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HELPING BIODIVERSITY BY SARA W.

Biodiversity has become a more familiar topic with folks around the world. But what is it? According to National Geographic **“Biodiversity refers to the variety of living species on Earth, including plants, animals, bacteria, and fungi.”** The earth is full of a vast amount of biodiversity, so much so that there are still many species yet to be discovered.

In 2019 a report by the UN came out warning us that one million species are at risk of extinction. This global assessment brought awareness to the window that is quickly closing on the protection of biodiversity and having a healthy planet for all of us to live on.



Unfortunately, all of the biodiversity on our planet is threatened due to human activity. For example, there is a nationwide obsession with having ‘the perfect lawn’ with no weeds, evenly cut grass, monoculture plants and no insects of any kind.

Without insects we don’t have any birds and the population of all animals degrades from there, plus **99% of all insects are beneficial.** The way of chemical landscaping is causing a lot of harm to biodiversity. With or without knowing it, a lot of gardeners, do-it-yourselfers, agriculture and landscape professionals have done massive destruction to our soils, insects, and population as a whole. Weed & Feed, chemical pesticides and ignorance has demolished biodiversity for aesthetic reasons.



But there is a solution: Organics promote embracing biodiversity and working with Mother Nature, instead of against her. When you decide to go Organic, you are caring for all life that roams Mother Earth, which is hugely beneficial for everyone and everything. So, let’s put down the chemicals and show biodiversity some love with Organics. What a dull world it would be if every lawn and everything was the same. **Embrace and enjoy biodiversity.**

Sara Wissinger

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BROWN PATCH IN YOUR LAWN?

HOW TO AVOID, PREVENT & CURE IT.



Brown Patch, caused by *Rhizoctonia Solani*, is a turfgrass disease that may affect St. Augustine & Zoysia grasses in the Fall. The Brown Patch disease likes cool temperatures, high humidity, excess water - all of which is brought on during Fall.

'May affect' are the operative words because Brown Patch is largely an avoidable problem. In the Organic world we do not see *Brown Patch* as a major problem. Conversely if the property is maintained chemically then Brown Patch is most likely to occur each & every year.

Avoiding & preventing Brown Patch: It's all about soil health. Healthy soils will prevent Brown Patch from taking hold as the good microbes 'beat up' on the bad microbes. Good microbes need oxygen & a clean environment. (**Just like us!**) Soil pathogens (soil diseases) are anaerobic & like the exact opposite. Soils go anaerobic when they are compacted & too much water is applied.



Most turfgrass areas are maintained on compacted soils. Chemical applications further compact the soil & the property owner generally applies way too much water. The result ... Anaerobic soils that are conducive to Brown Patch growth. The solution for many homeowners & lawn professionals is to apply a chemical fungicide in response. **That is absolutely the wrong thing to do!** Chemical fungicides are toxic poisons that kill good microbes & only temporarily abate Brown Patch.

Without the good microbes to protect the turfgrass, Brown Patch becomes a recurring problem.

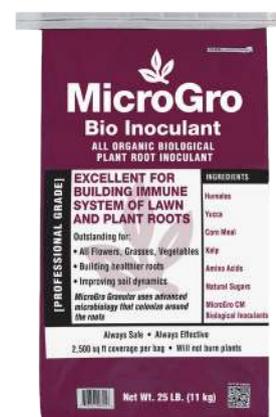
The Organic approach, by solving the core issue of soil health, will solve the problem on a permanent basis & will do so safely. This is important because all chemical fungicides are dangerous to humans & animals.

TO AVOID & PREVENT BROWN PATCH IS PRETTY EASY. JUST FOLLOW THESE STEPS:

- *Never* use chemical fertilizers as they compact the soil.
- *Never* use chemical fungicides as they kill off the natural enemies of *Brown Patch*.
- *Remember* the Fall Equinox, September 23RD. At that date turfgrass physiologically changes. It goes from active growing to its dormant state. This means it needs much less water.
- *Avoid too much water!* Most people remembering the hot Summer, forget to turn their turf irrigation water down. As a general rule, after September 23RD, turfgrass does not need more than one irrigation per week.



- *Throughout the year* only use quality **Organic** fertilizers like MicroLife to loosen the soil & increase the good microbes population numbers.
- *To further prevent & treat Brown Patch* apply a well proven Bio Inoculant like **MicroGro** which colonizes around the root system, protecting the plant from harmful root pathogens.





WANTED: BROWN PATCH

DEAD

OR

ALIVE



TWO GREAT PRODUCTS TO USE :

Fertilize & Fight Brown Patch:

Fight Brown Patch:



Brown Patch 5-1-3

Fall fertilizer & fights Brown Patch at the same time

Rate: 20 lb per 1,000 sq ft



MicroGro Bio Inoculant

Add to the active brown patch area & 5' perimeter around

Rate: 10 lb per 1,000 sq ft

Also, make sure that the irrigation is turned down. If the turf is treated early enough then we will still have a chance for the turfgrass to grow before it goes completely dormant.

REWARD: HEALTHY LAWNS

BIODIVERSITY LOSS IS A RISK TO THE GLOBAL FINANCIAL SYSTEM

GEOFF SUMMERHAYES & LAURA WATERFORD | THE GUARDIAN



The world's biodiversity is declining faster than at any other time in human history, and an estimated 1 million species are at risk of extinction. Corporate Australia is familiar with the concept that climate change presents a financial risk to the global economy, but more recently biodiversity loss has emerged as an equally important risk.

In fact, **climate change** and **biodiversity loss** are now often referred to as the **"twin crises"** facing the global financial system and awareness of the role the financial sector plays in this is rising swiftly. Crucially, a recent global review on the economics of biodiversity commissioned by the UK government, often referred to as "The Dasgupta review", concluded that our economic system is dependent on biodiversity. This fact is rightly of concern to the financial sector, given the world's biodiversity is declining faster than at any other time in human history, and an estimated 1 million species are at risk of extinction.

Just last month the G7 climate & environment ministers acknowledged "with grave concern that the unprecedented & interdependent crises of climate change & biodiversity loss pose an existential threat to nature, people, prosperity & security".

There are potential parallels between nature risk and other responsibilities of financial institutions, like anti-money-laundering requirements. Just as financial institutions have a responsibility to ensure that they are not a conduit for money used to do harm through criminal activity, **there is a growing sense that the finance sector has a responsibility to manage the economic risks associated with nature degradation** – and ensure they are not a conduit for finance that is destroying nature.



In this context, an international Taskforce on Nature-related Financial Disclosures (TNFD) launched last month. Over the next two years, the TNFD will develop a framework for corporations and financial institutions to report on nature-related physical and transition risks that include immediate, material, financial risks, as well as nature dependencies and the impacts on organizations and societal risks.



Ultimately, the TNFD also has the potential to divert the flow of capital throughout the global financial system **away from activities that cause the destruction of nature**, or are "nature-negative", & towards those that are "nature-positive".

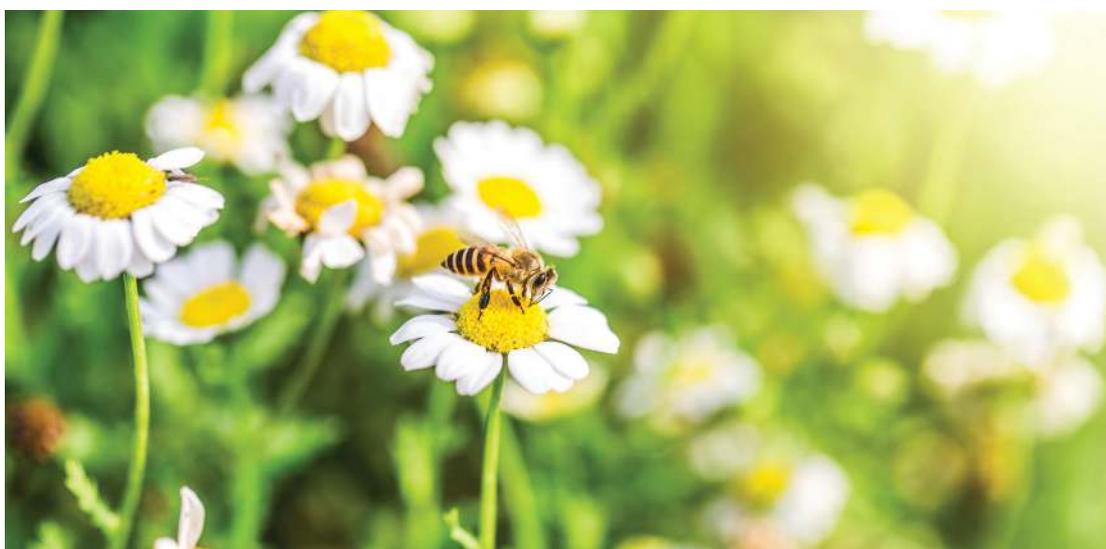
Perhaps most importantly for Australian company directors, the discourse on nature risk now appears to be at a similar point to climate risk half a decade ago – when the seminal legal opinion by Noel Hutley SC & Sebastian Hartford-Davis on directors' duties & climate risk was published.



BIODIVERSITY LOSS IS A RISK TO THE GLOBAL FINANCIAL SYSTEM

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This means that, depending on the particular facts of the case, it is possible a court could find that nature risks are capable of representing a foreseeable risk of harm to the interests of Australian companies today. It follows that a director who fails to properly consider these risks could be held personally liable for breaching their **“duty of due care and diligence”** to the company under the Corporations Act, to the extent that the risks intersect with the interests of the company.



One example of physical nature-related risk is pollinator colony collapse. **Around one-third of our food is pollinated by bees and their pollination services are worth several billion dollars a year to the agriculture sector.** However, bee populations across Europe, the US and China have been devastated, and it is foreseeable that Australia could be next.

Our bees are under threat from outbreaks of disease and parasites, as well as a long list of other pressures such as pollution, the use of pesticides, intensive agriculture, the introduction of alien species and climate change. This is a material risk for many Australian businesses throughout the agricultural supply chain, and directors should be considering how it could affect the financial position of their companies.

In terms of transition risks, there is the potential shift in investor and consumer behaviour to consider. Consumer preference for sustainability conscious products has been growing for some time.

On the investment front, widespread interest in Climate Asset Management – a recent joint venture by Pollination & HSBC that **aims to invest more than US\$6 billion into natural capital** – has demonstrated that there is emerging appetite for investment in nature-positive assets at scale. It is likely only a matter of time before divestment from nature negative assets follows.

Finally, if a new biodiversity framework is agreed at the UN Biodiversity Conference in October this year as expected, directors may also need to consider regulatory transition risk in the context of both Australia and our major trading partners.

When all of these factors are taken together, it is clear that nature risk will become the next climate risk. All business directors should take steps now to avoid being caught flat-footed on nature risk.

[READ FULL ARTICLE HERE](#)

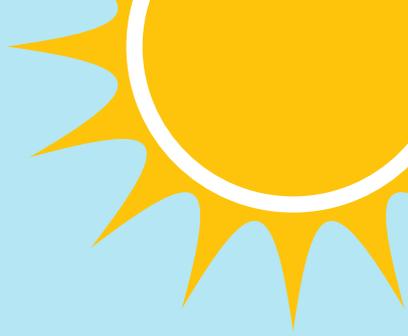
Article Source: <https://www.theguardian.com/commentisfree/2021/jul/04/biodiversity-loss-could-wreck-the-global-financial-system-and-its-only-a-matter-of-time>



It is arguable that this duty already exists because many of the factors that informed 2016 climate risk opinion are now also true for nature risk, or may be in the near future.

For example, there is a body of evidence which demonstrates that Australia is exposed to nature-related physical risks given the fragile state of ecosystems such as the Great Barrier Reef and the Murray-Darling basin. Reduced ecosystem function (for example, a reduction in ecosystem services such as pollination, temperature regulation or water purification) and its effects – that is, the associated physical risks – are already intersecting with the interests of Australian companies.

FALL VEGGIE CARE



THE FALL VEGGIE PROGRAM



+



+



Ultimate 8-4-6

MicroGro Granular

Ocean Harvest

Most complete, nutritious, non-burning veggie fertilizer EVER!

Biological Root Protection

Liquid Organic Nutrition

1. At time of planting, work in **MicroLife Ultimate & MicroGro**.
 2. Water in with **Ocean Harvest** & foliar spray every 2 weeks.
- Voilà, now you're set for the best veggies ever!**

CHECK OUT THE NEW MICROLIFE GUIDE TO FALL PLANT SUCCESS!



Guide To Fall Plant Success

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THE INTERRELATIONSHIP BETWEEN MICROBIAL COMMUNITIES

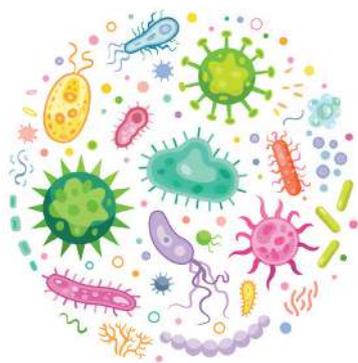
LELA NARGI | SALON MAGAZINE

“No man is an island entire of itself,”

wrote English poet John Donne, referring to the interconnectedness of the human species, and our societal dependence on each other. Almost 400 years later, ongoing research into microbiomes shows that interconnectedness is bigger and also much, much smaller than we once imagined. And it indicates that the health of all life on this planet — including our own — is predicated on communities of minuscule microorganisms, working in tandem, that proliferate everywhere around and in us.



As quickly as we’re learning about the essentialness of these systems, though, we’re also actively destroying them with a variety of unsustainable practices. These have grave implications for climate change and the ways it affects disease, ecosystem function and food security.

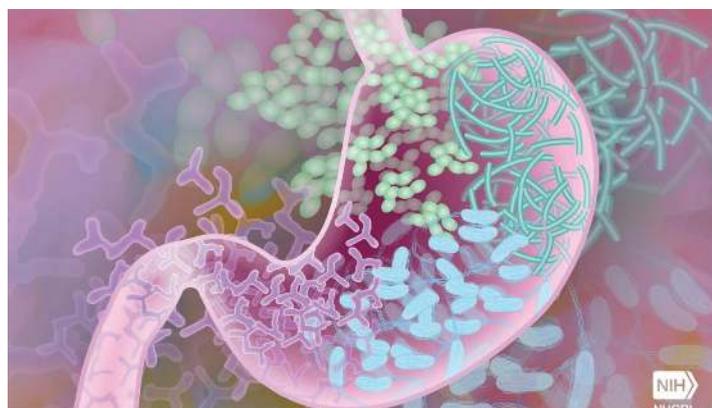


What Is a Microbiome?

Simply put, a microbiome is a community of microbes — eukaryotes, archaea, fungi, viruses, bacteria — that act together both with and within a specific environment. They are directly responsible for the health of that environment and the way it functions, collaborating to confer benefits that can help an organism thwart stressors and invaders, and making it overall more resilient; conversely, when their composition is altered, their environment is altered, too, and the organisms in it can suffer as a result.



Scientists have known of the existence of microbes for decades but it’s only relatively recently that there’s been a massive global effort across multiple disciplines to map & characterize various microbiomes & the microbes that populate them, and to analyze their individual & communal roles in keeping their environments working well. **We’re now beginning to understand that microbiomes basically run the whole planetary show:** absorbing & releasing carbon, breaking down dead matter & turning various elements into nutrients that then act as food for plants & animals (including people).



No matter what or where the microbiome — **air, ocean, our bodies or beyond** — its microbes **“are a translator of food into health or, if they’re corrupted, into disease,”** says Emeran Mayer, a gastroenterologist at the David Geffen School of Medicine at UCLA whose new book, *The Gut Immune Connection*, delves into some of the finer points concerning human microbial communities. “If you compromise the translator, you get the wrong results at the other end.”

THE INTERRELATIONSHIP BETWEEN MICROBIAL COMMUNITIES

LELA NARGI | SALON MAGAZINE

There's an atmospheric microbiome, in which "single-celled organisms float... through the air," writes Caleb Scharf for Scientific American. For more than 40 years we've been studying the ocean microbiome, which contains mostly bacteria, archaea, & protists like algae & accounts for about 90% of all life under the sea; it also produces half the earth's oxygen & influences our weather. **Alteration to the ocean microbiome is causing warming waters & overgrowths of harmful algal blooms that choke out other life.**

Here, though, we take a closer look at two other elementary and essential biomes: the one that exists in soil, which is inextricably linked to the one that exists in the human gut.



The Soil Gut Microbiome Connection

Researchers involved in the Earth Microbiome Project have been concertedly studying the soil microbiome since 2010, and have made all kinds of revolutionary strides in piecing its mechanisms together. For example, we now know that a spoonful of agricultural soil contains **30,000 taxonomic varieties of microbes**. Among them are several yards of fungal filaments that convert dead matter to biomass, or attach to plant roots to boost their nutrient uptake;



Up to a billion bacteria that convert nitrogen gas into compounds that "feed" those plants and other organisms; a few dozen nematodes and a few thousand protozoa that keep bacterial populations in check, mineralize nutrients and protect plants from pathogens.

When the soil microbiome is healthy and in balance, it directly, positively, affects the health of the plants that grow in it & protects them from drought or pests, for example. It can shove out pathogens trying to attack plants, produce toxins to kill them off & also trigger the plants to defend themselves. It also has other critical ecosystem functions; most notably, it acts as a carbon sink, helping keep atmospheric carbon in check for a critical climate benefit.

The Human Microbiome Project, another enormous and cross-disciplinary area of study funded by the National Institutes of Health (NIH) from 2007 to 2016, was instrumental in beginning to tease out the connection between the soil microbiome and our gut microbiome, which both contain approximately the same number of active microorganisms. (There's also a connection between the human gut microbiome & the ocean microbiome; they share about 73% of their microbes in common.) The soil microbiome likely evolved in tandem with the human microbiome and its estimated 39 trillion microbes that occupy our noses and mouths, our armpits and the palms of our hands, and most of all, our guts — particularly our large intestines. Our health is not only predicated on the activity of the microbes in our guts, but on the microbes we ingest both directly (from purposeful geophagy, or accidental dirt ingestion) & indirectly (in the form of plant crops) from the soil.



[READ FULL ARTICLE HERE](#)

Article Source: https://www.salon.com/2021/07/01/the-connection-between-soil-microbiomes-and-gut-microbiomes_partner/

3 Awesome Ways to Continue Organic Education:

OHBA E-list



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Healthy Soils, Healthy Plants, Healthy People

UPCOMING OHBA EVENTS:

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OCTOBER 2021



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with Mark Merriwether Vorderbruggen, Ph.D.

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Wednesday, October 27TH
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More Info. Coming Soon!