

Why the EBRD must end support for primary forest biomass in the Western Balkans



Biomass plant in Novi Pazar, Serbia (photo: Dragan Maksimovic).

As the Western Balkans aim to decarbonise their energy systems, forest biomass has been increasingly promoted as a renewable solution, particularly for district heating.¹ However, a 2017 World Bank study found that 75 per cent of the region's sustainable technical potential to produce woody biomass for heating was already being utilised.² With no updated regional data available and forests coming under increasing pressure, further expansion of biomass use raises serious sustainability and climate concerns.

Biomass and climate change

Biomass is often considered a 'carbon-neutral' source, provided that the burnt trees are replaced. But this claim is becoming less convincing as the climate emergency escalates. While forests, along with other ecosystems, have been essential for extracting and storing carbon dioxide from the atmosphere, recent

¹ Natasa Kovačević, Pippa Gallop, [Unmasking the biomass dilemma in Serbia and Bosnia and Herzegovina](#), CEE Bankwatch Network, 17 January 2025.

² Dejan Stojadinovic, Elena De Bortoli, Marco Baldini, [Biomass-Based Heating in the Western Balkans – A Roadmap for Sustainable Development](#), World Bank Group, Western Balkans Investment Framework, Energy Community, 1 October 2017.

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research reveals that the ability of forests to mitigate carbon dioxide emissions may diminish as climate change intensifies, casting doubt on their continuing reliability as a carbon sink.³ For years, scientists have warned that burning trees for energy worsens climate change in the same way as fossil fuels.⁴

A 2017 study demonstrated that meaningful emissions savings – compared to fossil fuels – can only be achieved by burning harvest residues or, in some cases, salvaged trees, with benefits typically accruing over a 25-to-50-year period. In contrast, burning whole trees often results in no carbon emissions savings, even over a 100-year timespan.⁵

The two countries with the most intensive biomass plans in the Western Balkans are Serbia and Bosnia and Herzegovina, yet neither has clearly stated its intentions in this field, despite Serbia having adopted its national energy and climate plan in July 2024.⁶

Western Balkan policies and the sustainability gap

The sustainability governance gap is significant. The EU, largely due to the commercial interests of certain Member States, has adopted inadequate biomass sustainability criteria, which Western Balkan countries have yet to even transpose. To date, only Serbia has incorporated the sustainability and greenhouse gas-saving criteria for biomass from the 2018 Renewable Energy Directive (RED II) into national legislation. Montenegro and Kosovo have done so only partially and still need to adopt the required implementing legislation.⁷ Albania, Bosnia and Herzegovina, and North Macedonia have not adopted any biomass sustainability criteria – not even the weak provisions set out in RED II.

Until these criteria are fully adopted, biomass burned in installations covered under RED II can be counted as renewable for the purposes of meeting the 2030 renewable energy targets, despite various policy plans.

Market volatility and government responses

The biomass market in the Western Balkans has proven volatile, particularly during the 2021–2022 energy crisis, which exposed the vulnerability of both households and district heating operators to price shocks.⁸ In response, several governments introduced emergency measures to curb exports and stabilise prices:

- Serbia introduced export quotas for raw wood (August 2022 to February 2023), imposed pellet export restrictions (December 2022 to January 2023), and enacted a pellet import ban in April 2024, later extended in June 2024.⁹

³ Max K. Lloyd et al., [Isotopic clumping in wood as a proxy for photorespiration in trees](#), *Proceedings of the National Academy of Sciences of the United States of America*, 120(46), (2023); Adrienne Berard, [Trees struggle to ‘breathe’ as climate warms, researchers find](#), *Pennsylvania State University*, 31 January 2024.

⁴ John D Sterman, Lori Siegel, Juliette N Rooney-Varga, [Does replacing coal with wood lower CO2 emissions? Dynamic lifecycle analysis of wood bioenergy](#), *Environmental Research Letters*, 13 (2018).

⁵ Jérôme Laganière et al., [Range and uncertainties in estimating delays in greenhouse gas mitigation potential of forest bioenergy sourced from Canadian forests](#), *Global Change Biology Bioenergy*, 9(2) (2017): 358–369.

⁶ The national energy and climate plans previously adopted by North Macedonia and Albania now need to be updated in light of the 2030 targets adopted by the Energy Community Ministerial Council.

⁷ Energy Community Secretariat, [Annual Implementation Report 2024](#), *Energy Community*, 1 November 2024.

⁸ Branko Glavonjić, [Current trends and developments on wood energy market trends in the Western Balkans](#), *Foresta 2023*, 20–23 November 2023.

⁹ European Commission, [Commission Staff Working Document: Serbia 2023 Report](#), *European Commission*, 8 November 2023.

- Bosnia and Herzegovina imposed -month wood export bans in both June 2022 and May 2023.¹⁰
- North Macedonia adopted export restrictions on specific wood types in July 2022.¹¹
- Montenegro, Bosnia and Herzegovina, Serbia, and North Macedonia all introduced administrative limits on biomass retail prices.¹²
- Montenegro additionally reduced VAT on pellets to 7 per cent to counteract the price surge.¹³

Forest biomass in Bosnia and Herzegovina: A decarbonisation dead-end

Having proven to be both unsustainable and unreliable, forest biomass cannot be considered a viable pathway for decarbonisation. The following case studies from Bosnia and Herzegovina highlight how EBRD-backed large-scale biomass projects have faced significant challenges related to sustainability, affordability, and fuel supply.

These examples demonstrate the need for the EBRD to cease all support for district heating projects that rely on primary forest biomass, to reassess large-scale biomass heating installations under its Green Economy Transition (GET) approach, and to redirect funding towards truly sustainable renewable energy and energy-efficient heating solutions.

Banja Luka biomass heating plant

In 2017, under its Green Cities Framework, the EBRD supported the construction of a 49-megawatt-thermal (MWth) biomass district heating plant in Banja Luka with an investment of EUR 16.4 million, including an EUR 8.3 million loan.¹⁴ Since becoming operational, the plant has faced serious supply-chain issues. In 2022, Eko Toplane – the operator of the plant – reported a 58 per cent shortfall in biomass supply, despite having signed contracts with forest concessionaires.¹⁵

To remain operational, Eko Toplane has relied heavily on public subsidies, receiving over EUR 3.5 million between 2022 and May 2024. Meanwhile, heating prices rose by 23 per cent during the 2023–2024 season. The unreliability of the service has led to user dissatisfaction, with 140 customers disconnecting in early 2024 alone.¹⁶

Tuzla 3 coal-to-biomass conversion

On 8 September 2022, the EBRD and Elektroprivreda BiH (EPBiH) – one of Bosnia and Herzegovina’s state-owned energy utilities – signed a mandate letter formalising the EBRD’s intention to consider financial

¹⁰ European Commission, [Commission Staff Working Document: Bosnia and Herzegovina 2023 Report](#), European Commission, 8 November 2023.

¹¹ European Commission, [Commission Staff Working Document: North Macedonia 2022 Report](#), European Commission, 12 October 2022.

¹² Bioenergy Europe, [Statistical Report 2023](#), Bioenergy Europe, 45, 2023.

¹³ Unija Smart Accounting, [Izmijenjen i dopunjen Zakon o porezu na dodatu vrijednost](#), Unija Smart Accounting, 11 May 2022.

¹⁴ European Bank for Reconstruction and Development, [GrCF - Banja Luka District Heating](#), European Bank for Reconstruction and Development, 9 March 2018.

¹⁵ Eko toplane Banja Luka, [‘Ugrožena sezona grijanja u Banjaluci’](#), Eko toplane Banja Luka, September 2022.

¹⁶ Milkica Milojević, [“Eco Heating Plants”: Citizens Pay a High Price for Poor Heating. Millions to Private Owners from the City Budget](#), Fokus, May 2024.

support for a controversial energy project in Tuzla. The project involves converting one of the ageing coal-fired units at the Tuzla power plant to burn willow or other types of wood from short-rotation coppice plantations, as well as waste incineration.

However, the plan is unlikely to significantly reduce Bosnia and Herzegovina's climate impact. While EPBiH plans to convert 1,075 hectares at the Kreka, Breza, and Đurđevik mines into willow fields for short-rotation coppicing, Biofuelwatch analysis reveals that the energy crops necessary would actually require 6,042 hectares – a considerable 5.6 times more land.¹⁷ The plan could also lead to an increase in waste imports, while developing waste incineration capacity risks hindering the country's urgent need to increase recycling, which stood at virtually zero in 2021.¹⁸

Meanwhile, other potential biomass sources under consideration, such as harvesting forests certified by the Forest Stewardship Council (FSC), offer little reassurance. Although formally certified in theory, Bosnia and Herzegovina's forests are poorly governed and monitored in practice. In any case, even FSC standards do not guarantee the absence of greenhouse gas emissions.

Given the significant issues related to greenhouse gas emissions, air pollution, and fuel supply risks from forest biomass, the Tuzla 3 conversion project does not represent a viable or sustainable solution. More than two years after the signing of the EBRD mandate letter, a technical feasibility study has yet to be completed, raising further questions about the overall credibility of the project.

Recommendations for the EBRD

We welcome the review of the EBRD's GET approach as an opportunity to strengthen its environmental integrity and to ensure it aligns more closely with global climate goals. However, while the EBRD has made some progress, its current GET criteria remain far too broad, opening the door for projects that risk significant environmental harm or offer only marginal climate benefits.

To ensure the GET approach delivers a truly just and effective transition across the Western Balkans and beyond, we strongly recommend a more precautionary, science-based strategy guide by the following steps:

1. Avoid replacing fossil fuels in district heating with new highly polluting practices like primary forest biomass and waste incineration.
2. Expand the GET project exclusion list to include bioenergy from energy crops and forest biomass, unless it is generated from locally collected wastes and residues not currently or foreseeably used by other sectors and can prove emissions savings.
3. Broadly refrain from investing in primary forest biomass due to its contribution to air pollution and premature deaths.¹⁹

¹⁷ Biofuelwatch, [Short-rotation coppicing: No credible option for fuelling new biomass plants in Bosnia and Herzegovina](#), *Biofuelwatch*, December 2023.

¹⁸ European Environment Agency, [Waste prevention country profile: Bosnia and Herzegovina](#), *European Environment Agency*, April 2023.

¹⁹ In 2018, particulate matter pollution was responsible for approximately 379,000 premature deaths in the EU-28, with wood burning identified as a major and growing source, surpassing even road transport. See: Forest Defenders Alliance, [Wood-burning is the largest source of deadly air pollution in Europe - So why does the EU encourage burning wood for "renewable energy"?](#), *Forest Defenders Alliance*, May 2021.

Mary S. Booth, [Trees, Trash, and Toxics: How Biomass Energy Has Become the New Coal](#), *Partnership for Policy Integrity*, 2 April 2014.

4. Strengthen transparency and reporting for GET projects by publishing clear data on their environmental and climate outcomes.
5. Comprehensively evaluate impacts during the operational phase in addition to overall project sustainability, particularly in regions with limited government oversight and unreliable data collection.
6. Support evidence-based data collection in the heating sector and, in particular, recognise and address the critical absence of data on heating in the Western Balkans.
7. Conduct in-depth analyses of the existing heating situation in each country, accounting for technical, financial, social, legal, and institutional aspects.
8. Gather detailed and up-to-date data on existing and projected heat demand, building-stock status, heat-source availability and usage, and the performance of existing district heating systems.
9. Adopt science-based ‘do no significant harm’ criteria for the heating sector, moving beyond assessing projects merely on net environmental benefit to explicitly ensure that all GET projects avoid harm to environmental objectives.
10. Recognising the limitations of the EU Taxonomy criteria, consult other sources like the EU Technical Expert Group on Sustainable Finance’s Taxonomy Report, which contains robust climate mitigation and adaptation criteria.²⁰
11. Ensure that the EBRD’s Environmental and Social Policy – including its Performance Requirements and Environmental and Social Requirements – systematically apply the ‘do no significant harm’ principle using a sector-specific approach.
12. Accelerate investments in highly efficient heating technologies such as heat pumps, combined with sustainable renewable energy sources – air, water, geothermal, solar, wind, waste heat – as well as thermal energy storage systems.
13. Critically assess why the EBRD’s previous studies on clean heating solutions – conducted under the 2019 Renewable District Energy in the Western Balkans (ReDEWeB) Programme and other Renewable District Energy (ReDE) programmes – have failed to result in actual projects being implemented.
14. Evaluate the quality of these studies, review the performance of the consultants involved, and determine the effectiveness of these programmes in delivering tangible results.

²⁰ EU Technical Expert Group on Sustainable Finance, [Taxonomy Report: Technical Annex](#), EU Technical Expert Group on Sustainable Finance, March 2020.