



Soil.....

SUSTAINABLE
SOILS
ALLIANCE

You've heard of
outer space....



The background of the entire image is a close-up, high-resolution photograph of dark, rich brown soil. The soil has a crumbly, granular texture with many small clumps and individual particles visible. The lighting is even, highlighting the natural texture of the earth.

Welcome to inner space!

What is soil?

Does anything call it home?

How is it made?

Is all soil the same?





Soils are vital for all of life

For our CLIMATE

For WATER

For BIODIVERSITY

For FOOD

Even for MEDICINE!

What is soil?

Soil is made of:

- Rocks and minerals
- Water
- Air
- Organic matter / humus (remains of dead plants and animals)



Is all soil the same?

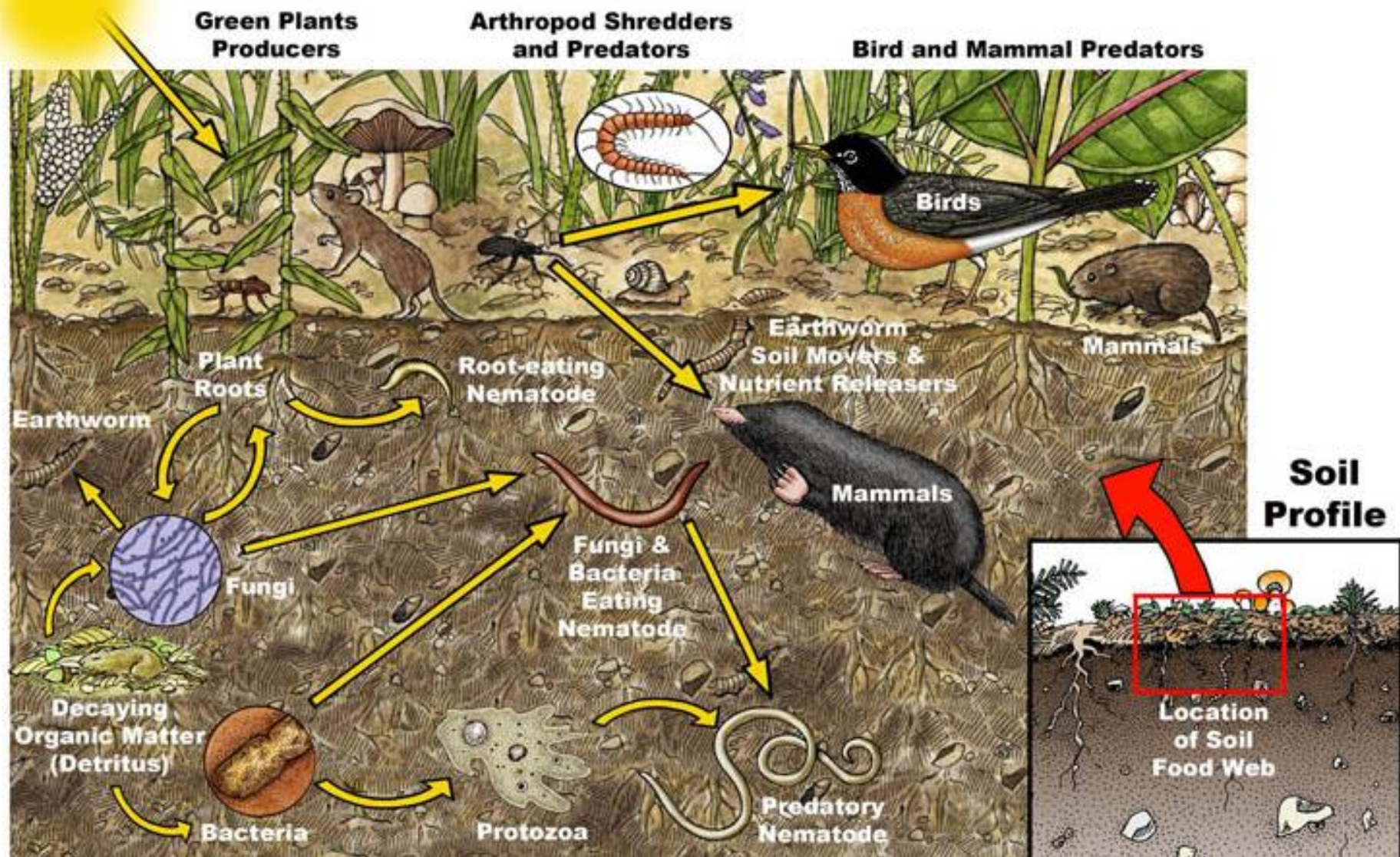
Can you guess how many different types of soil there are in the UK?





A close-up photograph of a pair of hands cupped together, holding a mound of dark, rich, crumbly soil. The hands are light-skinned, and the soil is a deep, dark brown color. The background is blurred, showing more of the hands and the soil.

What lives in and helps to
make healthy soil?



Let's take closer a look...

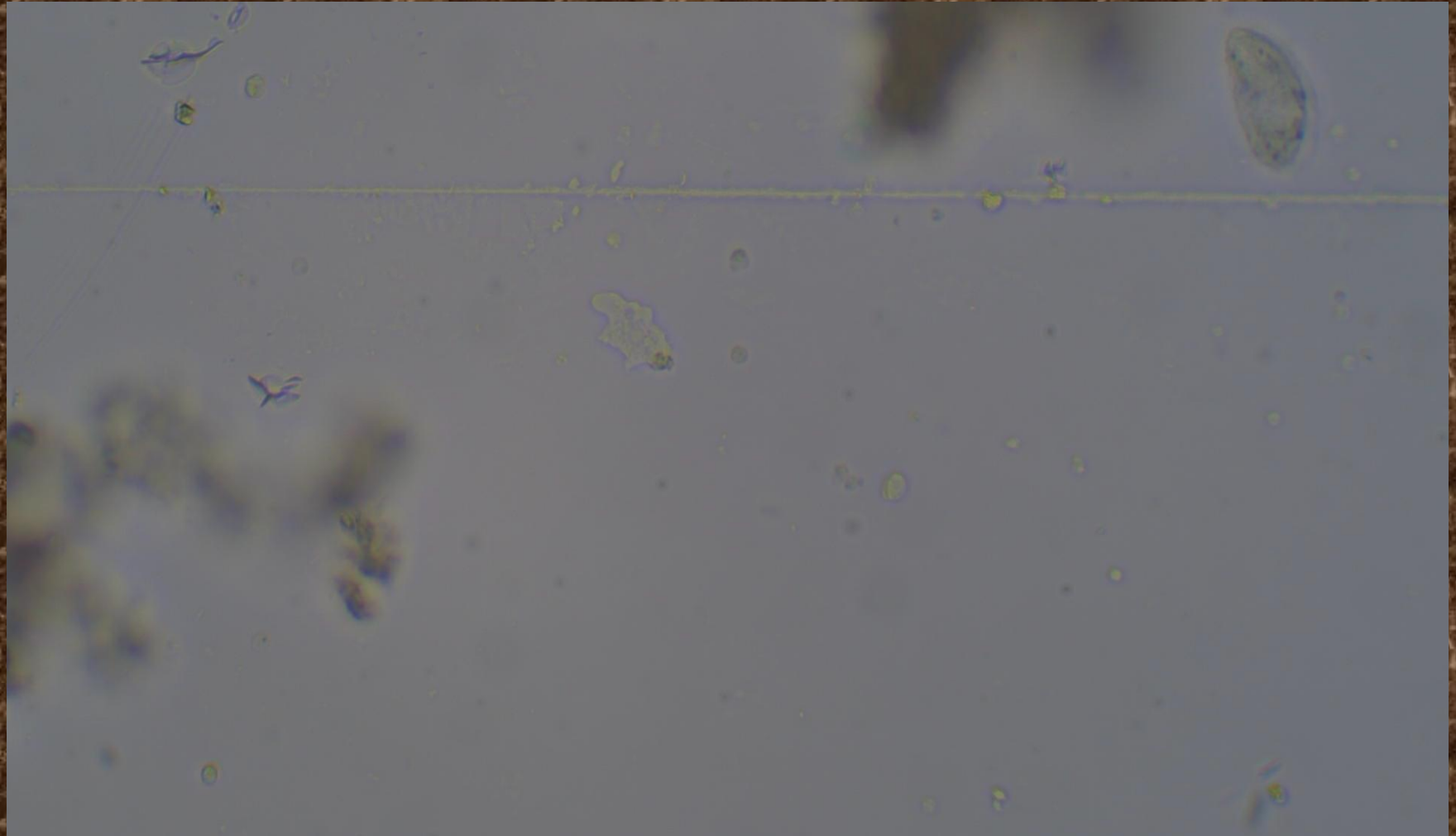


Soil is teeming with life!

Amoeba, more than 25,000 per teaspoon

Ciliates – around 1,000 per teaspoon.

Bacteria will be millions and millions!



NEMATODES

- Tiny, tiny worms
- Live up to 2.2 miles below the surface
- This is deeper than any other known animal
- Eat bacteria
- Help plants to grow
- There are 57 billion of them for every single person on Earth!



WATER BEARS

- Or TARDIGRADE, meaning Slow Stepper
- AKA Moss Piglets!
- 8 legs with 4-8 claws on each leg
- Up to 1mm in length: smaller than a grain of salt
- Live in soil, sand dunes and leaf litter but their favourite homes are in sediment at the bottom of a lake, on moist moss or in other wet places
- Really good at swimming
- Eat bacteria and other microscopic organisms, and suck the juices from algae, lichen & moss
- Toughest creatures on earth – have survived all 5 of earth's mass extinctions



FLOWER LONGHORN BEETLES

- 1/5 of all living species are beetles
- The Flower Longhorn eats nectar & pollen in spring and summer
- Helps to decompose organic matter like rotting fruit and leaves, which makes soil
- Lays its eggs in dead trees which the larvae eat, helping to decompose the tree and return it to the soil as organic matter





ROTIFERS

- Really good swimmers!
- Strong 'hair' called cilia which they beat against their head to move through water
- Move nutrients through soil so plant roots can find them
- All female!



SPRINGTAILS

- Size of a pinhead
- Move by catapulting themselves across ground
- Chew down organic matter (dead plants and animals) to make soil

Dung beetle





Woodlice

- Found all over the world
- Eat dead plants and seeds in soil
- Thought to help limit how much carbon is released from soil, slowing climate change





FUNGI

- Live in or outside of plant roots
- 'Friends' with plants and trees
- Help the host plants to take in nutrients from the soil
- The plants reward the fungi with sugar
- Other types of fungi are called Decomposers and help to break down dead plants
- The largest organism on earth is a 2.5 mile-wide Honey Mushroom!

Earthworms

- There are 6000 different types of worm round the world
- Earthworms breathe through their skin
- They are both male and female
- 1 worm eats 15 tons of soil a year
- Worm eggs look like tiny lemons
- They can live for 8 years
- The biggest worms are 10 feet long – as big as 1 ½ people!





How people
look after soil
so that soil
looks after people

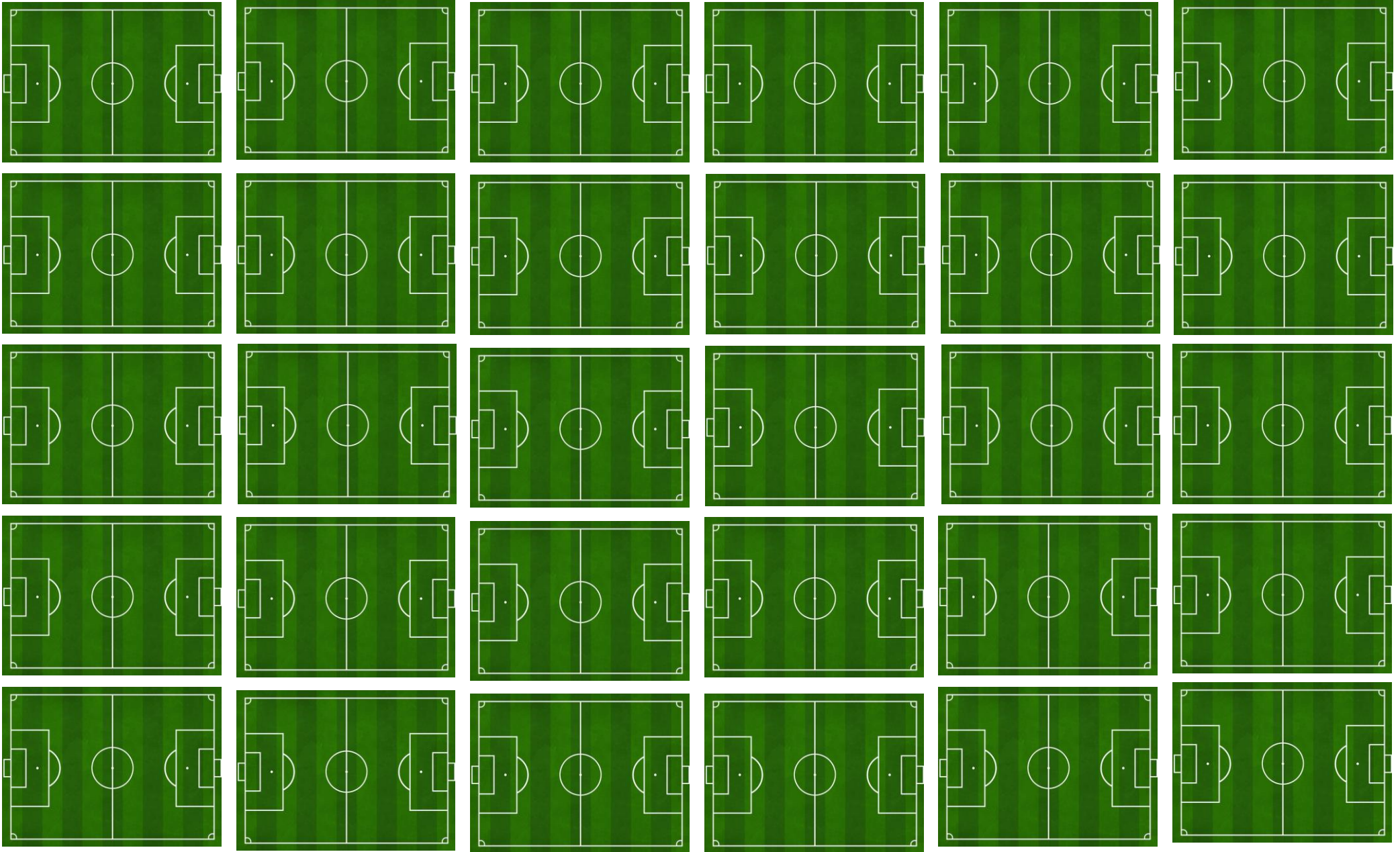
What
happens if
we don't look
after soil?





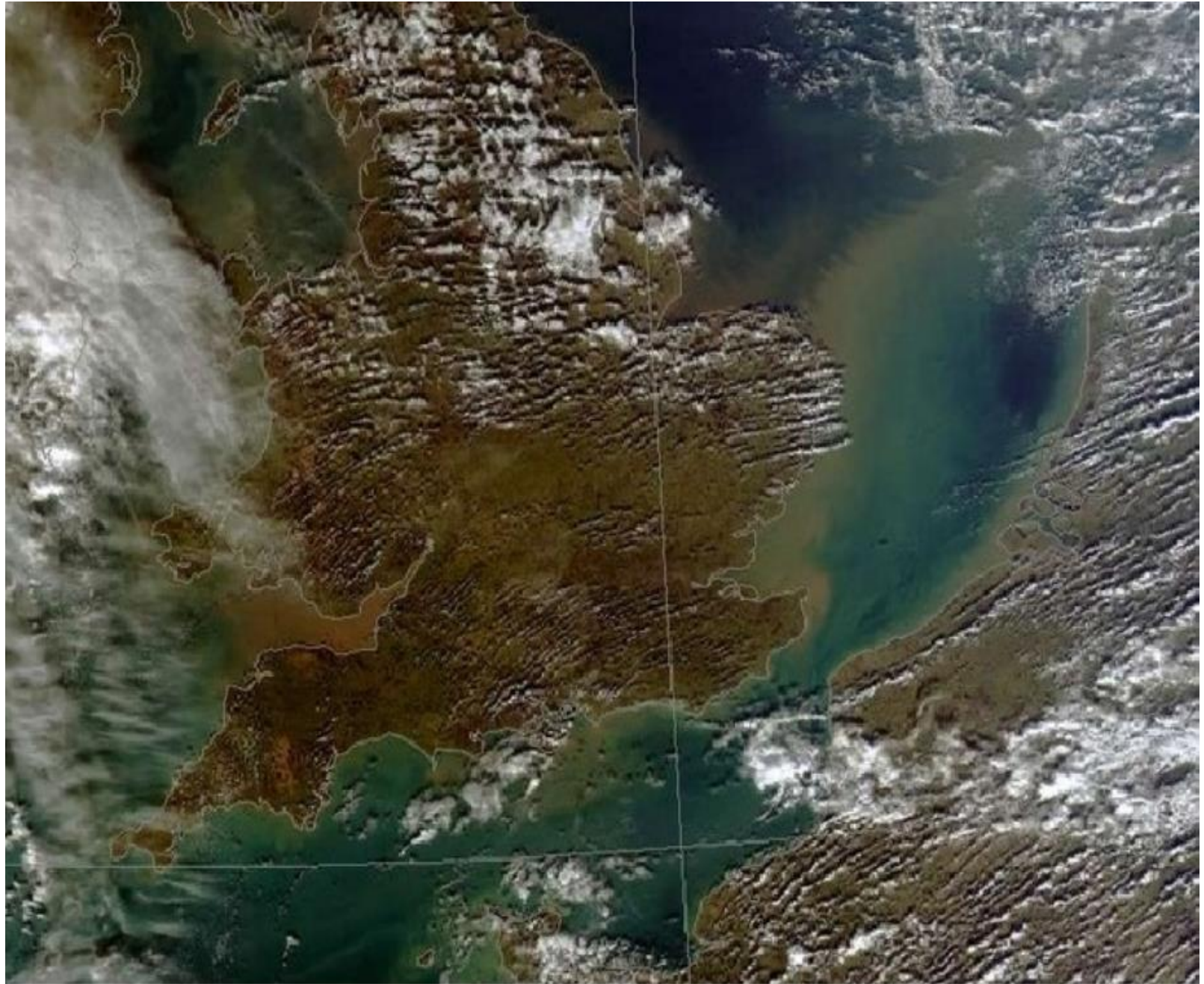


**1
MINUTE**



AS HEAVY AS

240,000



A close-up photograph of a pair of human hands, palms up, holding a small, vibrant green seedling. The seedling has three leaves and a thin stem, growing out of a mound of dark, rich soil held within the palms. The background is dark and out of focus, emphasizing the hands and the plant. The lighting is soft, highlighting the texture of the skin and the soil.

So what can we do to help
look after the soil?







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