Foundation lecture on the UK National Ecosystem Assessment

The Foundation for Science and Technology
at The Royal Society, 7-9 Carlton House Terrace, London SW1Y 5AG
13th July, 6pm

Response from Meurig Raymond
Deputy President of the National Farmers' Union

There is no doubt that this has been an enormously ambitious project and a huge amount of work involving, as Professor Bob Watson said, some 500 scientists and economists and I would like to congratulate Bob and his co-chair, Steve Albon, on the National Ecosystem Assessment.

The NFU is very familiar with the NEA and played an active role as part of a User Group, offering guidance on how the information from the NEA would be communicated and used, but we also submitted comments on various draft chapters at the stage of the peer review.

From our perspective, there are at least two reasons why we have an interest in the NEA:-

- Firstly, the NEA acted as a key piece of evidence for Government's first Natural Environment White Paper for some 20 years, launched last month. And as the White Paper says 'Farmers and land managers play a vital role in achieving society's ambitions for water, wildlife, healthy soil, food production and the management of landscapes'. Farmers are very often at the heart of the environment.
- And as the first of its kind, the NEA is likely to form the basis for discussions for similar assessments elsewhere in the world.

Professor Watson talked about a whole range of areas of interest in his presentation, including some of the past drivers for change and the drivers for change in the future that I could discuss further but just picking two issues:-

- The NEA acknowledgement of sustainable intensification, the term originally coined by the Royal Society; and
- The economic valuations assigned to ecosystem services.

Taking each of these in turn and firstly sustainable intensification, the NFU has long argued that one of the biggest challenges facing farmers and growers in

England and Wales in the near future will be their part in meeting the expected global demands to produce more food, but also to have less of an impact on the environment. So we are very pleased to see this acknowledged.

By 2025 we expect the UK population to be 70 million but by 2050 it is expected that the global population will be approaching nine billion and, with the added challenge of climate change, food shortages are likely. UK agriculture should be well-positioned to play a key role in meeting food needs not just in this country but also contributing to global food demands.

At the same time, with three-quarters of the UK land area in agricultural management the NFU also recognises that farmers and growers carry a unique responsibility for managing the countryside and will play a crucial role in any future activities.

Along with the White Paper sets out a clear commitment to bring together government, industry and environmental organisations to achieve the goals of 'improving the environment and increasing food production'.

Particularly significant is the explicit acknowledgement that food production will *increase*, but also that a number of different organisations will all be brought together to help find solutions. These are big steps forward.

The debate on 'sustainable intensification' or 'producing more, but impacting less' is broad-ranging, but what is needed is a range of actions and mechanisms to ensure that farmers can retain the capacity to produce food whilst also continuing to safeguard the environment.
Amongst these are that:-

- We need applied research and knowledge transfer. We need to better understand and better manage the interactions between the impacts of climate change, food production, our use of natural resources and wildlife species and habitats;
- Technologies and new approaches will also be needed to help meet our future challenges. These will include precision farming but also genetic improvement of both crops and livestock; and
- We also need to build on the success of partnership initiatives like the Campaign for the Farmed Environment and the Voluntary Initiative on pesticides. These bring together all stakeholders and are solution-focused and evidence-based.

The second area I want to respond to is on the economic valuations assigned to ecosystem services. The NEA is unique in that for the first time a value is placed on many economic, health and social benefits that the environment provides. And Professor Watson mentioned a number of these.

But this is where we want to urge some caution. We believe that the model used is far too simplistic and uncertain.

Our specific concern is that market prices are used to capture the value of agricultural produce, which is then compared against the value of non-market goods like biodiversity. Using such a crude technique does not take into account the fact that market power diminishes farm gate prices to a level below the value which consumers place on their food, as well as ignoring the likely increases in food prices expected over the next 50 years.

The resulting messages that farmers get paid far more for services they provide to the nation's ecosystems than they get for producing livestock and crops are concerning to us.

We know that the NEA specifically considered the impacts of converting the Welsh countryside to multi-use woodland and that the results showed that for almost every hectare in Wales, the benefits of converting to multi-use woodland outweighed the benefits of the current land use, which was largely agriculture.

However, as we have said the model used is too simplistic.

- In this particular example, it lacks a dynamic component, so as the area of land taken out of production increased there was no impact on food prices, or the value of agricultural produce.
- And it also did not take into account that as the area of woodland increased the public would not value the extra hectare of woodland as much as the first hectare. Without this, the results show that multi use woodland continues to be highly valued, in spite of the increased area available to the public, meaning that compared to other land use types, multi-use woodland appears to be a better use of land.

The other big concern that we have is that there is a tendency for some people to jump on a number once it has been produced and forget all of the carefully worded disclaimers and cautionary notes that the professionals have put alongside it. The NEA is described by many of the authors as a starting point,

with much more work required to make the numbers more robust.

So just to conclude:-

- On sustainable intensification or 'producing more, impacting less' we believe that there are good reasons to feel optimistic about this particular challenge and we look forward to working with Government and others to find the solutions.
- And on the issue of valuations assigned to ecosystem services, we believe that further work needs to be undertaken to assess future food prices. This is an important piece of work that would help valuations in the future.

Thank you.