FOREST MANAGEMENT MAPS

Each 0.5˚ grid has total forest area (0-0.25 Mha) which is divided to different management types.[1] This implies that within each grid the share of different management types is known but location of them is unknown. For this reason, there are different ways to classify grids for drawing the forest management map:

1) Classify grids according to dominant management types
2) Classify grids according to share of chosen management type (e.g. high intensity management)
3) Classify grids according to intensity of management
4) Classify grids according to harvest volume

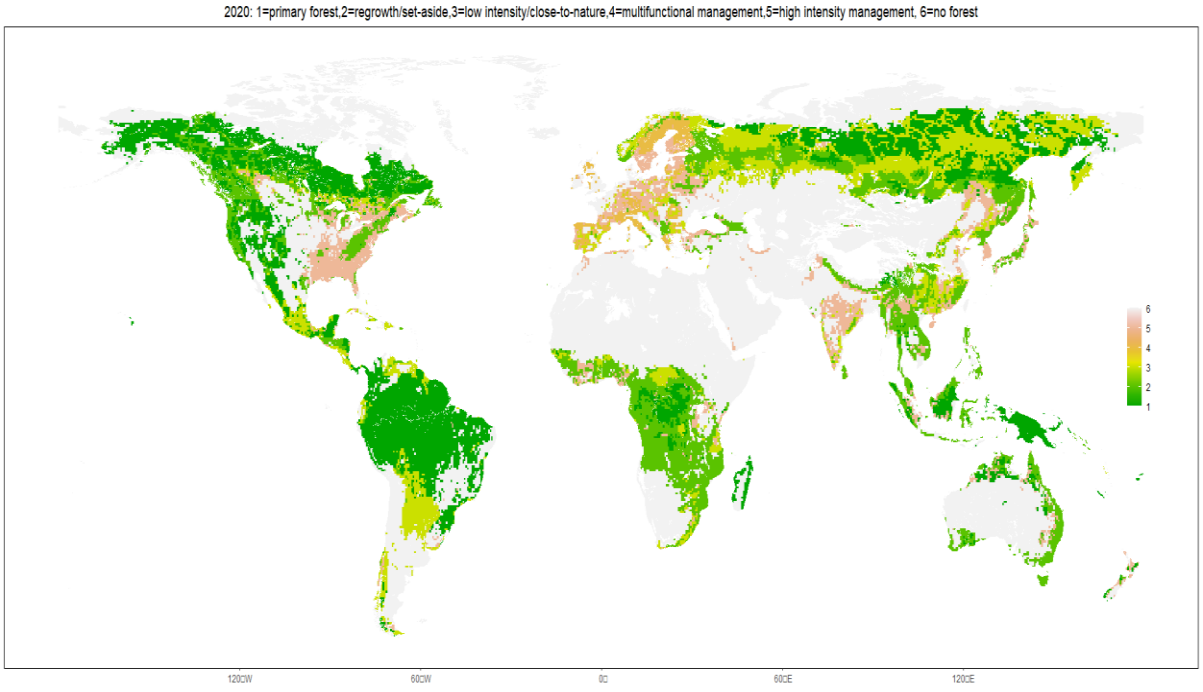
Forest management maps are based on RCP1p9 scenario where harvest volumes increase more than in the RCPref scenario due to higher bioenergy demand.

Table 1: Global roundwood harvest volumes (Mm3/yr):

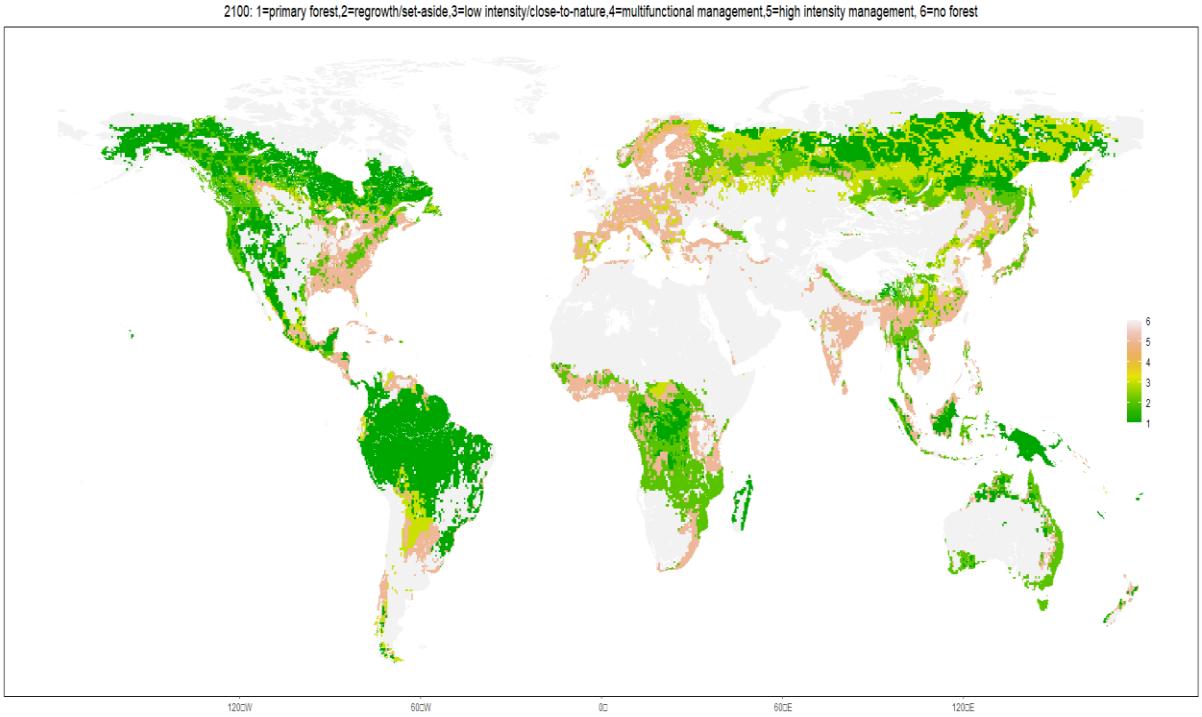
	2020	2100
RCPref	3804	4634
RCP1p9	3804	8054

1. Dominant management types 2020-2100

-this does not work very well in 0.5˚ resolution, because often dominant management type does not change even if there is changes in non-dominant managements (-> needs higher resolution)

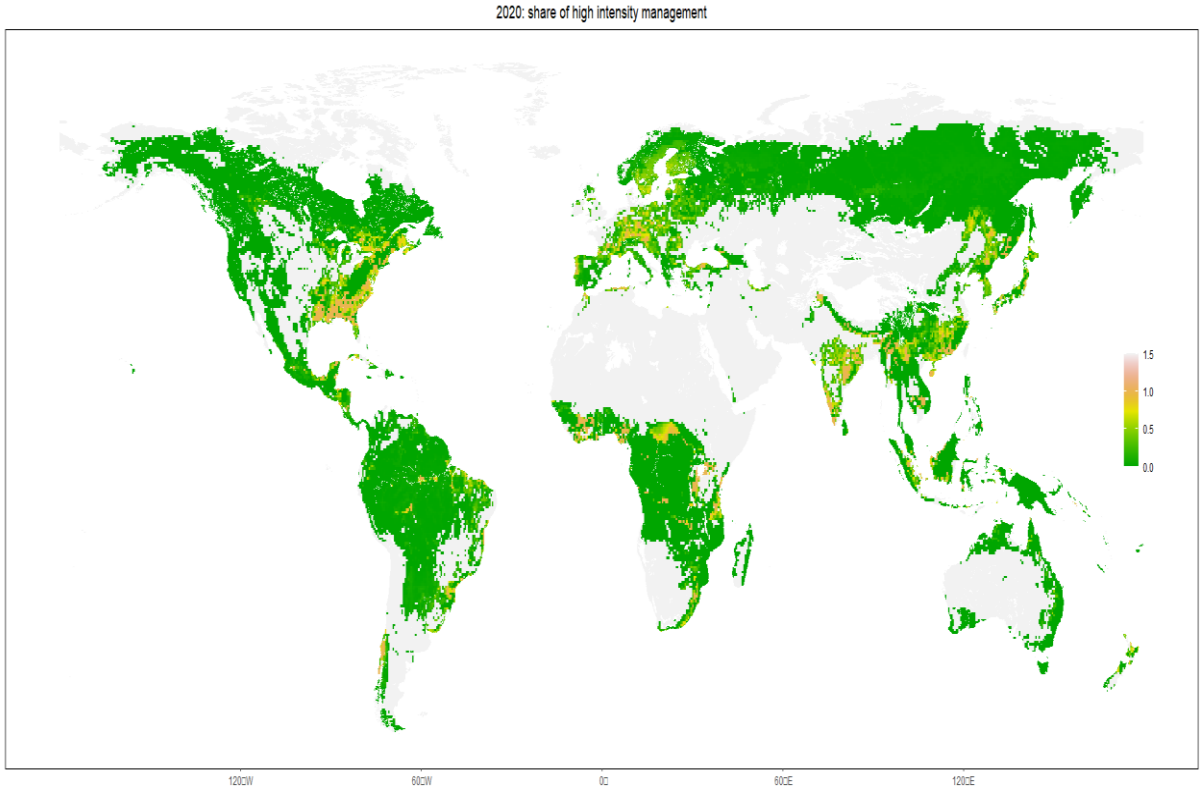


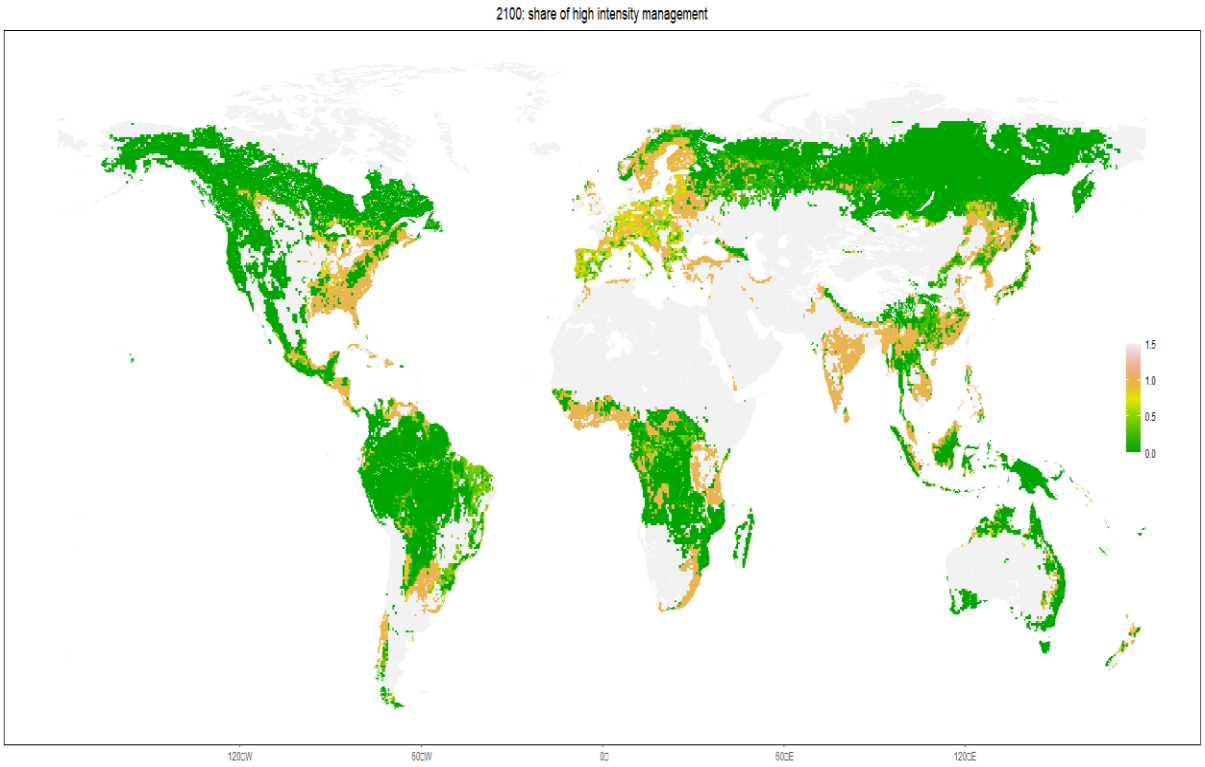
[1] With higher resolution than 0.5˚ it would be possible to solve the model by allowing just one management type for each grid. In this case, it is straight forward to classify grids for drawing the forest management map.



2. Share of high intensity management 2020-2100

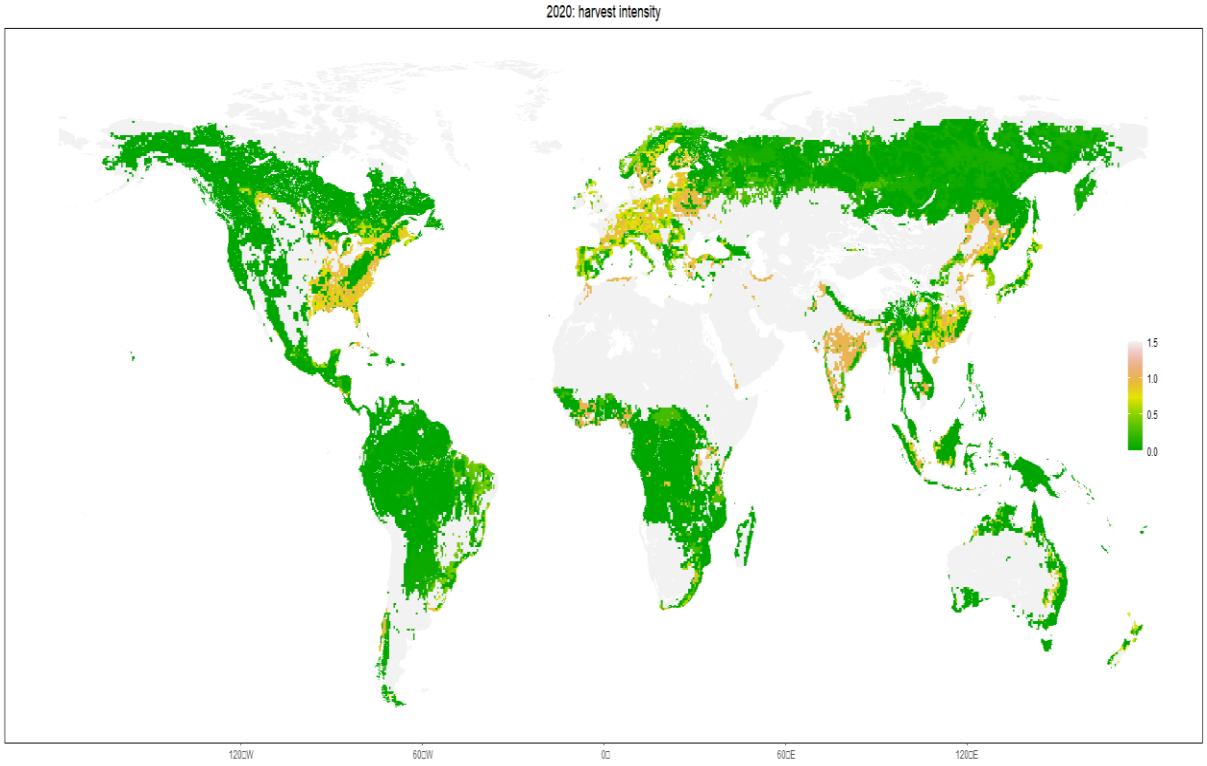
-looking each management separately provides more information about the development of management than just looking the dominant management

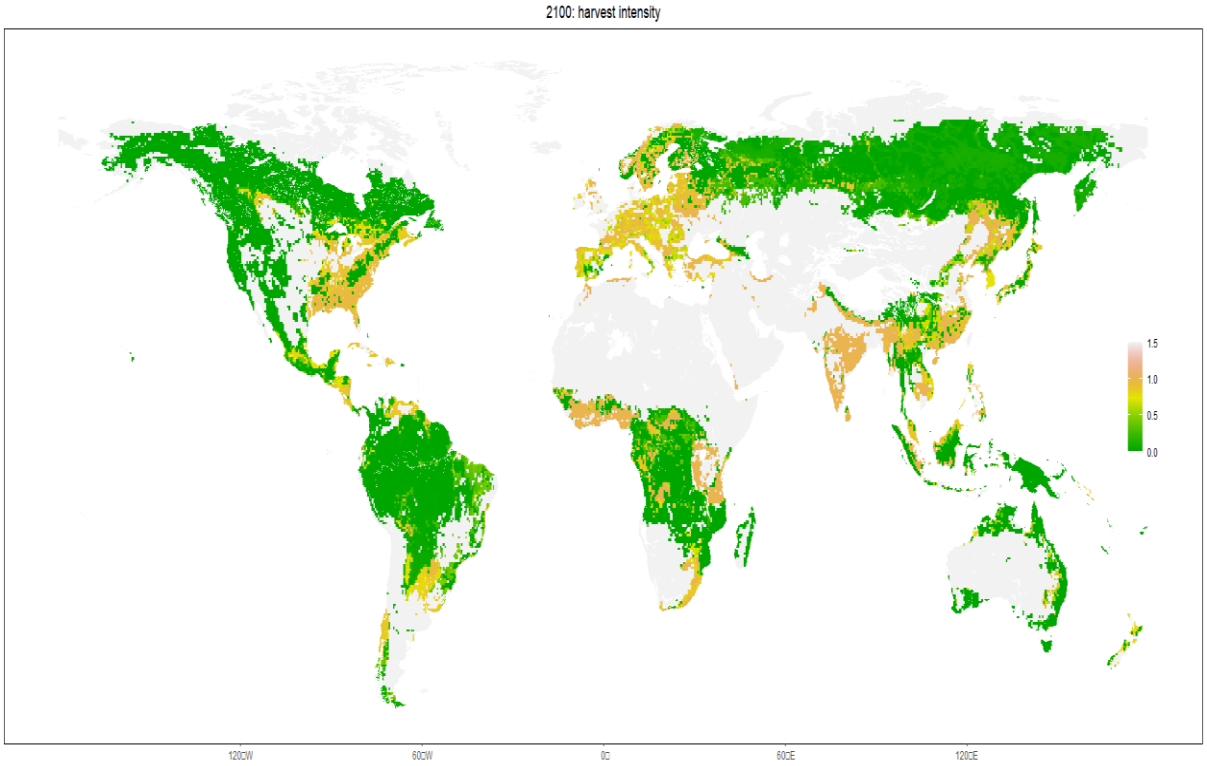




3. Harvest intensity 2020-2100

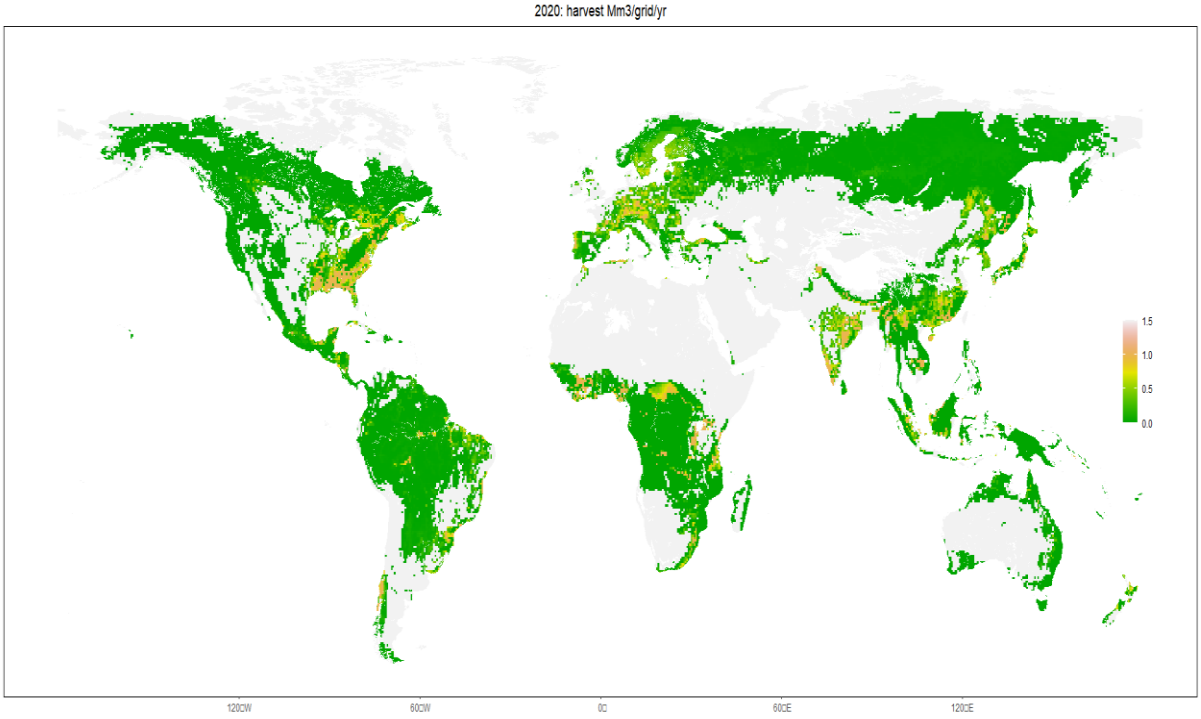
-harvest intensity= roundwood harvest/roundwood harvest potential
-this would also work better with higher resolution

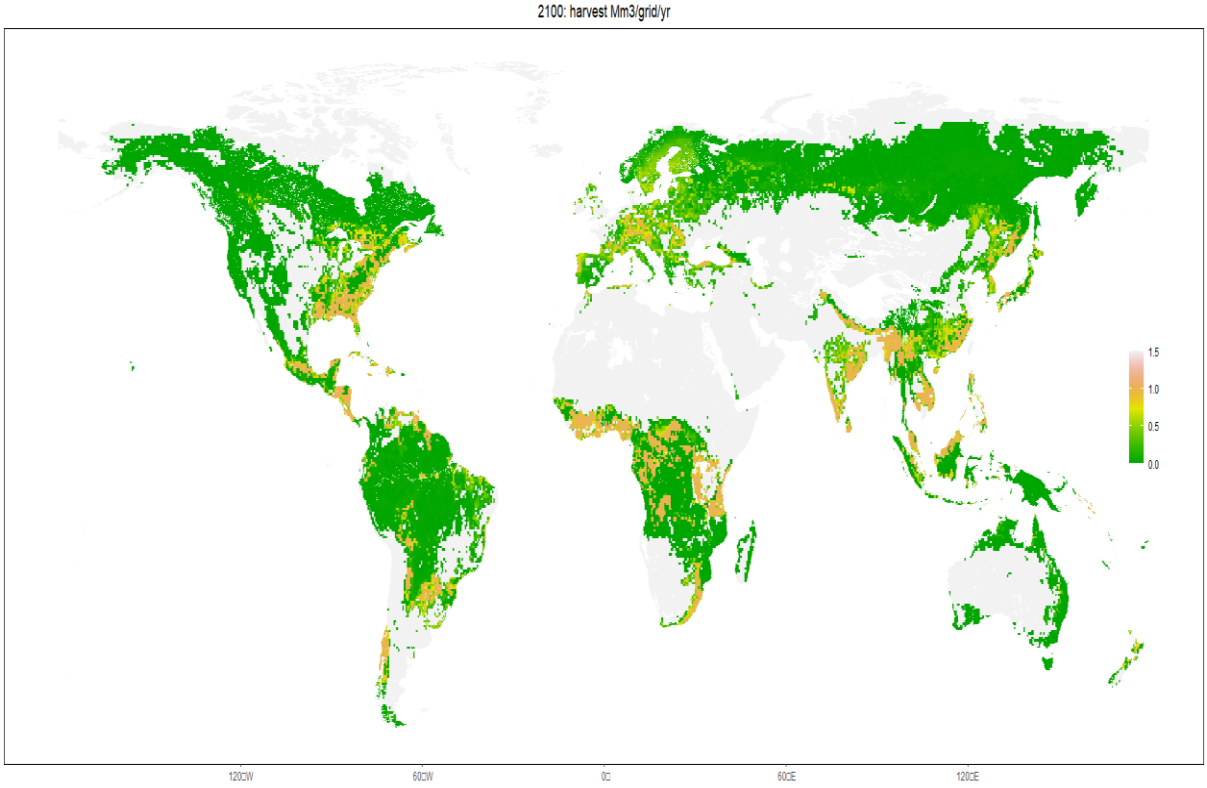




4. Roundwood harvests per grid 2020-2100

-this could be also interpreted as a measure of forest management intensity since intensively managed forest have typically high harvest volumes




2100: harvest Mm3/grid/yr
1.5
1.0
0.5
0.0
120°W
60°W
0°
60°E
120°E