

# SECURING A HEALTHY PLANET FOR ALL

**‘A MANIFESTO TO SECURE A HEALTHY PLANET FOR ALL’  
- A CALL FOR EMERGENCY ACTION**

# SUMMARY

AS GUARDIANS FOR HEALTH AND THOSE WHO ARE DEEPLY COMMITTED TO SECURING THE HEALTH OF THE PLANET FOR THE WELLBEING OF CURRENT AND FUTURE GENERATIONS FOR ALL, WE CALL FOR THE URGENT ESTABLISHMENT OF AN EMERGENCY RESPONSE TO THE CLIMATE AND ENVIRONMENTAL CRISIS AT GLOBAL, REGIONAL, NATIONAL AND COMMUNITY LEVELS. WITH CURRENT IPCC PROJECTIONS PLACING US ON A TRAJECTORY FOR A 3-4°C TEMPERATURE RISE BY 2100 AND 3-10°C BY 2200, COMBINED WITH THE INCREASING RISK FROM TIPPING POINTS, THAT COULD INCREASE TEMPERATURES AND SEA LEVELS FURTHER, WE STAND AT A CRITICAL JUNCTURE IN THE HISTORY OF OUR PLANET.

Moreover, we are at the crossroads to our very existence, as well as that of the majority of life on this Earth, having already seen an estimated 60% decline of our mammals, birds, fish and reptiles since 1970, with further estimates of nearly one million species at risk of extinction over the coming decades, we stand at the threshold of a sixth mass extinction. Over the next decade we are the generation that holds the responsibility to reverse the epidemic acceleration of carbon emissions and to urgently stabilise the risks from runaway climate change.



“The Planet is Sick – and we all need  
to work together to ensure the health  
and wellbeing of future generations”

HE Bertie Ahern, Co-Chair of the InterAction Council,  
former Taoiseach, Prime Minister, Republic of Ireland

AS GUARDIANS FOR PROTECTING OUR HEALTH AND WELLBEING, NOW AND FOR FUTURE GENERATIONS, WE ADVOCATE FOR THIS 'MANIFESTO TO SECURE A HEALTHY PLANET FOR ALL' WHICH CALLS FOR EMERGENCY ACTION, BASED UPON THE FOLLOWING OVERARCHING VISION AND PRINCIPLES:

### VISION

To Secure a Healthy Planet now and for the Well-Being of Future Generations.

### PRINCIPLES

To place the Health of the Planet and the well-being of current and future generations at the heart of decision making

To act with speed and scale, with the urgent establishment of an Emergency Response mechanism at Global, National and Community levels

MANIFESTO TO SECURE A HEALTHY PLANET FOR ALL – A CALL FOR EMERGENCY ACTION:

## 01

### SECURITY

A Critical Care Response for the Planet's Health: with the declaration of a Climate and Environmental Crisis and the urgent establishment of an Emergency Response mechanism to ensure the rapid reversal of carbon emissions, the stabilisation of risks from runaway climate change and the protection of vulnerable populations.

## 03

### FLOURISHING

A Flourishing Planet for All: combat denial and eco-anxiety by promoting sustainable wellbeing by maximising multiple health and environmental benefits, including healthy eco-systems, and multi-sector, systems based urban planning and 'One Health for One Planet Education' approaches across the life-course, to create connected communities and cyclical economies, for a flourishing Planet for all.

Security

AIR



# 04

## GUARDIANSHIP

**Guardianship for a Healthy Planet:** every organisation and community to establish a 'Guardian for the Planet's Health' responsible for: Planetary first aid, Emergency responses, Guardianship, Advocacy, Solutions, Unifying action and Sustaining a flourishing planet (PEGASUS); enabled by a Healthy Planet Index.

## Guardianship

LAND

Planet

People

Place

WATER

Recovery

# 02

## RECOVERY

**Rehabilitation and Resilience:** to enhance the recovery of the Planet's Biodiversity and Ecosystems, creating healthy air, water, land and food systems, scaled up through Universal Health Systems for Planet, Place and People.

FOOD

## Flourishing

# 05

## COLLABORATIVE

**Community and Health Professional Action:** everyone can become a community 'Guardian for the Planet's Health' to: protect and strengthen resilience by greening communities; reduce consumption and waste, recycle and use clean energy and transport; walk, cycle and communicate digitally and shift to healthy, planet friendly foods. Community members, including health professionals can lead by example with quality services and promote healthy green communities with resilient families.

# OUR PLANET A CRITICALLY ILL 'PATIENT'

If we were to consider our *Planet* as a *Patient*, as health professionals we would be seriously concerned about their health and would quickly diagnose that 'Patient Planet' was critically sick. A rapid assessment of the Planet's Health would find an escalating fever with difficulties breathing, a faltering circulation with metabolic acidosis and a toxic status, failing liver and kidney functions, a pale and blotchy skin indicating signs of shock and a rapidly declining mental state. From the perspective of the Planet's Doctor, we would urgently send 'Patient Planet' straight to Critical Care for emergency resuscitation and stabilisation. From an evolutionary perspective, in many respects human systems can be seen as a microcosm of the Earth's living biosphere. Although there are significant differences in scale and functioning of some of these systems, in terms of appreciating the seriousness of the Earth's failing eco-systems it is helpful to consider the analogies of the Planet's Health with that of Human Systems, as outlined below:

## ANALOGY OF THE 'PATIENT AS A PLANET' REQUIRING A CRITICAL CARE RESPONSE

As physicians, we would diagnose an escalating fever with a critical risk of multiple organ failure and send 'Patient Planet' straight to Critical Care:



### FEVER

Escalating temperature - 1 Centigrade now, rapidly **rising to 3-4C** by 2100 and 3-10C by 2200 – a temperature of 3-4C is considered a medical emergency and risks fatality in humans



### RESPIRATORY SYSTEM

Escalating **carbon emissions** with CO<sub>2</sub> at 411ppm; **air pollution** dangerously high, with 91% of places exceeding WHO guidelines; an estimated 32% of global forest lost since pre-industrial times; increasing **wildfires** and continued **loss of global forests**



### CIRCULATORY SYSTEM

33% oceans **harvested at unsustainable** rates; **freshwater scarcity**; oceans 30% increased **acidity**, having absorbed 50% of post industrial carbon emissions and 90% of the excess heat – equivalent to 36C in terms of thermal load, and is **melting ice sheets** and increasing water vapor that creates stronger storm systems



### ORGANS

Liver and kidneys - increasing pollution from **heavy metals** and **toxins** and a tenfold increase in **plastic pollution** since 1980; over 85% of **wetlands lost** between 1700-2000 and 50% **coral reefs lost** since 1870s – reducing coastal protection, and earth's ability to detoxify and regenerate



### SKIN

Increasing **desertification**, **mudslides**, and **depleted agricultural land** with 23% reduction in productive land due to land degradation; **loss of sea ice** and permafrost with subsequent **methane release**



### MENTAL HEALTH

Biodiversity estimated 60% **decline for mammals, birds, fish and reptiles** since 1970 – with an estimated one million at risk of extinction over the coming decades – the rate of loss accelerating and is tens to hundreds times higher than the average in the last 10 million years

References: IPBES (2019); IPCC (2018); WHO (2016); NASA (2019); FAO (2019); WMO (2019); World Wildlife Report (2018); IUCN (2016); Drawdown (2017); Lewis & Maslin (2018); Kumar & Clark (2016). Note: the Planet = Eco-systems and Biodiversity, including all life forms

**THIS MANIFESTO IS IN RESPONSE TO THE GROWING URGENCY OF THE CLIMATE AND ENVIRONMENTAL CRISIS WE FACE, REFLECTED BY A SERIES OF HIGH LEVEL INTERNATIONAL AND UN REPORTS OVER THE LAST YEAR, SUPPORTED BY AN INCREASING EVIDENCE BASE, (IPCC 2018).**

**This crisis is due in large part to the exponential exploitation of our Earth's resources, with little past appreciation, nor accountability of the consequences of our collective actions upon the sustainability of our planet's critical ecosystems, (Stockholm Resilience Centre, 2015). The Lancet Commission on Planetary Health, (2015), provides a robust knowledge base of the integrated and essential links between the health of human's, animals and ecosystems with that of our rapidly deteriorating environment – to the extent that our actions threaten to destabilise our Earth's very life-support systems.**

In response to this global threat, and in order to secure our own future well-being, the InterAction Council – a group of former world leaders – have called for fearless leadership, emphasising the need for strengthening responsibility and multi-sector governance for the Planet's health, (The Dublin Charter for One Health, 2017). This Manifesto, recognises and supports existing international mechanisms and efforts to achieve global goals, including the Sustainable Development Goals, the aspirations of the established Climate Change Commitments, as well as the role of UN and international organisations and the Sendai Framework for Disaster Reduction in building capacity and scaling up responses. Additionally, this Manifesto builds upon a range of related consensus statements from global leaders and health professional bodies, as summarised in the table below.

**THIS MANIFESTO BUILDS UPON THE FOLLOWING CONSENSUS REPORTS AND STATEMENTS:**

- Wildlife Conservation Society: The Manhattan Principles on “One World, One Health”: building interdisciplinary bridges to health in a globalized world, 2004  
[www.oneworldonehealth.org/sept2004/owoh\\_septo4.html](http://www.oneworldonehealth.org/sept2004/owoh_septo4.html)
- The World Medical Association: Declaration on Health and Climate Change – 2009 and 2017  
[www.wma.net/policies-post/wma-declaration-of-delhi-on-health-and-climate-change/](http://www.wma.net/policies-post/wma-declaration-of-delhi-on-health-and-climate-change/)
- ISSA (2014) ‘Climate Change and Natural Resource Scarcity’ Megatrends and Social Security; International Social Security Association  
[www.issa.int/en/details?uuid=b2af9fd7-d78d-4f20-ae2f-d9daf27f88d4](http://www.issa.int/en/details?uuid=b2af9fd7-d78d-4f20-ae2f-d9daf27f88d4)
- ‘From public to planetary health: a manifesto’ (Horton et al, 2014)  
[www.thelancet.com/journals/lancet/article/PIIS0140-6736\(14\)60409-8/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)60409-8/fulltext)
- WHO Call for Action to protect health from Climate Change – 2015:  
[www.who.int/globalchange/global-campaign/cop21/en/](http://www.who.int/globalchange/global-campaign/cop21/en/)
- The World Federation of Public Health Associations, (WFPHA) – ‘A Global Charter for the Public’s Health’, 2016  
[www.wfpha.org/images/PHAAo1001\\_Global-Charter\\_PROOF\\_160812\\_FINAL.pdf](http://www.wfpha.org/images/PHAAo1001_Global-Charter_PROOF_160812_FINAL.pdf)
- The Commonwealth Health Ministers’ Communique, 2016:  
<http://thecommonwealth.org/sites/default/files/events/documents/Ministerial%20Statement%20-%20Commonwealth%20Health%20Ministers%20Meeting%202016.pdf>
- The Commonwealth Health Collaborative: ‘The Colombo Declaration – A Plan for Collaborative Action’, 2017  
<https://drive.google.com/file/d/oB8wr692osuoaNoxoV2lZR3pybVE/view>
- The InterAction Council: ‘The Dublin Charter for One Health’, 2017:  
[www.interactioncouncil.org/publications/dublin-charter-one-health](http://www.interactioncouncil.org/publications/dublin-charter-one-health)
- The G7 Health Ministers Communiqué, Milan, 2017  
[www.g7.utoronto.ca/healthmins/2017-milan.html](http://www.g7.utoronto.ca/healthmins/2017-milan.html)
- International Council of Nurses Position Statement on Nurses, climate change and health, 2018  
[www.icn.ch/sites/default/files/inline-files/PS\\_E\\_Nurses\\_climate%20change\\_health.pdf](http://www.icn.ch/sites/default/files/inline-files/PS_E_Nurses_climate%20change_health.pdf)
- World Psychiatric Association (WPA) - Position Statement on Environmental Sustainability:  
[http://docs.wixstatic.com/ugd/e172f3\\_c66ea28a71264279b6468dae62240e49.pdf](http://docs.wixstatic.com/ugd/e172f3_c66ea28a71264279b6468dae62240e49.pdf)
- The Global Climate and Health Forum Call to Action on Climate and Health, 2018  
[www.globalclimateandhealthforum.org/call-to-action](http://www.globalclimateandhealthforum.org/call-to-action)
- The World Organisation of Family Doctors (WONCA): ‘Declaration calling for Family Doctors of the World to Act on Planetary Health’, 2019  
[www.globalfamilydoctor.com/site/DefaultSite/filesystem/documents/Groups/Environment/2019%20Planetary%20health.pdf](http://www.globalfamilydoctor.com/site/DefaultSite/filesystem/documents/Groups/Environment/2019%20Planetary%20health.pdf)
- Declaration calling for clinicians of the world to act on planetary health; Planetary Health Alliance Clinicians for Planetary Health Working Group; WONCA Working Party on the Environment; The Lancet - (Veidis et al, 2019) and  
<https://files.visura.co/users/12837/9coaf30afdb8667feb2542f973bb47e6.pdf>
- Planetary Health Alliance Clinicians for Planetary Health  
[www.planetaryhealthalliance.org/clinicians-for-planetary-health](http://www.planetaryhealthalliance.org/clinicians-for-planetary-health)

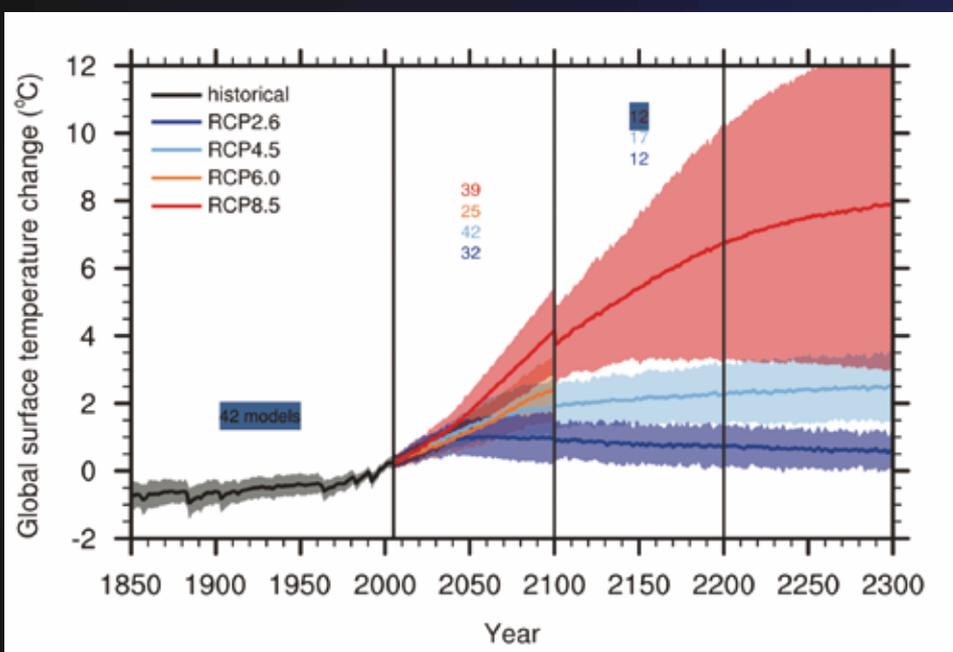
# DIAGNOSIS AND PROGNOSIS – WILL ‘PATIENT PLANET’ DIE?:

AS THE FAMILY OF ‘PATIENT PLANET’, BEING LED INTO THE VISITOR’S ROOM, OUR KEY CONCERN SHOULD BE – WILL OUR HOME ON EARTH, THE BIOSPHERE, DIE?

From a geological perspective, a mass extinction is usually defined as a loss of more than 75% of all species, and our planet has already experienced 5 mass extinctions, (Lewis and Maslin, 2018). Ultimately, we should be asking ourselves, are we at risk of a 6th mass extinction? The majority of our current global warming of 1°C above pre-industrial levels is due to human related activities – including our long-standing agricultural methods, followed by rapid industrialisation with exponential use of fossil fuels, which is increasingly being referred to as the ‘Anthropocene’, (Lewis and Maslin, 2018). In some respects, humans have inadvertently acted like a cancer, feeding upon resources, and expanding without due regard for the harm we are causing to the rest of our home, Planet Earth.

According to the recent United Nations Environment report (2018) our current trajectory puts us above the target set by the Paris Agreement, and will most probably result in a 4°C increase by the end of this century. Even if we managed to keep to the Paris Agreement, (in terms of the Nationally Determined Contributions), we are likely to reach 3°C by 2100 and not be able to keep within the safer limits of the 1.5°C target, (UNEP, 2018). A mere 3-4°C increase in a human body is considered a medical emergency and can be fatal – what are the consequences for Patient Planet’s Biosphere, and ultimately our own fate?

Global surface temperature changes from 1850- 2300 (IPCC, 2018)



**The worst extinction in history, during the Permian epoch, occurred approximately 250 million years ago, at a temperature range of 8-10°C from our pre-industrial levels, and is referred to as ‘the great dying’ where: 96% of marine species died out– from acidic oceans and loss of oxygen, along with 70% of land species, including most of the planet’s trees, insects, plants and microbes being made extinct; (Penn et al, 2018). Based upon our current temperature trajectories of 3-4°C by the end of this century, if we carry on with business as usual, by 2200, as can be seen by the IPCC chart below, we are projected to have an average global temperature increase of between 3-10°C – placing us in range of creating another ‘great dying’ extinction event.**

Based upon knowledge from the Pliocene epoch, which had similar levels of carbon emissions as we have today, (due to massive volcanic activity), and was associated with a temperature rise of 3°C there was a significant reduction of ice and sea level rises of between 20-30 metres, (Lynas, 2007). Moreover, due to our rapid rise in carbon emissions, our planet’s escalating temperature will take many years to stabilise, due to the thermal inertia of our oceans, (Kump et al, 2016). A recent report on ocean warming, estimates that the thermal capacity that has built up in our oceans from 1955-2010, would represent an increase of 36°C if released back into our atmosphere. Currently this excess heat is melting ice, evaporating into water vapour and strengthening storms and will gradually be released back into the atmosphere (and eventually space) over 100’s- 1000’s of years. The continued increase in ocean temperature, aside from damage to coral and loss of ocean life, risks further extreme weather events, melting of sea ice, sea level rise and release of methane, which will further escalate global warming, (IUCN, 2016).

Aside from the future risk of our Planet’s Biosphere largely dying from such a mass extinction, with the consequent impact that will have upon all of life’s future existence, we should be seriously concerned by the rapid rate of our current loss of biodiversity, where on average an estimated 60% of mammals, birds, fish and reptiles studied have declined since 1970, (Living Planet Report, 2018). Whilst the UN recently estimated that nearly one million species, which represents 1 in 4, are at risk of extinction over the coming decades, (IPBES, 2019). Our shrinking biodiversity, due to expanding urbanization and modern farming methods, have led to the rapid decline of species that are critical to our food eco-systems, including insects, pollinators, worms, bacteria and fungi, is of particular concern for our own future global food security, (FAO, 2019). Particular risks to human food security includes overfishing of 33% of our oceans with a further 60% at maximum sustainable capacity, approximately 23% of land productivity has declined due to land degradation, and an estimated 75% of our crops rely on pollinators, (IPBES 2019). In our increasingly interconnected world, we are already seeing the impacts of climate change starting to be played out with the nexus of extreme weather events driving migration and subsequent conflicts, such as has occurred in Syria, (Lewis and Maslin, 2018).

## **CURRENT AND FUTURE PROGNOSIS FOR HUMAN HEALTH AND SURVIVAL**

**At a 1°C increase in global temperatures, we are now entering into unknown territory for Human civilisation, with the WHO recently describing that we are entering a new phase of high impact epidemics and a convergence of risks due to the interaction of climate change, environmental encroachment and destruction, migrant and mobile populations, weak governance and conflicts resulting in the increased frequency and scale of disease outbreaks like Ebola (BBC, 2019).**

Human’s are already experiencing significant symptoms and health impacts from the Environmental and Climate Crisis, which are disproportionately impacting Low and Middle Income Countries and impeding the attainment of Sustainable Development, including (WONCA, 2019; Veidis et al, 2019):

**Increasing Extreme Weather Events:** including heatwaves, droughts, flooding, mudslides and storms, are already affecting many parts of the world and are associated with increased deaths, disease and injuries in the short term, as well as creating longer term impacts upon housing, agriculture, migration, conflicts and the economy with increased chronic diseases including mental health problems.

**New Infectious Disease Exposure:** shifting climate patterns and environmental conditions are already linked to increasing exposure to diseases like malaria, Zika, dengue, chikungunya, yellow fever, and Lyme, as well as increasing the risks from diarrheal diseases.

**Air Pollution:** is associated with 9 million excess deaths annually, of which, 70% are due to non-communicable diseases, including cardiac disease, stroke, chronic obstructive pulmonary disease, and lung cancer.

**Future Prognosis for Human Health and Survival:** on current projections, we will reach 4°C by 2100 and between 3-10°C by 2200 (IPPC 2018), which based upon past geological records, places us on a trajectory for a 6th Mass Extinction for the majority of life forms on this planet, (Lewis and Maslin, 2018). Evidence from the collapse of previous human civilisations reveals that they were due to a combination of interacting factors including: destruction of forests and natural habitats, including over-fishing; soil erosion and elimination of animals crucial to the food system (insects, birds, bats, earthworms, microbes); and depletion of freshwater supplies, (Diamond, 2011). **So far, we have seen an estimated decline of 47% of natural ecosystems and 82% loss of wild mammal biomass since pre-history, with a rapidly accelerating decline of species since 1970 and an estimated one million species at risk of extinction in the coming decades, (IPBES 2019).** Life is multiply inter-connected and inter-dependent, and the loss of species in one area can cause collapses and extinctions in other areas.

Current demographic projections anticipate a human population of 11 billion by 2100, however by then we will experience increasingly turbulent and escalating extreme weather events and increasing sea level rise, impacting significantly upon food and water security, leading to mass migration and conflicts. Given the further risks of escalating global warming from runaway climate change (Stockholm Resilience Centre, 2018), the prognosis for future human civilisation and survival does not look good in a world where most of the biosphere would have become extinct. Johan Rockstrom, previous Director of the Stockholm Resilience Centre and current Director of the Potsdam Institute for Climate Impact Research, recently stated that **by 2100 with our current trajectory of 4°C, that “It’s difficult to see how we could accommodate a billion people or even half of that”** (Guardian Weekly, 31 May 2019).

We currently stand at a critical juncture in the history of human civilisation with the risks from runaway climate change expediting the need to escalate our response in the next 1-2 years, (Figueres, 2017). In order to give hope for the future survival of humans and for the planet’s biosphere, which we rely upon for our very existence, we need an emergency or critical care response.

# A CRITICAL CARE RESPONSE

A quick assessment of 'Patient Planet's' critical state of health would warrant urgent resuscitation and stabilisation in a critical care unit. This should involve a rapid reduction of carbon emissions over the next decade, including actively sequestering carbon to lower key drivers of increasing temperatures. Stabilisation of ocean temperatures and acidity may also be required. The UN recently declared that we have to reduce global carbon emissions by 45% by 2030, in order to keep to within safe limits of 1.5°C, with a target of zero emissions by 2050. This will require urgent and large-scale action with an estimated annual investment of 2.5% of global GDP to rapidly reduce carbon emissions, including carbon capture (IPCC 2018).

**Whilst 'Patient Planet' is in critical care, we also need to rapidly stabilise risks to escalating temperatures and multiple organ failure. The IPCC provides a robust global scientific consensus on where there is relative certainty on climate change, (IPCC, 2018). Meanwhile, there is mounting evidence, based upon geological records and current observations about the potential risks from tipping points and feedback loops, (Stockholm Resilience Centre, 2018). Tipping points are where relatively stable earth systems reach a threshold that creates rapid shifts to another state, for example, as happens with the cascading effects of shock and multi-organ failure in human systems that can cause rapid death.**

The Stockholm Resilience Centre, (2018) recently released a report on the risks of tipping points that could cascade into further positive feedback loops and result in a runaway 'hot house Earth' scenario. This could push us suddenly out of the -1°C to +1°C range we have experienced over the last 800,000 years, that has provided relatively stable conditions for human civilisation to develop in, and potentially result in global average temperature rises this century of 4-5°C with sea level rises of 10-60 metres. Based upon past geological epochs, we already know that certain tipping points have occurred at our current carbon emission levels and that many have occurred within the range of 1-3°C increases in global temperatures. Of particular concern is that currently we do not know if we have reached tipping point thresholds that could already be leading us to runaway climate change. We require an urgent risk assessment approach, applying existing evidence, expertise and mechanisms, to enhance understanding and surveillance of tipping points so that we can potentially intervene to prevent runaway climate change.

The table below outlines examples of positive feedback mechanisms that, once a certain threshold has been reached could result in a cascading effect on other earth systems, leading to rapid rises in temperature and sea levels.

## RISKS FOR CREATING RUNAWAY GLOBAL WARMING AND SEA-LEVEL RISE:

- **Increasing wildfires:** of forests and peat, causing warming whilst releasing further carbon emissions and reducing carbon stores still further, with cascading forest loss, lowering protective rainfall and releasing carbon stores in soil
- **Melting ice:** warming of polar regions is altering the albedo (reflective and cooling) effect of ice, creating further warming and melting – the disintegration of major ice sheets (including on Greenland), is very difficult to reverse and would lead to substantial sea level rises estimated at between 10-60 metres
- **Rapid methane release:** from melting permafrost and changing lake and ocean temperatures and ecosystems – the warming effect from methane is approximately 30 times that of carbon dioxide and would cause a rapid increases in global temperatures
- **Ocean tipping points:** the oceans currently act as a massive carbon and heat sink, having absorbed approximately 90% of the excess global heat and 50% of carbon emissions created post industrially – at some point, the oceans may start to release more heat and carbon dioxide back to the atmosphere, escalating global warming, sea level rise and extreme events

(Adapted from Stockholm Resilience Centre, 2018)

From a critical care perspective, a full risk assessment would be undertaken, with urgent mechanisms put in place to stabilise 'Patient Planet' in order to reverse and prevent thresholds being crossed that could lead to further escalating temperatures and ecosystem collapse. Whilst in reality we continue to increase our global CO<sub>2</sub> emissions, (UNEP, 2018). In response to this, Ireland and Wales along with an estimated 423 local governments from around the world have already taken the initiative to declare a 'Climate Emergency' that have signed up to commit to a rapid transition from fossil fuels to renewable energy sources, (Climate Emergency Declaration, 2019).

We already have mechanisms like the WHO Emergency Response Framework in place, and given the critical state of the Planet's Health, this should warrant an urgent assessment as part of the emergency process, which based upon risks and severity of global impacts, should be placed at Grade 3, triggering a multi-sector, global emergency response, (WHO, 2017). We can also draw lessons from handling other emergency responses like Ebola, which led to rapid mobilisation of resources, strategic co-ordination and action at speed and scale that prevented a global security crisis.

Over a ten-year horizon extreme weather and climate-change policy failures are seen as the gravest global threats by the World Economic Forum Global Risk Report, (WEF, 2019). In the last decade, some countries on the Security Council have highlighted the threat of climate change to global security, with increasing links being made between current climate change impacts like drought, food and water insecurity and migration with existing conflicts, for example in Somalia, West Africa, the Sahel, Mali and Darfur (Sherman, 2019).

In the current UN system, climate change is mainly framed as a development and environmental issue, with no distinct UN agency responsible for addressing climate change in the context of peace and security re current impacts or future risks (Sherman, 2019). In particular, the impacts and costs are already disproportionately affecting lower income countries with future impacts likely to further widen global inequalities and destabilise peace and security with subsequent migration and conflicts. Going forward, we can potentially build upon and adapt existing national and international mechanisms like the Security Council for example, by establishing national and international Committees for the Climate and Environmental Crisis.

We can also draw and build upon existing global and regional networks and collaborative approaches, (Europa, 2019), as well as Inter- Governmental commitments, such as the Commonwealth Blue Charter, (2018), endorsed at the Commonwealth Heads of Government Meeting in 2018. Additionally, existing international tools such as the Sendai Disaster Reduction Framework, (2015) can potentially be further invested in and applied to strengthen our emergency responses, and scale up required action to stabilise current and future threats from the global climate and environmental crisis, including its impacts at national and local levels.

“Climate Change is running faster than we are – and we are running out of time”

United Nations Secretary General, António Guterres – re the IPCC 2018 report on 'Global Warming of 1.5°C'

AS GUARDIANS FOR THE PLANET'S HEALTH, WE CALL FOR AN URGENT MULTI-SECTOR EMERGENCY RESPONSE MECHANISM TO BE ESTABLISHED IN ORDER TO STABILISE RISKS AND SECURE THE HEALTH OF THE PLANET FOR THE WELLBEING OF ALL NOW AND FOR FUTURE GENERATIONS.



# RECOVERY, REHABILITATION AND RESILIENCE

Depending upon the successful resuscitation and stabilisation, ‘Patient Planet’ would be able to leave the critical care unit with a longer-term treatment plan, including an initial recovery period, during which time toxins and plastics would be removed to allow healing. In the longer term, critical earth systems, including Air, Water, Land and Food, would require rehabilitation to create healthy eco-systems, and the strengthening of resilient communities to deal with the unpredictable and extreme events that we are still likely to experience. We can already draw upon the experience of the environmental recovery that has occurred in Denmark and other European countries, whose waterways were transformed as a consequence of European Directives. Across the Great Lakes in North America, there has been a successful reduction of acid rain and de-acidification. The International Treaty known as the Montreal Protocol is another example of a successful initiative to bring in measures that allowed the recovery of the Ozone layer.

Additionally, a preventive approach would be taken, including early detection and intervention of high-risk symptoms that could cause further harm. The treatment plan would be evidence based, focusing on treatments that maximise health, social, environmental and economic benefits, efficiently and effectively, without causing harmful side effects, (WHO 2014).

It would build upon existing knowledge, such as the options outlined in the box below, with a strategic focus on rapid recovery to secure longer-term stability of the planet’s health. Where evidence does not exist, a risk analysis would be conducted and feasible interventions would be considered based upon expert opinion.

## Options for Urgent Reduction of Carbon Emissions to Stabilise Planetary Eco-systems

Sector	Total Reduction of CO2E GT	Net Cost \$ Billions	Net Savings \$ Billions
Food	322	\$777	\$10,017
Energy	247	\$4,896	\$21,447
Land Use	150	\$64	\$1,250
Women and Girls	121	NA	\$88
Materials	112	\$1,125	\$1,039
Buildings & Cities	54	\$4,778	\$17,906
Transport	46	\$15,676	\$22,666
<b>Total</b>	<b>1,052</b>	<b>\$27,316</b>	<b>\$74,413</b>

Drawdown – the most comprehensive plan ever proposed to reverse global warming; Paul Hawken, Penguin, 2017: <http://www.drawdown.org>

Reducing food waste and shifting to plant-rich diets are two key areas that could significantly reduce carbon emissions, (Drawdown, 2017). Additionally, there is increasing evidence about the health and environmental co-benefits for people and the planet of reducing consumption of animal based products, whilst enhancing a diet rich in plant based foods, (EAT-Lancet Commission, 2019). Such approaches could enhance food security, change land use patterns and increase sustainability across the food system.

The health sector can also play a significant role in providing accessible maternal and child health services, enhanced by education for girls, in developing resilient families and maintaining sustainable populations, (Planetary Health Lancet Commission, 2015). Focusing upon urban design that scales up renewable energy and transport systems, together with sustainable building materials, also has the potential to create win-win-win cost-effective responses that promote healthy and green cities, with enhanced facilities for walking and cycling, improved air quality and the creation of safe green spaces (FPH 2010); (WHO 2015).

In order to strengthen resilience for the planet's biosphere, including human populations, we could draw upon the experience of establishing universal health coverage and the delivery of health systems cost-effectively and at scale. For example, building upon the World Federation of Public Health Associations', 'Global Charter for the Public's Health', (Lomazzi M et al 2016 and Borisch B et al, 2018); the illustrated systems framework and related tools, could be further adapted to ensure a primary focus on securing the Planet's Health, (Commonwealth, 2016 and 2017). This or a similar approach, could potentially allow a flexible and rapid approach for assessment, development and delivery of multi-sector health systems for Planet, Place and People at community and national levels. This could be rapidly scaled up, by the further expansion of a digital health system, to create a common global good, as is being developed by the Commonwealth Centre for Digital Health, (CWCDH, 2019) which is creating a hub for Universal Health Systems for Planet, Place and People to secure a healthy planet for all.

This builds upon successes such as the Sri Lankan low cost, effective health system, with approximately 2% of GDP spent on health for an average life expectancy of 78 years (Commonwealth Health Hub). The systems framework for healthy policy represents such a roadmap for sustainable Universal Health Coverage. It has been adapted below to create a mapping framework to establish **a digital platform for Universal Health Systems for Planet, Place and People as a common good to secure a healthy planet for all**. This is being taken forward as a hub of the Commonwealth Centre for Digital Health, in collaboration with Southampton University (CWCDH, 2019).

## RECOVERY: UNIVERSAL HEALTH SYSTEMS FOR PLANET, PLACE AND PEOPLE



**Applying a One Health multi-sector systems approach and building on the Global Charter for the Public's Health**

1. **Governance:** planetary health guardianship and legislation; science based policy and strategy; cyclical investment; planetary health index.
2. **Knowledge:** surveillance, monitoring and evaluation; research and evidence; risk and innovation; digital systems and dissemination.
3. **Protection:** planetary health risks and response; IHR and Sendai Framework; communicable disease control; emergency preparedness; environmental health; climate change and sustainability.
4. **Promotion:** intergenerational inequalities; AIR-WATER-LAND-FOOD systems; co-benefits and sustainable development; ecological health literacy; life-course resilience; healthy eco-settings.
5. **Prevention:** primary prevention: vaccination; secondary prevention: screening; efficient healthcare management, waste and recycling.
6. **People:** primary healthcare (ecological community officers; maternal & child health); secondary and tertiary health and social care & recovery.
7. **Advocacy:** leadership and ethics; planetary health community guardians; green connected communities; multi-media networks.
8. **Capacity:** life-course education, workforce development; workforce planning: numbers, resources, infrastructure; standards, curriculum, accreditation, capabilities, teaching and training.

# FLOURISHING ECO-SYSTEMS CREATING CONNECTED COMMUNITIES

A key part of the Doctor's role is to provide hope to the family for the patient's survival and eventual recovery. This also serves to combat the unhelpful reactions, that are increasingly being experienced by younger generations, to the threat of the loss of 'Patient Planet' which include anxiety and depression, denial and disbelief, grief, anger, despair, resignation, numbness and apathy (Helm et al 2018). More than ever, we need to support young people and create viable, connected communities. This will assist in developing resilience and protect populations most at risk from the negative impacts of climate change and eco-system disintegration, as well as limiting the widening of inequalities (HM Govt, 2010).

**In order to do so, and to enable the delivery of the Sustainable Development Goals, (SDGs 2015) we need to reclaim the origins of the term 'Wealth' which derives from 'weal' meaning health, wellness, happiness and well-being, (Etymology Dictionary, 2019). Through the adoption of multi-sector and systems based 'One Health One Planet Education' approaches (Lueddeke GR, 2019), we can re-orientate our current priority focus from unsustainable economic growth to one that promotes nature based solutions for the creation of sustainable wellbeing, and in doing so, enables the delivery of the SDGs (Commonwealth SDGs, 2017). Life-long learning is an important aspect of raising awareness, skills and capabilities for future generations, (Commonwealth SDGs, 2017) with pre-school and early years exposure to nature in particular being linked to enhanced engagement with nature later in life, (FPH, 2010).**

This requires the development of circular economies that account for all the impacts across the system, which are based upon zero or negative carbon emissions and promote sustainable and flourishing prosperity (Raworth K 2017). This should build upon successful examples, where governance mechanisms and indicators have been re-aligned, for example, the Welsh Act for the Well-Being of Future Generations (Wales, 2015). Whilst Costa Rica, which actively protects its environment and bio-diversity and already obtains 98% of its electricity from renewable sources, recently announced a multi-sector plan to become entirely carbon neutral by 2050 (Costa Rica, 2019). A number of other Governments, including the UK and Germany, have recently committed to becoming carbon neutral by 2050.

A key challenge to creating flourishing connected communities is the rapid rise in urban sprawl with the resultant loss of bio-diversity, increasing pollution and widening inequalities and poverty. Yet there are good examples of effective and collaborative planning that meets the needs of existing and future generations, that bring together public health, environmental perspectives and planners to create liveable and sustainable communities, (Commonwealth Association of Planners). Effective planning can help create

healthy sustainable communities with well-connected and resilient infrastructure (including homes, schools, health facilities, social care, employment opportunities and green infrastructure networks and recreational space) to meet the needs of all members of society both now and in the future. A well-planned community is key to achieving a healthy community for all, and can be created by utilising integrated planning models and processes (Graham and White, 2016), supported by policies which place the health of the planet at its core, (Wales, 2015).

By actively creating integrated planning systems that cross vertical and horizontal silos we can develop flourishing communities, enable supportive, empowered and active communities, which are better able to develop creative solutions to our profound and existential global challenges (Green 2017). For example, we can do so, by empowering young people to become guardians for the planet's health, and to envision a sustainable world for the future, as well as actively engaging communities in the design, development and delivery of societies that place thriving eco-systems and enhanced biodiversity at the heart of our own well-being.

IN ORDER TO SECURE THE PLANET'S HEALTH, AS HEALTH PROFESSIONALS AND AS THOSE DEDICATED TO THE WELL-BEING OF FUTURE GENERATIONS AND AS ADVOCATES FOR THE 'MANIFESTO TO SECURE A HEALTHY PLANET FOR ALL', WE CALL UPON EVERYONE, TO TAKE RESPONSIBILITY AND TO TAKE EMERGENCY ACTION AND TO JOIN US IN BECOMING 'GUARDIANS FOR A HEALTHY PLANET'.

# A MANIFESTO TO SECURE A HEALTHY PLANET FOR ALL A CALL FOR EMERGENCY ACTION

## 01 SECURITY

### A Critical Care Response for the Planet's Health

**Declare a Climate Emergency:** at global, national and local levels to reflect the required urgency and speed needed to address the critical condition of the planet's health; drawing upon lessons from the health sector, establish an international multi-sector emergency response.

**Resuscitation:** at scale, reduce carbon emissions and ocean temperatures and acidity.

**Stabilisation:** identify key risks and impacts from potential tipping points and co-ordinate responses at scale and speed to stabilise them; diagnose and develop a longer term treatment plan for the planet's health and map the populations most at risk in order to target and scale up adaptation responses.

## 02 RECOVERY

### Rehabilitation and Resilience

**Healthy Air- Water- Land - Food Eco-Systems:** Enhance the recovery of the Planet's Biodiversity and Eco-Systems, including:

- **Air** – rapid investment in clean energy and transport systems
- **Water** – restore healthy ocean and coastal environments, enhance nature based solutions for clean water and sanitation systems
- **Land** – restore healthy habitats including those for pollinator species, reverse desertification, enhance reforestation with indigenous trees
- **Food** – reduce food waste and excess consumption, enhance plant-based healthy foods and clean cooking

### Scale up Universal Health Systems for Planet, Place and People:

Scale up multi-sector systems responses for healthy air, water, land and food eco-systems that also promotes human health, whilst strengthening, at scale: environmental health, climate change and sustainable systems, emergency preparedness; improve access to reproductive and sexual health services; enhance violence prevention and mental health services to increase population resilience, including that of migrants and those impacted by disasters.

## 03 FLOURISHING

### A Flourishing Planet for All

**Promote Sustainable Well-Being:** with a focus on actions that primarily benefit the health of the planet, whilst maximising co-benefits for human well-being, including: transformation to cyclical economies to account for impacts upon the planet's health with green infrastructure and urban planning, sustainable homes, green spaces and sustainable transport: systems to enhance active transport and promote bio-diversity.

**Create Connected Communities:** enhance digital communities and multi-sector systems based 'One Health One Planet Education' across the life-course for sharing knowledge and innovation and scaling up innovative solutions; enhance early years nature based education, create healthy eco-communities by promoting ecological volunteering; engage young people in community design and development; increase green cultural and learning spaces; celebrate diversity and bio-diversity; promote creativity and secure sustainable well-being for all.

## 04 GUARDIANSHIP

### Guardianship for a Healthy Planet

**Establish a Healthy Planet Index** – place the primacy of the Planet's Health in decision making and monitoring processes through the development of a Planetary Health Index with accountability to the well-being of future generations, in order to drive the scale and speed of action required and identify and intervene with risks to the Planet's Health.

**Guardians for a Healthy Planet:** every organisation and community to establish a 'Guardian for the Planet's Health' responsible for:

- **Planetary First Aid** – place the Planet's Health at the centre of decision making to secure the well-being of future generations
- **Emergency Response** – co-ordinate and communicate urgent action to address our Climate Emergency
- **Guardianship** – protect our Planet's Health from risks and promote the well-being of future Generations
- **Advocacy** – for science based decisions and nature-based responses
- **Solutions** – educate oneself and others on environmental challenges and innovative solutions for the Planet's Health
- **Unify** – act for the well-being of all on this planet, and enable rapid and proportionate collaborative action
- **Sustain** – hope and inspire action to create a flourishing planet for all.

## 05 COLLABORATIVE

### Community and Health Professional Action

#### Advocacy and Leading by example:

- **Guardians:** Become Guardians for the Planet's Health and a community advocate – anyone can become a Guardian for a Healthy Planet
- **Efficient:** Use clean renewable energy sources, insulate buildings and provide accessible community based and digital services
- **Recycle:** Dispose of medical waste, plastics, refrigerators and air-conditioners responsibly
- **Protect:** Patients from extreme weather events and have emergency plans and processes in place
- **Green:** Plant trees around health centers to protect against heatwaves, flooding and to create healthy environments

#### Patient Advice, Services and Prescriptions:

**Healthy Food:** Encourage a shift to healthy plant based foods, reduce food waste and excessive energy consumption

**Physical Activity:** Encourage physical activities like gardening, walking and cycling

**Green Activity:** Prescribe Green Volunteering, kitchen gardens, community conservation and tree planting

**Resilient Families:** Provide accessible Maternal and Child Health services, including reproductive and mental health services

**Quality Services:** Reduce over prescribing and over investigation, enhance public health with preventive approaches that empower patients.

# ACTING WITH SPEED AND SCALE

## WE NEED TO ACT WITH SPEED AND SCALE: A CRITICAL CARE RESPONSE TO SECURE A HEALTHY PLANET FOR ALL

### Critical Care Response:

Resuscitation  
Stabilisation  
Diagnosis  
Treatment  
Recovery  
Rehabilitation  
Prevention  
Promotion



### Actions (urgent):

**Security** - a 'Critical Care Response for the Planet's Health'  
**Recovery** - Rehabilitation and Resilience

### Actions (long-term):

A **Flourishing** - Planet for All  
**Guardianship** - for a Healthy Planet  
**Collaborative** - Community and Health Professional Action



**A DIGITAL PLATFORM FOR UNIVERSAL HEALTH SYSTEMS FOR PLANET, PLACE AND PEOPLE AS A COMMON GOOD TO SECURE A HEALTHY PLANET FOR ALL, IS BEING TAKEN FORWARD AS A HUB OF THE COMMONWEALTH CENTRE FOR DIGITAL HEALTH, IN COLLABORATION WITH SOUTHAMPTON UNIVERSITY, AS PART OF THE NEXT STEPS REQUIRED TO FACILITATE AND ENABLE COLLABORATIVE ACTIONS OUTLINED IN THIS MANIFESTO:**

[https://cwcdh.org/documents/CWCDH\\_Southampton\\_Hub\\_Brochure.pdf](https://cwcdh.org/documents/CWCDH_Southampton_Hub_Brochure.pdf)

## References:

- American Veterinary Medical Association: **One Health: A New Professional Imperative. One Health Initiative Task Force: Final Report.** King et al, 2008  
[www.avma.org/KB/Resources/Reports/Documents/onehealth\\_final.pdf](http://www.avma.org/KB/Resources/Reports/Documents/onehealth_final.pdf)
- BBC 2019: **'Large Ebola outbreaks new normal says WHO'** 7th June, [www.bbc.co.uk/news/health-48547983](http://www.bbc.co.uk/news/health-48547983)
- Borisch B, Lomazzi M, Moore M, Krech R, (2018): **'Update on the Global Charter for the Public's Health'** Bull World Health Organ. 2018 Jun 1; 96(6): 439–440. Published online 2018 May 14.  
doi: 10.2471/BLT.17.198820  
PMCID: PMC599621
- Ceballos et al, (2017) **'Biological annihilation via the ongoing sixth mass extinction signalled by vertebrate population losses and declines'** PNAS July 25, 2017 114 (30) E6089–E6096: <https://doi.org/10.1073/pnas.1704949114>
- Commonwealth, (2016) **'A Systems Framework for Healthy Policy – Advancing Global Health Security and Sustainable Well-Being for All'** Implementation Tool for the **'Global Charter for the Public's Health'**; The Commonwealth Secretariat, London, UK  
[www.thecommonwealth-healthhub.net](http://www.thecommonwealth-healthhub.net)
- Commonwealth (2017) **'Health Protection Policy Toolkit: Health as an Essential Component of Global Security'**; 2nd Edition; Public Health Wales and the Commonwealth Secretariat, 2017  
[www.thecommonwealth-healthhub.net](http://www.thecommonwealth-healthhub.net)
- Commonwealth (2017) **'Digital Systems for One-Health'** A policy brief; the Commonwealth Secretariat,  
[www.thecommonwealth-healthhub.net](http://www.thecommonwealth-healthhub.net)
- Commonwealth (2018) **'Blue Charter'**  
<https://bluecharter.thecommonwealth.org>
- CWCDH (2019): **Commonwealth Centre for Digital Health – Hub for Universal Health Systems for Planet, Place and People:**  
[https://cwcdh.org/documents/CWCDH\\_Southampton\\_Hub\\_Brochure.pdf](https://cwcdh.org/documents/CWCDH_Southampton_Hub_Brochure.pdf)
- The Commonwealth SDGs (2017) **'Curriculum Framework for Enabling the Sustainable Development Goals'** The Commonwealth Secretariat, London, UK;  
[www.thecommonwealth-educationhub.net](http://www.thecommonwealth-educationhub.net)
- Diamond J (2011) **'Collapse – How Societies Choose to Fail or Survive'** Penguin
- Drawdown, (2017) **'The most comprehensive plan ever proposed to reverse global warming'** edited by Paul Hawken, Penguin  
[www.drawdown.org](http://www.drawdown.org)
- Dwyer G and Chandler MA (2009) **'Mid-Pliocene sea level and continental ice volume based on coupled benthic Mg/Ca palaeotemperatures and oxygen isotopes'** Phil. Trans. R. Soc. A (2009) 367, 157–168  
<https://royalsocietypublishing.org/doi/full/10.1098/rsta.2008.0222>
- EAT – Lancet Commission Summary Report, (2019) **'Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems'** (Walter Willett et al.):  
<https://eatforum.org/eat-lancet-commission/eat-lancet-commission-summary-report/>
- Europa (2019) – Regional networks working on climate change and environmental challenges:  
<https://europa.eu/capacity4dev/public-environment-climate/minisite/useful-links/regional-organisations-working-environment-and-climate-change>
- Etymological Dictionary, (2019) – meaning of **'Wealth'**  
<https://www.etymonline.com/word/wealth>
- FAO, OIE and WHO. **The FAO–OIE–WHO Collaboration: Tripartite Concept Note.** World Health Organisation, 2010.
- FAO, (2018) **'The State of the World's Forests'**  
[www.fao.org/state-of-forests/en/](http://www.fao.org/state-of-forests/en/)
- FAO (2019) **'The State of the World's Biodiversity – for Food and Agriculture'**  
<http://www.fao.org/3/CA3129EN/CA3129EN.pdf>
- Figueres C, Schellnhuber HJ, Whiteman G, Rockstrom J, Hobley A, Rahmstorf S (2017) **'Three years to safeguard our climate'** Nature Vol 546; 593–595, 29th June 2017,  
[www.nature.com/news/three-years-to-safeguard-our-climate-1.22201](http://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201)
- FPH (2010) **'Great Outdoors: How Our Natural Health Service Uses Green Space to Improve Well-Being'** Briefing Statement, A Faculty of Public Health Publication in Association with Natural England:  
[www.champspublichealth.com/writedir/9ee3FPH%20green%20space%20briefing.pdf](http://www.champspublichealth.com/writedir/9ee3FPH%20green%20space%20briefing.pdf)
- Graham H and White PCL (2016) **'Social determinants and lifestyles: integrating environmental and public health perspectives'** Public Health, 141; 270–278; Science Direct  
[www.sciencedirect.com/science/article/pii/S0033350616302505](http://www.sciencedirect.com/science/article/pii/S0033350616302505)
- Green, E **'The Existential Dread of Climate Change'** How despair about our changing climate may get in the way of fixing it. Psychology Today; October 2017  
[www.psychologytoday.com/us/blog/there-is-always-another-part/201710/the-existential-dread-climate-change](http://www.psychologytoday.com/us/blog/there-is-always-another-part/201710/the-existential-dread-climate-change)
- Guardian Weekly: **'A 4C rise – this is how the future would look'** 31st May 2019:  
[www.pressreader.com/uk/the-guardian-weekly/20190531/281547997369914](http://www.pressreader.com/uk/the-guardian-weekly/20190531/281547997369914)
- Helm SV, Amanda Pollitt, Melissa A. Barnett, Melissa A. Curran, Zeliann R. Craig **'Differentiating environmental concern in the context of psychological adaption to climate change. Global Environmental Change,** 2018; 48: 158 DOI: 10.1016/j.gloenvcha.2017.11.012
- HM Gov't 2010; **'Confident Communities, Brighter Futures – a framework for population well-being'**; HM Government, England:  
[https://webarchive.nationalarchives.gov.uk/20130105065717/www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/@ps/documents/digitalasset/dh\\_115936.pdf](https://webarchive.nationalarchives.gov.uk/20130105065717/www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_115936.pdf)
- IPBES 2019 **'Global Assessment Report on Biodiversity and ecosystem services of the Intergovernmental Science– Policy Platform on Biodiversity and Ecosystem Services'** Summary for Policy Makers:  
[www.dropbox.com/sh/yd8l2vou4jqtp3/AACpraYjOYWpTxAFv5H-2vrKa/1%20Global%20Assessment%20Summary%20for%20Policymakers?dl=0&subfolder\\_nav\\_tracking=1](http://www.dropbox.com/sh/yd8l2vou4jqtp3/AACpraYjOYWpTxAFv5H-2vrKa/1%20Global%20Assessment%20Summary%20for%20Policymakers?dl=0&subfolder_nav_tracking=1)
- IPCC (2018) **'Global Warming of 1.5C'** Intergovernmental Panel on Climate Change  
[www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15\\_SPM\\_High\\_Res.pdf](http://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15_SPM_High_Res.pdf)
- IPCC (2018) **Graph of long-term temperature projections - Chapter 12** IPCC Report:  
[www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_Chapter12\\_FINAL.pdf](http://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter12_FINAL.pdf)
- IUCN (2016) **'Explaining Ocean Warming – causes, scale, effects and consequences'**  
[https://portals.iucn.org/library/sites/library/files/documents/2016-046\\_o.pdf](https://portals.iucn.org/library/sites/library/files/documents/2016-046_o.pdf)
- Kump LR et al (2016) **'The Earth System'** Third Edition, Pearson.
- Kumar and Clark (2016) **'Clinical Medicine'** 9th Edition, Elsevier  
[www.uk.elsevierhealth.com/kumar-and-clarks-clinical-medicine-9780702066016.html](http://www.uk.elsevierhealth.com/kumar-and-clarks-clinical-medicine-9780702066016.html)
- Lewis SL and Maslin MA (2018) **'The Human Planet – How We Created the Anthropocene'** Pelican, Penguin Random House UK  
[www.greenpenguin.co.uk](http://www.greenpenguin.co.uk)
- Living Planet Report, (2018) **'Aiming Higher'** World Wildlife Fund:  
[www.wwf.org.uk/sites/default/files/2018-10/wwfintl\\_livingplanet\\_full.pdf](http://www.wwf.org.uk/sites/default/files/2018-10/wwfintl_livingplanet_full.pdf)
- Lomazzi M et al (2016): **'A Global Charter for the Public's Health – the public health system: role, functions, competencies and education requirements'** Eur J Public Health. 2016 Apr; 26(2): 210–212. Published online 2016 Mar 7. doi: 10.1093/eurpub/ckw011 PMCID: PMC4804738
- Lueddeke GR. (2019). **Survival: One Health, One Planet, One Future.** London/New York: Routledge.  
[www.routledge.com/Survival-One-Health-One-Planet-One-Future/Lueddeke/p/book/9781138334953](http://www.routledge.com/Survival-One-Health-One-Planet-One-Future/Lueddeke/p/book/9781138334953)

## References (cont'd):

- NASA (2019) **Carbon Dioxide Vital Signs:**  
<https://climate.nasa.gov/vital-signs/carbon-dioxide/>
- One Health Initiative  
[www.onehealthinitiative.com/OneHealth2](http://www.onehealthinitiative.com/OneHealth2)
- Penn et al, (2018) **'Temperature-dependent hypoxia explains biogeography and severity of end-Permian marine mass extinction'** Science:  
<http://science.sciencemag.org/content/362/6419/eaat1327.full>
- Raworth K (2017) **'Doughnut Economics – Seven Ways to Think Like a 21st Century Economist'** Random House, Penguin, UK.
- Sendai Framework for Disaster Risk Reduction 2015- 2030:  
[www.unisdr.org/we/coordinate/sendai-framework](http://www.unisdr.org/we/coordinate/sendai-framework)
- Sherman (2019) **'How can the Security Council engage on Climate Change, Peace and Security?'** International Peace Institute, June 2019:  
<https://theglobalobservatory.org/2019/06/how-can-security-council-engage-on-climate-change-peace-security/>
- Stockholm Resilience Centre (2015) - **The Nine Planetary Boundaries**  
[www.stockholmresilience.org/research/planetary-boundaries/planetary-boundaries/about-the-research/the-nine-planetary-boundaries.html](http://www.stockholmresilience.org/research/planetary-boundaries/planetary-boundaries/about-the-research/the-nine-planetary-boundaries.html)
- Steffen W, Richardson K, Rockström J et al (2015) **'Sustainability. Planetary boundaries: guiding human development on a changing planet'** Science. 2015; 347: 1259-855
- Stockholm Resilience Centre, (2018) **Hothouse Earth Scenario**  
[www.stockholmresilience.org/research/research-news/2018-08-06-planet-at-risk-of-heading-towards-hothouse-earth-state.html](http://www.stockholmresilience.org/research/research-news/2018-08-06-planet-at-risk-of-heading-towards-hothouse-earth-state.html)
- Steffen W et al (2018) **'Trajectories of the Earth System in the Anthropocene'** PNAS August 14, 2018 115 (33) 8252-8259; <https://doi.org/10.1073/pnas.1810141115>  
[www.pnas.org/content/115/33/8252](http://www.pnas.org/content/115/33/8252)
- SDGs (2015) **'Sustainable Development Goals'** United Nations  
<https://sustainabledevelopment.un.org/sdgs>
- UN News (2019) **'Climate Change recognised as 'threat multiplier' as UN Security Council debates impact upon peace'** January:  
<https://news.un.org/en/story/2019/01/1031322>
- UNEP (2018) **'Global Emissions Report 2018'**  
[http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018\\_FullReport\\_EN.pdf?sequence=1&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018_FullReport_EN.pdf?sequence=1&isAllowed=y)
- UNSG quote:  
<https://news.un.org/en/story/2018/10/1022492>
- Veidis EM, Myers SS, Almada AA, Golden CD: **'A Call for Clinicians to act on Planetary Health'** The Lancet, vol 393, issue 10185 P2021, May 18, 2019. [www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)30846-3/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30846-3/fulltext)
- WEF (2019) **'The Global Risks Report'** World Economic Forum:  
[www.weforum.org/reports/the-global-risks-report-2019](http://www.weforum.org/reports/the-global-risks-report-2019)
- WFPHA (2016) **'A Global Charter for the Public's Health – the public health system: role, functions, competencies and education requirements'** The European Journal of Public Health, March 8, 2016  
[www.wfpha.org/images/PHAA01001\\_Global-Charter\\_PROOF\\_160812\\_FINAL.pdf](http://www.wfpha.org/images/PHAA01001_Global-Charter_PROOF_160812_FINAL.pdf)
- WFPHA (2016): **'The Global Charter for the Public's Health'** World Federation of Public Health Associations  
[www.wfpha.org/wfpha-projects/14-projects/171-a-global-charter-for-the-public-s-health-3](http://www.wfpha.org/wfpha-projects/14-projects/171-a-global-charter-for-the-public-s-health-3)
- Whitmee S, Haines A, Beyrer C et al. **'Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation-Lancet Commission on planetary health'** Lancet. 2015; 386:1973-2028
- WHO (2014) **'The Case for Investing in Public Health'** WHO Europe  
[www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/278073/Case-Investing-Public-Health.pdf](http://www.euro.who.int/__data/assets/pdf_file/0009/278073/Case-Investing-Public-Health.pdf)
- WHO (2016) **'Ambient Air Pollution – a Global Assessment of Exposure and Burden of Disease'**  
<https://apps.who.int/iris/bitstream/handle/10665/250141/9789241511353-eng.pdf?sequence=1>
- WHO (2017) **'Emergency Response Framework'**  
<https://apps.who.int/iris/bitstream/handle/10665/258604/9789241512299-eng.pdf>
- WHO (2019) **Air pollution resources**  
[www.who.int/airpollution/en/](http://www.who.int/airpollution/en/)
- WMO 2019: **'Statement on the State of the Global Climate in 2018:**  
[https://gallery.mailchimp.com/daf3c1527c528609c379f3c08/files/82234023-0318-408a-9905-5f84bbb04eee/Climate\\_Statement\\_2018.pdf](https://gallery.mailchimp.com/daf3c1527c528609c379f3c08/files/82234023-0318-408a-9905-5f84bbb04eee/Climate_Statement_2018.pdf)
- WONCA 2019: **'Declaration calling for Family Doctors of the World to Act on Planetary Health'**  
[www.globalfamilydoctor.com/site/DefaultSite/filesystem/documents/Groups/Environment/2019%20Planetary%20health.pdf](http://www.globalfamilydoctor.com/site/DefaultSite/filesystem/documents/Groups/Environment/2019%20Planetary%20health.pdf)
- World Atlas, (2019) **'Timeline of the mass extinction events on earth'** [www.worldatlas.com/articles/the-timeline-of-the-mass-extinction-events-on-earth.html](http://www.worldatlas.com/articles/the-timeline-of-the-mass-extinction-events-on-earth.html)
- World Medical Association, **World Veterinary Association One Health Memorandum of Understanding**, (2012)  
[www.wma.net/blog-post/one-health-initiative-wma-and-wva/](http://www.wma.net/blog-post/one-health-initiative-wma-and-wva/)

## Further information and case studies:

- Costa Rica (2019) **Decarbonisation plan**  
[www.theguardian.com/world/2019/feb/25/costa-rica-plan-decarbonize-2050-climate-change-fight](http://www.theguardian.com/world/2019/feb/25/costa-rica-plan-decarbonize-2050-climate-change-fight)
- Climate Emergency Declaration (2019): **Local Governments declare Climate Emergency**  
<https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/>
- Climate Strikes – what is a Climate Emergency?**  
[www.bbc.co.uk/news/newsbeat-47570654](http://www.bbc.co.uk/news/newsbeat-47570654)
- Nature Based Solutions  
[www.naturebasedsolutionsinitiative.org](http://www.naturebasedsolutionsinitiative.org)
- Wales (2015) **'Well Being of Future Generations Act'**  
<https://gweddil.gov.wales/topics/people-and-communities/people/future-generations-act/?lang=en>

## This Manifesto is endorsed and supported by the following organisations:

This Manifesto is a collaborative initiative by the InterAction Council, a group of former Heads of Government, co-chaired by HE Bertie Ahern from Ireland and President Obasanjo from Nigeria. It builds upon collaborative action in response to the InterAction Council Dublin Charter. The Manifesto has been developed with and endorsed by the following organisations in response to the increasing evidence of the urgency required to address our growing global climate and environmental crisis:

InterAction Council

[www.interactioncouncil.org](http://www.interactioncouncil.org)

World Federation of Public Health Associations

[www.wfpha.org](http://www.wfpha.org)

World Psychiatric Association

[www.wpanet.org](http://www.wpanet.org)

World Organisation of Family Doctors – Working Group on the Environment

[www.globalfamilydoctor.com/groups/WorkingParties/Environment.aspx](http://www.globalfamilydoctor.com/groups/WorkingParties/Environment.aspx)

International Federation of Environmental Health

[www.ifeh.org](http://www.ifeh.org)

International Union for Conservation of Nature, Urban Alliance

[www.iucn.org/news/secretariat/201809/iucn-launches-global-alliance-greener-cities](http://www.iucn.org/news/secretariat/201809/iucn-launches-global-alliance-greener-cities)

NCD Alliance

<https://ncdalliance.org>

Commonwealth Medical Association

<https://commonwealthdoctors.org>

Commonwealth Centre for Digital Health

<https://cwcdh.org>

Commonwealth Local Government Forum

[www.clgf.org.uk](http://www.clgf.org.uk)

Commonwealth Royal Society

[www.thercs.org](http://www.thercs.org)

Commonwealth Association of Science, Technology and Mathematics Educators

[www.castme.online](http://www.castme.online)

Commonwealth Human Ecology Council

[www.checinternational.org](http://www.checinternational.org)

Commonwealth Association of Museums

[www.maltwood.uvic.ca/cam/](http://www.maltwood.uvic.ca/cam/)

Commonwealth Association of Planners

[www.commonwealth-planners.org](http://www.commonwealth-planners.org)

One Young World

[www.oneyoungworld.com](http://www.oneyoungworld.com)

International Federation of Medical Students Association

<https://ifmsa.org>

Planetary Health Alliance

<https://planetaryhealthalliance.org>

Salzburg Global Seminar

[www.salzburgglobal.org](http://www.salzburgglobal.org)

Engineers for Social Responsibility Inc

<https://sites.google.com/site/test4esr/>

Welsh Commission for the Well-Being of Future Generations

<https://futuregenerations.wales>

Faculty of Public Health, UK

[www.fph.org.uk](http://www.fph.org.uk)

The National Institute of Public Health, Denmark, University of Southern Denmark

[www.sdu.dk/en/sif](http://www.sdu.dk/en/sif)

Chartered Institute of Environmental Health

[www.cieh.org](http://www.cieh.org)

School of International Futures

[www.soif.org.uk](http://www.soif.org.uk)

Foundation for Democracy and Sustainable Development

[www.fdsd.org](http://www.fdsd.org)

Association of International Accountants

[www.aiaworldwide.com/home](http://www.aiaworldwide.com/home)

World Health Summit

[www.worldhealthsummit.org](http://www.worldhealthsummit.org)

Islamic World Academy of Sciences

[www.iasworld.org](http://www.iasworld.org)

Arab World Association of Young Scientists

[www.arabways.org/index.php/arabways-news/item/114-arabways-the-first-platform-for-young-](http://www.arabways.org/index.php/arabways-news/item/114-arabways-the-first-platform-for-young-)



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