

 **CHRISTIAN ECOLOGY LINK**

Aug 2008 Prayer-Guide

for

The Care of Creation



“You care for the land and water it; you enrich it abundantly.
The streams of God are filled with water to provide the people with corn,
For so you have ordained it.
You drench its furrows and level its ridges;
You soften it with showers and bless its crops.
You crown the year with your bounty, and your carts are overflowing with
abundance.”

(Psalm 65.9-11)

“Be careful, or you will be enticed to turn away and worship other gods
and bow down to them. Then the Lord’s anger will burn against you,
and he will shut the heavens so that it will not rain and the ground will
yield no produce, and you will soon perish from the good land the Lord is
giving you.”

(Deuteronomy 11.16-17)

“The earth is defiled by its people; they have disobeyed the laws,
violated the statutes and broken the everlasting covenant.
Therefore a curse consumes the earth; its people must bear their guilt.
Therefore earth’s inhabitants are burned up, and very few are left.”
(Isaiah 24.5-6)

Friday 1st August

Our dependency on fossil fuels puts us at ever greater risk as prices rise and the global demand for oil and gas continues to grow. This impacts particularly on the cost and availability of food. Farmers have been marginalized for so long that it takes an effort to understand that, without the cushion of fossil fuels, humanity’s future depends on devising a new system of agriculture that can meet the needs of a global population that is projected to top 9 billion by 2050.

Saturday 2nd August

Yields of world grains have fallen for six of the past seven years, bringing reserves to their lowest since the 1980s. Yet the world population is increasing by 75 million each year. In many food production areas, conventional farming practices have severely depleted underground water to the point where rivers and lakes have dried up, topsoil has eroded away and wildlife decimated. Conventional agriculture

is heavily dependent on both fossil fuels and water. The true costs of current food production methods are becoming only too clear – especially when we factor in the social impacts of global trading and the subsidised dumping of agricultural surpluses on poor Third World countries.

Sunday 3rd August

Lord Jesus Christ, through whom and for whom this universe was created, we mourn with you the death of forests, the fruitful lands that have become deserts, the animals left without grass, plants, insects, birds and animals threatened with extinction, people turned off their land and left homeless. As the earth cries out for liberation, we confess our part in bringing it to the brink of catastrophe. Through ignorance, but often wilfully, we thought we could serve God and mammon, unable to resist the temptation to spend and acquire more and more possessions, with little thought of the consequences for future generations. Saviour of the world, you call us to repentance; to be transformed by your love, to deny ourselves, to take up the cross and to follow your way.
(Maureen Edwards)

Monday 4th August

Conventional food production incurs the following hidden costs:

- 1,000 tonnes of water are consumed to produce just 1 tonne of grain;
- 10-15 energy units are spent for every energy unit of food on our plates;
- With processed foods, more than 1,000 energy units are used for every energy unit of food;
- 12-15 energy units are wasted for every energy unit of food transported per thousand air-miles;
- 20% of global greenhouse gas emissions come from agriculture, which produces 60% of all methane emissions and 70% of nitrous oxide;
- Nearly 90% of all agricultural subsidies benefit corporations and big farmers, while in the USA alone 500 family farms close down every week.
- Subsidised surplus food dumped on developing countries creates poverty, hunger and homelessness on a massive scale.

Tuesday 5th August

The benefits of organic, sustainable farming include:

- A 2-7-fold saving of energy from switching to low-input agriculture;
- A 5-15% saving of fossil fuel emissions by the sequestration of CO₂ in organically-managed soils;
- A saving of 5.3-7.6 tonnes of CO₂ emissions for every tonne of nitrogen fertiliser phased out;
- A saving, e.g. in Nepal, of 625,000 tonnes of CO₂ emissions a year through the harvesting of biogas from crop wastes;
- A 2-3-fold increase in crop yields, e.g. in Ethiopia, by using compost instead of nitrogenous fertilisers.

These are some of the results of studies carried out over many years and published by the Institute of Science in Society (ISIS).

Wednesday 6th August

Other results from experiments show that:

- Organic farming in the US produces yields comparable to those of conventional farming, but higher in times of drought;
- Up to 4 tonnes of CO₂ are sequestered in organic soils each year;
- Organic foods contain more vitamins, minerals and antioxidants than conventionally-produced foods;
- In the UK alone £50-78 million a year goes directly into the pockets of farmers trading in our 200 established farmers' markets;
- Buying food in a local farmers' markets generates twice as much income for the local economy as buying in a supermarket chain.

Thursday 7th August

The Green Revolution of the '70s-'80s packaged high-yielding varieties of crops with fertilisers, pesticides and irrigation. These led to increased yields initially, but yields fell when soils became depleted and degraded, so more and more fertilisers were used, pests developed resistance to chemicals and farmers increasingly suffered from the effects of pesticides and of fertilisers that contaminated the groundwater. The Green Revolution began in India's Punjab State. Now nearly 80% of groundwater there is officially describes as "over-exploited or critical." Norman Borlaug, father of the Green Revolution, and others are now offering a second Green Revolution in the form of GM crops, with the help of corporate charities such as Bill Gates's Alliance for a Green Revolution in Africa (AGRA)

Friday 8th August

The first Green Revolution between 1970 and 1990 increased the total available food by 11%, but (leaving out China where access to land was a crucial issue) the number of hungry people rose by more than 11% from 536 million to 597 m. The real cause of hunger in Africa is not the lack of food, but the impoverishment of its peoples due to the “free trade” policies imposed by the World Bank, IMF, WTO, the US and EU. The forced privatisation of crop marketing boards, which previously guaranteed minimum prices, and of rural development banks, left farmers without finance to grow their food and made it easier for buyers to import subsidised food from the US and EU rather than negotiate with thousands of local farmers. This effective dumping drove local farm prices below the cost of production and forced local farmers out of business.

Saturday 9th August

Christians will be well represented at this week’s Camp for Climate Action, which aims to stop the building of a new coal-fired power station at Kingsnorth in Kent. For details, go to: www.i58.org.uk There will be a café which will double up as a place of worship and a venue for workshops. For anyone wishing to link up with other CEL members, please email ruth@jarman11.wanadoo.uk

Sunday 10th August

Our Father, to whom we turn for bread day by day, your creative power has provided food for everyone. We remember our sisters and brothers who, like us, ask you for their daily bread, their cup of rice, the blanket for the night – and receive nothing. Let us realise where we have failed them, and where our consumer choices have caused their poverty. Let us repent, that there might be help for them and ourselves, so that together we may give thanks to you for everything that you give us, each day anew.

(Dr Ruediger Minor)

Monday 11th August

Cuba before 1989 was a model Green Revolution economy, dependent on vast quantities of imported pesticides and machinery to produce crops for export, in return for which it imported over half its food. After the fall of the Soviet Union it lost 85% of its trade, including both its food and its agricultural inputs.

Without those inputs, home food production fell and Cubans suffered a 30% reduction in calory intake.

In response, urban agriculture took off on a massive scale. By 1994 more than 8,000 city farms had sprung up in Havana alone. Large-scale, high-input monoculture systems were converted to smaller, organic or semi-organic systems, focussing on low-cost and environmentally-safe inputs and relocating production nearer to consumption in order to minimise transport costs. Land grants were issued by the State to aspiring farmers and new planning laws gave the highest priority to food production. The increase in consumption of home-grown fruit and vegetables has led to an improvement in health – just as it did in wartime Britain.

Tuesday 12th August

Cement manufacturing is one of the most polluting industries. Cemex UK, a major cement user, now burns up to 6 tonnes of shredded tyres per hour to power its cement kilns in Rugby and elsewhere. Since beginning to use tyres as a fuel, emissions of nitrogen oxide have fallen by about 40% and the use of fossil fuels has dropped by 24%. In Britain 40 million tyres a year are scrapped, so using them as a fuel has great advantages.

Wednesday 13th August

Under UN rules, the UK Greenhouse Gas Inventory is based on emissions generated solely within the UK. Now researchers in New York, Stockholm and Sydney have shown that our consumption-related CO₂ emissions rose by 115 million tonnes between 1992 and 2004. This is because CO₂ emissions embedded in imports rose from 35% of the total to 67%, while those embedded in exports increased from 31% to 45% over the same period. The conclusion: while Britain has made progress in reducing emissions at home, this has been offset by increased emissions in other countries from which we import goods and services. In other words, we are exporting our pollution to countries such as China, India and Russia.

Thursday 14th August

Greenland is rich in valuable minerals including uranium. Its MPs are pushing for Southern Greenland to be designated by UNESCO as a World Heritage site for its thousand-year history going back to Eric the Red. But mining for its wealth of minerals, including uranium, would preclude that designation. Now the government is proposing that only

five small “islands” be designated as World Heritage sites, so as to avoid possible conflict with mining interests – a classic case of the perennial conflict between short-term profit and permanent destruction of the environment.

Friday 15th August

The Government has proposed 30 sites as new “eco-towns” for providing some of the 3 million new homes required under Government plans. CPRE points out that many of the proposals are far car-dependent housing estates, with no working transport links. Two of the “eco-towns” lie in designated green belts. Most of the proposals go against local plans agreed with communities and therefore have no local democratic mandate, with site-selection based on arbitrary developer-led bids rather than sound planning in the wider public interest. However, CPRE appears to ignore the wider pressures coming from population increase.

Saturday 16th August

The EU is considering plans to improve fuel efficiency in cars by 25% over the next four years. But car manufacturers are lobbying for weaker targets on the grounds that the reduction is not commercially or technically viable within that period. FoE Europe points out that manufacturers are still promoting more powerful and higher emitting vehicles when more efficient alternatives are available. If all cars met the standard of the most fuel-efficient models, the proposed 2012 target of 120 g. of CO₂ per kilometre could be met today.

Volkswagen has revealed plans for a 1-litre microcar of ultra-light carbon fibre composite which can travel 100 kms. on 1 litre of petrol – with a fuel consumption of 235 mpg.

Sunday 17th August

Give us, dear Lord, a deeper understanding of your purposes, that we may be steadfast amid the stresses and strains that encompass us in our daily lives. May our faith never fail, nor our love grow cold, nor our hope become faint. So may we look up and lift up our heads, for your promises can never fail us as your Kingdom draws ever nearer, through the sacrifice of your dear Son, Jesus Christ our Redeemer and Friend.

Monday 18th August

Before enlargement of the EU in 2004, half a million farm-workers were leaving the land each year. Now it is likely that Poland alone will

lose up to 2 million agricultural livelihoods as a result of joining the EU. According to Caroline Lucas MEP, this relentless consolidation drives the heart out of the countryside, causing social and economic decay and replacing it with an intensive industry that cares nothing about plant or animal diversity or compassion in farming, but is solely interested in bringing down prices and maximising corporate profit. “Free trade” policies also encourage the dumping of subsidised goods from the North to the poor South, distorting local markets and leaving farmers in developing countries unable to compete.

Tuesday 19th August

EU and Government policies tend to emphasise a handful of major crops such as wheat, maize and oilseed rape which require large fertiliser and pesticide inputs and to ignore resource-conserving rotations, for which farmers receive no government incentives, or sustainable practices such as growing clover or alfalfa to enhance soil fertility. According to research organisation Sustain, governments, by funding research on chemical fixes for agricultural problems to the exclusion of research on sustainable options, tend to perpetuate chemical-intensive agriculture.

Wednesday 20th August

The International Commission on the Future of Food & Agriculture suggests that trade in agricultural products should be confined to whatever commodities cannot be supplied at local level, rather than export trade being the primary driver of production and distribution. Another recommendation is to promote the redistribution of land to landless and land-poor families. Research in South Korea, Taiwan, China and Cuba has shown that small farmers are more productive and more efficient and contribute more to regional development than do the larger corporate farmers.

Thursday 21st August

The International Energy Agency 2004 report on biofuels found that a 10% substitution for fossil fuels would require 38% of current cropland in Europe. As this is not available, biofuel crops are increasingly leading to the felling of rainforests in Malaysia and Indonesia to make way for palm oil plantations. Both countries are committed to producing 6 million tonnes of palm oil per year to feed the production of biofuels. The costs of our addiction to transport and travel become ever clearer as irreplaceable forests are destroyed to feed our addictions.

Friday 22nd August

GM crops have been largely rejected both by Europe and by African countries where GM food has been dumped as “food aid”. Now biotech companies are promoting GM bioenergy crops in the hope that they will attract less public opposition as they will not be used for food or animal feed. This leaves out of account one basic objection to GM crops of all kinds – the risk of cross-contamination of other crops and indeed of whole ecosystems by GM varieties that are far from safe and so far have not provided any increase in yields.

Saturday 23rd August

Can organic agriculture feed the world? Is there enough organic fertiliser to maintain fertility?

293 case studies from both temperate and tropical regions were reviewed by researchers from the University of Michigan. They found that average yields of organic and non-organic produce were about the same in both developed and developing countries, but in the developing world – where most food is needed and farmers can least afford the costs of synthetic fertilisers and pesticides – yield ratios of organic to conventional crops ranged from 1.6:1 to 4:1. Nitrogen availability is the main limiting factor. In organic farming this is derived from crop residues, animal manure, compost and green manure from legumes. In the tropics, legumes grown between other crops can fix a substantial amount of nitrogen in 40-60 days. The Michigan team saw two main challenges to a shift to organic agriculture:

1. Support from research institutions dedicated to agro-ecological methods of soil fertility and pest management;
2. Strong government commitment with policy changes to encourage a global shift to organic, sustainable agriculture.

Sunday 24th August

Father God, we thank you for providing so richly for the work of those, notably from the Farm Crisis Network, who dedicate themselves to supporting farmers and their families faced with critical situations. As harvest time approaches, we pray for a good harvest and fine weather. We pray especially for all in the farming community who are struggling with rising costs, fears of blue-tongue disease and the ever-increasing burden of regulation. May they know your peace. May they know that there are people who care and may they have the courage to ask for help. In the Name of Him who is with us always, your Son, Jesus Christ.

Monday 25th August

The UN Food & Agriculture Organisation’s 2007 report (Organic Agriculture and Food Security” explicitly states that organic agriculture can address global food security challenges. It defines organic agriculture as “a management system that avoids the use of synthetic fertilisers and pesticides, and genetically modified organisms, minimises pollution of air, soil and water and optimises the health and productivity of plants, animals and people.”

It refers to evidence from Ethiopia’s Tigray province (www.twinside.org.sg) that organic management there has doubled yields in arid and degraded soils. “Where climate change is expected to hurt the world’s poorest, a shift to organic farming could help people to cope with the rising level of global hungry.” It gives top priority to production that targets local food needs and local markets, allowing imports only for items not grown locally, and exporting high-value produce.

The report concludes that a shift to organic agriculture can produce enough food to feed the world’s population over the next 50 years. Solutions to pressing problems such as the growth in population and consumption, fossil fuel dependence, food security, transport and agricultural employment are all built in to the organic agriculture paradigm.

Tuesday 26th August

Research by David Pimentel et al. of Cornell University and published in BioScience found that one reason for the higher productivity of organic soils during droughts is their increased water-holding capacity. Other advantages:

- Conventional production of corn requires 5.2 kilocalories of energy per hectare, whereas energy inputs for organic systems were 28-32% less;
- Soil carbon gain after 22 years under conventional farming methods was 8.6% whereas it was 15.1% under an organic legume system and 27.9% under an organic animal system.

But the biggest gains from organic agriculture arise from savings on public health and environmental costs due to the use of agrochemicals in conventional agriculture. These amounted to \$59.6 billion in 2002 – 27.4% of the entire agricultural output of the US.

Wednesday 27th August

The Swedish Institute for Food & Biotechnology did a life-cycle analysis of tomato ketchup to work out the energy efficiency and impacts on global warming, ozone depletion, acidification, human toxicity etc.

The tomatoes were cultivated and processed in Italy, then packaged and transported to Sweden. Other ingredients such as sugar, vinegar, spices and salt were imported from elsewhere. The aseptic bags used for the packaging were made in Holland and transported to Italy, where the bagged tomato paste was put in steel barrels and moved to Sweden. The red bottles were made in the UK with materials from Japan, Italy, Belgium, the US and Denmark. The polypropylene screw caps were produced in Denmark and transported to Sweden. Polyethylene shrink film and corrugated cardboard were used to distribute the final product, which was then shipped via wholesalers to the shops, where it was bought by households and stored, refrigerated, for up to a year. Then the waste packaging was disposed of. Many other factors were left out of the calculation. The results showed that it required at least 4,190 units of energy to deliver 1 unit of ketchup energy and at least 2,290 kg. of CO₂ emissions per kg. of ketchup.

Thursday 28th August

Soils are an important sink for atmospheric CO₂, but this sink is being depleted by conventional agricultural land use, and especially by turning tropical forests into agricultural land. The Stern Review, referring to the fact that 17% of greenhouse emissions are the result of deforestation, suggested that putting a stop to deforestation would be the most cost-effective way of mitigating climate change, costing as little as \$1 per tonne of CO₂ emissions saved. Converting existing plantations to agroforestry and encouraging multiple uses of forest plantations are other ways of saving CO₂ emissions.

Friday 29th August

While GM developers continue to assure us that their products are safe, a string of studies report the opposite. For example:

- Thousands of Indian sheep died after grazing on post-harvest GM cotton fields (Science in Society 2006.30)
- Hundreds of Indian farmers and cotton handlers suffered allergic reactions from GM cotton (SiS 2006.30)
- In Australia mice given peas genetically modified with a gene from a common bean developed immune reactions and the decade-long project for transgenic peas had to be abandoned (SiS 2006.29)

- Dr. Irina Ermakova of the Russian Academy of Sciences found that female rats fed on GM soya gave birth to abnormal litters with excessive stunting and deaths, while the remaining offspring were sterile.

In the light of these studies it is a mystery why EU Agriculture Ministers now allow contamination of conventional food to the extent of 0.9% GM content.

Saturday 30th August

Scientists now agree that the exceptionally fertile 'black earth' found on the site of prehistoric settlements in the Amazon is due to the ashes and charcoal buried there to help crops grow. The particles can retain nutrients and water that would otherwise be washed down below the roots. They turn the soil into a spongy, fragrant, dark material. Eprida, a not-for-profit organisation in Atlanta, Georgia, is marketing an improved process designed not only to increase crop productivity but also sequester a lot of carbon in the soil. See www.sciam.com and SiS 31. 37-39 of 2006.

Sunday 31st August

Father God, grant us singleness of heart and strength of purpose, that no selfish thoughts may hinder us from seeking your will, and no weakness from doing it, but that in your light we may find light in today's burning issues, and in your service find perfect freedom, through your Son Jesus Christ our Lord.

Sources:

"Food Futures Now" by Mae Wan-Ho, Sam Burcher, Lim Li Ching and others
The Ecologist
Green Futures
www.edie.net

The September Edition of the Prayer diary will be put online at the end of August 2008.

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 and request this. Picture on front cover: St John's-wort

For further information and requests for prayer, please write or email:

Philip Clarkson Webb, 15 Valley View, Southborough, Tunbridge Wells TN4 0SY
Email: pcw@christian-ecology.org.uk Website: www.christian-ecology.org.uk

Christian Ecology Link Ltd is a company registered in England and Wales. Registered address: 3 Bond Street, Lancaster LA21 3ER. Company Registration No. 2445198 Registered Charity No. 328744. tel: +44 (0)1524 36241 info@christian-ecology.org.uk