

Abstract, line 25-27: point (2) is no longer relevant, I feel – since this is no longer discussed in detail in the revised manuscript. While this point remains valid, I don't feel it should remain in the abstract.

L87-88: rephrase to: [...] for (1) better integration of [...], and (2) continued integration of [...]

Okay, now corrected

L105: here you mention that this takes place over 'just a few generations', on L 139 this is referred to as 'just a few tens of generations'. This should be clarified/harmonized.

Now corrected

P4-5. IN section 2, I feel paragraph 2 (starting at L 105: Recently, evidence has shown ...) connects directly to paragraph 4 (starting at L135: There is now ample evidence for rapid evolution ...), while the 3rd paragraph is a bit lost in between and should be moved to towards the end of this section (below the current L150 for example). There is perhaps some duplication in par 2 and 4 that can be merged.

Now corrected

L 151-152: This is a bit of an awkward sentence, and grammatically incorrect (the fact that the evolution [...] have occurred rarely [...] ?)

Now corrected

Figure 2: the description of the connection between individuals and the atmospheric domain is somewhat cryptic. "chemical emissions" – can this be reformulated ?

I am not sure why you think it is cryptic, same something more specific like contaminants or pollutants I would not apply equally/appropriately to the constituents we list there, we did talk about this when the figure was made.

L178: "In developed countries" can be removed I think. The example cited here is from France and this is mentioned explicitly. Perhaps add a year to these events – I can assume that for newer generations this will not be familiar in the future.

Now corrected

L186-187: "the primary barrier [...] are often political and social limitations" should be: "the primary barriers" ?

Now corrected

L196-197: rephrase this section, not clear (there is a verb missing I assume): " [...] where evidence exists for how organismal range expansion and/or contraction of say, marine benthic communities in response to climate change."

Now corrected

L199: impacts: should this be 'pressures' ?

Now corrected

L203: “will be key in understanding and laying the foundation for good policy development.” Key in understanding what ?

Now corrected

L204: “have long been essential in the development in part, in NASA exploration [...]”: there seems to be something missing there.

Now corrected

L205: “biogeochemistry in uniquely poised”: is uniquely poised.

Now corrected

L 222: what do you mean here with “biogeochemical systems pathways” and how are extreme climate events and ocean acidifications examples thereof ?

Now changed

L237-240: A few issues with this sentence. First, “A keys to success” should be “A key to success”, and the section starting with “in predicting future changes ...” is awkward, not clear what that links to. Or perhaps it’s just missing a comma before “in predicting”.

Now corrected

L249-254: here too, a few awkward sections. “in an already complex mixture of interdisciplinary world in the sciences” ? Further on, “a way forward in planning for humans can better plan for their, and other organisms range expansion, in response to climate change, on the planet.”. There’s some editing to do there to make this sentence work, perhaps this sentence should be split to make it easier. “on the planet” can likely be removed (given that I do not see where else ?)

Okay, now changed.

Reference list: I did not check throughout, but I notice some references cited in the text are missing (e.g. Han et al. 2015, Allen et al. 2017, Delgado-Baquerizo et al., 2020) and that other references are incomplete (e.g. Carney & Krausse 2020). Please go through the text and ensure that all references cited are provided in the reference list, and then cross-check if all references in the list are also cited in the text in case some did not make it into the final version. Tanhua et al. (2019) in reference list contains the first author twice. There are two Saito et al. (2020) references in the list, make these 2020a and 2020b and specify in the text which is which. I only looked at a selection, so there might be more issues than those listed here.

Now corrected and checked.