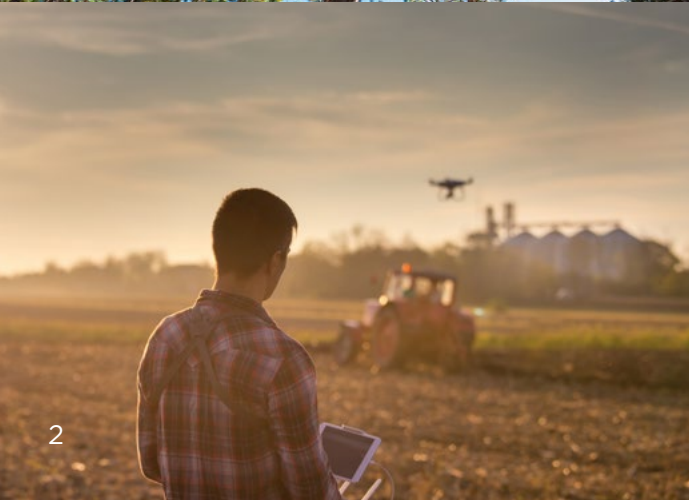


# Sustainable Agriculture

January 2021





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## Welcome to our new publication – **Sustainable Agriculture.**

It has been over a year since we hosted our first Sustainable Agriculture conference. Attended by over 150 people, we heard from an impressive list of speakers who spoke about the challenges and opportunities faced by our agriculture industry. We debated the necessary changes that were afoot and considered the uncertainties faced going into 2020. At that point we had no idea of the trials that 2020 would bring.

Last year undoubtedly marked a year of realisation of the fragility of our relationship with nature. Whilst we have seen a renewed sense of value for our open spaces and our natural world, we are now faced with the challenge of how we balance preserving and enhancing our natural world with tackling the deepest recession since records began.

In this edition of Sustainable Agriculture, we start by considering what a “green recovery” looks like for farming against the backdrop of a global pandemic with an article from **Rachel O’Connor**.

**Seema Nanua** provides an overview of the Agriculture Act 2020, including a summary of the financial support proposed for farmers and land owners through the Environmental Land Management Scheme as well as the Act’s provisions on food security, trade and supply chains.

**Helen Bray** provides us with further insight on proposals for how we assess Natural Capital, the importance of which is brought sharply into focus by the passing of the Agriculture Act 2020.

**Adam Quint** considers the Government’s proposals for the Energy and Green Finance Sector in its 10 Point Plan for a Green Industrial Revolution.

Finally, **Josie Edwards** continues our series of looking at the potential shape and focus of farming and food production by considering the recommendations of the World Resources Institute report “Creating a Sustainable Future”.

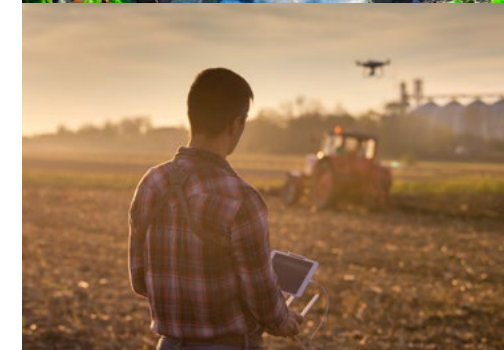
We are also delighted to be able to provide some key information on Michelmores’ MAINstream network for business angel investors and entrepreneurs and the MiVentures programme which provides support for ambitious, early stage businesses.



Ben Sharples  
Partner



Rachel O’Connor  
Senior Associate



# **Sustainable agriculture after the pandemic:** what does a green recovery mean for farming?



Rachel O'Connor  
Senior Associate





**N**ow, more than ever, we recognise that sustainability is not only key to our prosperity but our very existence. The impact that our species is having on the planet is not only testing our natural world but our own resilience. In a series of reports set to highlight the effect of nature loss on business, The World Economic Forum has issued its second Nature Economy Report, “The Future of Nature and Business”.

The report states the “...economic, humanitarian and social fall-out from the COVID-19 pandemic crisis is far more severe than the 2008-09 global financial crisis.” Further, that “...it is imperative to also recognise this opportunity to reset humanity’s relationship with nature.”

The World Economic Forum’s first New Nature Economy Report, Nature Rising Risk, recorded that “\$44 trillion of economic value generation — over half the world’s GDP, is potentially at risk as a result of the dependency of business on nature and its services.”

## Second Report

The second Nature Economy Report records that 80% of biodiversity loss is driven by three areas; first, food, land and ocean use; secondly extractives and energy; and thirdly, infrastructure and the built environment. It calls for a fundamental transformation of these areas. In relation to food, land and ocean use, the report recommends six transitions, which it records could create around \$3.6trillion of additional revenue or costs

savings per annum and create almost 200 million jobs by 2030 globally. These are:

1. **Reducing the footprint of agriculture and fishing** on ecosystems and restoring degraded ecosystems using fiscal incentives;
2. **A shift towards productive and regenerative agriculture:** a combination of traditional farming, advanced precision technologies and bio-based inputs to increase biodiversity and enrich soils, whilst improving yields;
3. **Sustainable managed fisheries** through upholding quotas and limiting fishing zones as well as sustainable aquaculture;
4. **Transition to sustainable management of forests;**
5. **A requirement for “plant-compatible consumption”** to move away from overconsumption of resource intensive foods which would also address consumer waste; and
6. **“Transparent and Sustainable Supply Chains”** by integrating transparency, traceability and increased collaboration in supply chains.

The report explores the approach of regenerative agriculture in “progressively reducing chemical inputs, using more crop rotation, building up soil health and making their production mix more biodiverse.” It also recognises the key role that technology will play, as well as stressing the importance of repurposing subsidies.

It is an incredibly ambitious report, so where does the UK stack up on its plans for a green recovery and what does this mean for the agriculture sector?



## Green recovery

On 18 November the Prime Minister announced a 10 point plan for a “Green Recovery”. The aspiration of Government policy, designed to tackle the current economic crises, is to make sustainability the cornerstone of future growth. Protecting the natural environment was 1 of the 10 points and describes an ambition to harness nature’s ability to absorb carbon by planting 30,000 hectares of trees a year by 2025 and rewilding 30,000 football pitches worth of countryside.

A joint announcement by DEFRA, Natural England, the Environment Agency and the Forestry Commission confirmed that 10 “Landscape Recovery Projects” will be established over the next four years through the Environmental Land Management Scheme (ELMS) introduced by the Agriculture Act 2020, which passed into law on 11 November 2020. The announcement explained that ELMS will be “centred around support aimed at incentivising sustainable farming practices, creating habitats for nature recover and supporting the establishment of new woodland and other ecosystem services to help tackle climate change.”

## ELMS

The new ELMS seeks to reward farmers and land managers for practices which promote (amongst other things) improved air and water quality, protecting and improving soil health, management of land, water and livestock that improves the environment or mitigates or adapts to climate change and encourages thriving wildlife.

On 30 November 2020, DEFRA published a guide setting out the “Path to Sustainable Farming”. The guide explains the core elements of ELMS as:

- **The Sustainable Farming Incentive** which “will support sustainable approaches to farm husbandry to deliver for the environment, such as actions to improve soil health, enhance hedgerows and promote integrated pest management”;
- **Local Nature Recovery** focussing on creating, managing and restoring habitats such as woodland, wetlands, freshwater, peatland, heathland, species-rich grassland, and coastal habitat; and
- **Landscape Recovery** which will focus on large-scale forest and woodland creation, restoration and improvement; ecosystem restoration; peatland restoration; and the creation and restoration of coastal habitats such as wetlands and salt marsh.

The guide also describes how DEFRA will launch a new scheme for industry-led innovation, research and development, recognising the role that technology and innovation will play in tackling the pressures on the agriculture sector.

Further detail regarding how the Government’s Recovery Plan and the Agriculture Act 2020 will operate in practice is expected to follow. That detail is essential in order to map out how the ambitious aspirations, which are set out, will come to fruition. What is clear, is that there must continue to be an acknowledgment and furtherance of our understanding of the dependency between business and nature in order to harness the economic potential of the environment.

# The Agriculture Act 2020: an overview



Seema Nanua  
Solicitor

The passing of the Agriculture Act in November 2020 marks the start of a transition period towards implementing the principle of “public money for public goods”. The reformation of the agriculture sector envisaged by the Agriculture Act, is one of the key mechanisms deployed by the Government to achieve the goals set by the 25 Year Environment Plan and to deliver on the commitment to net zero emissions by 2050.

The headline features of the Agriculture Act 2020 are set out below.

### **Reforming Farming Subsidies**

Currently, farming subsidies are predominantly delivered through Direct Payments under the Common Agricultural Policy (CAP). The Agriculture Act phases out Direct Payments over a seven year transition period beginning in 2021 replaced by payments under the Environmental Land Management Scheme (ELMS) due to commence in 2024. The ELMS is described by DEFRA as the “cornerstone of the Government’s new agricultural policy”.

ELMs implements a plan for financial assistance for farmers and land managers for delivering public goods and environmental outcomes including:

- Cleaner air;
- Clean and plentiful water;
- Thriving plants and wildlife through environmentally beneficial land and water management;

- Public access to and enjoyment of the countryside, farmland and woodland;
- Maintaining, restoring and enhancing cultural or natural heritage;
- Management of land, water or livestock to mitigate or adapt to climate change;
- Protection from environmental hazards;
- Improvements to animal health and welfare;
- Protecting or improving the quality of soil; and
- Improving the productivity of agriculture, forestry or horticulture.

There is a duty on the Secretary of State when devising the financial assistance schemes to have regard to encouraging productivity in an environmentally sustainable way.

### **Food Security**

The Act places a duty on the Secretary of State to produce a report for Parliament on UK Food Security every three years. The data to be included in the report is likely to cover global food availability, supply sources for food and resilience of the supply chain. The first report is due at the end of 2021.

### **Transparency and fairness in the agri-food supply chain**

The Act grants powers to the Secretary of State to collect data for specific purposes including;

- increasing productivity and managing risks and market volatility;







- improving transparency and fairness in the supply chain;
- improving animal health, welfare and traceability;
- improving plant, fungi and soil health and quality;
- minimising adverse environmental effects;
- minimising waste from agri-food supply chains; and
- monitoring or analysing markets connected to agri-food supply chains.

The Act also grants powers to introduce both general and sector-specific obligations that promote fair contractual relationships across the supply chain.

### **Trade – standards and welfare**

Despite widespread calls to do so, the Act did not enshrine a requirement that all future trade agreements include an obligation for agricultural imports to meet the same health, welfare and environmental standards as domestic producers. Instead the Government has indicated its backing of British farmers and food producers by strengthening the remit of the Trade and Agriculture Commission and placing it on a statutory footing. In addition, there is a requirement for the Secretary of State to report to Parliament on whether and to what extent, any Free Trade Agreement provides for the maintenance of UK standards as they relate to agricultural products before it is signed off. There remains uncertainty as to the extent of protection that will be afforded to domestic agriculture products as against imports produced to a lower standard.

### **Is the Agriculture Act 2020 a positive step for sustainability in agriculture?**

The Agriculture Act recognises the importance of the agriculture sector to our environment, our mental and physical health as well as our economy. It does not, however, go as far as providing concrete standards necessary for the protection of the environment, tackling climate change and restoring biodiversity. The financial provision provided by the ELMS will need to effectively incentivise sustainable practices in agriculture to support farmers in meeting the objectives envisaged by the Act.

Further detail regarding the implementation of the Agriculture Act is expected to follow.

For a comprehensive review of the Landlord and Tenant reforms under the Agriculture Act 2020 see: [\*\*Agriculture Act 2020: Landlord and Tenant Reforms - Now and Later | Michelmores\*\*](#)

# Natural capital assessment toolkit



Helen Bray  
Solicitor



Following the passing into law of the Agriculture Act in December 2020, it has never been more important to consider what a natural capital assessment might involve. There is some [helpful guidance from DEFRA, Natural England](#), the [Natural Capital Committee](#) and on our [Natural Capital Hub](#). The key points are set out in this article.

### **What is natural capital?**

Natural capital is the sum of the earth's natural assets including our ecosystems, geology, soil, air and water. Humans derive a wide range of services from these elements, directly and indirectly, including food, clean air and water, energy, climate regulation, carbon storage, natural flood defences, pollination and recreation. Originally coined in the 1970s, natural capital is not a new concept, though its inclusion in Government policy marks a turning point.

### **A natural capital approach**

A natural capital assessment relies on what DEFRA has called 'a natural capital approach'. The premise of a natural capital approach is that goods and services produced from the natural environment are essential to life, and so natural capital is central to the sustainability of the economy. Putting a value on natural capital aims to ensure its inclusion in decision-making and policy, as evidenced by both the Agriculture Act 2020 and the Environment Bill, which show how natural capital will be central to future agricultural policies and initiatives.

DEFRA's recommendation when adopting a natural capital approach is to first establish the motivations behind the project or the purpose in considering environmental services, and let that determine the process. As the natural capital approach develops, transparency in methodology – including its uncertainties and limitations – will be crucial.

### **Enclosed farmland**

The guidance from DEFRA recognises 'Enclosed Farmland' as one of eight Broad Habitat Types in the UK and describes it as being of 'great cultural significance' (though it is acknowledged that farming will also occur in other habitat categories). Enclosed Farmland is, of course, credited with supplying the majority of the UK's food, with crops being recognised as being a tangible output of natural capital, directly contributing to society's welfare.

### **ELMS**

Current natural capital 'initiatives' include the new Environmental Land Management Scheme ("ELMS") the introduction of which has now been formalised by the Agriculture Act 2020, under which farmers can expect to be rewarded for the environmental, social and cultural benefits their actions and enterprises on their land give to the general public.

### **Natural capital accounting**

Natural capital accounting has the potential to enable environmental health to be monitored over time and be reported on in the same way as unemployment, for example. However, DEFRA's guidance recognises that

natural capital accounting is just one aspect of a natural capital approach and qualitative data and the context must also be considered. DEFRA acknowledges that early attempts at natural capital accounting may be imprecise, but will in most cases be useful nonetheless. For farming, natural capital accounting differs from traditional accounting models because of its focus on how the ecosystem contributes to the agriculture, among other things, rather than measuring crop production.

### **Economic and scientific data**

What is particularly evident from DEFRA's guidance is how much economic and scientific data is already available to assist practitioners. In addition, an increasing amount of work is being undertaken to create a usable framework to enable the ecological services which flow from different habitats and natural assets to be recognised.

While DEFRA's guidance by no means provides answers to all questions practitioners will have, particularly in relation to the level of funding which will be available, there is a comprehensive collection of resources and information on hand, which gives an indication of what is to come. Readers may also find **Natural England's National Natural Capital Atlas: Mapping Indicators** report of interest in terms of baseline levels of natural capital (published 13 February 2020)



**The Ten Point Plan for a  
green industrial revolution:  
proposals for the energy  
and finance sector**



Adam Quint  
Associate



## What is the Government's Ten Point Plan?

The Ten Point Plan sets out the Government's proposals for tackling climate change in support of the 2050 Net Zero emissions target. The Plan proposes to utilise £12m of Government investment and looks to secure £42 billion of private investment by 2030 across energy, buildings, transport, innovation and the natural environment. Aimed at creating 250,000 jobs, the Ten Point Plan comprises:

1. A previously announced pledge to quadruple offshore wind power by 2030, to 40GW, enough to power every UK home.
2. Moves to boost hydrogen production, with the promise of a town heated entirely by hydrogen by the end of the decade.
3. Investment of £525m towards new nuclear power, based on "the next generation of small and advanced reactors".
4. A ban on combustion engine sales by 2030, with grants for electric cars, and funding for charge points. The sale of some hybrid cars and vans will continue until 2035.
5. Moves to promote public transport, cycling and walking, although no new schemes were announced.
6. Support for greener energies in the aviation and maritime sectors, with £20m committed to the latter.

7. £1bn in 2021 for funds to insulate homes and public buildings, using the existing green homes grant and public sector decarbonisation scheme.
8. An extra £200m invested in carbon capture initiatives.
9. 30,000 hectares of trees planted every year, as part of nature conservation efforts.
10. A pledge to make London "the global centre of green finance".

Point 9 of the Plan specifically addresses protection and restoration of the natural environment as one of the most effective solutions for combating climate change and biodiversity loss. In this article, we consider other aspects of the Ten Point Plan that are key to reducing greenhouse gas emissions. In particular, the proposals for the Energy Sector and the Finance Sector.

### How will the Ten Point Plan affect the energy sector?

#### Offshore Wind

The target is to quadruple the current capacity of offshore wind to 40GW 2030 by aiming to bring in £20 billion of private investment into the UK. Achieving this will require significant updates to the transmission grid which the Government plans to outline in the Offshore Transmission Network Review.





The focus on offshore wind will take advantage of typically greater and more consistent wind speeds than onshore wind farms and therefore higher efficiency. Offshore wind is perceived to have a less significant impact upon humans and the land required for development. Conversely, onshore wind is more easily connected to the grid and has on average been less expensive. As technologies improve it is likely that the cost of offshore wind farms will continue to fall and may be seen as the more attractive option. This certainly seems to be the position of the Government given its commitment to offshore wind in the Plan and its notable silence on onshore wind and other alternatives, such as solar.

### **Hydrogen energy**

The Ten Point Plan sets out the UK's target for 5GW of low carbon hydrogen production capacity by 2030. This includes hydrogen heating trials with plans for a Hydrogen Neighbourhood and a potential Hydrogen Town. This will be made possible through investment in carbon capture and storage infrastructure, which is also covered in the Ten Point Plan. As the development of low carbon hydrogen remains in its early stages, this will require a huge amount of investment and work to adapt and improve the grid. Some critics have questioned the impact that the proposed investment of £500 million will have when compared with the EUR 7 billion hydrogen programme unveiled by the German government earlier last year.

### **How will the Ten Point Plan affect the finance sector?**

The Ten Point Plan sets aims to establish the UK as the global centre of green finance and to encourage innovators, entrepreneurs and finance institutions to develop green technologies. Proposed measures include issuing the first Sovereign Green Bond which will help finance sustainable projects and investment into infrastructure. It also aims to extend the mandatory reporting of climate-related financial information by 2025.

### **How effective is the Ten Point Plan likely to be?**

The points outlined in the Ten Point Plan are interdependent. In particular, securing investment in green finance is key. Each sector will need to undergo significant development to achieve the Ten Point Plan's objectives. There is undoubtedly some way to go to determine the detail of how each target will be achieved and the extent to which there will be Government intervention for industries that fail to comply. By setting out the various targets and spending commitments, the Ten Point Plan seeks to shake up many sectors over the next decade and beyond. While the Ten Point Plan is a step in the right direction, critics are already flagging that it doesn't go far enough in detail or extent to tackle climate change and achieve UK Net Zero.

# Delivering a sustainable food future



Josie Edwards  
Senior Associate





**J**osie Edwards continues our series looking at the potential shape of farming and food production, by considering the recommendations of the World Resources Institute (“WRI”) 2019 report ‘Creating a Sustainable Food Future’.

### The WRI report

The report has a global focus and addresses the fundamental question: how can we adequately feed nearly 10 billion people by 2050 in ways that meet climate goals and reduce pressures on the environment? The report predicts that population growth and rising incomes will cause global food demand to increase by more than 50% by 2050, and demand for meat and dairy products by nearly 70%. It considers potential strategies to address the challenges and provides a ‘menu’ of possible solutions.

### The key challenges

The report highlights three interrelated challenges:

#### 1. Food supply

The need to provide sufficient, nutritious food for everyone. If consumption trends continue, global food production must increase by more than 50% by 2050 to feed the worldwide population adequately.

#### 2. Land use

This increase in food production must be achieved without a net expansion of agricultural land beyond the 2020 area, to protect natural ecosystems, crucial to biodiversity and to mitigate against climate change. Without systemic change, crop and pasture land will

need to increase by circa 600 million hectares by 2050 to meet projected demand.

### 3. Greenhouse gas (“GHG”) emissions

The report concludes that farming is a “significant and growing source” of GHG emissions and recommends reducing emissions by two-thirds from 2020 levels.

### The solutions

The report sets out a 22-item menu which is divided into five main ‘courses’ that could together deliver solutions if implemented **in time, at scale** and **with sufficient dedication** globally, across the public and private sectors:

- Reduce growth in demand for food and agricultural products
- Increase food production, without expanding agricultural land use
- Protect and restore natural ecosystems and limit agricultural land-shifting
- Increase fish supply, productivity and environmental impact (through improvements to aquaculture and wild fisheries management)
- Reduce GHG emissions from agriculture

The authors highlight the need to tailor the approach to suit the needs of individual countries and ecosystems.

Several key themes can be identified within the 22-item menu:



**a. Raise productivity** via increased efficiency of natural resource use e.g. increasing crop yields through improved crop breeding.

Every hectare of global pasture, capable of and appropriate for sustainable intensification must be fully exploited and growth of output/productivity per hectare must increase. This is likely to be achieved primarily by farmers in developing countries adopting developed-world production techniques, leading to “efficiency gains”.

**b. Manage rate of growth in demand** by:

- reducing food loss and waste at all points in the supply chain;
- shifting the diets of high meat consumers towards more plant-based diets;
- limiting the diversion of edible crops and land into bioenergy production; and
- education and healthcare programmes aimed at reducing birth rates.

**c. Link agricultural production with ecosystem protection** via government measures – e.g. expressly link efforts to boost yields with legal measures to protect forests, savannas and peatlands from conversion to agriculture and to restore such habitats wherever possible.

The authors conclude that it makes little sense to remove land from food production, if it is efficient or could become so. Reforestation and restoration should

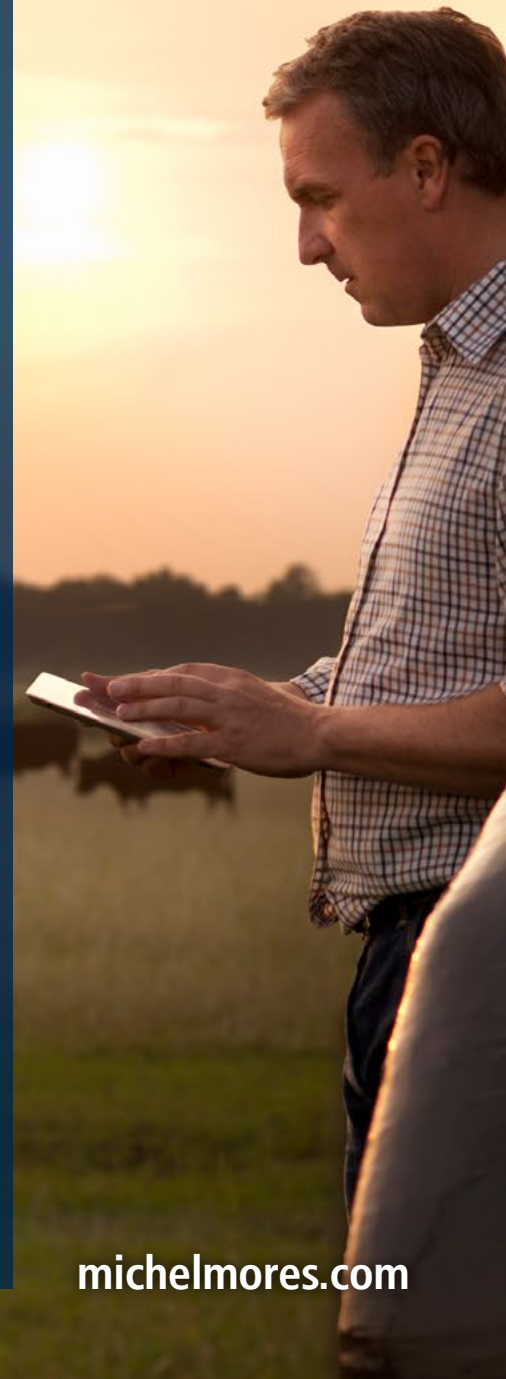
focus on land with better restoration potential than food production potential i.e. on unproductive or marginal agricultural land. However, their reforestation target (at least 585 ha) also requires significant progress with slowing food demand and increasing productivity, if enough land is to be ‘liberated’ for reforestation.

**d. Moderate ruminant meat consumption** – the report concludes that by 2050, the 20% of the world population who would be high ruminant meat consumers, must reduce their 2010 level of consumption by 40%.

The authors’ view is that this change presents the most promising strategy of various models of diet shifts for potential positive impact on land use and GHG emissions.

It isn’t all bad news for ruminant meat producers – even a 30% decline in global ruminant meat demand (relative to the baseline scenario) would still lead to an overall 32% rise in demand between 2010 and 2050 – a significant increase, but far less than the 88% growth anticipated if growth is left unchecked.

**e. Require production-related climate mitigation/GHG emission reductions** by focusing on methane produced via enteric fermentation by ruminants, nitrogen fertilisers, rice growing and manure and also by increasing energy efficiency in the sector and shifting to non-fossil, low-carbon energy sources (e.g. solar, wind). Improving ruminant production





systems in developing regions again presents the major opportunity for reducing methane emissions, as well as the productivity gains noted in (a) above.

**f. Technological innovation** is identified as offering huge potential, providing the opportunity is taken to innovate in multiple ways in every necessary area. Progress requires large increases in R&D funding and flexible regulation to encourage the private sector to develop and market new technologies.

### **Conclusion**

The need for urgent and decisive worldwide action is clear and the report highlights the importance of linking food production and ecosystem protection at every level – policy, finance, farm practice – to avoid destructive competition for scarce and precious resources. It identifies one guiding principle: the need to make land-use decisions that enhance the efficiency of both agriculture and ecosystem services.

This chimes as a key take away for British agriculture. As the report highlights, productivity and efficiency levels are already high in the developed world and will be difficult to improve upon, except for quite marginal gains. Instead the focus needs to be on maintaining production levels, whilst simultaneously encouraging dietary change, limiting waste, restoring ecosystems and habitats – (wherever possible but not at the expense of productive agricultural land) and continuing technological innovation. It is also clear that responsibility for changing our systems needs to be shared by stakeholders along the whole food supply chain, including processors, consumers and government.

**The full report can be accessed here.**

## MAINstream

### Michelmores' Angel Investor Network

A new network for business angel investors has been established by Michelmores. The network will be managed with input from all its members, is registered with the UKBAA and is open to experienced entrepreneurs and investors seeking opportunities to back innovative, early-stage businesses.

MAINstream will run several pitch events throughout the year where startups are invited to present their businesses to the network, as well as providing various networking and training opportunities for members.

The MAINstream team is led by Richard Cobb, Michelmores' Senior Partner, who heads Michelmores' Corporate and Private Wealth offerings and Corporate Associate Dan Partridge.

To find out more about MAINstream, whether to discuss the possibility of joining the network as an investor, or to be considered to pitch at one of our events, please email: [mainstream@michelmores.com](mailto:mainstream@michelmores.com)



Richard Cobb  
Senior Partner



Dan Partridge  
Associate

## MiVentures

Michelmores also provides extra support for entrepreneurs and innovative businesses through the MiVentures programme.

For ambitious early stage businesses who are ready to grow, accessing the right expertise and support is vital to navigate the opportunities and challenges that lie ahead.

Entrepreneurs and early stage businesses need passion, vision, advice and a network to help them navigate the challenges and grasp the opportunities that arise in the course of their growth. MiVentures provides the platform for a lasting and close working relationship between Michelmores and its clients. We see this as an exciting opportunity to invest our time in the businesses of tomorrow.

More information about **MiVentures can be found here.**

To apply for the MiVentures programme please email [miventures@michelmores.com](mailto:miventures@michelmores.com)

Please provide us with information on your business and market, funding to date and management team.



Tom Torkar  
Partner

