Life on Land

"By 2030, 193 Heads of State and Governments agree to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss."

UN Sustainable Development Goal 15

Good News: Conservationists are winning! Figures show that close to 50% of the world's 'key biodiversity areas' are now officially protected - a 10% increase on the 2010 figure

Bad News: More than 1 billion people are threatened by desertification and extinction rates for biodiversity are around 1000 times greater than a century ago.

Planting trees in Gansu province, China to halt the spread of desertification

Plants not only provide human beings with the vast majority of our food, they also provide us with medicines, fibres for clothing, building materials and the means to combat climate change. The SDGs aim to conserve terrestrial ecosystems through sustainable management and taking additional steps to combat problems like desertification, poaching, the spread of invasive species and the unequal distribution of natural resources but, it has to be said, that this has gotten much harder with the election of leaders like Donald Trump and Jair Bolsonaro.

Balance Sheet

Achievements	Work Left to Do
Soil Conservation science has made great strides in recent years – with the UN's FAO and the UK-based Soil Association offering simple solutions.[8 & 9]	Soil is being lost (to wind and water) at 20-40 times the rate it is being replenished – which means that usable topsoil will run out in about 60 years time. But nobody is telling us this! It is too far in the future! [8]
1.6 billion people rely on forests, and 2.6 billion rely on agriculture for their livelihoods. Their economic value has been estimated to be over USD$100 trillion per year. [1]	20% of the planet's available land area was degraded between 2000 and 2015 - this prevents or impairs agriculture, due to unsustainable agriculture, deforestation, large fires and urbanisation. [3]
Further, forests are home to over 80% of the 6.5m terrestrial plant, animal and insect species, currently identified by science. Most species have yet to be discovered so there could be many more. [1]	Extinction rates are progressing at over 1,000 times the rate they were 100 years ago. This is an irretrievable loss of these species' potential economic value, not to mention their intrinsic value. [4]
Around 45% of 'key biodiversity areas' (KBAs) in terrestrial, mountain and fresh-water ecosystems are now protected - this is a 10% increase from the 2010 figure. [3]	The current rate of progress has slowed, and by 2030 the proportion of KBAs protected may still be under half. [3]

Achievements	Work Left to Do
Afforestation schemes, 'rewilding' projects and protected areas are having a beneficial effect - the rate of forest loss from 2010-15 was 25% slower than between 2000-05. [3]	Between 2010 and 2015, over 58 million hectares of forest was lost - approximately the size of Kenya. This loss is usually driven by conversion to agricultural land, which releases huge amounts of CO2 into the atmosphere. [3]. Brazil contains nearly 40% of the Earth's rainforests, yet since 1970 over 17% of the forest has been lost. Since Jair Bolsonaro became president in January 2019, an area equal to two Manhattans has been lost every week. [7]
Support for conserving biodiversity may be on the rise. In 2017, $8.7 billion in development aid was promised for biodiversity conservation, a 15% increase from 2016. And there are now 116 parties to the Nagoya Protocol, which focuses on promoting equitable access between nations to genetic resources of plants and animals. [2], [3]	Poaching remains a problem, with reports of over 7000 species, most of them endangered, being targeted or poached since 1999. [2]
Mountain ecosystems are essential. They provide up to 80% of our freshwater used domestically, agriculturally and for renew-able energy generation. In 2017, 76% of mountains were covered in vegetation. [1]	More than 1 billion people are threatened with the effects of desertification, as are some of the major food-producing regions of the planet. [5]
16% of degraded land was saved and improved between 1981 and 2003. [1]	110 Countries are at risk of land degrad-ation. An area the size of Benin (12 million hectares) is lost every year: land that could grow 20m tonnes of grain and earn farmers $42 billion dollars. [10]

Sources

1. UNDP - SDG15
2. SDGs Knowledge Platform - Goal 15
3. SDGs Report 2019 - Section 15
4. WWF - Extinction Rates
5. UN Decade for Deserts
6. The 2030 Agenda
7. The Economist - Deathwatch for the Amazon
8. World Economic Forum
9. Soil Association (UK)
10. UN Decade of Desertification

Points to Ponder

- Does any one have a plan for how to feed a human family of 10 Billion people 60 years hence when there is no soil left to grow crops upon?
- Do the answers lie in Hydroponic farming and aquaculture?
- Are vertical farms in abandoned Office blocks part of the solution?
- What can communities do to restore severely degrade fields and common spaces? (Hint: Plant trees!)

Take Action

- Get involved in local Tree-planting