

World's food supply under 'severe threat' from loss of biodiversity

The State of the World's Biodiversity for Food and Agriculture, (Report by the Food and Agriculture Organisation of the UN, published 22 February 2019 by Belangier et al), at (<http://www.fao.org/3/CA3129EN/CA3129EN.pdf>)

Plants, insects and organisms crucial to food production in steep decline, says UN

The world's capacity to produce food is being undermined by humanity's failure to protect biodiversity, according to the first [UN study](#) of the plants, animals and micro-organisms that help to put meals on our plates.

What is biodiversity for food and agriculture? (the following section copied from the report.)

Biodiversity is the variety of life at genetic, species and ecosystem level. *Biodiversity for food and agriculture* is the subset of biodiversity that contributes in one way or another to agriculture and food production. It includes domesticated plants and animals raised in crop, livestock, forest and aquaculture systems, harvested forest and aquatic species, the wild relatives of domesticated species, other wild species harvested for food and other products, and what is known as 'associated biodiversity', the vast range of organisms that live in and around food and agricultural production systems, sustaining them and contributing to their output. Agriculture is taken here to include crop and livestock production, forestry, fisheries and aquaculture.

(The next two section copied from articles from the Guardian, by Jonathan Watts, Damian Carrington and Paul Brown, from articles published in February 2019)

The FAO report has been compiled from data from 91 countries. It found that 63% of plants, 11% of birds and 5% of fish and fungi were in decline. Pollinators, which provide essential services to three-quarters of the world's crops, are at great risks. As well as the decline in bees and other insects, the report notes that 17% of vertebrate pollinators, such as bats and birds, are threatened with extinction.

Agriculture is often to blame, owing to land-use changes and unsustainable management practices, such as overexploitation of the soil and a reliance on pesticides, herbicides (such as Roundup, which is mainly glyphosate – which is probably carcinogenic and neonicotinoids with names such as Imidacloprid, a poison that remains in all parts of the plant and in the soil)) and other agrochemicals. Then there is too much reliance on a small number of species (Maize, rice, wheat, potatoes, soy-beans – e.g for *cattle-cakes*, oil palm fruit – for oil – if it says 'vegetable oil' on a list of ingredients tends to be *palm oil*, sugar beet, cassava and sugar cane). Expanding mono-cultures are disastrous for biodiversity. Reliance on a small number of food plants may well lead to famine, as it did in Ireland in the 19th century. Many countries can now only feed inhabitants through imports.

Land conversion, where forests are cut down and fields and meadows are concreted over for cities, factories and roads.

“Around the world, the library of life that has evolved over billions of years – our biodiversity – is being destroyed, poisoned, polluted, invaded, fragmented, plundered, drained and burned at a rate not seen in human history,” according to Michael Higgins, president of Ireland at a conference on 21st of February in Dublin. If we were coalminers we’d be up to our waist in dead canaries.

Soils are losing small soil-dwelling organisms as well as earthworms: there are 3 types of worm – those that live on the surface, others that feed and dwell in the soil, and a third group that make deep burrows and come to the surface to feed on dead leaves. All are vital to the health of the soil, providing nutrients and drainage. Particularly at risk are the surface dwellers which have vanished in some fields in Britain as a result of intensive farming practices, such as deep tillage and overuse of chemicals. Their disappearance means poor soil fertility, lower crop yields and loss of carbon from the soil, a factor exacerbating climate change. It also may well have given rise to the crash of the song thrush population, which relies heavily on this type of worm to feed its young in the spring.

Plummeting number of insects threatens ‘Catastrophe for planet (11-02-19)

Insects

More than 40% of insects are declining and a third are endangered. And if you think that the extinction of wasps is a good thing, you may be amazed to hear that wasps are also useful pollinators!

According to the WWF in its new journal *Impact* (Spring 2019): **Join the Fight for UK Nature:**

“Today, the UK is one of the most nature-depleted countries in the world. Since 1970, 56% of species have declined and more than one in seven native species faces extinction. But we have a chance to help nature recover, if we act now. We need your support for a Westminster Environment Act that will set ambitious, legally binding targets to restore a healthy and resilient environment, tackle climate change and help native wildlife to recover. Please make your voice heard today at www.org.uk/fightfornature. The journal adds a page about wild-life friendly vegetables, which I copied for you as well.

What can we do personally, apart from signing the petition above: grow and/or eat organic food, don’t use any pesticides or herbicides, such as Roundup (and not a lot of fertilizer either!).

An email journal I receive, gives hints about pest control by organic methods as well as the use of liquid soap and vegetable oil (but not *palm oil*, please\0 to spray on plants, or what helps as well: some cloves of garlic left in a bowl of water, these make a good insect-chasing spray. Using chilli can chase some larger pests, such as squirrels from where you don’t want them.

Please help to avert this looming food crisis!