



NORDSIP
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insights

SUSTAINABLE REAL ASSETS

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Aline Reichenberg
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amuse-bouche

no fake assets

Given the long-term nature of real asset investing, the idea of sustainability should be truly embedded in the process, both from a risk and from a return perspective, for most institutional investors.

The very notion that a building, a piece of land or an infrastructure project should not only subsist but also retain value in a few decades, suggests that these investments should be sustainable. However, it doesn't mean that short-term sacrifices aren't still made on a regular basis, especially when it comes to the dimensions of E, S and G.

Meanwhile, asset managers have been busy developing tools and measurements to ensure that the project their funds invest in satisfy the increasingly demanding requests from sustainable institutional investors in the Nordics and elsewhere.

Carbon footprinting has almost become mainstream for some institutions, for instance. The high proportion of real estate companies in the total issuance of green corporate bonds

in Sweden is an illustration of the phenomenon. As always, the devil is in the details, however. Carbon footprinting, like any ESG measure done poorly can quickly tip over the green-washing line.

What is fashionable one day can easily be forgotten, when returns dry out or fickle public interest shifts to another trend. Regulation and taxes, on the other hand, can guarantee that the right environmental measures prevail

When we gathered six real asset specialists around lunch, a passionate discussion began before we even started recording. The debate heated up around the introduction of a carbon tax. Over more than an hour, the discussion spanned the spectrum of the represented real assets categories: agriculture, timberland, real estate and infrastructure.

From smart real estate to carbon sinking forests, from the circular economy to the European taxonomy and from patience to transparency; we hope that you will enjoy the account of this intense round table discussion.

who is who?



Nick Tapp
Chairman
Craigmore

Nick Tapp is the Head of Client Services and Chairman of Craigmore Sustainables Group. Craigmore is a UK asset manager specialising in farm and forest investments in New Zealand. Established in 2008 by two New Zealand family farmers, Craigmore has a highly experienced team managing a mix of dairy, grazing, forestry and horticultural properties spread over more than 15,000 hectares.

A self-described farmer, who has extensive experience working in the food supply chain industry, Nick joined Craigmore as a partner seven years ago from Bidwells, where he was Head of Agribusiness Consultancy between 2010 and 2013.



Johanna Strömsten Friberg
Portfolio Manager, Real Assets
Alecta

Johanna Strömsten Friberg is a Portfolio Manager, International Real Assets, at Alecta - Sweden's largest, and Europe's fifth largest, pension manager. Prior to joining Alecta as a Senior Investment Analyst in October 2018, Strömsten spent almost 2 years as an investment analyst at Schroders in Stockholm. She started her career in London at Bank of America Merrill Lynch and went on to SEB where she worked within Debt Capital markets and as a Corporate Credit analyst.

At Alecta, Johanna is responsible for sourcing, executing and managing investments within infrastructure and real estate. Together with two other colleagues, she is working to invest in infrastructure and indirect real estate. At the end of 2018, real estate holdings represented 10.1% of Alecta's portfolio, worth SEK97.5 billion.



Kari Kangas
Fund Manager, UB Timberland
United Bankers

Kari Kangas is the Fund Manager of United Bankers Asset Management's Timberland Fund in Helsinki. He joined the asset management company in October 2015, after working as CEO of Suomen Sijoitusmetsät (Forestland Investment Finland Ltd), a Finnish real estate brokerage firm where he worked with forest asset acquisition, management and valuation services.

Beyond these recent roles, Kari has extensive experience working in the Forestry industry, managing 1.3 million hectares of forest in Russia. Among other roles, he also worked as a Project Manager for the Finnish Ministry of Agriculture and Forestry, as a Senior Researcher for the European Forest Institute and as an advisor to the UN.



Dan Grandage
Head of ESG
Real Estate Private Markets
Aberdeen Standard Investments

Dan Grandage is the Head of ESG for Real Estate Private Markets at Aberdeen Standard Investments (ASI) – a UK-based investment manager for institutional and private investors - with £525 billion in Assets Under Management (as of 30 June 2019). Of this total, £40 billion is invested in real estate assets.

Dan joined Aberdeen Standard Investments as Head of Sustainability in October 2013 and has worked to deepen ESG integration into ASI's decision making since then. With an education in Urban Geoscience and Environmental Geology, he has worked in ESG since the 1990s, at a number of engineering & environmental professional services consulting firms.



Peter Dahl
Investment Manager
Polhem Infra

Peter Dahl is an Investment Manager at Polhem Infra, a Sustainable Infrastructure asset manager set up in 2019 by Swedish public pension funds AP1, AP3 and AP4. Polhem Infra finances businesses that operate or provide socially beneficial services and assets such as renewable power generation, energy storage, energy distribution and digital infrastructure.

Peter has spent his career in the energy sector. He was CEO of Sinfra, Sweden's largest infrastructure purchasing centre for the supply sector between 2011 and 2018 and deputy CEO of Svensk Fjärrvärme, responsible for district heating for two years before that. Between 2008 and 2011, Peter also provided industry expertise on district heating to the Swedish government.



Etienne Dupuy
Managing Director, Asset Management
Invesco

Etienne joined Invesco Real Estate in February 2014 responsible for the European Asset Management function, overseeing a team of 30 real estate asset managers across seven locations in Europe.

Etienne also chairs Invesco Real Estate's Sustainability Focus Group (SFG). At Invesco Real Estate, Etienne is a member of the European Executive Committee, the Core Investment Committee and the Sustainability Focus Group. He is based in the Paris office.

Etienne joined from BNP Paribas Real Estate Investment Services where he spent five years as managing director. Previous to this he spent nine years with AXA Real Estate Investment Managers. He started his career at Archon Group, an opportunistic and value-add Asset Manager for Goldman Sachs Whitehall funds.

Sustainable Real Assets

Wedholms Fisk
Stockholm

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From left to right: Filipe Albuquerque, Nick Tapp, Dan Grandage, Aline Reichenberg Gustafsson, Johanna Strömsten, Lina Alvemur, Peter Dahl, Stefan Behring, Kari Kangas, Nils Schalin, Robert Ekblom, Etienne Dupuy

Missing the Forest for the Trees

While carbon emissions often dominate climate headlines, the other side of the coin - carbon storage – is often ignored. Although recent technological progress holds much promise for carbon capture and storage, trees remain the most easily accessible carbon sinks. However, despite the environmental appeal of forestry investments, public discussions of their benefits can be misleading.

“People mismeasure the amount of carbon stored in forests,” **Kari Kangas** starts. “Politicians normally only have 15 seconds to make their point before the debate moves on. Hence, carbon measurements need to be simplified for public consumption. As a result of these short-cuts, public discussions tend to understate the total amount of carbon stored in forests. Aside from the carbon stored in trees, there is also a fair amount of carbon also stored in the ground.”



“Forests also have an important contribution to make in substituting fossil fuels. We learned to burn birch fibre 5,000 years ago. It’s time to take the next step. Timber could also play an important role in the supply chain of consumer products. Last year, the world declared war on single-use plastics. The 2020s will see a revolution in all these products. They will replace plastic. The alternatives already exist. Now they need to come to the market.”

Focusing only on the role of forests as carbon sinks and ignoring their role in substituting fossil fuels also risks creating problematic externalities, Kangas explains. “When Finland and Sweden discuss cutting harvesting volumes, we need to consider carbon leakage,” Kangas says, referring to the situation whereby, due to costs related to climate policies, businesses transfer production to other countries with laxer emission constraints. “It’s a very complicated issue. People are not going to stop using napkins, handkerchiefs and toilet paper because governments decide that they shouldn’t be produced domestically. Production will shift somewhere else, and pollution will increase.”

Driving the Energy Transition

According to **Peter Dahl**, Kangas’ argument about carbon sinks and pollution is also relevant for the energy sector. “In Nordic countries, we are substituting fossil fuels for biomass. However, burning biofuels for energy is not going to last. The energy sector has to pivot to other sources simply because the biomass is going to be used elsewhere such as liquid fuels for mobility.”

“According to, a professor at Stockholm University, we should not focus on eliminating all fossil fuels but rather on reorganising the energy mix. According to his estimates, meeting the



1.5°C target requires cutting our dependence on coal by 75%, decrease oil dependence to only 3%, increase natural gas with 33% and nuclear by 98% until 2030, for example,” **Johanna Strömsten** says. “The world needs to impose taxation, not give support to brown sources of energy to make oil and coal extraction less economical and give their green substitutes a chance. Politicians have an important role to play in implementing these measures.”

“It’s easy to think of natural gas as something negative for the environment,” Strömsten explains. “But for China, which burns so much coal, natural gas is an improvement. Given their ambitious economic growth agenda, they would never tax or abandon fossil fuels. The focus should be on improving the fossil fuels they use. The USA and Europe, whose economies are already more advanced, are the ones that should be at the forefront of energy alternatives.”

The Trade-Offs of Carbon Taxes



“I am a resource economist by background,” **Kangas** says. “I have a natural bias against all taxation because it’s never efficient. At almost 50 years old I am also not an idealist anymore. It would be best if the industry took care of this matter without taxation.”

“Taxes have what economists call a perverse effect,” Kangas explains, returning to the issue of carbon leakage. “When the European Union banned crude oil use in shipping, the polluting vessels were sold to Africa where they still use crude oil. Banning coal has led it to become much cheaper than it used to be.”

“Airline taxes are also problematic. It would be much better if passengers were incentivised to participate in carbon compensation schemes that pursue afforestation in Africa. Estimates suggest that one euro spent on afforestation in Africa has four times more impact than using that sum in northern Europe. I would like to see a more developed discussion on this subject. Collecting taxes is expensive. It would be best if this issue was handled through a market-based instrument.”

“Northern Europe has very efficient facilities with minimal scope for further emissions reductions. There are other regions where the marginal benefit of reducing pollution or the contribution of carbon capture is higher. The CO₂ in the atmosphere does not know where it came from. Focusing on afforestation efforts is more

efficient than trying to dictate to China how it should produce its energy,” Kangas adds.

“How can companies be incentivised to pay taxes or participate in a scheme which is not going to have a direct benefit in the country of origin?” **Strömsten** asks, pointing to the difficulties facing efforts to internalise global climate change costs at the local level. “When a country imposes taxes on coal consumption, it can channel the revenues towards schools, healthcare and other public and municipal goods that people value and use,” she says, emphasising the need for salience and relevance when fiscal revenues from climate change mitigating initiatives are redeployed.

“Taxation might be necessary,” **Dahl** argues. “Investors need to know where the market is headed. Sweden’s experience with *grönväxling* in the 1980s is telling. Thanks to a tax scheme, Swedes spent that decade switching from fossil fuels to biofuels. That is why we have attractive companies to invest in today. They made the big transition decades ago in line with the incentives of the time.

“Personally, I think that past achievements can only take us so far. The persistence of unsolved problems calls for us to redouble our efforts and consider bold solutions. To cite Christian Azar, a Professor at Chalmers, we need a BFT - a big fat international carbon tax or price - to get the ball rolling.”

Taxonomy, Green Washing & Vested Interests

“To introduce a tax we need to be able to tax something, which means it is necessary to conduct a measurement first,” adds **Dan Grandage**. “Real estate has been around for a long time and it has developed more advanced environmental standards than those underlying other assets. The industry does not always get the credit it deserves. We have been gathering data, calculating energy measures, and reporting about carbon in a way that does not happen elsewhere. Nowadays, the debate has moved on to consider the best paths towards achieving net-zero emissions, how money should be spent, the implications of offsetting our carbon emissions into an African forest and whether the focus should instead be on our own energy efficiency.”

“However, in the hierarchy of what needs to be done, we need to ensure that everyone uses the same language consistently. At the moment our industry is a wild west of claims about net zero and carbon neutrality. Not everyone can be net-zero and carbon neutral. Language needs to be used in a consistent manner, supported by shared rules that set a level-playing field for who can claim carbon neutrality. The risk is that, in five years, investors will wake up to the fact that some of the ‘carbon-neutral’ funds they have invested in were not neutral at all. The realisation could trigger concerns that those funds will fail to meet expectations because they did not fulfil their mandate, which could stain the whole industry.”

“Europe is working on the taxonomy to ensure the same language is used consistently across the market and to emphasise that what is delivered has to match what was advertised. The language regarding carbon emissions and environmental sustainability has to be of a same standard as accounting disclosures,” **Etienne Dupuy** adds. “Otherwise, it becomes not sufficiently reliable to claim being ‘zero carbon’.”

“In the USA and Europe, vested interests are often hard to overcome, which leads governments to carve out exceptions to the rules so as to protect these special interest groups,” **Nick Tapp** comments. “The experience of New Zealand is different,” he says of the world’s most internationally liberalised and open agricultural industry. “The emissions trading scheme that they



have in place is very effective. A net emitter in New Zealand has to pay and buy carbon credits. A net sequesterer, like the owner of a new forest, receives carbon credits. The system covers every sector, including farmers. Agriculture is an industry which both sequesters and emits carbon. Farmers are quickly working out how to measure emissions and sequestration. The agriculture sector has been incentivised to eliminate costs and consider ways to create revenues through carbon sequestration. The state sets the framework, but the market is producing the solutions.”

All Together Now

“A global scheme is necessary,” **Grandage** adds. “That was the motivation behind the Paris agreement. The dream would be to have a global carbon tax or a global trading scheme, but that is not happening at the moment. Everyone is trying to carve out exceptions for their own vested interests.”

“There are always going to be emissions. Some industries are always going to be net sequesterers while others are always going to be net issuers. However, at the planetary level, we want

to be at zero net emissions or slightly below,” **Tapp** adds

“Everybody should be doing something,” **Kangas** says. “Flying may never become an entirely carbon neutral activity. However, there is still room for airline carriers to improve their carbon footprint. The logic behind an airline company announcing a green bond was not initially evident to me, but raising capital to improve energy efficiency is one way in which this industry can contribute to the global fight against climate change.”

“At the same time, investors still expect to make a return on their investment. However, net neutral funds can struggle. The market for renewable energies, for example, is extremely competitive, due to how popular this segment has become. Demand for those investments is so high that performance has not been able to keep up. Renewables are also much riskier at the moment than in other sectors. Demand has pushed price so far up that the risk-adjusted return in renewables is not competitive.”



“Since pollution is unavoidable in absolute terms, lowering carbon emissions is still worth pursuing because it represents a relative gain. Issuing green bonds and investing in planes that are less polluting is a step in the right direction,” says **Strömsten**. “The energy transition also requires investing in funds that are not green, to help promote companies that have started changing and motivate those that have not yet to catch up. It is not possible to invest exclusively in net neutral funds.”

Afforestation Challenges

The issue of afforestation and carbon offsetting was a predominant topic of discussion for the panel. “Scientifically, afforestation is valuable,” **Grandage** says. “However, carbon offsetting can be abused, and some schemes are problematic. Carbon offsetting should be about lowering net emissions, rather than providing a cheap antidote against carbon guilt that underestimates the cost of carbon capture. To minimise the reputational risk posed by inadequate

carbon offsetting products, priority should be given to quality control and verification.”

“The question for investors is often whether their carbon footprint and associated investments are a P & L or a balance sheet problem,” **Tapp** explains. A net carbon emitting company operating within an emissions credit system needs to buy carbon credits on the market from net sequesterers. Pollution is a cost that is accounted for in its P & L, while it is a source of revenues for the sequesterer. Alternatively, the company could invest in a carbon offsetting scheme that has a predictable stream of carbon credits associated with it. In principle, such a company would not be limited to matching its emissions. It could become a net carbon sequesterer due to those investments and holding an asset whose market value could appreciate substantially in the future. “One of our investors is a large logistics company with a very large carbon footprint that they wish to improve. For the investor, it is a balance sheet solution that can be tackled by investing in forests, which will allow it to offset its emissions on a global scale.”

“The challenge with afforestation is that the much of the relevant land is currently being used for agriculture today, which implies that creating the carbon sink comes into conflict with farming,” Tapp continues to explain. “Arguably, there’s at least 1 billion hectares of unnecessary farmland. However, the political implications of challenging established farming practices are not appealing to elected officials. It is difficult to win elections by telling farmers to leave their land.”

“Nevertheless, New Zealand has started debating the trade-offs between farming and forestry,” Tapp says. “It is a difficult conversation about changing the make up of rural communities. Short term political incentives tend to postpone public conversations about long term problems. However, by engaging with this issue, New Zealand is moving in the right direction,” Tapp

main course

Smarter Real Estate and the Circular Economy



adds.

“Beyond carbon compensation schemes, better asset design and use is also key to the target of achieving net-zero carbon emission at the planetary level,” says **Dupuy**. “Given that human life and activity are net positive from a carbon emissions point of view, what ultimately needs to be called pollution is an unavoidable feature of the nature of any sectors, like real estate. However, buildings can be optimised to improve how we use them and decrease their emissions.”

“Half of the carbon emissions associated with the life cycle of a building are generated during the actual construction process. Building with sustainable or recycled materials mitigates the long term carbon emissions impact of that building,” Dupuy adds. “There are untapped resources in that area. Smart cities can also be applied to real estate to improve how we use the fabric of our urban landscapes and the features of our buildings to reduce the carbon footprint of our societies. The gains can be as high as 50%.”

“Real estate needs to be forward-looking and designed to be flexible,” **Grandage** says. “A flexible, adaptable and well-designed office building constructed today does not have to remain an office building in ten years. It could be residential, industrial or retail. Having that flexibility

means that from an investment perspective, we can retain the value of that resource. There is no need to tear down our buildings and starting again each time, which is exactly what has become the norm in real estate lately. From a pure resource perspective, our present practices are nonsense.”

“Society needs to move away from this unsustainable approach to real estate and design for longevity. This cycle of construction and destruction is relatively new in real estate. Stockholm, Paris or London, all have buildings that were built over one hundred years ago. Only recently, have short real estate life cycles - where buildings are constructed and torn down every ten to fifteen years - become the norm.”

“Developing a more circular economy is one of the paths towards achieving sustainability in real assets,” **Dahl** points out. “Climate change challenges our linear economic systems. They need to become circular. The transition from one approach to the other is not easy and it needs to be consciously managed.”

“Recently, Aberdeen participated in a project on circular economies, involving the construction of an industrial unit that produced deconstructed concrete,” **Grandage** explains. “Normally steel is encased in concrete, which means neither the steel nor the cement can be reused at the end of the building’s life. Both of the concrete’s components have to be disposed of and new concrete needs to be made, which is wasteful, if it can be avoided. To overcome this issue and introduce circularity into the life-cycle of the building’s components and the industrial unit was designed so that the concrete could be deconstructed and reused.”

“At the moment, the challenge of such a circular asset is that it only makes sense if it is owned for its entire lifecycle,” Grandage continues. “Selling the asset shortly after the initial construction would lose the residual value that is still in that building and materials. The investors holding the asset at the end of its life would be the ones enjoying that added value. They would be able to sell or reuse the components for another project. The first owner would not enjoy these benefits.”

“At the moment, the market is unable to incorporate the residual value associated with the reusability of the building’s components in the asset’s price. In theory, if the market overcame this short-sightedness, it should be possible to close that loop and create a truly circular economy.”

Mobility as a Service

“Dealing with shifting patterns of consumption and how they will affect living conditions, energy usage, and the energy transition requires a new approach,” says **Dahl**. “We are on the verge of a new era that will see significant economic changes in consumer habits and preferences. The most significant challenge facing investors is understanding how businesses and business models will adapt to these changes in the future.”

“Companies are very concerned about the threats and challenges posed by this transition. Even companies with some exposure to renewable energy sources are concerned that certain production facilities will become economically unviable. The risk of being stranded in the past as the world completes its next paradigm shift could



represent billions in lost value in current assets.”

Shifting from the business perspective to that of consumers, **Kangas** focuses on the potentials created by the practical approach that younger generations have towards their mobility. “When new generations decide to own something, they no longer focus on a family home, but rather on a car. However, millennials care about mobility. They do not treat cars as a symbol of wealth

and success anymore,” he says. “When I was 18, a driver’s license meant freedom, but my son does not think about it that way,” **Dupuy** agrees.

“Young people do not care that much about the car or ownership. What seems to matter is their mobility and how they can move from one place to another. Scooters and Ubers are popular because they serve this purpose as well or better than owning car,” **Dahl** argues.

However, even those popular mobility alternatives are being overshadowed by more innovative solutions. “There is an interesting app in the US where private car owners can share their cars as if they were car rentals, like Six or Hertz. People can register their cars with the app and users can rent them,” says **Strömsten**. “The issue with cars is that everyone wants to use them at the same time, which causes peaks in demand. That is one of the main hurdles that successful car-sharing services must overcome.”

“I agree there might be an issue with peaks of demand, but it can be solved by buses, trains, cars, scooters and other forms of mass transportation. Moreover, if there is saturation, consumers should adapt and start spreading their working hours in order to avoid high prices,” says **Dupuy**. “Pricing should play an important role. If





the car share service is correctly priced, its cost should increase with demand, thus naturally clearing peaks,” **Tapp** agrees.

These facts hint at a new reality. “The transition to mobility as a service has already happened,” **Dupuy** argues. “Car companies are diversifying their own portfolio of solutions to also offer customers a more diversified range of products, including bicycles, scooters, small motorcycles, as well as cars. Now infrastructure needs to catch up. Authorities need to prioritise safe paths for scooters and bicycles in cities to allow these trends to solidify. Continued urbanisation creates the need to start thinking about buildings as common goods of a city,” Dupuy explains.

“The real estate industry also needs to embrace the concept of space as a service. Ten-year lease contracts for a property and for a parking space are unlikely to be as core to the sector in the future as they were in the past. Investors need to focus on flexibility and making better use of existing properties whose carbon emissions already took place, rather than generating new emissions by constructing a new space. Residential parking lots, for example, are often full only half of the time. The same is also true for their office counterparts. At the same time, we are told 40% of the traffic in Paris is created by people looking for parking spaces.” Inefficiencies

such as these create opportunities for car sharing services and smart parks where it is possible to book parking places, according to Dupuy.

“Aberdeen has been considering how to use more retail parks and whether they can provide a platform for electric vehicle charging stations,” **Grandage** says. “While it makes sense to put some charging stations in a car park, it’s still difficult. First, we need to make sure the building has the capacity to charge the cars. Then, systems need to be in place to monitor and manage the queue system and how people are using the electric chargers. Finally, another system needs to identify fully charged cars and release them from the parking spot they are using to allow other cars to charge. “It is a complicated project with many moving parts. Electric vehicles are the way forward, but I’m not entirely convinced that using retail parks to charge them is the best solution.”

“Once autonomous vehicles come to the market, there will no longer be a concern about charging stations. This innovation will probably have even wider impacts. No longer needing to drive our own cars will have implications for our land use. There will be no need for parking outside the house. It will be possible to call a car and have it come pick us up. Autonomous cars will continuously be used. It will be charging

Sustainable Forests & Adaptive Systems

overnight, probably on the road. Does that mean there will be more space available? Will we use those spaces for something else? Will we have open park lawns?”

One of the hurdles to the successful transition towards a more circular economy is the difficulty with measuring what level of incentives is appropriate to drive change.

“It is striking how theoretical the discussion about the forestry sector and carbon sequestration is in Europe,” says **Kangas**. “The debate is about the fact that these issues should be measured. The argument is about the reference level. However, little attention is being paid to how it can actually be measured. The uncomfortable fact is that the climate goals are not reachable without taking the measures and efficiency into account.”

“I agree about the issue with measuring,” **Strömsten** says. “When considering investing in a new building against renovating an old one and adapting it to a new use, it may be so that the economic logic of that circular investment is not convincing. The decision to hold on to the old building, renovate it at the end of its life-cycle and use it for something else, rather than tearing it down, could be incentivised. Forcing companies to incorporate the tax cost of not reusing the materials into their investment calculation could help them internalise these factors. But such a shift would need to come from taxation and someone outside the industry.”

“One of our funds applies an internal carbon tax that allows us to capture that opportunity cost,” **Grandage** says. “When considering a real estate development, we look at the whole lifecycle of carbon, and apply a tax to it. From the fund’s perspective, this is a real tax, not a shadow number. To

replicate the effect of a tax, the fund is effectively penalised for more carbon-intensive activities. That money is ring-fenced and then used the following year to undertake carbon-reducing activities. This method drives different behaviour. The effect is patent in something as simple as the decision to upgrade a boiler. A classic gas fire boiler costs much less than a heat pump. Purely considering the financial perspective, the boiler is the obvious choice. However, once we add the carbon tax, the heat pump becomes preferable because the tax would add up to the cost of the boiler. It changes behaviour.”

“The energy sector has picked up on the shift towards energy efficiency,” says **Dahl**. “The discussion now, at the European level, is moving away from the production of energy towards its transmission. District heating and smart electrical grids are about taking energy from the building and giving it to somebody else who needs it. The structural change has begun, but we are still wrestling with how to handle the old production sites. Are they worthless, or will they become worthless?”

According to **Tapp**, New Zealand’s system is driving the transition for the country’s agriculture industry. “My experience as a European farmer is that European subsidies substantially slow the pace of change in agriculture, such that the industry is a mile behind where it needs to be. As long as the subsidy system is in place, Europe’s agricultural industry has no incentive to catch up.”

“In the absence of farm subsidies, New Zealand’s farming is a very commercial industry,” he explains. “The government recognises that agriculture has a role both as an emitter and as a sequesterer of carbon. It is trying to put in place the right measurements and



the right framework to allow that to happen in the most effective way both commercially and for the planet.”

“It is already happening at the farm level. We are now breeding bulls that produce lower levels of methane in their progeny. That does not change by 50% in one generation. It is a 10% downward movement with four or five years. It is a meaningful change. Simply producing more milk from a cow lowers the intensity of green-house gas emissions - the green-house gas emissions per unit of milk, per unit of nutrition - goes down. Efficiencies like these all contribute to marginal improvements.”

“New Zealand is very green. It’s full of pasture, so farmers can also integrate land management considerations into their calculations to improve the sequestration of carbon into pasture. This approach would increase carbon sequestration into the soil and sustainably retain nutrients rather than deplete the land due to over fertilisa-



tion with artificial inputs.”

“Another important contribution that farmers can make is to ensure they plant trees wherever they can. At the moment there is no incentive to plant trees on the small plots of farms that would typically go unused, which is a missed opportunity for carbon capture.”

“Treating a farm as a single carbon unit with the goal of achieving negative carbon emissions and rewarding farmers for doing so is likely to create the incentives necessary to fuel this search for added efficiencies. People would begin looking at the unproductive patches of land and consider planting native species or slow-growing but long-lived trees and combine these initiatives with other processes to generate more carbon efficiencies. It seems that shift is already in its early stages. We can see it happen on our farms and in some other instances. On the ground, the average farmer in New Zealand is probably are not thinking about this issue in such a comprehensive way,” he acknowledges. “They are probably concerned that the government is talking about including agriculture in the emissions

trading scheme. However, the complete lack of government assistance to the farming sector in New Zealand has allowed the country’s farmers to become extremely adaptable. They are very commercially minded. I’m sure that the next generation will continue to be competitive.”

Pulp Megatrends

Climate transition adjustments create exciting investment opportunities, according to the panel. Following his earlier comments on replacing plastics with renewable materials, Kangas considers other potential contributions from the timber industry.

“These are becoming megatrends. They are no longer weak signals,” he says. “We have already developed textiles made from pulp to satisfy demand for substitutes of traditional textiles, such as cotton. At the moment, these new materials are still too expensive, but as production processes are refined we should expect these products to enter the market. Moreover, as paper consumption goes down, the availability of recycled fibre for emerging products has also decreased, so all the trends are also driving the use of emerging fiber.”

“Part of these megatrends is also the shift towards more value added products. Pulp and cellulose are like a Nokia. The potential product range derived from these substances is quite varied. Pulp demand is going up five to six per cent every year, and doing so in a manner that is uncorrelated with the economic cycle. Demand comes from consumer hygiene goods that people use every day.”

Kangas argues that the demand is here to stay but that there is a need to strike a balance between growth and environmental sustainability. “The continued growth of Asian economies represents a potentially reinforcing trend supporting the timber industry. On average, Asian per capita consumption of pulp-related product is still only a quarter of the size of that of the typical American customer, but this could change.” Asian demographics help, according to Kangas. “Asian populations are growing and urbanising. Productivity is high, and natality rates are traditionally robust. All these trends can affect the forest industry, real estate and infrastructure.

Pricing Emissions & Quantifying Risks

However, we need to ensure that growth and increased production do not interfere with our initiatives to fight climate change.”

“We have painted a picture of change. But how are we going to look at the risk and how can it be managed?” **Dahl** asks.

For **Dupuy** the quantification of risk probably comes first. “When people are sufficiently aware of the risk, they will start thinking about it, and it will be easier to find a risk mitigation approach,” he says. “The risk used to be ‘planet wide’ so not really located, we are now able to consider it as localised, which makes it more concrete; and it is two-fold. On the one hand, there is the obsolescence risk related to the notion of flexibility and how easily the building can be adapted to accommodate different uses and be future-proof. And then there is the climate change physical risk, which impacts the site and obviously the economy. In some areas, the impact will be very hard, even if it will probably only materialise in the next twenty years.”

“That can be beyond the time span of a lease or many ownerships,” Dupuy continues. “But if

even if we own the building for ten years or less, then the opinion of the next buyer matters. A correctly priced asset is crucial for allowing the investment to make sense. The market should be able to internalise all costs fully. The market will price assets more and more accurately and accelerate the pace of environmental improvement because it will better internalise the remote costs which used to be imposed on the earth.”

Strömsten agrees. “Exclusion policies are a part of Alecta’s investment strategy. Investees have to avoid certain industries. But it is also necessary to quantify CO₂ emissions and how these are priced, according to companies’ annual report,” she says.

“The price of CO₂ European emission allowance certificates has doubled over the last two years,” **Dupuy** argues. “But there has been a correction on how the CO₂ pricing is going to develop,” **Strömsten** adds. “We have a house view on that, which we can incorporate into our models.”

“When investing in infrastructure, we always ask



prospective investees to show us their cash-flow models to check their underwriting assumptions and for example how they are depreciating the value of their assets. There has to be a timeline to obsolescence, especially for businesses in the fossil fuel sector, like oil and coal,” Strömsten explains. “Companies need to provide a clear and specific quantitative estimate of the rate of depreciation of their assets to show when they expect it to reach the end of its life and depreciate to zero. Investors need that information to calculate the value of the asset in the future so they can plan whether and when they want to exit the investment.”

“What we have described assumes that the longevity of the business model is still viable in ten, fifteen years’ time,” **Grandage** says. “Infrastructure projects, because they tend to have long lives, can create a false sense of confidence about the long-term viability of the project. According to our best calculations, investing in a gas pipeline, for example, might make sense today. However, gas usage in the future might decrease at a higher rate than expected due to the increased popularity of renewables.”

“Investors have to be able to use the available information to create an informed view of what the future may look like,” **Strömsten** argues. “This has to be the basis for any investment decision. Investors have to accept that there is a risk of being wrong because the future is uncertain. With fossil fuels, investors need to settle on a vision of how much they expect people to use each of the fuels in the future and ground their investment on that expectation. They may be wrong, but without settling on that view they will not be able to make a decision on what to invest in.”

Changing Consumer Habits and Repurposing Real Estate

“What will we need in five or ten years? What will our consumption habits and behaviours look like?” **Kangas** asks. “Regarding transportation, I am sure we will start questioning to which extent the amount of travelling we do nowadays is necessary. People are travelling on business too much at the moment.”

Retail will also be affected. “If they remain as



they are, in ten years I do not think people will want to go to the type of large shopping centres we visit today,” he adds.

“People won’t be shopping in malls. They can do that online. But if they go to these spaces it will be because something else is pulling them in,” **Grandage** argues. “Shopping centres will be more akin to amusement parks,” quips Strömsten.

“They will have to feel different. Shopping centres will have to be more akin to a leisure centre. People still want to meet each other in actual physical environments so shopping centres will have to create appealing experiences to attract consumers,” Grandage replies.

“The appearance – the look – of shopping centres will have to adapt to their new function. The focus has to shift away from shopping,” **Kangas** agrees. “At the moment, shopping centres are focused on making us buy something and leave. That will need to change. These spaces need to be redesigned to encourage people to stay and spend money in a manner that is consistent with our changing consumption habits. Some cafeterias are now banning the use of laptops because

people like to stay in cafes and work but they do not consume.”

“That is how people are using these spaces nowadays,” **Dupuy** agrees. “Maybe those cafeterias will be the next co-working space businesses?”

“The way people are using spaces is innovative in its own right,” Dupuy continues. “Rather than keeping it completely private, sometimes opening real estate space to more people and adding a vending machine and service is all it takes to give a new life to a dull and unused space. Doing this can make a space more valuable,” Dupuy argues. “Invesco is working with operators to revamp business centres in hotels. When we convert them into lively lounges, it works very well. When any space has already generated fifty per cent of its carbon emission being delivered, we need to engage with tenants and make sure such space is used as efficiently as possible.”

Sharing Local Solutions, Partnerships and Real Estate Procurement

The shift in structures and habits will also affect how people do business. In the work that



Polhem Infra does, **Dahl** has found new ways to finance projects by working with municipalities and regions to share new approaches that are more appropriate to the long-term challenges ahead.

“As an evergreen investor Polhem Infra can think about the long term and about what can be achieved over several years,” Dahl explains. “We don’t have any exit strategies for public owned assets. Our focus is on the total value of the company down the road. We are often aiming to be a minority investor who partners with public owners to realise and increase the value of the company. It is a new approach for the potential sellers of the infrastructure asset. We invest, but our relatively small stake allows our partners to keep the initiative and retain the long-term benefits of the company.”

“The sale of a municipality-owned company does not have to go through a tender,” Dahl continues. “It’s necessary to have a tender to procure the advisors, but not to sell a municipality-owned company. Politicians have the power to decide on this sort of matters.”

According to Dahl, a shortage of knowledge about how to handle these companies in Sweden makes private investors interesting partners in these ventures. “As investors, aside from the cash we provide these companies, the value that Polhem Infra bring to these assets is our experience in the industry. Local or regional authorities are able to discuss the problems facing these infrastructure companies because I come from the industry. They know that I understand what the relevant issues are. They also know that our minority stake leaves them in charge and commits Polhem Infra to the long-term development of the company and that gives us credibility both in the current partnership and in future partnerships”

“From our perspective, the lack of control associated with a minority stake could be perceived as a significant risk. But when talking about energy in the Nordic region, the incentive to succeed and increase the value of the company is very high for the municipality. Local politicians will be incentivised to develop the company simply because they need the company to be

Patient Capital, Holistic Returns and Openness



successful for the inhabitants.”

“Patience is an outstanding attribute in this space,” **Tapp** argues. “All of the asset classes we are talking about have long term time horizons. Forestry is long term, and rotation in Finnish forests is also long. It’s a bit shorter in New Zealand. These are not asset classes for people who want to trade every day or even look at quarterly reports and try and make decisions. Capital needs to be patient in these sectors. While that does not suit everybody, it should suit insurance companies and a good portion of pension funds. A number of our investors are medium to large size family offices who are looking at multi-generational wealth preservation. Patience is a key attribute.”

Kangas agrees. “Patience is a keyword. The ability to wait and take a longer-term view is one of the factors that seem to increasingly describe modern society. Weak returns are not appreciated. With our investors, we don’t talk about high returns. Our focus is on preserving value, which is one of the most attractive propositions for a long-term asset like forests.”

“I have been a bit disheartened about the future of our planet. Maybe we are at a turning point, or maybe it has happened already. I was not very encouraged by my generation or the ones

that preceded it, but the new generations give me hope. They are not so focused on owning all these artefacts.”

“Although taking a long-term view is one of the key characteristics of success in this space, investors need to be able to take a step back and also take the wider view. Investors need to be able to balance financial returns and environment and the social returns at the same time. A more holistic approach can help investors assess how that asset is integrated into society, how it benefits society and how society adds value to it too. Asset manager need to consider all of these factors together,” **Grandage** adds.

“The holistic view is critical, and maybe a game-changer for the economy. The circular economy is going to be holistic,” **Dahl** says.

“In a society, the people paying the rent and saving for their retirement are often or notionally the same people who own the assets that are driving change,” **Dupuy** argues. “To make sustainable real assets work, we need to correctly articulate the cycle between people as consum-



ers and as owners. The owners need to be adequately rewarded for the service they are giving as a whole to society. The money that is entrusted to us needs to be invested in a way that generates sustainable returns. There is no sustainable performance if assets are not attractive or usable by the ultimate client.”

“We have to push the limits and push the line,” **Strömsten** argues, drawing from her own experiences. “When considering a potential investment in a large, global infrastructure fund it became apparent that they were unable to accept a cap on certain companies, despite our clearly stated exclusion policies on coal. While it may have been understandable to accept this condition to ensure our participation in an attractive fund, I decided to take this opportunity to push the envelope and take a stand. I informed the senior management that I could not sign off on the fund and that Alecta would not be investing because it was not consistent with our policy and not what we stand for,” she explains.

“Eventually, he rang me back to say they had decided to change their policy to accommodate us. That was the first time I felt I could make a difference by standing my ground. I could have followed everyone else’s advice and accepted the fact that this is how the market works, but change will never happen if every investor gives up.”

“Real Assets are relatively opaque asset classes where information is not easily available. We must share insights and information,” **Dupuy** says. “Increased information is an important trend. It needs to be qualified and reassessed sometimes, and to be more science-based, but it’s a significant driver of the change.”

“The key to the success of Silicon Valley is how networked and open those companies are,” **Kangas** says. “In Finland, we tend to sit in the garage for five years and try to figure something out. Then we come out and realise it is not going to work. In Silicon Valley, they throw it in the air. In some cases, it gets shot down, but in others, it does not. The openness makes the discovery process faster.”

“Cooperation between investors and sharing

information about agreements is an important part of our openness,” **Strömsten** comments. Alecta, together with similar investors have discussed what to require as minimum standards on topics like ESG to make sure that our priorities are aligned. Then, when we talk with investees, we can all speak with one voice and not get in the way of each other with different priorities.”

“Cooperation initiatives such as these are important. Having started with real estate - since we were further ahead in that real asset class - we hope to extend coordinating to the infrastructure sector in the future.”

“Transparency is essential,” **Tapp** remarks. “In Romania, farmland transactions in the period after Ceausescu were always managed by the mayor. He was the only person who knew anything. The margins for him were quite large. As soon as it became obligatory to post online transactions, the market became completely transparent almost overnight. It became much more functional, much more sensible,” Tapp concludes.





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