Soil facts and figures
March 2020

1. Soil degradation
   • Soil is being destroyed at roughly 10x the rate it is being created Defra 2009
   • 84% of the UK’s fertile topsoil has been lost since 1850. The current erosion rate is 1-3cm per year Climate Change Committee 2016
   • Erosion levels are the equivalent of the weight of 240,000 double decker buses/year Defra Consultation 2015
   • This costs England and Wales on average £1.2bn annually WWF 2018
   • The cost of offsite soil erosion and compaction from agriculture is valued at £305m (2010) Defra Future Farming compendium 2018

2. Climate change mitigation
   Efficient soils provide the largest store of terrestrial carbon
   • Global croplands have the potential to store an additional 1.85 gigatons carbon each year—as much as the global transportation sector emits annually FAO Global Soil Partnership
   • Global soils hold 3x the carbon in the atmosphere - more than that in all forests and sunlit ocean area combined - and 4x the amount stored in all living plants and animals Columbia University
   • UK soils store over 10bn tonnes of carbon Defra, Safeguarding our Soils
   • 95%+ UK land carbon stock is held in our soils
   • 10% UK’s GHG emissions come from agriculture (mostly methane/nitrous oxide from livestock/fertilisers)
   • Cost of UK GHG emissions = £3.1bn
      Defra Future Farming compendium 2018

3. Clean water & flood protection
   • A single hectare of soil as the potential to store and filter enough water for 1000 people for 1 year
   • UK soils store an est. 130 trillion litres of water – much more than all UK lakes and rivers combined Climate Change Committee 2016
   • The government’s target of ensuring ¾ rivers/lakes/wetlands in England are in good health by 2027 would boost the economy by £8.4bn
   • Globally, freshwater species have declined by 81% since 1970 faster than any other habitat on the planet
   • Ag/land management responsible for 31% all pressures preventing England’s waters reaching good health
   • Ag/Land management sector accounts for c. 75% sediment load in watercourses WWF 2018
   • Damaged soils contribute £233m/year to flooding events UK Parliament POST note 2015
4. **Biodiversity**
   
   *Soils provide the dynamic ecosystem needed for the countless micro-organisms that support life on earth*

   - More than 25% of the planet’s biodiversity is held in our soils [European Crop Protection Association / European Landowners Association 2010](#).

5. **Land management – enforcement and regulation**

   - The Environment Agency’s current resources only allow for visits to <1% of farms each year

   - An estimated annual enforcement cost of £5.8m per year for a five-year period [would provide necessary enforcement capacity]...It would only take a 0.5% reduction in the annual £1.2bn costs associated with soil degradation to cover the expense of this enforcement activity [WWF 2018](#).

   - Prosecutions of businesses by the Environment Agency fell by 80 percent between 2009/10 and 2016/17 [Unchecked 2019](#).