

NATURE MATTERS

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Nature Matters is an electronic magazine covering wildlife and environmental issues.

Cover photograph:

A curious Bengal tiger cub peering through vegetation.
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Foreword

Welcome to issue 21 of Nature Matters.

This issue has a distinctly Indian flavour. The cover feature is about tigers and their precarious toe-hold in India. The issue has two other main features - one on Organic Farming in India and another on access to the countryside and the problems this is giving rise to.

As ever, I hope you find this issue informative, entertaining and thought-provoking and, if you do, please pass it on to colleagues.

Your comments and suggestions are very welcome.

MIKE ARMITAGE
EDITOR

Contact NM

Suggestions, comments and contributions are always welcome.

If you wish to submit an article or comment on the contents of the current or previous issues, please get in touch.

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Wind powers 2 million + homes

Wind power generation has increased by almost a third.

- Energy statistics reveal a 31% increase in wind power generation in 2009
- Renewables contribution to UK electricity mix up by 20%
- Wind energy now represents 2.5% of all UK electricity production

RenewableUK, the trade body representing Britain's wind, wave and tidal energy sector has welcomed figures today which show the percentage of electricity on the grid from wind power increased by 31.1% last year compared to 2008. In 2009 wind power in the UK produced 9,304Gwh of electricity or enough energy to power more than 2 million homes, the equivalent of around two thirds of households in Greater London.

The statistics, published by DECC as part of The Digest of UK Energy Statistics (DUKES) 2010, also reveal that between 2008 and 2009 the amount of electricity generated from renewable sources overall grew by 20% from 5.6% to 6.7% and the proportion of all UK electricity produced by wind power now stands at 2.5%.

Renewables can deliver 60% reduction in CO₂ by 2030

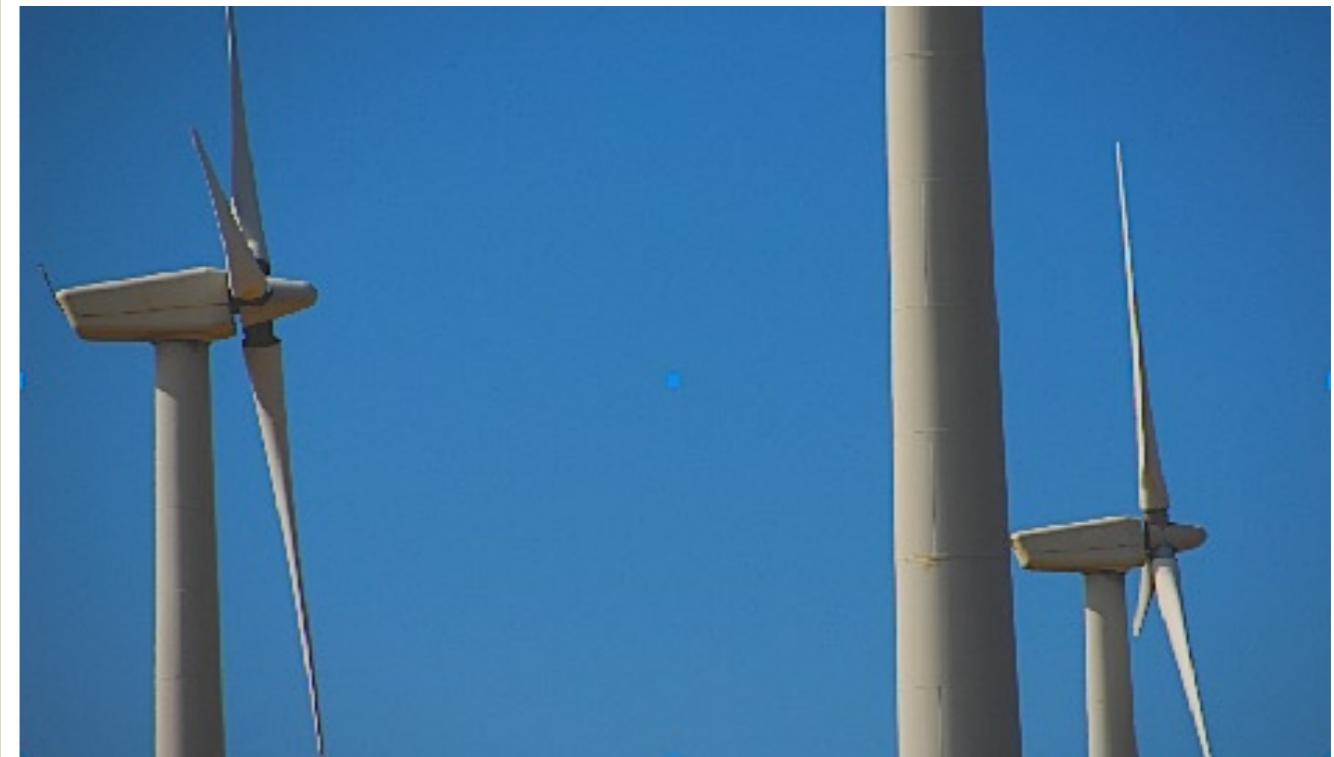
RenewableUK, the country's leading renewable energy trade association has supported today's recommendation from the Committee on Climate Change for a 60% reduction in carbon emissions by 2030. But the Association warned the Government against the introduction of tendering for low carbon capacity and emphasised the need for further investment in renewables.

Binding targets for carbon emission reductions by 2020 already exist, but RenewableUK said today's call for a 60% cut is the next logical step on the path towards decarbonisation of our electricity supply. The Association also stated that the target is well within current technological capabilities of the renewables sector.

Dr Gordon Edge, RenewableUK's Director of Policy commented:

"We very much welcome the Committee's carbon reduction announcement but we must warn against tendering of long-term contracts for low carbon capacity. Given

Wind turbines
© Mike Armitage



our unsuccessful experience of tenders during the 1990s under the Non Fossil Fuel Obligation we would strongly urge the Government not to go down this route.

"The 2020s will be a key decade in our journey towards decarbonisation of our electricity supply and we need clarity on the contributions of the various technologies so we can plan ahead and get the maximum benefit for the UK economy."

Commenting on the need for further investment in renewable technologies Dr Edge continued:

"Renewables have a key role to play in achieving these targets but investment will be needed to bring down the cost of these technologies. For example, significant investment will be needed in offshore technology over the next decade in order for it to deliver what is expected."

more information

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Trial of new 'paper' milk cartons

The cartons, made by Suffolk-based manufacturer GreenBottle, are made up of an outer casing created from recycled office waste paper, containing an inner plastic bag that holds the milk. The inner plastic bag can be manufactured from either low density polypropylene or a corn-starch based alternative..

GreenBottle milk cartons are made from recycled office waste paper. The cartons were tested originally by the East of England Co-operative Society.

more information

[<http://greenbottle.com/>]

Fantastic news for Welsh otters

The 2009-10 Otter Survey of Wales revealed that otters are now present at around 1000 sites in Wales. The survey is the fifth of its kind designed to track the presence of otters (as opposed to their number) as evidenced by the species' distinctive droppings known as 'spraints', and their five toe footprints. The last survey took place in 2002.

In west Wales the Rivers Cleddau, Teifi, Tywi and Loughor were found to be well populated by otters, as were the upper Severn and upper Wye in mid Wales.

New initiative to plant a million trees by 2015

The Big Tree Plant is a campaign to encourage people and communities to plant more trees in England's towns, cities and neighbourhoods. It is a partnership bringing together national tree-planting organisations and local groups working with Defra and the Forestry Commission to plant trees throughout England.

Anybody can get involved by planting and caring for trees to help make neighbourhoods more attractive, healthy places to live.

more information

[<http://thebigtreeplant.direct.gov.uk/index.html>]

OPINION

Vital for Green Products to become Cheaper and More Accessible

Products tagged 'eco' or 'green' always come at a premium. Such things as light bulbs, rechargeable batteries, eco-detergents, clothes..... you name it ... usually come with a premium price tag.

Some may claim that they contain more expensive raw materials.

But in order to get the general public on board and eager to buy green products , it is absolutely essential that this premium price tag is removed. Green products need to be cheaper and more accessible. This would come about if they were mainstreamed and seen as the norm, rather than something exclusive.

For the most part, I cannot see why this should not be the case.

The higher prices we have seen just mean that someone has felt that the green customer will be prepared to pay a premium for green credentials. However, I feel that someone is getting fat on the profits.

Green is no longer the hip and trendy alternative; green needs to become commonplace and regarded by everyone as 'the norm'.



Tractor, ploughing
© Mike Armitage

Green farming boosts bee numbers

New evidence suggests that conservation efforts by farmers have helped honey bee populations fight back.

Research shows that in 2010 honey bee colonies increased by 50% in the six months to October, reflecting the positive measures taken by farmers and beekeepers alike.

A survey by the British Beekeepers Association revealed that the number of colonies rose from 80,000 in March to 120,000 in October, with amateur beekeepers producing more than a third of all the nation's home-produced honey. On average, each hive produced 32lb of honey, worth £130 to the beekeeper, but providing an estimated £600 to the agricultural economy through pollination value. With about 270,000 hives in the UK, that equated to £200m in agricultural value, said BBKA president Martin Smith.

more information

<http://www.fwi.co.uk/Articles/2010/12/12/124720/Farm-conservation-boosts-bee-numbers.htm>

Public vote against government plans to sell off forests

The Government has abandoned plans to sell-off England's forests to private companies amid growing criticism.

Environment Secretary Caroline Spelman has made the announcement in the House of Commons, saying "we got this one wrong", as she halted the public consultation into the proposals.

Shadow environment Secretary Mary Creagh She also said she was removing the powers to push forward with the move from the Public Bodies Bill currently going through Parliament. She also thanked people for their support during the "difficult" issue, and said she took "full responsibility".

Ms Spelman was met with jeers and laughter from Labour when she claimed her aim throughout has been to secure the future of England's forests.

said: "Today the air is filled with the sound of chickens coming home to roost".

The news comes after hundreds of thousands of people united against the plans to change the ownership of England's 258,000-hectare public forest estate, many of them natural Tory supporters.

More than 500,000 people signed an online petition against the move.

Dormice take to the air

Dormice will be able to cross a new bypass safely, thanks to three special bridges costing £190,000.

The bridges are over the Church Village bypass near Pontypridd, Rhondda Cynon Taf, and are part of plans to protect ecology along the 4.6-mile road. The bridges consist of wire mesh tubes suspended between trees and tall poles.

The Countryside Council for Wales (CCW) said the "special treatment" for the dormice met EU rules and it criticised "negative reporting" of the matter. When completed, the tubes will be solid mesh to stop the dormice falling out.

As dormice live in trees as opposed to on the ground, their routes have to stretch between trees instead of along underpasses used by, for example, hedgehogs and badgers.

Newts, toads and slow worms have also been given new ponds along the £90m route.

The specialist work has been carried out by Rhondda Cynon Taf Council and contractors Costain, who were legally required to outline wildlife protection plans before the bypass was approved.

The Welsh Assembly Government has funded the bypass, including the dormice bridges.

Decision on English Badger Cull Delayed until May

By the end of February 2011, Ministers in England were expected to announce their policy on controlling TB in cattle by culling badgers. But now the measures will not be announced until after local council elections in May.

Defra said it wanted to “get it right” on the controversial policy, after delays to a similar cull planned in Wales as a result of a legal challenge by the Badger Trust.

Originally, under plans issued last year, farmers in England were to be issued with licences to cull badgers, to, in the government’s controversial view, help tackle rates of TB in cattle.

These plans would require farmers to meet the costs of culling and have come under intense criticism from animal welfare groups.

The RSPCA has claimed that the proposed badger cull to combat bovine tuberculosis in cattle could end up costing farmers more than an outbreak of the disease.

more information

<http://www.guardian.co.uk/environment/2011/feb/18/badger-cull-decision-delayed>

Welsh Badgers face renewed peril

The Badger Trust is deeply disappointed that the Welsh Assembly Government has resurrected its ill-conceived and counterproductive proposals to authorise the destruction of badgers in an area of west Wales. This is despite significant reductions in bovine tuberculosis over the last two years. Elin Jones, the Rural Affairs Minister, sought to justify a badger cull as somehow necessary to complement the range of measures already in place. The Trust will be studying the evidence presented to the Minister in detail and will seek legal advice in relation to the latest decision, which may also be subject to a challenge in the Welsh Assembly.

In a statement to Farmer's Weekly, the Minister does concede that there have been improvements in TB figures in the area. This reduction has taken place over two years without any badgers having been destroyed. However, the Minister seeks to underplay the significance of these results by claiming that there has been a cyclical pattern in the past. However, the Trust emphasises that this pattern was before the current stringent and effective cattle controls were introduced and took effect. (These measures had been recommended by scientists as the only solution for some time). These measures included improved surveillance and cattle disease controls, linking compensation to good practice, enforcing the testing regime, and establishing a regional approach to the disease. The Badger Trust has been recommending these measures for some time and believes that they should be given sufficient time to make their impact, before such drastic action as a badger cull is considered.

more information

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12 Help Stop Senseless Bycatch Killing

The food canner, Princes, has finally got the message that bycatch is killing the oceans and has announced that it will clean up its tinned tuna.

Thanks to emails, phone calls and advertising slogans sent by Greenpeace supporters, Princes has committed to ending the use of indiscriminate fishing methods which hoover up large numbers of marine creatures.

Greenpeace has just heard that Asda has made the same commitment.

This just leaves John West and Morrisons still relying on fishing methods which kill sharks, rays, other fish and even turtles.

Princes has pledged that by the end of 2014 all their tinned tuna will be caught by either pole and line or Fad-free purse seine nets. It's these Fads - or fish aggregating devices - which lead to unacceptable levels of bycatch of other marine species.

So what next? Despite having made significant progress since it came bottom of our 2008 league table, John West have once again become John Worst. The rapid shifts in the rest of the tuna industry mean it's now trailing well behind.

John West is now the worst offender of the tinned tuna brands in the UK.

Please help the Greenpeace campaign by emailing John West and Morrisons now (using the links below) and tell them to clean up their fishing methods.

more information

Campaign by Greenpeace - Contact Jamie Woolley
mail@mail.greenpeace.org.uk

Contact John West
<http://www.john-west.co.uk/contact/>

Contact Morrisons
<http://www.morrisons.co.uk/store-finder/about-customer-services/Contact-Us/>

How organic farming is making a comeback in rural India

How a crisis in rural farming in India resulted in a big U-turn in farming methods with some really remarkable successes.

Not so long ago, mankind lived a simple life in harmony with nature. Then modern lifestyles and the population explosion led to attempts to increase productivity on farms. Agricultural chemicals such as fertilisers and pesticides seemed, at first, to solve these problems.

The problem is that it left a dangerous legacy for future generations. The soil became poisoned and the plants that grew in it were weak, low yielding and prone to disease.

In India marginal farmers, despairing at successive crop failure, committed suicide by consuming the once "magical" pesticides.

The failed harvests came about as a result of intensive agriculture methods. But this has been a largely hidden humanitarian disaster.

Persuading farmers that success could result by going back to older, organic methods, was seen as the solution.

Organic farming is either really expensive or really cheap, depending on where you live and whether or not you are certified. Not only are the "natural" pesticides and fertilisers being increasingly marketed by agribusiness as costly or costlier than their chemical counterparts, but proving you are an organic farmer requires certification, which is time-consuming and expensive.

In the west, converting to organic agriculture is a

huge undertaking for commercial farmers, who have relied on chemical fertilisers and pesticides for many decades, but in India, the conversion is no less arduous, and far more ironic.

India's farmers are still mostly practicing organic methods, passed down for millenia. Organic fertilizer and natural pest control are the only tools available to most of these farmers, who have always lacked the financial resources to explore chemical solutions. But these farmers, whose produce is as organic as they come, cannot afford to pay the fees required to gain official certification.

The danger is that the well-intentioned global move towards organic standards will make small organic farmers in countries like India, who have been never done anything but organic farming, unable to sell their crops.

more information

<http://www.ecoworld.com/technology/organic-farming-in-india.html>
<http://www.satavic.org/>
<http://www.indianorganic.com/>



COVER STORY

TIGER, tiger, burning bright ...

The tiger has a precarious toe-hold on the planet. **Michael Armitage** looks at the situation in India, what progress has been made and what the future holds for this big cat.

The tiger, one of the most magnificent animals in the world, is also one of the most endangered. Of the eight original subspecies of tigers, three have become extinct within the last 60 years. Tigers are found in a variety of habitats, including tropical and sub tropical forests, evergreen forests, mangrove swamps and grasslands. In India, tigers are found in 19 states.

There has been steep decline in the tiger population all across the world. A WWF-WCS survey found that tigers have lost 93% of their historic range. In the last 10 years, tiger habitat decreased by an alarming 45%. The current tiger population in India is estimated to be only 1411 (with a minimum/maximum range of 1100-1600).

The decline in the tiger population in India can be attributed to many factors but the major reason is the growth in human population. Since independence large chunks of prime tiger habitats have been lost forever to agriculture and developmental activities.

To protect the tiger and to ensure its survival in the wild, WWF-India supports tiger conservation initiatives undertaken by the Government of India. The activities undertaken include strengthening protection measures in National Parks, Sanctuaries and Tiger Reserves, helping local communities to reduce their dependence on forest resources, mitigating human-wildlife conflict, providing a scientific database that will serve as a basis for sound management of tiger habitats, and capacity building for conservation of the species.

To better manage tiger habitats, forests have been demarcated as Tiger Reserves, National Parks and Wildlife Sanctuaries, also known as Protected Areas. There are 39 Tiger Reserves in India today.

Tiger conservation continues to face increasing challenges. However, it is still not too late. Through scientific, planned management interventions such as restoration of habitat and prey base, curbing human-tiger conflict and illegal wildlife trade, it may yet be possible to conserve viable tiger populations in the wild.

factfile

About the Tiger

The tiger is the largest of all the big cats. This magnificent animal is a heavily muscled and powerful predator that employs stalk and ambush tactics to bring down large prey, using its characteristic stripy coat as camouflage. Reaching up to 3.3 metres (11 ft) in total length, weighing up to 300 kilograms (660 pounds), and having canines up to 4 inches long, the larger tiger subspecies are comparable in size to the biggest extinct felids. Aside from their great bulk and power, their most recognisable feature is a pattern of dark vertical stripes that overlays near-white to reddish-orange fur, with lighter underparts. The most numerous tiger subspecies is the Bengal tiger while the largest is the Siberian tiger.

In the wild, tigers have a lifespan of 10–15 years, but, in captivity, they can live for more than 20 years. They are highly adaptable and range from the Siberian taiga to open grasslands and tropical mangrove swamps.

Tigers are territorial and generally solitary animals, often requiring large contiguous areas of habitat that support their prey demands. This, coupled with the fact that they live in some of the most densely populated places on earth, has caused significant conflict with humans. Three of the nine subspecies of modern tiger have become extinct, and the remaining six are classified as endangered, some critically so. The primary direct causes are habitat destruction, fragmentation and hunting.

Historically tigers have existed from Mesopotamia and the Caucasus throughout most of South and East Asia. Today the range of the species is radically reduced. While all surviving species are under formal protection, poaching, habitat destruction and inbreeding depression continue to threaten the tigers.

Tigers are among the most recognisable and popular of the world's large carnivores. They have featured prominently in ancient mythology and folklore, and continue to be depicted in modern films and literature. Tigers appear on many flags and coats of arms, as mascots for sporting teams, and as the national animal of several Asian nations, including India.

Population and distribution

In 2010 the population of wild Bengal tigers in India was estimated at fewer than 2,500. Of these, 1,165–1,657 are found in India, 200–419 in Bangladesh, mostly in the Sunderbans, 100–194 in Nepal and 67–81 in Bhutan. Tiger numbers have fallen dramatically during the past 100 years, and the trend remains downwards. Habitat loss and large-scale poaching are serious threats to the species' survival. The extent of area occupied by tigers is estimated at less than 1,184,911 square kilometres (457,497 sq mi), a 41% decline from the area estimated even in the mid-1990s.

Hunting and diet

Tigers prefer hunting large prey such as chital, sambar and gaur. They also hunt medium-sized prey species such as wild boar, and occasionally muntjac and langur monkeys. Smaller prey species like porcupines, hares and peafowl form a very small part in their diet. Due to the encroachment of human habitation into their habitat, they sometimes also take domestic livestock.

In most cases, tigers approach their victim from the side or behind from as close a distance as possible and grasp the prey's throat to kill it. Then they drag the carcass into cover, occasionally over several hundred meters, to consume it. The nature of the tiger's hunting method and prey availability results in a "feast or famine" feeding style: they often consume 18–40 kilograms (40–88 lb) of meat at one time.

Threats

The most significant immediate threat to the existence of wild tigers is the illegal trade in poached skins and body parts between India, Nepal and China. Wildlife crime has remained a low priority in terms of political

commitment and the governments of these countries have failed to implement adequate measures to prevent this. There are well-organised gangs of professional poachers, who move from place to place and set up camp in vulnerable areas. Skins are rough-cured in the field and handed over to dealers, who send them for further treatment to Indian tanning centres. Buyers choose the skins from dealers or tanneries and smuggle them through a complex interlinking network to markets outside India, mainly in China.

The illegal demand for tiger bones and body parts for use in traditional Chinese medicine is another reason for the demise of the tiger; its bones have been an ingredient in traditional medicines for over 1000 years.

Other factors contributing to their loss are human activity and development. Revenge killings by farmers who blame tigers for killing their cattle are also a factor.

Bandhavgarh National Park

Bandhavgarh is one of the popular national parks in India. It is located in the Umaria district of Madhya Pradesh and was set up as a national park in 1968. It covers an area of 105 km² but the buffer is spread over the forest divisions of Umaria and Katni and totals 437 km². The park derives its name from the most prominent hill of the area, which is said to be given by Hindu Lord Rama to his brother Lakshmana to keep a watch on Lanka (Ceylon). Hence the name Bandhavgarh (in sanskrit this means 'Brother's Fort').

This park has a large biodiversity. The density of the tiger population at Bandhavgarh is one of the highest in India. The park has a large breeding population of leopards, and various species of deer. Maharaja Abhishek Parida of Rewa captured a white tiger in this region in 1951. This white tiger, Mohan, is now stuffed and on display in the palace of the Maharajas of Rewa.

The Tiger Guards of India

The aim of Tiger Guards India is to donate equipment to the forest guards to encourage them to do their duties more diligently and thereby encourage anti-poaching activities.

Together with the conservation efforts to save tigers and their habitat, TGI also concentrates on social welfare schemes for the villages that surround the Bandhavgarh Reserve

Now TGI has decided to spend as much as fifty percent of the funds for social welfare, since the organization considers that there is an immediate need to make the villagers realise that Project Tiger is working in their interests not against them

more information

Sources of detailed tiger facts

http://en.wikipedia.org/wiki/Bengal_tiger
http://en.wikipedia.org/wiki/Bandhavgarh_National_Park

Tiger Reserves

For more details about the tiger reserves visit www.projecttiger.nic.in

Thanks

Early in 2010, I visited India and the Bandhavgarh Reserve and was lucky enough to see tigers at close quarters. I cannot explain what a profound effect India, its land, its people have had on me. It was a truly incredible experience.

My grateful thanks to Rajvardhan Sharma, "Raj", and the Tiger Guards of India at the Bandhavgarh Reserve for the many excellent sightings of birds and animals, including tiger, that I had during my stay.

soil association press release

Feeding the animals that feed us

A Soil Association report opens the urgently needed debate on how we can move away from feeding our farm animals grains and imported proteins and promotes more sustainable alternatives such as increased grazing and use of home-grown feed.

'Feeding the animals that feed us' aims to kick-start a discussion about the necessary improvements needed in the way we feed our livestock in the UK. A trend towards intensive factory farming systems over the past 60 years has meant that cows, chickens and pigs are now eating less grass and food waste and more grains and imported proteins like soya. This is a highly inefficient use of resources - the dependence on grain and soya imported from across the globe makes our food systems much less resilient and adds to the vulnerability and unsustainability of our food chain.

With the rising demand for meat and milk we are using ever more land and resources to feed farm animals - destroying rainforests and grasslands and contributing towards climate change in the process. Land-use change for the purposes of agriculture is one of the greatest threats facing the planet's biodiversity and is a key driver of climate change.

With climate scientists, public health professionals and environmentalists all saying we need to eat less meat and dairy products on both health and climate-change grounds, we also need to examine how the meat we eat can be produced more sustainably. Not all meat production systems have an equal impact, therefore the sustainability of our future food systems will depend not just on how much meat we eat, but also what we feed our animals.

Farm animals can play an important role in helping to tackle environmental challenges - helping us store carbon in grassland soils, recycling our waste food, providing nutrients to grow our crops, and giving us healthy food to eat.

Organic farmers have a head start in meeting the feed challenge - they are less reliant on grain, do not use soya from recently converted forest or grassland, and use more grass and silage to feed animals – but there are still improvements that can be made to organic production in the UK, with the intention of producing further environmental and animal welfare-friendly outcomes.

more information

<http://www.soilassociation.org/animalfeed.aspx>
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 press@soilassociation.org

soil association press release

Pressure on UK supermarkets to label meat and milk from GM-fed animals

Following a move by the world's second largest supermarket, the French chain Carrefour, to label foods derived from animals fed a non-GM diet the Soil Association has written to Tesco, Asda, Sainsbury's, Morrisons, Marks and Spencer and Waitrose to put pressure on them to do the same so UK consumers can make the choice if they want to avoid GM.

Although many of these chains have banned GM ingredients from their own-label products this ban on GM does not extend to the feed given to their livestock. Nearly all the non-organic milk, dairy products and pork in UK supermarkets are being produced from animals fed on GM crops, which means most consumers are unwittingly eating food produced from GM crops everyday.

Carrefour will use a green logo which reads 'Nourri sans OGM' or 'Reared without GM' which relates to about 300 products including eggs, poultry, pork, and farmed fish and will be extended to milk and dairy products. Carrefour made a decision to use the logo after research revealed that 96% of consumers backed honest labeling and 63% would stop eating products from animals reared on GM feed. Peter Melchett, Soil Association policy director, said

"This has long been a gaping hole in the non-GM policies of all UK multiple retailers. What is worse, there has been a complete lack of openness and honesty with customers. There is clear evidence that this misleads consumers into thinking that no GM crops are involved in the food chain in the UK. "It is no longer credible for UK supermarkets and food companies to claim that non-GM animal feed is not available, if the world's second largest multiple retailer is demonstrating that it is."

more information

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british ecological society press release

Crocodiles can cross oceans

The mystery of how the world's largest living reptile - the estuarine crocodile - has come to occupy so many South Pacific islands separated by huge stretches of ocean despite being a poor swimmer has at last been solved by a group of Australian ecologists. Publishing their new study in the British Ecological Society's *Journal of Animal Ecology*, they say that like a surfer catching a wave, the crocodiles ride ocean currents to cross large areas of open sea.

The estuarine crocodile (*Crocodylus porosus*) is a semi-aquatic reptile, living mainly in rivers, mangroves and estuaries. Its geographical range extends over 10,000 km² of the South-East Pacific, from East India to Fiji and from southern China to North Australia. Although it spends most of its life in salt-water, it cannot be considered a marine reptile in the same way as a turtle is, for example, because it relies on land for food and water.

Many anecdotal accounts exist of large crocodiles being sighted far out to sea, but this is the first study to show – using underwater acoustic tags and satellite tracking – that estuarine crocodiles ride surface currents during long-distance travel, which would enable them to voyage from one oceanic island and another.

The results explain why, despite occupying such a large range, species diversification of the estuarine crocodile has not occurred.

Working in the remote Kennedy River in North Queensland, Australia, Dr Hamish Campbell from University of Queensland and colleagues from Queensland Parks and Wildlife Service and Australia Zoo tagged 27 adult estuarine crocodiles with sonar transmitters and used underwater receivers to track their every move over 12 months.

During that time they recorded 1.2 million data packets and found that both male and female adult crocodiles undertook long-distance journeys, regularly travelling more than 50km from their home area to the river mouth and beyond into open sea.

The data showed that crocodiles always began long-distance travel within an hour of the tide changing, allowing them to go with the flow, and that they halted their journeys by hauling out on to the river bank when the tide turned against them.

The team – which included the late Steve Irwin ("The Crocodile Hunter") – also re-analysed archival data from the few crocodiles that have been satellite tracked whilst undertaking ocean travel. By overlaying the crocodiles' movements with surface current estimates they found that ocean swimming crocodiles showed a similar behavioural strategy when at sea.

One satellite-tagged crocodile – a 3.84 metre-long male – left the Kennedy River and travelled 590 km over 25 days down the west coast of Cape York Peninsula timing its journey to coincide with a seasonal current system that develops in the Gulf of Carpentaria.

A second crocodile – a 4.84 metre-long male – travelled more than 411 km in only 20 days from the east coast of Cape York Peninsula through the Torres Straits to the Wenlock River on the west coast of Cape York. The Torres Straits are notorious for strong water currents, and when the crocodile arrived the currents were moving opposite to its direction of travel. It waited in a sheltered bay for four days and only passed through the Straits when the currents switched to favour its journey.

According to Dr Campbell: "The estuarine crocodile occurs as island populations throughout the Indian and Pacific ocean, and because they are the only species of salt-water living crocodile to exist across this vast area, regular mixing between the island populations probably occurs.

"Because these crocodiles are poor swimmers, it is unlikely that they swim across vast tracts of ocean. But they can survive for long periods in salt-water without eating or drinking, so by only travelling when surface currents are favourable, they would be able to move long distances by sea. This not only helps to explains how estuarine crocodiles move between oceanic islands, but also contributes to the theory that crocodilians have crossed major marine barriers during their evolutionary past."

The study was supported by Australia Zoo, the Queensland Parks and Wildlife Service, the Australian Research Council and the late Charles Tanner.

The paper 'Estuarine crocodiles ride surface currents to facilitate long distance travel' is published in the *Journal of Animal Ecology* on 8 June.

more information

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Access all AREAS

Access to the countryside is a privilege that carries with it many responsibilities. Editor **Mike Armitage** feels that there should be a national debate about the negative effects of our increasing use of it.

Access is a major current buzzword. But access to the countryside is a serious matter and should not be taken lightly. It should also carry with it a serious responsibility for the land and its wildlife. Far too many of those who access it are abusing it. Many are, for example, toileting their dogs (most country parks today are not wildlife havens but dog toilets), trampling rare plants or throwing litter.

Access from a human health and wellbeing point of view is great but undoubtedly people + greater access to countryside = more disturbance to wildlife. It simply does not add up!

Some species can of course tolerate a certain amount of human presence but many, particularly shy and rare species, cannot and for them it simply marks another nail in their coffins.

Many species are in decline, some sharply so, and this is blamed on a range of factors from climate change to habitat loss but disturbance must also be playing its part in their demise. Again increasing human population levels are a root cause of these problems.

I am also concerned that some wildlife organisations are encouraging large numbers

continued on page 24

**Boardwalk through
Nature Reserve**
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of people into the countryside, viewing it simply as a leisure facility. In doing so, they may be turning a blind eye to the negative effects because money is flowing into their coffers.

Businesses are also seeing the countryside primarily as a means of making money. Every leisure activity you can think of is now making use of the countryside - canoeing, mountain biking, cycling, 4-wheel driving, hang-gliding ... you name it and it's taking place in the countryside.

But there are concerns that there is no balance here and I believe that birds

and animals are suffering increased disturbance.

The public may be paying for the privilege of enjoying the countryside, but I feel that wildlife may well be paying the ultimate price.

We are not the only species on the planet and our needs should not be viewed as paramount.

I feel that we need a national debate on this subject and perhaps a different mindset where consideration for wildlife and the countryside is given greater weight than it has been to date.

Diary & Events

People's Trust for Endangered Species

The People's Trust for Endangered Species has published its 2011 Forward Planner with activities ranging from their public Hedgehog Street campaign to save this iconic British species, to annual public surveys charting the nation's mammal populations, to a national inventory of traditional orchards, dormouse reintroductions, and more.

more information

www.ptes.org

Susannah Penn | Firebird Public Relations Ltd | 01235 835297

Badger Trust 2011 Conference

This is not just a Conference, it enables groups to meet, exchange news, share problems, thoughts for the future and to socialise together. It can only continue if it is well supported. The Conference will, as always, include an excellent programme of Speakers, talking on a wide range of subjects.

Dates: Friday 29 to Sunday 31 July

Venue: Sheffield University

Hosts: South Yorkshire Badger Group

more information

www.badgertrust.org.uk

press@badgertrust.org.uk

tAiLpieCE

A fishy tale

On Tuesday this week, Redondo Beach awoke to find a fishy blanket in their marina. Thousands of silvery sardines floated in the King Harbour marina; millions more had sunk to the bottom.

Was it a pollution incident on the Southern California coast. No, said officials, this was a natural event. Their immediate concern was to clear away the result, but the cleanup could take days or even weeks, and would soon create a pretty hefty stink!

Authorities said it appeared that a massive shoal of sardines was chased toward shore, driven by a spring storm that brought winds of 45 miles per hour off the coast last weekend. A pod of migrating whales was also spotted offshore and this probably also had an effect in driving the fleeing fish in-shore.

So the sardines headed for safety and into the picturesque complex of four marinas, home to 1,400 boats and there, they were trapped and with such large numbers of fish, quickly used up the oxygen in the water, and suffocated.

State wildlife officials sent a batch of the fish to Sacramento, where they will undergo physical checks and chemical analyses. But they described that process as a formality; two independent water samples conducted Tuesday revealed no trace of toxins, nor any oil slick, nor any suggestion of an algae buildup that has caused problems in the past.

"It is a naturally occurring – but unusual – event," said Andrew Hughan, a spokesman for the California Department of Fish and Game. "It's just a mess."

Redondo Beach relies mightily on its waterfront and has reason to be sensitive about this sort of thing.

Massive, stinking fish kills have struck King Harbour before, in 2003 and 2005. Both times, algae blooms robbed the harbor waters of life-enriching oxygen, causing fish to suffocate and die. This episode, meanwhile, could get worse before it gets better.

Authorities and dozens of volunteers were skimming floaters from the water Tuesday – they will be recycled and turned into fertilizer – and dive teams were expected to begin assessing how to siphon fish from the bottom, potentially with a giant vacuum cleaner.

However, an enormous task lies ahead. In the meantime, the fish will begin to decompose. That will draw bacteria, which will, in turn, consume more oxygen, Scheiwe said. More mass deaths are possible, and could fell large numbers of the fish more commonly seen in the harbor, namely mackerel and perch.

