From: **Judy Ryan** judyryan@grapevine.com.au
Subject: Re: (8) Correction for Dear Fellow Citizens of the World
Date: 29 March 2016 4:30 pm
To: Roger James Dargaville rogerd@unimelb.edu.au, Malcolm.Turnbull.MP@aph.gov.au, Greg.Hunt.MP@aph.gov.au
Cc: Marjorie Curtis marjorie.curtis6@bigpond.com

Dr Roger Dargaville, Deputy Director
Melbourne Energy Institute
School of Earth Sciences
405a McCoy Building
The University of Melbourne

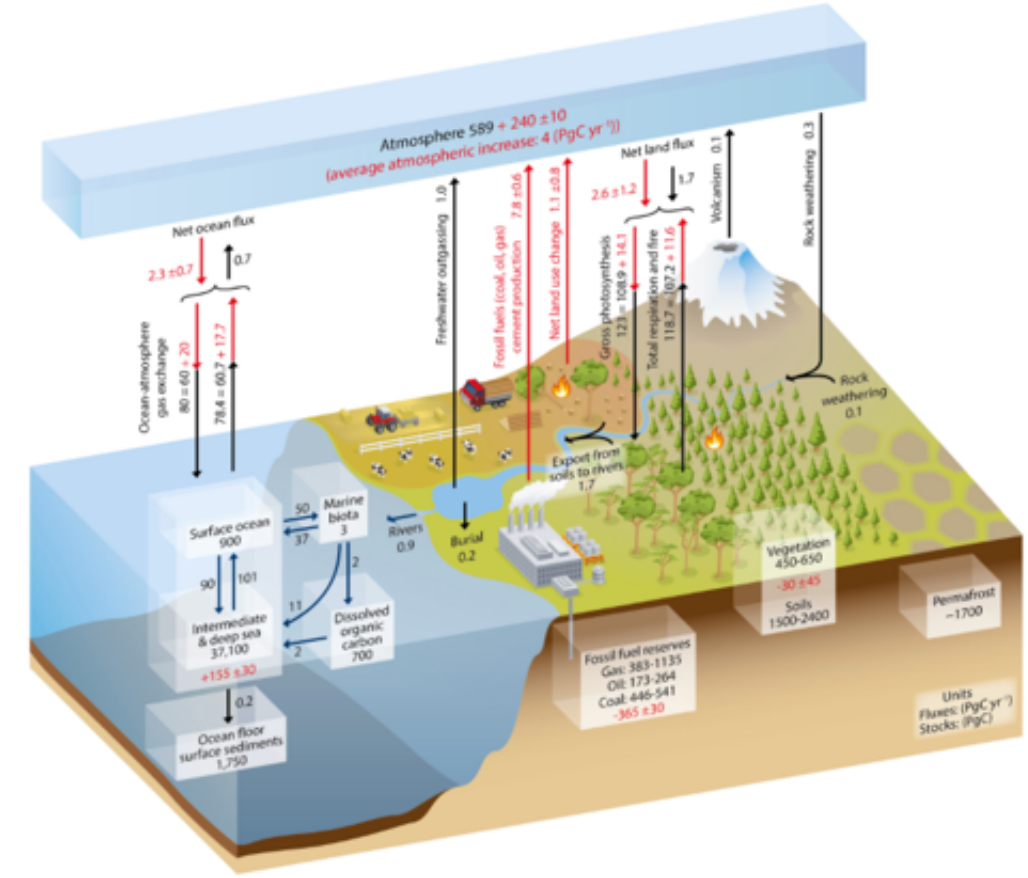
Dear Dr Dargaville ,

We apologise for writing to you so shortly after our previous letter dated 16th March 2016 which can be viewed here http://www.galileomovement.com.au/docs/jr/LetterToDargaville.pdf . However, we need to correct an error.

In our earlier letter we stated that a Petagram /Gigatonne is expressed to the power of 15 (000,000,000,000,001). One of your cohorts pointed out that a Petagram is 10 raised to the power of 15, not 10 raised to the power of **minus** 15, therefore should have been written as 1,000,000,000,000,000.

It is important that we write to you Dr Dargaville and to the three thousand other important citizens of the world who were copied into our letter. Our immediate priority is to publicly own, and rectify our error as we have done above. Science is an honourable discipline. Its standards are high and must be met to safeguard its integrity.

Nonetheless, it remains clear that the graphical image Fig 6.1 (shown below) is no more than a pretty picture.For example,the ambiguous term “carbon stock”, as used in the legend for Figure 6.1, describes an estimated, therefore by definition, unmeasurable, reservoir which has the capacity to accumulate or release carbon. Forest Resource Assesment 2005 Terms and definitions. We also note that, while confidence measures are mentioned, they are not shown. The *p values* are also not shown.



« Fig6-01 1 of 48 »

Figure 6.1 I Simplified schematic of the global carbon cycle. Numbers represent reservoir mass, also called 'carbon stocks' in PgC (1 PgC = 1015 gC) and annual carbon exchange fluxes (in PgC yr–1). Black numbers and arrows indicate reservoir mass and exchange fluxes **estimated** for the time prior to the Industrial Era, about 1750 (see Section 6.1.1.1 for references). Fossil fuel reserves are from GEA (2006) and are consistent with numbers used by IPCC WGIII for future scenarios. The sediment storage is a sum of 150 PgC of the organic carbon in the mixed layer (Emerson and Hedges, 1988) and 1600 PgC of the deep-sea CaCO3 sediments available to neutralise fossil fuel CO2 (Archer et al., 1998). Red arrows and numbers indicate annual 'anthropogenic' fluxes averaged over the 2000–2009 time period. These fluxes are a perturbation of the carbon cycle during Industrial Era post 1750. These fluxes (red arrows) are: Fossil fuel and cement emissions of CO2 (Section 6.3.1), Net land use change (Section 6.3.2), and the Average atmospheric increase of CO2 in the atmosphere, also called 'CO2 growth rate' (Section 6.3). The uptake of anthropogenic CO2 by the ocean and by terrestrial ecosystems, often called 'carbon sinks' are the red arrows part of Net land flux and Net ocean flux. Red numbers in the reservoirs denote cumulative changes of anthropogenic carbon over the Industrial Period 1750–2011 (column 2 in Table 6.1). By convention, a positive cumulative change means that a reservoir has gained carbon since 1750. The cumulative change of anthropogenic carbon in the terrestrial reservoir is the sum of carbon cumulatively lost through land use change and carbon accumulated since 1750 in other ecosystems (Table 6.1). Note that the mass balance of the two ocean carbon stocks Surface ocean and Intermediate and deep ocean includes a yearly accumulation of anthropogenic carbon (not shown). Uncertainties are reported as 90% confidence intervals. Emission **estimates** and land and ocean sinks (in red) are from Table 6.1 in Section 6.3. The change of gross terrestrial fluxes (red arrows of Gross photosynthesis and Total respiration and fires) has been **estimated** from CMIP5 model results (Section 6.4). The change in air–sea exchange fluxes (red arrows of ocean atmosphere gas exchange) have been **estimated** from the difference in atmospheric partial pressure of CO2 since 1750 (Sarmiento and Gruber, 2006). Individual gross fluxes and their changes since the beginning of the Industrial Era have typical uncertainties of more than 20%, while their differences (Net land flux and Net ocean flux in the figure) are determined from independent measurements with a much higher accuracy (see Section 6.3). Therefore, to achieve an overall balance, the values of the more uncertain gross fluxes have been adjusted so that their difference matches the Net land flux and Net ocean flux **estimates**. Fluxes from volcanic eruptions, rock weathering (silicates and carbonates weathering reactions resulting into a small uptake of atmospheric CO2), export of carbon from soils to rivers, burial of carbon in freshwater lakes and reservoirs and transport of carbon by rivers to the ocean are all assumed to be pre-industrial fluxes, that is, unchanged during 1750–2011. Some recent studies (Section 6.3) indicate that this assumption is likely not verified, but global **estimates** of the Industrial Era perturbation of all these fluxes was not available from peer-reviewed literature. The atmospheric inventories have been calculated using a conversion factor of 2.12 PgC per ppm (Prather et al., 2012).

We stand by our statement,"Fig 6.1 appears to either ignore, totally underestimate, or erroneously report the natural components in the carbon cycle." This link to Malcolm Roberts formal complaint clarifies and expands on our statement. http://www.climate.conscious.com.au/docs/20151012/4.4Empirical.pdf. Note that he refers to data cited and relied upon by the IPCC.

The remainder of this letter goes to relocating our critique of the application of linear analysis to natural dynamic systems with small differences in initial conditions.There is probably no better example of a "small difference in initial conditions" than the tiny, tiny amount of carbon-dioxide in our atmosphere. Further, the empirical evidence shows that whatever the amount of carbon-dioxide emitted by burning fossil fuels, it does not effect the overall amount in the atmosphere. "Nature determines carbon-dioxide levels in air proving that human carbon-dioxide can have no effect on the global variability or level of carbon-dioxide in air.http://www.climate.conscious.com.au/docs/BaldwinBirminghamReport.pdf (page 9).

The distortion and confusion exemplified in Fig 6.1 is why linear analyses has been disproven and discredited for measuring the weather and climate. "Small differences in initial conditions (such as those due to rounding errors in numerical computation) yield widely diverging outcomes for such dynamical systems https://en.wikipedia.org/wiki/Chaos_theory

So we ask the question again. Why are some scientists still using a discredited form of analysis to measure carbon-dioxide emissions into the atmosphere? (1) Are they truly unaware of the rounding and/or bias errors that can occur when using an inappropriate form of statistical analysis? OR (2) Do they knowingly measure a dynamical natural system in meaningless 100ths of a percentage point and if so WHY? One is naivety. The other, in our opinion, is a crime.The evidence indicates that Lysenkoism, fraud and wilful blindness are inextricably intertwined criminal offences.

In closing Dr Dargavile, we repeat, if there is anything we have said that you think is untrue or incorrect, please let us know

and we will recheck and respond to you. We are scientists and we welcome evidence based dialogue.

Respectfully Yours

Dr Judy Ryan
Dr Marjorie Curtis
Members World Wide Web of Independent Scientists