This is the second time that I am reviewing this manuscript. The manuscript is improved with respect to the first version and most of my previous comments were successfully addressed (two were not entirely, see items 1 and 2 below). I also added a few new (most relatively minor) comments derived from the new material that was added (items 3-6). Finally, I would recommend the manuscript be looked over by a native English speaker, as I found many English mistakes in the document. I have noted a few at the end, but this is not an exhaustive list, and the last section was a bit difficult to understand (see item 6).

1. Figures: The authors are using a diverging palette for non diverging data (upper right in Figures 1-10. While I don't think it is such a problem for temperature in this case, for precipitation it gives the illusions of boundaries where there is none. I would suggest using a sequential scheme, as described on p.10-11 of the IPCC visual style guide.

Also, there are a lot of figures for such a short manuscript. Since the emphasis is on the biases, may I suggest the following format to reduce their number?

Merge Fig. 1-4 such that:

ERA5 DJF tas 24h	HR DJF bias 24h	VHR DJF bias 24h
ERA5 DJF tas 6h	HR DJF bias 6h	VHR DJF bias 6h
ERA5 JJA tas 24h	HR JJA bias 24h	VHR JJA bias 24h
ERA5 JJA tas 6h	HR JJA bias 6h	VHR JJA bias 6h

and send the absolute values for the simulations (i.e. the second rows of the current figures) to the supplementary section. Figures 5-8 could be merged in a similar way. And Figures 9-10 could probably be sent to the supplementary section given that they are so similar to Figures 7-8 and only 1 sentence is spent discussing them. If the authors would like to include a 3rd picture, they could include what is currently Figure S17.

Finally, the characters for the latitudes and longitudes on certain figures seem to be overlapping (see for example Figure 5).

2. Something that was pointed out by myself and the other reviewer was the use of high and very high resolution when referring to the two configurations. In their response to the reviewers, the authors mention "In the new version of the manuscript we use the terms standard and high instead of high and very-high". However, I found many instances where the authors refer to the 1deg resolution simulation as high resolution (HR) and the 0.25deg resolution as very high-resolution (VHR). e.g. lines 34-35, 41, 84, 90, etc.

3. Lines 52-56:" Regarding the extreme precipitation representation, based on simulations from single GCM, some improvement in skill at higher resolution for some measures of extreme precipitation over certain regions of the globe have been found in the past (Wehner et al. 2014,

Kopparla et al. 2013) and only recently, multi-model assessment on this topic have been done, confirming that increasing the horizontal resolution to ¼ of degree (the highest adopted by the model object of this study), the magnitude of simulated daily (Bador et al. 2020) and sub-daily precipitation (Wehner et al. 2021) extremes is increased."

I feel this ignores all the work done on this topic in the RCM community, and it somewhat contradicts what is written on line 40: ("high resolution models, when implemented with a resolution similar to VHR, achieve skills comparable to state-of-the-art Regional Climate Models in reproducing precipitation distributions"). I would suggest reformulating.

4. Line 151: "On the other hand, the negative JJA bias of about -8C over north-eastern Canada shown by **the** HR model is even worse in the VHR version, where a larger portion of the domain is subject to a bias of about 10C."

This negative bias sticks out like a sore thumb. Do the authors have an explanation for this very large negative bias? Is it linked to an excess of sea ice in the summer?

5. I recommend computing the mean bias for the various variables and the different configurations. That value could be inserted directly in the corner of the relevant figure. That would help supporting statements such as:

"In terms of average precipitation, the VHR model shows less pronounced biases with respect to **the** HR model…(line 171)

"on average, the highest resolution CMCC model is better than the lower resolution model in representing…" (line 213)

6. I have to confess that I had a difficult time understanding the conclusion section, from line 225 onward. Part of it might be due to the English I think (e.g. sentence on lines 238-242 is too long; the following sentence is missing a verb), but some of the sentences in that section that were added as answers to the reviewers comments are not really well integrated in the text, which makes the message a little confusing. I am afraid I don't have a good suggestion here, other than spending a bit of time to make sure that the text flows a little better and making sure the main conclusions/ideas are clearly put forth.

Minor points

Line 40: "Demory et al. (2020) have shown that high-resolution models"

Line 43: typically, not tipically

Line 45-47: "Regarding the extreme temperature representation, based on data at the daily frequency, it has been shown that GCMs tend to have warm bias over most land areas (Li et al.,

2021) and the horizontal resolution plays a minor role with respect to the one played in the extreme precipitation representation”

1) I would suggest rephrasing this sentence, as the wording is a bit awkward.
2) Do you mean to say that models overestimate both warm and cold extremes?
3) Play a minor role in what?

Lines 47-51: “Typically, the warm extremes are computed based on maximum daily temperature, but in this work we want to verify the potential improvements induced by the increased resolution in the representation of extreme temperature events defined at two different time frequency (daily and 6-hourly). For this reason we investigate the distribution of daily and 6-houry average temperature, instead of maximum daily temperature.”

This should be moved to the methodology section.

Line 53: “...based on simulations from a single GCM…”

Line 82: “The two models ~~object~~ of this study differ only…”

Line 95: “The model performance in representing the temperature distribution is evaluated by comparing results to…”

Line 109: “Since we aim to characterize different types of extreme events…”

Line 119:” This time period is sufficiently long to capture…”

Line 122: “The grid differences are minor and therefore the interpolation introduces very little differences in the fields.”

I don’t know if I agree with this statement. It is true that the difference is small between the VHR resolution and ERA 5, but CHIRPS resolution is 0.05deg while the atmospheric models used here have a 0.25 deg and 1 deg resolution.

Line 155: “The positive bias over the north western part of South America…”

Line 184: “suggesting that the worst VHR extreme precipitation representing during DJF is mainly due to a too much pronounced stretching of the right part of the precipitation distribution only”

Please rephrase.

Line 213: “~~Anyway,~~ on average…”

Line 227: “...and also with multi-model recent findings, suggesting that higher resolution models…”

I don’t quite understand what the authors mean with “and also with multi-model recent findings”.