

Ecological Crises Supersede Economy that is Subordinate to Ecology, is now and always was..

by R.J.Blakemore BSc, PhD, PDC; Zama, Japan; July, 2020

Despite any petty or irrelevant commercial and/or political dissent, the impending ecological catastrophe receives more pragmatic and factually balanced assessment by no lesser than the chiefs of US military. Things are not looking good... As a November, 2019 article (www.theguardian.com/commentisfree/2019/nov/12/us-military-pentagon-climate-crisis-breakdown;) explains, US Pentagon officials view climate breakdown as an existential threat to human society and are already taking action. This is summarized in reports showing “*Climate Change Presents High-to-Catastrophic Security Threat*” by the Center for Climate & Security ([Ref.](#)). In summary, they acknowledge global warming has already threatened survival of many poorer countries and poses a risk to even the most wealthy nations, including USA. Climate affects essential resources and provokes conflict threatening stability in fragile governances with the inevitability of starvation & migration. Several proposals are made to mitigate the risks of climate change, mostly the most predictable suggestions about reducing emissions, etc.

However, the broader scale of issues is highlighted by another report by IPPR (2019) “*THIS IS A CRISIS*” - www.ippr.org/files/2019-11/this-is-a-crisis-feb19.pdf. In it they justify that the scale & pace of negative human impacts go ‘beyond’ just climate change, in particular [with updates]:

- The 20 warmest years since records began in 1850 have been in the past 22 years, with the past four years the warmest ever recorded. [And 2020 is predicted to be hottest].
- Vertebrate (e.g. mammal or bird) populations have fallen by an average of 60% since the 1970s. [Plants and invertebrates are also declining, [earthworms](#) alone by >83%!].
- More than 75 per cent of the Earth’s land is substantially degraded.
- Since 1950, changes in many extreme weather and climate events have been observed. [Already to mid 2020: Australia has burned, flooded & frozen; the Indian sub-continent, China, Indonesia and Japan have had record rainfall; North America and Siberia have record heat – Siberia 18°C above normal; and (despite covid shutdowns reducing emissions by ~10%) CO₂ levels are highest ever recorded and rise continuously].
- Extinction rates have increased to between 100–1,000 times the ‘background rate’ of extinction. [This mainly on land with at least 3 [earthworm](#) species already extinct].
- Topsoil is now being lost 10 to 40 times faster than it is being replenished by natural processes, and, since the mid-20th century, 30% of the world’s arable land has become unproductive due to erosion; 95% of the Earth’s land areas could become degraded by 2050. [This key crisis is such that UN’s FAO predicts less than 50 more harvests before all topsoil is gone. Where is it lost to? To the sea in the floods that turn rivers brown, and in the smoke/dust that circles the Earth. Burned materials should normally and naturally be processed in topsoil to form stable humus, yet when humus is depleted the remaining dust is easily blown off in “sandstorms” or washed off in floods].

In response to these crises that have merged into a near “perfect storm” or a super-crisis, IPPR suggests “*sustainable and just*” socioeconomic transformations that are as airy-fairy, wishy-washy and as trite as almost relying upon magic intervention for our salvation, viz:

- *“To bring human activity to within environmentally sustainable limits while tackling inequalities and providing a high quality life to all.”*
- *“To increased levels of resilience to the impacts of environmental breakdown resulting from past and any future activity, covering all areas of society, including infrastructure, markets, political processes, social cohesion and global cooperation.”*

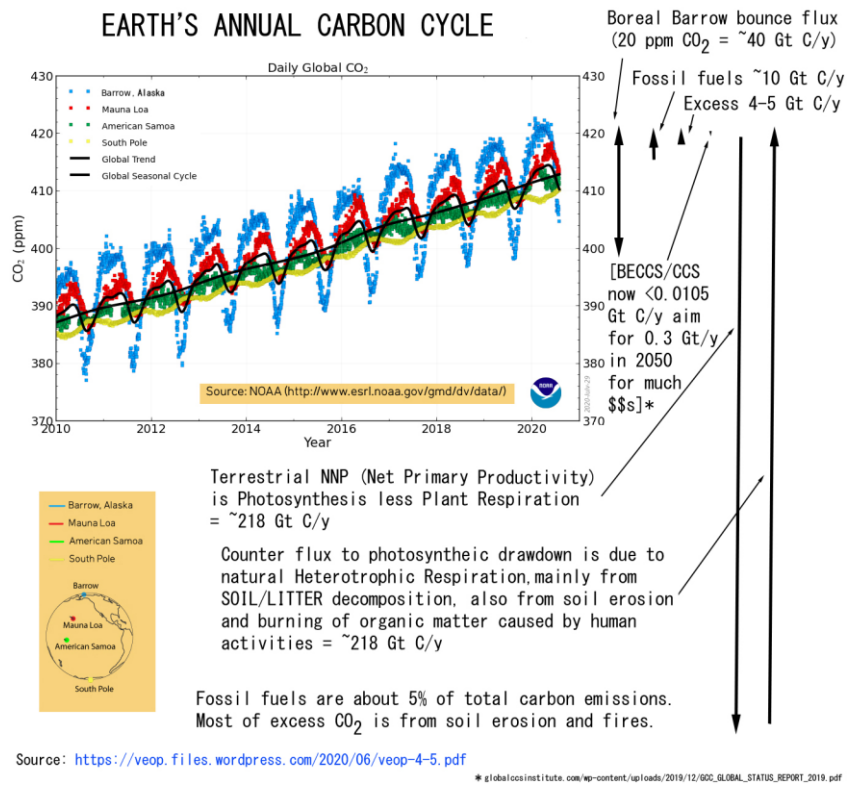
None of these reports considers in detail that destruction and poisoning of the environment is also critically affecting human health in terms of hunger/obesity, cancers, food allergies, asthma, autism and other neurological problems, rates of which are all also increasing dramatically around the globe and affecting our abilities to make sensible & rational choices.

Triage is key and what most of these reports also miss is that soil CO₂ respiration / decomposition is naturally about 220 Gt C/yr whereas total fossil fuel emissions of CO₂ are only about 10 Gt C/yr (<5%). Soil degradation means it is no longer able to accommodate carbon and is actually a source. Thus the major cause of excess atmospheric CO₂ is cumulative effects of deforestation (for pastures or stockfeeds), fires, failure to recycle composts, poor agri-management that allows soil erosion, and a relatively minor effect of capping of soils (e.g. urban areas & infrastructures that occupy only 2% of land area). Wilfully burning fossil fuels is not helpful, but the major focus should be on protecting and preserving our precious topsoils. Highly subsidized and commercially promoted synthetic nitrogen & agrichemical poisons are worse threats than climate with the inevitable conclusion for restoration of organic husbandry. Immediately practical actions that any individual or community can take to protect soils are:

1. Reduce red-meat to allow marginal lands to regenerate and use stockfeeds for foods.
2. Recycle all organic wastes into composts or vermi-composts for return to the field.
3. Stop all un-necessary burning (see 2) and ban use of chemical poisons (biocides).
4. Keep soil covered year round with greenery, crop residues or mulch.
5. Re-green all surfaces that have adequate sunlight and soil moisture (see 4), e.g. vines.
6. Insist all food is grown organically and humanely for healthier food, soils, plants, animals and ultimately healthier humans with a more balanced and sane society.
7. Ignore fantasy advertisements of endless and inconsequential GDP growth on a finite Earth; aim for quality & stability instead (see 6); ideas to go live on Mars are ridiculous.

Permaculture design courses readily provide practical and scalable remedies applicable on time and at location with many combined benefits and few, if any, penalties. The only loss will be to the chemical/pharmaceutical and fuel companies which, for the last century (with nary an ecologist), have been most culpable in the propaganda and distraction from the main issues that have brought us to the very edge of the precipice of complete topsoil/civilization collapse. For turnaround, if we each start doing our bit (bite by bite) taking informed, individual action & responsibility for our future there is, maybe, just time enough... Just one more thing ([Ref.](#)).

Accompanying figures for context:-

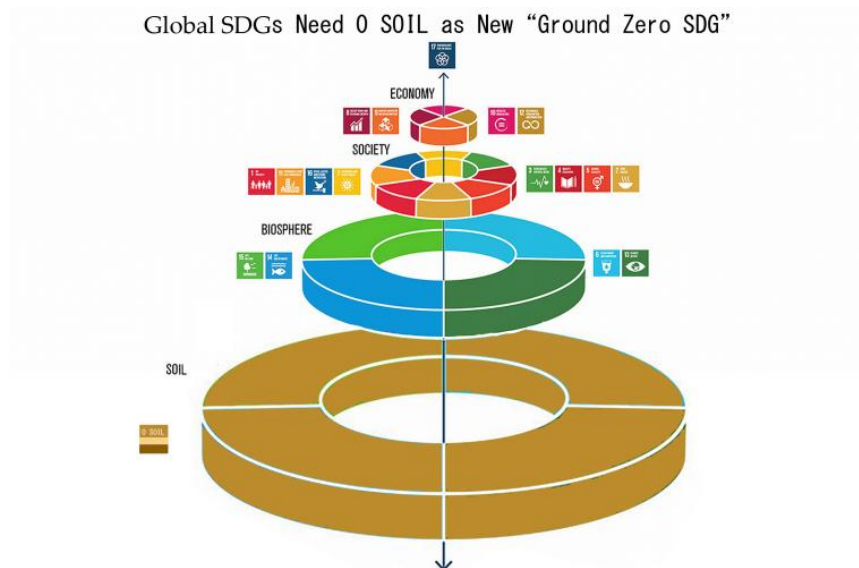


Terrestrial NNP (Net Primary Productivity) is Photosynthesis less Plant Respiration = ~218 Gt C/y

Counter flux to photosynthetic drawdown is due to natural Heterotrophic Respiration, mainly from SOIL/LITTER decomposition, also from soil erosion and burning of organic matter caused by human activities = ~218 Gt C/y

Fossil fuels are about 5% of total carbon emissions. Most of excess CO₂ is from soil erosion and fires.

Data source: <https://veop.files.wordpress.com/2020/06/veop-4-5.pdf> .



UN require a new SDG: "0 SOIL" for proper context and eco-triage (as suggested from <https://vermecology.wordpress.com/2020/05/27/realms-of-the-soil/>).