

value," says Prof Poepelmeier, who says his team ...are now testing how it performs as a lubricant.

<https://www.bbc.co.uk/news/science-environment-50143451>

Thursday January 30th

A new study ... from the University of Washington's School of Aquatic and Fishery Sciences has been released and shows that humpback whale populations have admirably bounced back from near extinction. Back in the early 1900s, the whaling industry had brought the western South Atlantic population of humpbacks to a mere 450 whales. It was estimated that approximately 25,000 of the animals were killed within 12 years.... in the 1960s and mid-1980s strict measures were taken to protect the species that then seemed to be on the brink of extinction.

<https://interestingengineering.com/humpback-whale-escapes-near-extinction-with-population-growing-from-450-to-25000>

Friday January 31st

After the Conservatives' win in the general election last December, it seems likely that today will definitely be the day the UK leaves the

European Union. As Winston Churchill put it, "This is not the end, this is not even the beginning of the end, this is just perhaps the end of the beginning". Whether you are celebrating or mourning, pray that justice is done for the environment, for the poor and for the nation.

If you would like to receive the prayer diary each month by email (free), please email:

prayer-guide@greenchristian.org.uk

www.greenchristian.org.uk

Picture on front cover: snowy trees, Leeds, by Emma King

Weblinks accessed December 2019.

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Prayer guide for the care of creation

January 2020

"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has." Margaret Mead

There is a time for everything, and a season for every activity under the heavens. Ecclesiastes 3 v 1



Wednesday January 1st

God as this new year dawns,
Let us not be blinded by the world's
darkness.
Or consumed by paralyzing fear.
Let us remember,
From darkness you bring forth light,
Out of winter's death you give birth to
life.
Let us remember,
That which is dormant will spring to
life,
That which is pruned will spout new
strength.
Let us remember,
You are the light that gives us sight,
You are the breath that gives us life,
You are the water that quenches
thirst.

(First part of Christine Sine's New
Year prayer
<https://godspacelight.com/2014/12/31/a-prayer-for-new-year-2015/>)

Thursday January 2nd

Last month, the European
Commission presented a
groundbreaking new legislative
roadmap to making Europe the first
continent to achieve carbon-
neutrality.

The European Green Deal provides
a roadmap with actions to boost the
efficient use of resources by moving
to a clean, circular economy that
stops the climate crisis, reverts
biodiversity loss, and cuts pollution.
Furthermore, it covers all sectors of
the economy, notably transport,
energy, agriculture, buildings, and
industries such as steel, cement,
ICT, textiles and chemicals.
<https://www.goodnewsnetwork.org/eu-presents-road-map-to-becoming-first-climate-neutral-continent/>

Friday January 3rd

Today is Greta Thunberg's 17th
birthday.

Zac Goldsmith will continue to serve
as Minister for the Environment,
Food and Rural Affairs despite losing
his seat as an MP in last December's
general election. 10 Downing
Street confirmed that Prime Minister
Boris Johnson has chosen to make
Goldsmith a life peer – a move which
has enabled him to retain his
Ministerial role at the Department for
Food, the Environment and Rural
Affairs (Defra).

rules the world, for you created the
universe and we are here as your
stewards.

Monday January 27th

China will maintain its environmental
protection goals and will not ease off
on trying to achieve them even as
the economy slows, an environment
ministry official said [last month]. The
cabinet last year issued a guide for
some important anti-pollution targets
up to the end of 2020 and there will
be no adjustments of them, said Xu
Bijiu, director general of the general
office at the Ministry of Ecology and
Environment. "It's like ... rowing a
boat against the current," Xu told a
media briefing in Beijing. "We have
no other choice but to go forward."
<https://www.reuters.com/article/us-china-environment/economic-slowdown-will-not-change-china-environment-policies-ministry-idUSKBN1YU0EA?f>

Tuesday January 28th

England's forests are home to an
abundance of wildlife, including
some of our most interesting animals
and plants - from the eerie buzzing
spider to spectacular purple emperor
butterflies. For 100 years, the

Forestry Commission has been
planting and looking after the
nation's forests to help the creatures
that call them home. Today, they
need our support more than ever
before. In the face of climate
breakdown, the impacts of pollution
and a growing, predominantly urban
population, the job of looking after
the nation's forests has never been
so important.
<https://theecologist.org/2019/dec/20/100-years-forestry-commission>

Wednesday January 29th

In America it's bubble wrap
appreciation day, which is made of
polyethylene. Prof Poeppelmeier and
his colleagues at Northwestern
University in Illinois, US, have
developed a chemical technique
which breaks down the bonds that
make polyethylene ... so
indestructible. The process "chops
up" the plastic polymer, turning it into
liquid oil. His team published their
breakthrough in the journal ACS
Central Science. It is a clever
catalytic technique using metal
nanoparticles to essentially snip the
polymer apart - chemically
transforming it into a liquid.
"Importantly, that liquid has use and

hit its \$10m (£7.6m) target in just 17 days - meaning the firm will now donate \$10m of its own to these causes. The money will be divided between more than 100 environmental NGOs working across the areas of biodiversity, climate, communities, land and water. On a European basis, the campaign will enable Patagonia to more than double the funding it donates to grassroots NGOs in 2020.

<https://www.edie.net/news/7/Patagonia-s-Black-Friday-campaign-raises--20mfor-environmental-causes/>

Friday January 24th

The UK's fashion industry is not cutting waste fast enough to hit its December 2020 target of a 3.5% reduction, the circular economy expert charity, the Waste and Resources Action Plan (WRAP), has admitted. According to a progress report from the WRAP's 'Sustainable Clothing Action Plan 2020' (SCAP 2020) commitment, supply chain waste has only dropped by 1.4% against the 2012 baseline. Although more progress has been made on cutting water use and carbon emissions, the industry is set to miss

its waste targets without urgent action.

<https://www.wrap.org.uk/content/scap-2020-progress-report>

Saturday January 25th

Today is Chinese New Year. Pray for all the environmental organisations who work to protect China's unique natural landscapes and wildlife. For example, WWF is working with local partners to protect the Yangtze and its river basin. A third of China's inhabitants live in the Yangtze basin. WWF have helped reconnect over 50 lakes with the Yangtze river. They'd been disconnected by sluice gates to create more land for agriculture and urban development – but that seriously harmed water quality and wildlife.

<https://www.wwf.org.uk/where-we-work/places/yangtze>

Sunday January 26th

Lord, you have given us this beautiful world, yet in our greed we are robbing future generations, poisoning your world and destroying many of your creatures. Help us, Lord, to come to our senses, to realise that we interfere with your world at our peril, for it is your hand, not ours, that

<https://www.edie.net/news/11/Zac-Goldsmith-to-remain-as-Environment-Minister/>

Saturday January 4th

Coal isn't dying. It moved to Asia. A report out last month from the International Energy Association reveals the extent to which coal has provided the power for Asian countries like Indonesia and Vietnam as their economic growth pulls millions out of poverty. The world burns 65% more coal today than it did in 2000, according to the IEA's new report. Coal accounts for 40% of all greenhouse gas emissions. The report shows that natural gas and renewables are killing so many coal plants in the United States and Europe that worldwide coal consumption should be falling ... if it weren't for China and India. There, as well as in smaller Asian countries, coal use is rising fast enough to erase the effect of closures elsewhere.

<https://grist.org/energy/coal-isnt-dying-its-moving-to-asia/>

Sunday January 5th

God as this new year dawns,

Let us give birth to what honours you,
Let us give life to what makes your goodness shine,
Let us give growth to your emerging eternal world.
In the depths of our hearts let us cry,
Your kingdom come, Your will be done,
On earth as it is in heaven.

(Second part of Christine Sine's New Year prayer

<https://godspacelight.com/2014/12/31/a-prayer-for-new-year-2015/>)

Monday January 6th

The Big Schools Birdwatch starts today, running until 21st Feb. Every year, educators from every corner of the UK take part, turning their classes into conservation scientists and helping the RSPB track the ups and downs of birds across the country. The results from this, and the Big Garden Birdwatch later in the month, show how some species are increasing, and some decreasing.

<https://www.rspb.org.uk/fun-and-learning/for-teachers/schools-birdwatch/>

Tuesday January 7th

The secret to cleaning up contaminated water may lie in the cheap, common polyurethane foam used in mattresses. In a study published in the journal Nature Sustainability in December 2019, scientists tested the ability of the material, enhanced with a special coating, to soak up tiny droplets of oil suspended in water. They found that it consistently captured almost all of the oil in under three hours. The sponge could help address water contamination from the oil and gas industry.

<https://grist.org/energy/this-very-special-sponge-could-help-clean-up-frackings-mess/>

Wednesday January 8th

Climate change is transforming Arctic ecosystems in unprecedented and troubling ways, causing vast sheets of ice to melt, impacting local wildlife and threatening not just indigenous populations who live there, but communities around the world, researchers warned in a dramatic new report issued on Tuesday. The findings were laid out in the 14th annual Arctic Report Card, compiled by more than 80

scientists for the National Oceanic and Atmospheric Association. Researchers observed many troubling trends in the region: Temperatures in the Arctic were the second-warmest on record for an 11-month period ending in August. The permafrost continues to thaw, potentially releasing up to 600 million tons of carbon into the atmosphere each year.

https://www.huffingtonpost.co.uk/entry/arctic-dire-condition-climate-change_uk_5df0f5bce4b0b75fb535ae12

Thursday January 9th

A Dutch innovator has designed [a billboard] to purify the surrounding air by eating up smog. The billboard, which was designed by Daan Roosegaarde and his studio in partnership with the University of Monterray, is just one of the billboards currently set up in Monterray, Mexico. Each ad space has been coated with a specialized resin that attracts nearby air pollutants and converts them into oxygen when exposed to direct sunlight. The billboard generates the same amount of clean air as 30 trees

people go skiing, and temperatures are well below freezing. But in December things were different. ...temperatures in Moscow ...easily topped 4°C ...compared to the normal average for December of around minus 6C. Snow is nowhere to be seen, the city's ski resorts are closed, and even the first spring buds on the trees are beginning to show -- three or more months too early. Russian President Vladimir Putin has always been reluctant to acknowledge the link between human activity and global warming. At his traditional year-end annual news conference last week, he again insisted that "nobody knows" the causes of climate change.

<https://news.yahoo.com/moscow-wonders-where-winter-gone-173303149.html>

Wednesday January 22nd

Rebecca Willis, Research fellow at Exeter University, has suggested the following policy climate actions from the recently re-formed government:

- instigating a swift review of governance for net-zero, giving responsibility and resources to other government departments,

and, crucially, to local areas, to deliver on carbon strategy

- prioritising climate and environmental protection in negotiations for a trading relationship with the European Union
- moving quickly to consult on a phase-out date for petrol and diesel vehicles, as promised in its manifesto
- removing the de facto ban on onshore wind energy, which the Committee on Climate Change advised needs to increase in capacity by 1GW a year
- confirming its opposition to fracking, and making its moratorium permanent
- pledging to formally consider the results of the national citizens' assembly on climate change, Climate Assembly UK, due to report in 2020.

<https://theconversation.com/what-boris-johnsons-government-needs-to-do-to-show-it-is-serious-on-climate-change-128885>

Thursday January 23rd

Outdoor clothing company Patagonia's Black Friday fundraiser for environmental organisations has

additional 'Statistics of the Decade' series of categories covering the 2010-2019 period. The 'International Statistic of the Decade' was that an area of rainforest equivalent to 8.4 million football pitches estimated to have been lost since 2010.

<https://ccbriefing.corporate-citizenship.com/2019/12/24/daily-media-briefing-1455/>

Saturday January 18th

Some of the world's biggest fossil fuel companies, including Russia's state oil giant Rosneft, have been added to the London Stock Exchange's (LSE) "ethical" investment lists. The FTSE4Good indices, run by the London Stock Exchange Group's FTSE Russell subsidiary, are marketed to investors interested in environmental, social and governance (ESG) issues. However, the LSE has refused to remove big polluting companies or the security company G4S despite allegations of systematic labour abuses across the world.

<https://www.theguardian.com/business/2019/dec/22/ftse-leaves-coal-and-oil-firms-and-g4s-on-ethical-investment-list#maincontent>

Sunday January 19th

Let there be peace on earth, and let it begin with us.

Let there be love on earth, and let it begin in our hearts.

Let there be miracles on earth, and let them begin with our faith.

Let there be a future for humankind, and may it begin with our actions now.

Monday January 20th

Big Energy Saving Week starts today. It is a national campaign to help people cut their energy bills and get all the financial support they are entitled to. We all have the power to save energy, money and the environment through everyday actions. The campaign raises public awareness of how simple changes such as switching energy supplier or tariff, accessing discounts or grants, and making homes more energy efficient can make a big difference.

<https://www.citizensadvice.org.uk/about-us/our-campaigns/all-our-current-campaigns/besw/>

Tuesday January 21st

Winters in Moscow usually look like something out of a picture book: the Russian capital is covered in snow,

every 6 hours and it can function for up to five years.

<https://www.goodnewsnetwork.org/mexican-billboard-purifies-air-by-eating-smog/>

Friday January 10th

Intensive agriculture may be nourishing most of the Earth's inhabitants, but it's doing the opposite to earth itself. Its dependence on singular crops, heavy ploughing machinery, fossil-fuel based fertilisers and pesticides is degrading our soils, wildlife and nutrient cycles, and contributing a quarter of the planet's unwanted extra heat. But we're not powerless to change the future of food. Nature and technological innovation are tackling these problems head on – and if the solutions they're offering are incorporated on a large scale and used together, a new agricultural revolution could be on its way. One way in which this can be changed is by utilising agroecology – farming that mimics the interactions and cycles of plants, animals and nutrients in the natural world – as a path to sustainable food.

<https://theconversation.com/three-ways-farms-of-the-future-can-feed-the-planet-and-heal-it-too-128853>

Saturday January 11th

Another way that can help farms not just feed the planet but heal it too, is by using pesticides derived from plants, which tend to be much less toxic to the surrounding environment. We can also use natural enemies to keep threats at bay. For example, peppermint disgusts the flea beetle, a scourge to oilseed rape farmers. And plants that are attractive for egg-laying but that don't support the survival of insect larvae are commonly used for this purpose. Finally, technology at an almost impossibly small scale could make a big difference to the way we grow our food. Companies have designed nanoparticles 100,000 times smaller than the width of a human hair that release fertiliser and pesticides slowly but steadily, to minimise their use and maximise crop yields.

<https://theconversation.com/three-ways-farms-of-the-future-can-feed-the-planet-and-heal-it-too-128853>

Sunday January 12th

Loving Father, we thank you for the skills which, passed down from one generation to another, enable us to harvest the earth's natural resources. We thank you for the lives of those who enable your gifts to be channelled into areas of need, and we pray that you will raise up many others willing and eager to share your gifts to the benefit of all.

Monday January 13th

The year 2019 concludes a decade of exceptional heat, and is on track to be the second or third warmest year on record. While the global average temperature teeters on 1.1°C above the pre-industrial record, the world's glaciers are in stark retreat. In high mountain areas, the steady trickle of melting snow in spring has nourished people for generations. Today, 1.9 billion people – or 22% of the world's population – live downstream of snowpacks and glaciers and depend on them as their main source of drinking water. These icy and snowbound mountain regions could be considered water towers, which provide a regular supply of water for drinking, irrigation and power

generation, and provide a life-saving buffer during droughts.

<https://theconversation.com/the-worlds-mountain-water-towers-are-melting-putting-1-9-billion-people-at-risk-128501>

Tuesday January 14th

The Indus basin is the most important water storage unit in Asia. Fed by rain and snow high up in the Himalayan, Karakoram, Hindu-Kush, and Ladakh mountain ranges, the water that drains from lakes and glaciers here supports 206 million people across parts of Afghanistan, China, India and Pakistan. Much of it is used for irrigating crops and in industry, as well as drinking water. But the Indus is also the most vulnerable water tower on Earth. The number of people directly dependent on the water it supplies is set to substantially increase over the next 30 years. At the same time, regional temperatures are projected to rise by 1.9°C. The glacial melt this causes could mean millions of people without enough water during dry seasons and especially during drought years. Eventually, entire communities may be forced to seek refuge elsewhere.

<https://theconversation.com/the-worlds-mountain-water-towers-are-melting-putting-1-9-billion-people-at-risk-128501>

Wednesday January 15th

The Bank of England has unveiled plans to introduce a mandatory and uniform climate risk test for major banks and insurers in 2021. The proposals have been introduced in the hopes of quantifying the potential financial impact of climate change on the UK's financial sector as a whole. If introduced, the tests would analyse whether companies within the sector are “properly managing” both transition risks – the likelihood of losing assets as the transition to a low-carbon economy continues – and physical risks – whether assets will be damaged or rendered unproductive by occurrences such as droughts, flooding or fires.

<https://www.edie.net/news/9/Bank-of-England-planning-mandatory-climate--stress-tests--for-banks-and-insurers/>

Thursday January 16th

Ultra efficient hydrogen fuelled vehicles may soon be coming to market thanks to [a] technological

breakthrough. In September, researchers at the Technion-Israel Institute for Technology published a paper in Nature detailing their success in creating a safe, clean, inexpensive, and ultra-efficient new method of splitting water molecules into oxygen and hydrogen fuel. Removing hydrogen from water is the only environmentally clean way to produce liquid hydrogen—a chemical that is normally expensive and inefficient to produce, but that can create electricity almost as efficiently as gasoline. As of right now, most hydrogen is produced using fossil fuels which produce harmful greenhouse gas emissions. <https://www.goodnewsnetwork.org/israeli-scientists-develop-exciting-new-way-of-producing-hydrogen-fuel/>

Friday January 17th

Devastating Amazon rainforest loss, the deadly threat posed by chronic air pollution and a huge increase in gas-guzzling SUVs on the world's roads have all been highlighted as the most stand-out stats of the decade by the Royal Statistical Society (RSS). Environmental issues dominated the RSS's annual awards, which this year included an