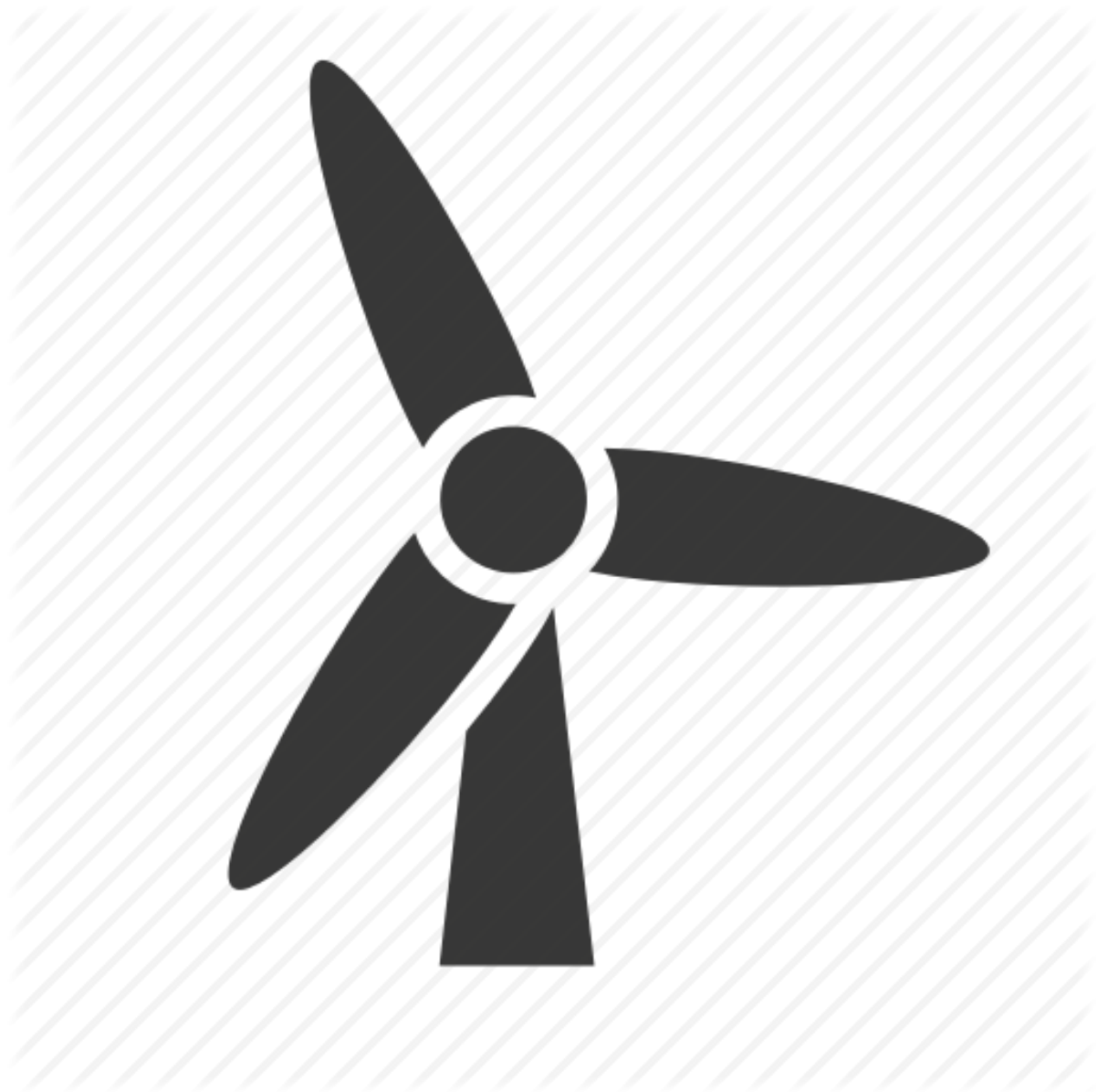


# Elements of strategy – FFNPT Pillar III

Renewable energy transition | Just transition | Economic Diversification



Niclas Hällström, WhatNext?

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# INTRODUCTORY SECTION

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## Introduction to this document

The proposed Fossil Fuel Non-Proliferation Treaty has three pillars:

- I. **Non-proliferation** – An end of exploration and expansion into new reserves of fossil fuels
- II. **Global disarmament** – 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. **Peaceful 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.

This strategy paper provides background and reflections on the third pillar, with the purpose of informing and providing a basis for conversations within the FFNPT Initiative on priorities, timelines, strategy, and resource mobilisation. It outlines possible areas of intervention with a focus on the next 1-3 year period.

One of the powerful features of the FFNPT 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.

So far much attention has focused on the first two pillars, which is also reflected in the name (FFNPT). It will be increasingly relevant for the FFNPT Initiative to highlight the third pillar.

Pillar III is the foundational basis for the long-term success and durability of Pillars I and II. In addition, for some actors, such as trade unions, their support for the treaty process may be contingent on a framing that ensures the Just transition and economic diversification elements are at the core.

Together, all three Pillars would represent perhaps the most significant and comprehensive Infrastructure and societal transformation in the history of humankind. It would change the economic and energy underpinnings and end the fossil fuel dependence that has dominated national and global economies of modern human societies since the Industrial Revolution began in today's developed countries.

The third 'Peaceful transition' pillar can be conceived as having three *elements*:

- 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 will in turn need to be supported by 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. These elements are intertwined. Some may see economic diversification and the renewable energy transition as subsets to Just transition as an overriding concept, while others see economic diversification encompassing all other dimensions. This document recognises the need for a set of "nested" and mutually supportive transitions – involving workers and communities, energy systems, and wider socio-economic systems – and considers the distinction into these parallel elements a useful way to structure the discussion.

This paper is divided into three parts. The first part provides a summary of key points and reflections on overall context for the FFNPT Initiative in terms of science, equity and risks of false solutions. The second part provides an overview on the various dimensions of each of the three elements (renewable energy transition, equity and just transition, and economic diversification). The third part provides an overview of different strategy elements, activities and potential approaches along the strategy elements outlined in the overall FFNPT strategy (reflections on narrative, civil society, private sector, sub-national, national, regional, international, finance related, and research related strategies). Each entry in this section is tagged in terms of how it relates to the three main dimensions (renewable energy transition, just transition and economic diversification), and to what extent it relates to narrative, research, policy, convening, communications, partnerships, training or mobilisation.

While the analysis recognises many on-going initiatives, it also recognises a lack of integrated approaches that can set the world on a credible and successful course for pillar III Peaceful transition. The FFNPT Initiative has the potential to enable consolidation of ideas, strategy and stakeholders to formulate such plans. This requires scale and boldness while not losing details and experiences from the ground that are critical for implementation of real solutions.

## Overview and summary of key points in relation to Pillar III

The following points provide a summary of some of the main conclusions in this document. They also provide narrative elements for the framing of Pillar III.

### Pillar III – cross-cutting points

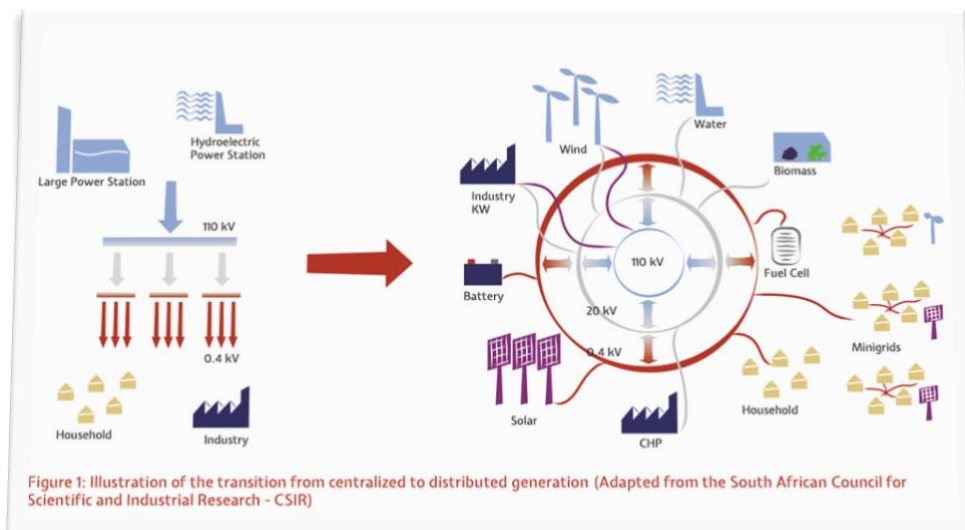
- A condition for any success in stopping expansion and phase-out of fossil fuels is a rapid transition to 100% renewable energy through equitable just transitions for workers and communities and transformation of wider socio-economic systems, as part of a globally just transition in which all countries do their fair share.
- Ensuring appropriate, renewable energy to people who still lack sufficient access to energy must underpin the FFNPT 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.

- Pillar III can only succeed through concerted international cooperation, while local and national-level actions are critical to any success.
- 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.

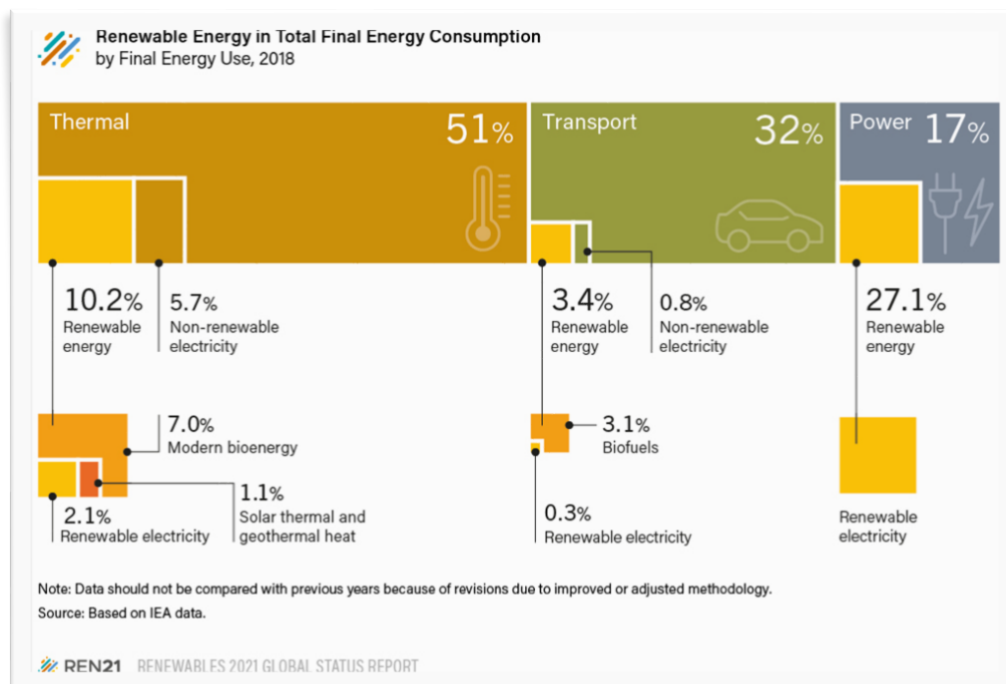


- Renewable energy can be an effective means for democratisation and economic diversification that drives local economic development and wellbeing. The transformation must support diversified ownership of energy production that include households, farmers, communities, cooperatives, schools, hospitals 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 several 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.

- 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 FFNPT 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-built coal across all continents, and is set to become even cheaper. 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.
- 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.



- The transition to 100% renewable energy globally within the timeframe and scale to keep global warming below 1,5°C without overshoot, nuclear power or risky or non-existing carbon dioxide removal technologies such as BECCS is possible, but requires immediate action and deep transformation of our societies across all sectors
- Such 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.

- Clear visions, long-term planning, and 100% renewable energy targets, 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.
- A 'Marshall' style 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. 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 FFNPT 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.
- The struggle against fossil fuels must go hand in hand with the support for renewable energy. Fossil fuel subsidies can be shifted to renewables. Juxtaposition of investment prospects and development co-benefits from renewables vs risks of stranded assets can help reorient investment decision. 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 battlefield between fossil fuels and renewables will increasingly shift towards good vs bad renewable energy.
- "Renewable Energy Watch!" / "Just Transition Watch" initiatives, social and environmental criteria, and horizon scanning/technology assessment measures to ensure precaution need to be established at both national and global levels, and can be pursued and supported by the FFNPT 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.
- 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 need to be embedded in national legislation and policies, NDCs and in international cooperative and legal agreements.

- Social protection is essential to ensure that neither fossil fuel workers or others are harmed by the transition. A global social protection fund as championed by trade unions and others should be an integral part of the transition and Pillar III demands.
- 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 FFNPT Initiative can help influence Green New Deal initiatives to go beyond their national frameworks and expand their reach to ensure global fairness.
- 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.
- While originating from the trade unions with focus on workers, the term Just transition has evolved over the years to have wide spread of interpretations. Just transition is increasingly 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. Indigenous peoples interpretation of just transition highlights just transition as ways to overcome historical trauma and colonisation and for the world to regain a connection with Earth and nature.
- Cutting across the various aspects of equity and just transition dimensions are the need to avoid further inequities by anticipating current trends, new challenges and unintended consequences of transformative actions.

## 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.
- 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.
- 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. 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 the dominant, growth-centred development model 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.
- 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". 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.
- 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 measures
  - 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 assets
- Support for reforms and redirection of state-owned corporations from fossil fuel producers to renewable energy providers.
- 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.
- Work undertaken in other parts of the FFNPT Initiative (for example, on international trade and investment agreements) can underpin further discussion of the international conditions needed for effective national transitions in all countries, as part of a global just transition.

## The broader context of the climate crisis

The strategic elements in this document and as summarised above need to be understood in a broader context where climate change and the FFNPT Initiative are parts of a large system of interconnections, constraints and intertwined crises; ; and of a wider effort by social movements, civil society organisations and campaigns to address these crises. The following section draws on the endeavors and expressions of these movements<sup>1</sup>, and offers possible elements of framing for the FFNPT Initiative.

### 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.

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<sup>1</sup> See for example [www.systems-change.net](http://www.systems-change.net) and [www.demandclimatejustice.org](http://www.demandclimatejustice.org)

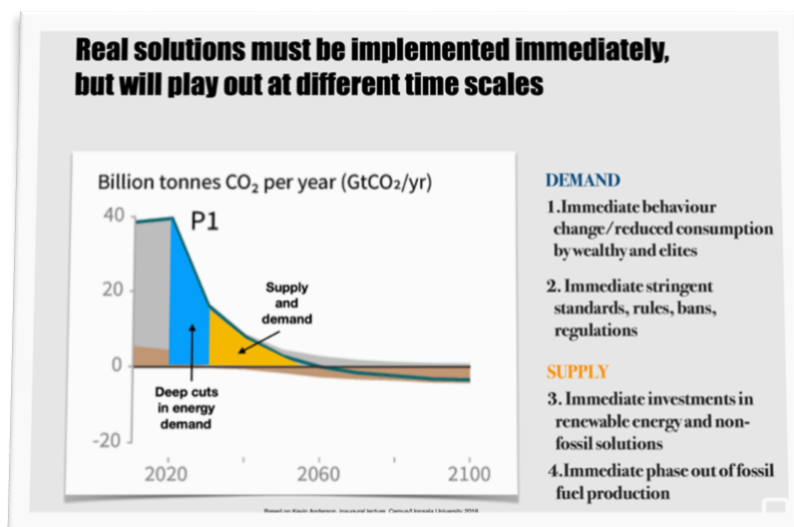
- The poorest *half* of the world receives barely 10% of global income. They emit barely 10% of emissions. The climate and over-consumption crisis is clearly not their fault.
- The richest 1% of the world population own 43% of the world's wealth, while more than half of the population only own 1,4% combined. The world's 26 richest persons has more wealth than half of the world's population.
- 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.
- Equity and justice and human rights must be at the heart of the transformation. The FFNPT 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.
- 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 poorer countries to undertake reductions that add up to similar or more than these wealthier countries' current emissions.
- 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 billions/year.
- 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 FFNPT Initiative departs from a clear understanding of the scientific premises, urgency and the many dangerous distractions that prevail.
- Industrialisation over the last couple of centuries led to an increase of atmospheric CO<sub>2</sub> 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 hence already exhausted.
- The carbon budgets presented by IPCC’s 1,5°C report accept 33% or 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 33% risk corresponded to 420 Gt of emissions as of 2018; we have since emitted approximately 100 Gt with now only 320 Gt remaining.
- 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-CO<sub>2</sub> climate forcers like methane, and the risks of tipping points are not fully integrated.
- The IPCC 1,5°C report’s 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.
- Over time today’s 418ppm of CO<sub>2</sub> in the atmosphere should ideally be reduced to a safer 350 ppm. There are currently no established and socially/environmentally acceptable technologies to undertake such removals.
- The limited capacity for removals of CO<sub>2</sub> from the atmosphere through ecologically and socially acceptable interventions (ecosystem restoration etc.) can only remove some of the “biospheric” CO<sub>2</sub> that has been released into the atmosphere during past centuries.
- “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 CO<sub>2</sub> worsens climate change

and must be assumed to remain a problem for thousands of years. Offsetting fossil fuels through uptake of CO<sub>2</sub> in vegetation or soils is fundamentally flawed and must not be accepted.

- 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 Sweden and the UK over the coming decade.
- 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.



- 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.

## 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 CO<sub>2</sub> 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 CO<sub>2</sub>.

- Large-scale bioenergy can not be part of the solution. The release of CO<sub>2</sub> 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.
- 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.
- 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.
- 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.
- 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 FFNPT Initiative may currently be one of the most powerful tools to counter efforts to normalise this controversial and dangerous technology.



# THE RENEWABLE ENERGY TRANSITION

## DIMENSION

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### The renewable energy context

The need to move towards 100% renewable energy as rapidly as conceivably possible is indisputable (Teske, 2019).

This transition to renewable energy is a formidable task – not only do we need to build an infrastructure that will surpass the current fossil fuel based energy system in scale, reach and complexity, we also need to ensure this new energy reaches all people to ensure universal access also to the 2,65 billion people lacking clean cooking facilities and the 860 million lacking access to electricity (REN21, 2020b). And all this needs to be achieved within just a couple of decades.

This needs strategy and long-term planning. While decreasing costs of renewable energy has contributed to a steady increase in deployment, current rates of renewable energy growth are nowhere near what is required. Markets alone will not achieve the transformation. Government interventions and effective policy-making are absolute requirements. This becomes even more apparent when considering the requirements of a just transition and economic diversification.

There are major route choices on the road to 100% renewable energy systems. These choices need to be informed by principles and values, as well as clarity on needs, requirements, scope, technological options, ownership/political economy considerations and equity.

### Principles

The FFNPT Initiative needs clarity on core principles as the Initiative advances the renewable energy transition. These should resonate with work by allies and partners already engaged in efforts towards new, people-centred renewable energy systems.

The following principles stems from a number of initiatives and visions as formulated by civil society, developing countries and independent scholar-activists, and may provide a useful basis for the kinds of values and approaches FFNPT may want to endorse (LDC REEEI, 2018), (Sokona et al., 2015), (Adow, 2020).

The renewable energy transition would need to:

- Promote increasingly distributed, smart, flexible, diverse, and democratised renewable energy systems, in contrast to the predominant bias towards grid-based systems with centralised control.
- Ensure participation and community focus positioning energy democracy and broad, multi-stakeholder participation at the centre.
- Respect country ownership and be driven and owned by countries through participation and engagement of diverse stakeholders.

- Ensure energy access to productive sectors such as small-scale agriculture, micro-, small-, and medium-sized businesses, and community services that form the backbone of livelihoods and economies in many countries; beyond bare-minimum focus on, for instance, light provision for households in poor countries.
- Ensure social and environmental safeguards at the core, and that all renewable energy efforts are undertaken in line with the precautionary principle and assurances that negative side-effects are avoided.
- Focus on transformative, programmatic, structural interventions emphasising policy, capacity mobilisation, long-term capacity building, and regulatory frameworks, rather than individual projects.
- Build on the public investments examples from the Covid-19 pandemic response and ensure global cooperation and finance schemes that enable immediate investments in renewable energy at the necessary scale, and in ways that do not add to poor countries' debt burdens.
- Foster new models for interaction between developing countries and international partners, and break with historic patterns of dominance and exploitation.
- Advance new forms of collaboration between civil society and governments, with civil society increasingly undertaking roles as leading technical expertise, in addition to its traditional advocacy and watchdog roles.
- Use examples from pioneering countries in both the global North and the global South that are already taking a lead, and that can bring other countries along.
- Promote effective South-South, North-North and North-South collaborations that accelerate the sharing of experiences and enables the most effective mutual support systems to distil best practices as well as ensuring learning from past mistakes.
- Ensure efforts are undertaken through an equity, fair shares and just transition approach.

Compilation of principles drawn from  
(Adow, 2020), (Sokona et al., 2015) and (Sokona et al., 2018).

## Current Renewable Energy Situation

In order to consider strategies and options for the renewable energy transition, it is important to have a sense of the current situation. This includes the role of energy in relation to development, the current renewable energy share of the overall energy mix and current trends, as well as an understanding of how the future, more distributed and smart renewable energy systems will differ from today's centralised systems.

### Energy and development

Any discussions about energy must be informed by the understanding of energy as a fully interrelated dimension of "development" and human well-being. Both the energy and climate crises are at their core crises of development, and are directly affecting how people are able to live secure, meaningful lives. Human well-being is directly correlated with access to energy up to a level of reasonable, sufficient per capita energy use, while high per capita energy use shows hardly any such correlation. Access to sufficient levels of energy is and should be a human right, and there are good reasons to regard such energy provision as a common good that

should be ensured and secured by governments. For a considerable part of the human population, there is an imperative to enable *increased* use of energy in per capita terms: this is an issue of fundamental rights and equity that must be recognised.

Discussions and strategising about the energy transition must recognise the perils of tackling energy in aggregate terms with an overly focus on a limited set of metrics (GWs, share of generation etc), as this entails risks of obscuring the underlying connections to development, communities and people.

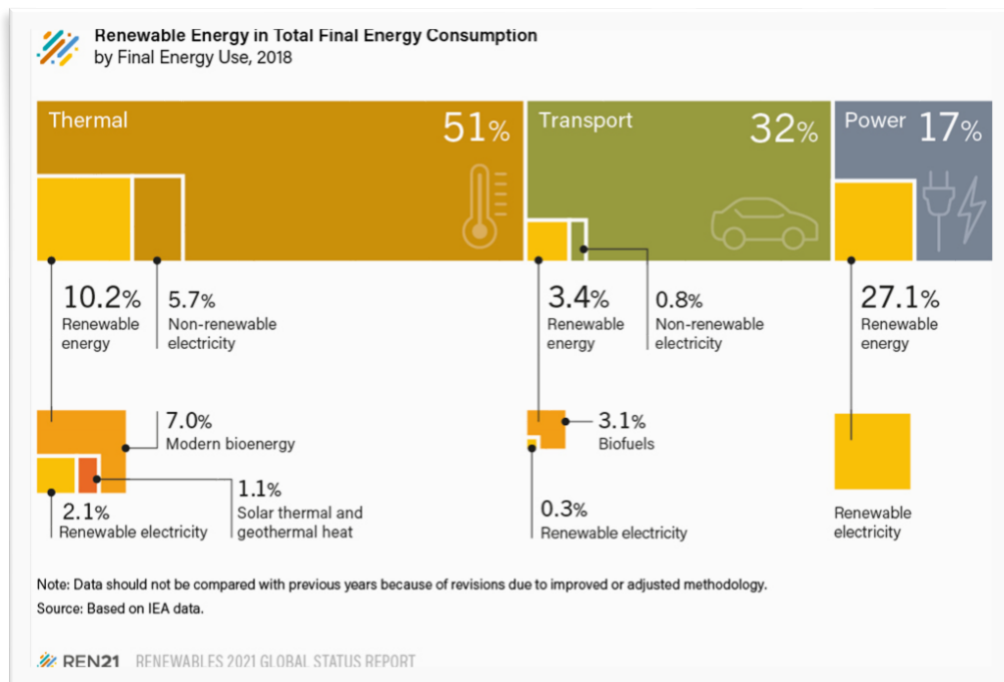
As discussed further in this document, the nature of “development” and what current and future energy use should be directed to is as important. All countries – poor and rich, need to challenge their current direction and engage in serious redirection and reprioritisation of their development models. The current dominance of narrow, mainly neo-liberal and corporate-centred discourses will need to give way to alternative, people- and nature centred development models.

## Current renewable energy situation and trends

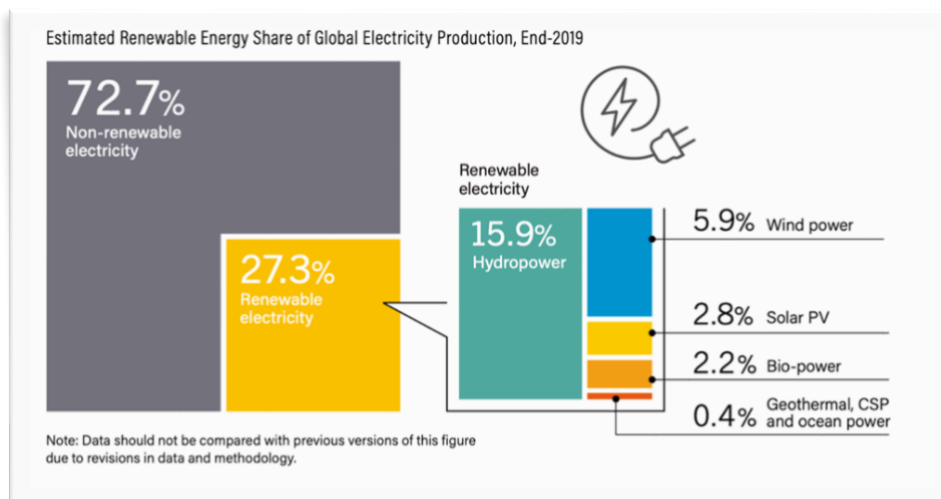
The current renewable energy situation can appear paradoxical. Renewables are clearly on the rise, with new investments amounting to 75% of all new power generating capacity, with both wind and solar PV already cheaper than new-built coal in most countries (REN21, 2020b; Bond et al., 2021)). These observations may convey the impression that transformative change is indeed underway, and that the transition to 100% renewable energy will happen by the very momentum of competitive pricing and increasingly positive public perception of renewables as real and desirable alternatives. Unfortunately, this is far from the truth. While there is positive change, it is happening too slowly, and starting from a low level. Renewable energy needs to replace the whole current fossil fuel infrastructure in a matter of decades.

The Renewable 2020 and 2021 Global Status Reports from REN21 illustrates the situation and the barriers to overcome (REN21, 2020b); (REN21, 2021):

- While there is much focus on renewable energy, energy efficiency is as important and urgent. A transition to 100% renewables that caters to all needs can only be achieved if overall energy use for any given service is reduced.
- Renewables have grown rapidly, but mostly in the electricity power generation sector. Advances in the much larger heating, cooling and transportation sectors have been slow and disappointing. Most countries have so far neglected policy frameworks, regulations and incentives to promote renewables for heating/cooling and transport. Renewables currently only constitute 10,2% of the world’s heating and cooling, and 3.4% of the world’s energy consumption for transportation, which is in turn dominated by often problematic bioenergy and biofuels. Renewable electricity only provide 2,4% of the total energy consumption for heating, cooling and transport.

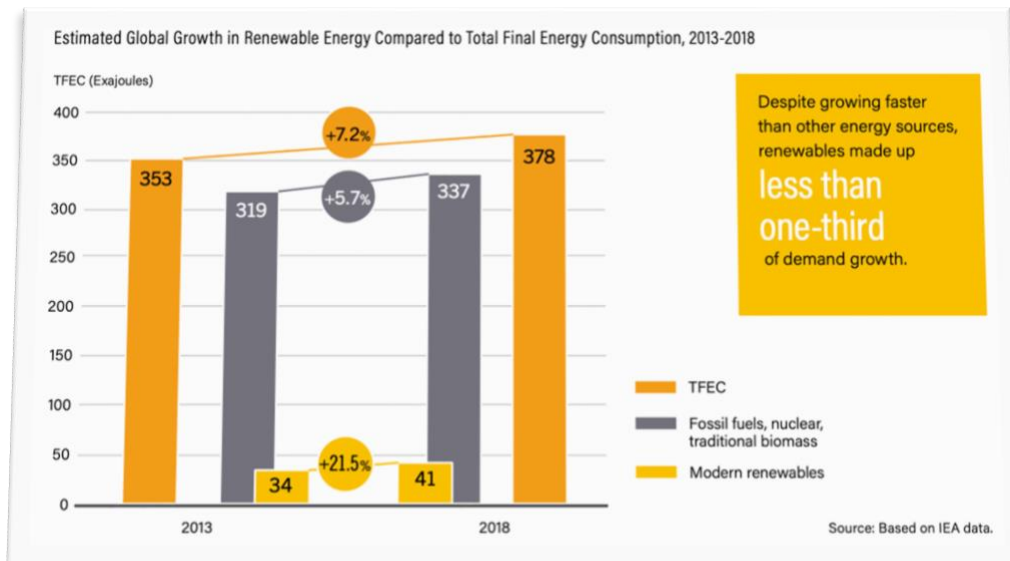


- Renewables currently constitute around 27% of global electricity power generation (including large hydro), with wind only providing 5,9% and solar PV 2,8%. Considering that fact that electricity power generation only constitute 17% of the world's Total Final Energy Consumption, wind currently provide about 1% of *total* energy, and solar PV 0,5%. Growth rates need to be very significant in order for these energy sources to constitute a major bulk of world energy generation capacity over only a few years and decades.



- In order to make both heating/cooling and transportation based on 100% renewable energy, there will need to be significant electrification (powered by renewable energy) of these sectors, which requires much higher growth rates of particularly solar PV and wind (these sources must not only replace the current 72% non-renewable electricity generation, but also cater to a much expanded power generation sector).

- While renewable energy deployment as part of Total Final Energy Consumption (TFEC) is increasing steadily (a 21,5% increase between 2013 and 2018) so are fossil fuels, which in *absolute* terms outpaced growth in renewables with 2:1. REN21 concludes that between 2013 and 2018 “[B]ecause of the ever-growing demand for energy, the continued support for fossil fuels and the lack of adoption of renewables in all sectors, the progress made by renewables is not fast enough to compete with rising energy demand. Demand for renewable energy grew three times faster than demand for fossil fuels and nuclear over a five- year period, but it accounted for less than a third of the total increase in final energy demand. This means that the *share* of renewables is only barely increasing.” (REN21, 2020b).



- Although most countries have some kind of renewable energy targets (172 countries) and policies (161 countries), there is a large untapped potential for efforts to put in place effective policies, regulations and incentives to greatly accelerate renewables deployment.
- The playing field is generally tilted the wrong way, and still in favour of fossil fuels. Fossil fuel subsidies amounted to around USD 400 billion in 2018 (an increase of 30%), which is more than double what governments spent on renewable energy power. In some countries, such as Germany, there has even been a backlash to its previous “Energiewände” with contraction of the renewable energy market.
- The REN21 report also provides indications of how the renewable energy roll-out is taking shape. It notes for example a trend where corporate and larger utility-scale investments are favoured (through tender rather than feed-in policies – see also later sections). It notes that while this on one hand have favoured fierce competition with “cut-through bids”, this also results in thin margins for many developers and manufacturers. While this trend has resulted in lowered cost, it has also contributed to “ongoing consolidation”. Such concentration of corporate power and the crowding out of smaller actors (including communities and cooperatives) goes against the visions and principles of energy democracy and people-centred energy systems.

While recognising the scale of the challenge, the REN21 report also shows that the necessary renewable energy transition can be achieved. Effective and proven policies and government interventions are available: targets, redirected subsidies, guarantee systems, feed-in policies, tenders, standards, regulations, bans etc can all be applied at scale.

The Carbon Tracker report “The Sky is the Limit” likewise outlines the potential for renewable energy in juxtaposition to fossil fuels. It argues that it is possible to capture 100 times the current global energy demand through current renewable energy technologies, and that by 2030 renewable energy will have economic potential to meet 90% of the global energy demand, due to continuously falling costs for these technologies. The report does not delve into issues around just transition, resource constraints and issues around policy requirements and barriers that remains even as renewables become more competitive, but does highlight the potential of renewable energy and how fossil fuels are unavoidably set to decline (Bond et al., 2021).

## Renewable energy systems

As the struggle between fossil fuels and renewables play out, the tensions between different kinds of renewable energy systems will likely take over as the primary area of contestation over the coming years and decades (Abramsky, 2010). As the world transitions to 100% renewable energy, it is far from clear under what forms this will take shape.

Since much of the energy infrastructure are long-term investments, the shape of the transition will be influenced by early choices and priorities.

In essence, there is a continuum of options with centralised, large-scale, grid-centered systems at one end, and small-scale, distributed, localised and more or less autonomous systems on the other. Neither is likely to materialise as pure alternatives; the question will rather be what relative proportion and mix there will be.

Most forms of renewable energy have inherent characteristics that makes them distinctly different to fossil fuels, and conducive to distributed and more people-centred energy systems.

Most importantly, renewable energy (except bio-energy) have no fuel costs, and can be harnessed almost everywhere. Wind and sun are available at most places and are free to harness. Small-scale hydropower potential can be found in many places. Marine sources (wave, tidal) are available for countries with coasts, while geo-thermal energy is more limited in its availability. Most of the renewable energy forms can be made available at different scales, and some (particularly solar PV) are inherently modular and scalable over time.

This distributed nature of renewable energy sources makes renewables prone to local solutions and diverse sets of owners and developers. Coupled with smart grids and uniform standards, the renewable energy systems of the future can be highly dynamic and versatile, with a mix of renewable energy sources at different scales (from micro to utility-size). Renewable energy production can become an attractive source of income generation by large numbers of consumers of energy (households, communities, companies, public services), allowing for a revolutionising “mushrooming” of relatively small, energy generation facilities across communities everywhere.

Local minigrids can be set up rapidly and simultaneously in communities across whole countries. In places far from existing, national grids, island minigrids can be installed, which can in turn become interconnected over time with each other and/or the main grids.

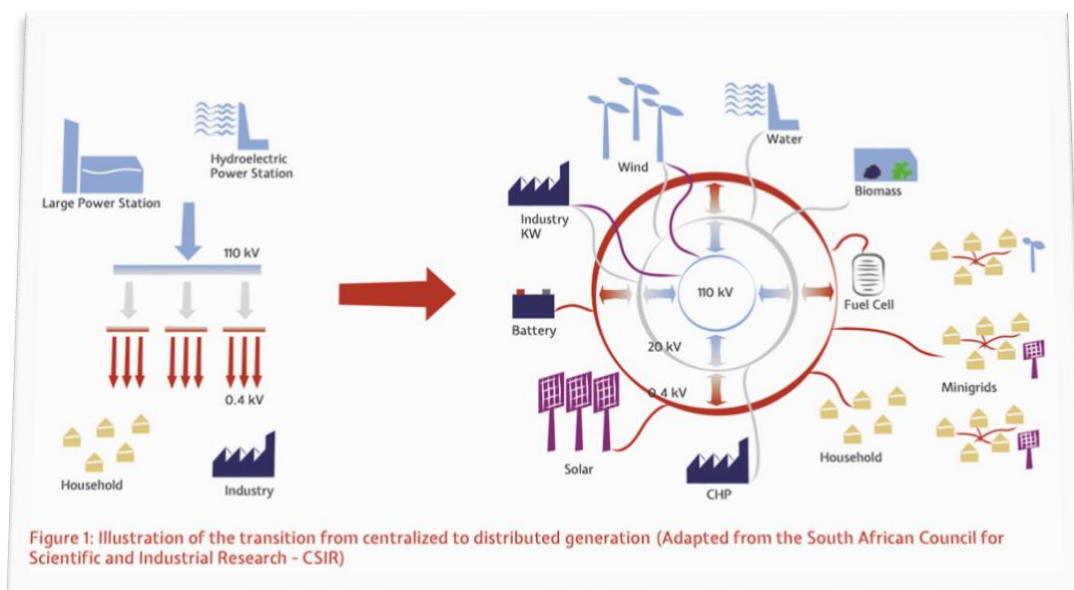
The smart grid technologies allows for interconnection of highly variable energy sources, and will make it possible to use numerous smaller electricity generation instalments to constitute de facto “virtual power plants”, that in their aggregate form can deliver resilient and redundant power for the most demanding electricity consumers, including heavy industry (Bischof-Niemz

and Creamer, 2018). Already, Denmark shows how it is possible to power the grid with 60% of highly variable wind power and some solar PV (REN21, 2020a).

These new, distributed and people-centred renewable energy systems will allow developing countries to leap-frog and focus on cutting-edge, smart solutions for the future. Richer countries with more advanced energy systems will also find reasons to transform their systems to increasingly smart and distributed systems in intricate interplay with existing centralised components. A new narrative can take over where distributed renewable power is more cutting-edge than the construction of vast wind farms or solar plants (not to speak about coal and natural gas fuelled power plants).

The LDC Renewable Energy and Energy Efficiency Initiative Framework formulates the vision of a new renewable energy model as: "This distributed nature of renewable energy production enables entirely new sets of actors to contribute as energy generators. Households, small-scale farmers, small and medium-sized enterprises, cooperatives large and small, community associations, public institutions such as schools, hospitals and government offices, as well as larger companies and utilities can all become producers of energy in this new system. This in turn enhances resilience, provides opportunities for income generation and boosts local economies, leading to locally adapted industrialization. This co-existence of energy generation at different scales, ranging from households to mini-grids to large power plants will together cater for all energy needs, including heavy industry and large urban areas. With their flexibility, modularity and scalability, smaller, distributed projects can be initiated simultaneously – off-grid, micro/mini-grids and on-grid – with significantly reduced construction times as opposed to several years for large centralized installations. Beyond electricity, distributed non-electrified systems also provide heating, cooling, transportation and other needs locally" (LDC REEEI, 2018).

These distributed and smaller-scale renewable energy solutions are well positioned to enhance local economic development, energy access, social cohesion, and other development co-benefits, in both the global South and North. Their successful deployment is however dependent on enabling environments in the form of appropriate policies, guarantees/incentives and other forms of government interventions (Bischof-Niemz and Creamer, 2018; EUEI PDF, 2014).





It is important to note that the highlighting of smaller-scale, distributed approaches does not mean a rejection of larger/utility scale instalments. These have relevance and can provide significant contributions to the grid-oriented power production in combination with the many other sources of power. The key is to understand their potentially negative impact on local populations and ecosystems, and the need for stringent safeguards, and local participation in any planning and decision-making around any such projects.

## People-centred energy/energy democracy

The issue of ownership and control of the new renewable energy systems are also at the core of the energy transition, where renewables offer potential for vastly different kinds of arrangements compared to the current, centralised and corporate/utilities-centred fossil fuels systems.

With the right kinds of approaches and frameworks, the renewable energy revolution can also spur an energy democracy and people-centred, local development revolution.

Such renewable energy systems with a significant share of locally and publicly owned energy production can strengthen democratic control, foster local economic development, create local jobs, boost local investments, enhance local public services, retain economic value locally, reduce inequalities and energy poverty, and empower citizens to take control over other vital dimensions of their lives and local societies.

The European Community Power Coalition states in its 2019 Vision statement that: “In order to address global challenges such as climate change and socio-economic inequities, Europe’s future energy system must be sustainable, carbon-free, socially fair, publicly owned and controlled by local communities and people. We believe that a decentralised and 100% renewable energy system is both possible and necessary - while our energy demand must decrease. We demand an end to the control over our energy systems by a handful of large utilities, and we demand that EU citizens are put at the heart of our energy transformation” and that “By 2050, at least half of EU citizens could be producing their own renewable electricity, meeting at least 45% of the EU’s electricity demand” (The Community Power Coalition, 2019).

Examples of community energy abound from across the world, with diverse examples of ownership and governance arrangements. Citizens are running renewable energy plants through co-operatives, community and development trusts, foundations, non-profit customer-owned enterprises, partnerships, housing associations and community associations, with a flourishing of experimentation and social innovation taking place. Such schemes are implemented from the smallest to utility scales, with sizes spanning a few to tens of thousands of members (REN21, 2016; Friends of the Earth Europe et al., 2020; Fairchild and Weinrub, 2017).

Energy cooperatives have been on a steady rise in Europe over the last decades, with roots in the Danish wind revolution of the 1970s. More than 2800 energy co-operatives were in operation in Europe by 2015 (REN21, 2016). [REScoop.eu](http://REScoop.eu), the European federation of citizen energy cooperatives represent over 1500 cooperatives and 1 million citizens.

Several of these cooperatives provide the pooling of revenues into services to benefit the whole community and local development. Other cooperatives serve the more strictly defined membership of the entity running the power generation plant. There are also common examples of local governments managing and operating local power utilities in collaborations with community co-operatives (‘municipalisation’ in the US and ‘Stadtwerke’ in Germany).



There are different drivers and reasons behind these various kinds of community power, with often a combination of several motivations. These include economic benefits, enhanced control over the energy generation and social and environmental benefits. Public acceptance of renewable energy is correlated to the level of community involvement, as can be seen in for example Denmark. Wind power, which was exclusively community based and widely endorsed by the Danish population in the early days, is now facing increasing hostility as deregulations have allowed domination by large, corporate wind farms without local community involvement.

From the many examples and long history of community energy it is evident that these kinds of approaches have the potential to play a significant role in the energy transition to 100% renewable energy. Yet, it is evident that in order to do so, effective policies and enabling environments need to be established (REN21, 2017). The German "Energiewende", with its ambitious policies and incentives for renewable energy, including for households and community energy, was a direct result of sustained pressure and activism from civil society and communities. As a result, 42% of the renewable electricity generated in Germany 2016 was produced by citizens or projects with strong public participation (Friends of the Earth Europe et al., 2020).

Successful policies to promote community energy include feed-in tariffs with purchase obligations and guaranteed prices, specific policy frameworks for local participation (as e.g. in Denmark and Scotland), net metering, financial support mechanisms such as tax credits, incentive schemes, and credit provision. Ambitious capacity building and training schemes are also of critical importance, since community energy schemes are often pursued by people without prior experience who are not energy developers as their primary professions. There is also great potential in the application of successful participatory methodologies from other sectors (such as agriculture and disaster risk reduction) to renewable energy efforts (Wu et al., 2016).

In most countries, however, the necessary conditions for a substantive surge of community energy schemes are lacking. The 2016 REN global outlook concluded that "Although the number of community energy projects is increasing worldwide, driven by an ever-diversifying set of possible models, challenges persist. A coherent and comprehensive policy framework that integrates community energy across governance levels and sectors, as well as building capacity and expertise, is needed to realise the full potential of community renewable energy" (REN21, 2016).

In fact, several trends and policy developments in the last few years have even countered the promotion of community energy. In Germany, large utilities and corporations who were late moving into renewables have successfully lobbied for reforms that favour auctioning while reducing the feed-in tariff schemes that enabled small and unexperienced entities (farmers, households, cooperatives and communities) to invest in wind and solar PV. Corporate interests are effectively countering the diverse ownership that materialised as a result of the earlier policies. Reverse auctioning can work for larger utilities, but is generally harmful for distributed and smaller-scale initiatives (Bodnar et al., 2020).

## 100% Renewable energy scenarios

The IPCC 1,5 degree report outlines four scenarios for keeping below 1,5°C - scenarios P1 to P4. These scenarios differ in their assumptions of how much negative emissions technologies (particularly Bioenergy with Carbon Capture and Storage - BECCS) are assumed, to what extent nuclear power are factored into the energy mix, and the assumed amount of reductions in

energy use from lowered consumption and energy efficiency. The results are strikingly different, with the P2-P4 scenarios allowing for significant temperature overshoot (with higher risks of crossing tipping points), a much delayed phase out of fossil fuels, and hence less ambitious and rapid deployment of renewable energy (Masson-Delmotte et al., 2018). From a climate justice point of view, only scenario P1 seems justifiable (with the caveat that it still includes assumptions of some nuclear power).

## A modelling example: Achieving the Paris climate agreement goals – global and regional 100% renewable energy scenarios with non-energy GHG pathways for +1.5°C and +2°C

The global and regional modelling underlying the scenarios presented in the study “Achieving the Paris Climate Agreement Goals” under the scientific leadership of Professor Sven Teske, University of Technology Sydney (UTS) provide indications of how a 100% renewable energy transition could take place globally under conditions that are more stringent than the IPCC P1 scenario for 1.5°C (Teske, 2019). Like the P1 scenario, this analysis does not assume any deployment of BECCS, but it also excludes nuclear power. The model does not assume any overshooting, and only includes ecosystem removal of carbon dioxide that may be justified from a biodiversity and ecosystem integrity point of view, such as restoration of wetlands and forests and reduction of logging (amounting to 152 Gt C in total) (Teske, 2019).

The model furthermore assumes a significant improvement in energy efficiency and “decoupling” of energy demand from GDP, with global energy intensity declining from 2.4 MJ/USD\*GDP in 2015 to 0.59 MJ/USD\*GDP in the 1.5°C scenario.

Given these conditions, the model assumes a total global energy demand of 253 Exajoule per year by 2050, with an electricity demand of 65,300 TWh/year in 2050 of which wind, solar and geothermal energy would provide 83% of the total electricity generated. In this scenario, renewable electricity would provide 62% of all energy by 2030 and 88% by 2040. In 2030 73% of all electricity produced would need to derive from renewable sources, and be generated by 9500 GW of installed renewable energy capacity. The required generation capacity to enable 100% renewable energy by 2050 would amount to 25 700 GW. The building of this power would be generated through variable sources (mainly wind and solar PV), up to 65%, with Concentrated Solar Power (CSP) playing a key role as dispatchable and secured power generation to cater for intermittence and peak demands. The cumulative CO<sub>2</sub> emissions under this 2015-2050 scenario amounts to 450 Gt.

This 1.5°C scenario furthermore assumes a phase out of 618 GW of coal and lignite power plants (approximately 515 power stations) by 2025, to be replaced by a variety of renewable energy power sources. The model factors in the uneven distribution of current energy production, assuming a 534% increase of maximum load capacity for Africa by 2050, while assuming a corresponding reduction of 87% in OECD countries by 2030. This figure will then increase to 116% by 2050 in order to cater for the increased electrification where the electricity power sector will take over energy production from fossil fuel sources in transportation, heating and industry sectors. The model also factors in sharp expansion of storage, and particularly battery technologies to address, together with CSP and (for a short transition moment) gas, the challenges of variable power supply from wind and solar.

The study's cost estimations conclude that the 100% renewable energy scenario does not entail significantly higher costs than a business as usual scenario when it comes to the direct costs associated with the various energy systems. Total electricity supply costs are roughly similar

(slightly lower for the 1,5°C scenario). The upfront investment costs into power generation construction is significantly higher for the 100% scenario (about USD 51 trillion in total), but this costs difference is on the other hand avoided from decreased fuel costs. Of course, the avoided costs from tipping the world onto catastrophic global heating are incalculable.

The model also considers impacts on jobs and just transitions and concludes that the 1,5°C scenario will “generate more energy-sector jobs in the world as a whole at every stage of the projection”. The study also considers the mineral and metal requirements under various scenarios, with the recognition that demands for cobalt and lithium are of major concern considering the currently known reserves. This means that stringent and bold recycling and re-use programmes must be put in place as a matter of urgency, while much efforts must also be directed to increasing efficiency of material use and search for replacement alternatives. These efforts are also important from climate justice and just transition reasons alone.

The conclusion of the study is that indeed technical possibilities exist for the necessary, rapid transformation of the global energy systems to 100% renewable energy within the next few decades. From a cost point of view this is also affordable, and a win even when narrowly considering the fuel costs of fossil fuel based scenarios. When factoring in the indirect costs of climate breakdown, the economic gains from a 100% renewable energy trajectory are nearly infinite, given the unfathomable costs and suffering from climate catastrophe and crossed tipping points.

The challenges amount to creating the kinds of responses that can effectively ensure a change of course here and now. Crucial investments in the renewable energy systems must be enabled immediately – overcoming the barriers of high upfront capital costs and need for developers to know their investments are safe. Policies and long-term plans and other regulatory interventions are critical to enable the 100% renewable energy scenarios.

The 100% renewable energy study by Teske provides a valuable contribution to energy strategizing and planning. A recent article “It Is Still Possible to Achieve the Paris Climate Agreement: Regional, Sectoral, and Land-Use Pathways” further substantiates these findings with some updated numbers, including a sensitivity analysis showing the significant implications of only a few years delay in execution of these renewable energy trajectories ((Teske et al., 2021)). Underlying this global study are also more granular and fine-tuned studies at country levels by the same team, that include data on e.g. community compositions, geographic renewable energy potentials, estimated load curves, local economic development needs etc.. The concluded studies for Bangladesh, Costa Rica and Tanzania all point to similar conclusions that 100% renewable energy systems are technically possible to cater to the projected increased energy use needs, and indeed provide overall direct cost savings (Teske et al., 2019; Teske et al., 2020; Teske et al., 2017; Dubbels et al., 2020).

For the FFNPT Initiative it appears valuable to support these kinds of analyses and efforts, which needs to be continuously updated and refined. One important aspect of the analysis already undertaken through the FFNPT process is an estimation of what energy requirements the establishment of the renewable energy infrastructure itself will entail, which will show how the renewable energy revolution can essentially drive its own energy requirements in combination with the rapidly diminishing fossil fuel production under the 1.5°C scenario. The recent report commissioned by FFNPT Initiative *Fossil Fuel Exit Strategy: An orderly wind down of coal, oil and gas to meet the Paris Agreement* shows how renewables can replace all fossil fuels by 2050, with the biggest reductions within the near 10-15 years (Teske and Sarah, 2021).

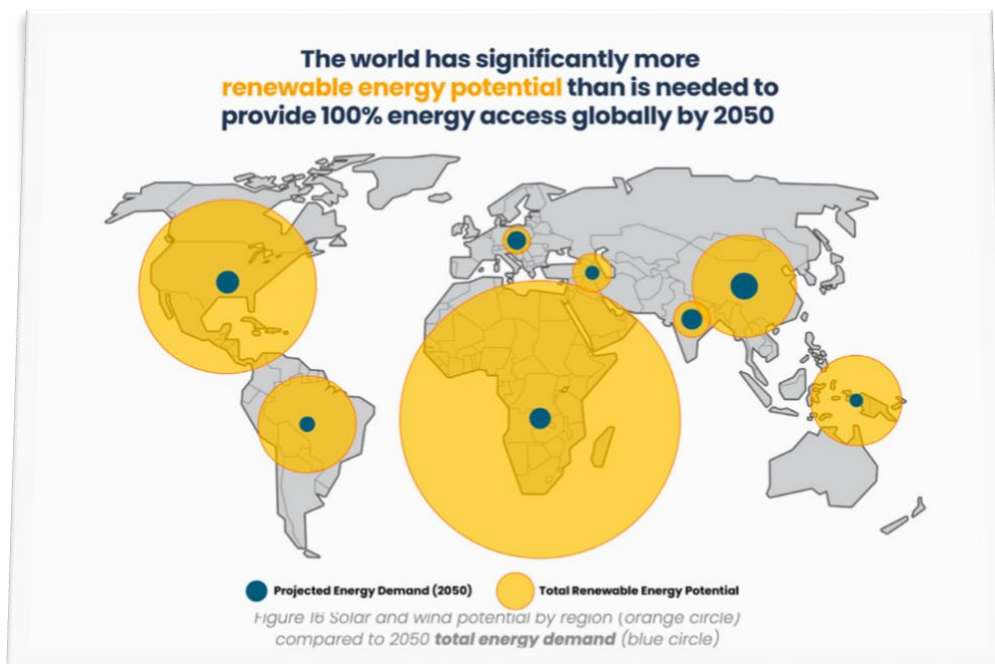


Figure from the report *Fossil Fuel Exit Strategy* (Teske and Sarah, 2021).

## Other approaches and scenarios

Pillar III strategies need to take into consideration a range of studies around possible energy transition scenarios, and enable further research and analysis. It would, for example be valuable with focused workshops and interactions with representatives of different approaches and modelling methodologies.

Another study outlining the feasibility and costs of a 100 % renewable energy scenario by 2050 (80% by 2030) is that of Marc Jacobson's research group at Stanford University. This modelling points to the feasibility of 100% renewable energy provision of all energy needs without CCS, nuclear power, liquid or solid biofuels or natural gas, with significant cost savings and close to 25 million new jobs created (Jacobson et al., 2017).

A relevant country case study outlining possible scenarios towards renewable energy is presented in the study "South Africa's Energy Transition: A Roadmap to a Decarbonised, Low-cost and Job-rich Future" by Tobias Bischof-Niemz (former Director of the energy division at the South African Council for Scientific and Industrial Research (CSIR)) and Terence Creamer. While diving deep into the specifics of the South African energy situation, many lessons and insights can be drawn for planning and scenario-building in other country contexts. The study shows convincingly how a rapid transition to a renewable energy system for this coal dependent country makes both economic and climate sense, and would bring social and jobs benefits overall. The study elaborates in detail how the new electrified and smart, distributed renewable energy systems can be rapidly deployed and ensure superior services and resilience, while also strengthening energy democracy (Bischof-Niemz and Creamer, 2018).

An urgent research priority, which the FFNTP process could support, would be to contrast these and other scenarios and trajectories, both in terms of methodologies and assumptions. A key question to interrogate is that of overall energy use from an equity perspective – how much future energy use and production is it reasonable and possible to assume? How much do different segments of the world population need to adjust their current per-capita energy consumptions?

## The problems with IEA and the World Energy Outlook

Given the agreed benchmark of 1,5°C in the Paris Agreement, it would be expected that the International Energy Agency (IEA) would have produced robust energy scenarios aligned with this goal for many years. This has not been the case. Rather, the IEA's annual flagship report the World Energy Outlook (WEO) has consistently framed scenarios and analysis with a heavy bias towards their "Stated Policies Scenario" (STEPS), which WEO 2019 acknowledges would lead to a catastrophic 2.7-3.2 °C global warming (International Energy Agency, 2019). Given the status and weight of IEA among energy ministries and other authorities around the world, this framing have caused harm and delays in the swift transition to renewable energy.

Only after consistent pressure from civil society, has IEA began to shift, and introduced in its 2020 WEO for the first time a scenario that claims to consider a 1.5°C aligned scenario. Civil society and other critiques highlighted severe flaws and limitations of this first approach (such as downplaying its conclusions, only modelling to 2030, assuming high degree of fossil fuels by assuming huge amounts of unproven CCS and unsubstantiated assumptions of major negative emissions beyond 2050), and mounted further pressure on IEA to conduct the 2021 study with a genuine, transparent 1,5 scenario that does not unduly favour fossil fuels (Tong, 2020), (Oilchange et al., 2020).

The IEA 2021 study "Net zero by 2050" has taken steps in the right direction, particularly in its recognition that further fossil fuel expansion is neither needed or justified under a 1,5°C scenario. Still, however, the report has numerous flaws, with chronic biases in several regards. The scenario now assumes "net-zero" by 2050 rather than 2070, but assumes continued near-term expansion of both gas and oil, much smaller reduction rates of fossil fuels that either IPCC P1/P2 scenarios or the Production gap scenarios, and assumptions of massive and completely unrealistic building up of CCS infrastructure, as well as ungrounded assumptions of BECCS and DAC. It is also not clear how this 1,5°C analysis will shape the next World Energy Outlook report (Agency, 2021); Oil Change (International, 2021).

The FFNTP Initiative may find opportunities for engaging with and help boosting the efforts to impact the IEA further during the coming year together with civil society allies in the lead of this important work.

## Renewable energy policies and interventions: What is required?

The transition to 100% renewable energy requires a mix of adequate policies and interventions, which will differ between countries and societies. There are no simple blueprints, nor silver bullet solutions. The transition will necessarily be messy, contradictory and at points conflicting.

Yet, it is clear that there is need for bold, long-term planning and efforts to harmonise and create comprehensive compilations of policy approaches that are programmatic and that can leverage wide-spread action on the ground across societies. A few areas of intervention stand out, and would likely be relevant for most country contexts. Additional equity and just transition requirements are further highlighted in the following section of this document.

## Energy access

It is key to recognise that energy is as much a question of development and well-being as it is a matter of importance to climate. Any efforts to transform the energy systems towards renewable energy must keep the imperative of ensuring and delivering sufficient access to energy to all as a central focus.

Energy access is a huge and primary concern in most of the poorest countries, with up to 90% of populations in some countries lacking access to electricity, but also a concern in many more wealthy societies. Poor and marginalised people in many societies lack access to a minimum of sufficient energy.

Globally, about 1 in 10 person – 770 million people – do not have access to electricity for even the most basic needs, and 2,6 billion rely on dirty and unhealthy biomass (coal, animal waste, charcoal) for cooking. A staggering 800 000 children die each year from exposure to indoor air pollution. On average, Sub-Saharan Africa has less than 50% access to electricity. Citizens of wealthy countries generally consume more than 10 times energy and more than 100 times more electricity than citizens of many least developed countries (The World Bank, 2021; International Energy Agency, 2021b; International Energy Agency, 2021a).

While energy access is highlighted as part of the distinct Sustainable Development Goal 7 calling for “affordable, reliable, sustainable and modern energy for all” by 2030, it also underpins almost all other goals. Access to sufficient energy is a prerequisite for most of the essential requirements for well-being.

## Long-term planning

Long-term plans for the energy transition are key for strategic decision making. Such plans also serve the narrative requirement to make the vision of 100% renewable energy tangible and desirable. Only with a conviction that the renewable energy transition is practically possible, will decision-makers be ready to champion and advance such agendas.

Long-term planning for 100% renewable energy futures are still rare, with scope for further methodology development .

The work by the research team at Institute for Sustainable Futures (ISF), University of Technology Sydney (UTS), led by Sven Teske, have undertaken both a global analysis of the feasibility, options and costs for 100% renewable energy pathways, as well as several detailed country studies (Teske, 2019). The study for Tanzania shows, for example, how the country could increase its overall energy use by 40% between today and 2050, while going fully renewable (including heating/cooling, transportation etc.), and how this would even save total costs compared to business as usual scenarios (without factoring in the enormous savings from avoiding climate related impacts) (Teske et al., 2017).

It is essential that work on long-term plans are rooted in local, and country-specific contexts. Long-term planning efforts need to involve both governments and stakeholders within countries and be undertaken in participatory ways with multi-stakeholder engagement.

## 100% renewable energy targets

Target setting, and particularly 100% renewable energy targets, has proved one of the most important measures for initiating and accelerating the renewable energy transition. Targets give jurisdictions from local communities and municipalities to national governments mandates to



develop concrete policies, regulations and incentives. They also provide opportunities for engaging the public in participatory policy development processes.

Targets can differ widely, and it is important to be clear and transparent in what is entailed in the 100% renewable energy commitment, and ensure it can be further strengthened over time. Is it covering all sectors or only the power sector or transportation? What geographical area is covered? Does it place requirements on e.g. renewable energy driven production of the renewable energy technologies that are deployed in the area? Are only renewable energy allowed in the territory, or is some non-renewable energy use allowed if it is off-set by export of renewable energy to other areas?

## **Bans, regulations, emissions/technology standards and public procurement**

Bans, regulations, emissions standards and public procurement regulations are proven ways to accelerate the renewable energy transition. Decades of market-oriented approaches seems to have clouded the understanding of what is actually possible to enact through decisive and clear regulatory measures for the common good. Interestingly and encouragingly, the Covid 19-pandemic crisis has opened up new spaces for bold, regulatory, “non-market” action, which needs to be further advanced and scaled up also for the climate and energy transition.

Governments can, to mention just a few examples, immediately establish requirements for all suitable new public buildings to have roof-top solar (and also to set up programmes to add this to already existing buildings), only allow public procurement of non-fossil public transport systems and organic foods, implement stringent maximum emissions levels for new cars that effectively only allows for the most efficient cars to be sold, or require all new buildings to be passive heating/cooling with zero energy requirements .

## **Capacity mobilisation and building**

The energy transition requires mobilisation of existing capacities and an unprecedented expansion of resources and schemes for training. This is a bottleneck and often neglected area that will be crucial for successful implementation of the surge of renewable energy projects and policy making that are required. It is also an area that requires early, pre-emptive action since training and infrastructure development takes time. Planning and strengthened capacity to build capacity must begin now.

It is essential to be sensitive to the many hurdles and even colonial mindsets that are often embedded in north-south dimension of capacity building. In a recent article, Youba Sokona reflects on his four decades of engagement in the field and notes that capacity should be understood as “the ability to chart a course and to make and implement the decisions indicated by this course. This involves being able to create strategies and policies, and to formulate the types of institutions and mechanisms that are needed in order to achieve specific goals that have been identified out of the realities of particular contexts. The notion of capacity is tightly tied to self-reliance and self-determination and goes beyond the narrow approach of training, education, and technical assistance. Accordingly, capacity is not the ability to implement someone else’s agenda but the ability to set and pursue your own agenda and, in that sense, it should be a core element of any development narrative. Capacity building, sometimes referred as capacity development, should start first with assessing and mobilizing existing capacities as a minimum level of capacity may be available in any existing context” (Sokona, 2020).

The capacity mobilization and capacity building necessary to undertake the energy transition must not be underestimated, and may be more daunting than the task of planning and operationalising the engineering and project management dimensions. Yet, the scaling up of capacity building must not be rushed and streamlined with top-down, externally imposed schemes. Sokona asserts that “[D]evelopment aspirations and the associated agenda should be the basis for determining capacity requirements, which in turn should be the basis for defining capacity-building priorities. Focusing on development shapes all aspects of capacity because it places at the heart of any capacity related effort the people whose wellbeing are the focus of attention along with their institutions and operational systems... While ideas or specific forms of knowledge can be borrowed or used as inspiration from one context to another, development and thus capacity mobilization and building happen in situ through problem-solving aimed at the specific challenges to wellbeing as defined and faced by particular people (Sokona, 2020).

## Energy efficiency

Energy efficiency policies and regulations are as important as efforts to promote renewable energy. As is clear from the 100% renewable energy scenarios discussed earlier, assumptions of substantive gains in energy efficiency are integral to all models. It is not possible to install the renewable energy production to serve all energy service needs without making each Watt deliver more than currently. Energy efficiency reduces the required costs, material needs, impact on ecosystems and provide more services for any given investment. In most cases, the gains and earnings from enhanced energy efficiency are the most cost-effective ways of advancing the agenda towards zero-carbon. Energy efficiency policies must go hand in hand with renewable energy efforts. It makes much sense to implement strict regulations, conditionalities as well as incentives for energy efficiency as requirements and conditions in direct connection with renewable energy projects. Potent energy efficiency measures include, for example:

- Appliance standards
- Building codes
- Commissioning and retro-commissioning for buildings
- Labelling and certification programmes

## International energy systems standards

As the distributed, smart and diverse new renewable energy systems expand, it is essential to ensure international, well thought through standard setting to enable the most flexible and streamlined opportunities for integration and sharing of technologies. Such measures should be undertaken immediately, before unnecessary and costly lock-ins of less than optimal and non-compatible equipment: “The energy sector requires both very specific measures, such as grid codes and efficiency standards, and overarching measures. International collaboration and co-operation are required to define and implement mandatory standards and to effectively develop energy policy and its regulative interventions.” (Teske, 2019) p 482.

## Access to credit and capital

For particularly smaller developers, access to credit for the upfront investments are common hurdles. Given the high initial costs of capital (CAPEX) for renewables, investors need to mobilise a large part of the lifetime costs of renewable energy power generation installations upfront. With the favourable and competitive costs for renewables, there should be interest from both



public and private creditors to provide such capital as a significant source of revenue or returns. Unfortunately this is not yet the situation in many places. Many banks and creditors are not acquainted with renewables as safe projects and interest rates, particularly in developing countries, can be exorbitant.

For a renewable energy revolution to be possible, access to upfront capital will need to be vastly expanded and made more accessible. This can only happen at enough scale and speed by directed, bold government interventions. Government backed payment guarantee schemes (see below) would for example provide confidence to lenders that renewable energy projects are safe long-term investments, which should allow for favourable interest rates on loans. As short- and medium term interventions, governments and public institutions (including national, regional and global development banks) need to put in place credit schemes and other measures that boost lending, and quickly accelerate the shift of perception towards renewable as safe and attractive areas for creditors. Short-term public interventions include provision of low-interest lending (particularly to smaller and less experienced developers), guarantee schemes for lending institutions, concessional credits, training to conscientize lenders and various regulatory interventions.

The FFNPT Initiative process, and a Treaty as such, could play important roles in helping redirect capital and enhanced credit opportunities towards renewables, particularly in the form of redirected subsidies and other public fossil fuel funding.

### Shifting of subsidies

The shifting of subsidies is a powerful measure that bridges all three pillars under the FFNPT. The current, direct USD 400 bn in fossil fuel subsidies must be effectively stopped (but with equity considerations to ensure negative impacts are not passed on to poor and marginalised groups) (REN21, 2020b). The most powerful measure would be to combine this with simultaneous redirection of public funds to promote and support renewable energy measures.

Such shifting of subsidies has significant symbolic value in linking the struggles against fossil fuels with the positive work in favour of renewables. Much work has already been undertaken to map and track fossil fuel subsidies, which it will be important to build on and connect with the various pillar III dimensions.

It should also be noted that significantly higher levels of fossil fuel subsidies can be estimated when also accounting for indirect subsidies. An updated version of IMF's analysis points to a staggering USD 5,2 trillion in 2017 in indirect subsidies if one assumes these as the difference between existing and "efficient" prices that would take into considerations public health costs from air pollution, effects of global warming etc. (Coady et al., 2019).

### Access to technology and domestic manufacturing

Access to appropriate, socially and environmentally safe renewable energy technologies will be essential for all countries, and in particular poorer countries. This is also recognised in the climate convention which highlights technology as one dimension of the necessary "Means of Implementation" along with climate finance and capacity building measures. The FFNPT Initiative may want to highlight this important dimension, and how international cooperation is required to break a system that is currently poised to favour corporate competitiveness and markets as the driving force for the spread of technology. Developing countries will need to

access the best available technologies in order to build safe, efficient and people-centred renewable energy systems, public transportation systems, industrial manufacturing and processing systems, and gain access to highest standard household appliances, rather than being dumped secondary and obsolete technologies. It is also important to ensure trade rules that allow developing countries to set up their own renewable energy technology manufacturing capacities, as important means for economic self-reliance, diversification and reduced dependencies. The FFNPT Initiative could play an important role in highlighting and revisiting existing, valuable ideas in this area, as well as fostering innovative approaches to new commons-oriented approaches to ensure the world as a whole move to the best possible technology solutions.

This is also tightly coupled with the need for precaution, risk- and technology assessment and horizon scanning as outlined elsewhere in this document.

It is also important to highlight the importance of new approaches to technological innovation and deployment in relation to wealthier countries. As discussed in the section on “Innovation” and “Horizon scanning, foresight and systems approaches” in the Economic Diversification part below, past experiences of innovative technological breakthroughs, and the combination of urgency and simultaneous need for pre-caution and risk assessments calls for strong public and government interventions along with civil society engagement.

### Sustainable and socially appropriate extraction/recycling

The transition to 100% renewable energy will require massive material input, including rare earth metals and other minerals. The social and environmental impacts of such extraction will be one of the biggest challenges of the energy transition. Already examples of unacceptable impact on vulnerable communities abound (see also the Just transition section). Energy efficiency efforts must be maximised, and energy use significantly reduced among the world’s well-off middle classes and elites, towards a global convergence of energy use at sufficiency levels. Even then, the strains and pressures exerted from the still necessary extraction and manufacture of renewable energy infrastructure will be significant, and could present some of the most substantial challenges to the energy transition. Surprisingly, many projections of the renewable energy potential seems to neglect this resource constraint dimension. The recent Carbon Tracker Initiative report “The Skye is the Limit” shows for example the enormous potential of renewable energy from a cost perspective, but does not discuss the resource constraints (Bond et al., 2021).

Strategies towards highlighting and regulating the extraction dimension of the renewable energy transition is crucial, and will need to entail enforceable restrictions, bans, safeguards and other regulations, including comprehensive recycling systems for materials. Such globally encompassing materials recycling schemes are in themselves putting- a-man-on-the-moon-like efforts that must be tackled and planned for right away. It would be relevant for the FFNPT Initiative and the treaty itself to highlight and tackle this dimension of Pillar III.

## The electricity power sector

The power sector with the share of renewable energy currently around 26% globally is the area that has received most attention and generated most achievements so far. Some of the key policies and interventions include:

### Preferential right to feed into the grid

Policies that establish the right of renewable energy producers to preferential access to the electricity grids have proven powerful and effective. Such measures – which is one of the key features of feed-in tariffs – gives renewable energy developers confidence (along with guaranteed prices - see below) that their investments into renewables are safe and that they will be able to sell all energy they produce. This measure also signals in a simple and powerful way what are societies priorities and in what direction the energy transition is heading. The effectiveness of feed-in laws are well documented, which speaks to their possible application across all countries, as also suggested in the 100% renewable energy study by Teske which concludes that “[r]enewable electricity should be guaranteed priority access to the grid. Access to the exchange capacity available at any given moment should be fully transparent and the transmission of renewable electricity must always have preference. Furthermore, the design of distribution and transmission networks, particularly for interconnections and transformer stations, should be guided by the objective of facilitating the integration of renewables and to achieve a 100% renewable electricity system”(Teske, 2019).

### Standards and infrastructure for new, distributed, smart renewable energy systems and grids

The synchronisation and streamlining of standards for smart grids and renewable energy generation technologies are essential and often neglected areas of policy making and regulation. With the increasing complexity of the distributed renewable energy systems of the future, with vastly more numbers and kinds of producers, at more diverse scales and with many different kinds of technologies, it will be essential that components match and are interconnectable. Well thought through, unified standard setting will be of importance to avoid bottlenecks and barriers to the rapid and effective deployment of such systems, and will cut costs. International cooperation is obviously essential and urgent in this regard.

The development, implementation and financing of the new, smart, multidirectional grids is a clear example of common, public goods that provide underlying infrastructure and which must be financed through public investments (and in the case of many developing countries enabled by climate finance as part of rich countries’ fair shares).

### Payment guarantees

With costs for renewable energy infrastructure rapidly dropping, and with no costs for fuels (and hence no risks associated with volatile fuel prices) for neither solar, wind, hydro or marine sources of renewable energy, the economic case for renewable energy is getting stronger by the day (Bond et al., 2021). Already, in many cases new built solar PV and wind are cheaper than both new constructions of coal and even continued operations of existing coal plants (Bodnar et al., 2020).

Yet, hurdles persist that prevents renewables from the large-scale deployment one would expect from cost considerations alone. One key aspect is the high proportion of capital investments required for renewables compared to traditional fossil fuels. Almost all of the costs for renewables lie in the upfront costs to build the necessary infrastructure (windmills, solar PV modules etc.), with very small operating and maintenance costs. The initial investment requires access to almost all capital right away (rather than the costs of fuel spread out over decades), which creates debt that must be paid back over the lifetime of the power plant. Those investing in renewable energy put all their eggs in one basket, and need to know that they will obtain continuous returns on their investments (i.e. payment for all they produce at prices high enough to cover the costs of capital). These economic uncertainties, and ironically even the continued positive trend of renewables getting cheaper, tend to discourage investments since there may not be enough certainty of sufficient returns in the future.

The establishment of public policies that create safe and predictable long-term investment conditions are therefore key, proven measures. Various forms of payment guarantees already exist, and need to be expanded to enable the renewable energy revolution that is needed. By ensuring that payments (Power Purchasing Agreements) over 20-30 years will be made at levels (tariffs) that will ensure cost recovery for the initial investment, and by ensuring that all renewable energy produced will be purchased, the developer of renewable energy is provided secure conditions to move ahead. This is particularly relevant for smaller and less experienced developers, e.g. farmers, cooperatives, small/medium-scale businesses, public entities such as schools and hospitals, and of course individual house owners, who do not have the experience or means to bid and compete on the market. Public policies are needed that crowd in investments, and enable *everyone* interested to take part in the renewable energy revolution in safe and secure ways.

There are many current and past experiences of these kinds of schemes, with much to build on and refine. Feed-in tariffs (see below), which is one example of payment guarantees, have been widely regarded as one of the most effective policy measures to promote renewable energy across numerous country contexts (Edenhofer et al., 2011). They combine a set tariff (payment level to the producer of energy) and a legal right for the renewable energy to feed-in to the grid and always be bought, hence creating a safe and easy way for developers and investors to enter the renewable energy market.

For renewable energy development that may not yet be competitive, payment guarantees can play an even more important role in also subsidising, or paying for risk mitigation, or ensuring that unfair, high costs are not passed onto poor consumers. This may be the condition in many developing countries, not least in rural areas not yet connected to the national grids. Investments here through mini grids, and additional costs for connections as well as higher relative costs associated with less favourable economy of scale for smaller entities would need to be made safe through direct policy schemes such as various forms of payment and connection guarantees.

## Feed-in tariffs

Feed-in tariffs had by 2019 been implemented in 113 countries according to REN21 (REN21, 2020b). As noted above feed-in tariffs include both preferential access for renewable energy to the grid, and a power purchasing agreement with guaranteed long-term commitment, which in combination provides a safe investment environment for the renewable energy developer. As long as they do their share by maintaining and operating the renewable energy facility they are guaranteed to be paid enough to cover the investment costs, with a safe, reasonable profit margin. For smaller and less experienced developers this is of crucial importance since it allows

for safe and easy entry into the energy markets. Paperwork is held to a minimum, and there is no need for individual bidding and risk calculations. Everyone is invited to take part as producers with a crowding in effect that can rapidly expand the number of developers, rather than singling out the ones that are most cost-competitive (or risk accepting) as happens in biddings and reverse auctioning. Feed-in tariffs was a back-bone in the German Energiewende and proved how programmatic policy programmes can kick-start a surge in investments.

Several studies and evaluations confirm the success and importance of feed-in tariffs and have they catapulted wind and solar PV development (and thereby also fast cost reductions). The IPCC Special report on Renewable Energy Sources and Climate Change Mitigation (Edenhofer et al., 2011) concluded that:

“A number of historical studies, including those carried out for the European Commission, have concluded that ‘well-designed’ and ‘well-implemented’ FITs have to date been the most efficient (defined as comparison of total support received and generation cost) and effective (ability to deliver an increase in the share of RE electricity consumed) support policies for promoting RE electricity. [11.5.4]

One main reason for the success of well-implemented FITs is that they usually guarantee high investment security due to the combination of long-term fixed-price payments, network connection, and guaranteed grid access for all generation. Well-designed FITs have encouraged both technological and geographic diversity, and have been found to be more suitable for promoting projects of varying sizes. The success of FIT policies depends on the details. The most effective and efficient policies have included most or all of the following elements [11.5.4.3]:

- Utility purchase obligation;
- Priority access and dispatch;
- Tariffs based on cost of generation and differentiated by technology type and project size, with carefully calculated starting values;
- Regular long-term design evaluations and short-term payment level adjustments, with incremental adjustments built into law in order to reflect changes in technologies and the marketplace, to encourage innovation and technological change, and to control costs;
- Tariffs for all potential generators, including utilities;
- Tariffs guaranteed for a long enough time period to ensure an adequate rate of return;
- Integration of costs into the rate base and shared equally across country or region;
- Clear connection standards and procedures to allocate costs for transmission and distribution;
- Streamlined administrative and application processes; and
- Attention to preferred exempted groups, for example, major users on competitiveness grounds or low-income and other vulnerable customers.”

In recent years, feed-in tariffs have received less favourable treatment from policy-makers, with a marked shift away from fixed tariff setting towards biddings and reverse auctioning, competitive schemes which is often attributed to the rapidly decreasing costs. This in combination with examples of governments not responding fast enough to the reductions in installation costs and consequent concerns for excessive, wasted expenditures because of too high tariff commitments seems to have contributed to the set-back. In Europe there have also been clear, concerted efforts by larger players (and late-comers) in the renewable energy field who have successfully fuelled a negative narrative around feed-in tariffs in favour of new legislation towards auctioning, where mainly large and well equipped developers can participate. While reverse auctioning can be effective in ensuring lower costs, they favour large

players who can make the necessary cost estimations and even underbid to capture market shares. The community energy movements in Europe are fighting against this negative trend and for the retention of feed-in tariffs as likely the most effective policy tool for enabling broad-based renewable energy investments by a diversity of smaller actors (households, farmers, communities, cooperatives, smaller energy companies etc.) (Appunn and Wehrman, 2019).

There have been several attempts and propositions to promote payment guarantee schemes at scale as a form of a renewable energy “Marshall plan” to make any serious actor in any country who is interested in developing renewable energy have the financial guarantees to make this possible. For developing countries, such measures would entail costs beyond their capacity and obligations, which would be supported by the international community, as concrete manifestations of the equity principles already enshrined in the climate convention. Such propositions include the Green Energy Revolution (GER) by SSNC, the Green New Deal proposed by UN-DESA and proposals by World Future Council, all around the Copenhagen summit in 2009; the FoE report Reclaiming Power in 2011 (Sabido et al., 2011), the What Next volume on Globally Funded Feed-in Tariffs (Banuri and Hällström, 2012), Global Renewable Energy Support Programme (GRESF, 2014), and the Programme for Global Renewable Energy and Energy Access Transformation (GREEAT, 2015; (WhatNext? et al., 2015)). They are also integral components in the Frameworks of the LDC Renewable Energy and Energy Efficiency Initiative for Sustainable Development (2018) and the Africa Renewable Energy Initiative (2015). In all these propositions, feed-in tariffs and other payment guarantees should be made available at the scale needed, coupled with the necessary international climate financing to enable developing countries to carry out such schemes.

It is recommended that Pillar III efforts under the FFNPT Initiative explore ways to support on-going efforts, help further develop, and explore ways to integrate these kinds of bold schemes in its framework (see strategy section below).

## Regulatory reform to enable fossil fuel based energy producers to directly transition to renewable energy

Just as long-term Power Purchase Agreements with set tariffs over decades are a powerful means to guarantee payments and ensure safe investment conditions for renewable energy, they are a major hurdle in the early dismantling of coal plants and other fossil fuels based energy production. A recent report by the Rocky Mountain Institute, the Carbon Tracker Initiative and the Sierra Club shows that by 2022 60% of the world's coal plants will not be competitive to their replacement by new-built Solar PV or wind (and associated battery storage for dealing with uneven demand and availability of sun and wind intermittency) (Bodnar et al., 2020). By 2025 it would be more economical for the owners of 73% of the world's coal plants to immediately shut them down and instead build new renewable energy to provide their customers with the same energy services. By 2025 a transformation from coal to renewables would save over USD 100 billion globally. The catch is that most coal producers are stuck with debt from their initial investments that they can only pay back through continued production of fossil energy that generates continuous payments (through high tariffs) by the customers. The companies are generally stuck with long-term Power Purchase Agreements that they can not get out of.

Through regulatory and legislative reforms, public policy interventions and creation of new financial measures, the RMI/CTI/SC report outlines how it would be possible to enable and encourage coal plants to gain access to enough capital to pay back their current loans, as well as make the necessary investments in the new renewable energy production. The savings from stopping non-competitive coal production would then have to be, through government

regulation, translated into lower costs for consumers and funds made available for just transition measures to ensure the transformation would be fair and not hurt the workers.

To dismantle coal production that is still competitive, various public financing measures that makes renewables viable for the coal plant owner could be considered, with still most of this public financing passed through to customers and workers.

In line with the section above, new renewable energy PPAs would ensure payment and tariff guarantees to make the shift to renewables safe.

## Decentralised and community energy

Community energy takes many shapes, and a multitude of policies, regulations and incentives are available and appropriate depending on particular local and national contexts. The many inspiring examples of energy cooperatives and other forms of community energy are often stories of sustained struggles and persistent efforts by dedicated citizens and groups to counter corporate power and utility monopolies, sometimes using openings in current policies and legislations, and other times through successfully challenging and changing policies. A wealth of insights of community energy successes and case studies from Europe can be found in the recently published "Community Energy: A Practical Guide to Reclaiming Power" (Friends of the Earth Europe et al., 2020). Many of these examples can be relevant and inspiring also for communities elsewhere.

While there is a power struggle in Europe as to which direction the renewable energy transition should go, with several setbacks due to successful corporate lobbying and efforts to lock in the current system, there are also recent examples of successes. The 2019 EU Renewable Energy Directive include several positive policy elements that will facilitate for cooperative and other forms of community energy efforts to advance. One breakthrough provision is the recognition and definition of "renewable energy communities" (RECs) as energy communities that have missions related to environmental, social, or local economic values rather than profit, and that are controlled by citizens, cooperatives or local authorities. The RECs can generate incomes from renewable energy production that are distributed in the community to meet local needs and provide services. Importantly, this legislation gives citizens explicit rights to produce, store, consume and sell their own renewable energy. The Directive furthermore obliges national governments to put in place laws, regulations and procedures that supports community energy, address barriers and simplify administrative procedures for community projects. The legislation also makes it possible and encourages municipalities and local public authorities to become members and shareholders of community power projects, together with citizens and local small and medium sized companies, without taking full control (Friends of the Earth Europe et al., 2020).

Examples of policies conducive to community power in a Latin American context are well presented in the 2017 REN 21 report "Renewable Energy Tenders and Community [Em]power[ment]: Latin America and the Caribbean" (REN21, 2017). This report recognises that "[T]hroughout Europe and North America, there is a trend towards increased citizen involvement in developing new large-scale renewable energy projects. Co-operation and community-driven renewable energy projects in these regions no longer can be labelled as marginal, but rather resemble a "movement", but note that "[C]ommunity-driven renewable energy projects offer a so-far unexploited opportunity in Latin America and the Caribbean. To date, there is no evidence of utility-scale, grid-connected community-driven renewable energy projects in the region." In light of this, the report outlines how current, prevalent tender processes in the region



can be modified to favour and accommodate community-driven renewable energy projects, and how important this is also for the many indigenous communities on the continent.

Examples of community energy from the United States include numerous local initiatives and local schemes, but also state-level regulatory reforms (so far in six states) that allow for democratisation of municipal power services through “Community Choice” provisions where citizen and community involvement can direct the local energy systems to be more locally based, renewable, more efficient and with reduced demand (Fairchild and Weinrub, 2017).

## Other sectors

### Clean cooking

Largely neglected, the huge challenge of enabling clean and healthy cooking for the more than 3 billion people currently relying on unhealthy and unsustainable traditional firewood, charcoal, dung, wood, crop residues or kerosene must constitute an integral part of the renewable energy transition (International Energy Agency, 2021b).

Such a transition need to be informed by the local realities and conditions determining choice, behaviours and available options, and through understanding of why prior efforts have often not been very successful (Mbungu, 2020). Many existing and prior efforts have focused on improved cookstoves for biomass, with higher efficiency and less health effects, as well as transitions to for example kerosene or in some cases solar headed stoves, again with limited success.

Looking ahead, with the enormity and scale of the necessary renewable energy transition in mind, it will be important to also take similarly bold approaches in envisaging and planning for alternatives to traditional, biomass or fossil fuel based cooking. As distributed, people-centred renewable energy systems are promoted and enabled (including isolated mini-grids and stand-alone systems in the most remote areas), new approaches toward low-voltage, electrification of cooking will make much sense. Such efforts will need to be enabled by comprehensive policy and support approaches that allow for affordability, long-term access and domestic manufacturing.

This area has been neglected for too long, and constitute one of the most important dimensions of the energy transition. The transition to universal, clean cooking must constitute a backbone to any energy transition scheme.

### Agriculture

Agriculture and food systems account for 20-30% of global emissions, depending on how these are accounted. The majority of these emissions are associated with industrial agriculture, which uses large amounts of fuels for machinery, and electricity for processing, storage and transportation as well as for the production of fertilisers. While using about 75% of the resources, industrial agriculture feeds less than 30% of the world’s population (ETC Group, 2017). It is clear that agriculture needs to undergo as big of a structural change as the energy sector (Sjukla et al., 2019). However, the transition from the fossil-fuel centred agribusiness model to less energy intensive, sustainable and more equitable agroecology approaches is motivated as much by ecological, human rights, health and biodiversity reasons. As with the fossil fuel industry, appropriate just transition measures must be put in place also for agricultural workers and farmers (Anderson, 2019).



Renewable energy for productive sectors, including small-scale farming in developing countries has generally been neglected in the energy discourses, yet it is one of the most important areas for intervention. Relatively modest improvement in energy access can make a major difference for farmers, allowing solar pump irrigation, storage and local processing, and improved transportation of food to local markets. Given the fact that 70% of the world's population is dependent on peasant agriculture, strategies and plans for the renewable energy transition must be integrated with the agriculture transition. The distributed nature of most renewable energy sources provides opportunity for new, smart, people-centred energy systems that can serve these needs.

## Transportation

The transportation sector only harbours 3.3 % renewable energy of its total energy consumption (3% biofuels and only 0,3% renewable electricity), and is thus one of the most neglected sectors in the renewable energy transition (REN21, 2020b). With about 1/3 of total final energy consumption, the transportation must be overhauled in more transformative ways than most other areas of society. Given the long lead-times and infrastructure requirements for new, fossil-free systems, action must begin and accelerate immediately.

Policies and regulations must be simultaneously devoted to all three dimensions of the equation: *Avoidance* of motorised travel (through urban planning, promotion of walking and cycling, telecommuting and other transport demand management interventions), *Shift* to less carbon-intensive modes (renewable energy powered public transport and zero-emissions logistics), and *improvements* in technologies (more efficiency and transition to largely electrified or electro-fuels-based vehicles (REN21, 2020b).

Kevin Anderson argues convincingly how policies and targets must be scrutinised and exposed for their inadequacies, such as for example UK's recent announcement of intentions to ban combustion-engine cars by 2030. This is too late, and moreover doesn't address the overall problem of a focus on individual car ownership. A one-sided transition to private, electric vehicles will create a number of new problems and delay structural change, such as reducing most cars from cities and have them replaced with public transport (Anderson and Calverley, 2020)

Shipping and aviation are important sectors which falls outside of regular climate negotiations and which have long investment horizons, making it important to increase pressure, policies and stringent regulations.

## Housing/Buildings

The housing and building sector is another neglected sector. The buildings sector constitutes about 1/3 of total energy consumption and releases about 28% of global energy-related CO<sub>2</sub> emissions. Of this energy about 77% relate to heating and cooling (space, water and cooking). Only 13,6% of the energy consumption relating to buildings are provided by modern renewables. Heating and cooling as a whole (also factoring in e.g. industrial processes) constitute as much as 51% of total final energy consumption, with renewables providing a mere 10,1% of the energy (REN21, 2020b).

Policy options for this sector include technology mandates for renewable energy in buildings, bans for fossil fuel use for heating of buildings, efficiency standards for passive housing or net-zero carbon/energy requirements for new buildings. Building energy codes only exist in 41

countries today, and are generally directed to new building or retro-fitting. With the huge stock of existing buildings, much attention must be given to wide-ranging renovations towards energy efficiency, underscoring the huge task at hand, but also the scope of the untapped potential for rapid improvements and job creation in this sector.

## Industry

Industry accounts for about 1/3 of total final energy consumption (35%), with associated CO<sub>2</sub> emissions constituting about 23% of total emissions. About 75% of industrial energy use relates to heating and cooling and the remaining for operation of machinery and lighting. Only 14,5% of industrial energy use come from renewable energy. Of the renewables share of the heating, most is in form of bio-energy associated with e.g. pulp and paper production (REN21, 2020b). For high-temperature processes, renewables currently play a very limited role, which points to the need for technological innovation and development of new approaches that can draw on electrification from renewables. There is currently very limited policy attention to this substantial, but neglected sector (REN21, 2020b).

# THE EQUITY AND JUST TRANSITION DIMENSION

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## Equity and “Just transition” context

Equity and Just Transition constitutes a second element of Pillar III.

For the purpose of this strategy paper, this section takes a broad approach to the concept of Just Transition, recognising that actors are applying the term and concept in different ways, and how this in itself is a point of debate.

One important strategic issue for FFNPT will hence be how broadly and how distinctly defined the term Just Transition should be used in internal and outward-oriented communications.

This element of Pillar III recognises the origins of the term Just transition by Trade Unions in the US in the early 1970s, and the importance of respecting, recognising and working closely with trade unions globally to deliberate on strategies, narratives and use of the term. It simultaneously recognises the expansion of uses and definitions of the term Just Transition, and the many additional dimensions of just transition that are as important for the success of the transition. This section frames these different dimensions also in terms of equity and justice, and highlights the global dimension of just transition.

The main purpose of this document is to help outline and frame key elements of equity and just transition that the FFNPT Initiative need to engage with, and outline an initial set of strategic considerations and possible, concrete activities for moving forward.

Importantly, this section seeks to highlight issues that must be considered and tackled for pillar III, regardless of terminology.

## History of the term Just Transition

The term Just Transition originated within the trade unions. Many attribute the ideas of a just transition as the brainchild of Tony Mazzocchi, a trade union organiser from the Oil, Chemical and Atomic Workers’ Union (OCAW), who undertook pioneering work already in the early 1970s to reconcile social and environmental concerns in ways that would simultaneously deal with environmental challenges while ensuring job security and decent livelihoods for workers (Morena et al., 2018).

The very term “Just Transition” was introduced in the mid-1990s by Canadian union activist Brian Kohler, and became increasingly established in the North American trade union context, where it exposed the false dichotomy of jobs versus environment, instead arguing it would have to be both or neither (Rosemberg, 2010).

The interpretation and application of the concept gradually expanded, with for example the Just Transition Alliance formed in 1997, which tried to bring workers and frontline communities together. The concept also took on a more international dimension, with trade unions in other countries starting to pick up the ideas.

With the birth of the International Trade Union Confederation (ITUC) in 2006, Just Transition took on an orientation towards climate and international negotiations, with consistent efforts to bring the concept and ideas into multilateral spaces. The concept was already put forward by the unions before the 2009 Copenhagen climate summit and was effectively promoted in the lead up to the 2015 Paris Summit to the extent that several UN and International bodies such as UNEP, ILO, and UNDP were championing the idea, and with Just Transition in the end included in the Paris Agreement preamble (UNFCCC, 2015).

During the last ten years the use and interpretations of the term has expanded, as has the multitude of actors taking it on. Increasingly, Just Transition has become a mainstreamed concept promoted by most established and mainstream environmental organisations, but also by community-based labour and environmental justice organisations – the latter with increasingly broad interpretations that include racial, culture and social justice concerns beyond the prior focus on labour and workers (Morena et al., 2018).

The current “Just Transition landscape” is hence quite diverse and multifaceted. While the concept is still firmly rooted in labour organisations, where for example the ITUC-affiliated Just Transition Centre (JTC) is playing an important role in centring focus on workers’ rights, others are simultaneously applying and using the term in both broader and more radical terms, including far-reaching critiques of markets and capitalism.

The report *Mapping Just Transition(s) to a Low-Carbon World* attempts to categorise these different applications and interpretations of Just Transition through a two-axis map with one dimension outlining a gradient from “status quo” via “managerial reform” and “structural reform” to “transformation”, and the other axis outlining a gradient from strict workers focus to an “inclusive” interpretation addressing society and the economy as a whole.

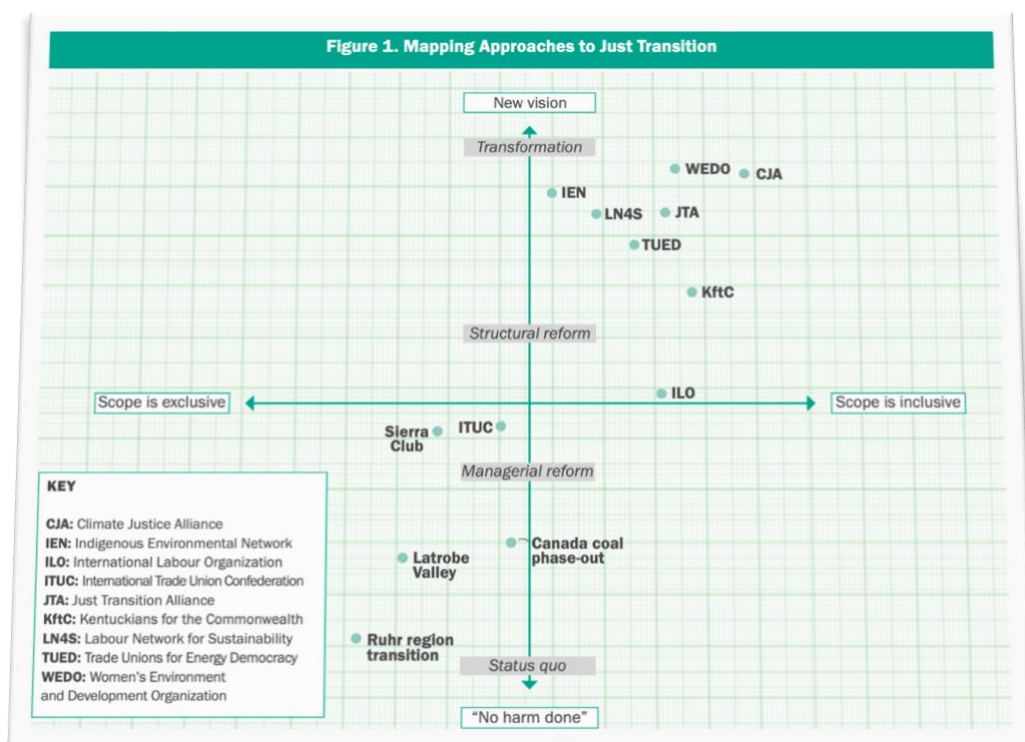


Figure from the report “Mapping just transition(s) to a low-carbon world” (Morena et al., 2018).

As the FFNPT Initiative strategises around pillar III, it will be important to have a good sense of these various interpretations and approaches to Just Transition, and also to other, related interpretations of what it takes to ensure equity, fairness and justice in the relation to the transition away from fossil fuels to renewable energy societies.

The following overview attempts to capture some of these dimensions, taking the above framework into account.

## Dimensions of Equity and Just Transition

### Just Transition approaches with focus on workers

In this context, Just Transition is primarily focused on labour and how to ensure that the transformation away from fossil fuels does not hurt workers, either in the current fossil fuel industry, or in other sectors that are also affected – including ensuring new decent replacement jobs in both the renewable energy sector and other sectors (such as agriculture (Anderson, 2019) and transportation).

The bottom line is that society must set up structures and support systems that ensure that the many millions of workers directly affected by the rapid and necessary transformation are not hurt.

The International Labour Organisation (ILO) – a tripartite organisation made up of governments, labour and employers –concludes in its *Guidelines for a just transition towards environmentally sustainable economies and societies for all* in 2015 that:

“Coherent policies across the economic, environmental, social, education/training and labour portfolios need to provide an enabling environment for enterprises, workers, investors and consumers to embrace and drive the transition towards environmentally sustainable and inclusive economies and societies” and that these policies “also need to provide a just transition framework for all to promote the creation of more decent jobs, including as appropriate: anticipating impacts on employment, adequate and sustainable social protection for job losses and displacement, skills development and social dialogue, including the effective exercise of the right to organize and bargain collectively” (ILO, 2017).

Or, in the words of ITUC representative Annabella Rosemberg “The Just Transition framework is a package of policy proposals which addresses the different aspects related to the vulnerability of workers and their communities: uncertainties regarding job impacts, risks of job losses, risks of undemocratic decision-making processes, risks of regional or local economic downturn, among others” (Rosemberg, 2010). Some of the key policy areas and actions needed in a framework to effectively deal with these worker vulnerabilities are then from a trade union perspective:

- Sound investments in low-emission and labour-intensive technologies and sectors
- Research and early assessment of social and employment impacts
- Social dialogue and democratic consultation of social partners and stakeholders
- Training and skills development
- Social protection
- Local analysis and economic diversification plans

(Rosemberg, 2010)

In a review of the key elements of a just transition for fossil fuel workers as discussed in the academic literature, Sandeep Pai et al highlights the following four different form of justice: Distributional justice (burdens and benefits playing out in just ways), Procedural justice (participation in decision-making and just processes), Restorative justice (repairing harm done), and Recognition justice (acknowledging those suffering from (un)just actions) (Pai et al., 2020).

This meta-study furthermore highlights 17 elements of importance for a sound just transition as found in the literature, cutting across the four elements of justice and spanning short-to long-term time frames: 1) The importance of Long-term and strategic planning at national and/or state/provincial level, 2) the importance of unions 3) Community engagement 4) Local jobs and diversified economies, 5) Coal/fossil fuels as identity, 6) Gender gap in energy sector jobs 7) Education/research institutions, 8) Worker pensions 9) Just transition principles and the planning, legislative and regular processes, 10 ) Job quality, 11) Job guarantees and compensation 12) Worker transition service, 13) Local infrastructure development 14) Local government revenue streams, 15) Communication of phase-out plans, 16) Environmental remediation 17) Retraining workers.

The literature review also points out how the Just transition debate and studies have so far largely focused on a few industrialised countries in the Global North and mostly on coal workers. It recognises glaring omissions of how the just transition challenges play out in the Global South, where for example shutting down coal may in the case of India directly harm both the economic base for railways (half of the traffic is coal) as well as the significant provision of education, health and social services by the coal companies – issues that goes beyond what may be the more narrow focus on Just transition challenges in the Global North [Sandeep Pai, personal communication].

Within the worker-focused dimension of Just Transition it is also important to expand beyond the direct impact on fossil fuel workers. As Anderson highlights, there are similar challenges within e.g. agriculture, where a transition towards zero emissions and renewable energy societies will have major consequences for farmers and farm-workers as industrial agriculture will need to be dismantled and reshaped towards agroecology. This analysis also highlights the importance of procedural justice and seeing the 'how' as something as important as the distributive "what" dimension (Anderson, 2019).

This is also highlighted in the recent report by UK-based organisations that has interviewed off-shore fossil oil workers in Scotland. Based on an extensive survey of oil workers, the study concludes that 81% of the respondent are ready to move to a job outside of the oil and gas industry, with preferences for jobs in offshore wind and other renewables and with job security being the primary concern. It is clear that the workers both see the change that is coming, and are ready to play an active and constructive part, but demand support systems and a "how" where they participate in the core of decision-making. The report concludes that "[T]he skills and experiences of oil and gas workers are essential to deliver an equitable and rapid transition to renewable energy. This requires engaging a representative section of the workforce in participatory policy-making, where workers are able to help determine policy, in addition to engagement with trade unions." (Platform et al., 2020) This is likewise observed by the Pai et al literature review which concludes that "none of the scientific articles so far has systematically incorporated the views of fossil fuel workers such as coal workers and their communities into the key features and elements of a just transition" (Pai et al., 2020).

Conversations with the Just Transition Centre (JTC) affirms these perspectives. They also emphasise the importance and relevance of the ILO guideline definition of Just Transition as an anchor point, with the interpretation that in fact this definition is a radical and transformative proposition, even if it doesn't challenge capitalism head-on. Other recommendation from JTC for the FFNPT Initiative include:

- Highlighting the idea of a global social protection fund (along with debt cancellation) – which makes even more sense and have more urgency in light of the current, intertwined Covid-19 crisis.
- Avoid using the term “managed decline” – it’s a non-starter for most of labour, and risk turning away potential support from unions. Workers in the oil and gas sectors are generally proud of powering societies, and generally not supportive of a framing that their sector is bad and essentially killing people and the planet. It should be recognised however that there is also a smaller vanguard within the labour movements – just as there is a strong peace and disarmament tradition by some parts of the unions – that will readily take on such a framing. The use of terms merits careful strategic considerations for the FFNPT initiative.
- Consider instead turning the framing/pillars of the treaty around – as a Global treaty for just transition and phase out of fossil fuels. That may be a way to get the unions and labour more excited and interested to join.
- The FFNPT may be too early and with too difficult a framing for trade unions to join as strong allies. There certainly needs to be further discussions.
- While recognising the appeal and importance of promoting a new more distributed model of renewable energy systems with diversified ownership, one must keep in mind that from a labour perspective highly centralised state-owned utilities are generally a good thing, and are often more prone to adjust to unionised pressure, and tend to have high degree union organising.
- A key challenge is to promote higher degrees of unionising within the renewable energy sector, where it is currently comparably low.

Importantly, the conversations and framings around Just Transition and workers has so far been constrained to mostly national contexts. Issues relating to impacts by the transition on e.g. workers in extractive industries in other countries are generally beyond the reach of conversations or concerns among the national unions. This dimension of international solidarity is in embryonic stages, but recognised by for example the JTC as important (Smith, personal communications).

## Just Transition as transformative, political and economic restructuring

Other applications of the term Just Transition, as outlined by Morena et al in the map matrix above, take wider approaches and focus on overall political and economic structures, and the need to transform these to radically new ways of organising society and economies (Newell and Mulvaney, 2013).

*Structural reform approaches* to Just Transition as manifested by e.g. the Trade Unions for Energy Democracy (TUED) “calls for a shift away from a social dialogue approach used by the ITUC and mainstream unions towards a social power approach guided by the belief that current power relations must be challenged and changed, and that this can only be achieved through public/social ownership and democratic control over key sectors (and in particular energy)” (Morena et al., 2018) (Sweeney and Treat, 2018). Other similar approaches define Just Transition as enabling “an economy powered by the people, for the people, for the prosperity of communities and the sustainability of communities” and as “a progressive economy in which the power and the wealth is distributed in a very broad-based way” (Morena et al., 2018).

*Transformative approaches* to Just Transition include e.g. those of the Women’s Environment and Development Organisation (WEDO), the Just Transition Alliance (JTA), the Climate Justice



Alliance (CJA) and the Global Campaign to Demand Climate Justice (DCJ). These go further to equate a just transition as necessitating a fundamental overhaul of the current political and economic system that is at the core of the climate and the many other, intertwined crises. In addition to the necessity to change rules, institutional structures and diversify ownership, these transformative approaches recognise the need for systems change towards new alternative development and fundamentally different, non-growth-centred economic models. Importantly, this approach sees the fight against racism, patriarchy, colonialism, imperialism and economic injustices as central to Just Transition, with the fossil fuel industry centrally integrated with these oppressive power structures. These approaches also see often marginalised groups as central to the Just Transition agenda — including people of colour, indigenous peoples, and LGBTQ communities.

The boundaries between the various interpretations and framings of Just Transition are however blurred. Also the ITUC, for example, recognises a systems dimension:

“However, this will not be enough to change the current trajectory of our societies. The origins of environmental and social crises find a common source in the prevailing economic model and, it is fair to say, little or no progress has been made in changing that model. Most of the policies advocated today to protect the climate are aimed at increasing the efficiency in the use of natural resources rather than changing production and consumption patterns that are environmentally harmful, socially unfair and unsustainable.

Traditional neoliberal recipes seem to be gaining ground in this moment of economic crisis. A diminished role for the State and for public investments, a certain resistance to new regulations, all these contradict the policies which will be necessary to stimulate a low-carbon economy” (Rosemberg, 2010).

## Extractives and the global dimension of Just Transition

It is important that the FFNPT pillar III highlights the global dimension of a Just Transition beyond the predominantly national framing around work, and not least in terms of impacts of mining and extractive industries in the energy transition. 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. This global dimension of the transition is often neglected, but needs to be taken seriously, as an integral dimension of equitable and just transition approaches.

A new report by ActionAid summarises this broader take on Just Transition succinctly:

“Workers, women and communities whose livelihoods are dependent on or connected to the fossil fuel sector, must be given opportunities for a better future. They must be provided with the space to organise, opportunities to participate in decision-making processes, positive alternatives for their livelihoods, community and well-being, and meaningful support, social protection and training to make the transition away from fossil fuel extraction.

At the same time, for communities likely to be affected by the expansion of mineral and metal extraction for renewables, development and enforcement of strong mandatory regulations for “responsible mining” is urgently needed, to ensure stringent labour, environmental and social standards.

As a priority, renewable technologies must also reduce their reliance on mining for new metals and minerals. To achieve this, they must improve material efficiency (i.e. use less material in their



products). Systems to recycle metals and minerals must be dramatically scaled up, presenting potential opportunities for increased employment. However improved systems for mineral and metal recycling must also be very carefully governed by strong labour and environmental standards to protect workers' health and the environment" (Anderson, 2020).

A *global* Just Transition must include approaches that effectively prevent negative spill-over to vulnerable communities in poor countries. This likewise translates to the need for the many initiatives for Green New Deals to come together and formulate integrated, synergistic approaches that ensures the possibilities for a Global Green New Deal, where national approaches do not affect other countries negatively. These processes are emerging, and would likely be valuable to connect with for the FFNPT Initiative.

A recent report on *Principles for Just Transitions in Extractives and Agriculture: Shaping fair climate futures in our energy and food systems* concludes that "The energy transition from fossil fuels to renewables must therefore avoid simply displacing injustice and exploitation to other areas, and must not exploit or harm workers and communities involved in or affected by the use and extraction of metals and minerals." (Anderson, 2020)

The report continues: "Stringent mandatory social and environmental requirements for responsible sourcing of minerals should therefore include and ensure:

- Gender responsive human rights due diligence by companies, based on the UNGP and OECD guidelines;
- Communities' full prior and informed consent (FPIC) before developing or expanding areas for extraction;
- Informed community participation, including women, in decision-making beforehand;
- No land grabs;
- Equitable and adequate compensation for communities, including for women who may be affected by extraction on and around the lands that they have used and lived on;
- On-going processes for communities to have their voices heard and to engage meaningfully in decision-making as activities take place, and the right to reject mining developments should communities wish;
- Workers' rights including fair wages, safe and decent working conditions and social protections;
- Stringent environmental regulations;
- Requirement for and implementation of environmental impact assessments before extraction begins;
- Baseline measuring and on-going monitoring of environmental health of local water, soil, air and ecosystems;
- Accountability;
- And full and fair payment of taxes, with no tax avoidance or "sweetheart" deals. "

(Anderson, 2020)

The report "A Material Transition: Exploring supply and demand solutions for renewable energy minerals" highlights the many concerns with "extractivism" and the bleak prior track record of the mining industry. It calls for support to front-line communities, "circular societies" and stringent, global regulations of the sector and warns for some of the worst companies "re-inventing" themselves as key players and saviours in the renewables transition while continuing exploitation of local communities and the environment (War on Want and London Mining Network, 2021).

## Impacts of renewable energy deployment

Another dimension of the equity and just transition element of Pillar III focuses on ensuring that renewable energy deployment is undertaken in ways that do not harm communities, ecosystems, and particularly vulnerable people, beyond the direct impact on workers and workers' rights. Examples of abusive, exploitative renewable energy projects with land grabs, human rights abuses and ecosystem destruction have been abundant for a long time (Abramsky, 2010).

While the Pillar I and II battles against the fossil fuel industry are fought, the next energy battlefield will be that between different kinds of renewable energy systems – between unacceptable, destructive projects and ones that are not exploitative and truly benefits communities, peoples and ecosystems.

The outcome is far from certain, and it will be important for Pillar III strategies to emphasise approaches and efforts that drives the renewables revolution in a desirable direction.

The current situation is far from reassuring. A recent *Renewable Energy and Human Rights Benchmark* report examining 16 of the largest wind and solar companies in the world (with combined capacity of over 130 GW) concludes that “[T]he results of the benchmark suggest that none of the companies analysed are currently fully meeting their responsibility to respect human rights, as defined by the UN Guiding Principles” and that nearly half of the companies scored below 10% and three quarters below 40% of the benchmark. The report finds that “as a whole, the industry has a long way to go to demonstrate its respect for the human rights of communities and workers in their operations and supply chains. The lack of human rights policy strongly correlates with allegations of abuse” (Business and Human Rights Resource Centre, 2020).

It is important that strategies set stringent social and environmental safeguards and participatory environmental impact and other assessments as firm requirements with clear monitoring, compliance and mechanisms. It is key for countries to adopt the most stringent rules, but also to take this to the regional, and even international level. One of the key features of the Africa Renewable Energy initiative (AREI), as it was originally conceived, was the establishment of the AREI Criteria that would need to be met in order for any renewable energy project and policy programme to be labelled compliant with the initiative, and for such projects to be counted towards international support and the targets set by the initiative (AREI, 2016). Most importantly these criteria were meant to enable and empower communities, civil society organisations and social movements as tools to hold both governments, funders and corporations to account. The current management and Board of AREI have grossly abused and distorted the initiative, and ignored the agreed Criteria and assessment procedures. An element of Pillar III strategies could be to support the reclaiming of AREI and its Criteria, and have similar approaches established also in other regions.

One powerful approach to ensure that renewable energy projects are indeed benefiting people and communities is collective ownership and control of the energy production. Community energy and energy democracy efforts exists across all continents and with both local, national and international networks, with a wealth of experiences and resources of good, workable approaches and experiences (REN21, 2017). (See also the previous Renewable energy transition section).

Community energy approaches ranges from tiny, micro-solutions to utility-scale wind farms. The Yansa approach shows the potential of the latter, with indigenous communities planning and pursuing large-scale wind in sustainable and socially appropriate manners, with collective

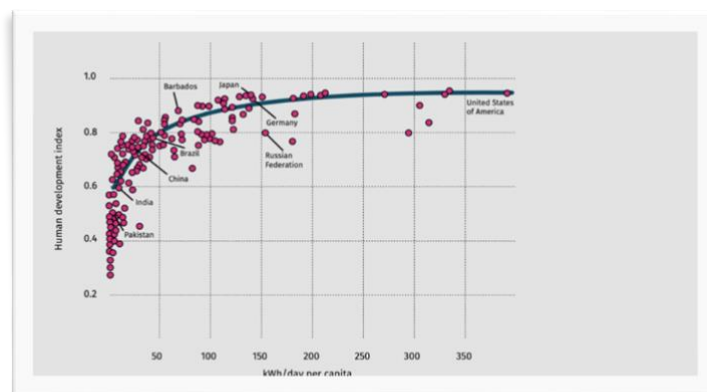
benefit of revenues pooled into trust funds for the community common good, and with a portion of the revenue set aside to facilitate other communities to do the same. The idea is to create a self-replicating model with potential for quick expansion of community energy (Oceransky, 2018). The origins for this model were indigenous communities seeing their neighbouring indigenous communities exploited by foreign, private corporations who disrespected their sacred sites and took control of the community's best lands for wind.

Proper rules, procedures, monitoring and compliance for renewable energy instalments are essential for any successful energy transition. Not only will the lack of such regulations cause problems and suffering, but the conflicts and resistance from those affected will also significantly slow down the transition.

## Convergence of energy use and consumption

Another aspect of equity and just transition centres on the justness and fairness in terms of per capita energy use. There is hardly any economic or development indicator that shows more striking discrepancies between wealthy and poor as that of energy, and in particular electricity use. For example the average Swede uses approximately 130 times (!) more electricity than the average Tanzanian citizen (The World Bank, 2020; Data, 2020).

Yet, it is clear that energy and electricity use are strongly correlated with well-being and meaningful development – up to a point. The Human Development Index shows how for those with low energy access, every additional kWh means a steep additional benefit in well-being. For those with already high energy and electricity consumption, additional energy brings no benefits to their well-being. (Steinberger, 2016)



(Hällström, 2016)

Hence, as for a global agenda, there ought to be a goal of convergence of energy use where those with low energy access can increase their energy use significantly, while those with high energy use not only shift to renewables, but drastically reduce their per capita use of energy overall. The world must aim to converge its energy use towards a band of "responsible well-being", which allows for some variation in per capita use (considering climate and other factors), but within a reasonable spectrum of sufficiency.

Considerable portions of the reduced energy use can be attained from maximising energy efficiency, but only to an extent. There is still need for considerable changes in lifestyles and consumption levels by the well-off. The recent SEI/Oxfam report "The Carbon Inequality Era" shows the striking inequalities in emissions between different income strata of populations. The 10% richest are responsible for half of the emissions 1990-2015, and the top 1% responsible for

17% of emissions in 2020, while the poorest 50% of the world's population only emits 7%. (Kantha et al., 2020). Currently these obscene inequities in emissions are directly correlated to energy use and fossil fuels. Without transformative change in per capita energy use, the renewable energy revolution will see the same kinds of inequity play out in terms of impacts of extraction, biodiversity loss, land grabs and other social and environmental harms.

The FFNPT Initiative will need to consider how best advance the convergence of energy use both in terms of overall narrative and communications, and in terms of concrete elements of the treaty itself.

## Fair shares and equity

The equity and fair shares approach was developed and pioneered by a broad set of civil society organisations coming together as the CSO Equity Review. This framework provides a powerful, clear and principled methodology for determining each country's fair share of emissions reductions based on the climate convention's principle of "Common but Differentiated Responsibility according to Respective Capabilities" (CBDR-RC). The Fair Shares approach effectively determines each country's relative share of total mitigation based on historical emissions and income and income distribution within the population, i.e. what is equitable and just as countries undertake the rapid transition away from fossil fuels to renewable energy societies. For most rich countries in the global North, their fair share of mitigation by 2030 by far exceeds reduction of all their domestic emissions. For UK and the US their "fair share" reductions by 2030 amounts to approximately 200%. Meanwhile, in order to keep global temperature increases below 1,5° or 2°C, the future emissions of poorer countries must be avoided and current emissions reduced much beyond their much smaller "fair share". Taken together this means that rich countries in the Global north have an obligation to reduce to real zero emissions within their countries as soon as possible, while they simultaneously have an international obligation to provide poorer countries in the global South means to avoid and reduce emissions beyond their fair share – i.e. undertake the renewable energy transition – enabled by climate finance, technology and capacity building (Civil Society Equity Review, 2015).

In the context of the FFNPT Pillar III this means that developing countries need to plan for 100% renewable energy futures and enhanced well-being aligned with the discussions above, and make these plans partly contingent on international support. The Fair shares approach can hence be connected to the ideas of a global Marshall plan and other bold ideas, making the case for substantial financing of these approaches by the Global North. The Fair shares approach spells out how the world needs to cooperate in order to achieve the common goal of avoiding catastrophic global heating.

The Fair shares approach needs to be integrated and highlighted under Pillar III, while the corresponding approaches for equitable phase out of fossil fuel production (Pillar I and II) are further advanced.

## Indigenous peoples, spirituality, Mother Earth

In parallel to the labour and worker oriented approach to the Just Transition, the concept has also been used by indigenous peoples in their formulation of desirable ways forward as aligned with their cosmovisions. While acknowledging the origins of the term by labour movements, the [Indigenous principles of Just Transition](#) concludes that for indigenous peoples “[J]ust Transition is a new term, but to most of our Indigenous peoples, it is understood, first by our heart, and secondly by our mind. Just Transition is a framework, a set of principles, to shift from a “stopping the bad to building the new”. In Indigenous thought, it is a healing process of understanding historical trauma, internalised oppression, and decolonisation leading to planting the seed and feeding and nurturing the Good Way of thinking. It is lifting up Original Instructions and Teachings of respecting ourselves, our clans, our family systems and how we are all related with all living things and our relationship with the spirit, personality and consciousness of the sacredness of Mother Earth and Father Sky” (Indigenous Environmental Network, 2017).

These principles provide a profound critique of the dominant economic system and “calls for strategies that democratize, decentralize and diversify economic activity while we damper down consumption, and redistribute resources and power”. They furthermore 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, while rejecting toxic, heavy metal and radioactive contamination, carbon and biodiversity offsets, and all new exploration and exploitation of fossil fuels, recognising more than 80% of the reserves must be left underground.

## Precaution, indirect impacts, horizon scanning

Cutting across the various aspects of equity and just transition dimensions are the need to avoid further inequities by anticipating current trends, new challenges and unintended consequences of transformative actions. The rapid, disruptive transition from the current fossil fuel system to a vastly different economy and infrastructure will bring about changes that are both good and bad. It is likely important to embed within the FFNPT Initiative strategising the need for strengthened foresight, horizon scanning and precautionary analysis. The controversies around new, risky geo-engineering technologies affirm this as do the many possible side-effects of new renewable energy technologies, batteries, transportation and other “disruptive changes” in other sectors.

On-going work by civil society actors to establish regional [Technology Assessment Platforms](#) (TAPs) are concrete and promising responses to the challenges, which are mirrored in encouraging developments at the multi-lateral UN level (also spurred by civil society engagement), including the Technology Facilitation Mechanism (<https://sustainabledevelopment.un.org/TFM>) and recent effort by UNCTAD to initiate [technology assessment with a first focus on Renewable Energy and Africa](#). Ultimately, these efforts have the potential to help society undertake healthy public debate, and ensure broad-based discussion and debate around development directions, policy choices and societal priorities where broad sets of stake-holders are engaged and where risks and precaution are at the centre of the conversation. The success of this work is contingent on capacity, resources and effective organising and prioritisation among civil society actors, in interaction with formal, UN structures and national governments. Elements of these emerging technology assessment and precautionary provisions at the international level could be considered for the FFNPT Treaty process, including for the legal treaty as such.

# THE ECONOMIC DIVERSIFICATION DIMENSION

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The necessary, rapid transition from fossil fuels to renewable energy societies requires transformative change in all societies. While some have come further, hardly any country is currently close to the kinds of economic, infrastructure, regulatory, behavioural, institutional and cultural overhaul and economic diversification that is needed.

Ultimately, the climate crisis points to the necessary systems changes that are needed also for tackling other intertwined crises, such as biodiversity loss, environmental destruction, ill and mental health crises, structural racism, authoritarianism, fascism and exacerbation of inequality within and between countries.

This section begins by highlighting a number of broad and cross-cutting aspects of economic diversification applicable to all countries, followed by a discussion of some of the specific challenges faced by fossil fuel producing countries and their need to find alternative economic orientations and sources of government revenues.

## Economic diversification of relevance to all countries

### Development

The climate crisis is a development crisis, which calls into question a number of premises that underpin assumptions and worldviews, many of which arose from European experiences at home and overseas with imperialism and colonial conquest that both triggered and were the result of new fossil fuel-driven, technology-oriented, natural resource-intensive, and human resource-exploitative modes of industrial production and consumption, and that over time have increasingly shaped modern mind-sets in societies across all continents. These mainstream understandings of "development" go deep and in many ways cut across traditional left-right dichotomies. Strategies to seriously and clear-sightedly tackle the current crises need to acknowledge these deeper roots, while simultaneously operate with hands-on tactics within the political spaces that currently exist.

Mainstream premises of development include foundational ideas such as development as linear in contrast to the cyclical worldviews of many indigenous cultures, with a premise that there is a 'natural' and clear direction and progression towards higher and more 'advanced' stages of development, (with the 'developed' countries in the global North as models to aspire to for all). Core ideas also include the notions of "progress" as an unstoppable and unidirectional force, and the belief in the possibility and desirability of continuous economic growth. There is a common presumption that all societies of the world are essentially moving along the same track, with some in the lead and many others lagging behind with the hope and ambition to "catch up". This modernisation, mainstream notion of development also assumes it is a spontaneous, unavoidable and irreversible force, driven to a considerable extent by science and technology, and by either markets or states (depending on political orientation) rather than the "third system" of civil society, social movements, engaged citizens and the public. Many of these "modernization ideas" are equated with the European "enlightenment" tradition, which when viewed from the perspective of those oppressed and colonized are rather European philosophical rationalizations of conquest, enslavement, displacement, and genocide of non-white societies (Hettne, 1995) (Sachs, 2010) (Hällström, 2014).

Counterpoint, “Alternative development” approaches, which resonates with the transformative approaches to Just Transition as discussed earlier, challenge many of these deep assumptions, and highlight the need to imagine and envision radically different futures and development trajectories, with different ideas of what kind of economic diversification is desirable. These development alternatives are naturally diverse and do not fall under any given blueprint, as core notions are the recognition that there is indeed a great diversity in desirable development trajectories depending on the specific cultural, historic, ecological conditions of each society. These ideas of alternative development was eloquently captured in the report *What Now: Another Development* published already in 1975 for the special session on Development at the UN General Assembly, as a result of an extensive process involving scholars and activists from both the Global South and North. The report is as relevant today and merits careful reconsideration. It asserted that “[D]evelopment is a whole; it is an integral, value-loaded, cultural process; it encompasses the natural environment, social relations, education, production, consumption and well-being. The plurality of roads to development answers to the specificity of cultural or natural situations; no universal formula exists. Development is endogenous; it springs from the heart of each society, which relies first on its own strength and resources and defines in sovereignty the vision of its future, cooperating with societies sharing its problems and aspirations” (Nerfin, 1975).

In addition to the endogenous development principle, four other core principles of Another Development highlighted that development must ensure basic needs, equity and well-being for all, respect the ecological “outer limits” (essentially the idea of planetary boundaries several decades ahead of its time), and that development must treasure self-reliance in the sense of cooperation and exchange with others, but with energy, food and other systems not at the mercy of other, commercial or geo-political forces. It also highlighted the notion of ‘collective self-reliance’ as a key force for Third World countries to exercise collective power to change the current economic and political world order. The final, concluding principle was that of the necessity to understand that *all* societies, in order to achieve the other principles, would need to undergo deep transformations – and that there are no “developed” societies. (Nerfin, 1975; Hettne, 1995)

These fundamental critiques of modern societies and mainstream development seems to resonate with increasing numbers of people who realise – including schools strikers and new social movement – that we can not simply continue with business as usual. The problems go much beyond replacing fossil fuels or adopting new technologies or policies, to calls for systems change and economic diversification at a more profound level. In considering options for economic diversification and overall approaches and strategies to underpin all three pillars, it will be important for the FFNPT Initiative to recognise and carefully consider these kinds of perspectives.

## Transformation to real-zero societies

Taking the 1,5°C goal and the Paris Agreement seriously means accepting rapid, far-reaching and seemingly radical transformations of every sector, starting now. As concluded in the introductory session of this document, there is essentially no carbon budget left – the world is already much beyond the levels of CO<sub>2</sub> that can be considered safe. We may already have crossed irreversible, catastrophic tipping points that may be kicking us into cascading heating — or may do so at any time. There are no soft landing zones decades ahead – the principle must be, as already noted, that of ‘maximisation’; do all that is possible and equitably/socially justified, as soon as possible (Monbiot, 2020).



In addition to building new, domestic 100% renewable energy production infrastructure countries also need to plan for an unprecedented transformation of their transportation, industrial, agricultural, housing, tourism and other sectors. This means taking on ambitious “Real Zero” pathways, rather than evasive and generally misleading, distant “net-zero” goals where continued emissions are assumed to be off-set by future, non-existing or risky technologies (ActionAid et al., 2020; Dyke et al., 2021; Stabinsky et al., 2021; Skelton et al., 2020).

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. Some of these Real zero solutions include, in addition to the 100% renewable energy transition: shifting to agroecology away from industrial, fossil-fuel based agriculture, transition to free or subsidised public transport systems, retrofitting of old buildings and stringent, passive house standards for all new buildings, reduced consumption by the wealthy and focus on sufficiency (Working Group for Real Solutions, 2019; Leap, 2015) (Kuhnhen et al., 2020).

**Examples of Real Solutions that get us toward Real Zero (adapted from briefing made in 2019 by DCJ members and others).<sup>19</sup>**

**Real climate solutions**  
 This list illustrates just some examples of real solutions and policy tools countries should use immediately to effect meaningful change, though they will all play out at different time scales (further underscoring the need to implement them immediately and alongside behavioural and consumption changes). Many of these are already implemented at local and national levels. Several of these measures can be easily implemented directly, while others require international cooperation.

**Behavior, consumption, and equity**

- Drastically target the excessive and wasteful consumption of corporations and wealthy elites.
- Reduce absolute levels of energy use and overall consumption amongst the richer part of the world’s population.
- Ensure just transitions across all sectors that ensure workers are able to move into new, secure green jobs.
- Ensure these kinds of real solutions are made possible in developing countries that have done the least to cause climate change, in line with fair shares and Common But Differentiated Responsibilities.

**Renewable energy**

- Plan for and transform energy systems away from centralized corporate-controlled fossil fuels and other harmful technologies such as nuclear, mega-hydro, and biofuels to clean, safe systems that empower people and communities.
- Implement policies, public investments, and incentives for a just and equitable transition to 100 percent renewable energy (by 2030 for developed countries), that enables energy democracy, creates new job opportunities, encourages distributed renewable energy, promotes local control and community ownership, and protects workers and communities most affected by extractive economies.
- Implement climate finance, technology and capacity schemes under the UNFCCC, and other means to support, in accordance with countries’ fair shares, enabling developing countries to rapidly move to 100 percent renewable energy.
- Remove intellectual property rights or other barriers to affordable and accessible environmentally sound technologies.

**Fossil fuels**

- Create an immediate moratorium on all new fossil fuel extraction.
- Develop treaties and legal agreements for an equitable, rapidly managed decline of existing fossil fuels.
- End producer subsidies promoting fossil fuels.

**Education and participation**

- Enhance and expand environmental education relating to the sustainable use of resources and climate change in school curricular, to facilitate people’s participation in climate action and to develop the real solutions needed to address the climate crisis.
- Ensure access to public information in a manner that is accessible and understandable, and that empowers people to participate in developing climate solutions.

#### Food & land

- Leave the ecological integrity of natural ecosystems unharmed and conserve biodiversity.
- Secure land and tenure rights for indigenous peoples and local communities.
- Rapidly transform industrial agriculture towards agroecological practices through proper incentives and policies combined with removal of perverse subsidies, and phase out artificial fertilizers.
- Promote and support ecosystems- and community based solutions to address climate change, including agroecological farming systems, and community conservation of biodiverse ecosystems, such as but not limited to grasslands and forests. These are community based solutions that protect biodiversity and ecosystem integrity while safeguarding food sovereignty and rights, all while providing substantial mitigation benefits.
- Vastly scale up ecological restoration to recover natural forests, peatlands, and other degraded ecosystems for both climate and biodiversity, through securing of land and tenure rights for indigenous peoples and local communities, proper public policies, and public financing.
- Embrace community governed forest conservation by passing governmental policies that support security of tenure and access to land, sustainable agriculture, food sovereignty and sustainable livelihood options that respect rights and traditional knowledge of Indigenous peoples and local communities.

#### Housing

- Create public investment schemes that ensure retrofitting of old inefficient houses and passive heating standards for all new buildings.
- Set new standards for high-efficiency cooling with targeted measures to ensure affordability for all.

#### Transport

- Invest in infrastructure of electrified, mass public transit, with free or heavily subsidized fares.
- Make cities car free and subsidize bikes and electric bikes.
- Set stringent emissions standards for all new cars with e.g. 10 percent tightening per year. Ban sale of fossil fuel cars (by 2030 in developed countries).
- Ensure major public investments in electric trains.
- Immediately ban expansion of airports, particularly in developed countries.
- Set new standards for high-efficiency cooling with targeted measures to ensure affordability for all.

Extract from the reports [Real Solutions, Real Zero: How Article 6.8 of the Paris Agreement Can Help Pave the Way to 1.5°](#) (Working Group for Real Solutions, 2019) and [Not Zero: How 'net zero' targets disguise climate inaction](#) (ActionAid et al., 2020).

There is currently no government with these kinds of policies all in place. Some aspirations and plans within formal political structures come somewhat close. The proposed [Green New Deal](#) under Bernie Sanders provided for example a fairly comprehensive approach, grounded in principles of equity, justice and just transition. The USD 16,3 trillion programme outlined detailed policy and regulatory actions across key sectors, including transition to 100% renewable energy by 2030 with increasingly public ownership, rapid move to 100% renewable transport sector with adequate public transport, end of fossil fuel subsidies and stop to new and existing fossil fuel extraction on public lands, move to regenerative farming with redirection away from corporate agribusiness to a focus on family farms and a focus on a just transition for workers and frontline communities cutting across all areas. The proposed programme recognised the US responsibility in an international context, drawing on the Fair Shares approached developed and promoted by Kartha et al and the CSO Equity review. It's calculation of the US Fair share amounted to 176% reductions by 2030 and a suggested US contribution of 200 billion to the Green Climate Fund as part of the commitment beyond 71% domestic reductions.

US civil society groups in their presentation of the US Fair share, based on the same methodology but with more stringent assumptions, conclude that the US Fair share be 193% reductions by 2030 (70% within the US) and that an upfront, good-faith payment of at least USD 800 billion be provided to developing countries (with the recognition that this would only be a

part of the US mitigation fair share and that also support for adaptation and loss and damage need to be added) (CAN, 2020).

Within each sector, detailed analyses, roadmaps and plans by civil society and climate justice groups, grounded in the overall principles of equity and ambition as outlined in this document, need to be elaborated. A good example of such sectoral approaches is the Climate Land Ambition and Rights Alliance report *Missing Pathways to 1.5°C: The role of the land sector in ambitious climate action* (Dooley et al., 2018).

The FFNPT Initiative, and the strategising around Pillar III and economic diversification can further map and draw on these and other plans, visions, manifestos and initiatives for inspiration and ideas. They can also contribute concrete ideas for the alternative, economic diversification strategies necessary for fossil fuel producing countries to end expansion and dismantle production.

### Alternatives to current economics: Wellbeing economics, ecological economics and other heterodox economics

Directly connected with the need for an alternative development paradigm, the predominant economic theory and system – rooted in neoclassical theory and neoliberal values must give way to new forms of economics that treasure fundamental human needs, dignity, purpose and fairness while respecting ecological limits. Measures and ideas of success in our new, zero-carbon societies must be aligned with wellbeing, rather than GDP or short-term profit.

The current economic system is a construction and design that can and must be changed for any truly meaningful and transformative change to be possible. Current economic orthodoxy constrain countries and decision-making, and perhaps most seriously, the imagination of what is possible to envision. There are, however, a huge number of ideas and alternative approaches flourishing in communities and in some cases regions or nations around the world. The Wellbeing Economy Alliance, for example, provides a space for a breadth of approaches, views and expertise to interact and draw on each other, both in terms of theory and ideas, and in terms of practical examples and implementation. The co-created [indicative table](#) at the [weall.org](http://weall.org) website outlining the differences between the current economic system (the “old way”) and wellbeing economics (the “new way”) may provide helpful ideas. [Ecological economics](#) provide another community as well as academic discipline with a vast repository of insights, theory and research.

### Public spending/Public investments/Modern monetary theory

Incremental change and business as usual will not suffice to drive the necessary economic diversification. As the Covid-19 pandemic has shown, countries can take bold government-led action and break with the past orthodoxy of neo-liberal economics and new public management. Modern monetary theory (MMT) approaches and major public investments are being unleashed and applied because they make sense and have the scope and transformative potential needed to counter crises at scale. These development must be further strengthened, and undertaken not only with the pandemic in mind, but for the much larger transformation from fossil fuels to renewables.

Modern monetary theory stipulates that countries that issue their own fiat currency (i.e. the currency is not pegged to gold, silver or other, foreign currencies) and only accept payments or taxes in this currency can generally spend much more on public investments in e.g. renewable energy, climate intervention or social goods than mainstream/neo-liberal economic orthodoxy

dictate. It may not be a problem for governments to essentially print money or increase debt by public investments as long as this does not result in excessive inflation: this is in turn determined by whether investment are made in real resources/productive capacity and whether influential market actors have the right and power to excessively raise prices. With the right kinds of policies and regulations these conditions can be ensured. Economics professor Fahled Kaboub (Director of the Global Institute for Sustainable Prosperity) points out that a country such as the US should

“spend on national priorities such as healthcare, education, green infrastructure, affordable housing, broadband, transportation, research and development of green technology, and more efficient renewable energy production and storage. We should tax polluters, financial speculators, abusive price setters, and ultra-rich oligarchs, not because the Federal government (sovereign issuer of the U.S. dollar) needs their money or their permission to launch a Green New Deal, but because we want to decarbonize the system, stabilize the economy, protect democracy from oligarchy, and establish a more sustainable, equitable, and just system” (Kaboub, 2021).

The “pay as you go” idea that every public investments must be matched by either new taxes or budget cuts do not hold from an MMT perspective, which argues that we must “permanently abandon the deficit myths, focus on mobilizing real resources for a multipronged, bold, and transformative program like the Green New Deal” and “tax and regulate the abusive price-setting behavior of the most politically connected corporations”.

Other measures to be further considered in general as well as in the specific FFNPT context (also summarized in the elements of strategy section below) include quantitative easing, guarantees and climate bonds by central banks (Kroll, 2020).

## Reversing of net flows of financial resources from the Global South to the Global North, including debt cancellation and addressing unfair trade rules

While much focus in the debate are on whether wealthy countries deliver their promised foreign aid or climate finance, these (unfulfilled) pledges are dwarfed by the net financial flows going the other way – from the Global South to the Global North. While wealthy countries have only delivered a fraction of their commitment to transfer USD 100 billion per year to developing countries, USD 2000 billion (2 trillion) flow the other way every year as a result of debt payments, unfavourable trade rules and a globalized economy heavily biased in favour of wealthy countries. Any bold, meaningful approaches towards economic diversification and long-term development plans hence need to acknowledge and address the underlying structural problems that drives these perverse financial flows. The FFNPT Initiative would likely benefit from mapping and relating with civil society and other initiatives that are already engaged in work to address foreign debt, trade and investment rules and other issues related to globalization and international economics. It will also be important to explore how financial flows can be reversed and ramped up to the necessary scale by not only domestic payments of ecological, climate and other debts by wealthy countries, but also how resources can be unleashed through e.g. IMF Special Drawing Rights and international financial transaction taxation.

## Covid-19 and social protection

The Covid-19 pandemic crisis has shown the importance of government social protection schemes to handle crises, ensure those most vulnerable are not worst affected, and keep the



fabric of society together. These are important lessons for the transition from fossil fuels to renewables and can inform and shape pillar III responses. Closely related to the Just Transition dimension, social protection is also closely integrated with measures towards economic diversification. Social protection must cut across all of society (beyond directly affected workers in the fossil fuel industry) and create the basis and glue for new forms of collaboration, engagement, re-training, creation of new initiatives, community organisations, solidarity associations and businesses. Social protection measures involve both direct measures to counter the worst effects of existing and new crises, as well as long-term investments towards the formation of social contracts, trust, and cooperation. Additional aspects of social protection are also discussed in the Equity and Just Transition chapter and in the elements of strategy part.

### Climate finance, fair shares and economic diversification

Economic diversification for most developing countries, whether fossil fuel producers or not, will necessitate international financial support and other means of implementation. While the ownership and direction of development plans and political priorities must be grounded within each country (through accountable governments and actively engaged and involved stakeholders), poor countries cannot be expected to finance the transformation and economic diversification away from fossil fuels by themselves, which is also recognised in the UNFCCC inscribed principles of “Common but Differentiated Responsibilities and Respective Capabilities”.

The Fair Shares approach emanates from collaboration between climate justice movements, several mainstream civil society climate groups and researchers. The approach presents a framework for determining each country’s share of responsibility for emissions reductions, taking into consideration historical emissions and income levels and income distribution in each country. Through a transparent on-line calculator it is possible to adjust variables (e.g. starting date of accounting for historical emissions, what level of incomes should be excluded as emissions necessary for survival, degree of progressive accounting for very high incomes (as proxy for luxury emissions etc.). Even with the least “equitable” settings this Fair Shares framework shows how essentially all wealthy (“developed”) countries need to reduce emissions far beyond 100%, and in many cases several hundred per cent. This means that emissions need to be cut to zero at home as fast as technically possible under the most stringent and far-reaching rules, regulations, policies and incentives imaginable. With 70-90% reductions by 2030, these wealthy countries still need to, simultaneously, provide international support to low-income countries in the form of climate finance, access to appropriate, environmentally and socially sound renewable energy technologies and strengthening of capacity so that these poorer countries can undertake similarly far-reaching, transformational efforts to reduce and avoid emissions far beyond their own fair share. This climate finance is not aid, but the equitable way for the countries who have already caused most harm and benefited the most from fossil driven development, to contribute their fair share. It is necessary and in their own interest for wealthy countries to enable the majority of the world to avoid repeating the past, fossil-fuel oriented development mistakes of wealthy countries (AFP, 2021; Civil Society Equity Review, 2015).

The FFNTP Initiative may want to highlight the Fair Shares approach as a way to channel the resources needed for sound, economic diversification. There are also overlap and synergies with the equity approach to the fossil fuel phase-out at the centre of Pillar II (developed by partly the same people).

It is important that international support does not focus only on the climate finance transfers and sums of money, but on what they intend to deliver. Stakeholders, including many of those involved in the FFNTP process, will need to engage to ensure resources are genuinely used for

sound and just economic diversification, renewable energy, energy efficiency measures, and structural change.

## Innovation

Considerations of economic diversification strategies need to also grapple with the issue of innovation, including how this relates to international agreements, intellectual property regimes and corporate and geo-political power dynamics.

Innovation is important for economic diversification, and must be approached in a holistic and broad manner, including consideration of existing, traditional knowledge and approaches, the possibility of reframing problem statements before adopting new technological innovations to solve a problem, and an understanding of what are conducive environments for socially and environmentally appropriate innovations. The simplistic idea that private profit motives are the most effective driver of innovation needs questioning so that governments and stakeholders can keep an informed and rich discussion based on actual findings and experiences. Mariana Mazzucato's work on the Entrepreneurial State exposes the myth that the state is a bureaucratic beast incapable of innovation, and shows through detailed case studies how on the contrary the state has often been the boldest innovator, providing the foundation for many breakthrough technologies that have later become picked up by private entrepreneurs (GPS, internet, many pharmaceutical drugs etc.) (Mazzucato, 2015).

There are also numerous examples of innovative environments characterised by collaboration and the mixing of diverse expertise and disciplines. Open source environments, which encourage the sharing and learning from both successes and mistakes, can boost innovation for the common good. One example is that of antibiotics, where the logic of pitching drug companies against each other in the competition for patents and monetary rewards is hampering the difficult work to find new antibiotics in a situation where common, global collaboration across all research groups are needed (Hällström, 2011).

The FFNPT Initiative may want to consider the establishment and promotion of such collaborative, open-source platforms for innovation as part of its agenda.

## Horizon scanning, foresight and systems approaches

Another dimension of economic diversification that applies to all countries involves the capacity to anticipate a rapidly changing landscape in terms of both politics, corporate control, new technologies and cultures/values. The transition from fossil fuels to renewables will play out over decades, during which the world will change substantially. There is need to act – and adapt – while the world around is constantly changing.

One must not make the mistake of outlining responses and strategies in too static and linear ways, but rather take into consideration outlier ideas, new thinking and cross-disciplinary approaches and systems thinking. Too often failure to look ahead and anticipate change, results in fire-fighting and panic reaction to new disruptive changes.

Enhanced capacity for longer-term analysis and anticipation of new trends and developments are important, both for civil society and within government and UN spheres. There are several relevant developments in this regard, partly facilitated by the Rio+20 process a decade ago. At the civil society side, the establishment of regional [Technology Assessment Platforms](#) are creating opportunities for civil society and social movements across sectors, constituencies and geographies to collaborate on horizon scanning and analysis of new trends and developments.

At the UN level, the UN Technology Facilitation Mechanism is providing opportunities for establishment of formal structures. UN Specialised agencies such as UNCTAD is also moving into technology assessment efforts, with an emerging focus on African and renewable energy technologies (UNCTAD, 2021).

Beyond technology assessment and precaution, there is a need for enhanced capacity to engage in systems analysis in order to inform and update strategising across all three FFNPT pillars. Systems approaches can reveal and expose underlying structures and how dominant social groups are exerting power in their interests across sectors and sub-systems.

Given its broad and far-reaching scope, the FFNTP process could play a role in supporting such horizon scanning and systems analysis capacity (see also elements of strategy section below).

## Economic diversification context for fossil fuel producing 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 several cases the key backbones to their overall economies. Such economic diversification is motivated not only by climate change, but also by stresses on the fossil fuel industry itself where the recent implosion of oil prices and risks of stranded assets have drastically exposed vulnerabilities and volatility. The continuous drop in costs of solar PV and wind further exacerbate the vulnerabilities of continued reliance on fossil fuels.

There is obviously many kinds of fossil fuel producing countries, with different challenges and conditions, and with different obligations and responsibilities – as elaborated by the work on equitably managed phase-out by Kartha and others involved with the FFNPT (Muttitt and Kartha, 2020). Any strategy on economic diversification will need to treat different kinds and clusters of countries in manners that understand and depart from their particular conditions. Across all countries, success can only be achieved if countries can see, trust and embrace credible plans for economic diversification that will also work in the short run. Countries with a large dependence on fossil fuels for their domestic revenues (e.g. Gulf states, Nigeria, Venezuela) obviously face particular and especially daunting challenges, but are also very differently equipped in how they can respond to these given their differences in wealth/poverty levels, economic structures, development challenges and geographies.

The following section presents a set of dimensions relating to these economic diversification challenges. It is far from complete and serves to initiate further discussions and should be continuously updated and expanded. Concrete activities and elements of strategy are presented in the “Elements of strategy” section of this document.

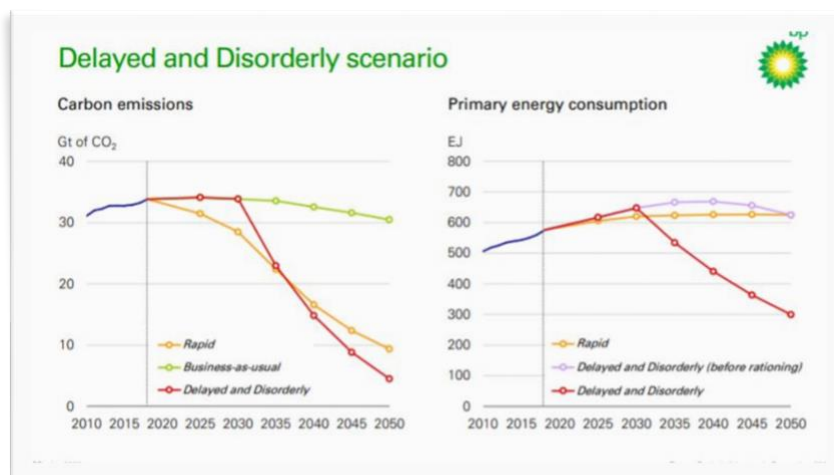
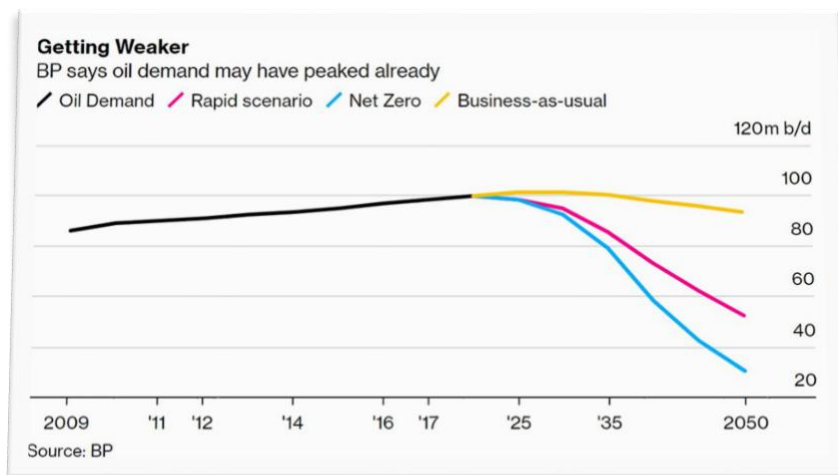
### The writing is on the wall – pandemic, cheap renewables and crashing oil prices expose an industry in crisis

The year 2020 was turbulent in every regard – and not least in terms of the energy and oil markets. The sharp decline in demand due to the drastic slowdown of the world’s economies caused by the Covid-19 pandemic together with new dynamic among the big oil producers



created a situation with record-low oil prices, record over-production and unprecedented bail-outs as well as exits of many fossil fuel producers. These extraordinary events are all playing out against a backdrop of intensifying climate crisis and growing insights that fossil fuel emissions must be curbed from a climate perspective, and against the fast and continuously falling costs for renewable energy.

While the fossil fuel players, in various ways and depending on their respective positioning, are trying to stay afloat and squeeze the maximum out of their fossil fuel assets, the writing on the wall is clear: one cannot count on using and producing the reserves and assets that exist. It is only now that these actors are themselves beginning to admit this publicly. Notably, BP made major headlines in 2020 with its conclusion as the first supermajor that oil demand may have already peaked and in acknowledging the risks of a disorderly transition scenario (Katakey, 2020).



OPEC is more optimistic on the prospect of the future of oil and claims that "Oil is forecast to remain the largest contributor to the energy mix by 2040, accounting for more than 28%. Between 2018 and 2040, global gas demand is anticipated to rise from 65.5 mboe/d to just above 90 mboe/d. Consequently, natural gas is expected to become the second-largest energy source, reaching a share of 25% in the total primary energy mix in 2040." Yet, also OPEC does recognise that renewables are on the rise, and that fossil fuels are not going to dominate forever. Their forecasts predict renewable energy will be the fastest growing source of energy in

relative terms, although their projections are a fraction of what is needed to avoid climate catastrophe (OPEC, 2019).

All this turbulence is now playing out in various ways that are shaking the markets profoundly. Saudi-Arabia took advantage of the situation in what seems the most aggressive and strategic way by implementing a U-turn strategy with increasing production and allowing prices to plummet, cornering, hurting and killing high-cost production in other parts of the world (including the US). While official predictions by the Saudi state owned oil company Aramco's CEO stat "that oil demand will continue to be healthy over the longer term. It is going to be a significant part of the energy mix over the next several decades" and that "[O]il, by the way, is not going to disappear under whatever scenario you are looking at: 2040, 2050, 2060", there is an underlying insight that indeed there is only a short window of opportunity to monetise these fossil fuel reserves, and that in parallel "income from Aramco is needed to help the Saudi leadership diversify the country's economy away from oil under the Vision 2030 program", towards economic diversification (Bakr, 2020).

While even the biggest fossil fuel producers see the writing on the wall, the challenge will be to pressure oil producers to not squeeze out oil revenues for several decades and instead rapidly embark on healthy, people-centred and environmentally friendly economic diversification trajectories. This requires capacity to monitor the sector, concerted and well coordinated strategies at multiple levels and the involvement of many kinds of actors.

### Equity in production phase-out enabling economic diversification

The clear and compelling framework by Muttitt and Kartha for categorising fossil-fuel producing countries into four groups according to their capacity and relative dependence on fossil fuel revenues is powerful and already integrated with the FFNPT initiative approach. This framework effectively bridges all three Pillars, and highlights the need for poor and fossil fuel revenue dependent countries to gain access to proper international support that can effectively, rapidly and with long-term stability enable these countries to diversify their economies and move out of fossil fuels. These measures go beyond monetary transfers and climate finance, and must at their core enable structural change and well planned, country-owned, long-term development trajectories that are both people-centred and environmentally sound. Comprehensive plans and approaches for moving towards universal energy access and 100% renewable energy need to be complemented with plans across all sectors.

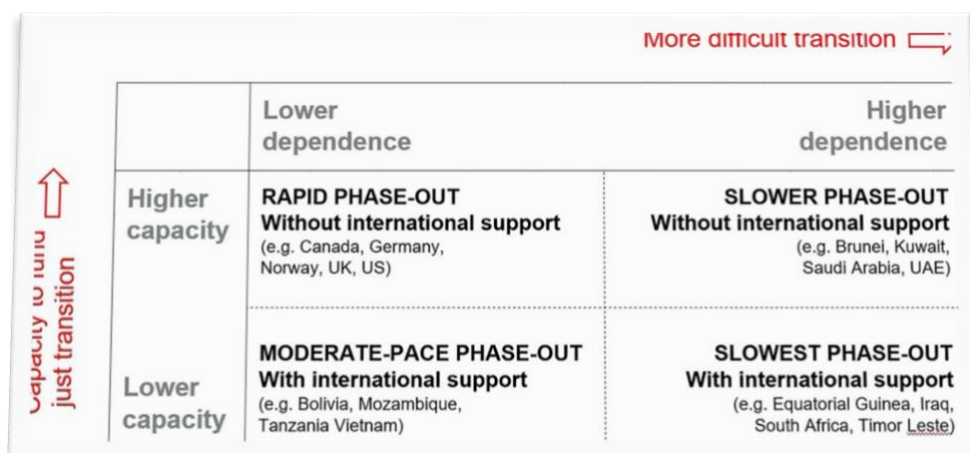


Figure from (Muttitt and Kartha, 2020)

For the wealthy countries that are highly dependent on fossil fuel revenues there must be strong pressure for much accelerated change towards non-fossil economies. The challenge and opportunity here is to pressure and convince these countries to immediately invest their own fossil-based revenues and existing stocks in economic diversification, and to the extent possible in renewable energy, while committing to non-expansion and rapid phase-out. FFNPT meta-level strategies needs to combine elements across the three pillars, with full integration of just transition, climate finance, fair shares and global cooperation approaches.

## Stranded Assets

The increasing threats of stranded assets should be exploited effectively. The current Covid-19 crisis have certainly helped illustrate these very real risks. There is also a growing international debate around stranded assets, where corporations, investors and other players take careful note and weigh risks in a rapidly changing landscape. The efforts by civil society in delegitimising fossil companies, removing their social license and pushing for divestment is shifting the balance.

Stranded assets are a particular concern in relation to many poor, revenue-starved countries in the Global South that are on the verge of investing in fossil fuels. The temptation of supposedly easily available revenues through extractives appear compelling, and as the 2019 United National University – Institute for Natural Resources in Africa (UNU-INRA) report *Africa's Development in the Age of Stranded Assets* concludes, "Climate change is a known driver of asset stranding but awareness is low among African policymakers. Instead, governments are increasingly concerned with how to use extractive resources to drive economic growth and transformation" (United Nations University – Institute for Natural Resources in Africa, 2019).

This can be seen clearly in several current cases of fossil fuel investments in Africa. The proposed East African Crude Oil Pipeline (EACOP) is one example where poor countries such as Uganda and Tanzania are about to invest large sums in fossil fuel infrastructure that will most certainly become economic liabilities and stranded assets. Such costs vastly exceeds the risk of losing these investments as the fossil fuel markets plummet further, and with as big or bigger losses in the costs of missed opportunities where the same resources could have been invested in something beneficial for the long-term, such as renewables. Rather than locking a poor economy into soon to be stranded assets, the country as well as the international community should ensure and enable these and additional investments in renewable energy and economic diversification measures, which will expand future revenues, the soundness of the economy and people's well-being. In fact, the renewable energy alternatives are already so competitive that thorough and fair economic analyses contrasting the different alternatives (pipeline/fossil fuels vs renewables) should provide motivation alone (Bond et al., 2021). These cases are of strategic value in that they can provide short-term "wins", embolden both movements on the ground and governments, and set examples for the whole world.

## Domestic renewable energy systems makes sense for all

As conversations around economic diversification for oil producers advance, it may be important to keep a distinction between fossil fuels as export revenues and fossil fuels in relation to domestic energy systems. While for some countries it is justified and necessary to have a longer phase-out period (the two right-hand quadrants in the figure by Muttit and Kartha above), it makes full sense for *every* country to move towards 100% renewable energy for their own, domestic energy systems as quickly as possible. This will enable economic diversification across the whole country, where many kinds of actors in local communities can

become both producers and consumers of energy, and where availability of renewable energy can drive local economic development as it directly benefits small and medium sized companies, small-scale agriculture and food production/processing, as well as the public sector (schools, health clinics, social protection etc) and overall industrialisation (See also the discussions on the renewable energy transition section of this document). These measures also remove vulnerability and dependence on highly volatile fossil fuel prices.

## Price stability

The importance of price stability has become increasingly evident, as turbulence and volatility escalate in the oil market. Price stability is likely a prerequisite for enabling an orderly and long-term, stable approach for phasing out and eventually exiting fossil fuels. This is articulated by Victor Menotti in a recent report titled *The Four Ds of Oil's Just Transition: Debt, Disclosure, Demand, and the Planned Decline of Production* (Menotti, 2020), where he concludes:

“Oil companies today face unprecedented financial pressures with deepening debts, mounting disclosures, peaking demand, and impending decline of production. Governments dependent on oil earnings strive to stabilize prices in order to predictably proceed with economic planning, including sustainable development and diversification from oil dependency. Yet market volatility is intrinsically tough to tame, and too often government revenue is insufficient to finance well-intended programmes. At the same time, oil-consuming countries are accelerating plans for low-carbon transitions to renewable energy, making the future demand for oil entirely uncertain; some say it may have already peaked. Therefore, we have a growing global constituency for oil price stability that could provide predictable pathways for the exit strategies of oil-dependent countries tenaciously trying to diversify away from oil, such as Saudi Arabia’s Vision 2030.”

Menotti further concludes that “[A]s Russia and Saudi Arabia show continued concern over climate change while pursuing paths from oil-based economies, the open invitation by OPEC+ to other oil producers (including the U.S.) offers an extraordinary opportunity to explore pairing price stability with a planned phase out of production to help implement a Paris+ Agreement with adequate ambition” (Menotti, 2020).

This further points to the need for international cooperation and agreements that can create the confidence and stability that everyone ultimately benefits from. The FFNPT Initiative will need to explore if and how such a dimension can be articulated and included in its framing.

## Addressing impacts of climate change response measures

The issue of “response measures” within the UNFCCC negotiations has been a contentious issue for a long time. The idea is to recognise and address adverse impacts of mitigation policies, programmes and actions that impact negatively on other countries. Traditionally, developing countries have approached the issue through defensive agendas, in particular some developing country fossil fuel producers that have seen renewable energy, energy efficiency and emissions standards as direct threat to their exports. Over the last few years, this has however begun to shift, with an increasing focus on possibilities to use the response measures framework as means to facilitate economic diversification and sustainable development, including overcoming export dependencies through diversification of economies. A “Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (KCI)” has now been set up (and had its third meeting in October 2020) and a work plan established. This [2020-2024 work plan](#) outlines among many other things identification of best practices, case studies and capacity

building on just transition and economic diversification. Given the slowness and challenges to develop agreed measures with bite and necessary funding within these negotiations spaces, one should be careful in what to expect in the short term. This is, however, an established space within the multilateral system that should be playing an important role in enabling the kinds of measures that are necessary for countries to move away from fossil fuels. It makes sense for the FFNPT process to explore and engage carefully in this space through partner organisations such as TWN, and see how its leverage can be maximised and connected to other dimension of the Pillar III strategy.

### Expanding tax base/social protection

Countries dependent on fossil fuel extraction for significant parts of their government revenues will need to explore how they can expand their tax base. Most fossil fuel producing countries will need to find other ways of generating government revenue as fossil fuels are phased out, and for some countries such as Nigeria with 80-90% of government revenue directly stemming from oil exports, the task is formidable. This necessitates, as one of many measures, tax reforms and tax justice reforms for both foreign companies and domestic populations and companies that ensure more diverse sources of revenue, where those with most resources provide their fair shares in taxes. The many existing movements and efforts championing good and fair taxation and that fight tax evasion would be valuable partners in the FFNPT process and country engagement (Shaxson, 2020).

### Economic diversification and just transition/social protection – lessons from Covid-19

Successful economic diversification necessitates long-term development planning combined with proper government-provided social protection. The Covid-19 pandemic shows with devastating clarity how economic disruptions hit the most vulnerable countries and the most vulnerable groups in countries the hardest. Without social safety nets and social protection, such as health care, sick pay, cash transfers, employment guarantees, etc., these abrupt changes leads to intolerable suffering and people falling into negative spirals from where it may be impossible to recover. On the other hand, many of the swift and ambitious responses to the Covid-19 crisis also show how resolute and fair government action and spending on social protection can make huge differences.

Economic diversification strategies can draw on the many Covid-19 related experiences (good and bad) of social protection measures, but also look at the many examples that exist around the world. Some countries, for example the Scandinavian countries, have many valuable experiences from how they have handled far-reaching economic restructuring where certain sectors declined and government policies helped create new opportunities while allowing workers to re-train, receive support to move locations and keep afloat during transitions from one sector to another.

Social protection approaches are also being increasingly discussed in the context of climate. A recent report by ActionAid highlights how social protection measures can be used as proactive tools by governments to address climate-induced loss and damage. With appropriate social protection schemes in place, including cash transfers, job guarantees, training/re-skilling, the worst effects of climate impacts can be addressed, and economic diversification facilitated before people face irreparable losses (Anderson, 2021).

For many poor countries the necessary measures are likely out of reach in relation to their government revenues, which reinforce the necessity for both tax justice and international

cooperation and support, at ambition and expenditure levels at par with or exceeding the current Covid-19 responses.

The [Global Coalition for Social Protection Floors](#), gathering more than 200 civil society organisations and trade unions, are demanding international responses to help enable, and where needed financially support, the establishment of appropriate social protection systems in all countries. Such measures include the creation of a [Global Social Protection Fund](#) (Global Coalition for Social Protection Floors, 2020).

Just transition linked to economic diversification goes beyond provision of social protection floors, however. It should also address broader social stress and conflict issues that may arise as a result of the decline of key fossil fuel-based economic sectors. This would include, for example, sudden drops in social welfare measures due to drops in national revenue streams; youth generational anomie due to the loss of post-school employment opportunities; social conflict and instability; loss of sense of national identity; pressure to migrate in search of economic opportunities within or across borders; etc.

### **New productive sectors and localisation - no magic new export commodity available for all**

With some exceptions, there will likely not be much prospects for fossil fuel exporting countries to find magic, one-commodity replacement options. Rather, countries will need to develop comprehensive, multi-sectoral economic diversification plans that builds resilience, strengthens self-reliance, and build local and diversified economies that directly benefit the populations – at least as complements to new export-oriented options.

This can in fact provide blessings in disguise – such forced reconsiderations of economic priorities and plans can enable countries to start developing more healthy and diversified economies sooner rather than later.

For many developing countries, it will be important to carefully look into productive sectors such as small-scale agriculture and local small and medium sized enterprises and industries. These sectors have generally been neglected, while they in fact cater to large parts of employment and livelihoods. The visions of new, people-centered, distributed renewable energy systems articulates opportunities for energy generation as new sources of income, but also, more importantly opportunities for enhanced value generation of local food production, processing, storage and markets, as well as thriving local economies driven by small, locally anchored businesses. These development approaches will not substitute for lost oil and gas revenues, but can certainly play a significant role for economic diversification.

### **Renewable energy export – for some**

For some countries, renewable energy production for export will be viable options for economic diversification. Not least the oil producing Gulf states are also endowed with excellent solar potential, and could begin a concerted effort to move to renewable energy production also for export. A key challenge to resolve is the transmission of the power to the buyers, which could be done through new transmission lines where feasible, but also the production of hydrogen produced through renewable energy powered electrolysis (“green hydrogen”) which may be possible to transport to market on other continents through refurnished (and renewable energy powered) tankers.

Renewable energy exports must be considered with caution however, since it may have negative impacts on the domestic renewable energy supply, local economic development and



diversification. There is for example increasing European push for African development of hydrogen catered to European markets, which seems predominantly driven by European energy security and geopolitical interests rather than African domestic needs. There are also numerous problems with the push for hydrogen in that it can become a mechanism for prolonged fossil fuel use in contexts where the increased hydrogen demand is met by production through fossil fuels rather than from renewables (Whitehead et al, 2020).

## Re-orienting state-owned fossil fuel corporations

A key part of the economic diversification strategies for many countries will involve the re-orientation of state-owned fossil fuel producing corporations. In several countries, these companies play a significant role as direct contributors to the government budgets, and are seen as key drivers for state-led development efforts and enablers of essential government services. In Malaysia, for example, the state-owned Petronas, provides 20% of its revenue to the state, which also corresponds to approximately 20% of the state budget. The company is a national symbol and has generally been seen as a positive force for the national development project, rather than a dirty oil major. As the detailed study on Petronas undertaken by TWN for the FFNPT Initiative shows, the situation is 'complex, and necessitates detailed understanding of the particular situation to inform effective strategising. This includes detailed understanding of the various stakeholders, and political and economic forces in the country, as well as of how the corporation is structured, managed, directed and performing. In the case of Malaysia and Petronas there seems to be some opportunities for more far-reaching re-direction of the current fossil fuel focus, given the combined pressures of climate change and decreased demand for oil due to the Corona pandemic.

The biggest player in this category of state-owned fossil fuel corporations is Saudi-Arabian Aramco, which totals 3,5 billion barrels in production, and in 2019 generated 295 billion USD in revenue. As a state-owned company, Aramco has provided for the last years almost USD 75 billion in annual revenue for the government. According to Moody's Investors Service this may not be possible after 2021, given the current developments in the markets, which further indicates the fast and disruptive change that is currently shaking the industry (Bloomberg, 2020). Any fossil fuel phase out and economic diversification strategy necessitates a clear understanding of how Aramco, Petronas and any other state-owned corporation can and will need to change, and how their government revenues are to be substituted with other incomes. Aramco is obviously in a quite favourable position, given its dominant role in the market, access to cheaply produced oil, and ability to squeeze out other producers by keeping production up at lower per barrel price, and still generate considerable profits. The opportunity and challenge from a climate change/FFNPT perspective is to effectively accelerate the emerging insights within Saudi and Aramco leadership of the need to use the current window of oil revenues for investments into a new economy. The Bloomberg article recognises that these insights do exist and that "[I]ndeed, income from Aramco is needed to help the Saudi leadership diversify the country's economy away from oil under the Vision 2030 program." (Bloomberg, 2020) While the Vision 2030 program does not in any way go far enough, it does indicate an existing space and platform for engagement that the treaty process may want to explore and strategise around.



# ELEMENTS OF PILLAR III ACTIVITIES AND STRATEGY

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## Introduction

This section provides initial elements of pillar III activities and strategies. It includes elements of wider reach that are important for the success of a just, renewable energy transition and the required economic diversification, as well as elements that may be more specifically tied and relevant to the FFNPT Initiative process.

Some elements that may be directly included or referred to in a legal treaty arrangement. These are marked by **Treaty element**

The activities and strategies can be structured along several axes. The main section is organised in accordance with the main FFNPT strategy document and includes the following dimensions: Narrative, Civil society, Private Sector, Sub-national level, National level, Regional level, International level, Finance-related, Communications, and Research.

Strategies and activities/actions identified under each of these dimensions are distinguished in terms of how they relate to the three Pillar III-dimensions: the Renewable energy transition. **Energy transition**, the Equity and just transition dimension **Equity/Just transition**, and the Economic Diversification dimension **Economic diversification**. Some strategies/activities are only relating to one or two of these dimensions while others cut across all three.

Strategies and activities are also identified in relation to how they relate to or include different kinds of actions:

**Narrative** **Research** **Policy** **Convening** **Communication** **Campaigning** **Partnerships** **Training**

This part of the paper is presented as a mapping/overview, with only limited prioritisation, interconnection or detail. Prioritisation and clustering of these into more operational and meta-level strategising can follow. Different actors can use and pick various elements in accordance with their own direction, expertise and priorities.

## NARRATIVE DIMENSION

The FFNPT Initiative will need to consider its overall framing, including the relative balance between pillars I/II and pillar III, and consider whether/under what circumstances it makes sense to lead the overall framing with pillar III – e.g. “A Global treaty for just transition and phase out of fossil fuels”.

The [Overview and summary of key points in relation to Pillar III](#) as well as on the “[Broader context of the climate crisis](#)” in the introductory section of this document provide a source of narrative elements to be considered by the FFNPT Initiative. A further distillation of these is presented below.

### *Context*

- 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.
- The climate crisis is part of a wider set of crises – crises of food, energy, inequality, patriarchy, racism, imperialism, extinction.
- 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.
- The urgency of the crisis requires a response centred on human rights, equity, and justice.
- 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 FFNPT Initiative departs from a clear understanding of the scientific premises, urgency and the many dangerous distractions that prevail.
- The concept of a “carbon budget” is a social construction. The “carbon budget” for keeping the world *safe* from global warming is already exhausted.
- Early action and ‘maximization’ of efforts to reduce emissions in the near term is essential. Continued high levels of emissions eat up the already risky IPCC carbon budget in only a few years.
- 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.
- Misleading rhetoric and promotion of “dangerous distractions” or “false solutions” that gives the impression that action is happening is likely worse than inaction.
- Prevailing, distant net-zero targets tend to embed false solutions and shift focus away from the near-term. Their assumptions of off-sets, overshooting and future removal of CO<sub>2</sub> 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 CO<sub>2</sub>.

- 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.

### ***Renewable energy transition***

- A condition for any success in stopping expansion and phase-out of fossil fuels is a rapid transition to 100% renewable energy through equitable just transitions for workers and communities and transformation of wider socio-economic systems, as part of a globally just transition in which all countries do their fair share.
- All countries must immediately plan and begin implementation towards real zero emissions, with comprehensive plans across all sectors that do not rely on risky, unproven technologies or off-setting emissions to others.
- 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.
- Pillar III can only succeed through concerted international cooperation, while local and national-level actions are critical to any success.
- 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.
- A ‘Marshall’ style 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’.
- Such 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
- The struggle against fossil fuels must go hand in hand with the support for renewable energy. Fossil fuel subsidies can be shifted to renewables. Juxtaposition of investment prospects and development co-benefits from renewables vs risks of stranded assets can help reorient investment decision. Frontline struggles against fossil fuels can simultaneously promote renewables.

### ***Equity and just transition***

- Equity and justice must be at the heart of the transformation.
- 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 battleground between fossil fuels and renewables will increasingly shift towards good vs bad renewable energy.

- There must be a convergence of energy use per capita globally – the energy transition must 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.
- The future 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 prosperity - nor impact negatively on poor and marginalised peoples and communities today.
- 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 including households, farmers, communities, cooperatives, schools, hospitals and other public entities and as well as new, smaller renewable energy companies.
- The new, smart, people-centred, distributed renewable energy societies of the future is cutting-edge and symbolises real progress. A positive, self-reinforcing narrative of what it means to be winning and ahead of the curve, i.e. true leadership can be advanced by insightful political leaders, supported by our efforts.
- Access to sound, clean, environmentally and socially appropriate renewable energy is a right, which merits significant public ownership and provision of energy for the common good.
- 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.
- 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 (for example in connection with minerals extraction( in other parts of the world.
- 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.
- Social protection is essential to ensure that neither fossil fuel workers or others are harmed by the transition. A global social protection fund should be an integral part of the transition and Pillar III demands.
- The transition to renewable energy societies requires and provides means for democratised energy systems and enhanced equality and equity overall. Obscene inequalities in terms of wealth, incomes and climate pollution by the few are drivers of current problems; a successful and just transition to renewable energy and zero carbon societies is not possible without addressing these injustices and recognising historical, colonial, imperial and racist roots.

### *Economic diversification*

- Economic diversification is essential for all countries. For fossil fuel producing countries, credible economic diversification trajectories are essential for any concerted action towards

stopping expansion and phasing out fossil fuels.

- Poor countries, and particularly producers with high dependency on fossil fuel based revenues, must be supported to enable diversification of their economies.
- All countries, including fossil fuel producers, 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.
- 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. 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 sufficiency and non-material means to enhance quality of life.
- The transformation to 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". There are no universal blueprints.
- 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.

## Actions and activities in relation to Narrative strategising may include:

### Consideration and further refinement of above narratives

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Integrated assessment, reflection and refinement of narratives across Pillar I, II and III of the FFNPT process (involving all three working groups: political, campaign and research and other entities).

Narrative Convening

Energy transition Equity/Just transition Economic diversification

### Refinement of communications material

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Crystallising and effectively communicating the above and further refined narratives through reports, infographics, video, social media, and other means). See also communications strategy below.

Narrative Communication

Energy transition Equity/Just transition Economic diversification

### Testing of effectiveness and impact of narratives

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Bring in Pillar III narratives in early testing of communications framing, memes, slogans, impact etc.

Narrative Research Communication

Energy transition Equity/Just transition Economic diversification

## Translation into other non-English languages and cultural contexts

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Work with regional hubs for specific framing appropriate for regions as well as translations

Narrative Communication

Energy transition Equity/Just transition Economic diversification

## Develop training toolkits

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for media appearances and FFNPT advocacy that effectively communicates Pillar III narratives.

Narrative Communication Training

Energy transition Equity/Just transition Economic diversification

## Establish internal procedures

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Ensure Pillar III narratives are captured and communicated in media, communications and advocacy efforts under the FFNPT

Narrative Communication

Energy transition Equity/Just transition Economic diversification

# CIVIL SOCIETY DIMENSION

This section outlines activities and strategies that are directed towards civil society, for example in terms of how civil society can effectively mobilise, organise and build partnerships. Civil society engagement in policy and advocacy are highlighted under the local, national, regional and international strategies sections below.

## Civil society platforms

### Further mapping of individuals and organisations of relevance for Pillar III

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An immediate next steps would involve further and systematic mapping of key individuals and organisations of relevance for the various dimensions of energy transition, just transition and economic diversification as outlined in this paper.

Research Convening Partnerships  
Energy transition Equity/Just transition Economic diversification

### Cross-cutting civil society energy platform for FFNPT pillar III

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While several networks and platforms exist, there appears to be scope and relevance for a structure that would bring together relevant civil society actors in relation to pillar III of the FFNPT treaty process. Existing and emerging efforts to create broad, civil society platforms across constituencies and for whole continents may be integrated in such efforts, including the efforts by FFNPT regional nodes (PSA, APMDD). The Initiative can engage with other efforts such as the Renewable Energy Platform of Action and similar networks to explore synergies and scope for collaboration.

Policy Convening Campaigning Partnerships  
Energy transition Equity/Just transition Economic diversification

### Civil society/research expert groups

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With adequate resources, group of experts and scholar-activists such as the Climate, Energy and Development Initiative group behind ideas for a Global Marshall plan for energy and development, the Africa Renewable Energy Initiative, the LDC REEEI, GREEAT and several other initiatives can contribute to the consolidation of several of the key strategies outlined in this document.

Research Convening Partnerships  
Energy transition Equity/Just transition Economic diversification

### South-South cooperation platforms

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Strengthened civil society organising in the Global South is key across all dimensions. The regional nodes under the FFNPT Initiative are already providing opportunities for enhanced South-South collaboration, which should be further advanced in synchronisation with othe on-going and emerging South-South efforts.

Convening Partnerships  
Energy transition Equity/Just transition Economic diversification

### UNFCCC focused civil society platform on energy, just transition and economic diversification

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The Climate, Land, Ambition and Rights Alliance (CLARA) has created an effective, cross-sectoral space for



interaction, strategising, analysis, knowledge development and direct interventions in processes connected with UNFCCC negotiations and IPCC. A similar platform is missing for energy related issues and could be formed, which would also provide strategic opportunities for advancing the FFNPT within formal negotiations spheres.

Convening Policy Partnerships  
Energy transition Equity/Just transition Economic diversification

## Global over-riding people's platform

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Consolidation of a platform that can appeal to and unite broad segments of citizens across geographies and backgrounds for planetary survival – “People for Future” – is timely, appealing and in the making, already recognising FFNPT and its three pillars as a priority.

Convening Partnerships Mobilisation  
Energy transition Equity/Just transition Economic diversification

## Trade union and just transition dimension

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Efforts to advance strategic interactions between the FFNPT process and trade unions is a priority. As noted under the Just Transition section of this document, the framing of managed decline can be problematic for many unions, and a narrative that puts social protection and just transition centrally is important for most unions. Further collaboration can include more concrete advancement on how just transitions agendas can play out in the global context, and with broader interpretations of what Just Transition entails. The establishment of such a platform within the FFNPT process could contribute to early clarifications as regards both narrative, political framing and identification of research needs.

Policy Convening Campaigning Partnerships  
Energy transition Equity/Just transition Economic diversification

## Integrated campaigning across all pillars

The FFNPT process can identify and contribute to civil society campaigning that integrate work across the three pillars. Strategic interventions to mobilise and advocate against fossil fuel expansion/extraction in direct juxtaposition to renewable energy alternatives can be expanded, through use of economic analysis, exposure to risks of stranded assets and potential for spin-off effects on economic development and peaceful, collaborative alternatives.

## East Africa Crude Oil Pipeline (EACOP)

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This current case offers opportunity for integrated strategising and campaigning. The emerging resistance to the pipeline planned to run from Uganda through Tanzania can be boosted by arguments showing the economic and development benefits of stopping expansion of fossil fuels and instead using the resources for renewable energy. Effective campaigning requires resources for research, organising and mobilisation, and should also include dimensions targeting the foreign corporate involvement (Total in this case). This and similar cases should also connect to strategies for promotion of 100% renewable energy transitions and plans and their support through Fair shares and equity as outlined elsewhere in this document.

Research Campaigning Mobilisation  
Energy transition Equity/Just transition Economic diversification

## Identification of other similar cases and establishment of networks

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Similar cases can be systematically mapped and analysed. The different struggles can be connected to

share experiences and boost campaigning power.

Research Convening

Energy transition Equity/Just transition Economic diversification Development of common toolkits and methodologies

Build resources in the form of common toolkit, methodologies, compilations of analysts/expertise etc.

Research Training

Energy transition Equity/Just transition Economic diversification

## Training and capacity mobilisation/building

### Internal capacity building and strategy considerations for the FFNPT process

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Internal engagement and capacity building on pillar III matters as outlined in this document can be undertaken within the treaty process itself, including webinars and in-depth workshops/strategy discussions and written material. Several issues highlighted in this document require careful consideration across the political, campaigning and research working groups.

Training

Energy transition Equity/Just transition Economic diversification

### Capacity building with larger civil society

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Through the FFNPT process and some of the platforms and existing networks, interaction and capacity building on the pillar III issues as outlined in this document can be scaled up to reach civil society constituencies across broader segments of civil society and social movements, including new and vibrant youth movements.

Training Partnerships

Energy transition Equity/Just transition Economic diversification

### Training of governments

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Civil society interaction with and training of government officials across all dimensions covered in this document as well as Pillars I and II issues can be enhanced. Methodologies may range from briefs and webinars to intensive workshops, courses, joint study tours and creative online interaction. Civil society needs to more effectively take the role of, and be recognised, as technical experts matching entities such as development banks, private consultancies and establishment think-tanks. Specific FFNPT Initiative related trainings can be directed to e.g. regional groups of negotiators and parliamentarians.

Training Partnerships

Energy transition Equity/Just transition Economic diversification

### Communications and training materials

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Existing, relevant material for FFNPT pillar III (written, video, infographics etc.) can be made easily accessible on the FFNPT campaign and other relevant websites. New training materials to be produced.

Training Communication

Energy transition Equity/Just transition Economic diversification

### Systems mapping

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Analysis, training and capacity mobilisation to foster systems thinking and -analysis can be further

developed and strengthened.

Research Training

Energy transition Equity/Just transition Economic diversification

## Mobilisation – building power

Civil society popular mobilisation and broad-based people power have historically been the key force behind social progress, social and environmental justice and human rights. Achieving the goals of the FFNPT will require such mobilisation of people power.

It will be important to support the growing movements for climate justice in advancing the calls for people-centred, distributed renewable energy, energy democracy, just transition and economic diversification through alternative development approaches and visions.

Sites of struggle range from the local efforts to establish people-controlled renewable energy solutions to national, regional and international policy battles. The FFNPT Initiative has tremendous potential to provide conducive platforms and coalescing of targeted and integrated mobilising against the fossil fuel industry, against other false solutions, and for appropriate renewables and real solutions.

### The Global Campaign to Demand Climate Justice (DCJ)

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DCJ gathers hundreds of social movements and organisations in both the global South and North, with many leaders already involved in the FFNPT process. Close collaboration and further strengthening of the DCJ resource base would provide significant potential for synergies and popular mobilisation, including on the solutions oriented efforts for real zero/real solutions.

Mobilisation Partnerships

Energy transition Equity/Just transition Economic diversification

### CAN-I/CAN-US re-orientation

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The current re-orientation of the Climate Action Network both internationally and in e.g. US towards building power from below is promising, timely and important, and offers opportunities for synergies and joint strategizing. The comprehensive approach for FFNPT pillar III can provide strategic openings and help CAN move further in its solutions work, while drawing on its 1500+ member organisations in the support for a FFNPT.

Mobilisation Partnerships

Energy transition Equity/Just transition Economic diversification

### Fridays for Future/School strikers

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The interest in FFNPT from many school strikers as a concrete and inspiring initiative provides scope for synergies and collaboration. So far, most attention may have been directed to the Pillar I and II dimensions, while there is much potential for engagement also on Pillar III.

Mobilisation Partnerships

Energy transition Equity/Just transition Economic diversification

### Local resistance/mobilisation

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It will be important for FFNPT to emphasise that not all renewable energy efforts are positive or socially and environmentally acceptable (as discussed in e.g. the Just Transition section above), and to illustrate and support the parallel struggles against fossil fuel production/expansion (Pillars I and II) and struggles

against unacceptable mineral extractions for renewables and mega projects that abuses land rights and human rights.

Mobilisation Partnerships  
Energy transition Equity/Just transition

## Local struggles for renewable energy

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Many examples of community power and establishment of appropriate, participatory renewable energy projects have emanated from persistent struggles and engagement by local people, including the many jurisdictions that today have 100% renewable energy commitments and targets. The FFNPT process can help enhance and connect such examples and struggles and connect these with the SAFE cities work in relation to pillars I and II.

Mobilisation Partnerships  
Energy transition Equity/Just transition Economic diversification

## Watchdogs

The hi-jacking and co-optation attempts of several promising renewable energy initiatives such as AREI and LDC REEEI show the importance of civil society capacity to monitor and intervene to keep such efforts on track, and to ensure genuine civil society and stakeholder participation.

## African and other continental energy initiatives watch

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The current, emerging pan-African platform to monitor initiatives on the continent has potential, but needs further capacity, resources and longer-term strategies. Current efforts by EU to advance a new European conceived EU-Africa Green Energy Initiative to largely serve EU geopolitical and trade interests calls for urgent strengthening of such watchdog capacity. Similar efforts should be encouraged and facilitated on other continents. The Watchdog functions can be integrated with efforts to establish and monitor social and environmental criteria.

Mobilisation Partnerships  
Energy transition Equity/Just transition

## Global watch

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Scope and need for a global watchdog function, with integration of the various dimensions of Pillar III could be explored and advanced, either as a stand-alone effort or integrated under the FFNPT process.

Mobilisation Campaigning Partnerships  
Energy transition Equity/Just transition Economic diversification

## South-South collaboration

There is need for strengthened South-South collaboration among civil society, but also across governments and other stakeholders. Too much of the political agenda, whether in civil society or government spaces, are set by Northern actors. The reconsideration and research of historical experiences from how the global South has managed to collaborate and set its own agenda can be valuable (such as in the “post-colonialisms today” work by Regions Refocus).

Research Partnerships

## Civil society led multi-stakeholder engagement models

The role of civil society as technical experts and vanguard movers at both policy and implementation levels must be recognised and advanced. Without civil society in the lead, the transformative agenda of the renewable energy revolution and climate action have little chance to succeed. Governments and business will be in no position to advance transformative enough solutions, neither implement processes that involves all stakeholders in participatory manners.

### Build on and scale-up/replicate existing pioneering examples

The example of broad multi-stakeholder-government interaction towards formulation of 100% renewable energy roadmaps and policies in Tanzania, as well as Costa Rica and Bangladesh, provides some examples and experiences to build on further. The work of CAN Tanzania in partnership with World Future Council and Bread for the World is setting the ground for other similar work, and can be considered and further expanded by other actors. The summary of experiences (Dubbels et al., 2020) so far provides insights for how such processes can be initiated and advanced. Such approaches are also aligned with the framework and original intentions of the AREI, LDC REEEI, GREAT and the work of the Climate, Renewable Energy and Development expert group behind these initiatives.

Research | Policy | Convening | Partnerships | Training

## PRIVATE SECTOR DIMENSION

The private sector strategy in relation to pillar III needs to identify genuine allies in the corporate sphere, but as importantly, scrutinise companies who are undermining the renewable energy and just transition. It is also important to differentiate between different kinds of private sector actors. Many community energy efforts are for example driven by private entities that are not profit-maximising, for example cooperative and community associations with a mission to return surplus revenue for community benefit. Policies and financial measures to foster increased private sector investments in renewables are covered in other sections.

### Small-to medium scale renewable energy businesses and business associations

The FFNPT Initiative may want to develop approaches and strategies for directly targeting renewable energy businesses and business associations to gain their support for the treaty, and as potential advocates and communicators. Many of these can be reached through existing entities such as REN21. Specifically targeted communications materials and toolkits can be developed.

Communication Partnerships  
Energy transition Equity/Just transition Economic diversification

### Human Rights, environment and renewable energy industry watch

Given the findings by the Business and Human Rights Resource Centre (as discussed in the Just Transition section) that none of the 16 of the largest wind and solar companies in the world met their responsibility to respect human rights, and that more than half of these only scored 10% of the criteria, it is important to scale up and further institutionalise industry watch capacity. Strategies must be developed and resources mobilised to continuously monitor and evaluate the conduct of renewable energy companies. Criteria such as those formulated and adopted under the Africa Renewable Energy Initiative must be strengthened and applied across continents, with adequate structures for monitoring and sanctioning.

Research Campaigning Communication  
Energy transition Equity/Just transition

### Blacklists and exposure

Associated with the item above, the FFNPT Initiative may consider expansion of its registry functions to include listing and exposure of renewable energy corporations that are not conducting its work in line with human rights, environment and just transition principles.

Research Campaigning Communication  
Energy transition Equity/Just transition

### Criteria for supporting FFNPT

FFNPT may want to develop criteria for corporations (and other actors) that want to show their support for the treaty.

Research Communication Partnerships  
Energy transition Equity/Just transition

## Engaging and moving national fossil fuel companies towards renewable energy

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As elaborated by the study of Petronas by Third World Network for the FFNPT Initiative, the role of national fossil fuel companies and their potential to change direction from fossil fuels to a focus on renewable energy is important. While state owned, they are generally operating as profit-maximising entities, but can be transformed and re-directed through political decisions. Further research and sharing of experiences/examples of corporate transformations would be relevant.

Research Communication Partnerships

Energy transition Equity/Just transition

## Industry assessments

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Systematic monitoring and assessments of the rapidly changing renewable energy industry (and associated industries such as the mining and recycling sector) to understand and be in position for pre-emptive interventions as the renewable energy transformation takes off. Such capacity must be coupled with capacity to monitor the changing corporate landscape, including oligopolistic moves, mergers and control of intellectual property access sectors, which often takes place under the radar,

Research Convening

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## SUB-NATIONAL DIMENSION

There are obviously numerous activities and strategies for sub-national action. The list below provides an indication of possibilities.

### Toolkits, handbooks and examples for 100% renewable energy building blocks and community energy

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Much of the renewable energy revolution and just transition efforts have been driven by local and sub-national efforts. The growing body of experiences, case studies and networks can increasingly inspire and accelerate such efforts elsewhere. FFNPT Initiative communications, campaign website and other activities can help boost such efforts, and point to useful resources such as the *100% RE Building Blocks: A practical toolkit for a sustainable transition to 100% Renewable Energy* specifically directed to sub-national jurisdictions (Boselli and Leidreiter, 2016), and the handbook *Community Energy: A Practical Guide to Reclaiming Power* (Friends of the Earth Europe et al., 2020) along with inspiring case studies and examples.

Policy Convening Partnerships Training

Energy transition Equity/Just transition Economic diversification

### Link to SAFE cities campaign

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The many examples of sub-national jurisdictions that have taken on 100% renewable energy targets should be candidates for also joining the SAFE cities dimension of the FFNPT process. Furthermore, there is considerable scope for mutual learning, sharing of best practice and joint strategising, with potential for inclusion of pillar III elements in the SAFE cities framework.

Policy Convening Partnerships Communication

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### Solar revolution – People’s movement for bottom-up renewable energy

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The Swedish ETC solar revolution 2.0 outlines an interesting model that could be highlighted and replicated. ETC has managed to create a new green-red daily newspaper (a significant feat in itself) with much focus on climate and underlying causes. Through this media channel, a range of innovative cooperative schemes are being developed to include crowd-sourcing and savings in new, wood-constructed apartment buildings that generate more energy from their solar panels than they consume. This innovative scheme simultaneously tackles the climate crisis, the renewable energy transition, safe savings alternatives away from conventional for-profit banks and provision of affordable, yet environmentally and socially sound rental housing. Connected to these schemes are efforts to enable all Swedish house owners to install rooftop solar on their houses through collective bulk purchase and a system of popular education and training where people learn to plan, design, order and deploy solar themselves. The theory of change involves the creation of a social movement that expands its reach by people inspiring and supporting each other, while benefitting from lowered energy costs.

Narrative Convening Communication Training

Energy transition Equity/Just transition

## Indigenous renewable energy at utility scale

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An inspiring model for transformative renewable energy deployment with direct social benefits has been pioneered in Latin America. The “Yansa” model is built on indigenous communities maintaining control of their land and resources while developing large, utility scale wind projects that are carefully aligned with social, cultural, spiritual and ecological considerations. The participatory model involves and benefits the whole community with revenue of the bulk of the energy that is sold to the national grid going to community social trust funds. A part of the revenue is put aside to provide support and start-up capital for other communities to replicate the model, with the purpose of not only creating viable community energy provision, but to help spur a larger transition to renewable energy. The solidarity-based model provides safe investments for institutional investors who appreciate socially appropriate use of their money, and also the much decreased risk of local conflicts over land and rights that is often the case for large-scale commercial projects. This and similar examples of sub-national strategies can provide inspiration and concrete examples of solutions that the FFNPT Initiative may communicate to wider audiences.

Narrative Communication Partnerships Training

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## NATIONAL LEVEL DIMENSION

Advocates for FFNPT will need to shape their specific national strategies based on their particular and specific national contexts. The following activities and strategies provide initial examples for consideration.

### Enable country-level mapping and power analysis

Thorough mapping and research at the domestic level can fill critical knowledge gaps. This is essential for national strategising, advocacy and effective campaigning across all pillars. It is important to identify allies at country levels that are positioned and capable to undertake such analysis. It would be valuable if the treaty process could help leverage means for broad roll-out of the necessary funding and training that is required to enable this kind of civil society led research/mapping efforts across all countries. As a secondary step it will be essential to build capacity for effective compilation, synthesis and information sharing of both open as well as sensitive, strategic information across countries.

The FFNPT research template outlines the following mapping/research areas in relation to the renewable energy transition:

The **national domestic energy system characteristics** (access to energy across population, regions, ethnicity, incomes etc.) energy mix, energy import dependency, fossil fuel reserves, RE potential/resources, legal environment, existing RE strategies and policies, principal barriers (legal, financial, political, infrastructure), sources of finance, energy system/energy grid type, existing subsidies (fossil fuels and RE), diversification of ownership of energy producers (and size), current energy plans and forecasts.

Dimensions of the **national policy and political economy/power context** that need to be assessed and understood include how political the political system functions, relative power across ministries, opposition party power and influence, nature and openness/repressiveness of the political system, legislative procedures, potential allies and contenders, current targets and commitments to RE (including NDCs).

It is also important to map and assess country-specific presence of initiatives, donors, aid programmes and investment plans, as well as assessments of foreign influence and trends in renewable energy policy making over time.

For **just transition dimensions** there is need for country level mapping and research in relation to: current jobs at risk in the fossil fuel sector, current jobs at risk in other sectors under transformation (industrial agriculture, transportation, certain industries etc.), current just transition policies and arrangements, current social protection situation, worker's rights and legal situation, estimation of financial need and costs for early retirements, relocation, retraining, social protection etc., trade union presence and power, participation and multi-stakeholder context, estimations and prospects of new job opportunities in the renewable energy and other sectors.

For the **equity and global just transition** dimension there are needs for country-based mapping and research on current inequalities within the country (including associated carbon emissions, the country's fair share and international obligations to support or receive climate finance, access to technologies and other means of implementation; energy use, emissions and ecological footprints across incomes, race, class, geography; and impact on other countries,

communities and environment/ecosystems from current and anticipated extractive activities to serve the renewable energy transition.

In terms of **economic diversification**, mapping and research are needed to clarify **fossil fuel producing countries'** dependence on fossil fuel revenues; how these revenues are allocated and used; importance of such revenues for government budgets and structures/mix of state-owned verses private fossil fuel industries; current short-term plans for expansion and/or diversification; existence of longer-term plans for reinvestments of fossil fuel revenues and diversification away from fossil fuels; main barriers and arguments blocking diversification, current ideas and prospects for new economic opportunities and diversification.

For **all countries**, research and mapping is essential in terms of the scope of economic and development debates – is it mainly confined within a neo-liberal context, within a mainstream modernization context or in a larger and deeper systems critique/alternative development discourse? What are current plans, debates and disagreements on long-term development visions across sectors (agriculture and food, health, industries). What are current understanding of implications of further automation, new technology development and international trade?

In order to map/conduct necessary research in line with the above, several efforts can be supported and undertaken simultaneously:

### Enable civil society/independent efforts to undertake research/mapping as outlined above in pilot countries

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Initiate mapping methodologies and initiate mapping in pioneering countries. Mobilise resources for expanded efforts across countries. Requires funding and supportive institutional arrangements.

Research Training

Energy transition Equity/Just transition Economic diversification

### Support country/government-driven efforts at research/mapping

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Work directly with countries and initiatives (such as the LDC REEI) to facilitate mapping efforts where conducive/appropriate circumstances. Encourage cooperation and synergies with civil society efforts.

Research Training

Energy transition Equity/Just transition Economic diversification

### Enable effective synchronisation and sharing of research/mapping findings across countries

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Set up effective information sharing systems and databases for management of mapping and other information. Explore most suitable institutional platforms and potential collaborators.

Research Communication Partnerships

Energy transition Equity/Just transition Economic diversification

## National targets and plans

### 100% Renewable Energy targets

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Target setting is widely recognised as an effective policy tool, that can help boost other efforts. Efforts to set in place 100% RE targets should be promoted and targets should not only include the power sector

(which is by far the most common), but also on heating/cooling and transportation sectors, and ideally cross-sectoral targets (which is most rare) (REN21, 2020b; Boselli and Leidreiter, 2016).

Policy Campaigning

Energy transition

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## Develop 100% Renewable Energy plans/scenarios (with multistakeholder participation)

Long-term plans for how to achieve 100% renewable energy, energy access and just transitions need to be developed within every country, with genuine stakeholder participation. Examples of successful, participatory processes with multi-stakeholder engagement need to be shared across countries and further refined. Capacity building and training on planning methodology need to be scaled up and institutionalised and further research towards development and evaluation of planning methodologies should be pursued (see also the research section below).

Narrative Research Policy Convening Partnerships Training

Energy transition Equity/Just transition Economic diversification

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## Just transition in Green New Deal frameworks

Current 'Green New Deal' efforts need to be carefully considered. These efforts differ in shape, approach, reach and depth of transformation between countries (<https://www.congress.gov/bill/116th-congress/house-resolution/109>, <https://berniesanders.com/issues/green-new-deal/>, <https://www.labourgnd.uk>, <https://www.gndforeurope.com>). Most of the GND efforts have so far taken place in Europe and North America, and mainly within national contexts. They all include renewable energy transition plans and recognise the importance of implications on workers and the need for a just transition. It make sense for the FFNPT Initiative to engage with GND processes to provide support as well as having a direct influence and impact on the further shaping and direction of the GND programmes in relation to all three pillars. See also the global dimension of the GND processes (see below).

Policy Convening Communication Partnerships Mobilisation

Energy transition Equity/Just transition Economic diversification

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## Engage with pioneering countries as trailblazers

The transformation from fossil fuels to 100% renewable energy and new development models requires trailblazers and pioneers taking lead and setting examples. It will be important to mobilise capacity and popular pressure to support such efforts. Fostering such leadership is a key approach in several initiatives (e.g. AREI and LDC REEI as originally conceived), as well as in several civil society led efforts (Sokona et al., 2015; Sokona et al., 2018; Dubbels et al., 2020). FFNPT can play a role in supporting aligned organisations and expert groups to engage with pioneering countries in the formulation of comprehensive, bold, 100% plans. For developing countries, such efforts may include collaboration towards GCF readiness funding as a stepping stone towards full-fledged transformation plans.

Countries shifting subsidies and shutting down or reconsidering fossil fuels project in favour of renewable energy provide powerful symbolic value that can encourage others to do the same.

Narrative Policy Convening Communication Partnerships Training

Energy transition Equity/Just transition Economic diversification

## Overall development discourses: alternative development, progress and well-being

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The FFNPT process provides opportunity to advance discussions, debate and considerations of overall development trajectories and development models that are aligned with the three pillars and the deep, transformative change they imply. As discussed in the “[Development](#)” section, alternatives to current dominant, mainstream and economic growth-centred development models are called for, that are rooted in values of well-being, sufficiency, sustainability, basic needs and equity, and that recognise the importance of endogenous development and cultural diversity rather than one-size-fits-all blueprints. The FFNPT Initiative may help leverage essential interaction on these underlying, systems level dimensions of both climate change and other intertwined crises. A proposed “Another Development” project under or connected with the FFNPT Initiative would examine past ideas of alternative/another development, current approaches such as the Green New Deals and beyond, and engage with other concrete activities around just transition and economic diversification within the FFNPT process. This project would connect directly with country-specific work with pioneering countries as well as regional and international processes.

Narrative Research Policy Convening Communication

Energy transition Equity/Just transition Economic diversification

### Country-specific strategies

The mix of policies, measures and approaches discussed in part I will need to be applied as appropriate in terms of each country’s particular context and set of actors. Such country-specific strategies are not covered in this document, and will need to be elaborated in further work with different stakeholders in respective country and region.

## REGIONAL LEVEL DIMENSION

### African strategy

An African regional strategy across the three pillars has been developed for the treaty process by Power Shift Africa. This living document informs part of this strategy and will provide a basis for further African engagements, (Power Shift Africa, 2020).

While a small contributor to historic and current emissions, Africa may play an increasingly significant role in terms of its projected increases of emissions from industrialisation, consumption and infrastructure development. Yet, Africa also has the potential to set example for all other regions by taking leadership towards a vision in alignment with this document. Such leapfrogging would benefit the continent by avoiding stranded assets and enabling local economic development through appropriate, renewable energy provision across all communities.

At the macro-level, African countries and pan-African institutions need to ensure they are in charge and the drivers of an African-owed agenda, given persistent attempts by donors and other influential actors and countries to set the agenda. Africa, through civil society and stakeholders, will need to formulate strategies that are pro-active and that can leverage support and resources in accordance with needs and fair shares. A successfully executed African strategy can play an important role for the overall strategy.

### Africa-Gulf state strategy

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There may be opportunity to develop agreements where African producers or potential producers of oil and gas replace such plans with renewable energy, with the support from some of the Gulf states to do so in exchange for less competition and reduced overall production volume. There may also be opportunity for interaction where some of the smaller Gulf-based actors (e.g. Kuwait) shares lessons of their vulnerabilities and need to diversify their economies away from fossil fuels with African countries on the verge of investing in oil/fossil fuels.

Narrative Policy Partnerships

Economic diversification

### Africa Renewable Energy Initiative

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The original Framework, Action plan and Criteria of the [Africa Renewable Energy Initiative \(AREI\)](#) was endorsed by all 55 African Heads of State and is aligned with the principles, approaches and priorities of this strategy (Sokona et al., 2015; AREI, 2016). The initiative highlighted nine work areas that overlaps with the strategies outlined in this document: Mapping; Strengthening Policy, Regulatory, Support and Incentives Frameworks; Capacity building and mobilisation; Financing and Funding; Project development support; Socio-economic and environmental assessments; Multi-stakeholder engagement; Wider context monitoring and assessments; and Communications and outreach. . Since 2019 the initiative has been effectively non-functional due to severe governance challenges involving the Heads of state in the Board and undue influence of international donors.

Stakeholders on the African continent should ensure the original intentions and Framework are used as a strategic guide and resource for both government and other stakeholders, while actively developing strategies and mobilisation to reclaim the initiative in either formal or informal ways. A reclaimed AREI – or a civil society led replacement of AREI – could be an important dimension for the FFNPT to highlight and support as a key component of its Pillar III strategy (Adow, 2020).

Narrative Policy Communication Partnerships Training Mobilisation



Energy transition Equity/Just transition

## AFRETRAP/African Union

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[The Africa Energy Transition Programme](#) as formulated by the African Energy Commission, a subsidiary to the African Union, outlines another comprehensive approach to the energy transition on the continent. It outlines strategic areas of intervention and approaches for undertaking research, coordination and planning work in pioneering countries across Africa, with the view to develop concrete plans for the transition. African government and stakeholders, as well as funding institutions, are invited to engage with the programme in order to help shape and strengthen its implementation.

Narrative Research Policy Communication Partnerships Training

Energy transition Equity/Just transition

## Asian strategy

The Asian strategy will be further developed, informed by the work led by AAPMD.

## Gulf-state specific strategies

Gulf-state focused strategies need to recognise the particular challenges these oil producing countries face in terms of economic diversification.

## Response measures – UNFCCC strategies

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As discussed under “Response measures”, this contested area of the climate negotiations has begun to shift towards conversations around economic diversification, with the Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (KCI) set up to begin executing a work plan. Organisations well suited to engage in this space, such as TWN, can help move the conversation and future planning among developing countries, including Gulf states.

Policy Convening

Energy transition Equity/Just transition Economic diversification

## Transforming state-owned fossil fuel companies

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In-depth studies and analyses of state-owned fossil fuel companies and the scope, opportunities and barriers to their transformation away from fossil fuels toward economic diversification should be expanded, drawing on the methodologies and lessons from e.g. the pioneering Petronas (Malaysia) study (see also research section).

Research Policy

Energy transition Equity/Just transition Economic diversification

## Engage on long-term development visions/plans

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Some of the Gulf states have begun formulating longer-term development plans, such as the Saudi-Arabian Vision 2030. These provide entry points for further engagement and for advancing and stretching the analysis and visioning towards new economic diversification opportunities beyond oil (towards renewables). Strategies can be developed for further engagement in such spaces, including with government think tanks such as the Saudi King Abdullah Petroleum Studies and Research Centre

(KAPSARC) .

Narrative Research Policy Partnerships

Economic diversification

## Identifying bottlenecks for transformation into solar economies

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Gulf states are diverse, with vastly different outlooks and economic contexts facing the smaller counties in the region versus big countries such as Saudi-Arabia. The current crash of oil prices stresses this point further, with small players at risk of being squeezed out. It would be valuable to ensure capacity for in-depth analysis of the barriers, bottlenecks and opportunities for the diverse set of Gulf state actors, within a progressive energy transformation framing. What are for example options (and risks) for ambitious transformation toward solar-driven hydrogen export by Gulf states? How can challenges of water needs for cleaning solar PV/CSP be effectively addressed? Can international technological and financial cooperation/support help enable desalination efforts to make solar attractive as a real alternative to continued extraction during a transition phase? How can interventions towards price stability of the oil markets contribute to planned and accelerated shift towards solar economies?

Narrative Research Policy Partnerships

Economic diversification

## Gulf state - African alliance: Support for renewable energy efforts to African/LDCs/developing countries as measure to keep oil in the ground elsewhere during transition

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Explore and promote strategies for bilateral or regional/multilateral agreements where developing countries are incentivised and benefit from renewable energy investments by Gulf states in return for foregoing entry or expansion into oil and gas extraction. Such a strategy can be beneficial in several ways for Gulf states — it can have a positive on the oil markets and price stability during the transition period, and help the transition and economic diversification into renewables investments. For Africa countries this could enable possibilities to receive foreign investments for renewables and avoidance of volatile fossil fuel markets stranded assets.

Policy Partnerships

Energy transition Economic diversification

## LDC strategy

The LDC Renewable Energy and Energy Efficiency Initiative for Sustainable Development ([LDC REEEI](#)) was endorsed by ministers representing all 47 LDCs in 2018, and presents one of the most comprehensive frameworks of a country grouping with its 100% renewable electricity, 100% energy access and 100% efficiency goals. The LDC REEEI Framework outlines principles almost entirely in line with those presented in this document. The 8 work areas of the initiative are : Mapping and monitoring; Knowledge, capacity and learning; Planning and policy; Funding and financing; Multi-stakeholder engagement and people-centered/community energy; Equity, women and social/environmental safeguards; NDCs and national development plans and Public awareness, communication and outreach. In order to make the Initiative succeed, there is need for efforts by stakeholder groups in pioneering countries to drive actions forward, supported by expert groups led by LDCs and civil society/scholar-activists. With the experiences from AREI in mind, it is important to ensure governance arrangements that are not constrained by institutional politics and vested interests.

Narrative Research Policy Convening Communication Partnerships Training

Energy transition Equity/Just transition Economic diversification

## SIDS strategy

Given the dependency and costs for fossil fuel imports by most Small Island Development States, strategies towards increased self-reliance and domestic energy production through renewables, as well as local, diversified agroecological food production is key. Elaboration of such ideas are underway through the FFNPT Initiative and will be references and summarised here in further versions of this document.

## Regional Technology Assessment Platforms

The precautionary principle is essential, particularly in areas where rapid, far-reaching and potentially disruptive technological transformations are taking place. Deployment of new, zero-carbon technologies at massive scale will need to be continuously scrutinised and critically assessed to avoid unforeseen, unintended and negative impacts. There are no inherent guarantees that the renewable energy revolution will be benign from human rights, social, environmental, cultural perspectives. How societies assess, prioritise and approve or reject technologies and business models will determine the outcome. In light of this and similar challenges across other sectors, civil society efforts toward creating regional Technology Assessment Platforms are advancing. These efforts can be integrated in the regional Pillar III strategising of the FFNPT process as well as in relation to research and policy development efforts. As a start, open-ended collaboration and strategising interactions can be initiated between these different civil society processes.

Research Policy Convening Partnerships

Energy transition Equity/Just transition Economic diversification

## INTERNATIONAL LEVEL DIMENSION

International level dimensions of the Pillar III strategy relate both to possible elements of a future legal treaty, and components that the broader FFNPT Initiative may pursue. It also includes strategy elements relating to other international fora and initiatives, including e.g. UNFCCC negotiations.

### Possible 'treaty' components

The following section outlines components relating to Pillar III that could be considered for inclusion in a legally binding Fossil Fuel Non-Proliferation Treaty text (which would ultimately be negotiated between countries) and elements directly connect to this (such as registries). These are elements for discussion and consideration, and contain no suggested legal formulations. It would appear important to ensure a relatively equal balance between the three pillars.

#### Energy Access

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Commitments to achieve equitable, universal and sufficient energy access for all citizens in each country could be captured in the treaty. Formulations around energy access as a right could be considered.

Treaty element

Energy transition Equity/Just transition

#### Registries for 100% renewable energy and long-term plans

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Ultimately, countries and entities subscribing to the treaty should commit to 100% renewable energy targets across all sectors. As a first move, a registry analogous to the production side registry could be set up to document existing status and efforts. Preparatory work would need to be undertaken to design such a registry in the most appropriate manner, and could involve for example REN21. Such a registry could require countries and entities subscribing to the FFNPT to declare their current renewable energy and Just transition status (according to criteria and variables to be developed).

A registry could also be set up to capture to what extent countries a) have 100% renewable energy and just transition targets (as per criteria) b) have long-term plans towards 100% renewable energy, with a number of prerequisites (for example that they are ambitious enough, cross-sectoral, fulfils criteria for participation, multi-stakeholder engagement and environmental safeguards throughout the value chain, and c) have achieved various 100% renewable energy targets.

A registry may also require and register ambitious targets to be inscribed as NDCs under UNFCCC.

Treaty element

Energy transition Equity/Just transition

#### Energy efficiency

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Commitments to prioritise and achieve energy efficiency.

Treaty element

Energy transition Equity/Just transition

#### Real zero - real targets

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Commitments to express emissions reductions targets in real zero terms (no off-sets) could be considered.

Treaty element

Energy transition Equity/Just transition Economic diversification

## International support – Fair shares

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Commitments by high-income countries to provide international support in accordance to equity and their Fair shares (to enable the energy transition, and provide means for economic diversification away from fossil fuels by low-income countries) could be included. Such arrangement might include new international funding schemes/mechanisms (Global energy transition fund) or ramping up through existing mechanisms such as GCF.

### Treaty element

Energy transition   Equity/Just transition   Economic diversification

## Global energy per capita convergence goal

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Commitments to strive towards convergence of global per capita energy consumption could be included.

### Treaty element

Energy transition   Equity/Just transition   Economic diversification

## Minerals recycling/circular economy program and registry

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Commitments to ensure effective and compulsory minerals and other critical materials recycling programmes/mechanisms could be included. A. accompanying registry could be developed.

### Treaty element

Energy transition   Equity/Just transition   Economic diversification

## Social, human and environmental provisions with complaints and grievance mechanisms

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Commitments to ensure social, human and environmental rights provisions with appropriate complaints and grievance mechanisms in relation to all three pillars could be included.

### Treaty element

Energy transition   Equity/Just transition

## Social/environmental criteria

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The treaty could include a set of social and environmental criteria to ensure equity and a just transition which countries (and any other eligible entity to the treaty) would need to accept and implement (the [AREI criteria](#) may offer some ideas; see also “Global Renewable Energy Watch” under the International level strategy below).

### Treaty element

Energy transition   Equity/Just transition

## Global social protection fund

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Commitments to set up and/or contribute to a global social protection fund to support workers and others who are negatively affected by the transition could be included.

### Treaty element

Energy transition   Equity/Just transition   Economic diversification

## Innovation for collaboration/open source platforms

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Commitments to establish and support open source platforms for innovation of socially and environmentally appropriate technologies essential for the renewable energy transition could be included.

### Treaty element

Energy transition   Equity/Just transition   Economic diversification

## Access to technology/technology sharing and assessment schemes

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Commitments to ensure universal access to socially and environmentally appropriate technologies and technology assessment schemes to ensure precaution and avoidance of unintended negative consequences could be included.

### Treaty element

Energy transition   Equity/Just transition   Economic diversification

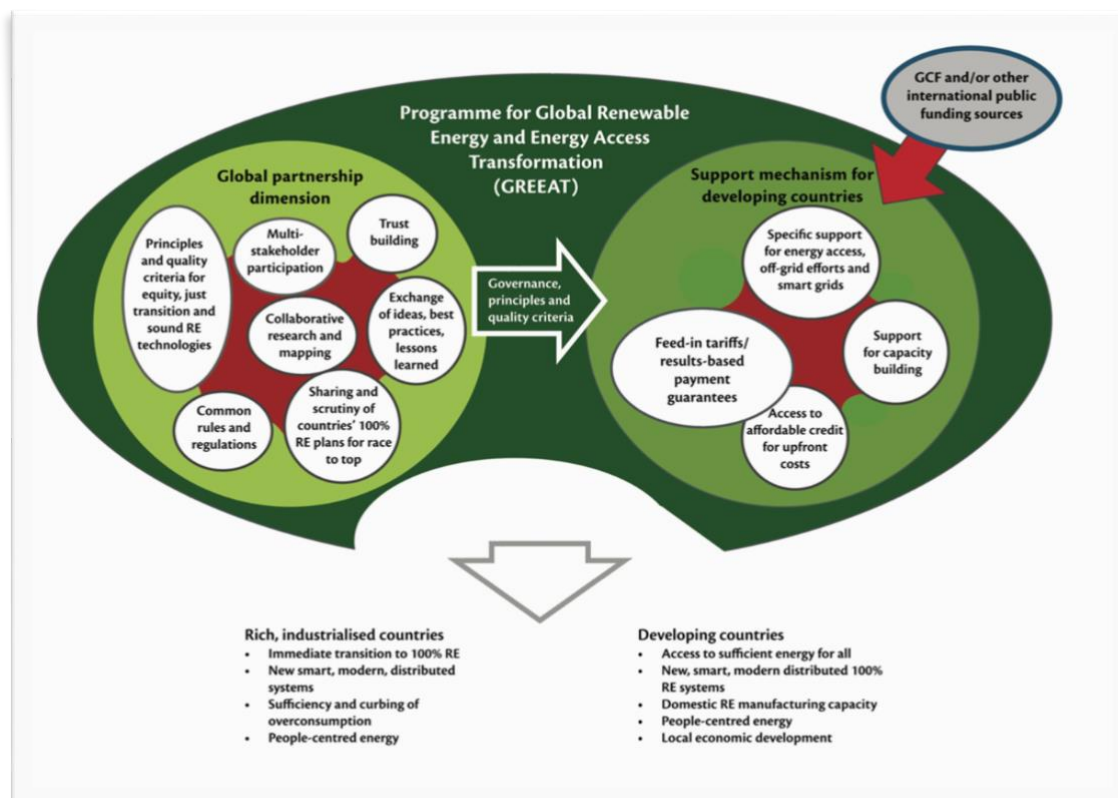
# Global/international initiatives

## Comprehensive global programme for the renewable energy transition: Programme for Global Renewable Energy and Energy Access Transformation (GREEAT)

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While implementation, policies and regulatory regimes will necessarily be national, the necessary transformation can only happen through simultaneous international coordination, support and mutual sharing of both successes and barriers. It appears essential to have a *global partnership* that could enable the rapid scaling up, sharing and implementation of best practices, including ensuring availability of adequate funding. Yet no such programme exists.

The [Programme for Global Renewable Energy and Energy Access Transformation \(GREEAT\)](#) which was first presented during the Paris summit in 2015 could be revived and advanced. The programme was initially conceived in a multi-staker process led by WhatNext?, Centre for Science and Environment, and Friends of the Earth International, while drawing on a large constituency of organisations and individual experts (WhatNext? et al., 2015). The proposal outlines a Global Marshall plan-like undertaking that would enable coordination and mutual support across countries in both the global North and global South. GREEAT includes at its core key principles for just transition, social and environmental safeguards, multi-stakeholder participation, uniform standards, common collaborative research and platforms for sharing of best practices, as well as specific support mechanisms for developing countries informed by just transition and fair shares principles. This part includes the formation of funding support mechanisms to enable all developing countries to move straight to renewables through specific off-grid/energy access support, affordable credit, support towards domestic manufacturing capacity, and as a key measure the enabling and financing of payment guarantee schemes that can make renewable energy development safe for everyone (and in particular the multitude of smaller and less experienced actors). (See the sections on Payment guarantees and Global RE fund below for more details on this aspect of the scheme).



The GREEAT programme influenced the African Group of Negotiators (AGN) submission to the UNFCCC for the “Establishment of a global partnership to accelerate the Energy Transformation required for a well below 2° Celsius World by supporting renewable energy feed-in tariffs and other incentives” which lay the ground for the development of the Africa Renewable Energy Initiative and later the LDC REEEI (African Group of Negotiators, 2014; Sokona et al., 2015; Sokona et al., 2018). A Global Partnership for Renewable Energy and Energy Efficiency was launched at COP22 in Marrakech, but has yet to take shape.

It appears overdue to refocus attention on the promotion of a global programme such as the one outlined under GREEAT. The FFNPT process provides opportunity to help promote, support and possibly integrate such efforts. Further exploration, networking, and development of these ideas could be undertaken as a concrete step for the FFNPT Initiative, with the aim of rapidly resourcing and scaling up the effort over the coming 1-3 years. The 50-year anniversary of the Stockholm conference could provide a useful opportunity for both GREEAT and FFNPT as a whole. Several of the international processes outlined below offer additional opportunities for consideration and integration with the GREEAT framework. .

- Treaty element
- Narrative
- Research
- Policy
- Convening
- Communication
- Campaigning
- Partnerships
- Training
- Mobilisation
- Energy transition
- Equity/Just transition
- Economic diversification

## Green New Deals / Global Green New Deal

An effort spearheaded by LEAP and War on Want is bringing together national and regional Green New Deal initiatives under a framework of a Global Green New Deal (GGND), with efforts to include diverse movements, intersectional struggles, and representation from the global South. This efforts seeks to facilitate a participatory process to link existing and emerging initiatives, and to challenge these to consider a more globally just approach than the current national focus of most Green New Deal initiatives. This includes highlighting extraction and impacts on developing countries and frontline communities in other countries. Resource use and extraction levels in GND frameworks should be consistent with what would work if all countries did the same. Interaction between the GGND process and the FFNPT Initiative



could be valuable for both initiatives, and a way for the treaty to become considered within national GND frameworks.

Narrative Research Policy Convening Communication Campaigning Partnerships Mobilisation  
Energy transition Equity/Just transition Economic diversification

## Global Renewables Congress

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Empowering parliamentarians and linking them globally can be an effective to speed up the renewable energy transition. The [Global Renewables Congress \(GRC\)](#) is an example of a cross-country, cross-party platform facilitating peer-to-peer exchanges between legislators on issues related to the renewable energy transition. CRC is a project of the World Future Council and seeks to offer exchange of experiences between legislators across countries and continents, provide capacity building and help support development of renewable energy pathways and policies. The initiative is relatively new and only so far mostly involving legislators from the global North. Further links between the FFNPT initiative and CRC would likely offer mutual benefits. The parallel work by WFC and many parliamentarians on nuclear disarmament provides additional strategic entry points well aligned with the FFNPT framework

Policy Convening Communication Campaigning Partnerships Training  
Energy transition Equity/Just transition Economic diversification

## Global Renewable Energy Watch

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Enhanced capacity within civil society to effectively monitor renewable energy initiatives, investments, and project implementation on the ground is required. As discussed in this document, renewable energy is already a contested area with numerous examples of corporate misconduct, human rights abuses and takeover of initiatives by vested interests, corrupt regimes and donors. The FFNPT Initiative may be able to help facilitate establishment of renewable energy watch groups and network. Such efforts should draw on the work already carried out by local and regional groups, but also allow for expanded, dedicated capacity to scrutinise, research/document, and address misconduct at all levels through legal action, advocacy, media exposure, campaigning, and boycotting.. Such efforts would need to be well synchronised with other Just Transition efforts. Renewable energy watch activities could include:

- Establish and refine civil society criteria for renewable energy projects. These can include minimum requirements, and sets of qualities that allows for ranking and tiered labelling of projects
- Monitor, keep on track and reclaim renewable energy initiatives
- Monitor, influence and when needed counter the emergence of new initiatives (e.g. expose new EU-Africa Green Energy Initiative)
- Monitor renewable energy corporate conduct (building on the kind of work highlighted by the [Business and Human Rights Resource Centre](#) above.
- Monitor implementation of renewable energy projects on the ground, with complaints and support facility for affected frontline communities.
- Monitor workers rights and Just Transition for workers in the new renewable energy sector (in coordination/collaboration with trade unions)

Research Policy Convening Communication Campaigning Mobilisation  
Energy transition Equity/Just transition

## UNFCCC-oriented strategy

Neither renewable energy, fossil fuels or energy at large are mentioned in either the Climate convention or the Paris Agreement. As a result of focused engagement by trade unions and other constituencies, the Paris agreement does however acknowledge “Just transition” in its preamble (UNFCCC, 2015).

The following areas nevertheless of direct relevance for Pillar III dimensions of the FFNPT:

### Nationally Determined Contributions (NDCs)

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The NDCs offer opportunity to concretely outline renewable energy and another sector plans and commitments towards national NDC pledges. The International Renewable Energy Agency (IRENA) concludes in its 2019 report on NDCs and renewables that only 85 countries have so far included unconditional renewable power pledges in their current NDCs, while 135 countries have other national renewable energy targets (IRENA, 2019). The current renewable energy NDC commitments (equalling 3,2 TW by 2030) are almost exclusively for the power sector, and fall far short of what’s needed for any chance of keeping global heating below 2° or 1,5° C (compare to the estimate by [Teske](#) that 25,6 TW would be needed for the power sector by 2050).

Under the current pledge and review framework, NDCs are the instrument where ambition, equity and fair shares needs to be inscribed. Yet, a ramp-up of ambition has so far been lacking. It may be useful for FFNPT to consider specific strategies towards engaging directly with the NDC process – adding pressure on countries to both inscribe non-proliferation and dismantling of fossil fuels as well as sufficiently ambitious renewable energy commitments.

Policy Communication Campaigning Mobilisation

Energy transition Equity/Just transition

### Response measures

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As discussed in the economic diversification section, the “Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (KCI)” has now been set up, with a work plan that allows for engagement on several dimensions of just transition and response measures within the UNFCCC context. Breakthroughs and financial commitments though these negotiations processes will not be easy. It will however make sense for civil society and FFNPT related entities (such as TWN) to follow the process carefully through effective engagement with both developing and industrialised countries.

Policy Convening Communication Partnerships

Energy transition Equity/Just transition Economic diversification

### Global stock-taking

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The Paris agreement stipulates that there should be “Global stocktakings” on mitigation, adaptation and means of implementation (finance, technology, capacity building) every five years. These stocktaking are supposed to be followed by revised and more ambitious NDCs within two years following the stocktake. A first “Facilitative dialogue/stocktaking” took place in 2018 (with revised NDCs supposed to be formulated by 2020), with the first full Global stocktaking set for 2023. It would be useful for the FFNPT process to impact these processes by bringing in elements across all three Pillars, including e.g. demand for stock-taking based on fair shares/equity in relation to both managed decline and support for renewable energy transitions in developing countries. The Global stocktake should also provide opportunity for evaluations of transition plans/NDCs in light of carbon budgets and trajectories that do not assume reliance on risky/non-existing technologies, off-sets and other dangerous distractions.

Such a strategy may also include pioneering countries setting examples that introduce equitable and managed phase-out measures and 100% renewable energy plans.

Policy Convening Communication Campaigning Partnerships Mobilisation  
Energy transition Equity/Just transition Economic diversification

## Article 6

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The negotiations on carbon markets under article 6 will likely be the most contested and difficult negotiations in the lead-up to and during COP26. These negotiations have direct bearing on all three Pillars under the FTNPT since they may lock-in loopholes for the fossil fuel industry and help big polluters evade their responsibilities. Article 6.8 on 'Non-Market Approaches' on the other hand presents possibilities for advancing conversations and negotiations towards real solutions with real zero emissions and the just transition to 100% renewable energy (see ["Real Solutions, Real Zero: How Article 6.8 of the Paris Agreement Can Help Pave the Way to 1.5°"](#) produced by a number of climate justice organisation around COP25) (Working Group for Real Solutions, 2019). The FFNPT initiative will need to consider in what way it shall relate to these challenging negotiations.

Policy Convening Communication Campaigning Mobilisation  
Energy transition Equity/Just transition

## Technical Expert Process

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The Technical Expert Meetings/[Technical Examination Process](#) was established in 2014-15 under "Workstream 2" on pre-2020 action (conceived and made possible by some of those currently involved in the FFNPT Initiative), and introduced a sectoral, concrete focus on renewable energy and energy efficiency among other themes. This process is still on-going and has produced and compiled material of relevance for Pillar III related issues (most recently a technical paper on ["Off-grid and decentralised energy and water use in the agrifood chain"](#)). The FFNPT process may want to consider using this space to bring forward dimensions of all three pillars.

Research Policy Convening Communication Partnerships  
Energy transition Equity/Just transition Economic diversification

## Net zero vs. Real zero - Real solutions

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Efforts to claim success by pointing to broad sign-up to "Net-zero by 2050" commitments will be at the core of the COP26 strategy by the UK COP Presidency and many others. As discussed, this is a dangerous narrative with loopholes that delay the rapid, transformative action that is needed immediately. "Net-zero" sounds ambitious but allows countries and corporations to assume future risky and/or non-existent technologies, off-sets and 'overshoot' decades into the future (see for example the recent briefing ["Not Zero: How 'net zero' targets disguise climate inaction"](#) (ActionAid et al., 2020)). The actions needed across all these dimensions of Pillar III require "Real zero" commitments with yearly timetables of radical action starting now, with a roll-out of policies, regulations, bans, taxes, standards and incentives that span all sectors, diversifies economies and drives fast and significant emissions reductions immediately (see [Transformation to real-zero societies](#) under the Economic diversification section above).

Civil society will need to counter the current "net-zero" discourse and show the scale, urgency and concrete actions that are needed for Real zero. FFNPT can together with other organisations and networks play an important role on both narrative, communications, policy, campaigning and research dimensions. The FFNPT process is well positioned to effectively link the real zero solutions to the production side analysis and strategising.

Narrative Research Policy Convening Communication Campaigning Mobilisation  
Energy transition Equity/Just transition Economic diversification

## UNFCCC focused civil society platform on energy, just transition and economic diversification

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The [Climate, Land, Ambition and Rights Alliance \(CLARA\)](#) has created a well functioning, cross-sectoral space for interaction, strategising, analysis, knowledge development and direct interventions in processes around UNFCCC negotiations and IPCC. A similar platform is missing for energy related issues and could be formed, which would also provide strategic opportunities for advancing the FFNPT within formal negotiations spheres.

Convening Policy Partnerships  
Energy transition Equity/Just transition Economic diversification

## Global/international fora and multilateral institutions

Specific pillar III strategies need to be elaborated in relation to several global fora and multilateral institutions, with considerations to what extent and in what form the FFNPT process can and should engage.

### UN Secretary-General and General Assembly strategy – Energy High Level Dialogue 2021

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Strategies directed to the UN Secretary-General and the UN General Assembly need to be considered, both in terms of the FFNPT treaty as a whole, and in terms of some of its components (e.g. registries, renewable energy partnerships etc.). The FFNPT Initiative will need to consider how best relate to and impact the [High Level Dialogue on Energy](#) that will take place at the UN General Assembly in September 2021. Some interaction on the current drafting of Technical Working Group papers have already taken place.

Policy Convening Communication Campaigning Partnerships Mobilisation  
Energy transition Equity/Just transition Economic diversification

### MDB-oriented strategy

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The World Bank and the regional multilateral development banks (Asian Development Bank, African Development Bank etc.) are central players in relation to both Pillars I/II and Pillar III. Specific strategies will need to be elaborated with the regional African, Asian and Latin American FFNPT processes and in the context of the financial strategy.

Policy Convening Communication Campaigning Partnerships Mobilisation  
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### Religious leaders

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Can religious leaders, such as the Pope but also representatives of other religions such as Dalai Lama, be engaged and provide support for the FFNPT and/or some of its components?

Narrative Policy Convening Communication Campaigning Partnerships Mobilisation  
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### G20 strategy

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Civil society coordination around G7 and G20-strategies can enhance leverage for the treaty process. FFNPT can engage in these spaces, including around Pillar III. Relevant issues to support include calls for Global Social protection funds by ITUC and the labour movement, as well as calls for debt cancellation and bold renewable energy and just transition propositions that should be fully integrated in the immediate Covid 19-responses.

Research Policy Convening Communication Campaigning Training Mobilisation  
Energy transition Equity/Just transition Economic diversification

## International Renewable Energy Agency (IRENA)

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Specific strategies need to be elaborated in relation to the role of IRENA. The international organisation should be an ally in the work towards a treaty, but needs to be influenced to take on more ambitious visions in alignment with the 100% renewable energy trajectories outlined in this document.

Narrative Research Policy Convening Communication Campaigning Partnerships Training Mobilisation  
Energy transition Equity/Just transition Economic diversification

## International Energy Agency (IEA)

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As [highlighted earlier](#), the IEA has been under increasing pressure by civil society for its failures to take implications on the renewable energy transformation for a 1,5°C or 2°C world seriously. The current campaigns and civil society pressures are beginning to have real impact on the agency, which still has a long way to go (and continues to provide advice to governments that further locks them into fossil fuel investments). The FFNPT process can engage with the current IEA campaigns for exploration of best approaches and possible support and synergies.

Narrative Research Policy Convening Communication Campaigning Partnerships Mobilisation  
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## REN21

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REN 21 was created in 2004 with members from science, governments, NGOs and renewable energy industry associations. Its mission is to collect, consolidate and synthesise renewable energy data to provide clear and reliable information in real-time. It's annual Renewables Global Status Reports provide state-of-the-art updates on current renewable energy situation in the world. REN21 can provide valuable expertise, research and other forms of collaboration for particularly Pillar III of the FFNPT Initiative.

Narrative Research Policy Communication Partnerships  
Energy transition Equity/Just transition

## FINANCE-RELATED DIMENSION

The finance-related strategy include a number of components relating to all three pillar III dimensions: the renewable energy transition, just transition and economic diversification. Across these different components, it is clear that government and public funding plays a crucial role in enabling the needed change, and as means to direct other forms of investments (including both private profit and non-profit oriented investments).

Estimates of what are the financial requirements for the overall transition vary and are difficult to predict with precision. The Green New Deal under Bernie Sanders committed to USD 16,3 trillion in public investments for the US, but also estimates the societal gains of these measures to be USD 70 trillion by 2050.

IRENA estimates that USD 110 trillion will be needed in investment for the overall energy transformation globally and notes that only a fifth of this would be devoted to new electrical power generation. More (USD 37 trillion) would be needed for energy efficiency measures, USD 13 trillion for the transformation of the transportation sector and USD 12 trillion for smart grids and energy storage. These measures would however lead to cumulative savings – with IRENA estimating between USD 45 and 1240 trillion saved by 2050 (IRENA, 2019).

The conclusion is that public finance and effective rules and regulations must be established now to redirect investments that will not only help prevent catastrophic climate change, but also save huge amounts of money.

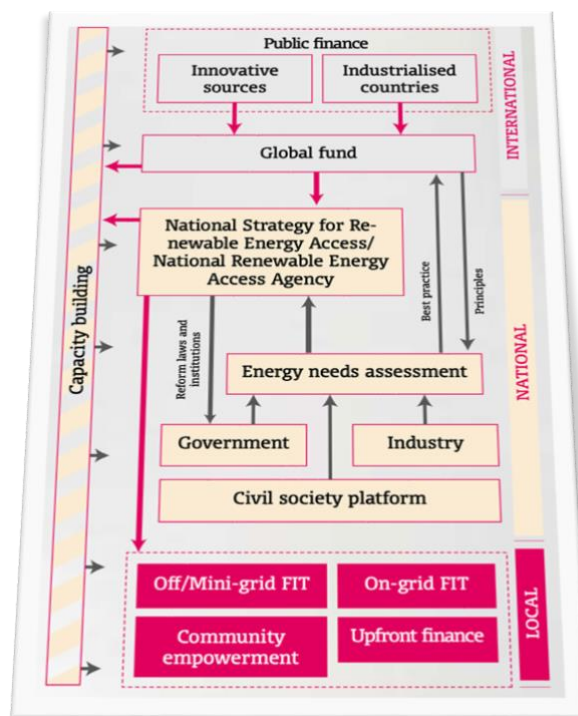
### Globally funded/backed payment/connection guarantee scheme

At the core of several proposals (e.g. GER, GRESP, GREEAT, AREI) is the idea of encouraging developing countries to establish a national system of payment guarantees. Off-take guarantees (all renewable energy produced will be bought), tariff guarantees (the revenue is guaranteed over time) and connection guarantees (payments are made for existing and functioning connections to customers for mini grid systems that are not connected to the national grid) would provide the safe and enabling context that is needed for a massive surge in renewable energy investments. The financing and collateral risk-taking of such a system would be provided through an internationally backed system, in turn guaranteed by international climate finance. Such financing could be generated through one or several schemes (ramped up GCF contributions, Special Drawing Rights, international financial transaction taxes, fossil fuel production levies, redirected fossil fuel subsidies, international taxations or other direct, Covid-19-like public financing and MMT responses).

Such a policy-driven, programmatic approach would enable a large number of projects on the ground. The FFNPT Initiative can consider supporting and helping mobilise resources to advance these ideas, including pilot schemes in one or several countries.

Narrative   Research   Policy   Convening   Communication   Partnerships  
Energy transition   Equity/Just transition   Economic diversification





Some organisations were hoping to introduce these kinds of idea already at the Copenhagen summit at COP15, with elaborate ideas for how such a scheme could be set up. (Hällström and Sabido, 2012)

## Global Renewable Energy Fund/GCF

The ideas around a Global Marshall plan to enable all developing countries to set up ambitious 100% renewable energy plans and payment guarantee systems may include the creation of a global renewable energy fund to help channel these resources. Such a fund would need to have stringent social and environmental safeguards and criteria, and would need to involve stakeholders including civil society and social movements in its formation and implementation.

One option would be to build on the already existing Green Climate Fund (GCF). Country efforts that are comprehensive, programmatic, with development co-benefits, multi-stakeholder engagement, direct access and genuine country ownership tick almost all GCF criteria. Successful pioneering country examples could boost interest also in other countries, and would call for scaling up of replenishments.

It would be relevant to thoroughly evaluate the experiences so far, and the prospects, risk and benefits of promoting GCF as a main conduit for the channelling of the massively increased funding volumes needed to enable all developing countries to undertake a just transition to renewable energy. This calls for critical assessment as well as convening of key actors from both civil society, governments and academia.

These discussions should also consider the possible creation and/or integration of other financing schemes such as ideas for global social protection funds, and the channelling of redirected fossil fuel subsidies.

Research Policy Convening Partnerships

Energy transition Equity/Just transition Economic diversification

## Role of central banks

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Another avenue to explore further is how Central Banks can play an active and decisive role in enabling investments in renewable energy. A number of potential tools exists (including green bonds and various forms of guarantees) that might enable the provision of credit at low interest rates to help drive the renewable energy investments. Some of these measures may need approval and new mandates for the Central Banks by parliaments, that explicitly tasks them to undertake actions and measures that promote renewable energy as part of addressing climate change as an overall public good. The further development and analyses of these ideas, such as those presented in the report [Tackling the Climate Crisis and the Corona Pandemic Recession: How central banks can integrate climate finance and stimulating the economy into their regular monetary policy without compromising their primary objectives or losing independency](#) could be facilitated (Kroll, 2020).

Research Policy Convening

Energy transition Equity/Just transition Economic diversification

## Access to credit

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As renewable energy technologies become even cheaper, and local/national crediting institutions get increasingly familiar and confident in their anticipated returns and low levels of risks, cost of credit (interest rates) will decrease and improve access to credit. This will however need to be speeded up and actively facilitated though public interventions. These may range from grants and low/zero interest loans by e.g. development banks or national governments, to various forms of risk guarantee measures. Many of the measures to reduce risk through guarantees can be handled by government institutions and central banks, but need for many developing countries further backing and collateral at the international level. There is need for further clarification and assessment by civil society actors and other stakeholder of best practices and innovative solutions in this important area.

Research Policy Convening

Energy transition Equity/Just transition Economic diversification

## Debt relief and debt cancellation

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The debts relief and debt cancellation are key priorities for both climate and overall development reasons. Both the Covid pandemic and the urgent need to move away from fossil fuels to renewable energy, bring strong impetus to the arguments for debt cancellation. Removing debt servicing for poor countries reduces pressures to earn export incomes from fossil fuels, and leaves more resources for investments in renewables. Under the current pandemic situation, it makes little sense for either governments or people to pay debts that immediately takes away emergency assistance and cash payouts. Obviously, it is important to carefully deal with illegitimate debts that should be cancelled without conditions. The conversations on debt-for-climate swaps within the context of the FFNPT Initiative is promising and relates to all three pillars, and should hence be an integral part of the strategising.

Research Policy Convening Communication Campaigning Mobilisation

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## Re-financing for renewable energy and early retirement of coal

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Proposals for enabling the early retirement of coal by re-financing schemes that can both lower costs for electricity consumers and enable utilities and energy companies to invest in renewables and just transition measures years and decades before the end of lifespan and expiration of set power purchase agreements should be explored (see [Power sector](#) in the Energy Transition section above).

Research Policy Convening Communication Partnerships

Energy transition Equity/Just transition

## Shift subsidies from fossil fuels to renewables

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Shifting of subsidies has relevance across the three pillars. To simultaneously undercut the fossil fuel industry while directly supporting renewable energy has leverage and also symbolic value. It may be useful to set up registry systems also for this area. Research, convening and partnerships with key organisation focused on subsidies are needed to evaluate most appropriate strategies, including considerations of different financing mechanisms for pooling some of the subsidies to developing country investments.

Research Policy Convening Communication Campaigning Partnerships Mobilisation  
Energy transition Equity/Just transition

## Cap and dividend

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The idea of a Futures Generation Fund and Dividend such as presented by the [World Basic Income](#) argues that a global cap on fossil fuel production (i.e. FFNPT Pillar I and II) be applied together with a fee ('permit') for every ton of coal, oil or gas that is extracted. The revenues from these permits would be collected in a Futures Generation Fund (similar to the Norwegian Sovereign Wealth Fund where revenues from the country's oil production is placed), which would be actively used to drive renewable energy investments and research, as well as provide payments from its dividends to each person on the planet. Together with other sources of revenue such as financial transition taxes, digital taxes, global wealth taxes, aviation fees etc.) the proponents of the scheme argue that sufficient resources could be obtained to eradicate poverty by providing basic incomes for all (World Basic Income). These and similar ideas could be further explored and considered in the context of other bold approaches.

Narrative Research Policy Convening Communication Campaigning Partnerships Training Mobilisation  
Energy transition Equity/Just transition Economic diversification

## The economics of renewable energy vis-a-vis fossil fuels

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Strategies that bridge opposition and frontline struggles against fossil fuels with renewable energy efforts seems particularly relevant for the FFNPT and its three pillars. Countering the East Africa Crude Oil Pipeline (EACOP) with economic arguments for the relative benefit of instead investing in renewables and eliminating risks of stranded assets could be advanced and facilitated. If successful such approaches can provide templates for engagement in other similar cases. Successes where governments make 180-degree turns can have considerable symbolic value.

Narrative Research Policy Convening Communication Campaigning Partnerships Training Mobilisation  
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## Pension funds/institutional investments in community energy

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Utility-scale community energy efforts such as the [Yansa approach](#) can be particularly suitable for investments by institutional investors such as pensions funds. The focus on public [indigenous renewable energy](#) benefits and ethical investments, with low risks in terms of land and community conflicts make such schemes attractive. Through the built-in replication model the number of community and indigenous projects could expand rapidly. Given that the combined assets of institutional investors such a pension funds, insurance firms, sovereign wealth funds, foundations and endowments hold about USD 100 trillion there should be no shortage of capital (IRENA, 2019).

Narrative Research Policy Convening Communication Campaigning Partnerships Training Mobilisation  
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## Global social protection fund and tax justice

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As discussed in the just transition and economic diversification sections, social protection measures, and at the minimum “social protection floors” are essential for coping with both pandemics, climate impacts and negative effects of the energy transition (Global Coalition for Social Protection Floors, 2020). While such policies must be grounded in country contexts and to the extent possible financed through domestic tax bases, for many poor developing countries this will prove impossible. The growing call for a Global Social Protection Fund is an important development that relates directly to Pillar III strategies.

Policy Convening Communication Partnerships

Energy transition Equity/Just transition Economic diversification

## Tackle trade and investment agreements preventing renewable energy deployment

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International trade and investment agreements that hamper access to appropriate renewable energy technologies or rules against subsidies and preferential treatment of climate and renewable energy oriented solutions must be countered as part of the international strategising.

Policy Convening Communication Campaigning Partnerships Mobilisation

Energy transition Equity/Just transition Economic diversification

## RESEARCH DIMENSION

This section presents a compilation of relevant Pillar III related research including research activities/strategies already highlighted in the sections above. Considerations of what research may be possible to support thought the FFNPT process will need to be elaborated in consequent steps.

### Mapping and trajectories

#### National level mapping

Major research undertaking. See further details under the national strategies section above.

Enable civil society/independent efforts to undertake the kind of research/mapping as outlined above in pilot countries and more broadly

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Research Training  
Energy transition Equity/Just transition Economic diversification

#### Support country/government-driven efforts at research/mapping

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Research Training  
Energy transition Equity/Just transition Economic diversification

Enable effective synchronisation and sharing of research/mapping findings across countries

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Research Communication Partnerships  
Energy transition Equity/Just transition Economic diversification

#### 100% renewable energy scenarios/long-term planning options

Major research undertaking.

#### Methodology development/evaluation

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Mapping of different approaches to 100% renewable energy scenarios, and comparison/evaluation of methodologies + stimulation of further refinements (involve among others Teske, Jacobson, Bishof-Niemz).

Research Policy Convening  
Energy transition Equity/Just transition Economic diversification

#### Country specific 100% Renewable Energy plans/scenarios (with multistakeholder participation)

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Conduct studies like those already done for Tanzania, Costa Rica, Bangladesh by Teske et al. (consistent with 1,5°C, universal energy access, no BECCS, no nuclear, no offsets, no geo-engineering etc.)

Narrative Research Policy Convening Partnerships Training  
Energy transition Equity/Just transition Economic diversification

## Will the world face a shortfall in energy supply from fossil fuels if no new projects will be opened up?

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This study for the FFNTP process by Sven Teske also addresses the questions: What will be the amount of oversupply of fossil fuels if all new announced fossil fuel projects go to ahead under a 100% renewable energy pathway? Are there alternatives to these new projects? Compare to a 1.5°C energy pathway. Compare the cumulative emissions and emissions over time of four scenarios

Research Policy

Energy transition

## Map Real Zero/GND/100% renewable energy plans

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Systematic study and comparison of current comprehensive plans and initiatives for full transformation away from fossil fuels to 100% renewable energy.

Research Policy Partnerships Training

Energy transition Equity/Just transition Economic diversification

## Extraction of minerals and key resources for the renewable energy transition – sequencing, alternatives, impacts, safeguards, and requirements/limits for just transition

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Further research on energy use limits in light of just transition/environmental justice requirements and resource extraction limitations.

Research Policy

Energy transition Equity/Just transition

## Funding, financing, incentives, and regulations

### Payment guarantees – best practices, state of the art, approaches for different kinds of countries

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Evaluation of best practice and experiences to inform most appropriate design and applications in country context and for global programmes

Research Policy

Energy transition Equity/Just transition Economic diversification

### Role of central banks and new monetary tools/approaches

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Key convening of leading thinkers/actors and research for exploration of most promising approaches to inform further advancements of national and global initiatives/programmes.

Research Policy

Energy transition Equity/Just transition Economic diversification

## Integrated campaigning across all pillars

### East Africa Crude Oil Pipeline (EACOP) vs economics of renewables case

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Research to show renewable energy economic benefits over investments in crude oil pipeline, including methodology and toolkit development.

Research Campaigning Mobilisation  
Energy transition Equity/Just transition Economic diversification

### Case studies of state-owned fossil fuel companies

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Research similar to the study already undertaken on Petronas for a range of other companies/countries

Research Policy  
Energy transition Equity/Just transition Economic diversification

## Participation, partnerships, people-centred renewable energy

### Continued mapping/identification of individuals and organisations of relevance for Pillar III

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Expansion of on-going work

Research Convening Partnerships  
Energy transition Equity/Just transition Economic diversification

### South-South collaboration

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Evaluation/research on current and past examples of effective south-south collaboration practices.

Research Convening Partnerships  
Energy transition Equity/Just transition Economic diversification

### Collaboration for innovation

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Design of ambitious, collaborative research models and platforms for development of appropriate new renewable energy technologies and associated technologies.

Research Partnerships  
Energy transition Equity/Just transition



## Best practices of community energy

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Creation of bold platform for bringing pioneers and best examples of community energy and public ownership schemes together for sharing of successes, lessons learned, exploration of new ideas and thorough research/evaluation of accumulated experiences from across the world.

Research Policy Convening Communication Campaigning Partnerships Training  
Energy transition Equity/Just transition Economic diversification

## Safeguards

### Criteria and safeguards

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Research and evaluation of best case experiences of social and environmental criteria and safeguards, including monitoring, institutional arrangements and implementation.

Research Convening Partnerships  
Energy transition Equity/Just transition

### Human and environmental rights vs renewable energy companies

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Further research on and monitoring of renewable energy companies and companies involved in extraction for renewable energy technologies.

Research Convening Partnerships Campaigning Mobilisation  
Energy transition Equity/Just transition Economic diversification

## Just transition, economic diversification and jobs

### Jobs and just transition for workers

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A joint research programme on just transition developed in close collaboration with trade unions would provide scope for close collaboration and development of shared understanding of priorities and strategies. Collaborative processes should identify and define the key research topics to explore.

Research Policy Partnerships  
Energy transition Equity/Just transition Economic diversification

### Research/monitoring of learning oil producers and opportunities for economic diversification

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Standing capacity for monitoring and researching the volatile oil market, with a focus on finding openings for course change by major oil producers, consistent with the Four D strategy (Menotti, 2020). Such research may include identification, with top oil producers, possible international policies supportive of

countries' just transitions and development of proposals underpinning financial packages that leverage today's growing oil debt traps amid low prices/low demand. Subtopics may include 1) Supply-side measures by the US to reduce oil supply on global markets and allow prices to rise; 2) Price stability policies, such as agreed ranges, to facilitate budget planning for diversification; 3) Partnerships financing African renewable energy expansion to substitute foregone oil income; 4) Technological transition assistance with equipment and training in efficient oil and renewables; and 5) Trade peace ensuring freedom from retaliatory tariffs and securing market for lower-carbon oil.

Research Policy Convening Partnerships  
Energy transition Equity/Just transition Economic diversification

## Systems thinking/alternative approaches

### Systems mapping

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A systems approach is essential to enable a holistic understanding of the many intertwined dimensions of the FFNPT across the three pillars – and how these relates to yet broader dimensions. Enhanced capacity for applying systems thinking in strategising and planning are also essential. Enhanced capacity for systems mapping/research and methodology development, as well as broader communications efforts are well motivated under the FFNPT process.

Research Policy Partnerships Training  
Energy transition Equity/Just transition Economic diversification

### Regional and national systems analysis centres

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Strengthened endogenous capacity in the global South for capacity mobilisation and development of systems research on climate, energy, and development is key to break patterns of subordination and Northern imposed knowledge generation.

Research Policy Partnerships Training  
Energy transition Equity/Just transition Economic diversification

### Horizon scanning and precaution

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Civil society capacity to conduct horizon scanning and assess in a precautionary manner new technologies and other developments, including geo-engineering, is key to avoid future mistakes and unintended negative consequences. Participatory research schemes could be supported and integrated with emerging Technology Assessment Platforms and/or the systems mapping facility outline above.

Narrative Research Policy Convening Partnerships Training  
Energy transition Equity/Just transition Economic diversification

### WhatNext?/Alternative development visions and Pillar III

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Reconsiderations and further evolution of alternative/another development visions and their relevance and contributions to all Pillar III dimensions and many of the strategy elements presented in this document motivate dedicated research and convening of key actors across constituencies and geographies.

Narrative Research Policy Convening Communication Partnerships  
Energy transition Equity/Just transition Economic diversification

## Communications/narrative related research

### Testing of effectiveness and impact of narratives

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Research effectiveness of different Pillar III narratives in testing of communications framing, memes, slogans, impact etc.

Narrative Research Communication  
Energy transition Equity/Just transition Economic diversification

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