



Forum 21 Newsletter

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Working for a Fair and Sustainable Western Somerset

Britain's coastline could be at risk after Brexit

With the quality of bathing water in the UK now ranking the worse bar one in Europe fears are growing in Brussels that post-Brexit the export of dirty factories, practices, or waste will cross the Channel.

Although 96.4% of British beaches were found safe to swim in last year, 20 sites failed the assessment in the annual survey by the European Environment Agency (EEA). Only Ireland had a higher percentage of poor quality bathing waters at 4%.

EU regulations staunched runaway coastal pollution in the 1970s but some influential Brussels figures are warning of retaliation if the UK lowers environmental standards.

Benedek Jávor, the co-chair of the European parliament's environment committee, said that if that happened "the EU could put pressure on the UK by saying that British products will not be allowed into EU markets

unless they meet environmental standards".

Molly Scott Caho, the Green MEP for the south-west, said the health of Britain's coastline was at risk. "The business people I speak to in the tourism industry are very worried about the anti-regulation extremists in the Conservative party," she said. "Before we joined the EU we were the dirty man of Europe and it took a long time for our beaches to be cleaned up – and that was because of action from the EU."

Regular surveys are undertaken by the Environment Agency. A recent one indicated that bathing water at Porlock is 'excellent', at Minehead and Dunster 'good' but at Blue Anchor only 'sufficient'. Ilfracombe and several beaches further up the estuary are classed as poor and unsafe for bathing. (<http://environment.data.gov.uk/bwq/profiles/>)



Burnham Beach Clean

Join Friends of Burnham Beach and Litter Free Somerset to clean up the beach for wildlife (and humans) on Friday 11 August 2-4 pm. Bathing at Burnham Beech is not advised by the Environment Agency.

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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.

Unexpected decommissioning work prompts fears of escalating costs

Forum 21 director **Maureen Smith** reports on a recent meeting of the Hinkley Stakeholders Group and reflects on her previous experience of reporting on the controversial plant over several years.

Part of the regulation of the Nuclear powers stations at Hinkley Point in West Somerset is a regular meeting, currently held three times a year, of local stakeholders called SSG meetings. These take place all over the country wherever there are active nuclear power stations and include local councillors, council officers and special interest groups. There is a national forum of SSGs currently chaired by Cllr Mike Carswell, who also chairs the Hinkley SSG. Maureen Smith has been Forum 21's delegate (with voting rights) for the past year. Before this she represented West Somerset District Council from 2011 to 2014 at the SSG and was on the planning committee when applications for intermediate waste treatment facilities were made, so has experience of this very complex construction and associated issues. Only Hinkley A, which is being decommissioned, and B, which is currently expected to cease generation in 2023, are discussed. C will only be included if, and when, it becomes operational.

Reports are given to the meetings for both A and B sites by the Station Directors, inspectors from the Environment Agency and Office of Nuclear Regulation and a representative from the Nuclear Decommissioning Authority. In addition reports on monitoring and on emergency planning, which is the County Council's responsibility offsite, are given as available.

Hinkley A poses huge problems as it was not built with decommissioning in mind (I remember this construction going on while I was at school in Bristol). The historically slipshod approach to asbestos and improvised arrangements to cope with problems on the site have resulted in unexpected challenges for the decommissioning company working under the Nuclear Decommissioning Authority (NDA).

Diesel has been found and cleared from under the site and a building used to place radioactive sludge in canisters for disposal at sea has got to be cleared of residue. The sea disposal was banned in the 80s.

Similar decommissioning problems have been found at other sites such as Bradwell and techniques to decommission items, such as the rods which held the fuel (the high level waste removed to Sellafield) have been improvised and used at other sites.

Storage ponds have been cleared and decontaminated and the Turbine Hall is expected to be demolished next year. However, the two reactor buildings will not be demolished until around 2085 which is the time when the site will be handed back to the government. By then the radioactivity will have partially reduced and it is hoped that robots will be available to do the work. The decommissioning is being done on a reducing budget which we were told was £36 million in 2015 and is now £20 million.

Hinkley B reports are mainly about safety of both workers and the reactor itself. As the equipment ages the graphite blocks which hold the fuel rods are likely to crack. A mock-up was on display at the last meeting and we were told where the cracks are likely to appear. Sensors alert the staff to any malfunctions but the blocks, which number thousands, cannot be replaced. This process will be factored into the decision as to how long the reactor can continue to operate.

Three issues have come to the fore over the past year:

- Planning permission for two buildings on the A site was given in 2004, one for treatment and packaging of intermediate waste and the other for the storage of the boxes for up to 150 years. There was a condition that no additional radioactive waste would be brought from elsewhere. This was generally understood to still be the case but a briefing I attended while a councillor, which related to the acid treatment of fuel element waste, a technique now discontinued, showed transport routes between nuclear sites. At the most recent meeting, a representative of NDA stated that since 2011 it has been government policy to concentrate treatment of waste in as few sites as possible. When a planning application is made, although none has to date, the SSG will be entitled to a special meeting and extensive consultation. It seemed that most people at the meeting, including the chair, were shocked by this and they plan to enforce the right to consultation when the time comes.

- At a meeting late last year the chair announced "good news" ie. the Government have decided that the entire country is suitable for the siting of the Geological Disposal Facility (my italics) of high level nuclear waste. He said this meant that West Somerset and Sedgemoor were potential sites and could receive the accompanying financial reward. Delegates objected that geological factors must be considered and it has always been said that this area is ruled out on these grounds. Representatives from the newly formed authority dealing with the Deep Geological disposal process attended the next meeting and stated that geological surveys were being carried out and local

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authorities would be invited to offer to host the site. I asked about long term security of the site and was told that, when completed, it would not be marked or guarded and the waste would remain radioactive for many thousands of years.

- At the first meeting of the year, the NDA representative reported that they had lost a court case and were fined £1 million. The case was brought by an American company who considered they had not been treated fairly in a tendering process for a decommissioning contract. The NDA did not think they had done anything other than that some aspects of the process were under par. This was resoundingly repudiated by Cllr Sue Goss, who listed the many failures brought to light by the case.

At the most recent meeting the NDA estimated the whole cost of the case at £100 million, but still denied they were severely in the wrong. In addition, agreement has been reached that the current contractor at Hinkley A will withdraw from the contract due to the additional unexpected works which have emerged. The NDA will continue the work at the site and find another company to take over. The costs to the NDA were not revealed but local councillors expressed alarm at the escalating financial burden.

More information on magnox-sites.com.

Decline in electricity prices will place heavy burden on consumers

Recently released government figures give the final cost to households to support Hinkley Point C as £50 billion according to a report in *The Telegraph* on 17 July. This is more than eight times the original estimate.



Consumers will have to pay for a much bigger share of this cost because the wholesale price of electricity is falling steadily while nuclear power construction remains high cost and risky.

Under an agreement between the Government and EDF Energy, reached in 2013, Hinkley is guaranteed to earn £92.50 for every megawatt-hour (MWh) of energy produced through a combination of wholesale market prices and a levy on consumer energy bills.

At the time the Government said this would require top-up payments totaling £6bn via energy bills to meet the "strike price", but falling market prices have widened the forecast gap every year since then.

The latest report said the cost of supporting Hinkley will continue to vary as the outlook for wholesale market prices shifts. In theory, the deal protects consumer bills if market prices surge above the £93/MWh mark but it also erases the benefit of cheaper market prices which many believe are more likely in the future.

The report said: "Wholesale prices are volatile and sensitive to a number of uncertain factors including, for example, future global gas price trends, carbon prices, coal prices, the level of intermittent generators in the system and demand trends whereas the

strike price agreed for Hinkley Point C is fixed and has been set following extensive negotiations with EDF and with advice from independent expert advisors".

The chief cause of the market decline is the boom in renewable energy which is falling in cost, as well as the crash in global oil and gas prices. As renewable costs continue to fall — and the energy system's exposure to fossil fuel markets wanes — experts believe further declines are likely.

Hinkley stats (from *The Telegraph*)

£19.6 billion
EDF estimate of construction cost

3.2 GW
Capacity of plant

5.8 million
Number of homes it could power

5,600
People to be employed on site at peak construction

25,000
Total number of jobs that could be created

£92.50
Price to be paid (in 2012 money) for each MWh unit of electricity – more than double the market price

35 years
Duration of subsidy contract agreed by ministers

2027
Earliest expected date for first power to be generated

Fossil fuel consumption – “It’s a war against time”

With the Trump announcement of the US withdrawal from the Paris Agreement it’s now a war against time to change from fossil fuel consumption. Speaking at a public meeting of the International Panel for Climate Change Lead Authors at Exeter University in June, Aromar Revi of the Indian Institute of Human Settlement, warned delegates: “We have only 15 to 20 years to make the change.”

“Our present system privatizes profits and socializes risks”, said Myles Allen of Oxford University. “This is outrageous. Climate change will not be stopped until this paradigm changes.”

He went on to say: “It will be essential to licence fossil fuel extraction on condition that at least the emissions created are balanced by extraction of carbon from the atmosphere. We were close to requiring all new fossil fuel extraction to dispose of it through carbon capture and storage in 2015.”

Delegates heard from Ove Hoegh-Guldberg of Queensland University about the shrinking of the Barrier Reef. “It will go in 20 years,” he said. On a more hopeful note, he said that

a lawsuit brought by the Youth of America v. fossil fuel companies under the American constitution could protect future as well as current generations.

The plight of small island states as the ‘first sufferers’ was discussed. Peter Tschakert of the University of Western Australia said the 1.5 degrees target makes political sense as it gives these islands a political tool if they suffer loss and damage.

Myles Allen thought there was a good case for the UK to use its wealth of industrial revolution to fund technical development so that other less developed nations can benefit.

Could solar power be managed globally through Solar Radiation Management? It was thought it would have limited effect as the link between global and local changes would be broken although it could address rises in sea level.

A recurring theme was whether generational opinion could change fast enough to prevent further damage with one speaker saying that the

UK first past the post political system militated against long term thinking.

What needs to change to swing public opinion? Speakers put forward some suggestions:

- People need to start by feeling vulnerable and to understand those less privileged.
- We need to get angry with the fossil fuel industry. Solving the carbon capture problem is very simple.
- We need consumer labeling of products, ie. ‘Made in a region supporting the Paris Agreement’.

This IPCC meeting is the second of three on the Special Report on the impact of global warming of 1.5 degrees C above pre-industrial levels and related global greenhouse gas emission pathways. It was commissioned by the UN at the Paris Convention in 2015. For more information on the report visit www.ipcc.ch/report/sr15

Report by Bill Butcher, Forum 21 Director.

Waste and biomass can produce low carbon gas power efficiently

A new report published by the Energy Technologies Institute (ETI) has concluded that using waste and biomass for gasification can produce low carbon power efficiently, particularly at the town scale.

The ETI’s latest report *Targeting new and cleaner uses for wastes and biomass using gasification* sets out why it believes the technology could be so important to a future low carbon UK energy system, what the current UK landscape looks like along with analysis of earlier ETI research into waste gasification technologies.

ETI analysis of the UK energy system indicates that bioenergy should be a crucial part of the UK’s future energy mix as it can reduce the cost of meeting the country’s 2050 carbon targets by more than 1% of GDP.

Gasification, which can use a variety of feedstocks, is a key technology for delivering low carbon energy as electricity, heat and power as well as chemicals and other materials. This is because it converts the energy held within a difficult to use solid fuel into an easier to use gas which we can then be used to make,

for example, electricity, hydrogen or jet fuel.

It is especially useful when operated at a town scale because the waste heat generated can be used in district heat networks to provide heat and power for commercial operations. Currently, the technology and commercial risks are too high for typical investors and developers. To accelerate the technology to the point where these risks are more acceptable, the ETI is investing £5m in the construction of a 1.5 MWe waste gasification demonstration project incorporating an engine

fuelled by ‘ultra-clean’, tar free syngas.

The 1.5MWe facility being built in Wednesbury in the West Midlands will produce enough electrical power to supply 2,500 homes and will use gasification technology to produce power at high efficiency and high reliability from sorted and processed municipal waste.

The Wednesbury plant will convert about 40 tonnes a day of post recycling, refuse-derived fuel (RDF) produced locally into a clean syngas. *Source: Politics Home*

Delay to recovery of ozone layer blamed on paint stripper

Rising emissions of a chemical used in paint stripper are being blamed for decades-long delays in restoration of the ozone layer.

Atmospheric levels of the ozone-destroying chemical dichloromethane have doubled in the last decade. Its use is not restricted by the Montreal protocol which outlawed the CFCs mainly responsible for the hole in the ozone layer.

Dichloromethane is also used as an industrial solvent, an aerosol spray propellant and a blowing agent for polyurethane foams.

Research, published in the journal *Nature Communications*, analysed the level of dichloromethane in the atmosphere and found it rose by 8% a year between 2004 and 2014. Using computer models, scientists found that, if this continues, the recovery of the ozone layer would be delayed by 30 years. *Source: The Guardian*

Peatlands could play vital part in carbon storage

Peatlands are a vital part of ecosystems: purifying water, sometimes mitigating flooding and providing a home for rare species. They are also very efficient in storing carbon.

Known peatlands only cover about 3% of the world’s land surface but store at least twice as much carbon as all of Earth’s standing forests. In addition, at least one-third of the world’s organic soil carbon, which plays a vital role in mitigating climate change and stabilizing the carbon cycle, is in peatlands.

A study published this year in *Global Change Biology* estimates that tropical peatlands – the most important in terms of carbon storage – may cover three times more land than previously estimated. But they are difficult to find because not all wetlands contain peat.

Unlike rainforests or coral reefs, peatlands have largely been ignored by researchers and policymakers and it is not even known where they are. Scientists used to believe that the vast majority of the world’s peatlands were in boreal and temperate areas, such

as Minnesota, but we now know there are huge areas of peatlands in the tropics.

Early in 2017, scientists announced they had discovered the world’s largest tropical peatland in the Congo. The massive peatland – covering an area larger than New York State – stores as much carbon as is emitted from burning fossil fuels globally in three years, about 30bn metric tonnes.

Scientists fear peatlands are threatened by agricultural expansion. Greta Dargie, a research fellow at the University of Leeds, helped discover the peatlands in the Congo. She says the best way to uncover the world’s still-hidden peatlands and make sure they aren’t destroyed for agriculture is to start with satellite data and “identify areas which have the potential [for peatlands]”.

More information from: <https://www.theguardian.com/environment/2017/jul/28/ultimate-bogs-how-saving-peatlands-could-help-save-the-planet>

Al Gore – still telling us the ‘inconvenient truth’

Ten years ago the documentary *An Inconvenient Truth* alerted millions of people to the planet’s vulnerability to fossil fuel emissions.

In an interview for the *Observer* (30 July) star of the documentary Al Gore talked about the work he has been doing with his Climate Reality Project which grew out of the documentary.

In March this year he organised a meeting of 972 people in Denver Colorado to discuss climate change. They were all there to learn how to be ‘climate reality leaders’.

In the interview Gore said he had concluded from studying world events for several years that to fix the climate crisis we have to first fix the government crisis. He fears that big money has ‘hacked’ our democracies and identified links between Brexit, Trump and Putin.

To join the Climate Reality Project go to <https://www.climaterealityproject.org> where you will also find information about the Climate Reality Leadership Corps training.

Al Gore’s new film An Inconvenient Sequel: Truth to Power is in cinemas from 18 August.

Forum 21 grants
Forum 21 can offer small organisations grants of up to £1,000 for projects which meet our criteria for sustainability.
For more information ring: 01984 634242 or email: mail@forum21.org.uk

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