COP30 Presidency Roadmap for Transitioning Away from Fossil Fuels in a Just, Orderly and Equitable Manner

Environmental Paper Network
BIOMASS ACTION NETWORK

Submission by the Biomass Action Network

The Biomass Action Network, a global coalition of more than 230 organisations working to protect forests and communities from the large-scale burning of wood for energy, welcomes the COP30 Presidency's call to contribute to the Roadmap for Transitioning Away from Fossil Fuels in a Just, Orderly and Equitable Manner ("the TAFF roadmap"). We are submitting the following views:

The TAFF roadmap presents an important opportunity to recognise the flawed reliance on bioenergy as an alternative to fossil fuels and the urgent need to end the burning of all carbon fuels.

2024 saw global temperatures **exceed the 1.5°C threshold.** Despite global commitments to reduce greenhouse gas emissions, governments and industries heavily rely on fossil fuels and carbon-intensive feedstocks, like bioenergy.

Forests are our best defence against climate change: Over exploitation and unsustainable supply chains are destroying these precious allies in the fight against the climate crisis. Although defined as forests by the UNFCCC, monoculture tree plantations are not forests — they are much less carbon dense than natural forests and do not have the ecological characteristics that can confer resilience.

Bioenergy is a false solution and a threat to forests. Woody biomass, bioenergy with carbon capture and storage (BECCS), and biofuels pose serious risks to biodiversity, socio-economic wellbeing and the climate itself due to the disproportionate exploitation of forests.

Achieving climate and biodiversity goals needs investment in real solutions, which is still highly insufficient. The over-reliance on bioenergy is capturing investment which could otherwise be spent on genuine solutions, like wind, solar, and forest conservation.

It is paramount that **the TAFF and the COP30 Presidency Roadmap to Halting and Reversing Deforestation and Forest Degradation by 2030 of the COP30 Presidency, are mutually reinforcing**, rather than exclusive, to ensure their success. If the TAFF were to promote bioenergy, especially the use of woody biomass, this would undermine, not only the objectives of the TAFF itself, but also the goals of any roadmap on forests and climate.

Key barriers:

1) A faulty carbon accounting framework. Currently, emissions from biomass burning are not accounted for in the energy sector in order to avoid double counting, as carbon accounting frameworks assume the carbon is counted in the AFOLU (land use) sector. This is in stark contrast to how emissions are recorded for fossil fuel energy sources, which are accounted for in the energy sector of the country where they are consumed. In fact, the IPCC states in its Guidelines that they "do not automatically consider or assume biomass used for energy as "carbon neutral", even in cases where the biomass is thought to be produced sustainably."
Treating biomass differently creates a false impression of zero emissions for biomass energy, in comparison to emissions from burning fossil fuels. However, burning **woody biomass often releases more carbon dioxide** per unit of energy produced than coal and increases carbon dioxide in the atmosphere for decades to centuries.

Similarly, **woody bioenergy with BECCS has higher emissions** than those of renewables without it. For example, multiple independent studies and models have shown that BECCS systems, based on wood pellets, would increase rather than decrease levels of atmospheric CO2e compared to scenarios without BECCS. This is because of the significant emissions released from logging trees, the foregone sequestration that is caused from the harvest, and the energy required for BECCs, even when these models assume generous success rates for BECCS processes. Furthermore, BECCS is still only in the testing stage and remains unproven at scale. The International Energy Agency's BECCS Tracker has concluded that the technology will not scale in time. BECCS relies on the success of carbon capture and storage (CCS) which, despite three decades of financial support, is "not on track" to achieving its target of capturing 185Mt CO2 per year globally by 2050. Even if it did exist, it would do nothing to capture emissions resulting from logging or land use change.

Crop-based biofuels and their derivatives, like palm oil, have been criticised for their impacts due to their significant indirect land use change (ILUC) risks; these additional emissions have been often omitted in a similar manner as for woody biomass. However, when factoring in the ILUC risks, palm oil-derived biodiesel can emit up to three times more CO_2 than its fossil-fuel derived counterpart.

2) Governments and corporations' reliance on bioenergy prolongs the life of fossil fuels. Current plans for bioenergy by governments and corporations constitute a severe distraction from real solutions. Investment should instead be directed towards genuine low emissions renewables, energy efficiency, and the infrastructure shift required to bring about rapid electrification. In reality, the push to use bioenergy, like woody biomass for co-firing or biofuels in blending mandates, are not a transition away from fossil fuels but an enabler in prolonging the life of fossil fuels. Bioenergy is just as carbon intensive as fossil fuels and only adds emissions rather than reducing them.

Several **emerging technologies** risk increasing the pressure on forests even more. Such technologies include; the use of charcoal made from wood to produce steel, process soy, and

for many other industrial processes requiring heat; the production of e-methanol and e-diesel using wood; biochar and BECCS. Instead of false solutions we need a shift away from all carbon fuels to electrification with 100% renewable energy and energy efficiency, alongside reducing consumption.

3) Bioenergy threatens forests globally and exacerbates global inequity. Social injustices occur through land grabbing, rising food prices, land and water conflicts and health threats from air pollution and toxic biofuel production. Most feedstocks for biofuels are produced in the Global South, like Vietnam, Indonesia, and Brazil but are exported to countries in the Global North, like the UK and Japan. In the case of woody biomass, the majority comes from North America, parts of Europe, and South East Asia, often overlapping with the lands of Indigenous Peoples or environmental justice communities.

Industrial **biomass supply chains contribute to forest degradation, biodiversity loss, soil degradation, and water stress**. In many cases, native forests are cleared or replaced with fast-growing monoculture plantations, reducing habitat complexity, biodiversity, and carbon stocks. These models are also associated with land conflicts, displacement of communities, and labour precarity. Across Latin America, for example, the expansion of bioenergy is closely linked to monoculture plantations, land concentration, and corporate control over territories, reproducing structural inequalities and driving land-use conflicts.

Moreover, bioenergy threatens forests globally. In the Global South bioenergy has been found to be a major driver of tropical deforestation. In the Global North, woody biomass production enforces forest degradation, which is often overlooked and hidden under the guise of "sustainable forest management" but incredibly harmful. Of course, there are many industries that harm forests - but bioenergy is wrongly promoted as providing a climate benefit and is growing very rapidly compared to other industries that also exploit forests. It threatens massive conversion of biodiverse forests and agriculture to monoculture plantations.

4) Reliance on wood imports is a risky dependence.
An energy transition which relies on biomass will lead to significant pressure on supply chains. Biomass feedstock is financially risky and sourcing is becoming more uncertain. Bioenergy consumer countries rely heavily on imported biomass feedstocks. The bioenergy industry states that its primary concern for the future is the price and supply of feedstock. In March 2024, Enviva LLC, one of the world's biggest wood pellet suppliers, filed for bankruptcy, and has since closed one of its plants in Northeast Mississippi, USA, demonstrating the volatility of supply. Global demand for biomass is expected to increase further, with demand for wood predicted to quadruple by 2050 and wood pellet demand expected to triple by 2030. At the same time, supplies of biomass feedstocks are expected to come under direct threat from climate change. An escalating reliance on imported wood undermines countries' energy independence in an increasingly unstable world.

Key levers:

1) Ensure that carbon accounting includes a comprehensive life cycle analysis to bring about a science based decrease in absolute emissions. Carbon accounting should require a comprehensive life-cycle analysis (LCA) for all fuels, including bioenergy, rather than treating them as inherently "carbon neutral" at the point of combustion. Current biomass supply chains are often vertically integrated, with corporations controlling production from plantation/forest to end use, which can obscure transparency and accountability across the lifecycle.

A robust LCA should include upstream and indirect emissions (land-use change and foregone sequestration, cultivation and fertilizer use, harvesting, processing energy, transport, and market leakage), apply conservative counterfactual baselines, and rely on transparent, verifiable traceability to feedstock origin. Tightening these rules is a practical lever to drive a real transition away from carbon fuels. It closes loopholes that allow paper decarbonization through biomass substitution or blending mandates while emissions and ecological impacts are displaced elsewhere, and it reorients investment toward genuinely low-carbon solutions like efficiency, electrification, and truly additional renewable power.

The transition needs to aim at decarbonization that **ensures a science-based decrease in absolute emissions** in line with limiting global temperature rise to below 1.5 degrees Celsius. This means a shift to genuine low emissions renewables, primarily wind and solar energy, together with associated infrastructures, such as grids, batteries, and other storage facilities. Furthermore, increasing energy efficiency and reducing consumption play an important role.

2) Phase out subsidies and incentives for deforestation and forest degradation, establish criteria for exclusion of harmful technologies.

According to the World Economic Forum $44 trillion of economic value generation – more than half of the world's total GDP – is moderately or highly dependent on nature and its services and is therefore vulnerable to nature loss. Yet global material demand is exceeding nature's capacity to regenerate. Regenerative solutions need to be made economically more viable than those harming biodiversity. A transformative shift requires a reform of the financial and market structures that currently incentivise deforestation and forest degradation. Phasing out subsidies for biomass burning is an essential first step in redirecting incentives.

To ensure that climate action genuinely contributes to mitigation, adaptation, and biodiversity protection, **clear and science-based criteria need to be established to exclude harmful technologies** from climate finance and policy frameworks. For example the promotion of liquid and gaseous biofuels through the Belem 4x Pledge and expanding biomass-based power generation under climate policy frameworks can intensify pressure on natural ecosystems. Establishing explicit exclusion lists covering industrial bioenergy and other high-risk technologies, is essential to prevent climate finance from reinforcing destructive practices.

3) Large-scale biomass energy should be excluded from national and international climate targets. This includes the Global Renewables And Energy Efficiency Pledge and Nationally Determined Contributions. Countries such as the UK, some EU Member States, South Korea, Japan and Indonesia, which already support burning woody biomass for energy on a large scale, should change their approach and move rapidly away to genuinely renewable and low emission energy sources. The resources, especially subsidies, and attention currently

devoted to biomass energy development should be redirected to real climate solutions, such as increased energy efficiency, protection and restoration of natural ecosystems, the circular economy, and genuinely low-carbon energy sources, including wind and solar.

4) Transition to renewable energy and energy consumption within planetary boundaries.
Burning biomass must be excluded from renewable energy targets and action taken to reduce energy consumption. It is not possible to successfully transition away from fossil fuels without considering the ongoing biodiversity crisis and ensuring we do not make it worse. Deforestation and degradation are risks associated with a rapid increase in demand for land and resources for renewable energy development. Clear policies against deforestation for renewable energy projects must be adopted and enforced. There should be policies designating “no-go zones” for energy projects, considering all social and environmental factors, including Indigenous and traditional uses of lands, ecologically sensitive areas, biodiversity, and hazards related to the environment or topography, such as risks of land or water contamination and earthquakes.

Best practices for a just, orderly and equitable transition while also safeguarding the protection of forests already exist

Community-led experiences show that genuine solutions for forest protection must be rooted in an energy transition that reduces overall energy demand and rejects false climate solutions. Indigenous Peoples and local communities consistently highlight that carbon markets and the financialisation of nature, often linked to energy transition policies, encompass a risk of failure to reduce emissions and instead deepen pressures on forests. It is key that effective climate action is **rooted in the realities of indigenous territories and local communities, centering human rights, gender justice, collective governance and sustainable livelihoods**, rather than expanding markets for biomass or other extractive energy forms
Sustainable, community-driven land use systems, such as **agroecology and Indigenous agroforestry**, offer real alternatives to biomass-based energy models that rely on large-scale extraction. These practices maintain healthy forest ecosystems while enhancing carbon sequestration and supporting climate resilience and food sovereignty, illustrating that a just energy transition must avoid dependence on wood-based fuels or industrial plantations. Community resistance movements further reinforce this point: across regions, communities are actively rejecting extractive energy pathways, opposing industrial logging for biomass, and advancing localised renewable solutions grounded in ecological integrity.
Cross-regional coalitions, including the Biomass Action Network, the Global Forest Coalition, and other civil society alliances, play a critical role in exposing how current energy transition policies can drive deforestation and forest degradation when they rely on woody biomass or market-based instruments. Their work underscores that “best practices” for the energy transition are not new technologies that increase pressure on forests, but rather rights-based, gender-just, community-led approaches that reduce energy demand, support distributed renewable energy systems, and keep forests standing. A transformative and equitable energy transition therefore requires shifting power and resources toward these community-proven models, while dismantling policy incentives that link energy production to forest exploitation.