹, along with conducive **policy** environments, **standards** and **regulations**, and access to **credit** and long-term **investment security** are essential requirements for enabling the necessary, many-fold acceleration of renewable energy deployment as well as energy efficiency measures.
- As renewable energy carries high upfront costs for purchasing the power generation (wind, solar) equipment, while having no fuel costs, it is key to provide **policy frameworks** that makes the initial investment secure, through for example **feed-in tariffs** and other **payment guarantees**. Such schemes have proved highly effective, and particularly enable smaller and unexperienced actors to become energy producers.¹²
- A **global plan** for just transition to renewable energy is needed, where countries mutually support each other by sharing best practices, and where poorer countries are supported through access to **international finance** and **appropriate technologies** in accordance with 'fair shares'.
- A Global Renewable Energy and Energy Access Transformation programme must ensure that **everyone interested can invest** in socially and environmentally appropriate renewable energy through the availability of affordable credit and the establishment of rules and regulations that guarantee long-term investment security.¹³ For poor countries, such systems must be backed and financially supported and guaranteed through the **international community**, in accordance with equity and fair shares. The Treaty Initiative can help develop such schemes and large Covid-19 recovery style public finance provisions.
- Regional initiatives and pioneering countries are crucial as **powers of example** that can accelerate the energy transition and inspire others to follow suit.¹⁴
- The struggle against fossil fuels must go hand in hand with the support for renewable energy. Fossil fuel **subsidies** can be **shifted to renewables**¹⁵. Juxtaposition of investment prospects and development co-benefits from renewables vs risks of **stranded assets** can help reorient investment decision.¹⁶ **Frontline struggles** against fossil fuels can simultaneously promote renewables.
- The renewable energy transition can **go wrong** and create new problems: These include increased **concentration of power** among a few large **corporations, exploitation of labour**, destruction of environment and communities from **extraction of minerals** and **land grabs** for power plants. The current **battlefront** between fossil fuels and renewables will increasingly shift towards good vs bad renewable energy.¹⁷



Photo: Enough project

- “Renewable Energy **Watch!**” or “Just Transition Watch” initiatives, social and environmental **criteria**, and **horizon scanning**/technology assessment as **precautionary** measures need to be established at both national and global levels, and can be pursued and supported by the Treaty Initiative.
- As renewable energy infrastructure expands, the marginal cost of energy will fall dramatically. Long-term planning with appropriate policies and regulations must ensure that cheaper energy and ‘**rebound effects**’ do not fuel further overconsumption and associated resource extraction and pressure on biodiversity and other planetary boundaries.

Equity and just transition

- There must be a **just transition** for **workers** and their **communities**, everywhere – workers in the fossil fuel sector, and workers in other directly affected sectors (industrial agriculture, transportation etc.) must not suffer from the transition. The fossil fuel treaty must be framed so that workers see the treaty as a **positive force** that will advance their rights.¹⁸
- The concept of ‘**Just Transition**’ originated within the **trade union** context. Close collaboration and interaction with trade unions as well as ILO are of critical importance.
- Just transition measures for workers need to include provisions for **social dialogue** and **democratic consultations**, **training** and **skills** developments, **economic diversification** measures, economic **compensations/early retirement schemes**, and proper **research** and assessments of **social and employment impacts**. Such provision needs to be embedded in national legislation and policies, NDCs and in international cooperative and legal agreements.¹⁹
- Social protection is essential to ensure that neither fossil fuel workers nor others employed directly or indirectly as a result of fossil fuels are harmed by the transition, including workers in sectors such as industrial agriculture and transportation that will be directly affected by fossil-fuel phase out²⁰ A **global social protection fund** as championed by **trade unions** and others should be an integral part of the transition and Pillar III demands.²¹
- It must be made possible for all countries to ensure such Just Transition measures, which requires **international collaboration** and the provision of adequate **support** by wealthy countries to less wealthy countries with high dependency on fossil fuel production, in accordance with “**fair shares**”

- A just transition must also go beyond workers and be directed to **all people and communities** affected by the transition away from fossil fuels.
- The transition must be **globally just** and ensure measures towards renewable energy or workers' rights in one country do not negatively affect workers, communities, marginalised peoples or ecosystems in other parts of the world. The Treaty Initiative can help influence **Green New Deal** and other initiatives to go beyond their national frameworks and expand their reach to ensure global fairness.



Photo: Tor Lindstrand

- In a world that moves towards 100% renewable energy, the solar PV and wind technology demands for **cobalt, silver and rare earth metals** will grow exponentially, with increasing pressure on the sites of **extraction**, which are predominantly located in the **Global South**. As a priority, renewable technologies must reduce their reliance on mining for new metals and minerals through material efficiency, recycling, and reduced consumption. For any mining that can be motivated there must be strong, **mandatory regulations and enforcement** to ensure stringent labour, environmental and social standards.²²
- Just transition measures must also include provision that prevent negative impacts on communities from **renewable energy deployment**, e.g. **land grabs** or environmental **impacts** from large-scale wind or solar installations, including principles of **free prior informed consent**. The renewable energy business sector has currently a poor track record in relation to human rights.²³
- The term 'just transition' has evolved over the years to now have a **wide spread of interpretations** beyond the original focus on workers to include all of society in the other end of the spectrum. Just transition is also increasingly interpreted beyond a focus on 'managerial' and 'structural' reforms to be seen as synonymous with **transformative**, political and economic restructuring and **rejection** of the **current globalized economic system, neo-liberal capitalism** and intertwined injustices across **race, gender, sexuality** and **north-south divides**.²⁴
- Various Indigenous peoples' interpretations highlight just transition as ways to overcome historical trauma and colonisation and for the world to regain a connection with Earth and nature. The **Indigenous principles of Just Transition** provide a profound critique of the dominant economic system and "calls for strategies that democratize, decentralize and diversify economic activity while we dampen down consumption, and redistribute resources and power" and "affirms the need for respecting and restoring **sacred creation principles** and

the **Right of Mother Earth**, the importance of **indigenous knowledge**, and **sovereignty** and **self-determination**".²⁵

- Cutting across the various aspects of equity and just transition dimensions are the need to through horizon scanning and systems approaches counter further inequities by **anticipating current trends, new challenges** and **unintended consequences** of transformative actions.²⁶

Economic diversification

- **Economic diversification** is essential for **all countries**. For fossil fuel producing countries, particular and credible economic diversification trajectories are essential for any concerted action towards stopping expansion and phasing out fossil fuels.
- Poor countries, and particularly those with high dependency on fossil fuel-based revenues, must be **supported** to enable diversification of their economies.²⁷
- All countries, including fossil fuel producers and importers, benefit from a rapid **domestic transformation to 100% renewable energy**: it increases resilience and well-being, reduces risks and avoids stranded assets, and is a prerequisite for enabling the world to avoid catastrophic climate change. Energy for **productive sectors** at all scales (including small-scale agriculture and SMEs) in developing countries is often neglected but constitute a key enabler of **local economic development**, economic diversification and resilience.²⁸
- The solutions and sectoral transformations outlined in various '**Real zero**' visions, and some of the 'Green New Deal' programmes indicate the need for reorientation as well as diversification of most sectors.²⁹ Some of these Real zero solutions include, in addition to the 100% renewable energy transition: shifting to **agroecology**, free or subsidised **public transport systems**, **retrofitting** of old buildings, **reduced consumption** by the wealthy and focus on income and livelihood **sufficiency** and **non-material** means to enhance quality of life (including enhanced provision of basic social and public services and infrastructure such as safe public parks, quality public education, free broadband/public Internet access, etc.)..
- Ideas that fundamentally **question** dominant, **growth-centred development models** are gaining traction, including how global North countries could reorganise themselves toward increased equity, satisfaction of people's needs and maintaining employment while reducing energy and material use, resulting in **zero growth** or **degrowth**. Modelling of such scenarios shows significantly increased likelihood of keeping warming below 1,5° or 2° C degrees.³⁰
- The transformation to **alternative development models** and renewable energy societies must be driven by each country's own, mobilised and enhanced capacity, based on its own "**endogenous**" development rooted in its history, culture and ecology. The transformation must prioritise **basic needs, social justice** and **self-reliance**, and the respect of **ecological "outer limits"/"planetary boundaries"**.³¹ There are **no universal** blueprints.
- The predominant economic theory and system – rooted in neoclassical theory and neoliberal values must give way to new forms of economics – "**Wellbeing economies**" that treasure fundamental human needs, dignity, purpose and fairness while respecting ecological limits. Measures and ideas of success must be aligned with wellbeing, rather than GDP or short-term profit.³²
- In addition to the challenges, needs and opportunities for economic diversification that cut across all countries, **fossil fuel producing countries** face a number of **specific challenges** and needs for economic diversification away from dependencies on fossil fuels as sources of domestic revenues (public and private), sources of jobs and in some cases the key backbones to their overall economies.

- Measures to facilitate economic diversification that both fossil fuel producers and non-fossil fuel producing countries may want to explore and engage in include:
 - Quantitative easing and **modern monetary theory** measures³³
 - Debt cancellation
 - **Tax reforms** for expanded government revenues
 - New **productive sectors**, localisation and localised, well-being oriented economies
 - **Social protection** measures and expansion of tax base
 - Public interest driven **innovation** and **horizon scanning** measures.

Measures that are specifically relevant for fossil-fuel producers include:

- Addressing the economic and social consequences of **response measures**
 - **Price stability** measures that enables orderly phase-out and monetization of current fossil fuel assets³⁴
 - Support for reforms and **redirection of state-owned corporations** from fossil fuel producers to renewable energy providers.³⁵
- Many countries lack the conditions needed for an effective transition within their countries. The lack of these conditions, in many cases, is the product of a highly **unequal and unfair international system**. To enable a transition on the scale and speed necessary (including most of the measures listed above), **changes in the international institutions and rules** will be required in order to enable a just transition for every community and country, with the wealthy countries undertaking their fair share of effort and action.
 - Currently **USD 2 trillion flow annually from the poorest to the richest countries**, an expression of an extractive economic system where current imports of fossil fuels (including countries exporting oil) and agricultural goods, as well as industrialization where poor countries export low value-added products and import high value-added products, all combine to keep poor countries dependent on and indebted to wealthy countries.³⁶ Under such conditions the idea of developing countries “catching up” with the Global North is impossible.
 - There is a need for a different model of development – where South-South collaboration and much **enhanced self-reliance** on energy production (where renewables fortunately has a high potential for distributed, local harnessing) and food production (agroecology without foreign inputs of pesticides and acritical fertilizers) can be key components of the solutions.³⁷
 - Further focus on reshaping international trade and investment agreements can underpin discussion of the **international conditions** needed for effective national transitions in all countries, as part of a global just transition.

Ways forward

More concretely, to advance work on Pillar III, the Treaty Initiative could:

- Further highlight Pillar III dimensions in **outreach and communications** around the Treaty.
- Promote and help develop **bold, global financing/guarantee schemes** to allow all kinds of entities – from households and cooperatives to public institutions and companies – to safely invest in renewable energy; enabled by international support mechanisms for Global South countries in accordance to climate finance and fair shares.
- Promote and help develop **refinancing mechanisms** for overcoming contractual lock-in to fossil fuels, enabling fossil fuel utilities to transform to renewable energy producers while re-training and retaining fossil fuel workers.
- Facilitate formulation of **100% renewable energy and just transition plans** for regions, sub-regions and individual countries, building further on experiences from the Fossil Fuel Exit Strategy and pioneering country plans.
- Promote and refine approaches for **shifting fossil fuel subsidies** to renewable energy investments and just transition measures.
- Promote and enable consolidation of examples and **lessons learned** from sound alternatives to fossil fuels and corporate concentration practices, including **community energy** and enhanced energy democracy approaches.
- Develop and promote a **global renewable energy and energy access registry** – similar to the fossil fuel registry currently under development – that tracks progress towards 100% renewable energy commitments/targets and actual renewable energy roll-out among both countries and other jurisdictions.
- Advance already initiated work on examples and options for **state-owned fossil fuel companies** to transform to non-fossil fuel activities, including renewable energy production.
- Collaborate with trade unions and other actors to promote and develop a **global social protection fund** and other measures to ensure just transition for workers across affected sectors.
- Help direct existing international negotiation processes (such as UNFCCC negotiations on **response measures**) to get on track to effectively support countries to end fossil fuel expansion and phase-out.
- Develop and initialise a **just transition and renewable energy Watch** that can effectively monitor conduct by government and companies in relation to human rights, just transition measures, and social and environmental abuses.
- Engage in measures to replace GDP by diverse and more meaningful **well-being economics and quality of life indicators** that may be better equipped to tackle the current crises than the dominant neo-classical economic theory.
- Promote engagement, public debate and deepened interaction to refine ideas and foster shifting of dominant, mainstream development thinking to new, **alternative development** approaches that place **well-being, equity, sufficiency and ecological sustainability** at the centre.

The broader context of the climate crisis

Pillar III efforts and the Treaty Initiative as a whole need to be understood in a broader context of climate change as part of a large system of interconnections, constraints and intertwined crises; and of wider efforts by social movements, civil society organisations and campaigns to address these crises. The following section draws on analysis and framing by these movements.³⁸

Context and starting points

- The Earth's climate is destabilizing and the **planet is in crisis**. There is already excessive heating that is causing damage to communities and ecosystems today.
- Climate change already **multiplies the sufferings** of people already burdened by the global injustices of hunger, dispossession, and human rights violations.
- It is **disproportionately affecting** the people and communities globally who have contributed **the least** to creating this planetary emergency.
- There are imminent risks of crossing **irreversible tipping points**. This could radically change the surface of the planet, collapsing the systems we rely on for life. It threatens to **wipe out vast populations and profoundly change life on Earth**.
- The climate crisis is part of a wider set of crises – crises of food, energy, inequality, patriarchy, racism, imperialism, extinction.
- It is part of a systemic crisis driven by **profit** and **growth oriented systems** that sacrifice the needs of the many, and the health of the planet, to the interests of a few.
- These are systems based on **competition** and **limitless growth** – ones that reduce things of intrinsic value into **commodities**, seek **profit** without limits, **separate** humans from nature, and impose upon all a logic of **domination**.
- At the root of the problems are a dominant model of "**mainstream development**" that is much rooted in a particular cultural context of enlightenment and industrialisation, and that over time has increasingly shaped modern mind-sets in societies across all continents.
- Addressing these systemic **root causes** of the current crises requires profound social **transformation** in all countries and at all levels – local, national, and global.
- It requires different models of development — ones in which all countries move towards systems that enable humans to **live well** in harmony with each other and with nature.

Fair shares, equity and sufficiency

- The urgency of the crisis requires a response centred on **human rights, equity, and justice**.
- The richest **10%** of the world's population emits more than **50%** of climate pollution, and receives more than **50%** of world income. Their "**luxury**" emissions must be treated differently from the "**survival**" emissions of the poor.³⁹
- The poorest *half* of the world receives barely **10%** of global income. They emit barely **10%** of emissions. The climate and over-consumption crisis is clearly not their fault.⁴⁰
- The world's **26** richest persons has more wealth than **half** of the world's population, while

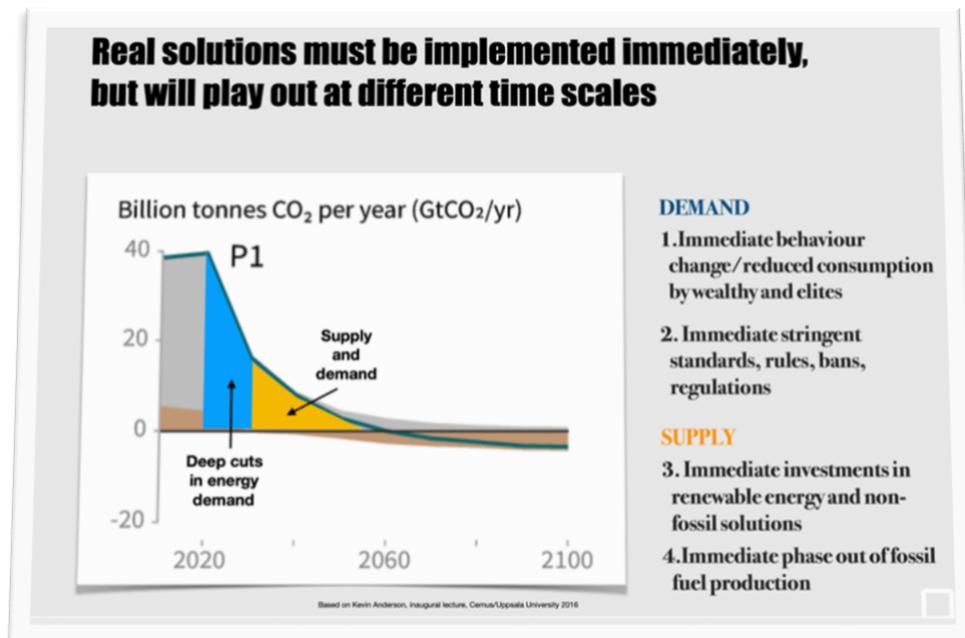
more than half of the population only own **1,4%** combined.⁴¹

- These inequalities are even more extreme when it comes to energy and **electricity use**: the average citizens of wealthy countries such as US and UK consume far **more than 100 times** the amount of electricity than the average citizen of a country such as Tanzania.⁴²
- **Equity and justice** and **human rights** must be at the heart of the transformation. The Treaty Initiative can be a force for avoiding false solutions and for promoting real solutions and equity.
- To increase ambition, and enhance participation, the global effort needs to be shared fairly. Each country should do its **fair share** based on its **responsibilities** for causing climate change, and its **capabilities** to help the world address it.⁴³
- Wealthy countries' fair shares include **ambitious action at home**, and support to help poorer countries to also undertake ambitious action. This applies to both emissions reduction and phase out of fossil fuel production, as well as support to address adaptation and loss and damage.
- For emissions it means that wealthy countries reduce to as **close to zero emissions** as possible at home (while also supporting the restoration of ecosystems), and **simultaneously enable less wealthy countries to undertake reductions** that add up to similar or more than these wealthier countries' current emissions.⁴⁴
- For **fossil fuel production**, it means that wealthy countries support poorer countries that are highly dependent on fossil fuel revenues to transition.
- There must also be a **convergence of per capita energy use** globally – the energy transition need to allow poor people to significantly increase their access and use of energy, while middle classes and elites must reduce their energy use and consumption. **Sufficiency**, **"responsible well-being"** and equity are guiding values.
- Global equity must cut across all sectors and go beyond emissions and climate, recognising for example that **net financial flows** from **South to North** are currently at a level of **USD 2 trillion yearly**, in contrast to the still unfulfilled and woefully insufficient climate finance pledges of USD 100 millions/year.⁴⁵
- The **current climate finance** conversations hence need to be **recalibrated** to recognise that trillions of dollars are needed to both reverse these current net flows and provide additional means to address both mitigation, adaptation and loss and damage in developing countries at the necessary scale.
- The **financial system**, **international debt** and **trade rules** are at the **core of the crises** and must be addressed simultaneously with measures targeting fossil fuel production and renewable energy.
- The future 100% renewable energy societies can be **flourishing, enriching** and **thriving** societies where everyone's needs are met, and where the resource use and environmental impacts do not undermine possibility for future well-being – nor impact negatively on poor and marginalised peoples and communities today.

Climate, carbon budgets, urgency and maximization

- The climate crisis is **more dire** than commonly understood – even by many individuals and groups whose work includes fossil fuels and/or climate change. It is important that the Treaty Initiative departs from a clear understanding of the scientific premises, urgency and the many dangerous distractions that prevail.
- **Industrialisation** has over the last couple of centuries led to an increase of atmospheric CO₂ levels from around **270 ppm** to now almost **420 ppm**. While the global average temperature has increased with more than 1 degree C, regional differences of several degrees and exacerbation of extreme and unpredictable weather and climate impacts are already a reality.
- The concept of a “**carbon budget**” is a social construction. The “carbon budget” for keeping the world *safe* from global warming is **already exhausted**.
- The carbon budgets presented by IPCC’s AR6 report shows 17%, 33%, and 50% risk of exceeding the dangerous threshold of 1,5°C, which are levels of risk normally never accepted for life-threatening activities. The estimated budget for 17% risk corresponds to 300 Gt of emissions as of 2020, while 33% risk corresponds to 400 Gt. Under current yearly emissions rates of 50 Gt there only remain 6 and 8 years of emissions respectively.⁴⁶
- This budget and related probabilities do not take into account significant factors that indicate that the **IPCC budget is likely too large**: there are uncertainties on how much has been already emitted historically, there are indications that climate sensitivity is higher than assumed, there are significant uncertainties around the effect of non-CO₂ climate forcers like methane, and the risks of tipping points are not fully integrated.
- The IPCC 1,5°C and 6th Assessment reports’ conclusion that global emissions needs to be halted by 45% by 2030 and reach net-zero by 2050 is therefore **likely overly optimistic**; approaches based on this therefore carry a significant risk of failing to limit warming to below 1.5°C.
- There are also major **uncertainties** around the risks of crossing **tipping points**. There is **no safe level** of warming that precludes the risk of setting in motion irreversible and in worst case run-away, rapidly escalating heating. Every **fraction of a degree** of additional heating increases such risks.
- There are also accumulating scientific findings that show how the **dangers** associated with any **given temperature** have likely been **underestimated**. A warming below 1,5°C will still lead to massive, irreversible **loss and damage**, and does not preclude risks of crossing tipping points. 1,5°C warming is far from safe.
- **Early action** and ‘**maximization**’ of efforts to reduce emissions in the near term is therefore essential. Continued high levels of emissions eat up the already risky IPCC carbon budget in only a few years.⁴⁷
- Over time today’s 418ppm of CO₂ in the atmosphere should ideally be reduced to a safer 350 ppm. There are currently **no** established and **socially/environmentally acceptable technologies** to undertake removals at such scale.
- The limited capacity for removals of CO₂ from the atmosphere through **ecologically and socially acceptable** interventions (**ecosystem restoration** etc.) can only remove some of the “biospheric” CO₂ that has been released into the atmosphere during past centuries.⁴⁸

- “**Nature based solutions**” can therefore **never** compensate for (“offset”) additional release of fossil carbon into the atmosphere (biosphere and fossil carbon are not interchangeable and must be accounted for separately). Every molecule of added CO₂ worsens climate change and must be assumed to remain a problem for thousands of years. **Offsetting fossil fuels** through uptake of CO₂ in vegetation or soils is **fundamentally flawed** and must not be accepted.⁴⁹
- The benchmark for proper reduction levels of fossil fuel production and emissions reductions must be the **maximally possible under acceptable equity considerations**. This means yearly domestic reduction rates of **10-20%** for wealthy countries such as US, UK, and Sweden over the coming decade.⁵⁰
- The urgency of the situation makes clear that the necessary emissions reductions can not be achieved only through establishment of new, zero-carbon technologies and renewable energy, which takes time due to infrastructure construction lead-times. **Behavioural, lifestyle and consumption changes** by middle classes and wealthy people are essential and required immediately.



Based on Kevin Anderson, Inaugural lecture, Cemus, Uppsala University 2016

- **Fossil fuel production** must come to an end as soon as possible. Given the above, the requirements of **6%** annual reductions in the Production gap report is a **minimum** requirement, and likely an underestimate.⁵¹

Dangerous distractions must be exposed and avoided

While the world is slowly awakening and many world leaders speak to the importance of tackling climate change and other intertwined crises, few have internalised the magnitude of the task, and the extent to which all societies need to undergo deep transformations. Misleading rhetoric and promotion of “**dangerous distractions**” or “**false solutions**” that gives the impression that action is happening is likely worse than inaction.

Many of these dangerous distractions are promoted and supported by the fossil fuel industry and include:

- Prevailing, **distant net-zero targets** that tend to embed false solutions and shift focus away from the near-term. Their assumptions of **off-sets**, **overshooting** and future **removal** of CO₂ at massive scale through **not yet operational and risky technologies** such as CCS and BECCS wrongly justify continued fossil fuel production and corresponding emissions of CO₂.⁵²
- Large-scale **bioenergy** can not be part of the solution. The release of CO₂ from burning biomass is instant, while uptake from new vegetation takes decades or centuries and is far from certain. Bioenergy at scale also have significant negative consequences on **biodiversity**, **land rights** and other **social and environmental concerns**.
- All forms of off-setting are flawed. In a world that needs to eventually reach real zero emissions everywhere there is **no room for offsets**. Offsets simply push back the necessary transitions in wealthy high-emitting social groups and societies, and shift the burden to the poor and future generations.⁵³
- Even worse, assumptions of large-scale carbon dioxide removal **geoengineering** schemes such as Bioenergy, carbon capture and storage (BECCS) and to a lesser extent Direct Air Capture (DAC) in many integrated assessment models have allowed assumptions of significantly exaggerated fossil fuel allocations in the calculated budgets. These assumed, imaginary technologies can have detrimental effects in lessening the pressure for reductions of fossil fuel production and emissions ('**moral hazard**' or '**mitigation deterrence**'), and would likely have devastating impacts on human rights and ecosystems if attempted at scale.⁵⁴
- If these kinds of dangerous distractions are not called out and replaced with measures for immediate, **real solutions**, the world will miss the opportunity to keep warming to below 1,5° or 2° C, which will in turn increase the risk of unilateral, panic deployment of existentially risky solar geoengineering "sun-blocking" technologies.⁵⁵
- These **sun-blocking geoengineering** technologies are falsely presented as a cheap plan B that are assumed to dial back climate change by reflecting incoming sunlight. In reality, the technology justify continued fossil fuel production and emissions, exacerbate the disturbances of an already deeply disturbed climate system, and present new existential dangers such as shifting regional weather patterns such as the monsoon, risk of spiking temperatures from "termination shock "for millennia, and risks of weaponization.⁵⁶
- Immediate action to stop expansion and initiate equitable phase-out of fossil fuel production must **begin now** as the only way to avoid the worst impacts of climate change and to avoid the existential threats of solar geoengineering deployment. The Fossil Fuel Non-Proliferation Treaty Initiative may currently be one of the most **powerful tools** to counter efforts to normalise this controversial and dangerous technology.

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