

Interactive comment on “Fire and vegetation dynamics in North-West Siberia during the last 60 years based on high-resolution remote sensing” by Oleg Sizov et al.

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ekaterina.ezhova@helsinki.fi

Received and published: 14 August 2020

Please find below the replies to the comments.

1. I also appreciate the involvement of the Corona satellite, which allows for extending the observation period further back in time compared to Landsat, although I wonder how the authors come to a period of 60 years (2018-1968=50).

Burned sites detected in ‘Corona’ imagery from 1968 can be dated back to fires from the period between 1953 and 1964 based on geological surveys and separate images from early Corona mission (Table 6 in the previous version of the manuscript, Table 5 in

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the current version). We added Lines 154-155 in the current version of the manuscript: ‘Burned areas in Corona mosaic from 1968 were partially dated back to the fires in the period 1953-1964 based on geological surveys (Chekunova V.S., Geological and geomorphological survey of a part of the lower reaches of the River Nadym basin and parts of the right bank of the River Ob in Nadym region in 1953. VSEGEI: 1954. 72 p.) and early Corona images’. Therefore, the starting point of our study is in fact between 54 and 65 years ago, which is on average closer to 60 years than to 50.

2. Nevertheless, I agree with reviewer 1 in all the points made: in its current shape the manuscript contains too many unknowns to be able to make a proper judgement of the results. I got strong feeling that many of the results (e.g. classification was based on visual interpretation).

We do not fully agree with the statement that the manuscript contains too many unknowns. We added the information required by referee 1 in section Methods and in the replies to reviewer 1. The manuscript contained many quantitative results already in its first version (version with what both reviewers were working), e.g., quantification of burned areas, period between fires, recovery times based on NDVI, change of the vegetation state. However, in the current version of the manuscript, we aimed to keep only quantitative results and we have removed all qualitative results (the information about possible causes of fires and section ‘Qualitative observations of the vegetation dynamics’).

3. First the major issues highlighted by reviewer 1 need to be addressed before I can provide an in-depth review of the manuscript.

We have addressed the issues raised by reviewer 1. The point-to-point answer to reviewer 1 has been uploaded to the system. We hope that the reviewer will now be able to provide an in-depth review of the manuscript.