



Forum 21 Newsletter

Volume 8, Issue 3

January 2017

www.west-somerset-forum21.org.uk

Working for a Fair and Sustainable Western Somerset



Plastics attract toxins and pollutants, threaten marine life and pass up the food chain onto our plates.

Two West Country MPs launch Facebook campaign against marine plastic pollution

Campaigns to reduce plastic litter which is threatening marine life – and ultimately human life – are growing in number.

Bristol Labour MPs, Kerry McCarthy and Thangam Debbonaire, have launched a Facebook campaign (<https://www.facebook.com/LetsStopPlasticPollution/>) to get feedback on the work they are doing in Parliament and to share new developments and initiatives nationally, locally and internationally. They would like to hear from others on what measures could be taken to improve our marine environment and reduce plastic litter.

Similar campaigns are being run by the Ellen MacCarthy Foundation and Sky News. According to the Ellen

MacArthur Foundation just 5 per cent of plastic packaging is recycled (14% of it is collected for recycling, but only 5% is retained for subsequent use), while 40 per cent is sent to landfill and around 14% is sent for incineration/energy recovery. A third is never collected and ends up clogging up our sewers and polluting our ecosystems, where it can stay around for hundreds of years and is impossible to remove.

There is also evidence that plastics attract toxins and pollutants in the marine environment. Having accumulated in marine life, there are real concerns that plastics and toxins pass up the food chain and onto people's dinner plates.

Pasture power
Exmoor's golden future
Friday 17 March
Forum 21 conference to demonstrate the benefits of pasture-fed food production

Speakers: Graham Harvey
Rebecca Hosking
Rob Havard Nigel Hester
Bea Davis Philip Limbery
Robin Milton Julian Hosking
Liz Bowles

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Forum 21 is a not-for-profit company which aims to raise awareness about ecology, natural history, resource conservation, sustainable development and environmental studies as well as to conserve and protect the environment and natural resources.

Tidal energy

Swansea Bay Tidal Lagoon is a step nearer – but will it get the green light from government?

Plans for a £1.3bn tidal lagoon in Swansea Bay have been backed by a government-commissioned review. Former energy minister Charles Hendry's independent report into the technology's viability said it would make a "strong contribution" to the UK's energy supply.

He said it was cost effective and would bring "significant economic opportunity".

The project would involve 16 turbines along a breakwater but is seen as only the start - a prototype for much larger lagoons, including one in Bridgwater Bay. But Mr Hendry believes this is "too ambitious a goal" before even one had been built and "could only be considered properly when more progress had been made".

The UK government still needs to agree on a deal and a marine licence would also need to be approved. Mr Hendry said moving ahead with a pathfinder lagoon off the Swansea coast should be seen as a "no regrets" policy.

The project would see energy produced for 14 out of every 24 hours, according to Tidal Lagoon Power (TLP).



Swansea Bay Tidal Lagoon could be a prototype for larger lagoons, including one in Bridgwater Bay.

Mr Hendry made 30 conclusions, including:

- The technology would "contribute positively" towards the UK's decarbonisation goals
- It was "beyond question" that local economic regeneration would follow a tidal lagoon
- It offers "significant economic opportunity" for Wales and the UK
- The potential impact on consumer bills of large scale tidal lagoons "appears attractive, particularly when compared to nuclear projects" in the long term
- A high level of monitoring of environmental impacts would still be needed
- A Tidal Power Authority should oversee the new industry
- Competitive tendering for future projects "to deliver the most substantial cost reductions" - similar to the nuclear industry

Former UK energy minister Mr Hendry has been gathering evidence for nearly a year for his independent inquiry, including visits to all the potential sites and discussions with industry.

Mr Hendry said: "If you look at the cost spread out over the entire lifetime - 120 years for the project - it comes out at about 30p per household for the next 30 years. That's less than a pint of milk. We can start a new industry and we can do it at an affordable cost to consumers."

Review gives fresh impetus to Minehead company's ambitious plans

The strong support given to the Swansea Bay project has given fresh impetus to ambitious plans by a local West Somerset company LongBay Seapower. The company is bidding to build a tidal lagoon between Lillstock and Minehead, generating electricity to power 2.5 million homes.

LongBay Seapower has joined up with American tidal energy developer Halcyon Tidal Power to progress plans for a semi-circulate tidal energy lagoon with 960 turbines located in six powerhouses.

Renewable energy

Investment in renewables will decline by 95%

More than £1bn of future investment in renewable energy projects disappeared over the course of 2016, the Green Alliance found when it analysed the government's latest pipeline of major infrastructure plans.

It also concluded that investment in wind, solar, biomass power and waste-

to-energy projects will decline by 95% between 2017 and 2020.

While a slowdown in green energy investment had been expected after ministers cut several subsidy schemes over the last 18 months, the figures reveal the true extent of the decline.

Shortly after the EU referendum, the government committed to cutting carbon emissions by 57% by 2030 on 1990 levels, but has so far failed to spell out how it will support low-carbon energy, such as offshore windfarms, beyond 2020.

"Renewables will be cheaper than new fossil

power stations by 2025 at the latest if we allow companies to build, learn, and cut their costs. But the government has been holding back the final bit of support needed to make renewables subsidy-free. It's also blocked the cheapest renewables from being built," said Dustin Benton, acting deputy director at Green Alliance.

Climate change

Can we minimise the effects of heavy rainfall?

Large areas of West Somerset are now prone to flooding during periods of heavy rainfall. This was exemplified by the recent flooding of the River Avill which caused traffic chaos on the A39.

What can be done to reduce the effects of heavy rainfall?

Exmoor National Park is running a project, Headwaters of the Exe, working with farmers and land managers in the catchment of the River Exe. It is part of South West Water's Upstream Thinking programme. The project will run until 2020 and is funded by South West Water and the Exmoor National Park Authority. It covers an area of 27,559 hectares and includes the upper Exe, the Rivers Barle, Quarme, Pulham, Haddeo and smaller

tributaries, as well as Wimbleball Reservoir. The programme will deliver a range of work, including rights of way maintenance to reduce erosion and run-off in high risk areas.

Part of the work involves fencing off rivers and re-positioning gates to protect the soil in areas of frequent use plus advice to farmers on the value of hedgerows and trees to retain water. Providing animals with strategically placed water troughs, instead of allowing them to drink out of rivers and streams, also directly greatly reduces erosion.

"We cannot control the quantity of rain but there is a lot we can do to minimise run-off and improve the soil", says Graham Boswell, Forum 21's ecologist.



Packhorse Bridge in Dunster after heavy rainfall. Photo: Paul Scullion by kind permission of West Somerset Free Press

Biodiversity

Cold-associated birds struggling against climate change and loss of habitats

A new scientific study reveals that birds such as meadow pipits, willow tits and willow warblers, have disappeared from sites in south-east England and East Anglia, because of the combined effects of intensive crop growing and rising temperatures. The finding contradicts earlier suggestions that birds are tracking global warming by shifting their ranges.

The research found that birds that prefer cooler climates are struggling to cope with climate change. "Birds are facing a double-edged sword from climate change and declines in habitat quality," said Tom Oliver, at the University of Reading, who led the new study. "In England, birds are already being hit with long-term reductions in habitat quality and, for the cold-associated birds, those losses are being further exacerbated by climate change."

Simon Gillings, at the British Trust for Ornithology, a member of the research team, said: "Intensive [land]

management is making it harder for cold-associated birds to find cool corners of sites, or to disperse away from warming regions."

But Oliver noted that learning that wildlife is affected by the availability of good habitats means action can be taken. Creating larger natural areas in strategic places will help species cope with a changing climate, the scientists said.

The study, published in *Global Change Biology*, analysed both bird and butterfly data from more than 600 sites monitored between 1964 and 2009. It found butterflies were adapting much better to climate change than birds, although cold-associated butterfly species also suffered if the area around the site was poor in natural habitat. Oliver said butterflies were faring better as they require much smaller areas of natural land. Good habitat means more suitable food plants and more microclimates in which species can thrive in

good years and survive in poor ones. The ringlet butterfly, for example, suffers badly in drought years but they can hang on if there are patches of broadleaf woodland available, as these resist droughts and keep soils more moist than treeless landscapes. Butterflies can also produce many generations in a single year when conditions are favourable, whereas birds reproduce more slowly.

The scientists determined the temperature favoured by each species by looking at the average warmth of their ranges across Europe, with those preferring heat found mostly in southern Europe and vice versa.

Stopping the destruction of habitat such as hedgerows and old orchards and creating new nature reserves can give opportunities for wildlife to adapt to global warming said Oliver. But biodiversity across England continues to fall, he said, despite a landmark review of wildlife sites for the government in 2010.

Do we need nuclear energy?

Forum 21 asked Steve Mewes to give a talk at our AGM last November. The title we suggested was “The future of energy – do we need nuclear?”

The simple answer to that question, said Steve, was an emphatic ‘No!’ He went on to outline the range of options now available to reduce CO2 levels, pointing out the pros and cons of each. He prefaced this by saying that the most effective way would be to reduce energy use. Since 2000 UK households used 27% less energy per capita but with energy prices so low there was little incentive to use less.

When he gave this talk Steve Mewes was Chairman of Green Wedmore. He is now Campaigns Officer for West Somerset Wildlife Trust.

Solar Photovoltaic

Pros

Almost cost parity
Durable, low maintenance
Easy to install
Quick CO2 payback
Solar glass, new roofing products

Cons

Solar farms unpopular
Very little subsidy
Difficult to store
Mostly imported, often from China

Solar Thermal

Pros

Cheap to install
Durable, low maintenance
Easy to install
Quick CO2 payback

Cons

No subsidy
Few installers

Onshore Wind

Pros

Cheapest form of renewable energy
Good domestic resource
Moderate CO2 payback

Cons

Wind farms unpopular in rural areas
Very little subsidy
Planning changes make it virtually impossible
Difficult to store
Visual impact
Considerable concrete foundations

Offshore Wind

Pros

Low visual impact
Considerable domestic resources

Cons

Short life
Expensive maintenance
Expensive to build
Effects on sealife unsure, vibrations, disruption

Biomass/Anaerobic

Digestion

Pros

Can use up food currently wasted/landfilled
Remaining slurry useful fertiliser
Can generate electricity and gas for the grid
Quick CO2 payback

Cons

Many AD plants use maize and other crops
Very little subsidy
More complicated process/recipe
Difficult to greatly scale up

Tidal Lagoons

Pros

Free raw material
Long life, 120 years
Straight forward to construct
Domestic
New industry
Many other benefits, tourism, flood control etc

Cons

Expensive to construct
Until scaled up, high subsidy needed
Siltting, cumulative impact and wildlife issues

Tidal Stream, Tidal Barrage and Wave Power

Pros

Large energy potential
Variable CO2 payback

Cons

Untested at scale
Barrage has high CO2 payback
Difficult to store
Higher environmental cost

Forum 21

Judy Mapledorum leaves Forum 21 with the Steam Coast Trail her lasting legacy

At the last meeting of Forum 21 directors we were very sorry to hear from Judy Mapledorum that it was the last meeting she would be attending. Since joining the Forum in 2013 Judy has been closely involved in developing the Steam Coast Trail, a multi access path giving cyclists and pedestrians a safe alternative to the A39 between Washford and Minehead.

The Trail was the idea of Forum 21 director Bill Butcher who, with another director, Graham Boswell, worked on the original plans. In 2015, following a long campaign, a £637,000 donation from the Coastal Communities Fund kick-started the project which is now run by a separate charity, Friends of the Steam Coast Trail.

The project is now being

realised with the opening last month of the first section between Dunster and Blue Anchor. It is already proving popular with walkers, cyclists and wheelchair users.

You can support this great initiative by donating to Friends of the Steam Coast Trail. Go to the website <http://www.steamcoast-trail.org> and click on Get Involved.

Forum 21's newsletter is published quarterly in July, October, January and April

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