

There is a tide in the affairs of men,
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.

William Shakespeare, *Julius Caesar*

Introduction

I am very grateful for having been given the opportunity to speak to you today and not only because the National Marine Aquarium is located within my constituency.

For this institution does not exist in a bubble:

It is located in a city which is fast becoming an unrivalled centre of excellence for the marine sciences;

In a region set to take the lead in the development of radical alternative sources of energy;

In a country which seeks to set the international agenda on tackling climate change;

And in a world which is slowly waking up to the crisis it faces.

So what is happening locally here is inextricably linked with what is happening globally, with implications – and opportunities - for every area of society.

There is the very real prospect that as well as our country playing a key role in forging a workable post Kyoto protocol framework, our region and our city too may become global centres of excellence.

It is therefore a matter for the Government and, in turn, a matter for me. And it is these links and these opportunities that I wish to talk about today.

Science and Technology Committee

I have been privileged to spend the last year sitting on the Science and Technology Select Committee during which time it has conducted two inquiries of direct relevance to Plymouth.

The first concerned the funding of Science & Technology Centres and took evidence from, among other submissions, the NMA.

Rightly, it recognised the important role such organisations have in educating the public and in stimulating debate.

In more practical terms, the report also made recommendations that, if adopted, would see funding for such centres placed on a much firmer footing and opportunities for the NMA to build its business and, in so doing, create business opportunities for others.

The second enquiry was entitled 'Investigating the Oceans'

For me the most important proposal to come out of it was that of a new Marine Science Agency – to coordinate the promotion of the subject and also to engage with industry and international organisations.

It acknowledged – rather eloquently in my opinion – why the kind of research undertaken here in Plymouth is so important:

“Oceans provide unquantified - and perhaps unquantifiable - services through the maintenance of biological and landscape diversity – the importance of which may only be fully appreciated by future generations

“For all these reasons, the oceans need to be explored, monitored, studied and understood more thoroughly than has been the case up to now”.

I will return to some of the opportunities for Plymouth and the South West a little later

Climate Change Bill

In Westminster, the recognition of the importance of marine sciences and changing weather patterns, of research and education, and of our seas, is not confined to the backbenches or to select committees alone – it is equally present around the Cabinet Table and in the corridors of Whitehall.

Following on from the Stern Report, there is a growing appreciation of not only the environmental necessity of action, but of the economic potential too.

The reason for this is two fold.

Firstly, we cannot afford not to take action. As the Prime Minister reminded us in his speech on Monday to the WWF, Stern is clear - the costs of urgent action are far less than the costs of delay; and the earlier we act the easier and less expensive our task will be.

Secondly, by 2050 the global low carbon energy sector could be worth 3 trillion dollars and employ some 25 million people –

The Prime Minister's predicted that in the next twenty years, over a million people in the UK could be employed in environmental industries - imagine how Plymouth could benefit from this?

The proposals outlined in the Queen's Speech earlier this month bear out the Government's commitment.

The Climate Change Bill is - and this is a word I do not use lightly – truly radical. When enacted, the UK will become the first country in the world to have a legally binding, long term framework to cut CO2 emissions and adapt to climate change.

All too often, progress on climate change has been hindered by those who peddle false arguments about negative impacts on the economy or on our standard of living. But now the Climate Change Bill isn't being presented by the Government in the face of public opposition. Rather, it is the public who are pushing the boundaries of what it can achieve, daring the Government to be ever more bold. As a direct result of the weight of some 17,000 comments received during the public consultation, the Government is to review the 2050 goal of at least a 60% reduction in CO2 emissions to see if it should be stronger still, not least through the inclusion of emissions from aviation and shipping.

The Climate Change Bill will see statutory cap placed on Britain's emissions – with five year carbon budgets set on the advice of the new independent climate change committee.

The Bill shows our determination to reduce domestic emissions. It will also enable us to play a leading role in forthcoming discussion in Bali, where the negotiations for a new international post 2012 Kyoto protocol agreement begins.

The Prime Minister made our standpoint clear in his speech last week.

“Our vision” he said “has an overriding aim: holding the rise in global average temperature to no more than 2 degrees centigrade. This requires global greenhouse gas emissions to peak within the next ten to fifteen years – and to be cut at least by half by 2050”.

Again, the economic potential is the key to progress on the international stage. We must build a low carbon economy by harnessing the power of the market to set a global price for carbon. The EU Emissions Trading Scheme is the model we seek to replicate worldwide and in order for this market to flourish, we will be pressing for binding emissions caps for all developed countries.

Marine Bill

While the Climate Change Bill gives us much to be pleased with, many of you will no doubt have been disappointed by the absence of a full Marine Bill. I was disappointed too.

However, when it does finally come, the Marine Bill will be no less radical. Indeed, the fact it has been delayed is a testament to how far reaching it will be.

In the words of Jonathan Shaw, the minister under whose remit the Marine Bill falls,

“No other country has attempted such a comprehensive and groundbreaking approach to the enormously complex issue of marine environment management”

In other words, if we want an act which is effective, then it is best we spend time getting it right.

The Marine Bill will mark a step change in marine conservation, establishing for the first time Marine Conservation Zones. Understandably, this has caused considerable excitement among conservation and wildlife organisations and their supporters.

It has also found strong support in Plymouth, as one would expect from a city where marine science and tourism meet. As if standing in the NMA wasn't evidence enough, the success of the Scylla Reef project demonstrates both the richness of our coastal waters and the hunger within us to explore and conserve their wonders. I understand it has already met the business viability study which showed it would bring £1 million per annum into the local economy – and similar schemes are now being considered in Bournemouth, East Sussex and elsewhere.

For me and for Plymouth, the most promising element of the Marine Bill will therefore be the creation of a dedicated Marine Management Organisation.

Our seas have increasing pressures placed on them – as a food and energy resource, as a recreation environment, for transport and defence. Such an organisation will be at the forefront of a new co-ordinated, strategic approach to managing these competing demands – whether they be from leisure, from shipping or from fishing - ensuring that they are reconciled in a sustainable manner.

In doing so, it will create opportunities for marine spatial planners and scientists. We are also set to see Plymouth's five marine institutions in a new marine partnership. And if we need a model of what this partnership can achieve, we need only look to the Tamar Science Park, which has already established itself as a centre of excellence for medical research.

If the marine science park which the Partnership is hoping to develop is half as successful as the Tamar Science Park then there will be significant economic value added to our local economy. Some of the most exciting science we see in our local laboratories opens up the possibility of utilizing the plant and animal life from our seas in a sustainable manner, whether for biofuels, developing the science of carbon capture in new and innovative ways or for medicine.

I think I am right in saying that 60% of the world's population live within a coastal zone and coastal management issues and the science relating to it will therefore become of increasing economic, as well as environmental and security interest – if we can secure the location of the base for the marine management organisation in Plymouth this could confirm our position as a centre of excellence in the marine science related to this – perhaps making us the global leader in this field.

Frameworks for Responsibility

When it comes to preventing environmental damage and promoting sustainability, perhaps the biggest obstacles are time and scale – sacrifices need to be made now, even though the repercussions will be felt tomorrow; individuals must make changes in their lives and yet the solution will only be found if billions of others do the same.

Half the battle lies in persuading the people, that while as an individual their actions alone may not make a difference, as a society, the actions of each and every individual together will make *all the difference*.

So it is clear that the Government not only needs to set an example, but also must actively engage with society and business, to encourage and instil a sense of responsibility.

We need to create the right framework and the signs suggest this is already happening.

Three instances, two with local significance come to mind.

A few years ago who could have predicted that the residents of Modbury would be setting a precedent and provoking a national example when they decided to eliminate the use of plastic bags?

Who would have thought a few years ago that Walker's crisp packets would display details of their carbon footprint?

Who could have expected the Caribbean Carwash Company to win best new business at the recent enterprise Plymouth awards – using a minimal amount of water?

This same trend that we see in Plymouth has been taking place at a national level. The Prime Minister recognised this in the "We're in This Together Campaign" which includes such major companies as B&Q, Marks & Spencer, Sky and Tesco.

He declared:

"All of us – government, business, civil society and individuals have a part to play"

“But I believe there is even greater scope for business and the voluntary sector to work with Government to mobilise individuals to take action. So I have asked Fiona Reynolds of the National Trust and Ian Cheshire of B & Q to recommend how this might be achieved”.

South West Energy Developments

There are some important lessons to be learned about how we drive forward environmental programmes in a way that can drive economic performance.

The environment, like the internet, is something of a frontier: with currently unimaginable opportunities for those willing to claim them. We need people with vision, willing to take risks; alongside radical advances in science and technology.

The Prime Minister recognised this when he called for a fourth technological revolution. Not only a change in scientific and technical terms, but one that will change society, in the same way as the steam engine or the microprocessor did for previous generations.

This fact is also recognised by the South West Regional Development Agency. The South West Peninsula’s location and natural assets make it an obvious leader in this field. And they also recognise the advantages that come with being home to the Met Office – another global leader in its field.

Two such projects in the South West are set to demonstrate the business potential in renewable energy.

The first is the Wave Hub.

This project is exciting for several reasons.

Firstly, government, region and business are working together – The project involves the South West Regional Development Agency, with support from the Department for Business, Enterprise and Regulatory Reform and the Department for Environment, Food and Rural Affairs and the participation of major companies.

Secondly, it builds upon the South West’s existing strengths of marine science and maritime construction.

Thirdly, it will provide economic benefits both nationally and regionally over a sustained period – £560 million and 1,800 jobs nationally, of which £332 million and 1,000 jobs will be in the South West¹.

¹ SWRDA Website

<http://www.southwestrda.org.uk/news/release.asp?releaseid=2136>

Finally, and most obviously, there will be the environmental benefits. If successful, the wave hub could generate electricity for 7,500 homes – saving 300,000 tonnes of CO₂ over the next 25 years thereby helping the South West to meet its target of 15% power from renewable resources by 2010².

What makes the Wave Hub special in particular is that the potential is not limited to the actual project alone – the Wave hub will allow companies to develop and test wave energy technology, thereby paving the way for further projects.

So from this small site in Cornwall will flow national and international solutions.

It is my hope that the strengths of this project can also be advanced by the other major renewable energy project under consideration in the South West – that of the Severn Barrage.

This will certainly need a coming together of Government, business and environmental interest groups if it is to overcome the controversies and concerns that currently exist.

But what is at stake in the Severn Barrage is certainly worth overcoming the obstacles. It alone could provide a reliable and plentiful source of green energy – generating 5% of Britain's entire power needs³, free from foreign reliance.

But it will also impact the local environment, altering ecosystems – particularly the inter-tidal mudflats which provide habitat and food for 65,000 wading birds and aquatic fowl⁴.

Just as we must approach these matters with an eye on affordability, so we must find ways of mitigating the negative environmental impact – an approach recommended by the Sustainable Development Commission.

Our region's likely leadership in renewable energy also puts it in an interesting position to look at whether when the European Emissions Trading Scheme is fully established we can see some way of drawing economic benefit of such trading into our region. We should not be backward at coming forward in ensuring we can exploit our leadership in this to our full advantage economically.

Conclusion

² Ibid.

³ Daily Telegraph Article

<http://www.telegraph.co.uk/earth/main.jhtml?xml=/earth/2007/10/01/easevern101.xml>

⁴ RSPB http://www.rspb.org.uk/Images/severnaddto06enreview_tcm9-132870.pdf

The marine science and technology sector is already very significant: and it is growing and will continue to do so – the only question is how far and how fast.

For those of us in Plymouth and the South West, we already have a head start.

For us therefore, the challenge - and the promise – is how we can seize the opportunities that present themselves and turn them not just to our advantage - but to the advantage of all those around us.

When I was growing up, when people talked about the future, they talked about space exploration and putting men on the moon.

I believe that in the same way, much of the future challenges we face, and the solutions we need will involve looking to the coasts and the oceans.

With the Wave Hub and the leadership of our Regional Development Agency; with Marine Partnership and its own Science Park; and with the prospect of being home to a Marine Management Organisation, I believe Plymouth can be a global centre of excellence in coastal marine management and marine science.

Time and Tide wait for no one. If
Thou dost love life, then do not squander time.

Inscription on Clock at Mount Edgcumbe Cremyll Ferry landing