

Environment, Climate Change and Land Reform Committee**Climate Change (Emissions Reduction Targets) (Scotland) Bill****SUBMISSION FROM Bruce Taylor**

Climate change is already here. This summer saw extreme weather and record breaking temperatures around the world. Forest and moorland fires out of control around the globe releasing vast amounts of carbon dioxide (CO₂). Even the tundra in Scandinavia and Alaska is on fire releasing methane (18 times the global warming potential of CO₂). The monsoons are particularly heavy this year – floods in Kerala, South West India last week. Flash floods in the South of France and Italy – possibly contributing to collapse of the Morandi motorway bridge in Genoa. Australia is currently in a devastating drought and this is during their winter. What is it going to be like in their summer?

In an important recent paper, (Stefen et al, 2018, Trajectories of the Earth System in the Anthropocene, www.pnas.org/cgi/doi/10.1073/pnas.1810141115), it is argued that we are “only decades away” from reaching an irreversible tipping point of 2 °C warming above pre-industrial levels. According to that paper we are already at 1 °C warming above pre-industrial levels. Decades away could be 20 or 30 years away which would take us to 2050.

The scale of the potential catastrophe of uncontrollable runaway global warming once we reach the tipping point of 2 °C could be a cull in the human population within decades after 2050 on scale that makes the slaughter of the 20th minuscule in comparison. Consider the impact of half of the world population of 7 bn people being wiped out? The factor of 50% was just plucked out of the air but even if it were only 10% this is still 700 million deaths. If planet earth does a population reset to around 1 bn, which are the estimates for the global population in 1800, before the industrial revolution really took off we are looking at an 85% cull.

The scale of the potential catastrophe facing humanity is such that urgent action is needed now for all nations to make large cuts in their carbon emissions.

The Paris Agreement which commits all nations to playing their part in limiting global warming to 1.5 °C. Wealthy nations like Scotland, which built up their wealth in the 19th and 20th centuries through heavy manufacturing industries based on coal and steel should make a proportionately larger and faster cut in their carbon emissions. Apart from considerations of equity between developed and developing nations we should also be leading by example. If Scotland moves rapidly to a low carbon economy we can develop the technologies and expertise that will be able to export these to countries around the world. A low carbon economy does not have to mean a low growth economy.

Specifically the Bill does not commit Scotland to cutting climate emissions any further in the next decade. We already had a target to cut our greenhouse gases by 66% by 2032. The new bill brings that forward only 2 years to 66% by 2030. A more appropriate and achievable 2030 target would be a 77% reduction. While the Bill includes a new section called ‘the net-zero target’, it doesn’t actually set a net -zero target. It sets a 90% reduction

in Scotland's climate emissions by 2050 - a slight increase from the current target of 80%. Given the urgency, a target of net - zero emissions by 2040 is what Scotland and all nations should be aiming for.

The Scottish Government said they won't set a target for net-zero because they don't know exactly how to meet it, and that they will set a net-zero target when it is 'credible and responsible' to do so. But when climate change is already here, the only credible and responsible action is to set the ambitious target now. Industry and academia will work out how the net-zero target is to be met.

Malthusian gloomy predictions have proved wrong in the past because they failed to take account in advances in technology, medicine and agriculture. If we are to prove Malthus wrong again we need to get cracking on working on the technologies that are going to get us to zero-carbon by 2040.