

Project. For Renata Rez, from Szeged in Hungary, managing the project has been an opportunity to put her B.Sc. in Environmental Management into action.

Wednesday 30th September

Next Sunday October 4th will be a Climate Change Day of Prayer, supported by Churches Together in Britain & Ireland, when Christians of all denominations will join together to express their concerns over the seriousness and urgency of our global situation and to pray for God's will to be done during the decisive Copenhagen talks this December. The time of prayer and meditation could be between 12 noon and 6 p.m. and could be combined with a time of fasting. Information, posters and sample magazine inserts can be found at: www.christian-ecology.org.uk/day-of-prayer.htm

If you would like to receive the prayer diary each month by [email](mailto:prayer-guide@christian-ecology.org.uk) (free), please email prayer-guide@christian-ecology.org.uk

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Sources:

State of the World 2009
(Worldwatch Institute)

CIWEM News

UKWIR News

www.edie.net

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Prayer guide for the care of creation



September 2009

"Trust in the Lord with all your heart and lean not on your own understanding. In all your ways acknowledge him and he will make your paths straight."
(Proverbs 3.5-6)

"The work of praying is prerequisite to all other work in the kingdom of God, for the simple reason that it is by prayer that we couple the powers of heaven to our helplessness."
(Ole Hallesby)

"Prayer is the slender nerve which moves the muscle of Omnipotence."
(Charles Spurgeon)

"When it comes to climate change . . . what is often missing is quiet reflection and passionate prayer. As the world descends into fearful uncertainty, we need space to ask God for his perspective and intervention, to think about what our abuse of his creation says about us, and to plead for a new vision of God's purposes for us in his world."
(Dave Bookless)



Tuesday 1st September

The Copenhagen Summit in December has been described as “the last chance for the planet.” Churches Together in Britain and Ireland have put out a programme of resources to encourage churches to observe Creation Time from today till October 4th – which has been designated Climate Change Day of Prayer. “In the face of mounting evidence that we are heading for runaway climate change and massive losses in biodiversity, we need an international treaty to bind governments to drastic and immediate cuts in carbon emissions, but this requires courageous and far-sighted political leadership to transform our economy and many aspects of our culture.”

Website: www.ctbi.org.uk/375

Wednesday 2nd September

The Amazon rainforest generates much of its own rain. Moist air from the Atlantic falls as rain on the eastern rainforest, where it evaporates or transpires from trees, returning moisture to the westward moving air, to fall as rain elsewhere. In 2005 this “rain machine” failed, creating the greatest drought in the recorded history of the Amazon. Britain’s

Hadley Centre now predicts “Amazon dieback” if global temperatures rise by 2.5^o C. or more, with dire effects on the world climate.

Thursday 3rd September

Increased acidification of the oceans results from rising levels of CO₂ in the atmosphere. It is already affecting the ability of tens of thousands of marine organisms which depend on calcium carbonate to build their shells and skeletons. These include the tiny planktonic organisms that are the basis of all marine life. Reducing CO₂ emissions from deforestation – which currently accounts for 20% of greenhouse gas emissions – is therefore vital for the protection of marine life on which millions of humans depend for their food.

Friday 4th September

Between 2000 and 2005 the world lost forests at a rate of 7.3 million hectares a year. Clearance of every hectare of forest releases between 217 and 640 tons of carbon into the atmosphere. Paying farmers and land managers for afforestation projects and avoided deforestation is key to reducing carbon emissions and protecting

organisations may seek the free advice it can offer them. “The first practical step is to understand where the simple, no-cost measures can be made. People can start by minimising energy waste, then build an idea of the options for capital investment. That will often be the way they deliver heating and lighting, and then they can take advantage of grants to invest in renewable technologies.” Advice can be found at: www.carbontrust.co.uk/schools or ring 0800 0852005.

Sunday 27th September

Give us, dear Lord, a deeper understanding of your purposes, that we may be steadfast amid the turmoil of our times. May our faith never fail, nor our love grow cold, nor our hope become faint. So may we look up and lift our heads as we look for the coming of your Kingdom, through your dear Son, our Redeemer, Jesus Christ.

Monday 28th September

Growing local food is the trigger for greater engagement with the big issues such as climate change and health. It cuts across age, income,

race and class. In Todmorden vegetables and fruit are springing up everywhere. Public flower beds are being transformed into community herb gardens and vegetable patches. “Incredible Edible Todmorden” has set a standard for every town in Britain. For any community to be self-sustaining, there must be a food land bank so that public land can be licensed for community use; learning opportunities for all, including apprenticeships with farmers, parks departments etc. and incentives for businesses to develop food markets. Website: www.incredible-edible-todmorden.co.uk or email: pam@bearco-op.com

Tuesday 29th September

A ‘Green Gown’ sustainability award has been given to a Kingston University scheme that encourages students to donate unwanted clothes and household goods to charity. Over 5 years the scheme has collected around 5 tonnes of discard items that would otherwise go to landfill. Last year 80% of the items went to charities within 12 miles of Kingston including Cancer Research, Princess Alice Hospice, Refugee Action Kingston and the Community Furniture

conflicts and land grabbing. This leaves JBS, the world's biggest producer and exporter of processed meat, as the last major exporter that still has to commit to helping to end the destruction of Amazon rainforest for beef production. At Copenhagen, in December, Greenpeace will be calling for a \$40 billion fund to help world governments to protect forests and sign up to a commitment to end deforestation by 2020.

Thursday 24th September

An analysis by WWF of large-scale water transfers from one river basin to another has looked at schemes in Spain, Australia, Lesotho, S. Africa, Greece, Brazil, Peru and China. Many were found to be high cost, high risk solutions to water problems, with benefits much less than the sales pitch. Australia's Snowy Mountains Scheme took 99% of the Snowy River flow to produce power and provide for distant irrigation, causing generations of conflict. "Often it is going to make greater sense to import water in extra food grown in wetter areas than to import water to grow food in a drier area."

Friday 25th September

At the Eden Project today a weekend conference called "Landscapes of the Mind" asks whether our mental health depends on our relationship with the natural world. "As the planet is poised at the tipping point of irreversible climate change, we struggle to conceptualise this potential catastrophe and its consequences. Too awful, perhaps, to contemplate the consequences of inaction, we bury this awareness so as to re-establish the comfort zone of denial. Believing that we are individually helpless to impact on this terrifying escalation, this helplessness can be felt as despair and moral confusion." The conference examines how we can creatively harness awareness of our relationship with nature.

To download a booking form, go to: www.confer.uk.com/landscapes.html or ring 01728 689090.

Saturday 26th September

Large schools and most universities will have to report on their emissions and take steps to reduce them when the Carbon Reduction Commitment kicks in next year. The Carbon Trust estimates that up to 5,000

carbon sinks. Costa Rica increased its forest cover from 21% in 1986 to 51% in 2006 by the use of markets that make payments for ecosystem services and ecotourism. The Copenhagen Summit needs to see agreement on the REDD programme (Reducing Emissions from Deforestation & Degradation) which currently faces major difficulties.

Saturday 5th September

Annual emissions from livestock total 7.1 billion tons, including 2.5 billion for clearing land for animals, and accounts for 14.6% of all emissions from human activities. A cow/calf pair on a beef farm is responsible for more greenhouse emissions than someone driving 8,000 miles in a mid-size car. Apart from reducing our consumption of meat and dairy products, solutions proposed include:

- Intensive rotational grazing to allow proper regeneration of plants so as to improve carbon storage in the grass and to eliminate or at least cover manure storage;
- Using feed additives to make diets easier for animals to digest and so reduce methane emissions;

- Using anaerobic biogas digesters where microbial action breaks manure down into biogas and nutrient-rich sludge. The biogas can be burnt for heat or electricity, while the sludge can be used as a fertiliser.

Sunday 6th September

Lord, we thank you for the fruits of science and technology. We pray that human technology will never crush the human spirit. We praise you for your great gifts of freedom and inventiveness, and we pray for wisdom to use them aright in your service and in the service of the world that you created.

Monday 7th September

Biogas digesters involve an initial cash investment, but lifetime benefits far outweigh the costs. The Penn England dairy farm in Pennsylvania invested \$141,370 in a digester to process manure from 800 cows and another \$135,000 in a combined heat and power unit. The farm now makes a profit by using the biogas to generate 120 kWh of electricity to sell back to the local utility at 3.9 cents per kWh.

The system provides sufficient heat to power the digester, make hot water and heat the farm buildings.

Tuesday 8th September

India and China have large programmes for revegetating millions of hectares to reduce rural poverty and protect critical watersheds. In Morocco 34 pastoral co-operatives with more than 8,000 members have rehabilitated and now manage 450,000 hectares of grazing reserves. On degraded soils, initial cultivation and re-seeding may be necessary to enable natural vegetation to re-establish itself. There are two keys to success:

- Engage local communities in planning, developing and maintaining watershed areas and
- Include areas of high local importance, such as local woodfuel sources and areas such as gullies that can be used for productive cropping.

Wednesday 9th September

The Montreal Protocol for eliminating ozone-depleting gases did not include the refrigerant hydrofluorocarbons

(HFCs) even though a pound of HFC has the same global warming effect as 3,830 pounds of CO₂. A successor to Kyoto could stimulate the recovery of tons of “banked” HFCs and CFCs sitting in old cooling equipment that need to be safely recovered and destroyed. Meanwhile a coalition called Refrigerants Naturally which includes Unilever, Coca-Cola, PepsiCo, McDonalds, IKEA and Carlsberg has pledged to replace HFCs with natural refrigerants in vending machines, freezers and fridges. The timing is crucial.

Thursday 10th September

Black carbon, a component of soot, is second only to CO₂ as a cause of global warming. However, it only stays in the atmosphere for a few days or weeks, so reducing emissions could be the quickest means of climate mitigation. It is a product of incomplete combustion of fossil fuels and biomass. Its main sources are the open burning of biomass, diesel engines and the burning of coal, wood, dung and crop residues. It converts solar radiation into heat and, by darkening ice and snow surfaces, reduces the earth’s ability to reflect light and thereby increases heat

driving deforestation in South America. The Government must tackle the hidden impacts of meat and dairy production by supporting home-grown animal feeds instead of imported soya and by shifting taxpayers’ money from factory farms to smaller planet-friendly systems.

- DEFRA has failed to support the Competition Commission’s findings that a supermarket watchdog is vital to stop the abusive buying practices of supermarkets. The cost of an Ombudsman is dwarfed by the profits of the big four supermarkets and there is no evidence that it would lead to an increase in consumer prices. With many farms going out of business because of unfair terms of trade with supermarkets, a fairer system for farmers is vital to ensure continued food production in the UK.

241 MPs have so far signed EDM 845 which raises awareness of the environmental and social damage driven by the global meat and dairy industry, and calls for action.

Tuesday 22nd September

A study by UK Water Industry Research called “Maximising the value of biogas” appraises technologies for producing biogas from sewage sludge. Conversion of biogas to biomethane, already well established in Europe and beyond, provides all the advantages of natural gas, from injection into the national grid to use as a vehicle fuel. For water companies the best application would often be the use of biogas in CHP systems, converting up to 40% of the energy contained in biogas into electricity. Measures to increase production of biogas from sewage include optimisation of digestion plant operation and pre-treatment technologies to ensure greater volatile solids destruction.

Wednesday 23rd September

Two of Brazil’s biggest beef traders, Berin and Marfrig, have undertaken to register and map all cattle ranches which supply them with beef and by 2011 to implement a traceability system from farms to slaughterhouses and processing facilities. They will also ensure that they don’t buy cattle from indigenous or protected areas or farms linked to slave labour, land

Friday 18th September

At the UN Bali conference an Indonesian Minister suggested that the world be allowed to 'rest' at least once a year, like a Day of Silence or the Hindu Nyepi (or indeed the Jewish Sabbath). He went on: "By conducting the ritual . . . we stop using electricity, motorised vehicles, air conditioners and factory machinery for at least one day." But there was not one response from any of the foreign participants. The Western creed of 24/7 production and consumption allows no time for reflection – as is obvious in the way the media present our politics. Hence, while countless political leaders have said we must radically change the way we do things, in the political domain at least, it is business as usual.

Saturday 19th September

A plan, known as Desertec, to harness solar energy in North Africa and transfer the renewable electricity to Europe has moved a step forward in Munich when 20 top companies including Siemens, Deutsche Bank, Munich Re and energy company RWE met to promote the project with a budget of nearly £338 billion. Desertec aims to build solar power plants in Morocco, Libya and Algeria provided

political conditions are stable. African countries would benefit by retaining a proportion of the electricity generated. The consortium sees the economic downturn as vital for stimulating such a huge project, since it will create new jobs and encourage other industries to go green.

Sunday 20th September

Lord our Creator, help us to reflect your nature by living creatively and generously instead of destructively and selfishly. Inspire us to be watchful and thoughtful in using the resources you have given us, remembering that one day we must give an account of our stewardship.

Monday 21st September

Commenting on DEFRA's new vision for sustainable food, FoE says that ministers are still fixated on GM crops, even though none have yet shown any higher yields, while the projected drought- and salt-resistant crops remain costly PR promises rather than commercial reality. In particular:

- The livestock sector globally requires ever-increasing quantities of energy, land and water, so

absorption and accelerates melting. Measures to reduce its effect include:

Requiring diesel particulate filters on all vehicles, new and old, and Restricting agricultural burning in northern countries during the springtime melt season, so as to reduce the impact of black carbon on snow and ice.

Friday 11th September

Commercial deployment of pre-combustion carbon capture & storage (CCS) requires 90% more fresh water than in a conventional power station. Also, the chemical reactions of the scrubbing agents would increase the hazardous waste while CCS could exacerbate local environmental problems tied to the extraction and transport of coal, damage to waterways and air pollution. Yet viable alternatives already exist. The greenhouse emissions for electricity generated by solar thermal or wind power are just 2-3% of the amounts for coal-fired CCS plants, while the emissions generated by advanced gas-fired CHP stations are about the same. Cost estimates for CCS by 2020 are 35-50 euros per ton of CO₂ – a 50% increase in electricity costs if

one assumes no increase in fossil fuel prices. In the 15-20 years required for deployment of CCS, renewable technologies such as offshore wind and solar thermal power plants could already be offering cheaper electricity, so undermining the argument that CCS can be a "bridge" to renewable energy.

Saturday 12th September.

Every country benefits directly from actions within its borders that release greenhouse gases, but the emissions have an effect on the whole global climate. Under the Clean Development Mechanism, carbon trading in 2006 and 2007 allowed \$19.5 billion to move from industrial to developing countries to enable them to develop low-carbon technologies, so preventing an estimated 1.5 billion tons of CO₂ emissions. But one problem with the CDM is that resulting avoidance of CO₂ emissions might not take effect for many years. However, it is clear, despite objections from FoE and others, that carbon trading is here to stay, so that the challenge at Copenhagen will be to turn CDM into a system which delivers real emissions reductions both in industrial nations and, in the longer term

allowing for much-needed development, in the rest of the world too.

Sunday 13th September

Father, we thank you when we see the hearts of the powerful melting before the demands of justice. We pray for those who are standing up for the poor and the exploited. Give them wisdom and insight, grace and patience, and the courage and endurance that come from you, so that justice and peace may reign throughout your world.

Monday 14th September

Can a new climate treaty be built on strong principles of equity? This depends on the answers to two questions:

How should rights to emit greenhouse gases be allocated?

Who should bear the costs of emissions reductions?

Four competing principles have been advocated:

Under the Egalitarian Principle everyone on the planet has the same emission allowance. So India, with a population 3.8 times the size of the

US, would be entitled to 3.8 times the US emissions allowance.

Under the Sovereignty Principle every nation reduces its emissions by the same percentage. For a 10% reduction, for example, the US would reduce its emissions by 579 million tons of CO₂ while India reduces hers by 141 million tons.

Under the Polluter Pays Principle, the US since 1950 has emitted ten times as much CO₂ as India, therefore the US bill for dealing with climate costs should be ten times greater.

Under the Ability to Pay Principle, allocating the burden of costs according to their wealth as indicated by GDP, the US burden will be about 12 times greater than India's.

In practice, any agreement on emissions allocation may require a mixture of principles. Some see the Egalitarian Principle as a long-term goal, with other principles being used as a route map towards egalitarianism.

Tuesday 15th September

Ideally, a new climate agreement would provide for a uniform high and rising global price for carbon emissions that would:

- (a) discourage the release of greenhouse gases and
- (b) raise money for adaptation measures, especially in developing countries, and for further emissions reductions.

All the world's religions can play a vital part in raising public awareness of the fact that everyone will need to contribute their talents and money, and to stimulate pressure on elected representatives to shift away from carbon-based energies and to create new ways of carbon accounting.

Wednesday 16th September

Forecasting future emissions in China and other fast-developing countries is immensely difficult as there are so many uncertainties. The Chinese view is that industrial nations should agree to firm emissions reductions while, if developing countries are allowed the flexibility to take voluntary action now, new technology and capital from developed countries will help them build their capacity for clean energy and emissions cuts, making it easier to negotiate binding targets later. Yet China is already the world's top producer of solar cells and is likely to lead the world in solar energy by 2012 with 30 GW. of installed capacity. Can

the world rely on voluntary action by China and India while the rest of us commit to binding targets? This will be a key question at Copenhagen.

Thursday 17th September

Dr. Stephen Wozniak, a public interest campaigner, writes:

"So when the reality of our impotence dawns, would any politician dare order genuinely painful and real sacrifices for no certain benefit? Would the millions of 'super-rich' give up their yachts, mansions, super-cars and hugely destructive lifestyles? Would politicians sacrifice their pensions and live modestly? Would ordinary consumers even stop eating meat and coveting luxury?"

Colin Challen MP asks: "Do politicians see themselves as society's leaders or society's prisoners? To be successful, a politician must on the one hand be a suitable subject for hero worship, but on the other hand be a humble servant of the people. The master/servant relationship usually cannot be combined in the same person, but that's what democracy expects." Perhaps fewer of our MPs would feel trapped in this dilemma if more of us gave them consistent and prayerful support.