

Forest plantations Position paper



Hadrien Gaudin-Hamama
ESG ANALYST



Kevin Whittington-Jones
SENIOR ESG SPECIALIST

Forests cover almost a third of world land surface, on a decreasing trend as reforestation notably in the West and in Asia does not compensate local deforestation, in South America and Africa. But the rationale for forest expansion is strong, and developing wood-based productions can contribute to meeting some global challenges in various ways. In this context, properly designed and well managed forest plantations should be considered in impact-oriented investment universes, to support the development of a sustainable economy.

The rationale for forest expansion is strong, and led by economic, environmental, and social considerations:

- By sequestering carbon, forest play can play an essential role in **achieving carbon neutrality** by 2050. Managed forests already sequester 2bn tonnes CO₂eq per year. IPCC (Intergovernmental Panel on Climate Change) +1.5°C scenario requires adding 300 million hectares forest surface (+7,5% of current size) in the next thirty years¹.
- Besides, forests offer habitat for 80% of terrestrial biodiversity² and enable **essential ecosystem services** such as water regulation and filtration, hence forests expansion meets **enhanced biodiversity conservation** requirements such as the CBD (Convention on Biological Diversity) objectives on protecting biodiversity rich areas (30% of earth surface) and SDG (Sustainable Development Goal) n°15 on life on earth³.
- Forests meet **increasing humans needs for biomass and feedstock** in the manufacturing and energy industries to substitute for petrochemicals and fossil fuels respectively, with estimates ranging from +7% to +24% of exploited surface by mid-century^{4 5}.

Wood can contribute to meeting global challenges

Half of total forest surface is exploited in one way or another. Wood harvesting has reached 4,000 million cubic meter removals in 2018, shared evenly between fuelwood and industrial feedstock⁶.

Wood manufactured products

Industrial uses of wood include pulp for paper and packaging, construction timber, wood panels and particleboards, the latter being used in downstream furniture and construction industries and posting the highest growth over the last five years⁷.

Wood products contribute to meeting global warming challenge as they both sequester carbon during their lifetime, but also substitute for energy intensive products such as steel and cement in the construction industry.

1 "Special Report on Climate Change and Land", 2019, IPCC

2 "The State of the World's Forests", 2020, FAO and UNEP

3 "Zero draft of the post-2020 biodiversity framework", 2020, CBD

4 "Living forests report", 2012, WWF

5 "The Impact of Accounting for Future Wood Production in Global Vertebrate Biodiversity Assessments", 2020, Schulze et al

6 and 7 "Global forest products facts and figures", 2018, FAO



They are also well positioned to meet the ‘resource challenge’ induced by the search for alternative to petrochemicals in the chemical industry thanks to cellulose, lignin and hemicellulose used as an alternative feedstock. Provided they are eco-designed, wood products’ long lifespan and ease of reusing of wood wastes (wood chips, bark, black liquor, particles, fibers, resin, pellets, etc.) from products reaching end of life enable thorough integration of wood into a circular economy.

Woodfuel

Typically, in a country, a high share of fuelwood in wood end uses reflects a low development level caused by wood use in traditional cooking whose inefficient combustion induces energy losses and causes respiratory diseases with Africa displaying a 90% share while North America is at 12%⁹. However recent policy changes from western countries on subsidizing biomass for energy has induced a steep rise of fuelwood use in developed economies, mostly from wood pellets, as secondary wood such as wood industry wastes (currently 49% of woodfuel supply in the European Union – EU) and wood components (currently 17% of EU woodfuel supply) are insufficient to cover

Lastly, wood products such as corrugated material may also substitute for environmentally detrimental products such as plastic packaging, the primary source of plastic waste and a prominent factor in erosion of marine biodiversity having increased tenfold over four decades⁸.

needs¹⁰. The IEA (International Energy Agency) net-zero scenario aiming at limiting climate change to +1.5°C requires an increase of short rotation plantation forests contribution to bioenergy supply, from 5% today to 25% in 2050, the second largest bioenergy source increase¹¹. In the meantime traditional less efficient use of bioenergy in developing countries should disappear. In the context of such challenging transitions, supporting the development of sustainable wood production to accelerate the growth of wood-based energy production contributes to achieving climate objectives.

Sustainably managed plantations offer opportunities

Against the background of increasing demand for wood products combined with land pressure caused by agriculture land expansion, plantations offer the opportunity of contributing to meeting human biomass needs thanks to their high productivity while releasing pressure from logging activities on naturally regenerating forests¹².

Covering 3% of world forests¹³, short-rotation plantations can even have direct local positive environmental impacts when they are planted on degraded soils such as pastureland in South America, or when they release human pressure on primary forests caused by fuelwood sourcing such as in Africa¹⁴; besides plantations can mitigate biodiversity habitat fragmentation through corridors between primary forests patches¹⁵.

8 "The global assessment report on biodiversity and ecosystem services", 2019, IPBES

9 "Global forest products facts and figures", 2018, FAO

10 "The use of woody biomass for energy production in the EU", 2021, JRC

11 "Net Zero by 2050: A Roadmap for the Global Energy Sector", 2021, IEA

12 "Production, restoration, mitigation: a new generation of plantations", 2018, Silva et al

13 "Global Forest Resources Assessment", 2020, FAO

14 "Biodiversité des plantations d'Eucalyptus", 2011, CIRAD

15 "Production, restoration, mitigation: a new generation of plantations", 2018, Silva et al



As far as biodiversity is concerned, primary forests are irreplaceable. Apart from these, wood sourcing options do impact biodiversity differently depending whether wood is logged in naturally regenerative forests or harvested from intensively managed plantations. Yet, assessing differentiated biodiversity impact of various modes of wood production is complex. Indeed, scientists acknowledge the difficulty of assessing biodiversity impact due to idiosyncratic response of species to local pressures, reducing comparability. In any case, future modes of wood production are key policy issue for any world region. For instance, in Asia, increased wood production from plantations could benefit mammals while entailing potential negative impacts on birds, whereas in Africa, resorting to eucalyptus plantation would reduce general biodiversity losses by mitigating logging activity in primary and regenerative forests¹⁶.

Regarding the social dimension, plantations can generate development opportunities for surrounding communities and indigenous populations. In the context of land acquisition for plantations, distribution of formal land titles can empower communities in developing countries

where such titles are not yet available, while purchase of land titles can reduce smallholder farmers' debt. Provided wood processing plants are located close to plantation site, plantations can generate fairly paid jobs opportunities. They also can provide in kind benefits to locals through resin-tapping, fuelwood timber and mushroom collection. When intercropping is allowed, it can result in increased soil fertility generating complementary revenues for farmers. Eventually, construction of road infrastructure, dispensary and schools can increase local access to transport services, health and education¹⁷.

Against this background, opportunity of using plantation wood depends on three considerations:

- environmental and social considerations at plantation site (soil rehabilitation, alternative to logging in surrounding regenerative forests, employment opportunities)
- capacity of meeting destination market needs while ensuring resource efficiency and end of life management (reuse and/or recyclability)
- capacity of products to substitute for damaging products (petrochemicals, plastics).

Our approach to E&S risk management

The potential E&S (Environmental & Social) risks associated with plantation forests are complex. Plantations are notably regularly accused of reducing biodiversity, and of reducing the ecological services provided by local ecosystems compared to their natural counterparts, notably by eroding soil fertility or water availability. Attention should also be paid to the social impacts, such as those related to land acquisition as well as health and safety or labour conditions for example. But these E&S risks result of a wide range of possible interactions between bio-physical and socio-economic factors. The nature of these interactions is highly dependent on local context and generalisations should be applied with caution.

In order to ensure that Mirova's investments in projects of this sector make a net positive contribution across all performance areas, projects within the investment universes are analysed taking into consideration the following elements. These come in addition to the various Standards we expect invested assets to comply with, as formally stated in [Mirova Natural Capital ESG policy](#) and integrated at the core of our due diligences process, namely the [IFC Performance Standards](#).

¹⁶ "The Impact of Accounting for Future Wood Production in Global Vertebrate Biodiversity Assessments", 2020, Schulze et al
¹⁷ "A systematic review of the socio-economic impacts of large-scale tree plantations, worldwide", 2018, Malkamaki et al

a. Certification and Standards

Plantation forest projects must achieve material compliance with the [IFC EHS \(International Finance Corporation - Environmental, Health & Safety\) guidelines](#) within a reasonable period of time post-investment, which includes implementation of a formalised Environmental and Social Management System (ESMS). They are also expected to either hold valid international sustainability certification at the time of investment or have a plan to achieve certification within an acceptable timeframe.

Regarding certifications, there is a wide range of voluntary forest certifications – [FSC](#) (Forest Stewardship Council), [CCB](#) (Climate, Community & Biodiversity), [RSB](#) (Roundtable on Sustainable Biomaterials), [Rainforest Alliance](#) etc – , that are all dependent on audits by independent audit teams. Although all of the certification Standards typically cover elements of technical, environmental and social best practices, there are differences when it

comes to specific requirements under each of these broader performance areas. These reflect the focus of individual certifications and it is not uncommon for plantations to hold multiple certifications in order to demonstrate good performance across the full range of E&S performance areas.

Mirova recognizes that there has been some criticism of forestry certification standards and that no single certification addresses all ESG (Environmental, Social, Governance) performance areas in adequate depth. However, Mirova's perspective is that certifications would not substitute for the Mirova's own E&S due diligence and on-going monitoring of a project. Instead, certifications provide an additional level of independent oversight of a plantation's ESG performance¹⁸.

b. Management

Regarding the general management of E&S risks, it is essential to ensure that project owners have identified E&S risks early in the project's lifecycle and that they have applied international best practice to ensure that risks are eliminated or reduced to an acceptable level. Although various scientific tools (e.g. hydrological models, Environmental Impact Assessment, Participatory Rural Appraisal etc.) enable an improved understanding of potential interactions, gaps still exist. Therefore, ensuring that appropriate E&S resources are in place and that a robust governance is established on ESG are key parameters.

Concretely, all projects must ensure an E&S management team is composed of suitably qualified and experienced individuals. Depending on the scale of the operations, the project team would normally be led by an E&S Manager who will be supported by social and environmental officers. And normally, a single individual on the company's Board of Directors will be assigned responsibility for ESG performance of the company and projects.

c. Plantation design

Plantations must be designed to incorporate a mosaic of land-use types that enable commercial success of the project while also promoting meaningful value in terms of local socio-economic development, improved community livelihoods and

wellbeing, and biodiversity conservation. Incorporation of elements that will enhance the climate change resilience of communities within a project's area of influence is also desirable.

¹⁸ References to a ranking, prize or label do not anticipate the future results of the latter, or of the fund, or of the manager.

d. Resource Use

Companies must demonstrate that they actively work to control and reduce the production footprint through the optimization of the energy efficiency of processes, of water and non-renewable inputs consumption at both plantation and processing levels. Regarding water specifically, projects are expected to demonstrate that they have mapped their water stress risk and have defined a sampling

management plan to reduce the potential impact of identified risks. To complement this approach, Mirova advocates the implementation of good practices that help to address water stress at the local level. Where plantations are located in water-stressed areas, it is desirable for companies to hold [GLOBALG.A.P SPRING](#) (Sustainable Program for Irrigation and Groundwater use) certification¹⁹.

e. Labour

Where there is a reasonable risk of non-compliance with the ILO (International Labour Organisation) Core Labour Standards and / or national labour

legislation, plantation forests will be required to maintain SA8000 certification on socially acceptable practices in the workplace, or similar.

f. Community and Land Acquisition

Mirova will not invest in projects or plantation companies that are associated with unresolved conflicts with communities. To the extent feasible, involuntary physical or economic displacement should be avoided. Options to avoid involuntary displacement should include consideration of the potential for a project model based on community outgrowers. Any involuntary displacement must be managed in accordance with the requirements of

the [IFC's Performance Standard 5](#) on land acquisition and involuntary resettlement. Independent specialists should be contracted to develop and monitor implementation of Resettlement Action Plans or Livelihood Restoration Plans. Where additional land area is required for a project, good quality agricultural land should be avoided, with preference given to establishing plantations on degraded land.

g. Monitoring

It is expected that projects will implement a robust and comprehensive E&S monitoring programme, the scope of which includes positive impacts and all relevant E&S risk areas. Routine internal monitoring will normally be augmented by at least annual independent E&S audits and, where applicable, monitoring by subject specialists (e.g.

biodiversity monitoring). The approach to monitoring should always be aligned to international best practice. Projects must prepare an annual report in which they disclose their E&S performance. This report should be made available to external stakeholders.

Adapting these standards to investments in listed assets

When investing in a listed asset, the level and nature of information available is often very different than in the context of an investment in a non-listed activity such as a project. For that reason, while principles and expectations stated hereabove still apply, the approach used when analysing the ESG performance of a forestry listed asset often relies predominantly on proxies, such as certifications, controversies, and on a selection of useful information when disclosed by the companies in their annual or sustainability reports, related to the structure and content of their environmental and social management system, including their policies and processes. When relevant and possible, a discussion with the management may take place to refine the understanding of processes and practices in place.

¹⁹ References to a ranking, prize or label do not anticipate the future results of the latter, or of the fund, or of the manager.

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Non-contractual document issued in November 2021.

MIROVA

Portfolio management company - French Public Limited liability company

Regulated by AMF under n°GP 02-014

RCS Paris n°394 648 216

Registered Office: 59, Avenue Pierre Mendes France – 75013 – Paris

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NATIXIS INVESTMENT MANAGERS INTERNATIONAL

Portfolio management company - French Public Limited liability company

Regulated by AMF under n° GP 90-009

RCS Paris n°329 450 738

Registered Office: 43, Avenue Pierre Mendes France – 75013 – Paris

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NATIXIS INVESTMENT MANAGERS

French Public Limited liability company

RCS Paris n°453 952 681

Registered Office: 43, Avenue Pierre Mendes France – 75013 – Paris

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MIROVA U.S., LLC

888 Boylston Street, Boston, MA 02199; Tel: 857-305-6333

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