

BNP PARIBAS hk for a changing world **PERSPECTIVES**

Experts' views on the green and social transition

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The economic roadmap has to be more sustainable, resilient and inclusive

by Bertrand Badré, Managing Orange Capital. Previously Managing



We live in a unique time. Never before has the planet faced so many systemic challenges simultaneously. How best can banks and financial institutions respond?

Climate-related disasters, the war in Ukraine, post-COVID disruptions to supply chains and energy and food markets, in addition to political upheavals in Europe and the US... the world is living unprecedented pressing challenges.

Collective resilience is key. This is easier said than done. One way forward is to work towards a truly sustainable economy. Almost a decade ago we agreed to address the climate challenge

and move to sustainable development. Unfortunately, it was never discussed how to get there from a financial perspective. We left it to the invisible hand. It did not work. As a result, our financial system and models are still not fit for the purpose.

To transform the way we operate our economic model, banks and financial institutions have a vital, leading role to play. They can help clients monitor their business practices from an ecological and social perspective. They can push investments and financing towards carbon neutrality while working towards a more inclusive economy.

"IT IS NOT A TRANSITION; IT IS A TRANSFORMATION."

It is not a transition; it is a transformation. A revolution is needed, which requires ambition. This will not happen without banks and financial institutions taking their responsibilities seriously.

> Fossil fuel and industry

emissions

Net CO, emissions

from land use, land

use change and

forestry

Other GHG

emissions

BREAKTHROUGH AGREEMENT AT COP27, BUT WORK STILL TO BE DONE, WITH A FOCUS **ON DIALOGUE AND FINANCE**

The main twin objectives of COP27 were:

- 1) to address "loss and damage" (how developed countries can contribute to help vulnerable countries amid climate disasters), and
- 2) to maintain a dialogue between all countries, a necessity to save the global climate ambition.

After two weeks of tough negotiations, an agreement was reached to create a loss and damage fund. Its design, funding and operationalisation still need to be discussed. One thing is clear - public finance will not be enough to cover the requested amounts; significant contributions from private actors are needed. To go further, a more trustworthy and constructive dialogue is necessary between developed and developing countries, and between public and private finance. Financial institutions such as BNP Paribas have a role to play in the creation of innovative financial mechanisms for a just transition.

Sébastien Soleille, Global Head of Energy Transition and Environment BNP Paribas



Uneven global emissions



Eastern Asia was responsible for 27% of global greenhouse gas (GHG) emissions in 2019. However on a per capita basis, North America is the number one. The area has also historically contributed the most to global warming, being responsible for 23% of the anthropogenic CO₂ emissions between 1850 and 2019, ahead of Europe (16%). The latter's share of annual global emissions has fallen from 16% to 8% since 1990, thanks to the import of products, and to the first steps made towards transition and better land use resulting in a net capture of CO₂. A start on the very long road to carbon neutrality ...

SCAN OR CLICK ON THIS OR CODE TO DISCOVER DETAILS ABOUT THE EVOLUTION OF GHG EMISSIONS IN DIFFERENT **REGIONS OF THE WORLD.**



Net anthropogenic greenhouse gas (GHG) emissions per capita and for total population Source: IPCC

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Reassessing our lifestyles and financing

Banks and authorities should take climate risks more into account, to foster greater moderation without affecting our well-being.

The ECB cannot ignore the climate emergency

by **Marc Irubetagoyena,** Head of Group Stress Testing – Member of the Group RISK Executive Board of BNP Paribas

The European Central Bank has set up an action plan to integrate climate challenges.

On July 8th 2021, the ECB presented an action plan to integrate climate change considerations into the banking sector's risk management and its own strategy. The ECB's integration will take several forms:

- Firstly, the climate impact will be incorporated into the inflation estimation process and hence into the management of monetary policy.
- In addition, corporate bond buybacks will focus on companies with low levels of greenhouse gas emissions (Scopes

1, 2 and 3), or those that aim to reduce them substantially.

3. Lastly, the ECB wants to prioritise collateral (guarantees) that will contribute to compliance with the Paris Agreement in its refinancing operations.

Furthermore, the ECB has stated that its strategy will take into account the enhanced quality of the data available for modelling risks. This cautious approach ad-

dresses the banking industry's requests to have sufficient time to measure the effects of climate change, before imposing decisions on all stakeholders. On 8 July 2022, the

ECB published the results of its first climate risk stress

test, which covered 104 banks across Europe. The ECB evaluated the aggregate risk at \notin 70 billion, by summing the impact of the three analyzed scenarios. When considered separately, the additional risk cost is lower, with a spread of \notin 10 to 20 billion.

Today, climate issues are at the heart of European banking institutions' strategies. They are still working hard to quantify the

"TODAY, CLIMATE ISSUES ARE AT THE HEART OF EUROPEAN BANKING INSTITUTIONS' STRATEGIES." risks they may face in the medium term, and how they will manage the stranded assets on their balance sheets. In the longer term, another issue will be about the integration of climate change risks into capital requirements.

Sobriety is now a must



One way to reduce our economy's carbon footprint is to co-build new lifestyles.

Since the start of this year, we have faced a dual crisis that has greatly increased the visibility of our planet's limits. The drought highlighted that climate change is rapidly disrupting key aspects of our society, such as energy and food production. We are also experiencing an energy crisis, reminding us that energy is scarce and we cannot continue to rely on fossil fuels if we want to sustain a liveable planet.

Energy efficiency and technological innovations are obviously two important tools to achieve the climate objectives. However, we must also focus on demand. For instance, changing our mobility needs or consuming less meat will facilitate the decarbonisation of the related sectors.

From a political perspective, the need to consume more moderately is still a sensitive

issue. It challenges the social promise of abundance in place since the end of the Second World War. Current research seems to show that we can achieve an equivalent level of well-being, while being more frugal when catering to people's basic needs.

"CURRENT RESEARCH SEEMS TO SHOW THAT WE CAN ACHIEVE AN EQUIVALENT LEVEL OF WELL-BEING, WHILE BEING MORE FRUGAL WHEN CATERING TO PEOPLE'S BASIC NEEDS."

Therefore, once we have accepted and embraced the need for change, there is no longer any point in calling for the preservation of an over-affluent and over-comfortable lifestyle. Here though, the fundamental question is, how?

Our preferences are fluid and typically

change over time. Moreover, the lifestyles we choose are largely shaped by government policies, as well as by the products and services available from the private sector.

Climate justice has become a reality

Governments and companies that fail to truly commit to the transition face an increasingly real risk of legal challenges.

European Green Deal building further on its bold objectives

by **Wilfried Remans,** Head of NEST Sustainability Network at BNP Paribas



Europe's moonshot programme has been translated into a series of legal and regulatory initiatives.

Launched in 2019, the European Green Deal is an integrated strategy covering all important sectors. Its objectives entail a profound transformation of our societies. With the European climate law, the 2050 climate neutrality target has become a legal obligation for EU institutions and member states. The law also sets an intermediate target to reduce emissions by 55% compared to 1990 by 2030 already. This will require the electrification of cars, more efficient buildings, renewable energies and a range of investments that systematically integrate ESG criteria in a transparent manner.

Despite Covid and the war in Ukraine, the European Commission has long-term plans. The REPowerEU plan doubles down on energy efficiency, renewable energy and renewable hydrogen. The Fit for 55 package brings together various proposals: a revision of the emissions trading system; stricter energy efficiency targets; measures to promote greener fuels for aviation and shipping; and a social climate fund to protect the most vulnerable.

With EU elections coming up in 2024, all eyes are on flagship initiatives like the Nature Restoration Law, the farm-to-fork and circular economy strategies, the corporate sustainability due diligence (CSDD) as well as enhanced ESG reporting requirements for companies.

The transition to a sustainable economy also involves a regulatory transition

by **Laurence Thébault**, Global Manager of LEGAL Regulatory and Leader of the CSR & Sustainable Finance Practice at BNP Paribas

The regulatory boom engages all stakeholders and contributes to the development of sustainable finance by strengthening investor confidence.

'Greenwashing' covers practices where businesses report that they are doing more for the environment than they truly are. These companies are exposed to reputational risk and legal claims. Sustainable investment is popular and the demand is rapidly growing. Yet this growth also comes with mounting scepticism about the authenticity of ESG integration and sustainability practices. This is underlined by recent regulatory sanctions on several continents.

The new regulatory framework being developed, inspired by the principles of transparency and harmonisation, should reassure investors and the market. The EU's Sustainable Finance Disclosure Regulation (SFDR) and the EU Taxonomy, which aims to establish a classification of environmentally sustainable economic activities, should help to tackle the problem of greenwashing. However, these new measures will not really take full effect unless financial operators can access companies' extra-financial data. This should be enabled by the future Corporate Sustainability Reporting Directive (CSRD), which will gradually become effective from 2024-2025. The regulation is therefore not yet mature.

Establishing labels for financial products, together with international convergence at the regulatory level, will be key developments for the future. In the short term, financial operators will have to be more prudent, in a time that is both uncertain yet crucial for transitioning to a more sustainable world.

New ESG reporting requirements

The new CSRD¹ aims to strengthen and harmonise the extra-financial reporting of companies – impacts on environmental, human rights and social standards. Specifically, it will widen the pool of companies asked to comply and reinforce the disclosure's quality, consistency and transparency requirements. The European Commission will unveil the first reporting standards by June 2023, for implementation in financial year 2024. Initially, this will only concern companies that are already covered by the NFRD² directive, but the scope will rapidly be expanded.



1) Corporate Sustainability Reporting Directive 2) Non-Financial Reporting Directive, which has set the regulations for non-financial reporting in Europe since 2014

Industries in depth

The energy transition is driving every sector

From gas supplies to the steel industry and nuclear power, we must be guided by common sense to achieve climate neutrality.

Strong ESG credentials remain crucial for oil & gas sector

by Constance Chalchat, Head of Company Markets at BNP Paribas and Martin Brough,



Oil & gas companies not transitioning or with poor ESG profiles will have access to smaller liquidity pools.

The transition to net-zero is clearly impacting the oil & gas sector, as evidenced by the trend in stock prices. Investors are under increasing pressure to move away from the most-emitting, least-transitioning oil & gas producers. Sustainable investors remain underinvested in the sector and some plan to pull back from fossil fuels altogether.

Clean energy investments by sector leaders are growing strongly in renewables, with longer-term plans for hydrogen and carbon capture. Thanks to their technical and financial capabilities, oil & gas players have the necessary levers to further accelerate the energy transition. These investments should improve their access to both funding and valuations. Yet to attract sustainable finance, transparency is key: climate targets must be viewed as credible by investors and be externally verified.

The geopolitical crisis has brought back a focus on oil & gas supply dependencies. The immediate priority is de-risking supply, which means supply diversification and investments in natural gas infrastructures. However, the strong focus of the EU's CREPowerEU and the US Inflation Reduction Act on renewables and energy efficiency shows continued policy support for the energy transition.

Is this the beginning of a new | The bioenergy required era for the nuclear industry?

by Greg De Temmerman, Managing Director at Zenon Research, Associate Researcher



Investments in small reactors are likely to rise as the clean energy perks of nuclear become clearer.

The energy crisis sparked by the war in Ukraine, an oil market under pressure, and low nuclear and hydro-electricity production have made lawmakers realise that the transition must be sped up.

With its high-energy density, low-carbon and dispatchable electricity generation, nuclear needs less raw material than other low-carbon energies. The IEA recommendation to delay the closure of existing plants confirms that nuclear should be part of the future energy mix.

Germany is keeping two reactors on standby, while France and the UK plan to build new ones. The US Inflation Reduction Act supports nuclear power. R&D in advanced and small modular reactors aims to reduce the cost and construction time of reactors. So nuclear and the transition look set for a bright future.

for net-zero

by Yves Floch. ESG Expert Energy Transition and Oceans at BNP Paribas

By 2035, bioenergy power generation could provide between 2% to 3% of global energy.

Electricity produced from biomass (bioenergy) is an interesting solution for non-interconnected zones such as islands; or in places where bioresidues are available in significant quantities, like sawmills, agricultural residues and biowaste. Bioenergy may also be used as a transition solution to replace coal, before developing other low-carbon alternatives.

Since the availability of sustainable biomass is limited, any new project should be developed cautiously. It must deliver significant life-cycle environmental benefits and not have significant negative environmental or social impacts, such as deforestation or biodiversity loss. Moreover, biomass used in a power plant should conform to the strictest certification, such as FSC or PEFC for wood.

Green hydrogen, a major challenge for Europe

by Romain Talagrand, at BNP Paribas



The development of green hydrogen faces significant obstacles.

Green hydrogen - produced from renewable electricity - is the most promising approach to decarbonising many industries. To limit global warming to 1.5°C, annual production capacity should reach more than 600Mt by 2050. The first substantial project is scheduled to come on stream in Saudi Arabia in three years, followed by others before the end of the decade.

However, using this new capacity brings with it considerable challenges, particularly in transporting green hydrogen from the places of production to the places of consumption. Still, it will require significant investment to use this energy source in our industries. The present crisis calls for accelerating the development of renewable energy sources. This is a key issue, especially for Europe, which must secure its access to carbon-free, abundant and competitive energy.

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The challenges of fleet electrification



The energy crisis has driven up electricity prices, which is likely to increase costs but also offer opportunities for innovation.

The automotive industry is undergoing a major transition. According to the European Automobile Manufacturers' Association, the number of 100% electric passenger car registrations rose by 63% in 2021 and this growth is forecasted to continue. This will make access to a public charging network a crucial issue, especially in urban areas.

The number of public charging stations has tripled since 2018, reaching 340,000 in Europe in mid-2022. However, European authorities estimate there is a need for between 1 and 1.5 million stations by 2025. Today's infrastructure is therefore largely inadequate, with delays in deployment and uneven distribution across the EU. Charging stations are today highly concentrated in Germany, France and the Netherlands.

The EU regulatory framework calls for a rapid reduction of $\rm CO_2$ emissions and an end to the sale of new internal combustion

engine vehicles, including hybrids, by 2035. Car manufacturers have therefore taken steps to rapidly electrify their range in Europe by the end of this decade.

Fleet electrification has speeded up in the last two years, mainly because of various tax incentives. Yet the current energy crisis is quickly raising the price of electricity. This situation gives rise to questions about the timetable for fleet electrification, while offering opportunities for innovation such as V2G (vehicle-to-grid) technologies, which will ultimately enable vehicle batteries to be used to stabilise the electricity grid.

The decarbonisation of the steel industry is challenging but vital

by **Rodrigo Lencina**, Senior Industry Consultant Ste and Metals Transformation at BNP Paribas



Government policies and private initiatives adopted in the next ten years will be critical to shape a sustainable future for one of society's most essential industries.

The steel manufacturing industry is highly carbon-intensive, producing around 7% of total energy sector CO_2 emissions. During the next decade, as we transition towards a low-carbon steel industry, it will be vital to optimise usage of input materials and increase technology performance to reduce the energy intensity of the manufacturing process.

Low-carbon hydrogen is a potential game-changer in the long term, as a replacement for metallurgical coal. Electrification – replacing blast furnaces with electric arc furnaces for instance – is promising but requires massive investments and large volumes of low-price renewables as energy source. Carbon capture, use and storage is expected to play an important role in countering steel plants that continue to emit.

However, no silver bullet exists for the decarbonisation of steel. The optimal solution for each region will depend on many factors such as access to renewables and availability of scrap. Steel's decarbonisation also requires the collaboration of all stakeholders: producers, governments, suppliers, clients, banks and academia.

In the meantime, steel will remain a crucial material for many sectors such as automotive, construction and energy. Steel is also a key infrastructure enabler for the energy transition. Wind power facilities for example require 120 to 180 tonnes of steel per MW.

Energy transition gains traction in non-metallic construction materials manufacturing



High energy-intensive processes are being affected by stricter environmental regulations and the energy supply crisis in Europe.

On the supply side of non-metallic construction materials, solutions are already in place to improve the energy efficiency of production processes and reduce CO_2 emissions. They include more efficient kilns, waste heat recovery systems, preheating systems, raw material substitution, biosourcing, and the increasing usage of recycling when applicable. To further decrease emissions, carbon capture, utilisation and storage (CCUS) has significant long-term potential.

On the demand side, construction materials are highly dependent on local specifications. However, arbitrations could increasingly be made in favour of more sustainable construction materials (driven by stricter building regulations such as RE2020 in France), and the economic rationale (taking into consideration the current high energy prices).

Finally, the use of certain materials such as insulation products contributes to a building's energy performance, and their carbon and energy footprint is largely recovered by savings made over a building's lifetime. Extending the lifetime of building materials is thus another important driver towards improved sustainability.

Harnessing today's technologies

Solutions are available to reduce emissions, whether for the European industry, the lighting of public spaces or the electrification of Africa.

Efficiency will underpin net zero

by **Marieme Rocch** and **Sébastien Renaud**, Co-heads of the Sustainability Centre at BNP Paribas CIB



Metron is at the heart of the movement to increase energy efficiency in industrial buildings.

■ Improvements in energy efficiency could reduce our CO₂ emissions by up to 30%. ■ Metron is a company offering an innovative SaaS (software-as-a-service) solution known as EMOS (energy management and optimisation system). It enables the capture, management and monitoring of operational data; and the identification of optimisation opportunities to reduce $\rm CO_2$ emissions by up to 15% for some sectors, without further investments.

Solutions like this are already used in sectors with high CO_2 emissions, such as metallurgy, for which energy is a major cost item. For other sectors, including pharmaceuticals, the recent surge in energy costs has raised awareness of the savings that can be made.

Boosting the use of solutions like EMOS is key to reducing CO_2 emissions. Metron will soon participate in the 'Decarb Fast Track' programme, along with BNP Paribas, Dalkia and Amazon Web Services. The aim is to accelerate the implementation of energy efficiency solutions in about 100 factories across Europe.

Solar power to electrify and light the African continent

The African continent still struggles with a low electrification rate of 56% and daily power cuts. Afrigreen and Sunna, supported by BNP Paribas through its green tech dedicated envelope, are developing low-carbon solutions.





Small businesses in Africa are constrained to use expensive and polluting generators (CO_2 , noise pollution, etc.) to ensure their operation. Yet solar electricity is a more dependable, cleaner, decarbonised and less expensive source of energy, especially when coupled with batteries.

The transition to solar self-consumption for businesses and industries is nevertheless hindered by a lack of financing. Initial investment is indeed important for companies of this size. Bank debt is crucial, yet currently inaccessible.

Afrigreen was created to address this key challenge for Africa's development. This fund, built by the investment management company RGreen and Echosys Advisory, offers long-term loans for renewable energy self-consumption projects for businesses. These projects are set up and managed by specialised developers. They provide technical expertise and are financed by Afrigreen.



Sunna Design manufactures public solar lighting. Right from the start, the company has designed its products for Africa, especially by integrating its NiMH battery and by developing a passive ventilation system. Its lighting is thus highly reliable, connected and smartphonecontrollable.

Since they require no connection to a network, which is often absent, these lights can bring life to villages and businesses. Sunna has tapped into mass production to offer competitive prices and recently signed a contract to supply 40,000 street lighting points in Togo.

Over time, this French company has become more international, particularly through partnerships in North America and Europe. It has rolled out its technology in a range that caters to various types of use, such as parks and roads. In this way, its battery-powered solar lighting contributes to the shift to renewable energy without placing additional pressure on the electrical grid.

Carbon capture is crucial

by **Guillaume Poupy,** ESG Group Expert – Climate, Low-Carbon Hydrog



Carbon capture technology must be scaled up massively if we are to achieve carbon neutrality.

The technology for capturing CO_2 is now proven. Dozens of facilities are operating worldwide in petrochemical, electricity and hydrogen production facilities. Half of the captured carbon dioxide is used for manufacturing fertilisers, one third for extracting hydrocarbons (by gas injection) and the rest for other uses such as producing fizzy drinks.

 CO_2 capture is key to achieve carbon neutrality, primarily to reduce emissions from sectors with the highest emissions – industry (cement, steel and chemicals) and thermal power generation (coal, gas and biomass). The second potential use is manufacturing alternative fuels, such as by combining captured CO_2 with low-carbon hydrogen. Capturing carbon directly from the atmosphere is also envisioned, but this option is limited by the higher costs.

The needed increase of CO_2 capture in carbon neutrality scenarios is substantial. According to the IEA, carbon capture will need to rise from **b** 0.04 billion tonnes of CO_2 in 2020, to 7.6 billion tonnes in 2050 if we are to achieve climate neutrality.

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Financing tomorrow's world

A successful climate transition depends on substantial investment and the development of new markets for low-carbon solutions.

A unique partnership between businesses and finance for sustainable mobility

Hyundai, South Korea

"We know that fuel cells and hydrogen technologies are technically viable and have to be part of the mix to achieve carbon neutrality," notes Dr Saehoon Kim, Executive Vice President and Head of the Fuel Cell Centre at Hyundai Motor Group. Yet vast amounts of capital are required. According to BloombergNEF's specialists, clean electricity and green hydrogen roadmap will cost § \$78 trillion to 130 trillion of new investment by 2050.

The B <u>Hydrogen Council Investor Group</u> was formed in 2020 to finance large-scale projects in infrastructure and renewable energy.

Hyundai Motor Group and BNP Paribas, which are members of this group, have collaborated to develop the world's first financing ecosystem for hydrogen-based mobility. While the



bank provided the financing to the Korean group in Switzerland, Hyundai Hydrogen Mobility supplies logistics services to Swiss retailers with a hydrogen refuelling network set up with H2 Energy, a local expert.

For the production, refuelling stations networks, and hydrogen cars: "all investments have to be done simultaneously," says Dr Saehoon Kim.

Does carbon capture and storage hold the key to net zero?

Northern Lights, Norway

Northern Lights is developing the world's first open-source $\rm CO_2$ transport and storage infrastructure.

"According to the International Energy Agency, reaching net zero is virtually impossible without using carbon capture and storage (CCS). It's a key clean technology for carbon-intensive industries such as cement, steel and chemicals. In cement production, for example, half of CO_2 emissions is linked to the chemical reaction of producing cement – irrespective of whether fossil fuels or renewables are used as energy source," explains Elise Roc, Senior Business Development Advisor at Northern Lights.

The **B** <u>Northern Lights</u> project – a joint venture between Equinor, Shell and TotalEnergies – is developing a unique CO_2 transport and storage infrastructure and establishing a new market in the transport and storage of CO_2 as a service.

The emitted CO_2 is captured and compressed. The gas is thus turned into a liquid, and shipped to the receiving terminal in western Norway. The liquid CO_2 is then piped 100 km offshore where it is injected into a safe and permanent reservoir 2.6 km under the seabed.

In the first phase, Northern Lights will provide CO_2 storage capacity of 1.5 million tonnes per year. Once completed, Northern Lights aims to store 5 million tonnes of CO_2 every year.

The Persian Gulf mobilises its assets for transition

by **Jérôme Ponrouch**, Head of Company Engagement - Sustainability Middle East and Africa at BNP Paribas CIB

Persian Gulf countries are in a strong position to contribute significantly to global decarbonisation efforts.

The source of their current wealth is drying up and they know it. The Gulf Cooperation Council (GCC) oil and gas-producing member states are sending out positive signals about meeting the Paris Agreement goals. Moreover, since they enjoy a competitive advantage in terms of both the cost and carbon intensity of their hydrocarbon production, these states should be capable of making an orderly transition when the global demand for oil will start to decline. The carbon neutrality commitments announced by the United Arab Emirates, Saudi Arabia, and Oman are welcome, considering the high current level of greenhouse gas emissions in these countries. Furthermore, greater geopolitical stability in the Persian Gulf should enable the implementation of long-term ESG initiatives, including social standards.

This context should support the rollout of foreign capital aimed at financing decarbonisation and improving the ESG performance of the Gulf countries.

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Flashforward

A transition driven essentially by society

From schools to entrepreneurs, the process of decarbonising our economy hinges on greater cooperation and the integration of societal issues.

Making the just transition the new normal for business

by **Jan Noterdaeme**, Senior Advisor at CSR Europe and **Emanuela Pisanò**, Project Manager at CSR Europe



A just transition is crucial for social and environmental justice, but also to attract talent and investment.

Through our Leaders Hub, CSR Europe aims to:

- Mobilise businesses to embed just transition in their strategy and develop a customised approach for each stakeholder;
- Mobilise businesses to engage in ecosystem initiatives with local impact;
- **3.** Unite EU and business leaders to grow a social Green Deal with ambition for equity, climate and nature.

At the local level, we provide business leaders with strategic tools and best practices – available in the <u>European Business</u> <u>Roadmap for Just Transition</u> – and promote peer-to-peer awareness. The just transition will help businesses attract talent and investment, manage regulatory risks and opportunities, retain their customer base, and build public trust.

At the European level, we are exploring with the European Commission, the <u>World Business Council for Sustainable</u> <u>Development</u>, and <u>Business for Inclusive Growth</u>, how to join forces. The aim is to engage with more regions and sectors facing high risks of social exclusion and inequalities.

BNP Paribas is a key contributor to the CSR Leaders Hub.

Incorporating environmental issues in management courses



Managers have a dual role to play in the green transition: reducing the impacts of their organisation and working towards the adaptation of our societies.

Limiting the environmental impacts of human activities will require a major transformation of our societal and economic models. This transition starts with an awareness that economic activity depends on energy and material flows, climate conditions and ecosystems.

Management sciences and managers are central to this revolution of ideas and practices. In The Shift Project's study, 94% of business teachers believe that their institutions should educate students on environmental issues.

However, they have had little training for such challenges. Only 6% of management school courses addressed environmental issues in their mandatory courses in 2019.

The Shift Project report was drawn up jointly with several higher education management institutions. It offers recommendations for all higher education stakeholders – institutions, teachers, students, alumni, companies, governments, rankings and accreditations – with the aim of triggering a far-reaching transformation. One section for teachers describes the knowledge and skills that management students must acquire.

Recent commitments of BNP Paribas Group to achieve carbon neutrality

As a signatory to the NZAM initiative, **BNP Paribas Asset Management (BNPP AM)** has committed to achieving net zero emissions for its portfolios by 2050 or sooner. Its net zero roadmap, released in November 2022, is based on a 10 commitments including:

- Reducing the carbon footprint of its investments by 30% by 2025, and by 50% by $2030^{\rm 1}$
- Aligning its investments with net zero, targeting 60% of in-scope investments to be in companies achieving, aligned or aligning with net zero by 2030 (100% by 2040)
- Exiting coal by 2030 in EU/OECD countries and by 2040 in the rest of the world
- Voting for climate action, engaging with companies on net zero and advocating for climate policies

BNPP AM's initial commitment covers €250bn (50%) of its assets under management², with the aim to expand this scope to 100%. As a signatory to the NZAOA initiative, in September 2022, **BNP Paribas Cardif** announced announced new commitments to align its investment portfolios with a carbon neutrality trajectory, setting initial milestones by 2025:

- Reducing the carbon footprint of directly held equity and bond portfolios by at least 23% between 2020 and 2024³, and the carbon intensity of directly owned office properties by at least 12% between 2020 and 2030⁴
- Reducing the exposure of its investment portfolios to fossil fuels by definitively exiting thermal coal by 2030 for EU and OECD countries and by 2040 worldwide
- Investing to support the energy transition by allocating at least €800 million annually to investments with a positive impact on the environment
- Engaging in dialogue with companies and asset managers

¹Against a 2019 baseline ² Based on assets under management as at 30 June 2022 ³ 53% reduction already achieved between 2017 and 2020 ⁴ 32% reduction already achieved between 2011 and 2020

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