

Differences between HYDE population data versions

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1 Introduction

This document shows plots of differences in the HYDE population data, more specifically in the HYDE version v3.2.1 and v3.3. Each plots shows the difference v3.3–v.3.2.1, i.e. positive values mean an increase from v3.2.1. to v3.3. The maps feature the original HYDE resolution $\frac{1}{12}^\circ \times \frac{1}{12}^\circ$. The numbers that follow the plot give a few more details/statistics about the plotted data.

Other arguments

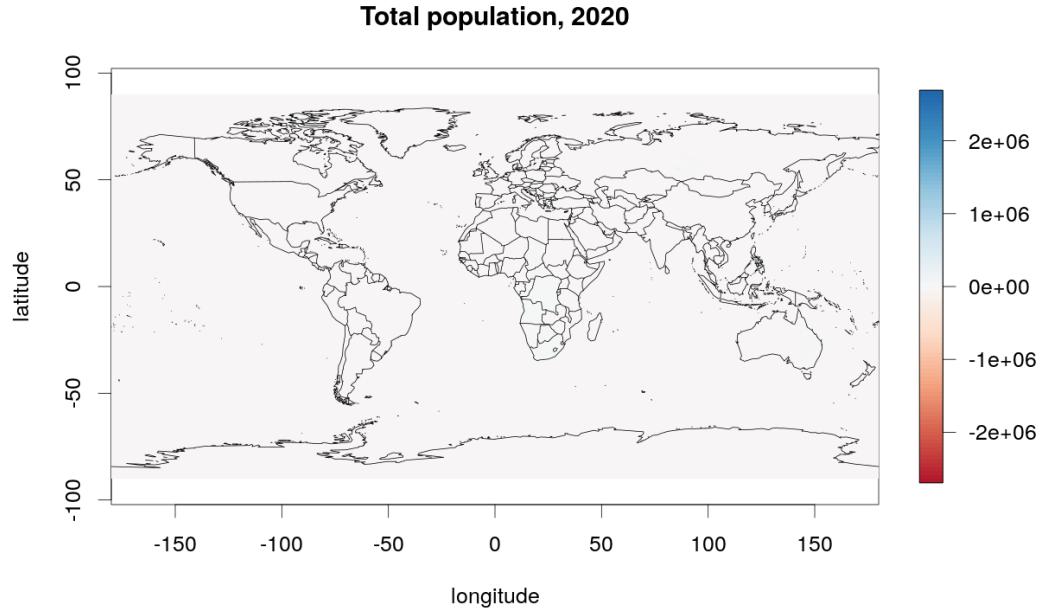
- HYDE v3.2.1 compatible with ...
- the GDP data by Muarakami (2021) gives HYDE 3.1 papers as their reference

Explanation of notation

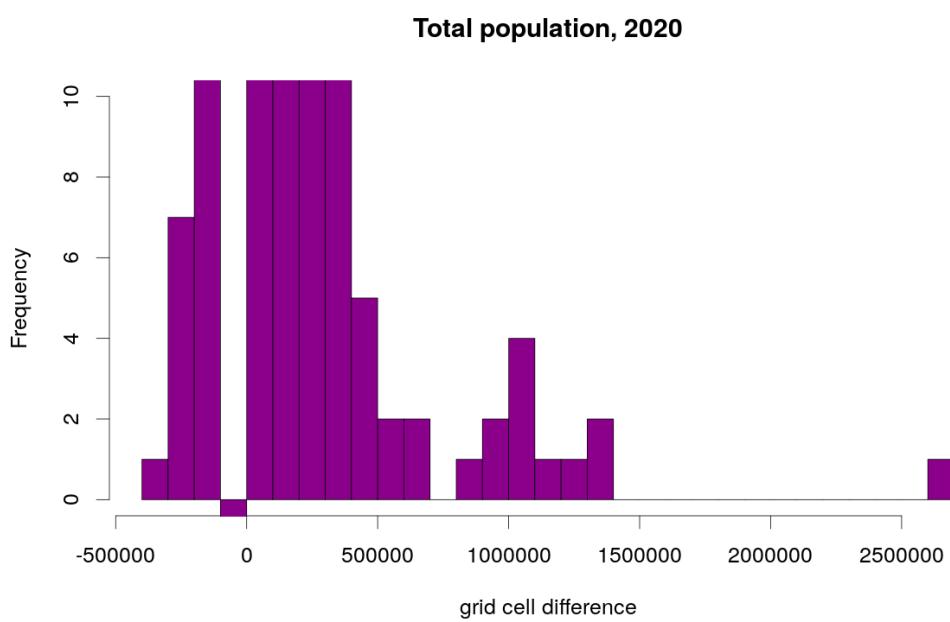
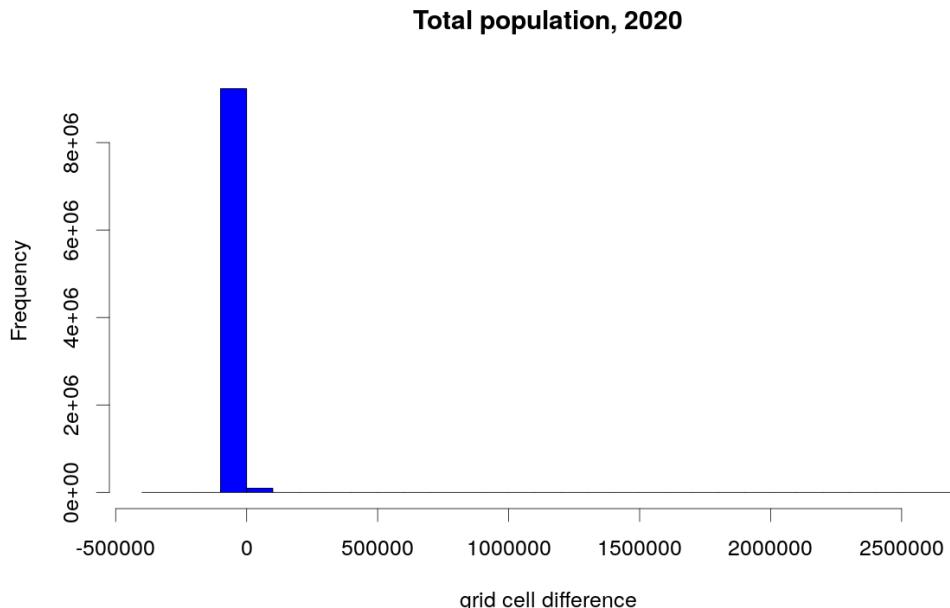
- population at point x is p_x , HYDE versions are indicated as a superscript
- the difference between versions at point x is $\Delta_x = p_x^{(v3.3)} - p_x^{(v3.2)}$

2 Total population

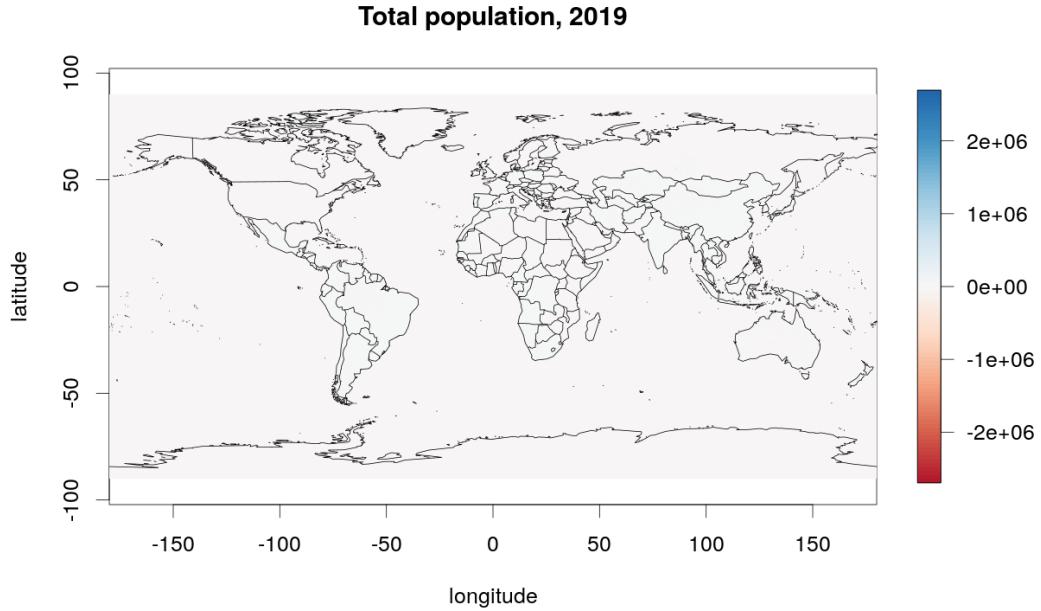
2020



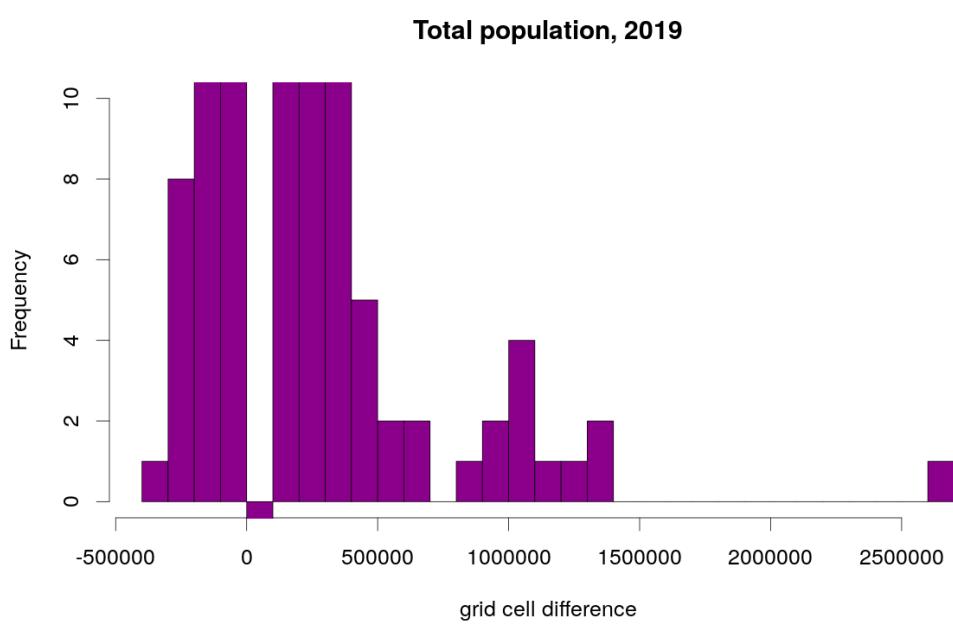
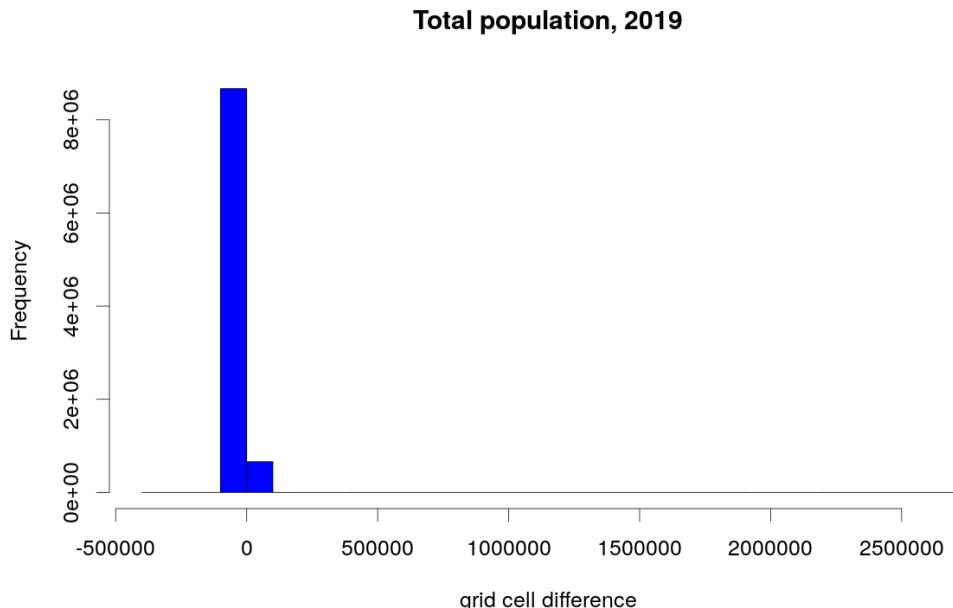
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.63146e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.6435e+09 \\
 \sum_x \Delta_x &= 1.20425e+07 \\
 \sum_x |\Delta_x| &= 1.21391e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00157801 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0159067 \\
 \max_x \Delta_x &= 2.66658e+06 \\
 \min_x \Delta_x &= -317322
 \end{aligned}$$



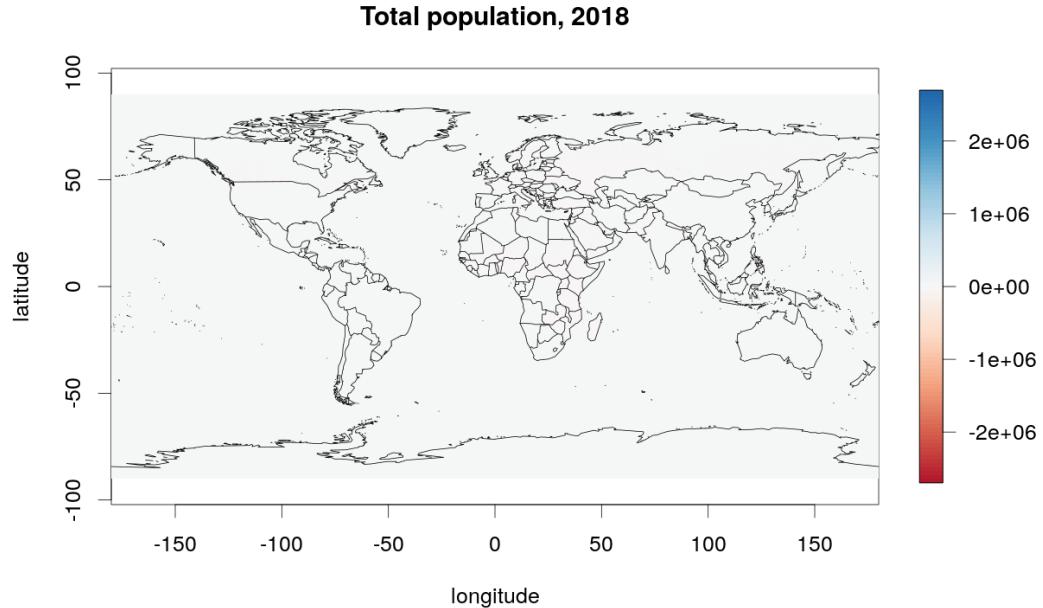
2019



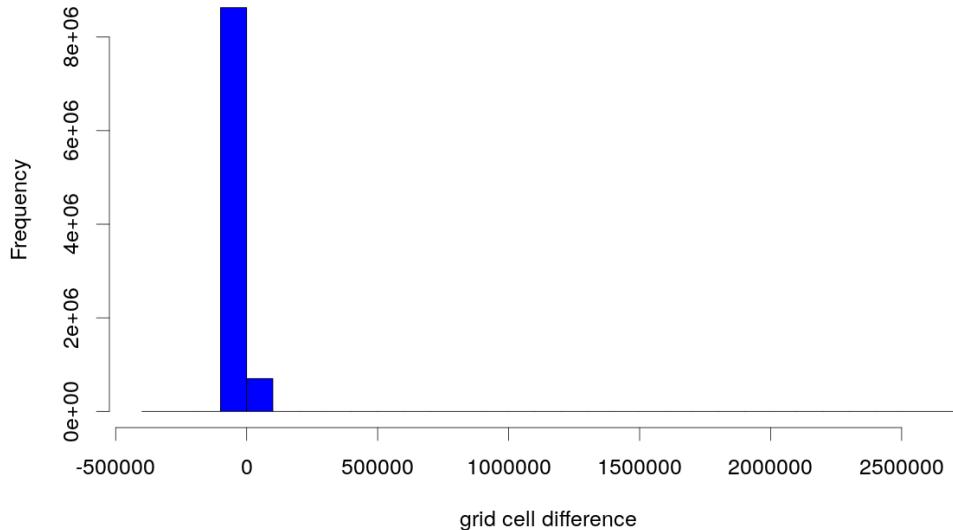
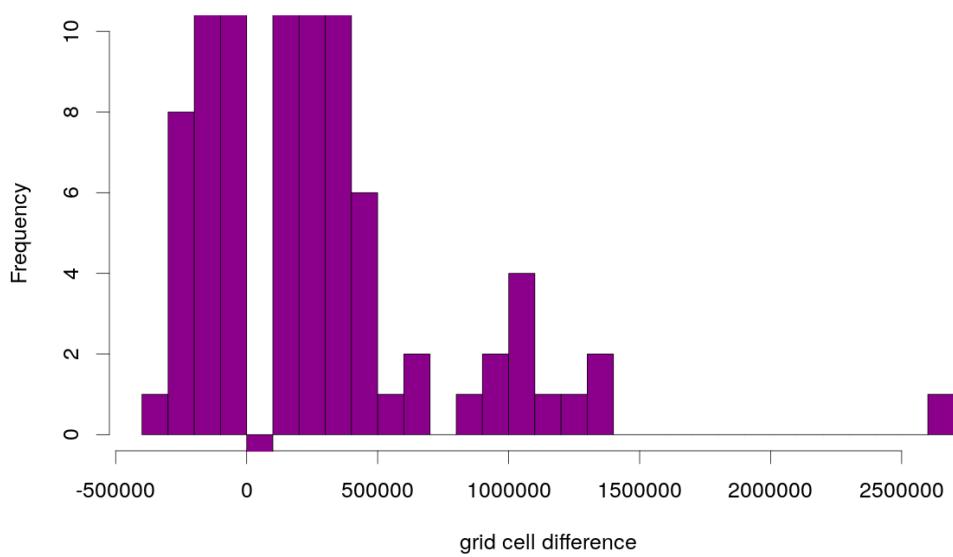
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.55696e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.56872e+09 \\
 \sum_x \Delta_x &= 1.17535e+07 \\
 \sum_x |\Delta_x| &= 1.3719e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00155532 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0181541 \\
 \max_x \Delta_x &= 2.66844e+06 \\
 \min_x \Delta_x &= -317543
 \end{aligned}$$



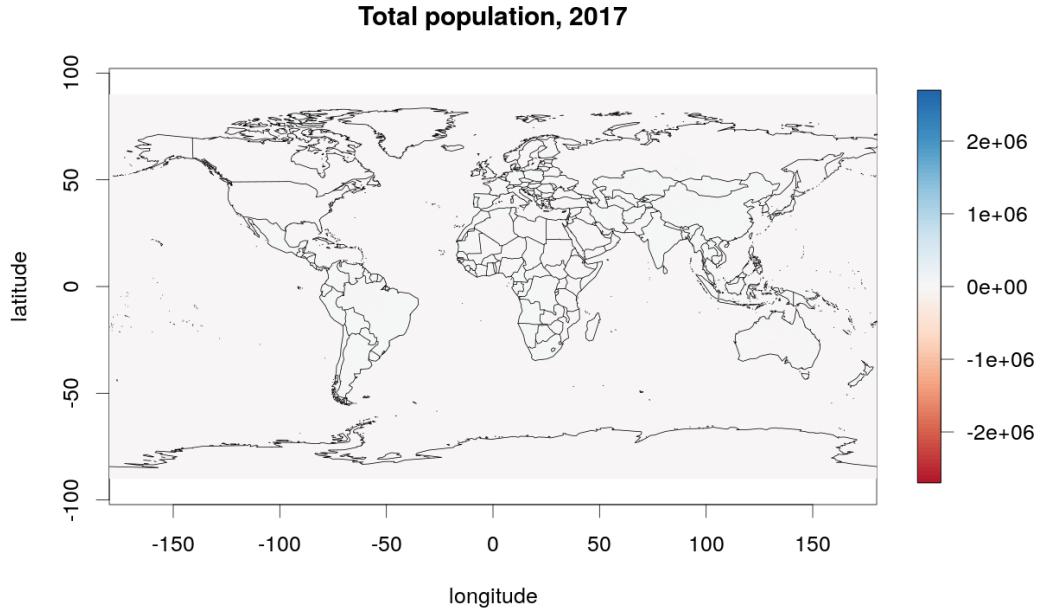
2018



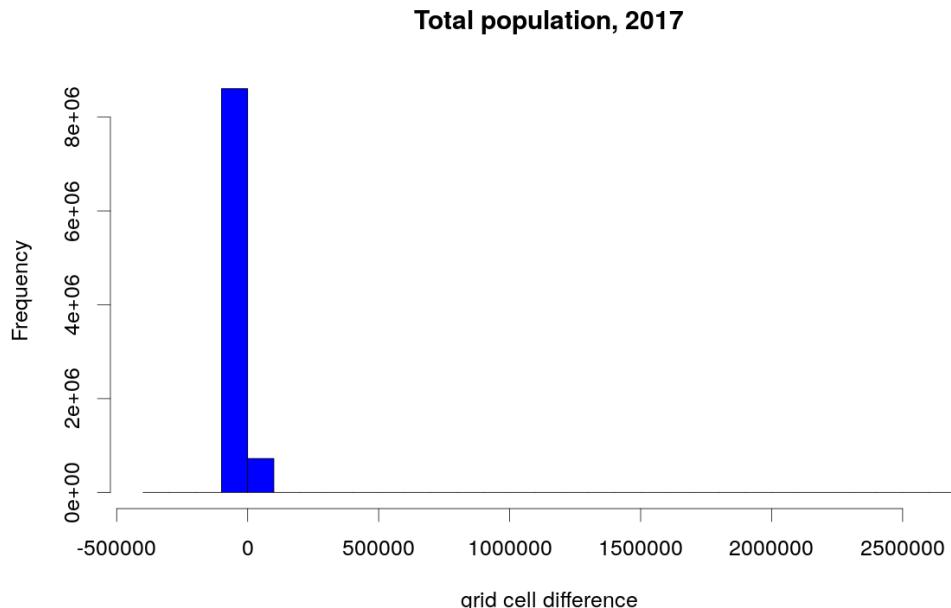
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.48247e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.49389e+09 \\
 \sum_x \Delta_x &= 1.14241e+07 \\
 \sum_x |\Delta_x| &= 1.37666e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00152678 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0183985 \\
 \max_x \Delta_x &= 2.6703e+06 \\
 \min_x \Delta_x &= -317764
 \end{aligned}$$

Total population, 2018**Total population, 2018**

2017

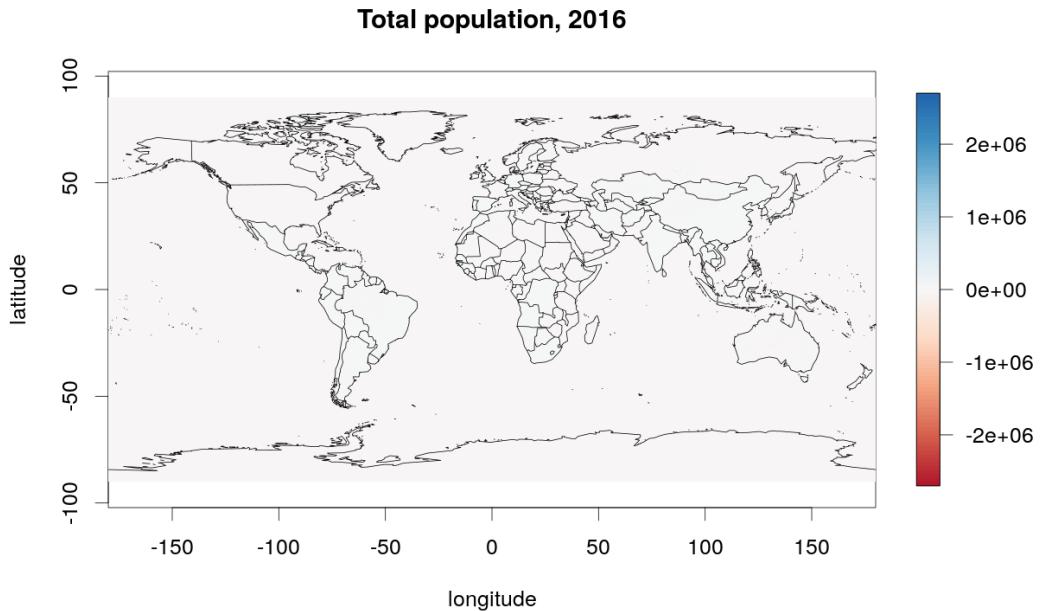


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.40676e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.41918e+09 \\
 \sum_x \Delta_x &= 1.24193e+07 \\
 \sum_x |\Delta_x| &= 1.36035e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00167675 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0183663 \\
 \max_x \Delta_x &= 2.67216e+06 \\
 \min_x \Delta_x &= -317985
 \end{aligned}$$

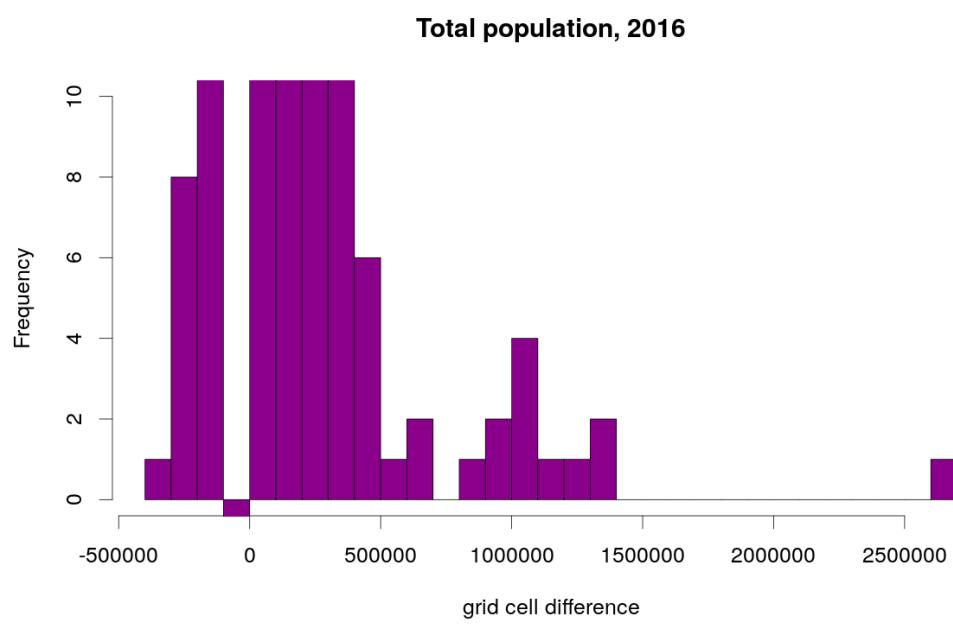
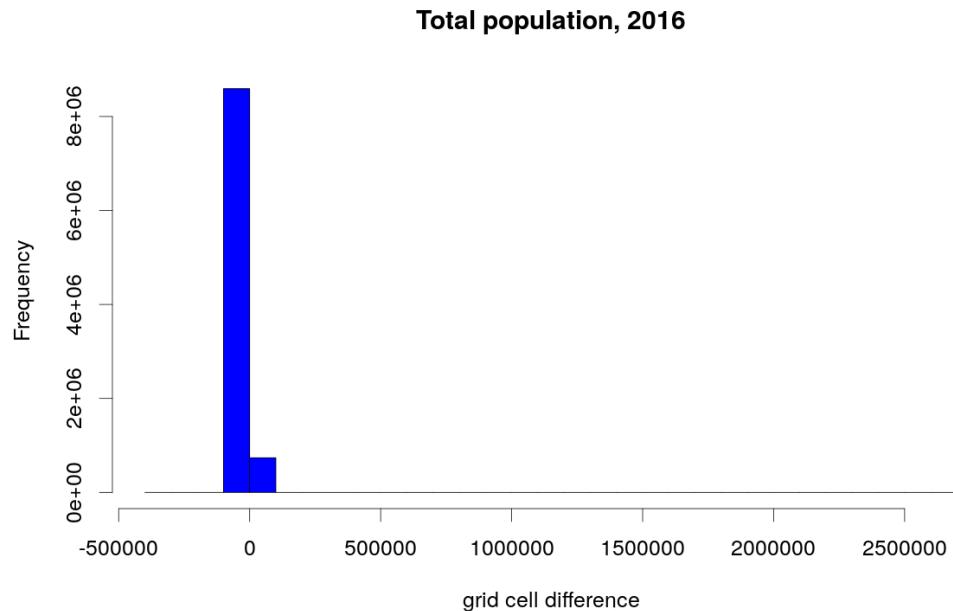


10

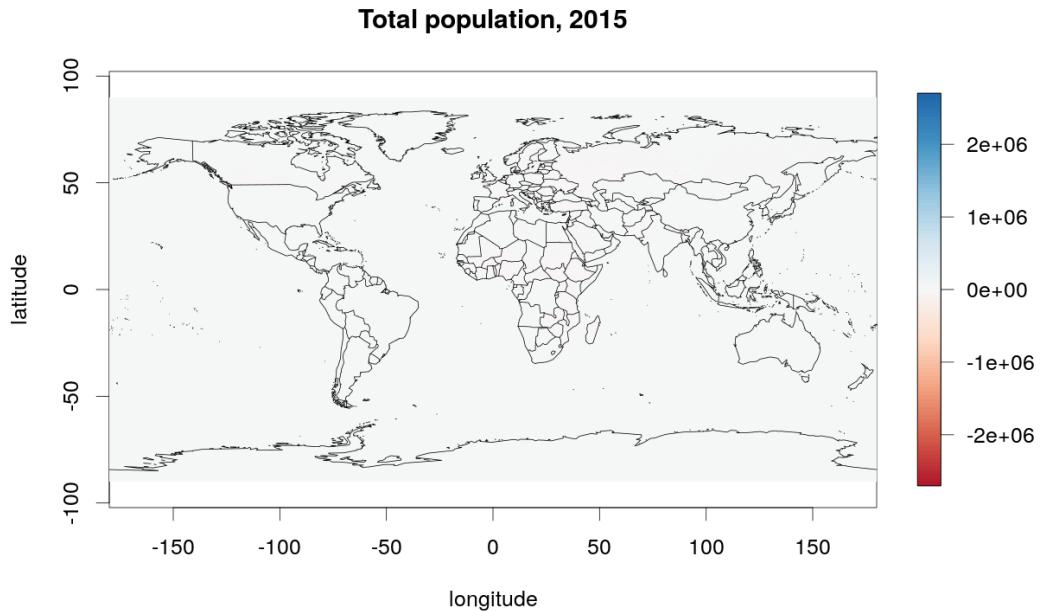
2016



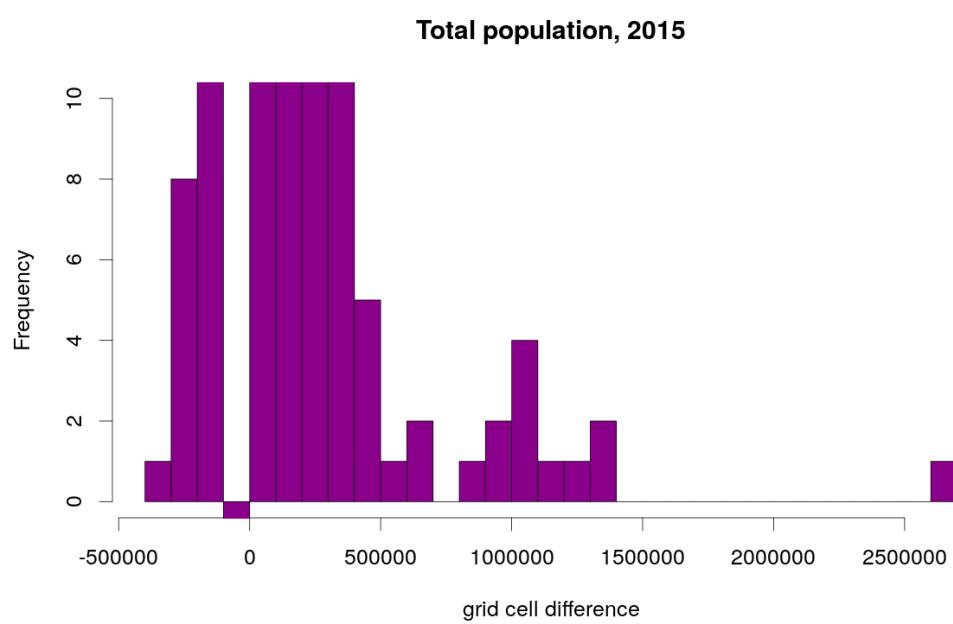
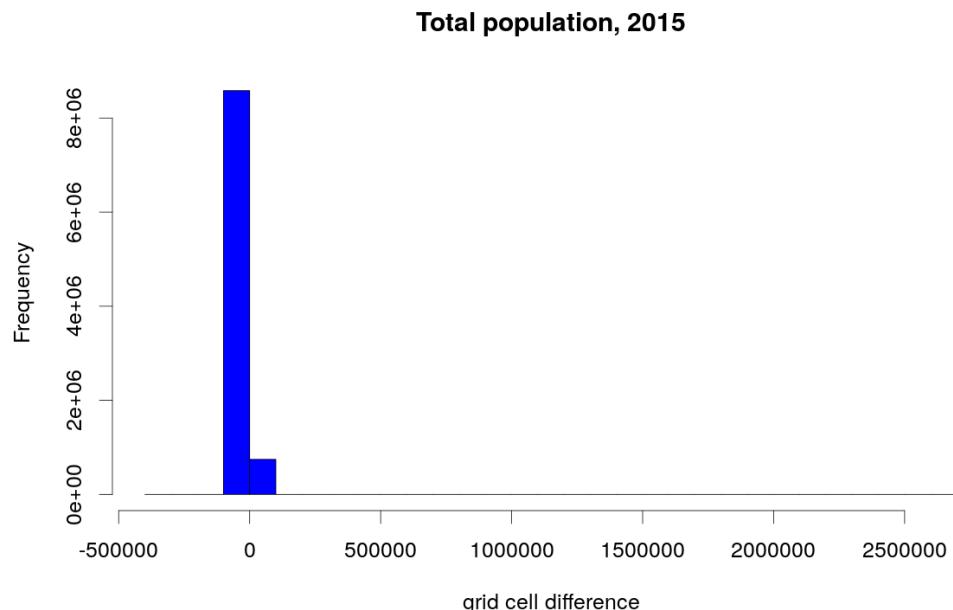
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 7.33186e+09 \\ \sum_x p_x^{(v3.3)} &= 7.3446e+09 \\ \sum_x \Delta_x &= 1.27387e+07 \\ \sum_x |\Delta_x| &= 1.36211e+08 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00173744 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.018578 \\ \max_x \Delta_x &= 2.67402e+06 \\ \min_x \Delta_x &= -318206\end{aligned}$$



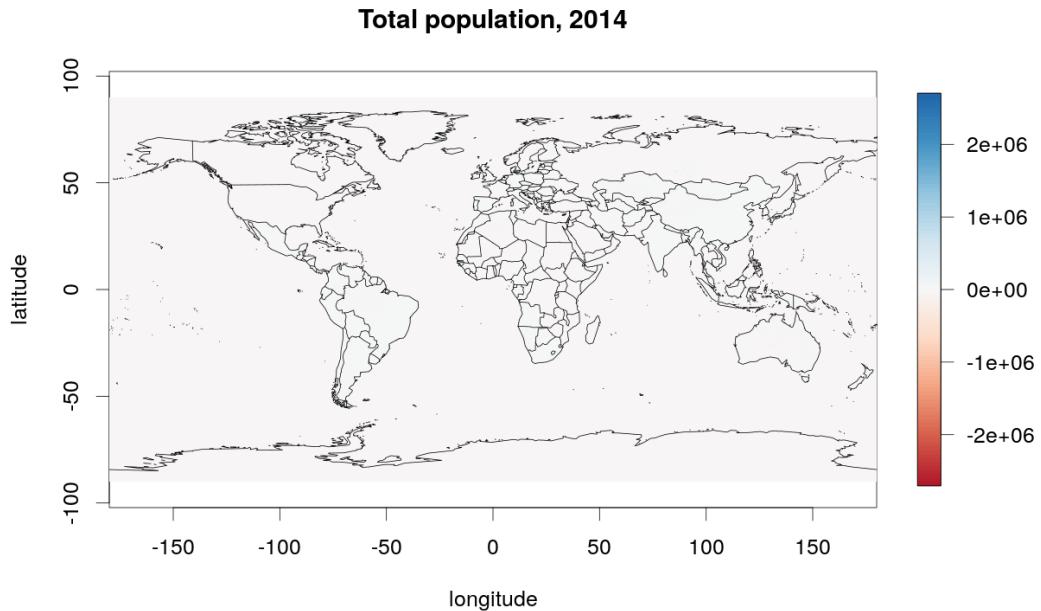
2015



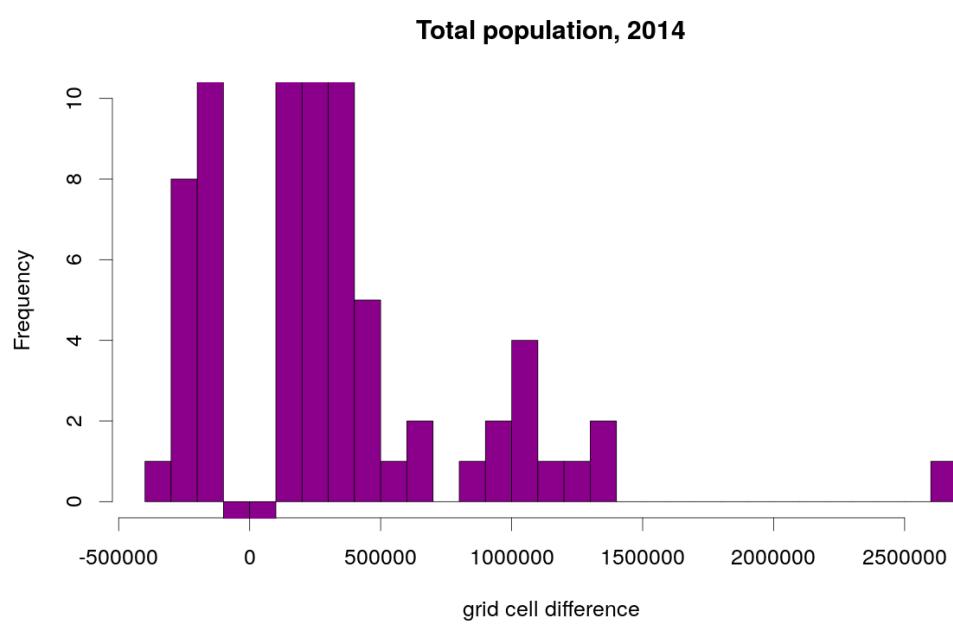
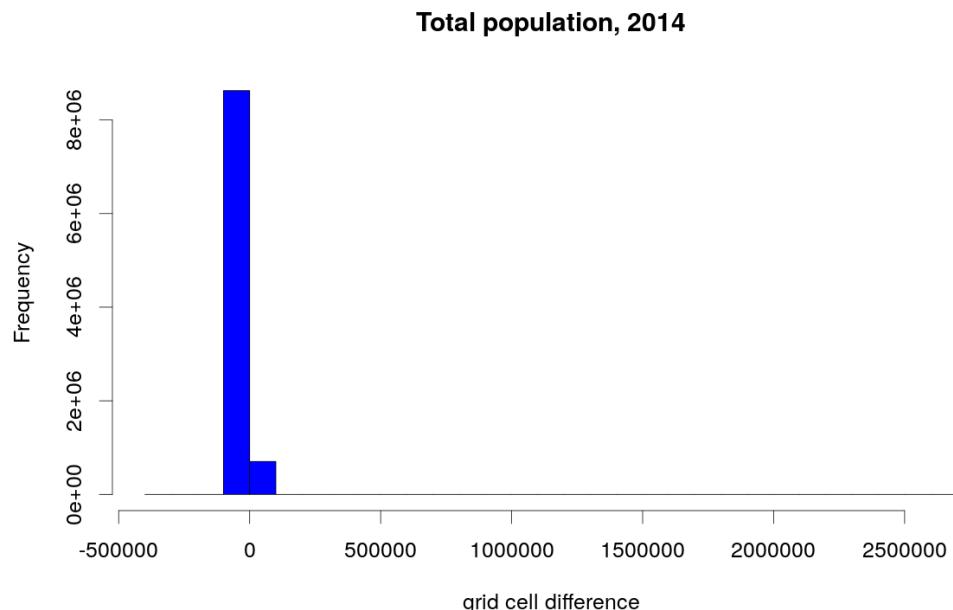
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.25696e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.27009e+09 \\
 \sum_x \Delta_x &= 1.31209e+07 \\
 \sum_x |\Delta_x| &= 1.36837e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00180804 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.018856 \\
 \max_x \Delta_x &= 2.67588e+06 \\
 \min_x \Delta_x &= -318427
 \end{aligned}$$



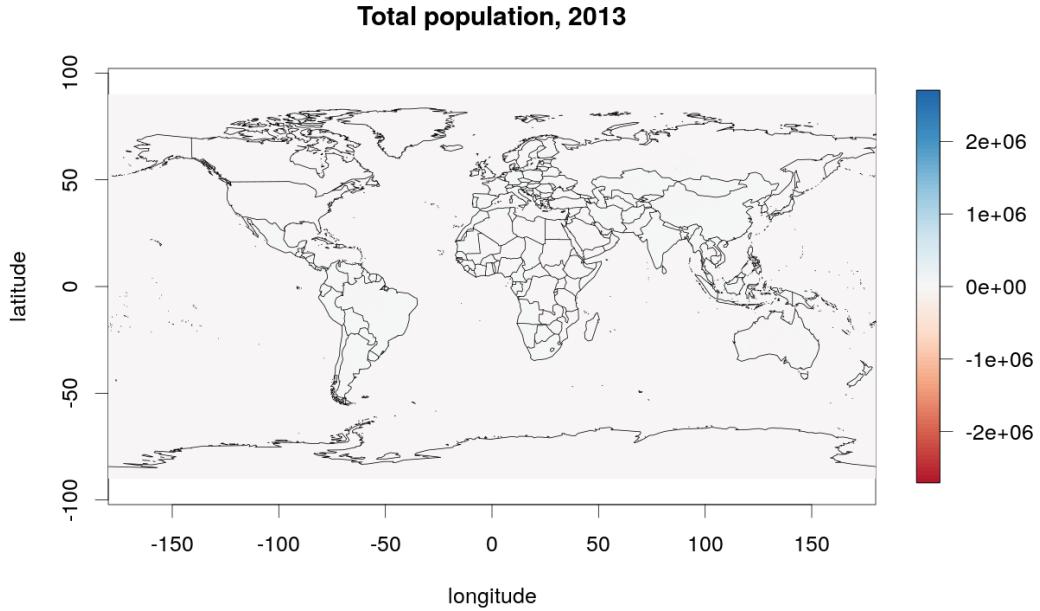
2014



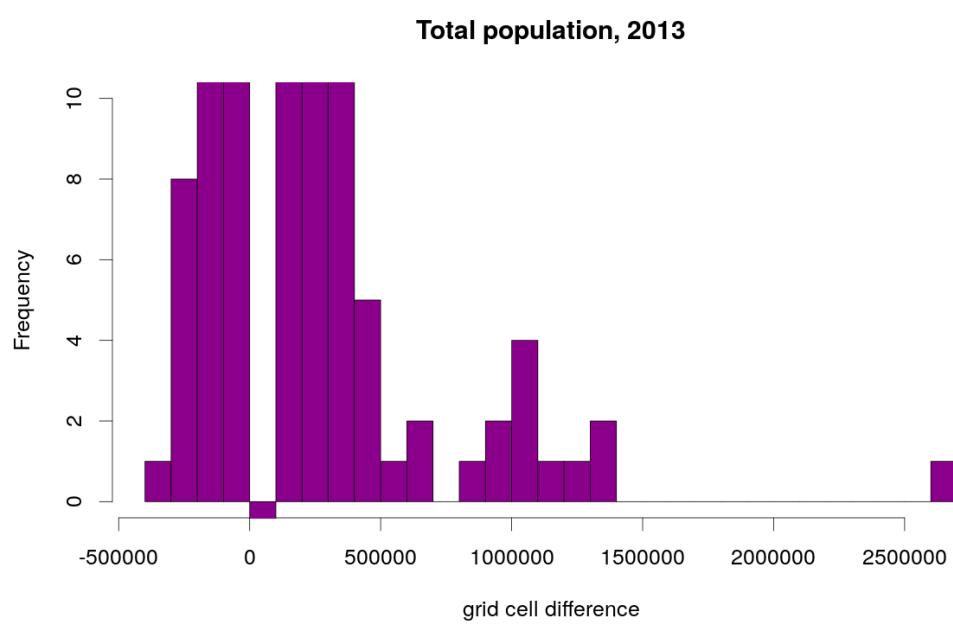
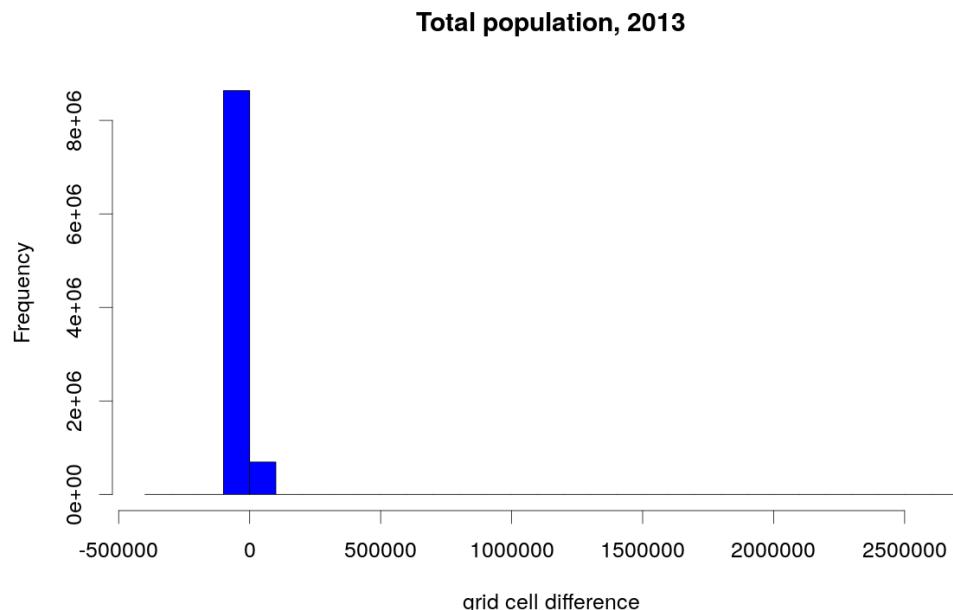
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.18207e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.19312e+09 \\
 \sum_x \Delta_x &= 1.10496e+07 \\
 \sum_x |\Delta_x| &= 1.324e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0015385 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0184348 \\
 \max_x \Delta_x &= 2.67774e+06 \\
 \min_x \Delta_x &= -318649
 \end{aligned}$$



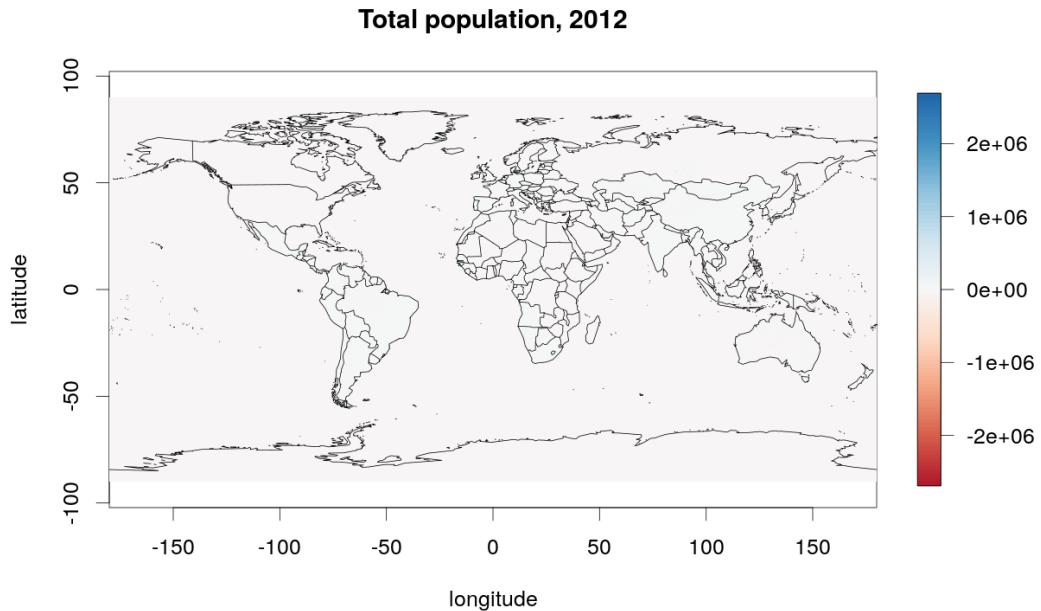
2013



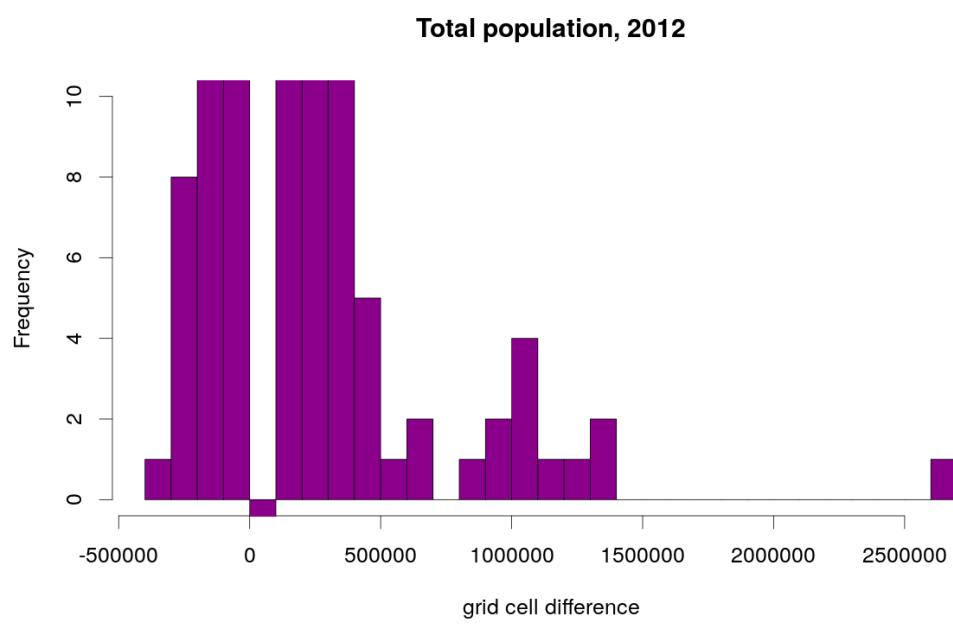
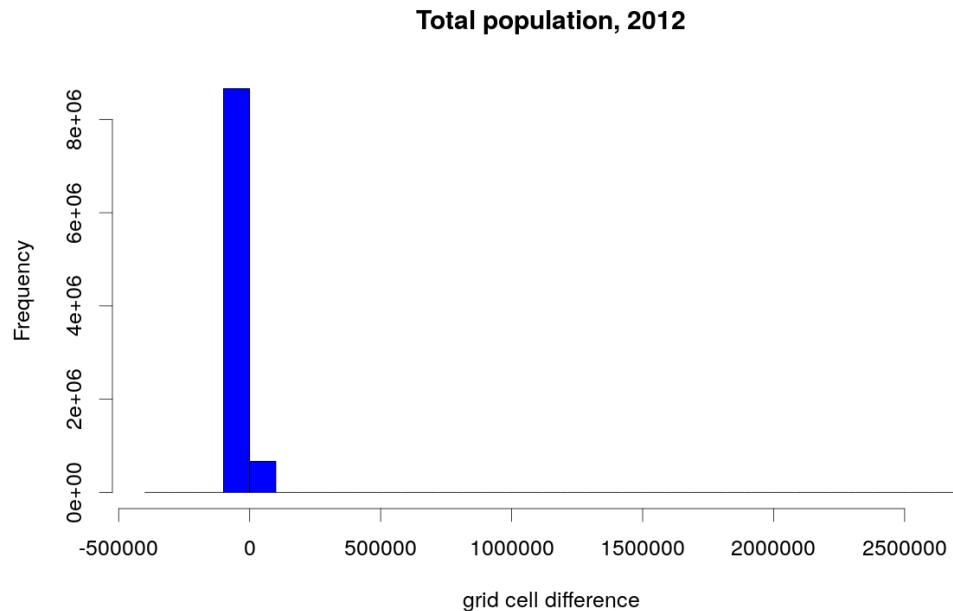
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.10717e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.117e+09 \\
 \sum_x \Delta_x &= 9.82934e+06 \\
 \sum_x |\Delta_x| &= 1.28852e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00138302 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0181299 \\
 \max_x \Delta_x &= 2.67959e+06 \\
 \min_x \Delta_x &= -318870
 \end{aligned}$$

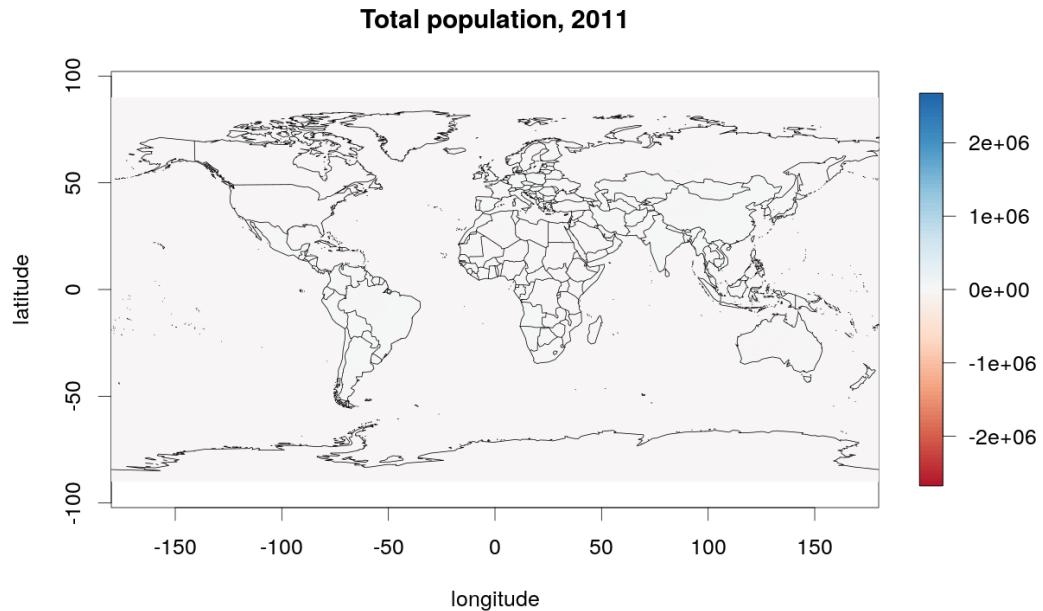


2012

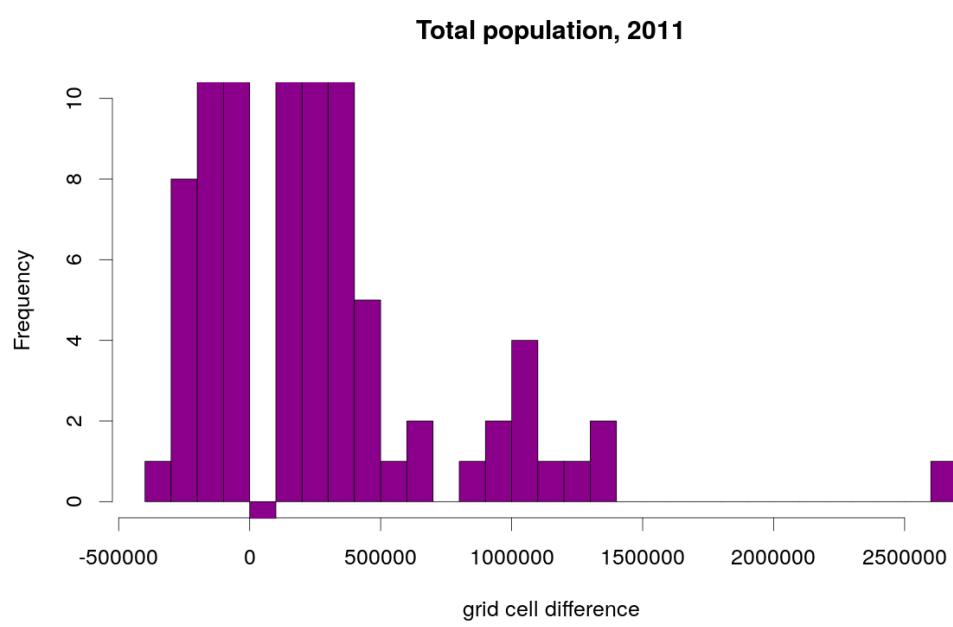
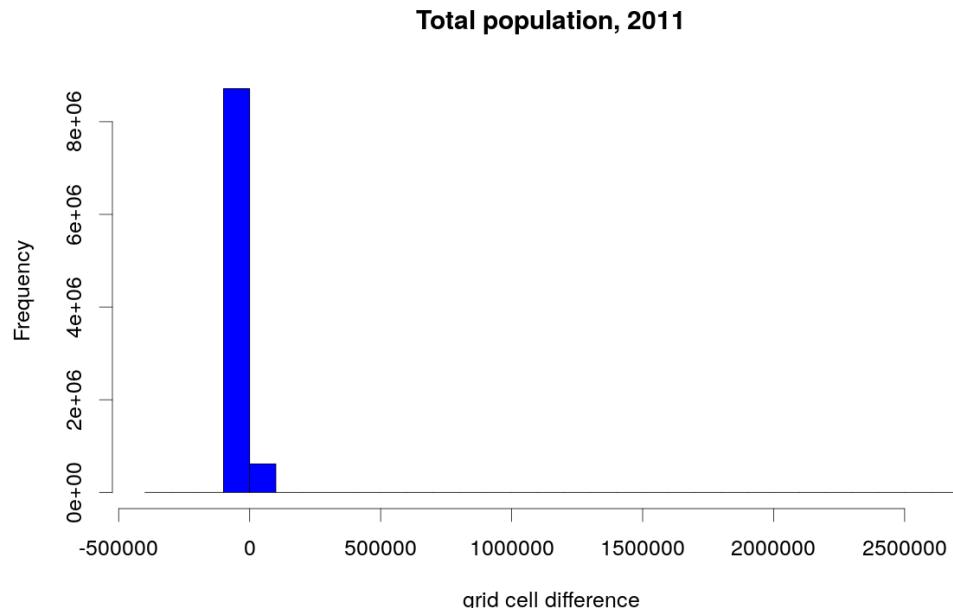


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 7.03227e+09 \\
 \sum_x p_x^{(v3.3)} &= 7.04042e+09 \\
 \sum_x \Delta_x &= 8.14728e+06 \\
 \sum_x |\Delta_x| &= 1.25238e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00115856 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.017809 \\
 \max_x \Delta_x &= 2.6637e+06 \\
 \min_x \Delta_x &= -327928
 \end{aligned}$$

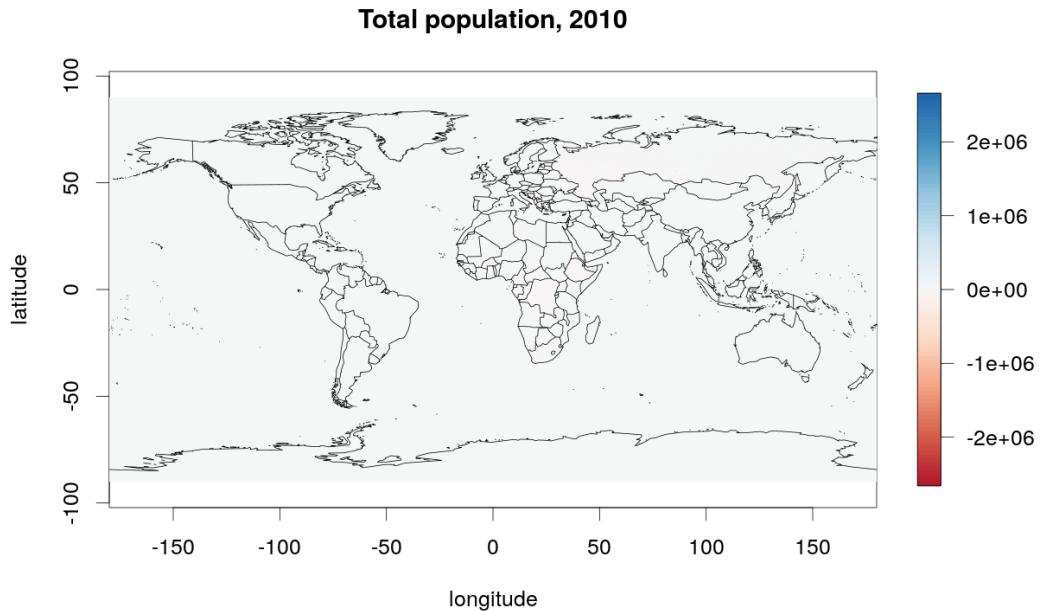


2011

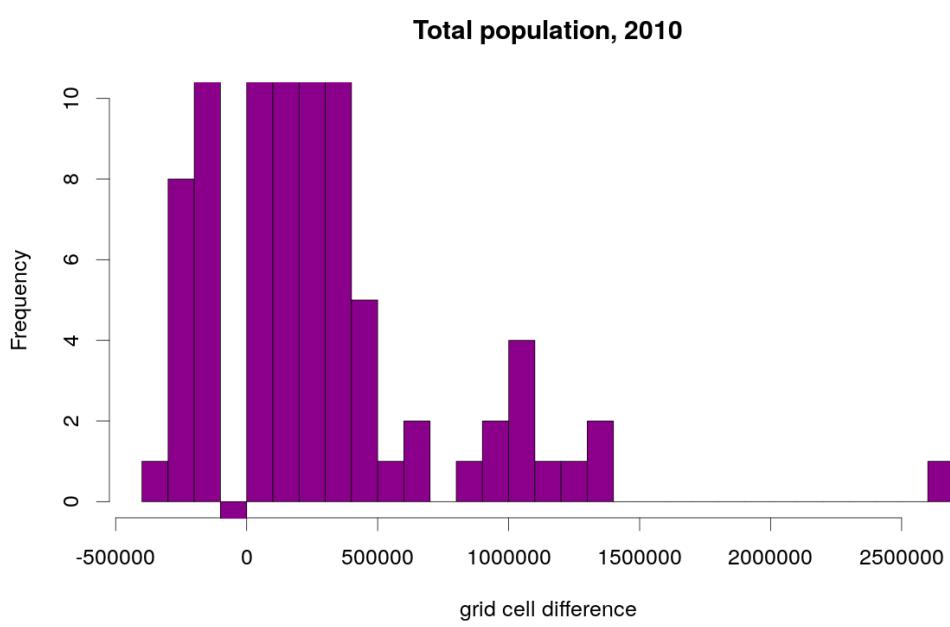
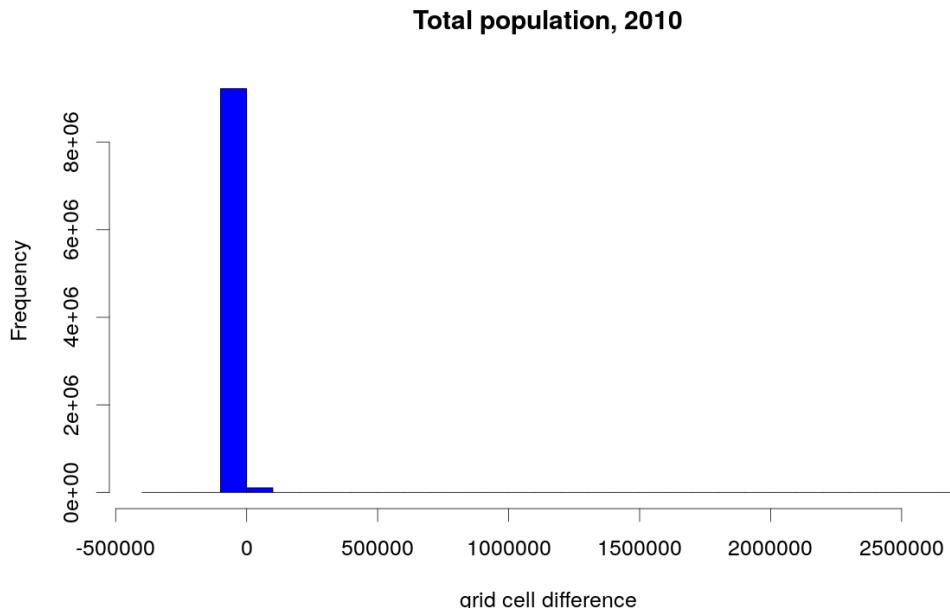
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.95737e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.96412e+09 \\
 \sum_x \Delta_x &= 6.74929e+06 \\
 \sum_x |\Delta_x| &= 1.21982e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000970092 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0175328 \\
 \max_x \Delta_x &= 2.6478e+06 \\
 \min_x \Delta_x &= -327164
 \end{aligned}$$



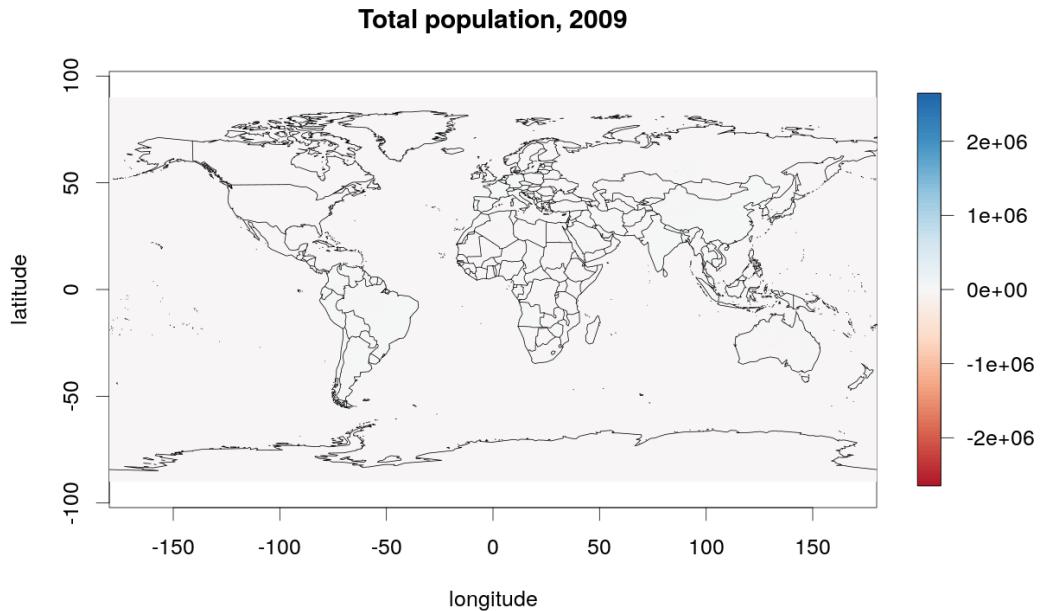
2010



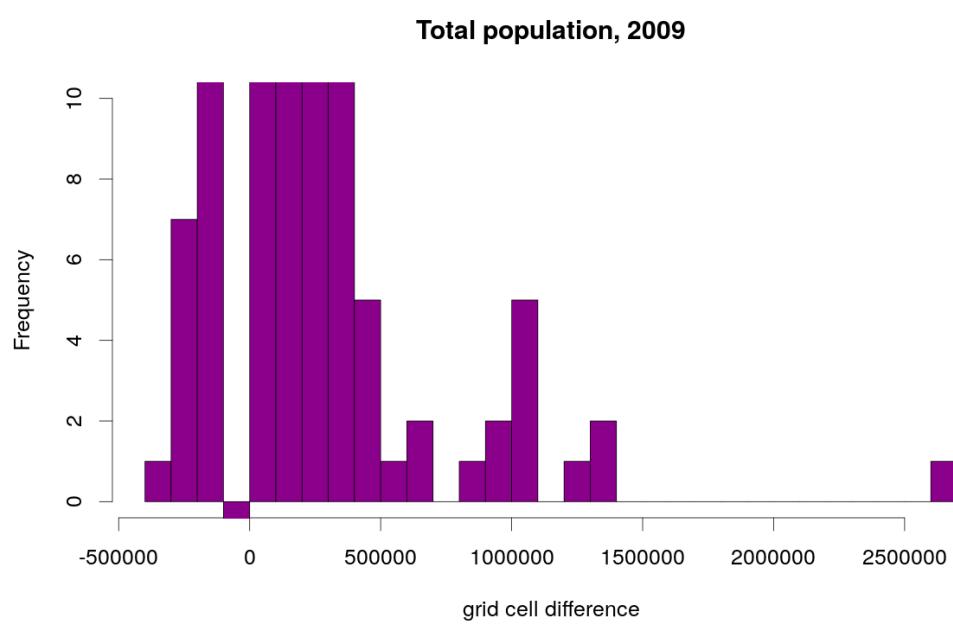
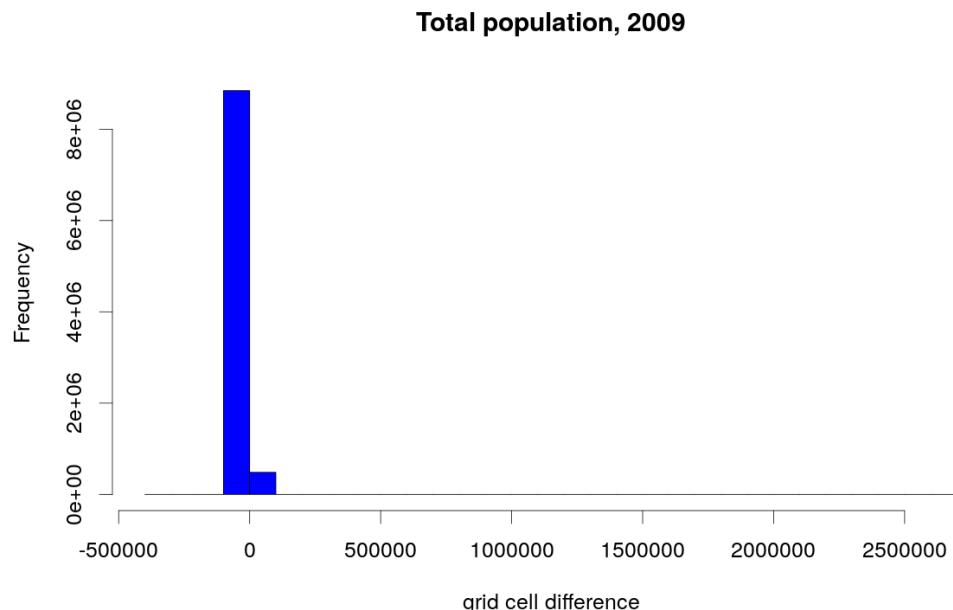
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.88247e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.8846e+09 \\
 \sum_x \Delta_x &= 2.13261e+06 \\
 \sum_x |\Delta_x| &= 1.23092e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000309861 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0178849 \\
 \max_x \Delta_x &= 2.63189e+06 \\
 \min_x \Delta_x &= -326399
 \end{aligned}$$

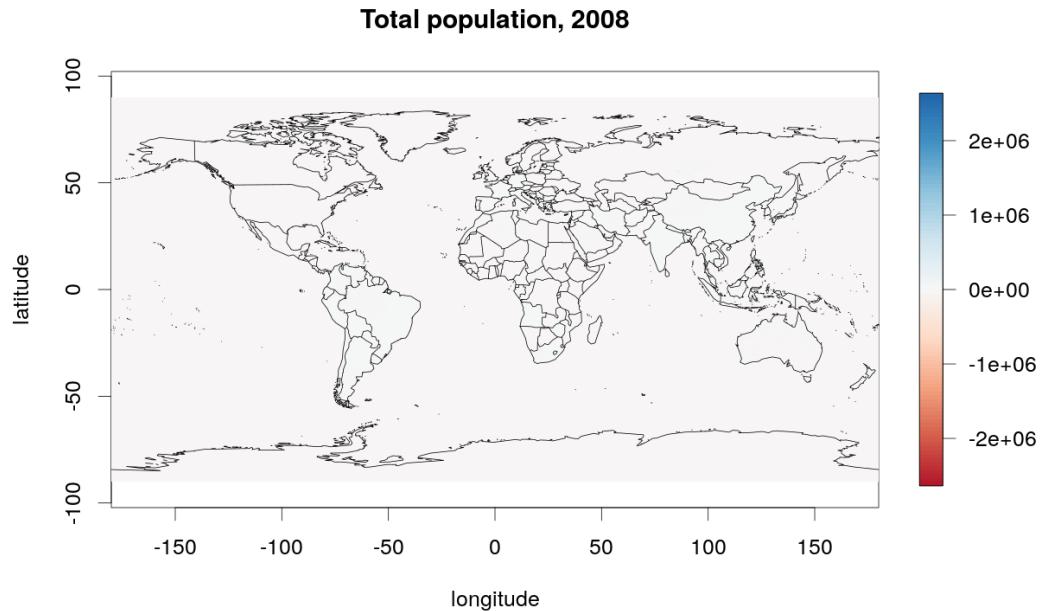


2009

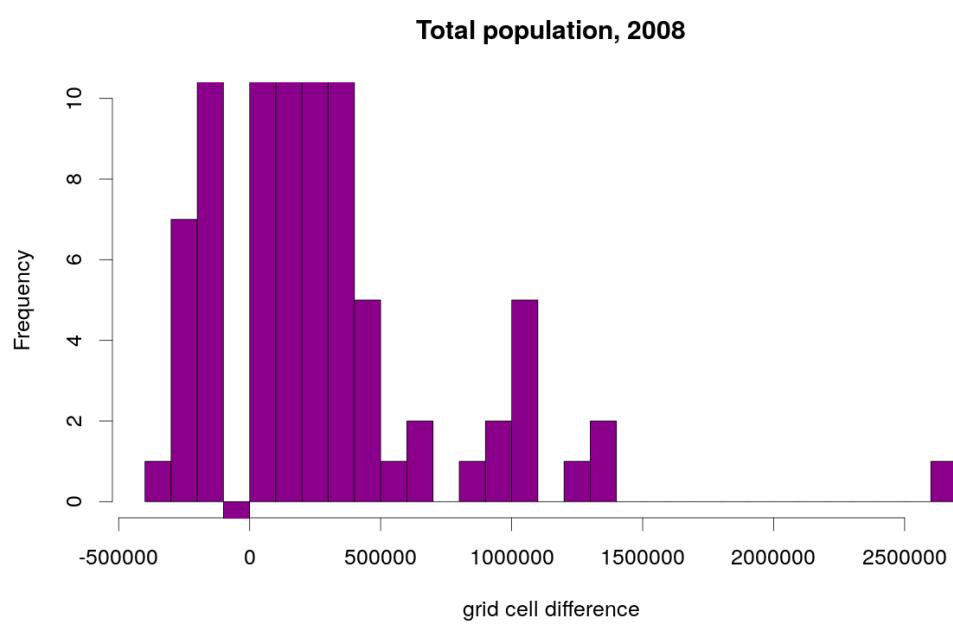
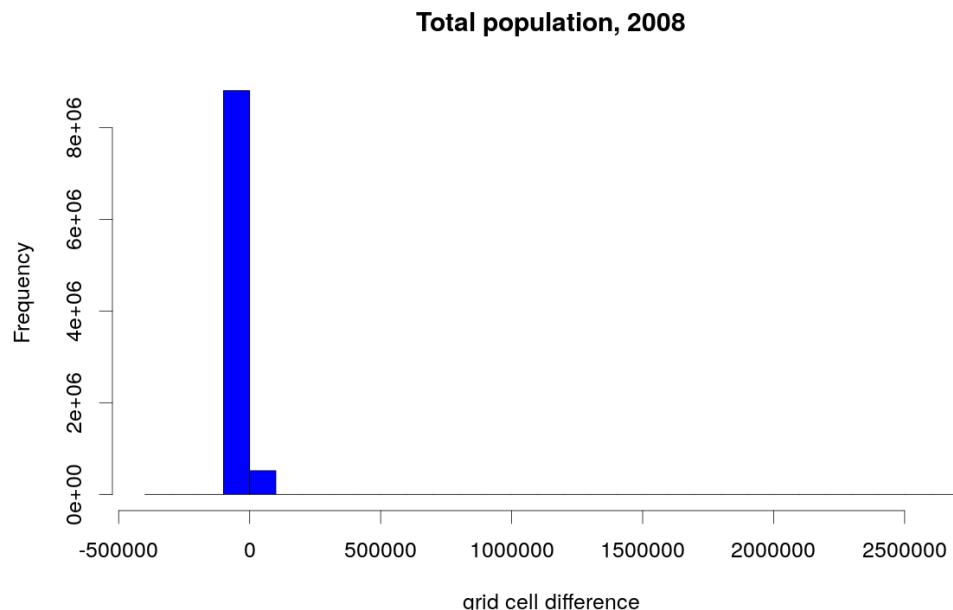


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.80527e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.80928e+09 \\
 \sum_x \Delta_x &= 4.01508e+06 \\
 \sum_x |\Delta_x| &= 1.22987e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000589996 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0180723 \\
 \max_x \Delta_x &= 2.62111e+06 \\
 \min_x \Delta_x &= -326272
 \end{aligned}$$

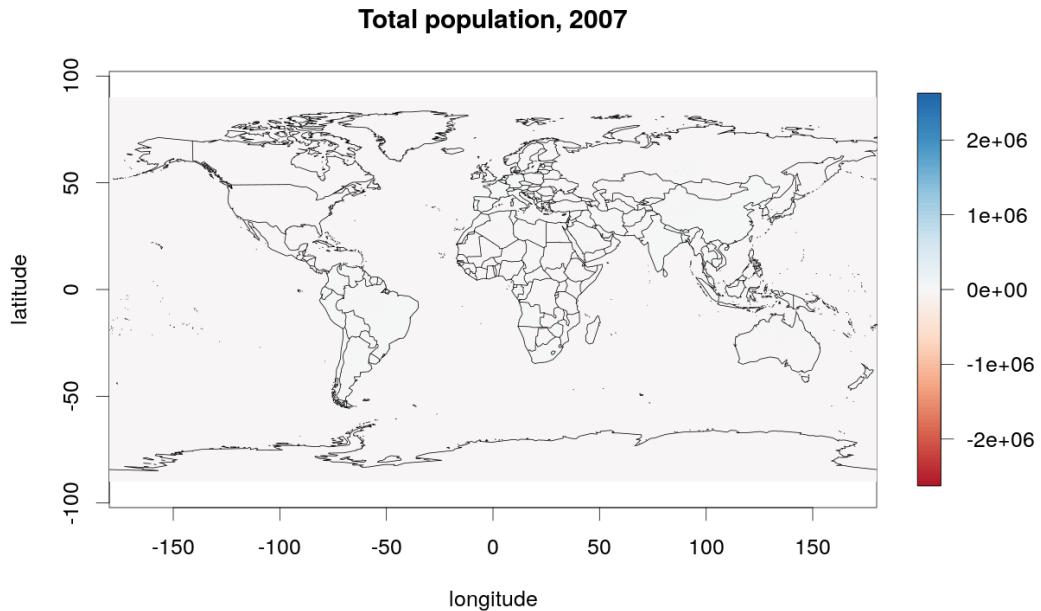


2008

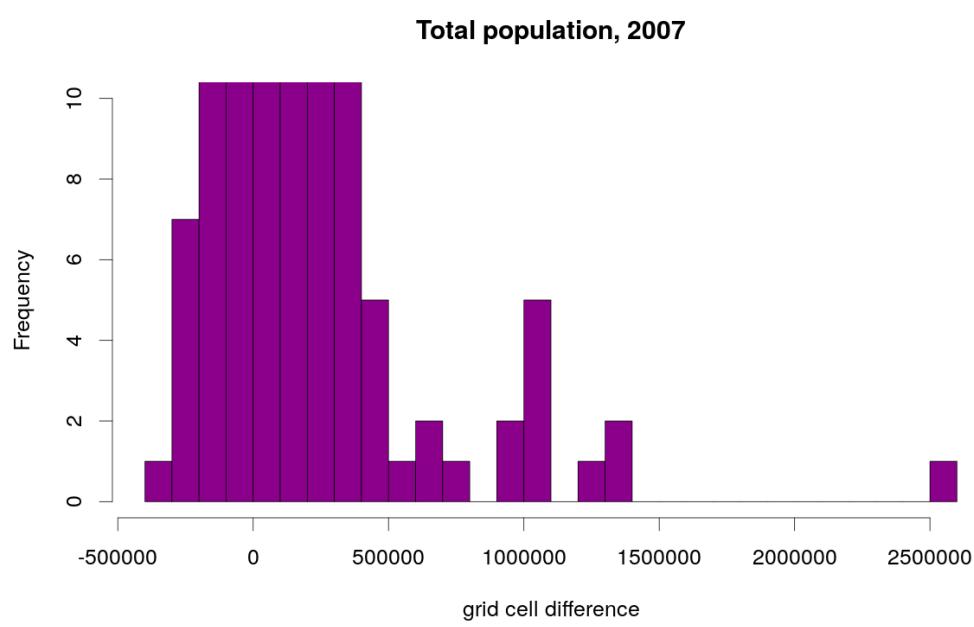
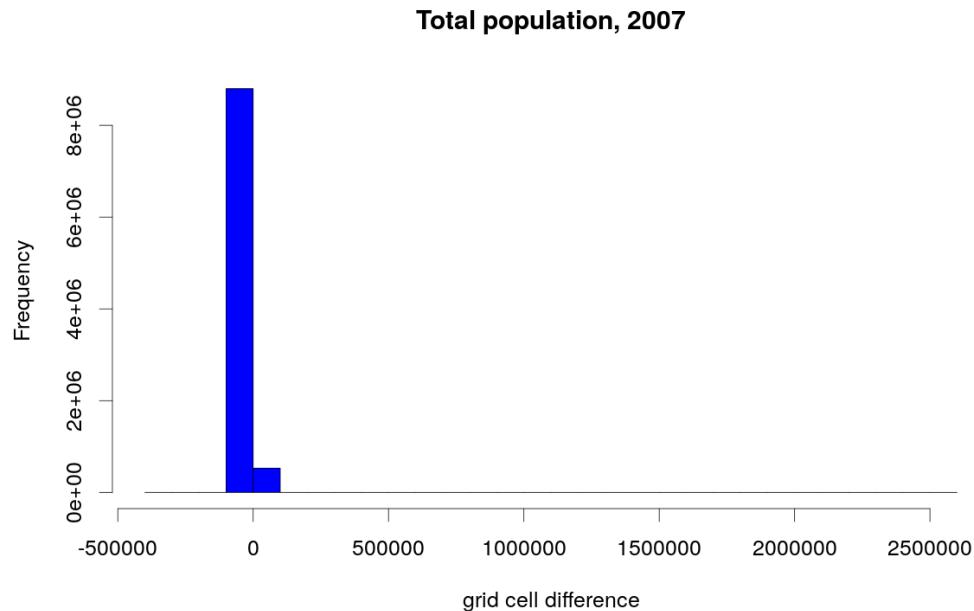
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.72806e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.731e+09 \\
 \sum_x \Delta_x &= 2.93871e+06 \\
 \sum_x |\Delta_x| &= 1.27326e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000436784 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0189246 \\
 \max_x \Delta_x &= 2.61025e+06 \\
 \min_x \Delta_x &= -326140
 \end{aligned}$$

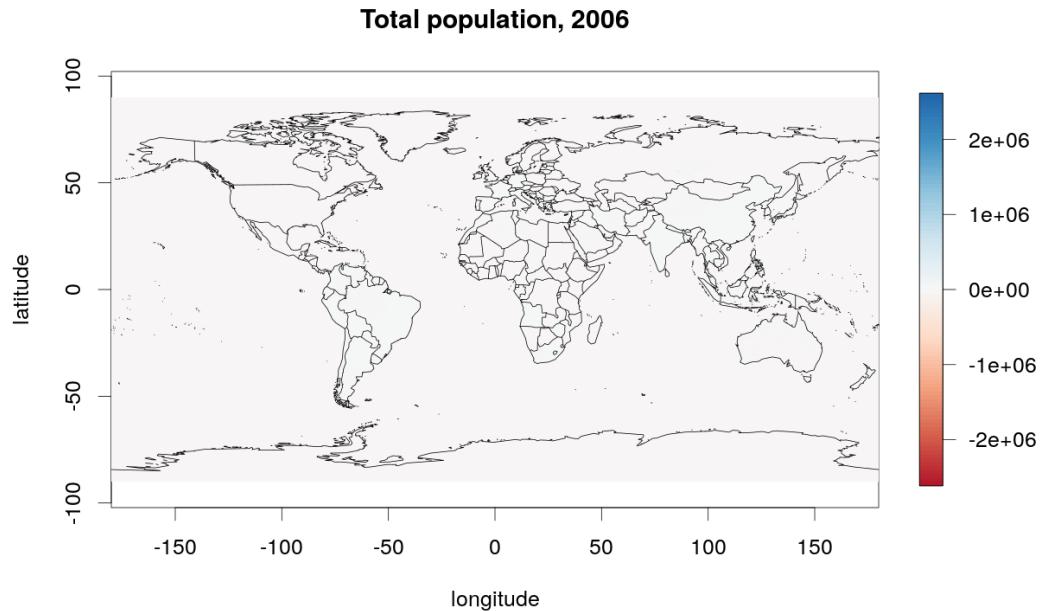


2007

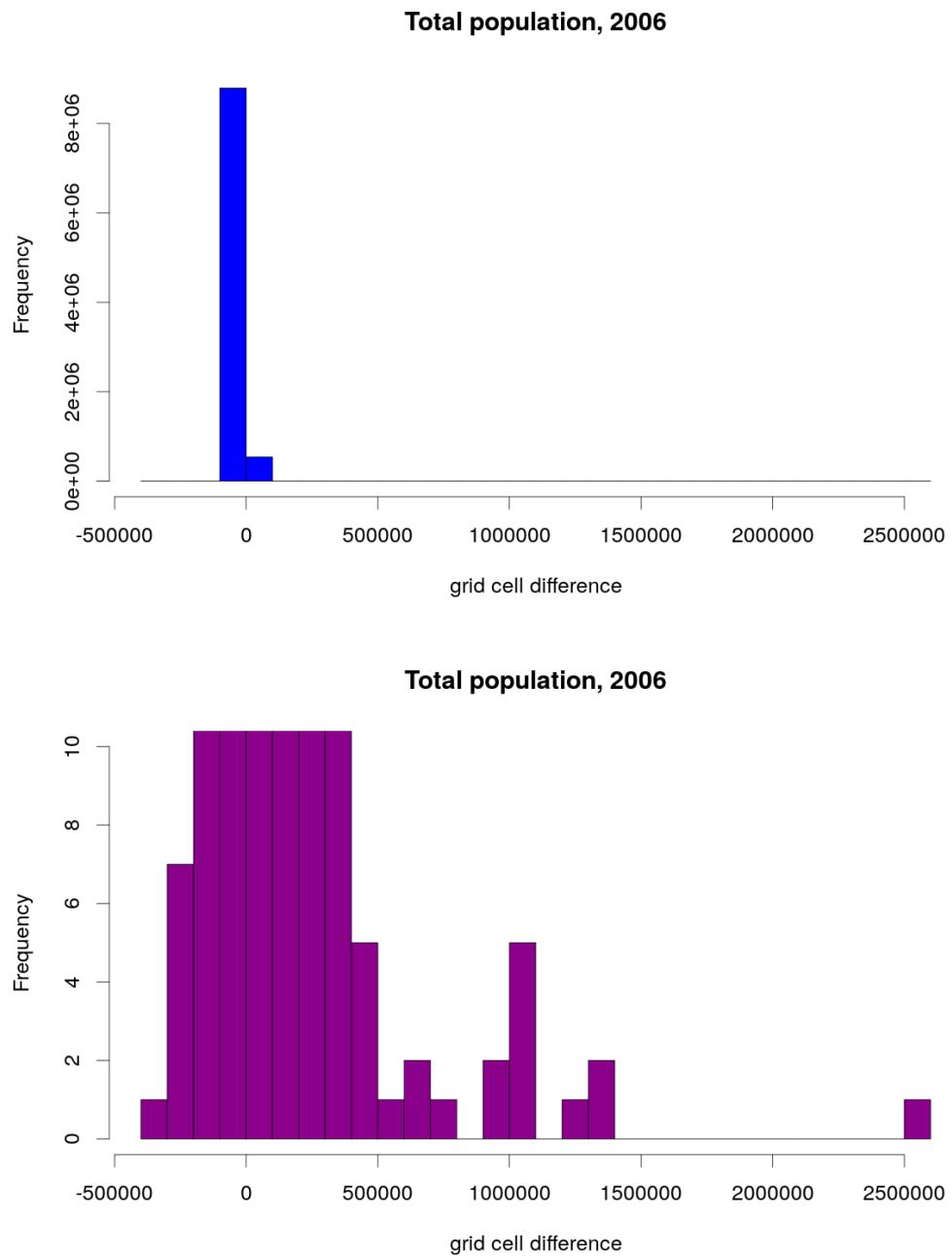


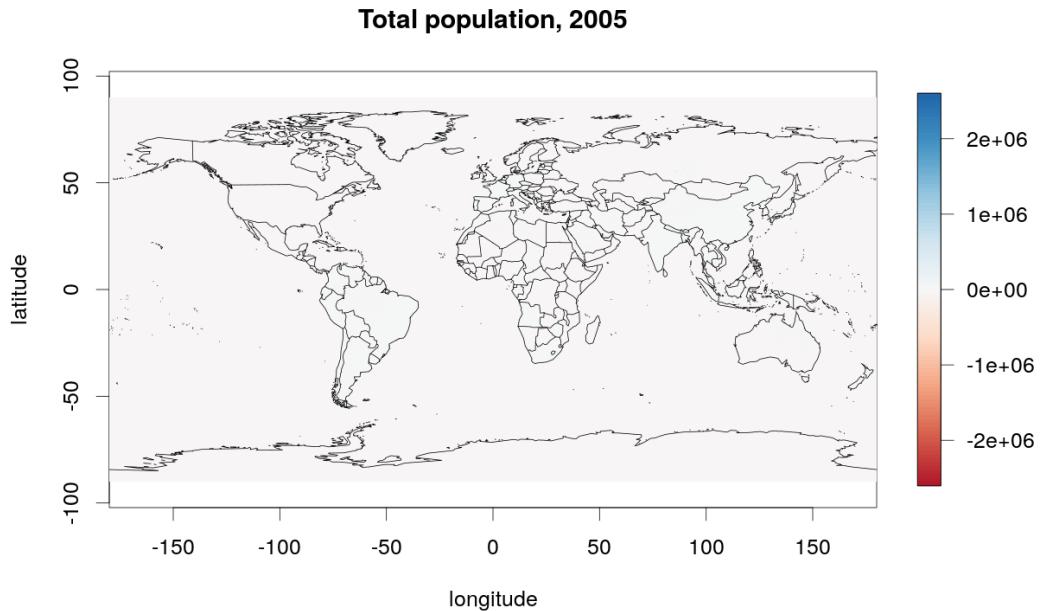
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.65086e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.65286e+09 \\
 \sum_x \Delta_x &= 2.00153e+06 \\
 \sum_x |\Delta_x| &= 1.31971e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000300943 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0198427 \\
 \max_x \Delta_x &= 2.59931e+06 \\
 \min_x \Delta_x &= -326004
 \end{aligned}$$



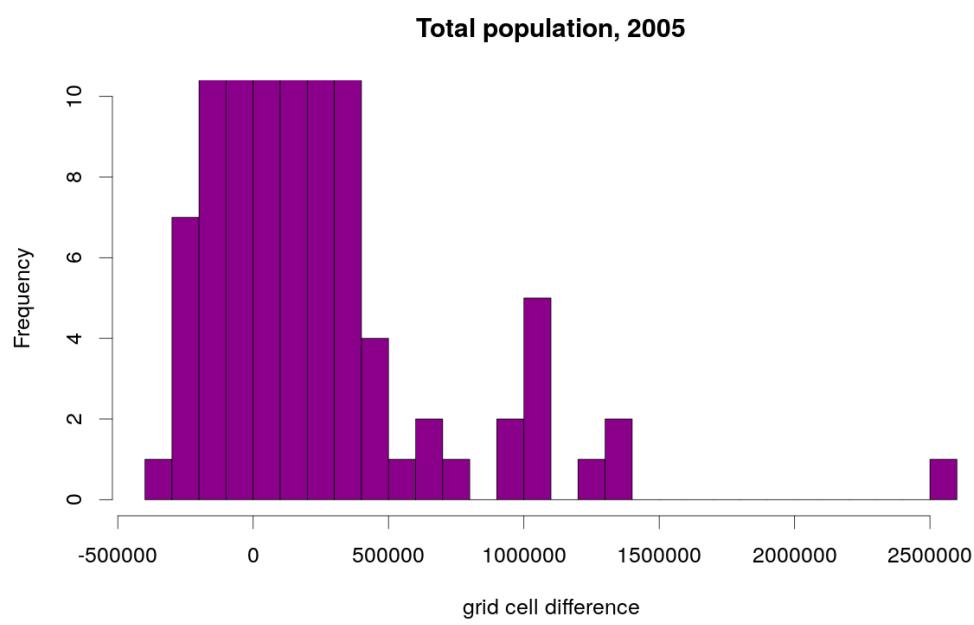
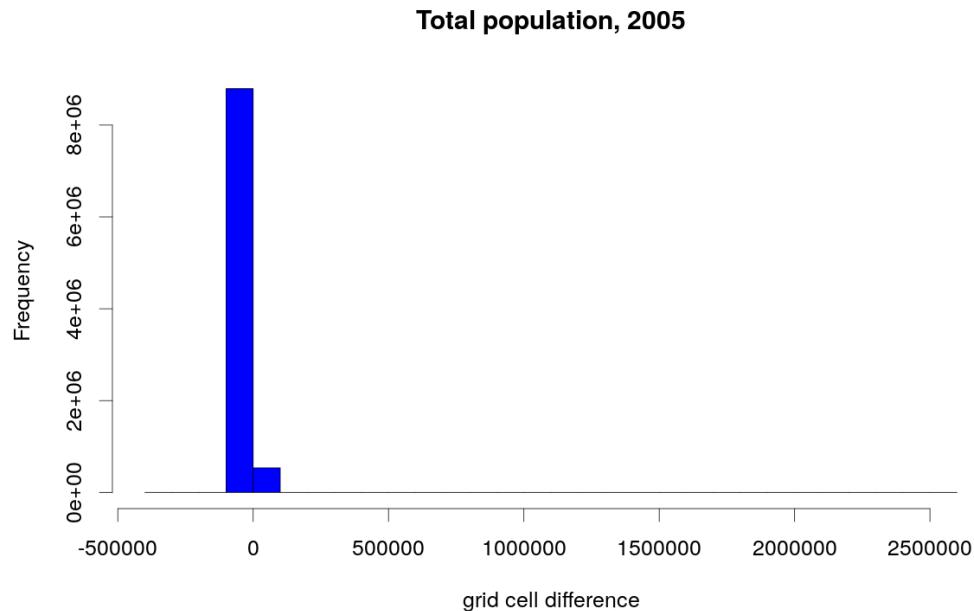
2006

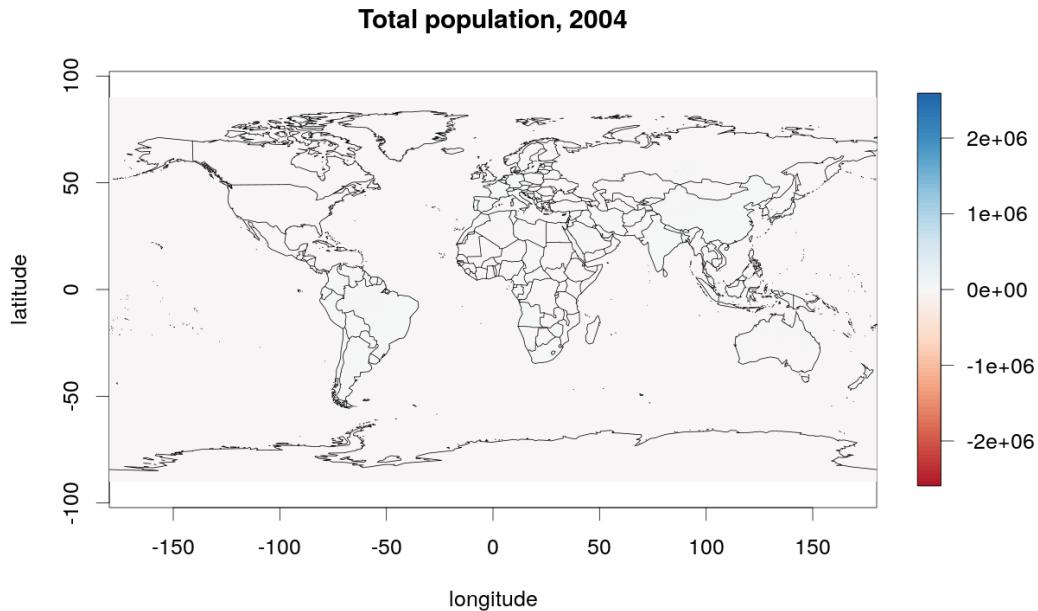
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.57366e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.57487e+09 \\
 \sum_x \Delta_x &= 1.21544e+06 \\
 \sum_x |\Delta_x| &= 1.3655e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000184895 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0207723 \\
 \max_x \Delta_x &= 2.5883e+06 \\
 \min_x \Delta_x &= -325862
 \end{aligned}$$



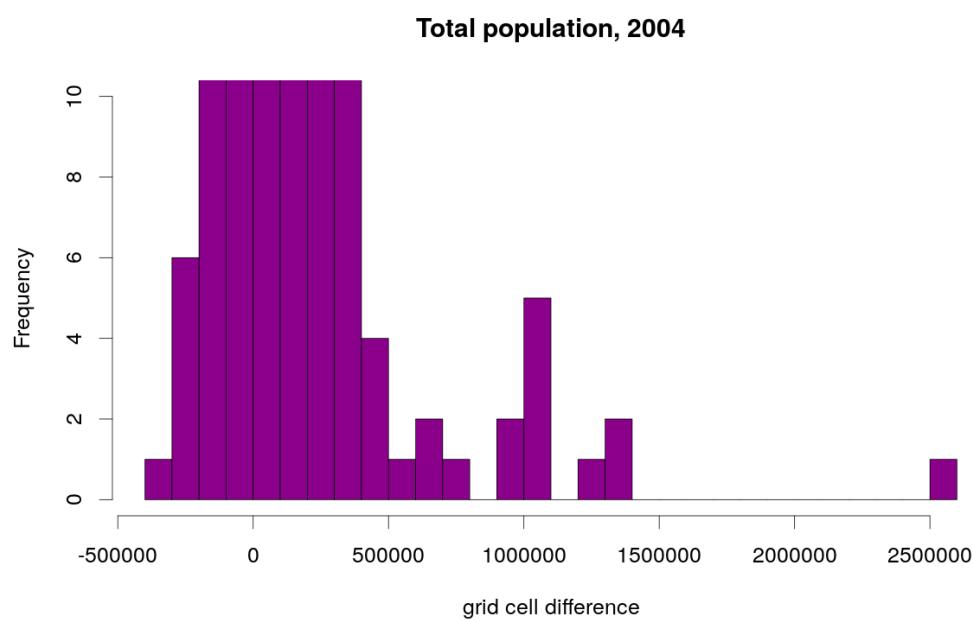
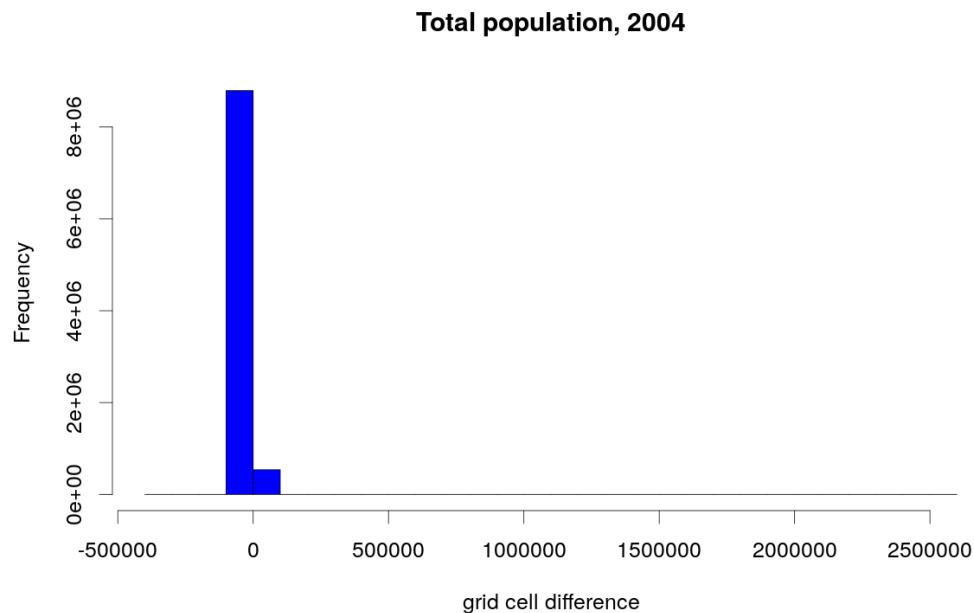
2005

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.49646e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.49705e+09 \\
 \sum_x \Delta_x &= 594217 \\
 \sum_x |\Delta_x| &= 1.41056e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 9.14678e-05 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0217127 \\
 \max_x \Delta_x &= 2.57721e+06 \\
 \min_x \Delta_x &= -325715
 \end{aligned}$$

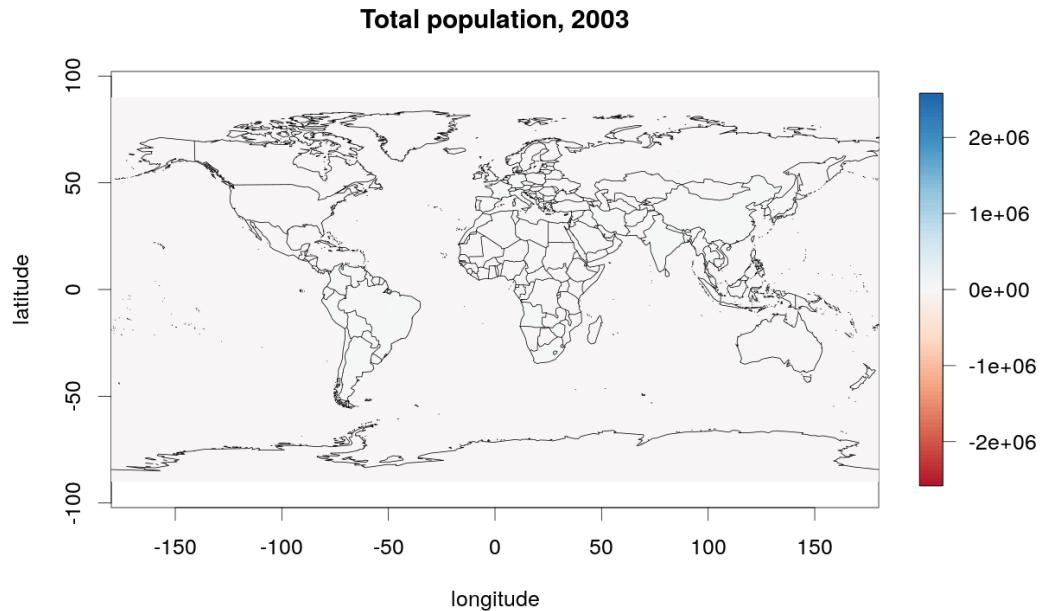


2004

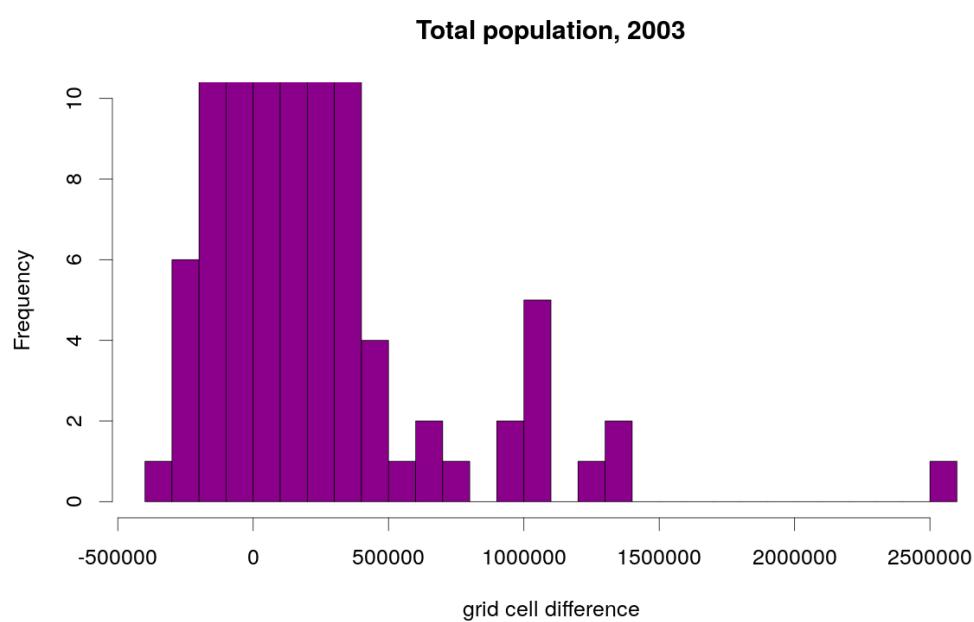
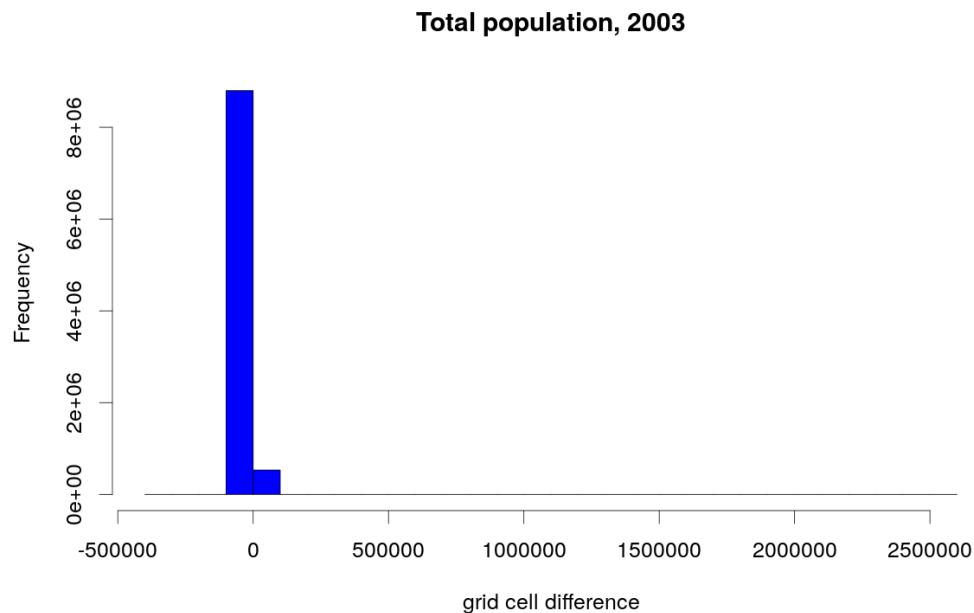
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.41925e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.41985e+09 \\
 \sum_x \Delta_x &= 596269 \\
 \sum_x |\Delta_x| &= 1.36575e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 9.28876e-05 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0212758 \\
 \max_x \Delta_x &= 2.56604e+06 \\
 \min_x \Delta_x &= -325563
 \end{aligned}$$



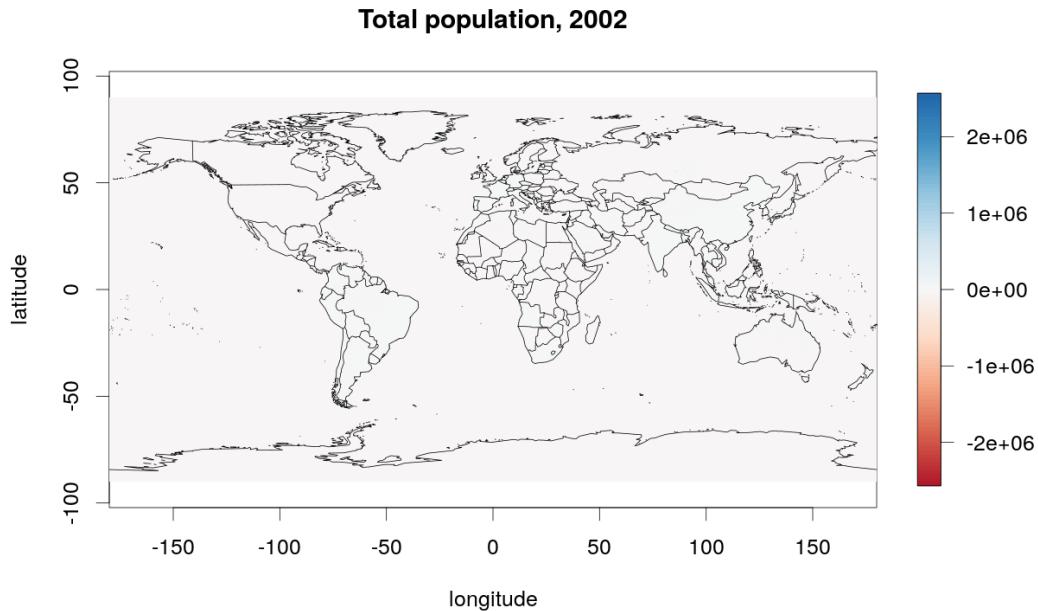
2003



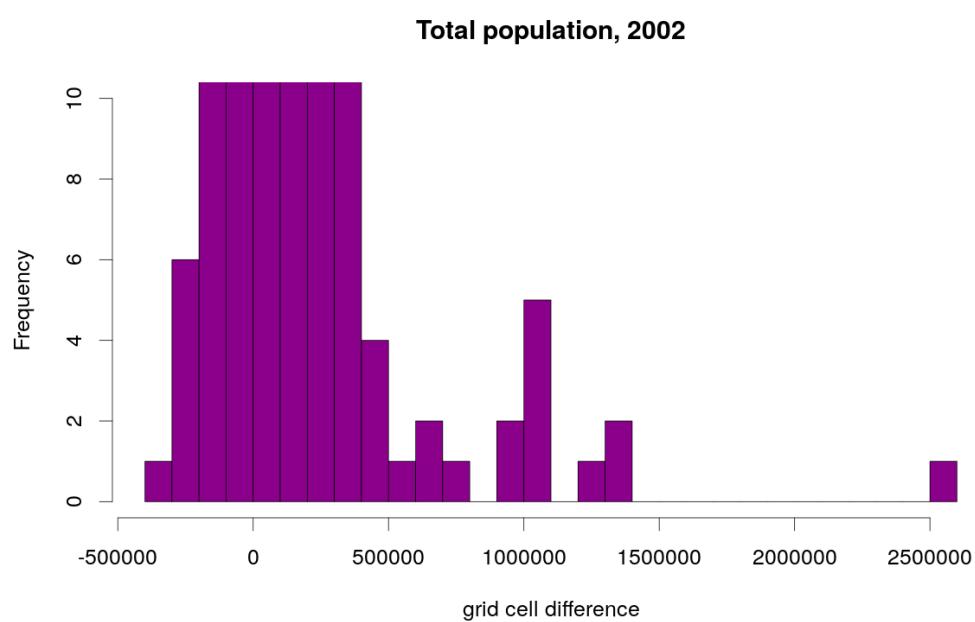
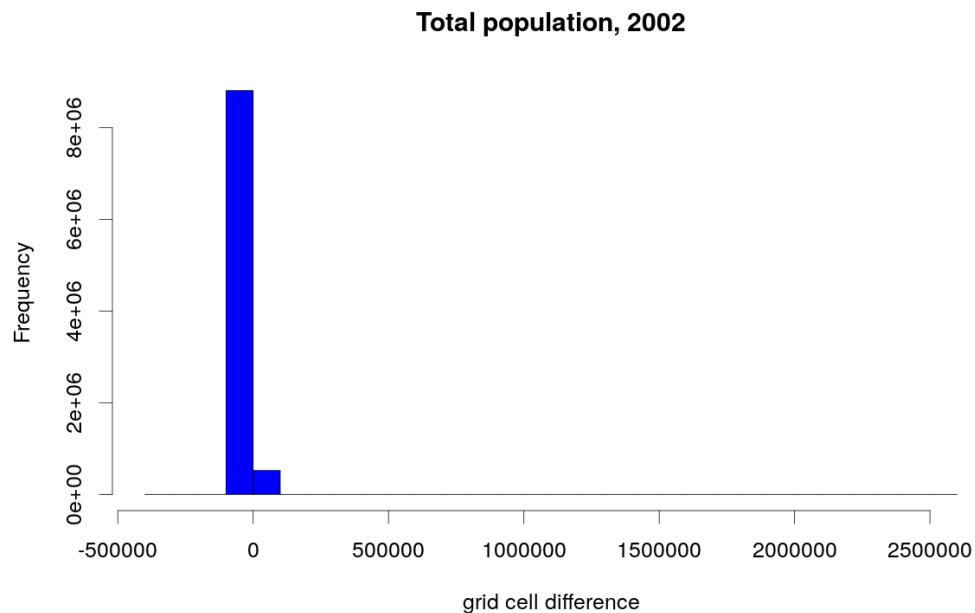
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.34205e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.34261e+09 \\
 \sum_x \Delta_x &= 555897 \\
 \sum_x |\Delta_x| &= 1.319e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 8.76526e-05 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0207977 \\
 \max_x \Delta_x &= 2.5548e+06 \\
 \min_x \Delta_x &= -325406
 \end{aligned}$$

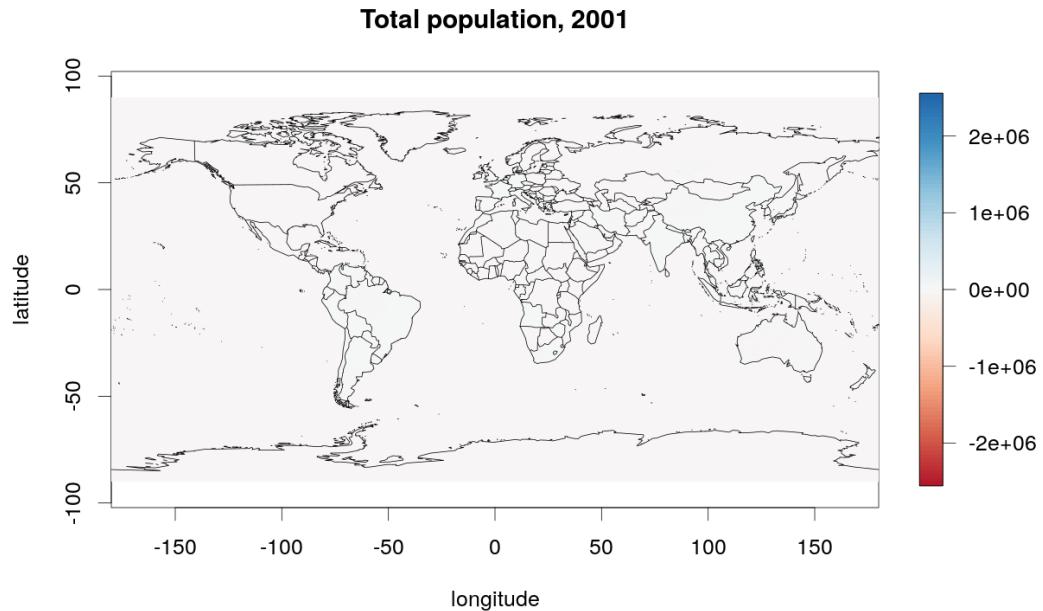


2002

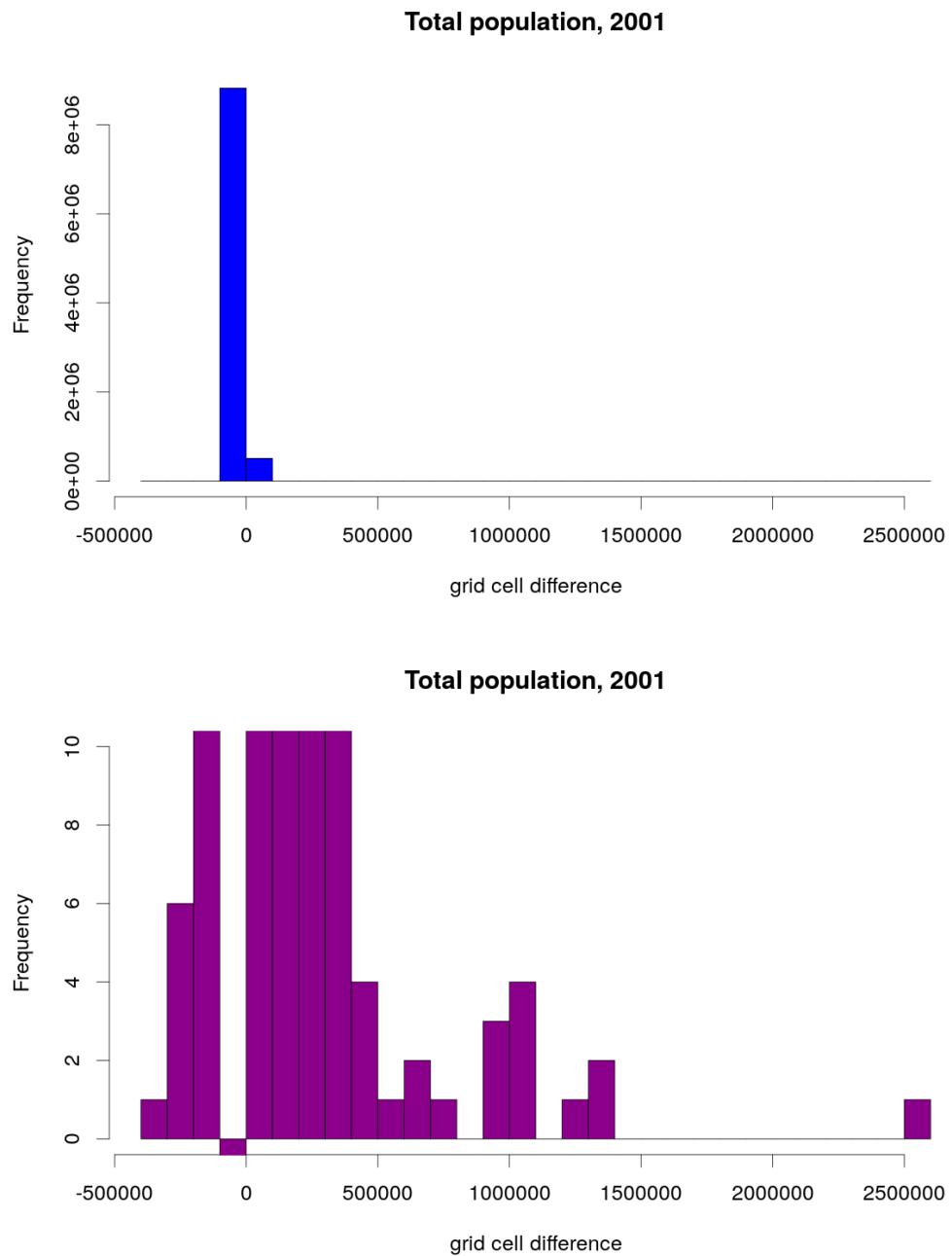


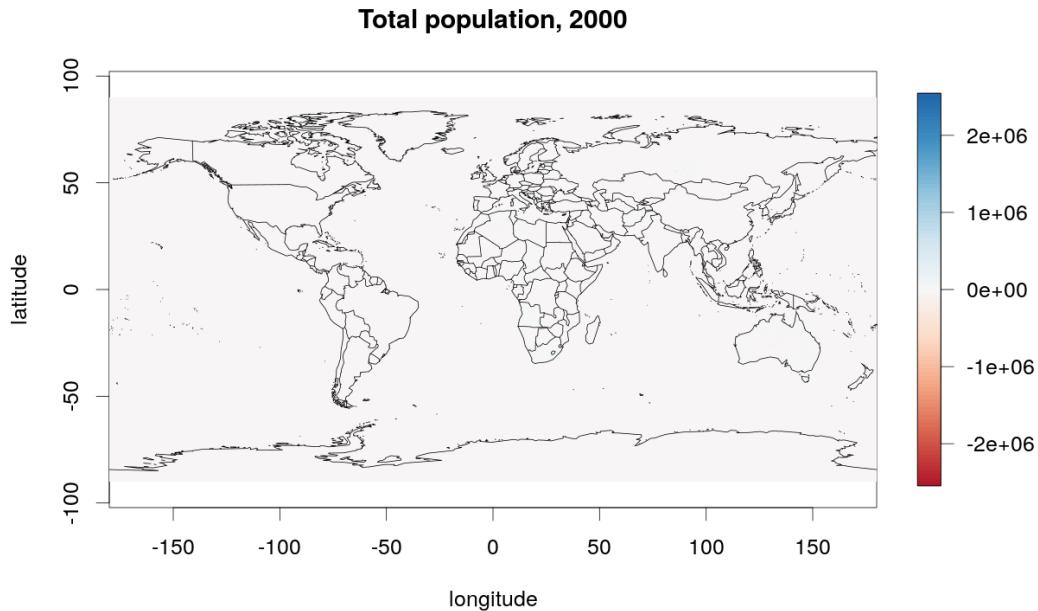
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.26485e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.26557e+09 \\
 \sum_x \Delta_x &= 724462 \\
 \sum_x |\Delta_x| &= 1.27223e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000115639 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0203074 \\
 \max_x \Delta_x &= 2.54349e+06 \\
 \min_x \Delta_x &= -325244
 \end{aligned}$$



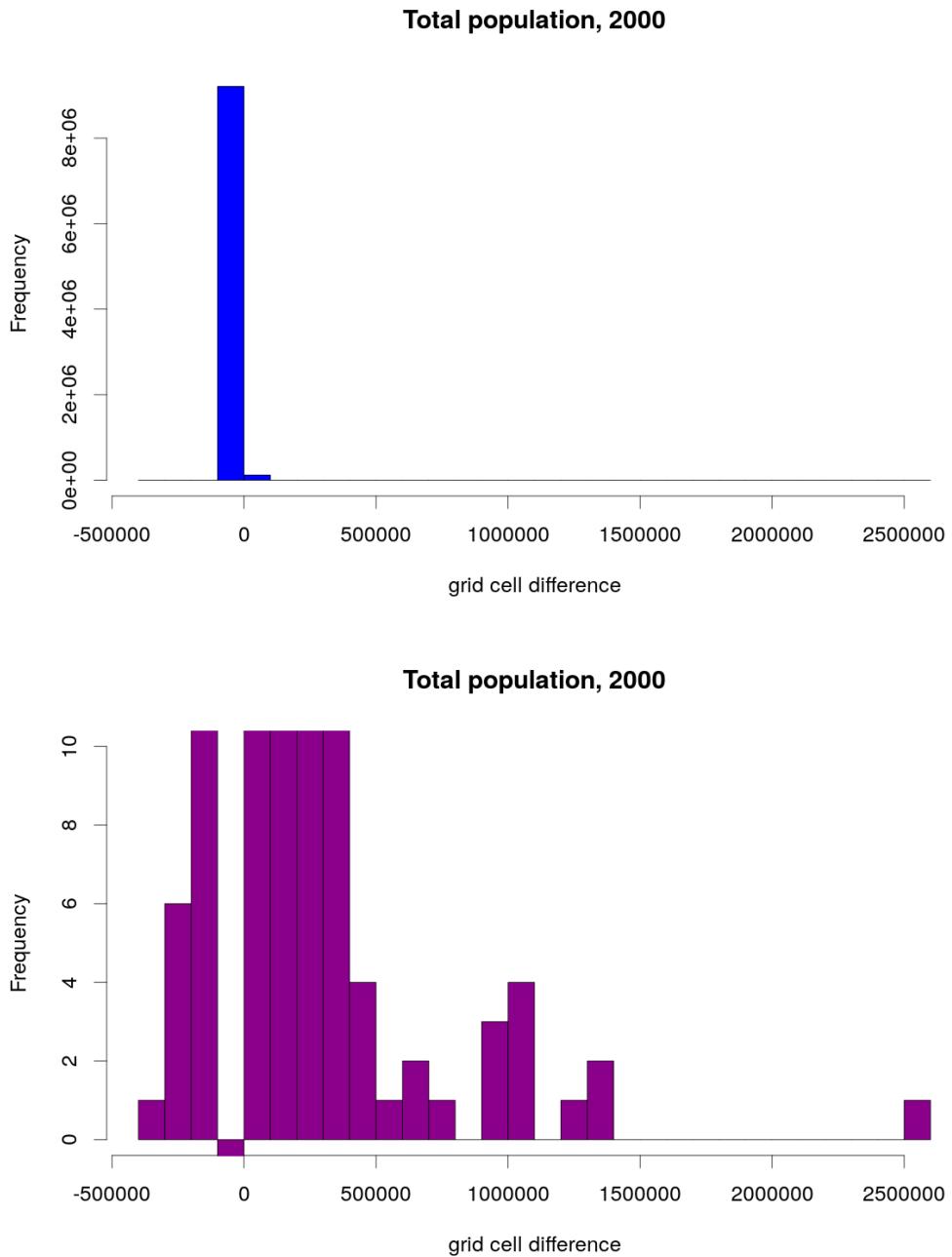
2001

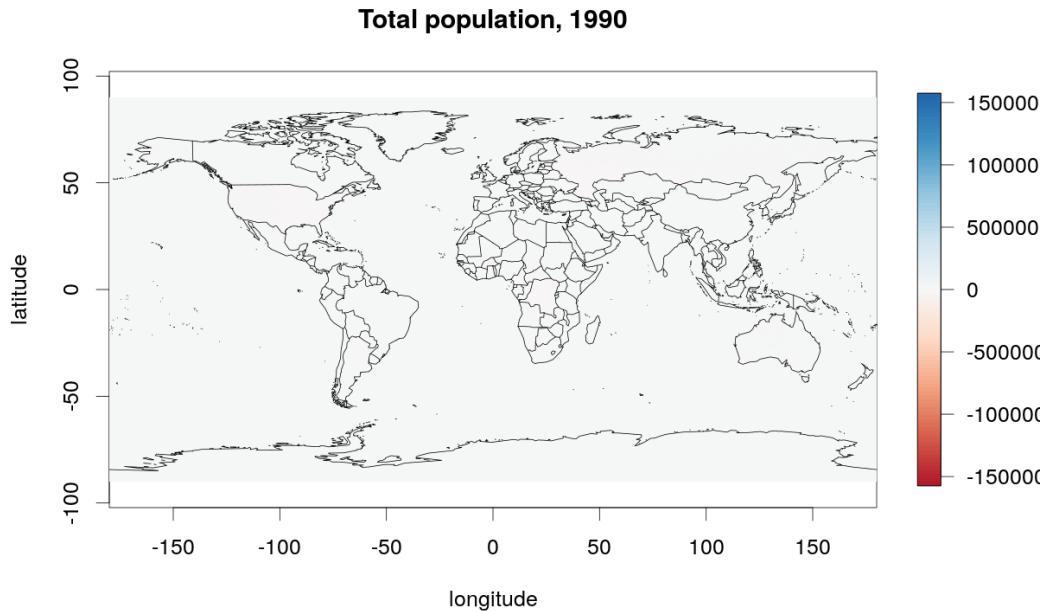
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.18765e+09 \\
 \sum_x p_x^{(v3.3)} &= 6.18883e+09 \\
 \sum_x \Delta_x &= 1.18051e+06 \\
 \sum_x |\Delta_x| &= 1.22565e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000190785 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.019808 \\
 \max_x \Delta_x &= 2.53211e+06 \\
 \min_x \Delta_x &= -325078
 \end{aligned}$$



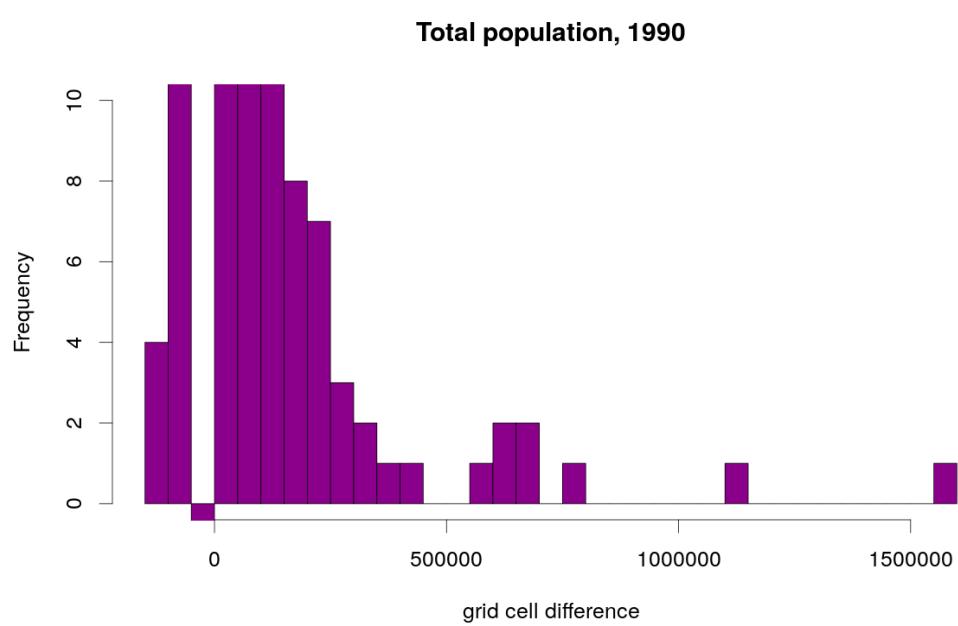
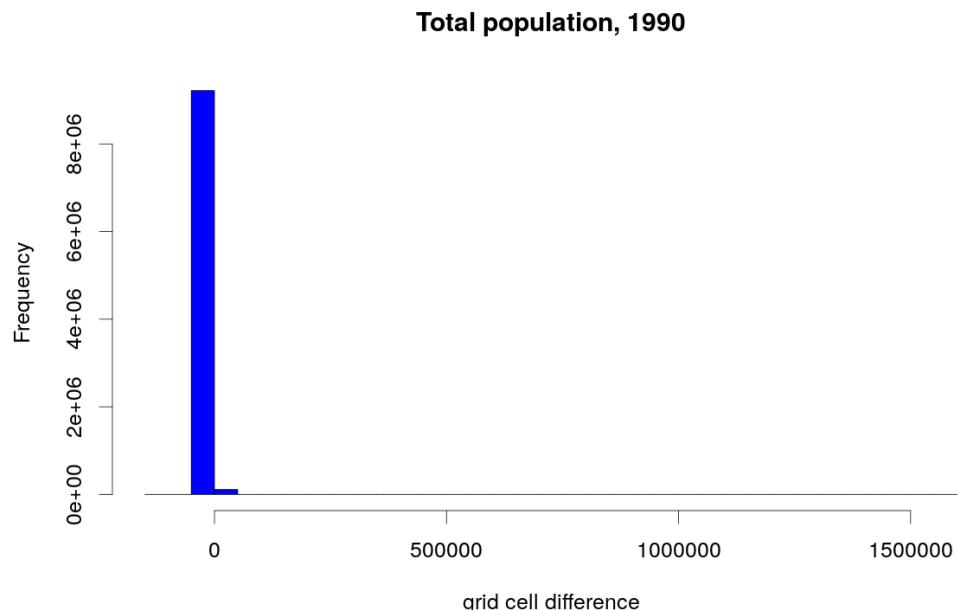
2000

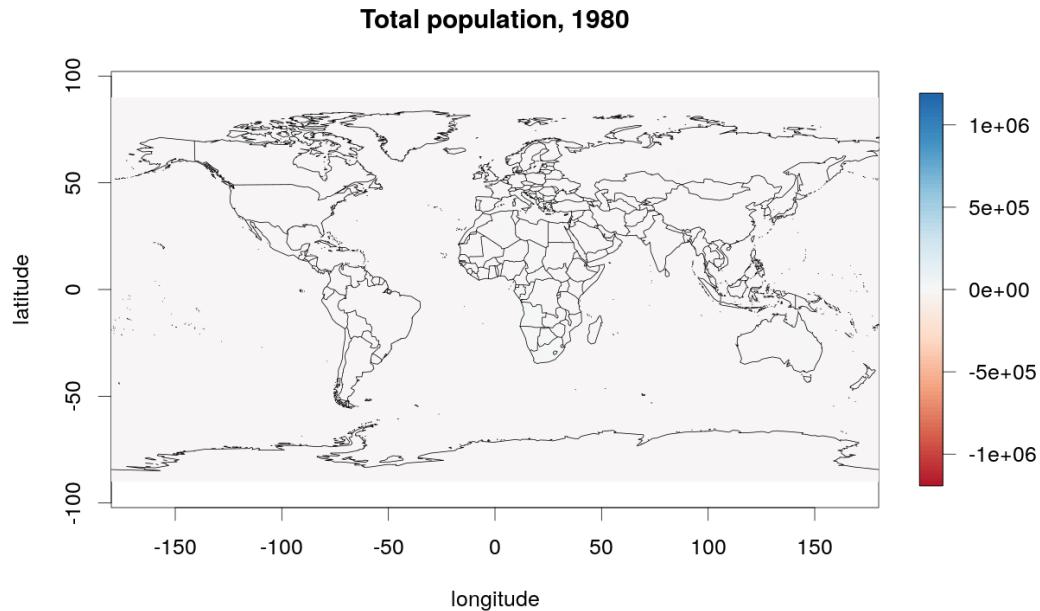
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.11044\text{e+09} \\
 \sum_x p_x^{(v3.3)} &= 6.11076\text{e+09} \\
 \sum_x \Delta_x &= 313136 \\
 \sum_x |\Delta_x| &= 1.20924\text{e+08} \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 5.12461\text{e-05} \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0197897 \\
 \max_x \Delta_x &= 2.52065\text{e+06} \\
 \min_x \Delta_x &= -324906
 \end{aligned}$$



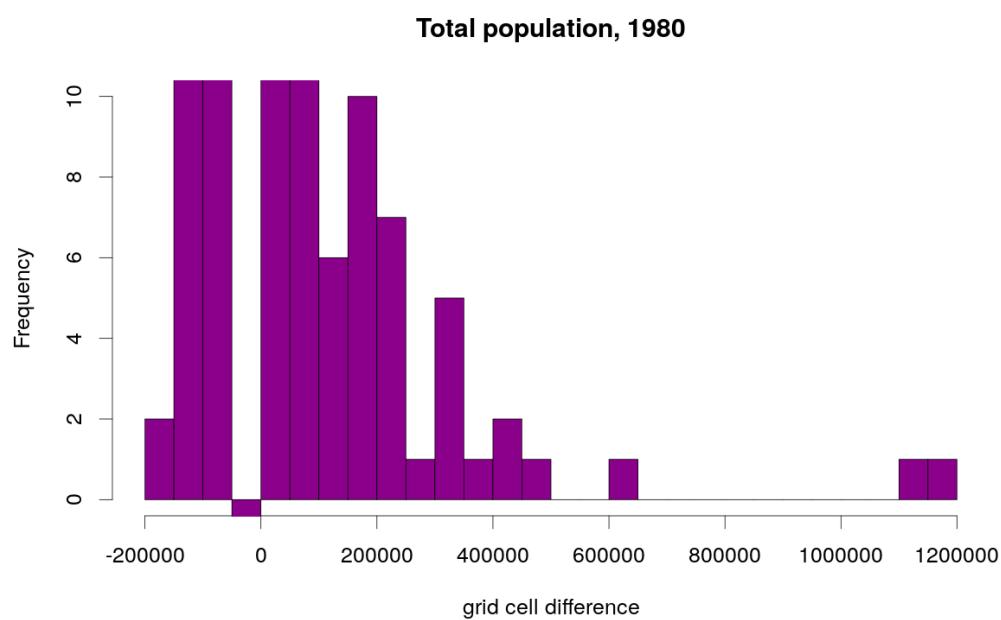
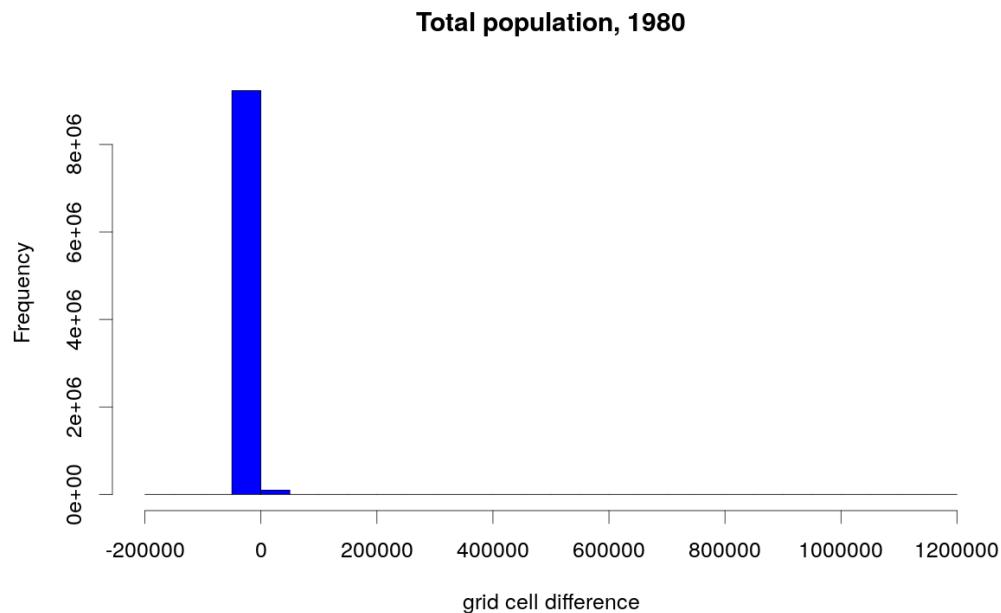
1990

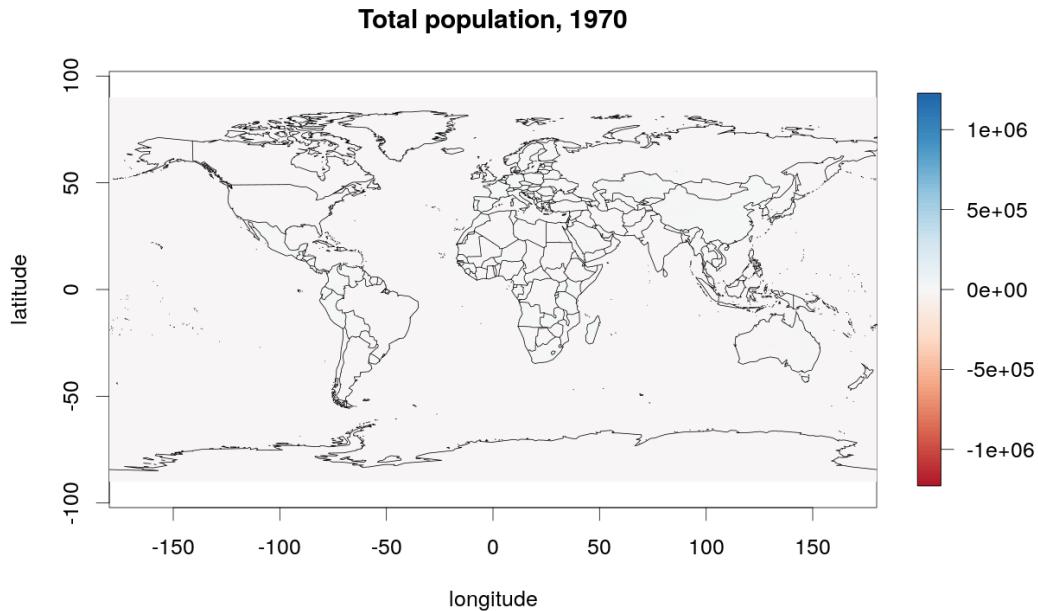
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 5.29783e+09 \\
 \sum_x p_x^{(v3.3)} &= 5.29255e+09 \\
 \sum_x \Delta_x &= -5.28245e+06 \\
 \sum_x |\Delta_x| &= 6.6305e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000997097 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0125155 \\
 \max_x \Delta_x &= 1.55859e+06 \\
 \min_x \Delta_x &= -144662
 \end{aligned}$$



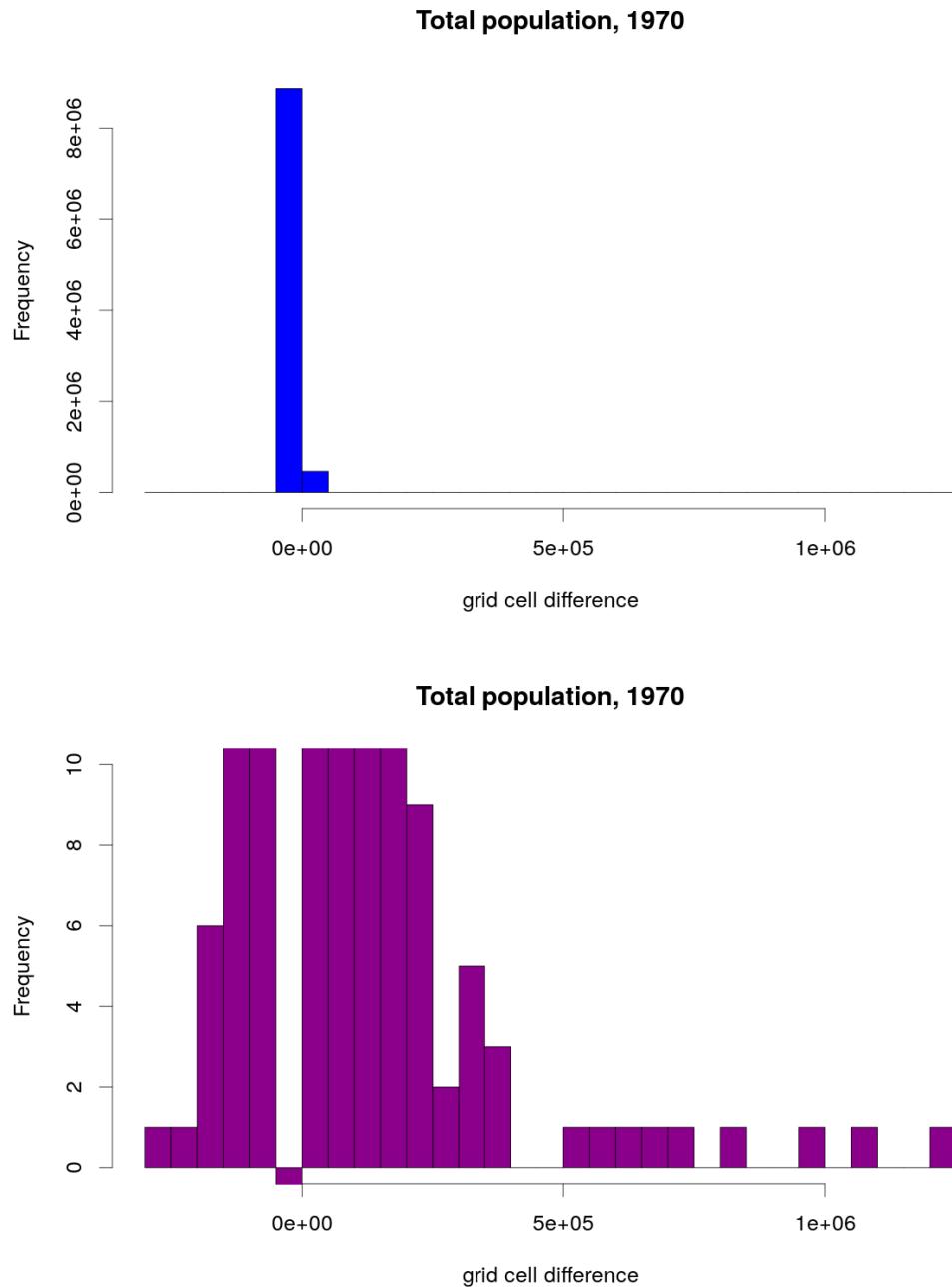
1980

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 4.44716e+09 \\
 \sum_x p_x^{(v3.3)} &= 4.44054e+09 \\
 \sum_x \Delta_x &= -6.62033e+06 \\
 \sum_x |\Delta_x| &= 6.81436e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00148866 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0153229 \\
 \max_x \Delta_x &= 1.18035e+06 \\
 \min_x \Delta_x &= -171458
 \end{aligned}$$



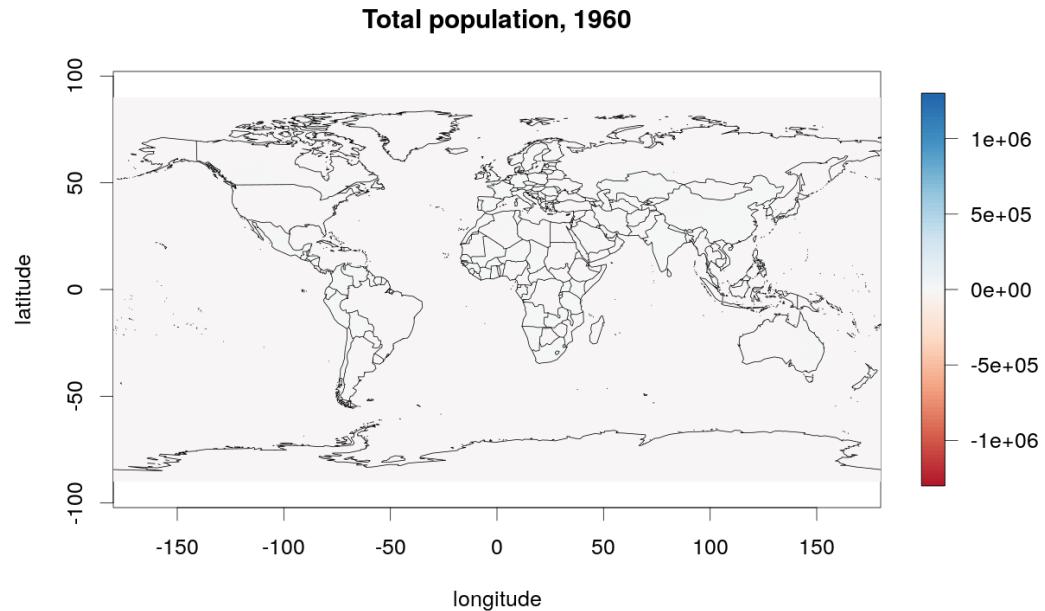
1970

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.69412e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.68167e+09 \\
 \sum_x \Delta_x &= -1.24451e+07 \\
 \sum_x |\Delta_x| &= 1.35679e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00336889 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0367284 \\
 \max_x \Delta_x &= 1.2154e+06 \\
 \min_x \Delta_x &= -251637
 \end{aligned}$$



50

1960



$$\sum_x p_x^{(v3.2.1)} = 3.02282\text{e}+09$$

$$\sum_x p_x^{(v3.3)} = 3.02095\text{e}+09$$

$$\sum_x \Delta_x = -1.87325\text{e}+06$$

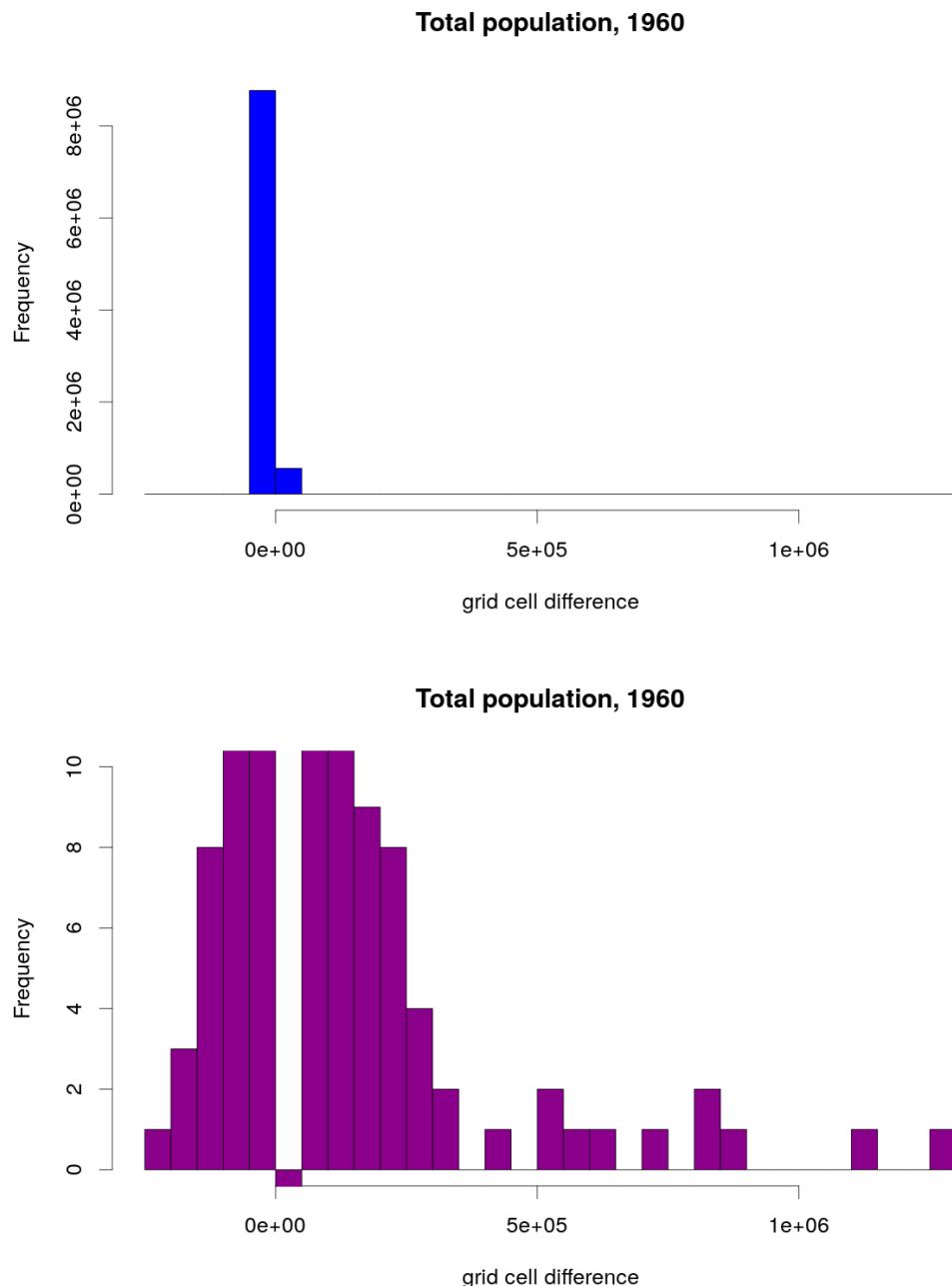
$$\sum_x |\Delta_x| = 1.38705\text{e}+08$$

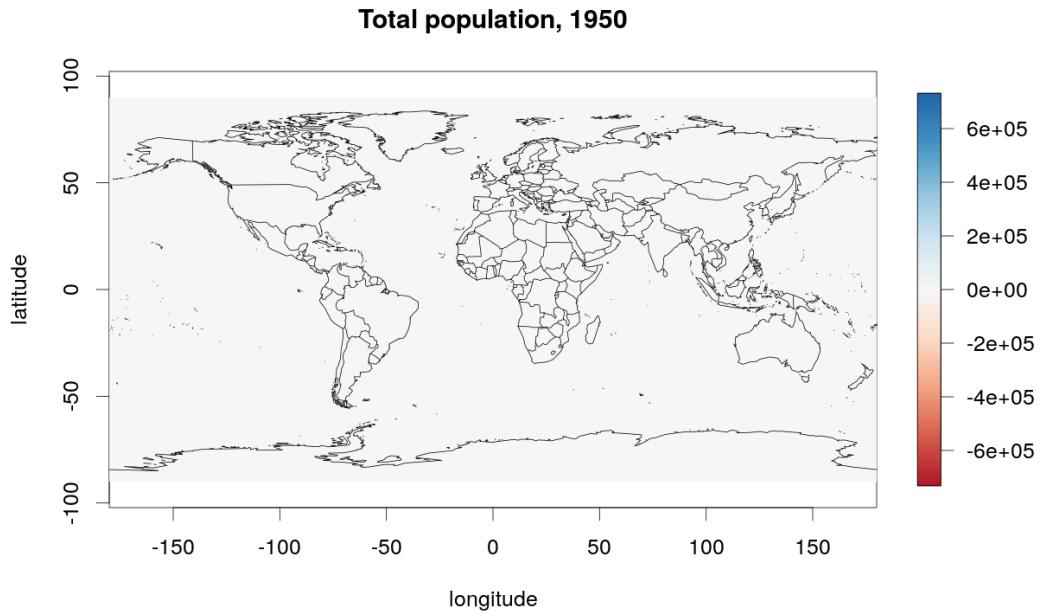
$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = -0.000619703$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.045886$$

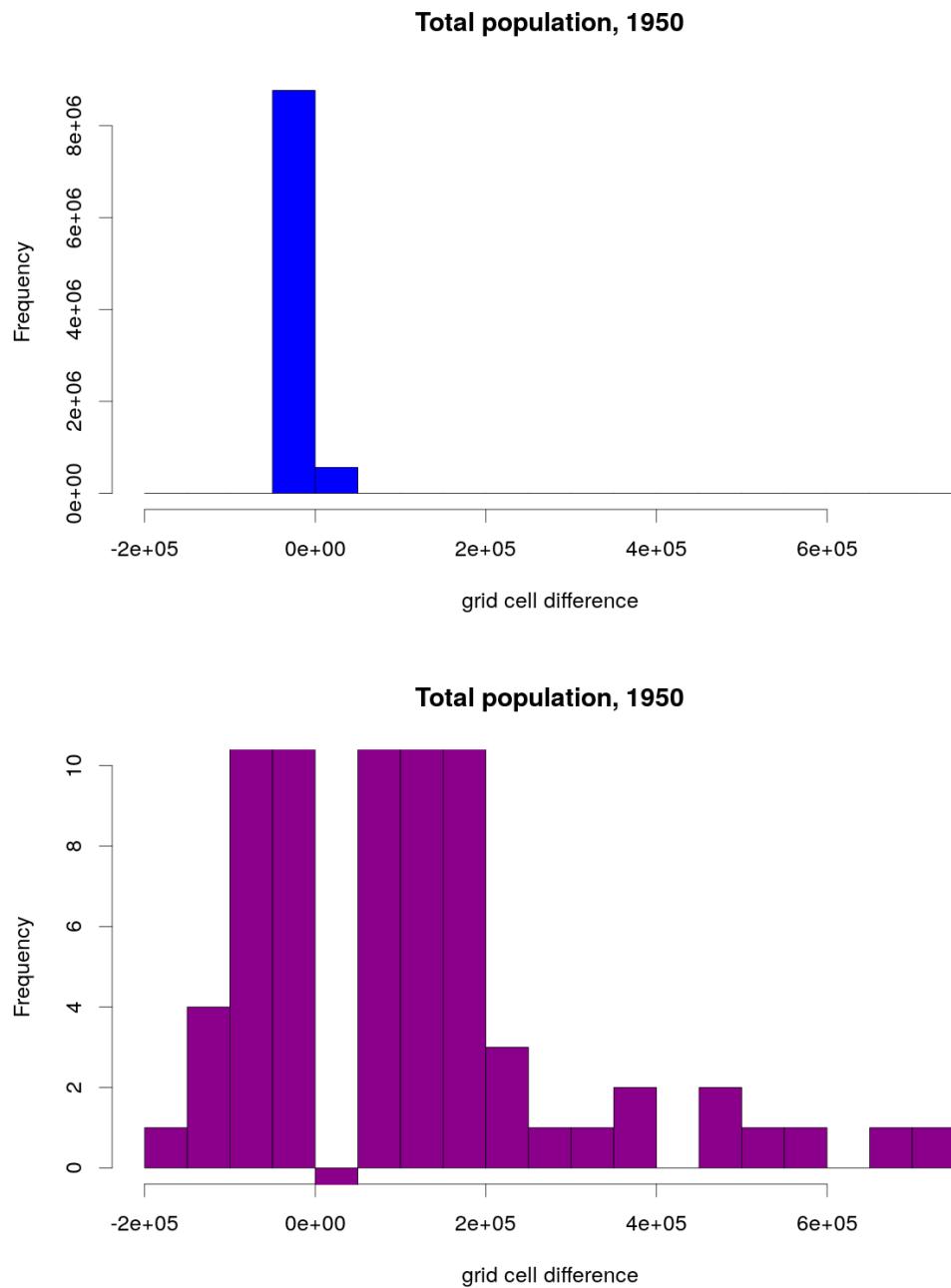
$$\max_x \Delta_x = 1.28762\text{e}+06$$

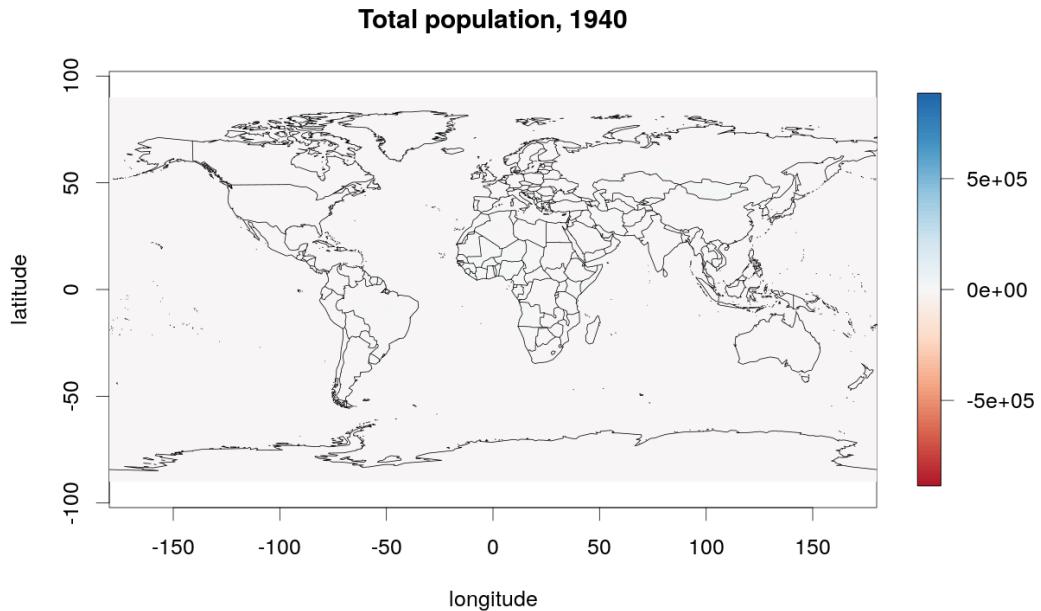
$$\min_x \Delta_x = -208091$$



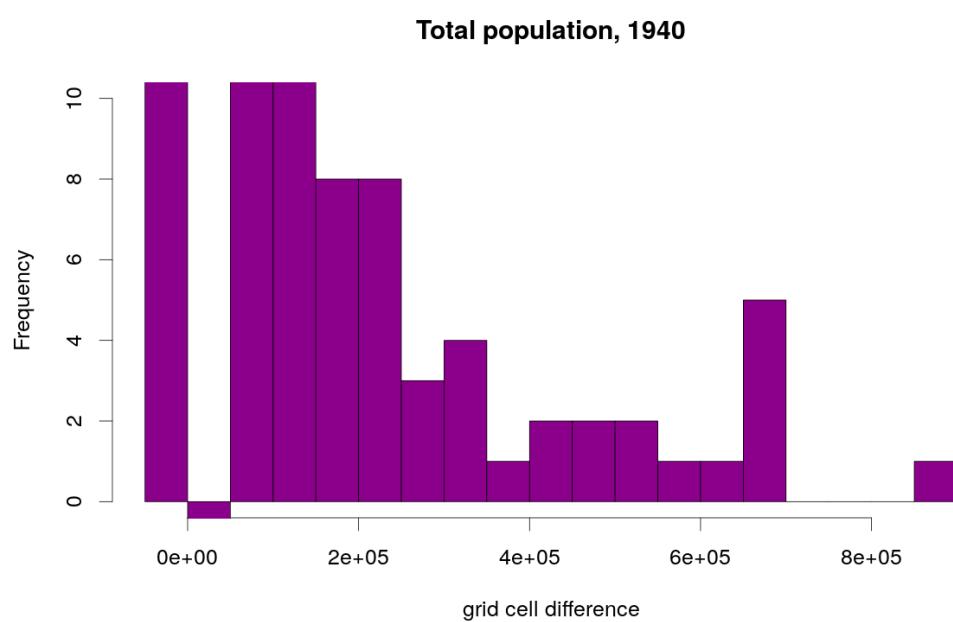
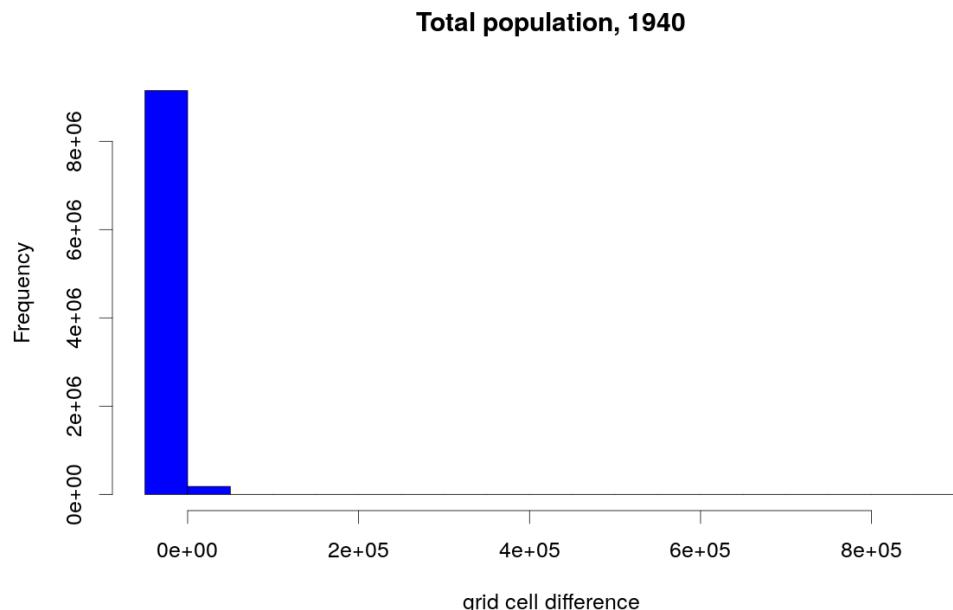
1950

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.52978e+09 \\
 \sum_x p_x^{(v3.3)} &= 2.53183e+09 \\
 \sum_x \Delta_x &= 2.04806e+06 \\
 \sum_x |\Delta_x| &= 1.17559e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00080958 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.04647 \\
 \max_x \Delta_x &= 724354 \\
 \min_x \Delta_x &= -150619
 \end{aligned}$$

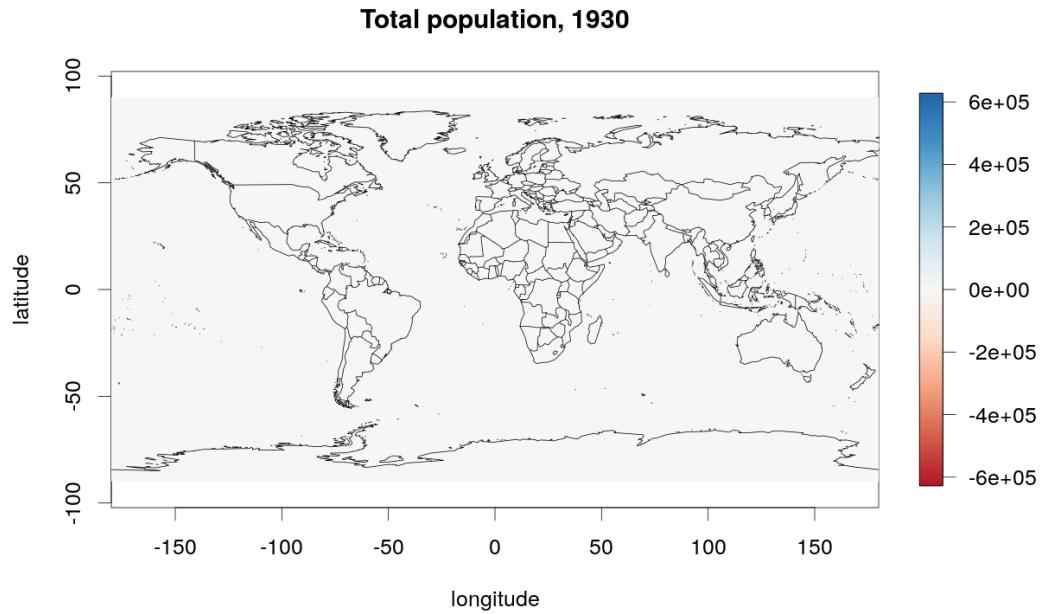


1940

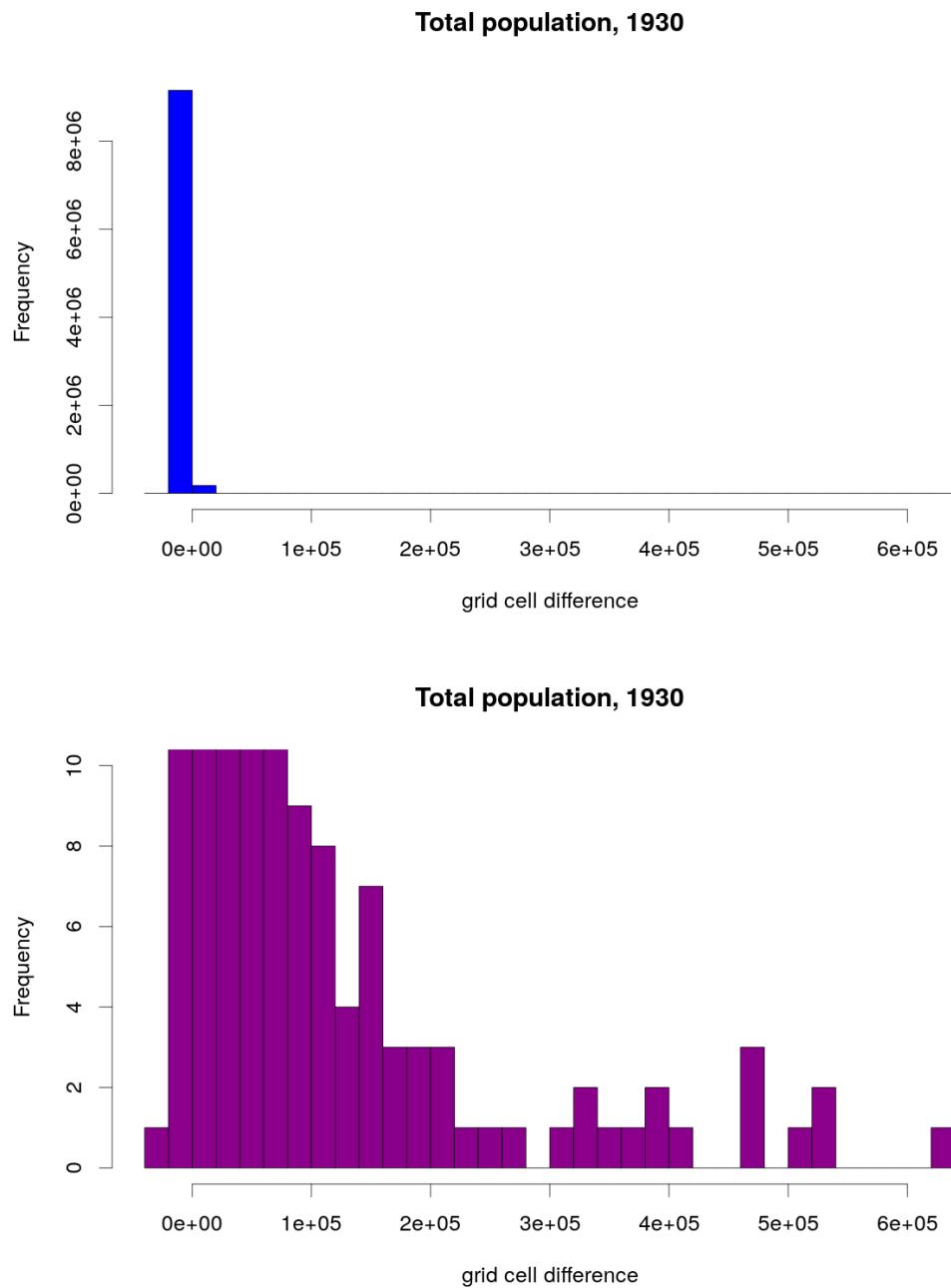
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.28923e+09 \\
 \sum_x p_x^{(v3.3)} &= 2.32844e+09 \\
 \sum_x \Delta_x &= 3.92063e+07 \\
 \sum_x |\Delta_x| &= 5.52401e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0171264 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0241304 \\
 \max_x \Delta_x &= 876256 \\
 \min_x \Delta_x &= -46833.7
 \end{aligned}$$



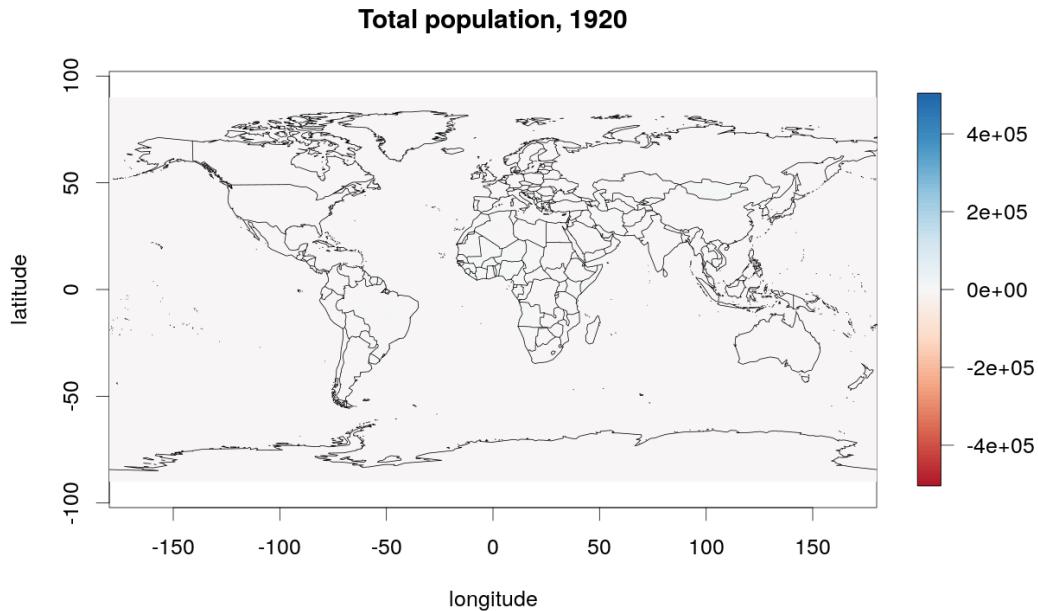
1930



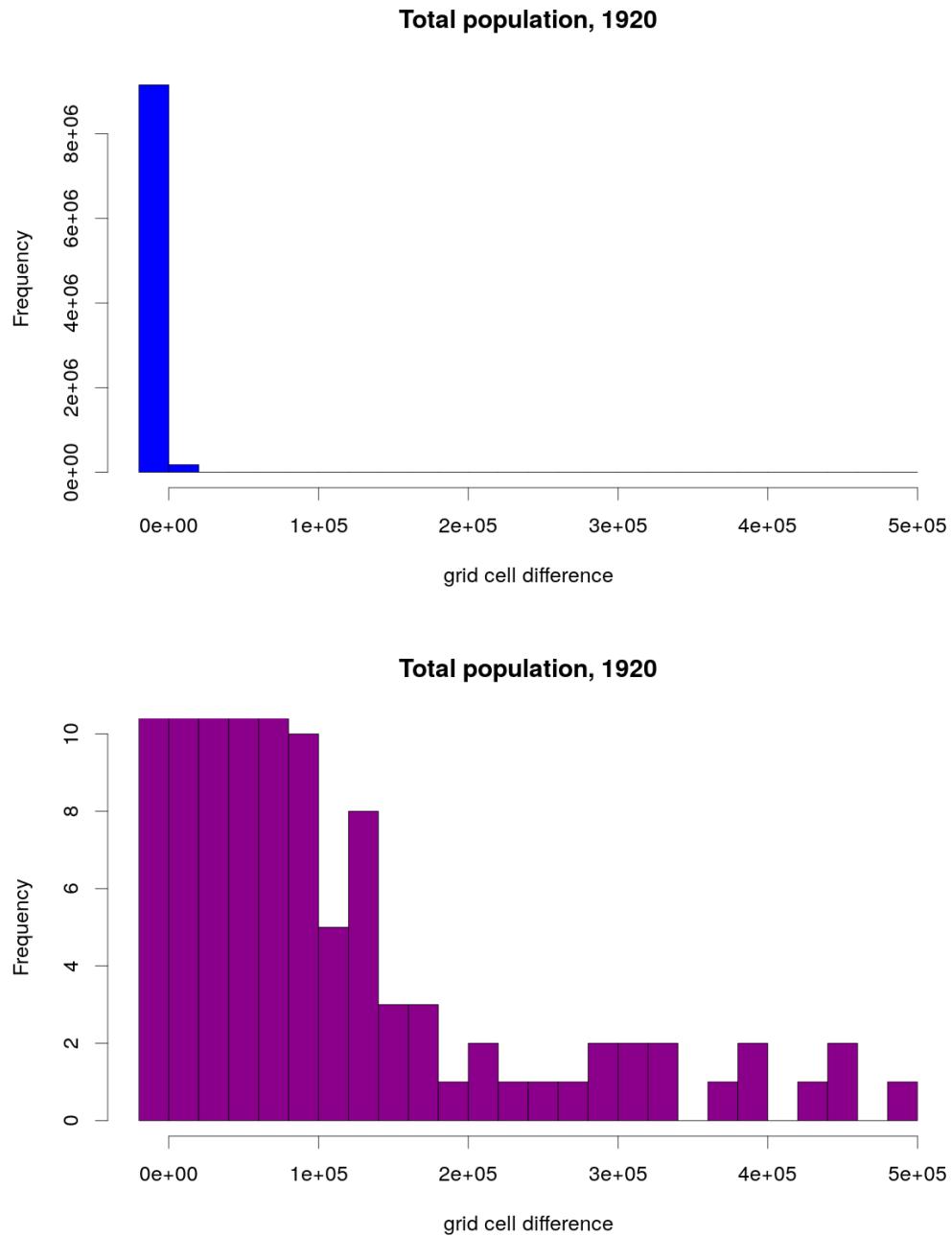
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.07319e+09 \\
 \sum_x p_x^{(v3.3)} &= 2.10638e+09 \\
 \sum_x \Delta_x &= 3.31908e+07 \\
 \sum_x |\Delta_x| &= 4.35334e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0160095 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0209983 \\
 \max_x \Delta_x &= 621425 \\
 \min_x \Delta_x &= -22613.1
 \end{aligned}$$



1920

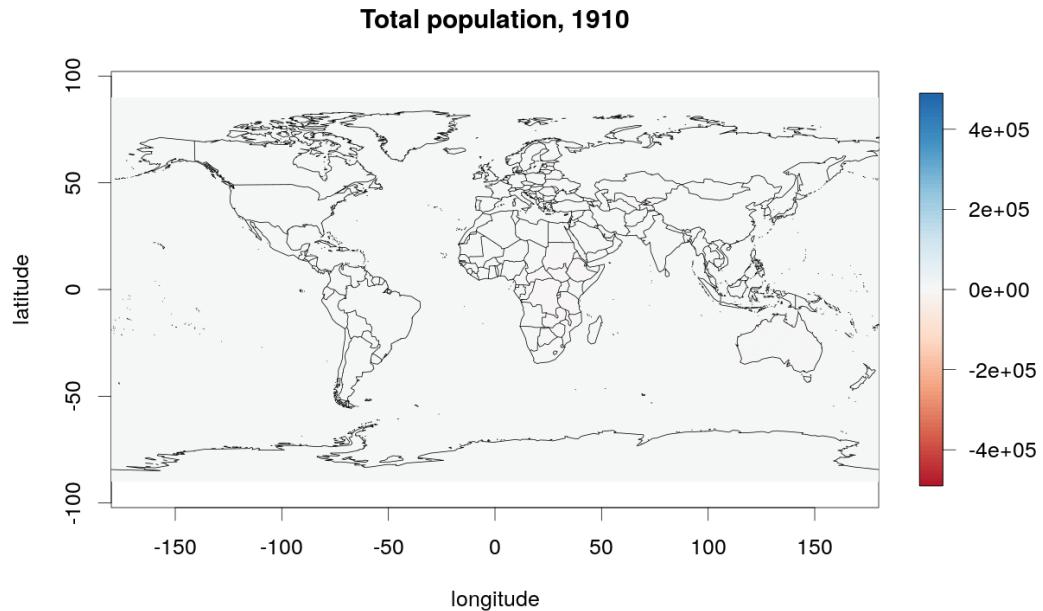


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.89552\text{e+}09 \\
 \sum_x p_x^{(v3.3)} &= 1.92784\text{e+}09 \\
 \sum_x \Delta_x &= 3.23223\text{e+}07 \\
 \sum_x |\Delta_x| &= 3.70641\text{e+}07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0170519 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0195535 \\
 \max_x \Delta_x &= 499194 \\
 \min_x \Delta_x &= -11167.3
 \end{aligned}$$

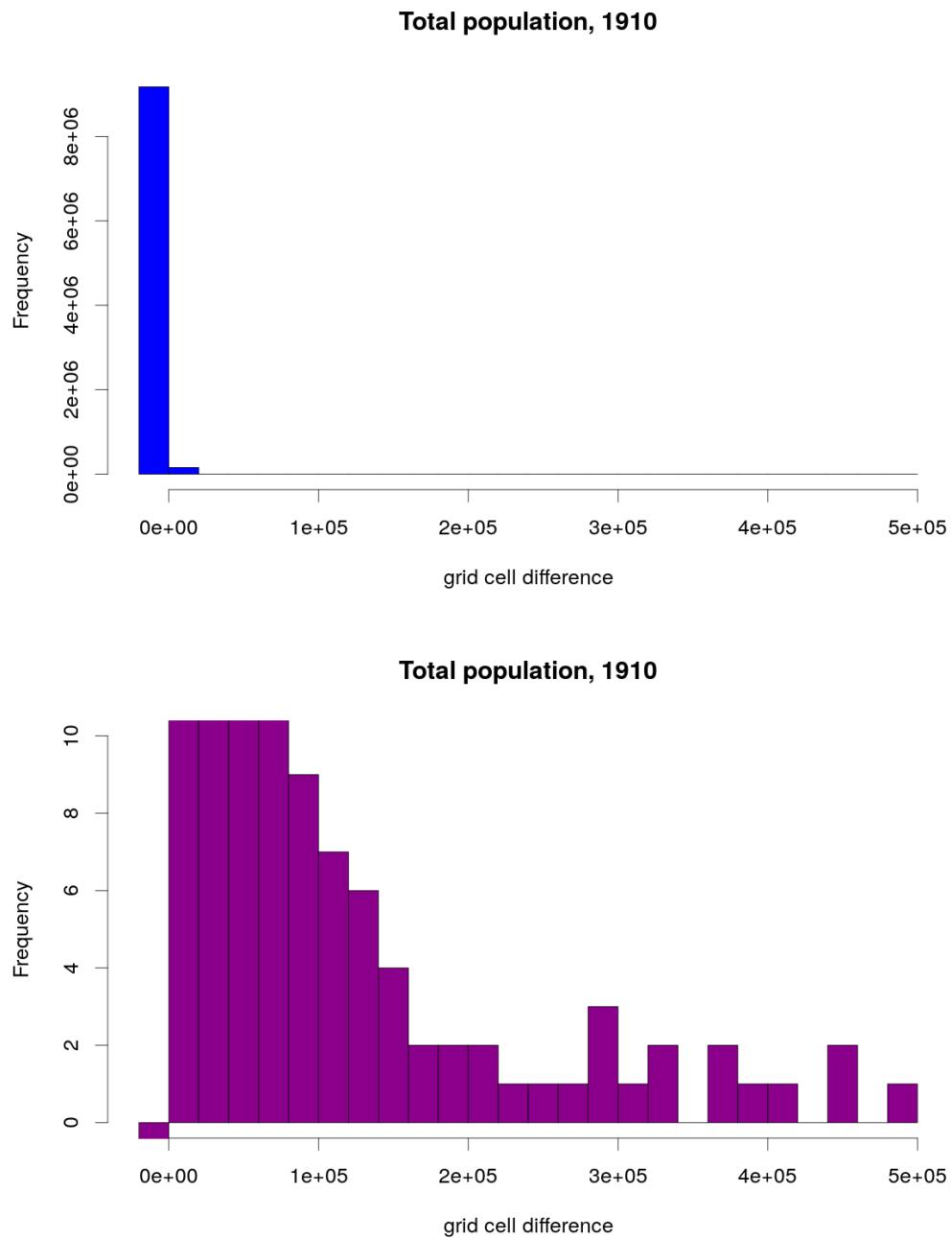


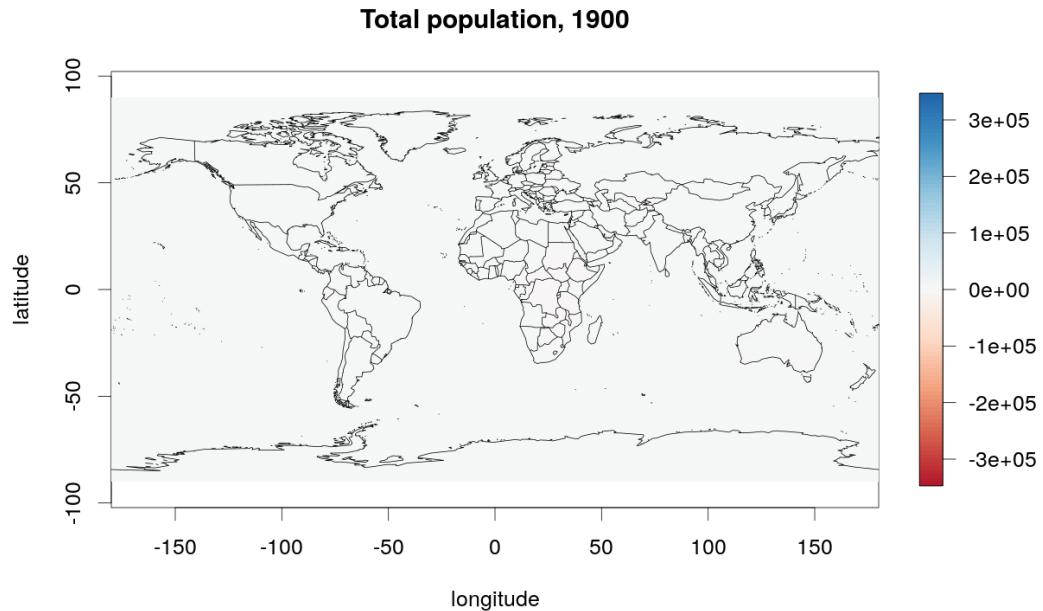
60

1910

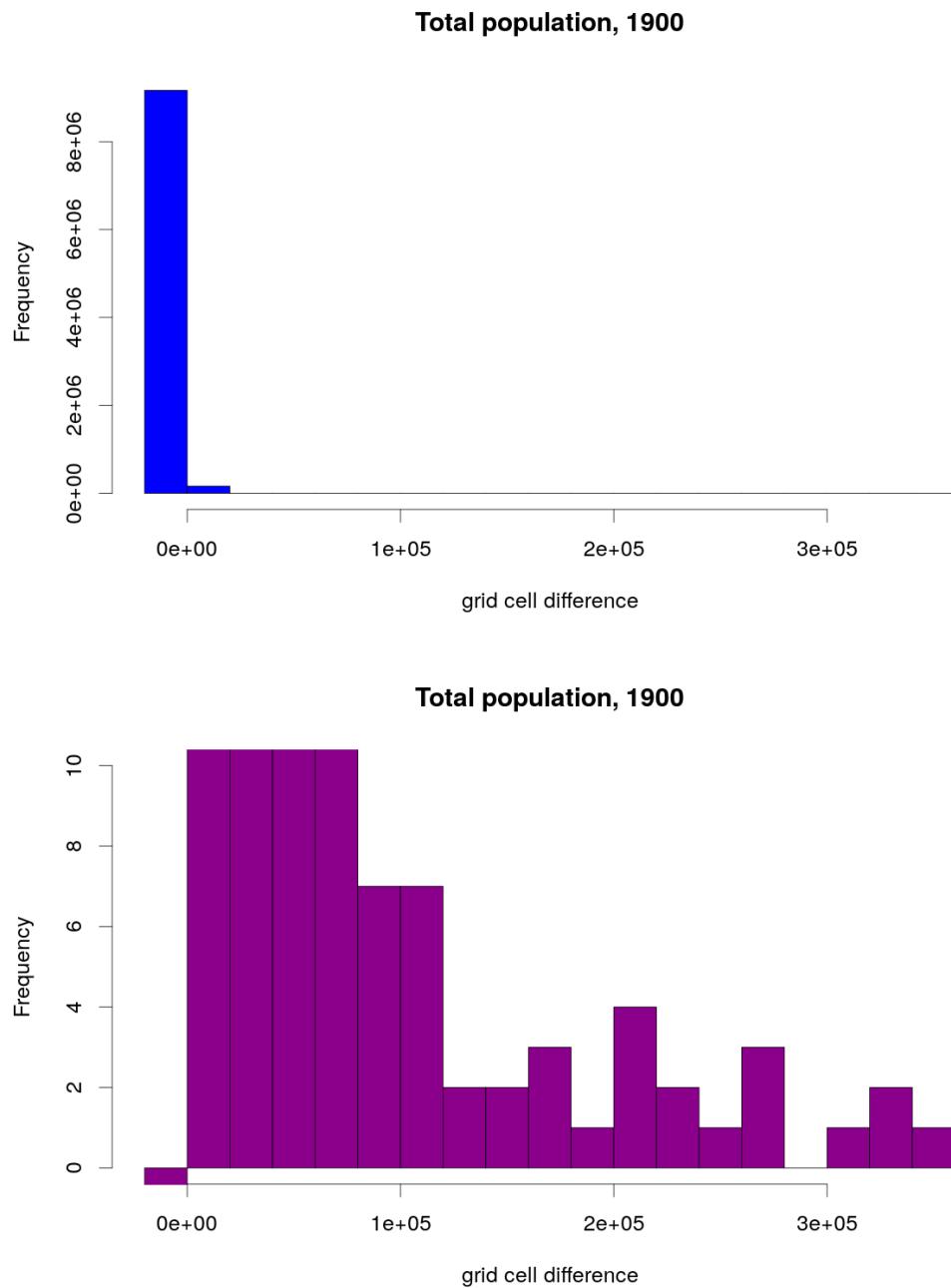


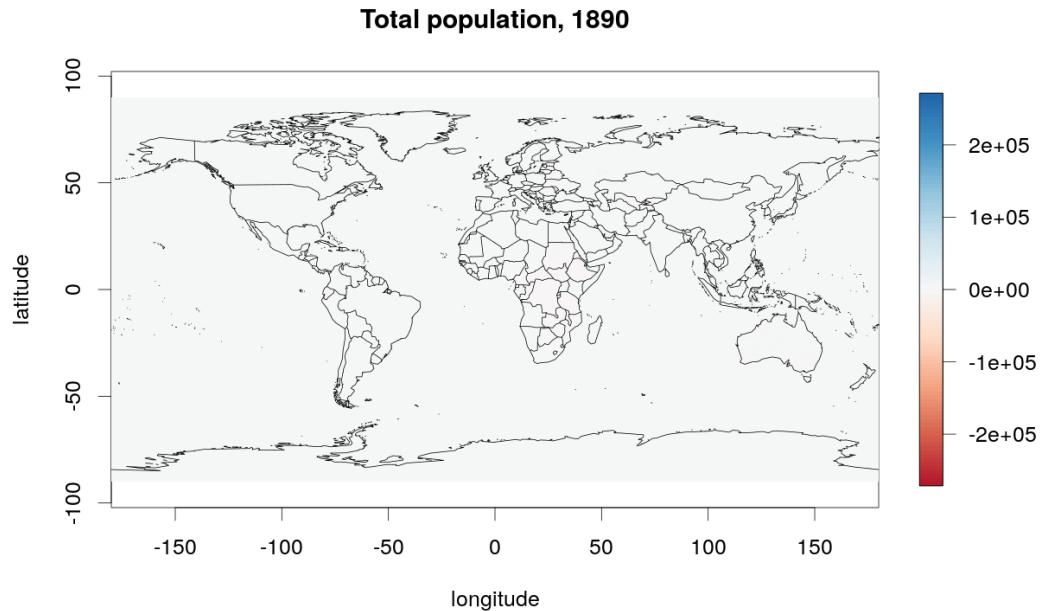
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 1.765\text{e+09} \\ \sum_x p_x^{(v3.3)} &= 1.8002\text{e+09} \\ \sum_x \Delta_x &= 3.52046\text{e+07} \\ \sum_x |\Delta_x| &= 3.79677\text{e+07} \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0199459 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0215114 \\ \max_x \Delta_x &= 484826 \\ \min_x \Delta_x &= -7234.35\end{aligned}$$



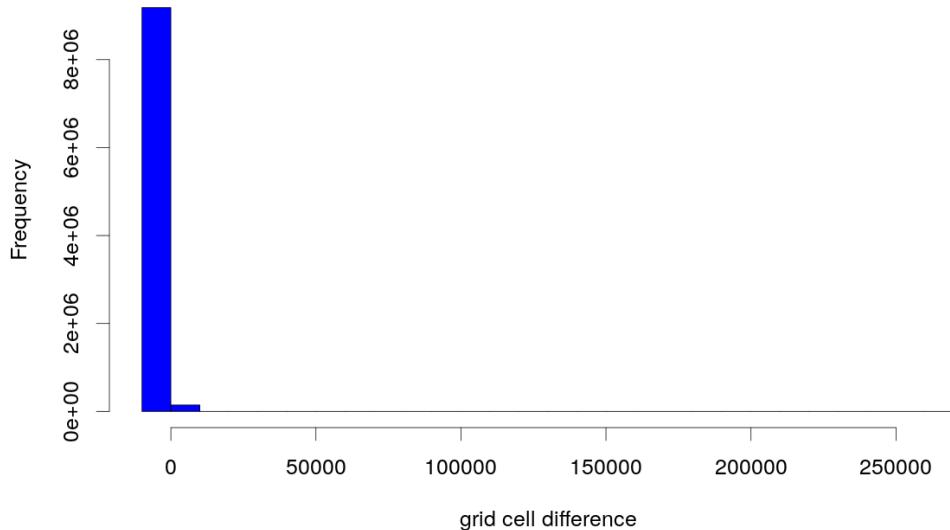
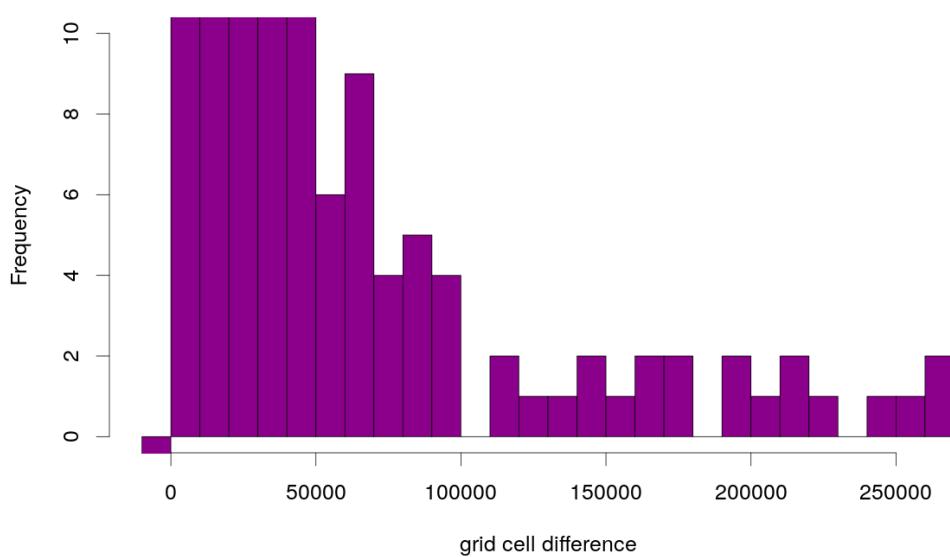
1900

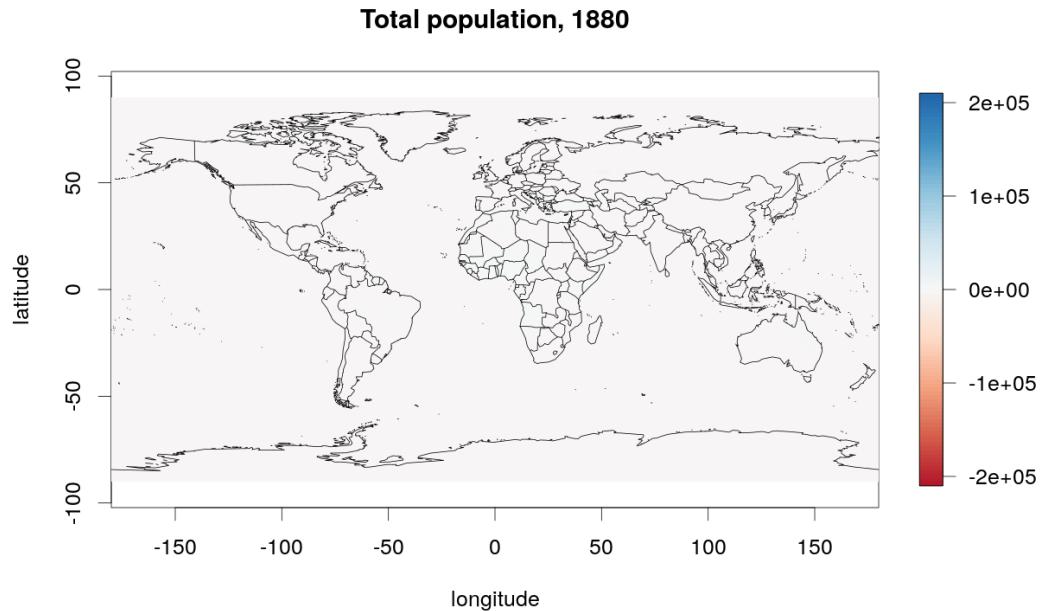
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.64203e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.67062e+09 \\
 \sum_x \Delta_x &= 2.85917e+07 \\
 \sum_x |\Delta_x| &= 3.11624e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0174124 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.018978 \\
 \max_x \Delta_x &= 343675 \\
 \min_x \Delta_x &= -7064.37
 \end{aligned}$$



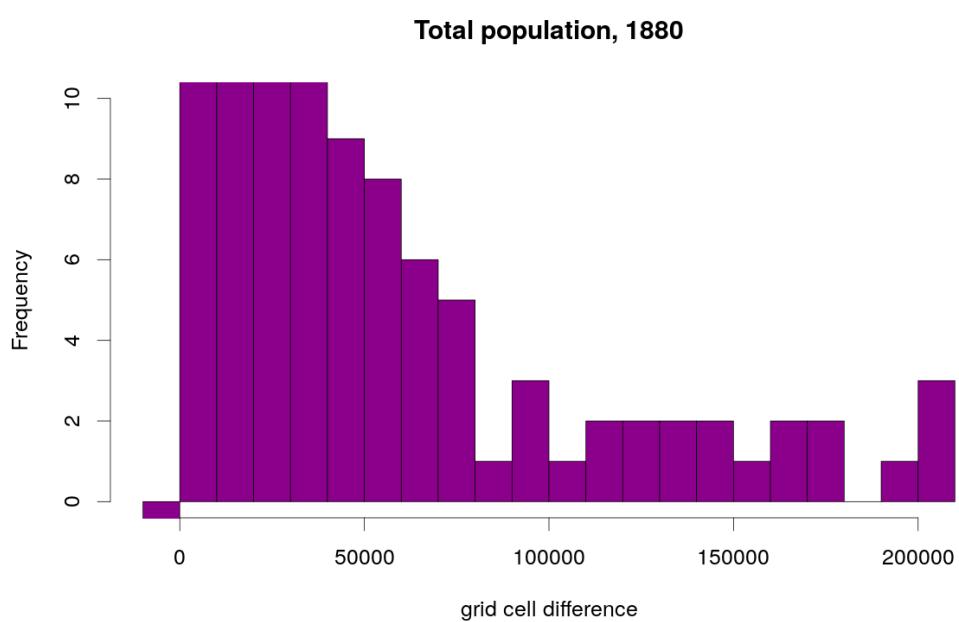
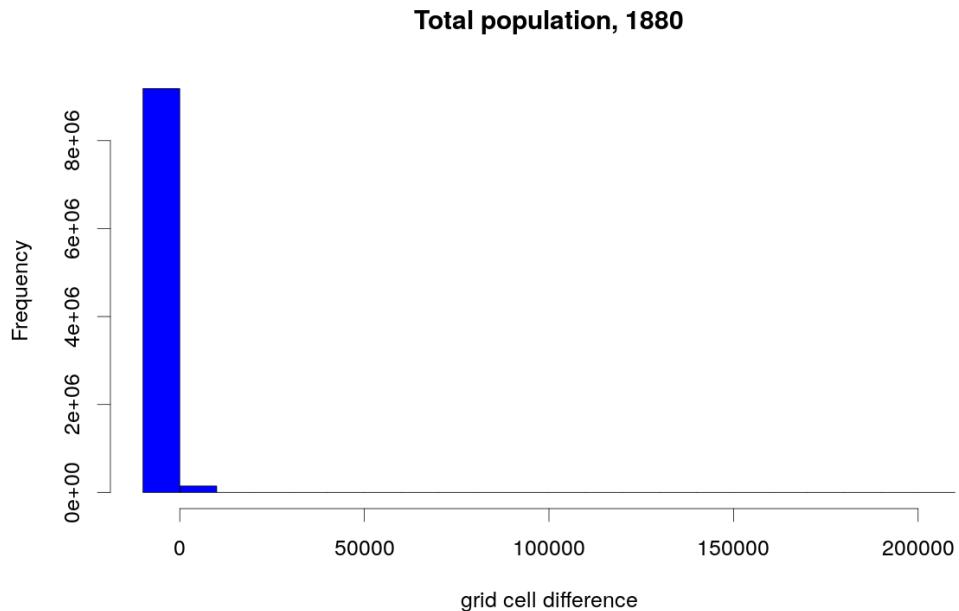
1890

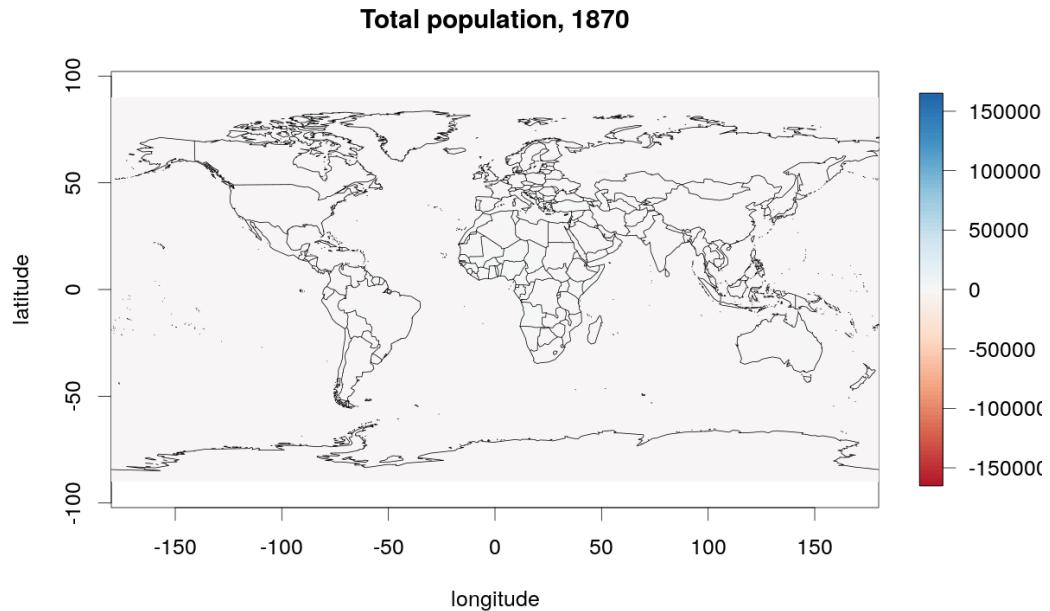
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.52276e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.54839e+09 \\
 \sum_x \Delta_x &= 2.56361e+07 \\
 \sum_x |\Delta_x| &= 2.80718e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0168353 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0184348 \\
 \max_x \Delta_x &= 268720 \\
 \min_x \Delta_x &= -6894.34
 \end{aligned}$$

Total population, 1890**Total population, 1890**

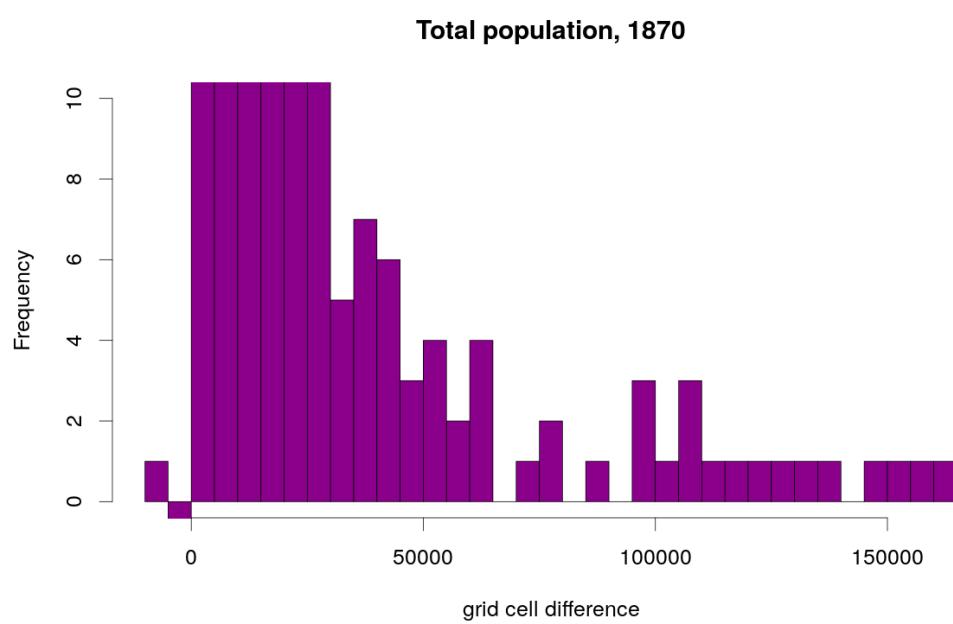
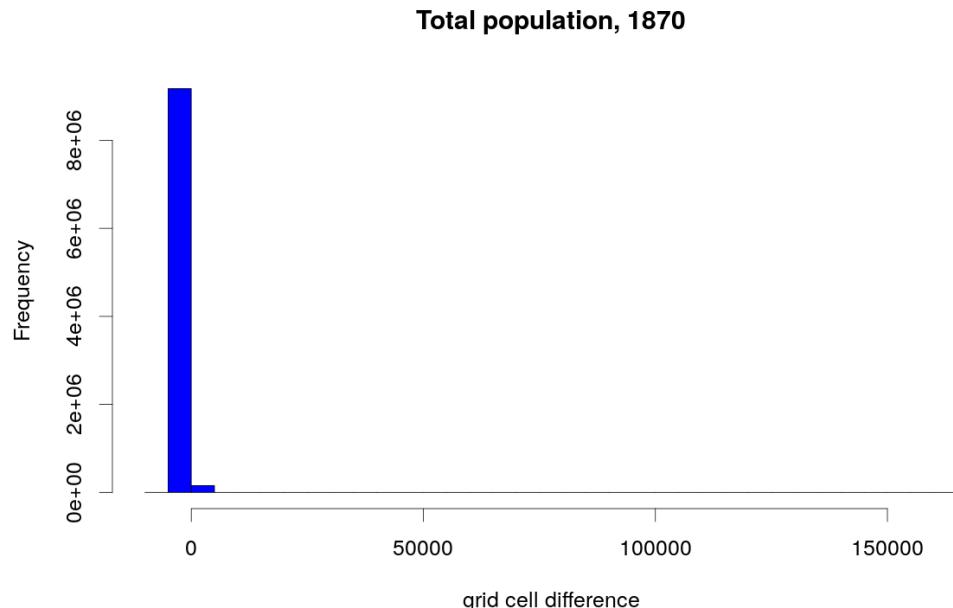
1880

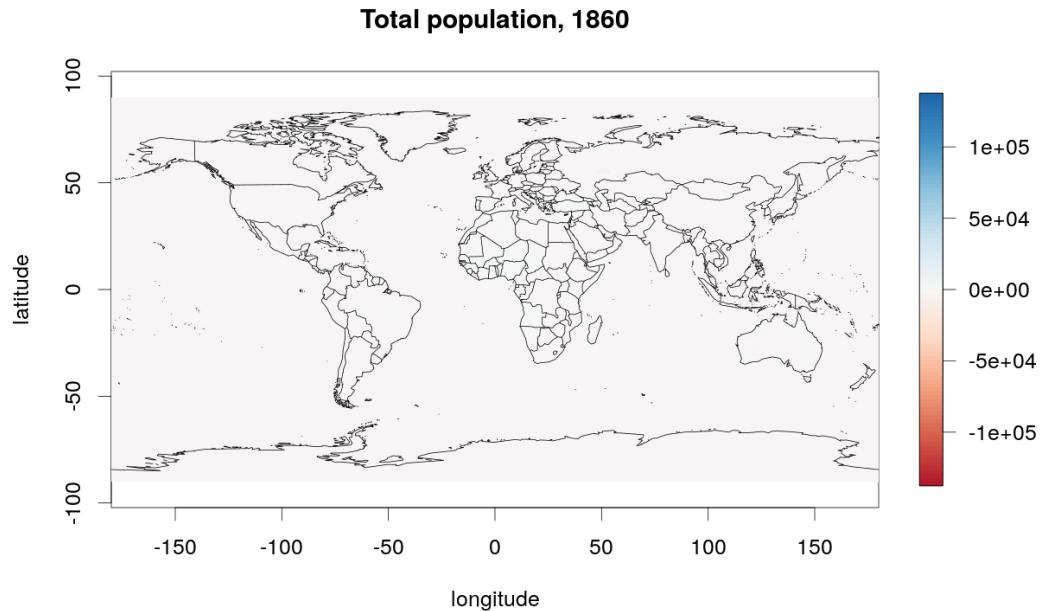
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.40517e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.42771e+09 \\
 \sum_x \Delta_x &= 2.25399e+07 \\
 \sum_x |\Delta_x| &= 2.48494e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0160407 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0176843 \\
 \max_x \Delta_x &= 207911 \\
 \min_x \Delta_x &= -6724.34
 \end{aligned}$$



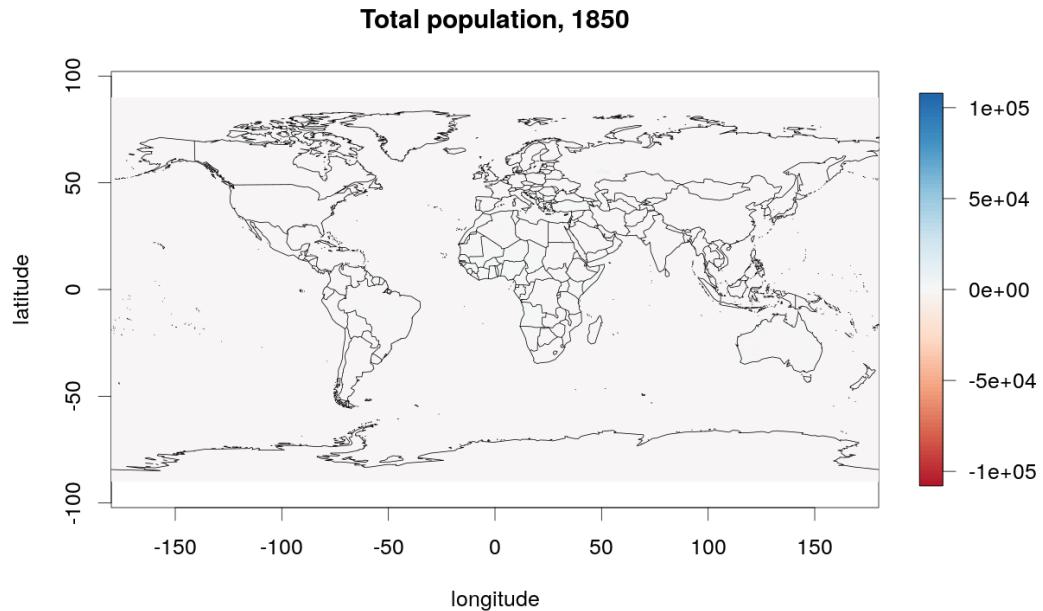
1870

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.32692e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.34675e+09 \\
 \sum_x \Delta_x &= 1.98302e+07 \\
 \sum_x |\Delta_x| &= 2.20235e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0149445 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0165975 \\
 \max_x \Delta_x &= 163469 \\
 \min_x \Delta_x &= -6554.4
 \end{aligned}$$

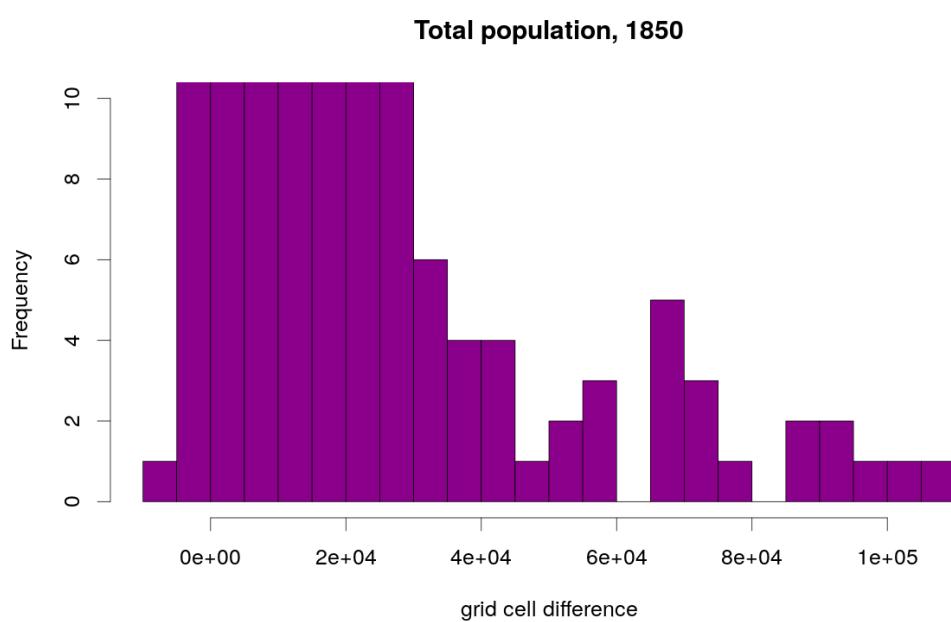
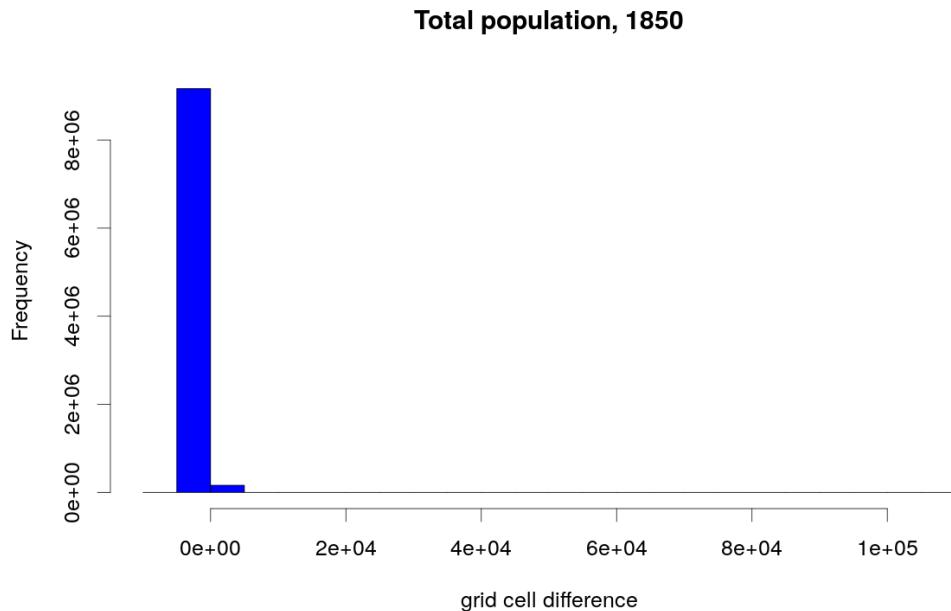


1860

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.32763e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.34608e+09 \\
 \sum_x \Delta_x &= 1.84549e+07 \\
 \sum_x |\Delta_x| &= 2.05461e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0139006 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0154758 \\
 \max_x \Delta_x &= 136229 \\
 \min_x \Delta_x &= -6384.61
 \end{aligned}$$

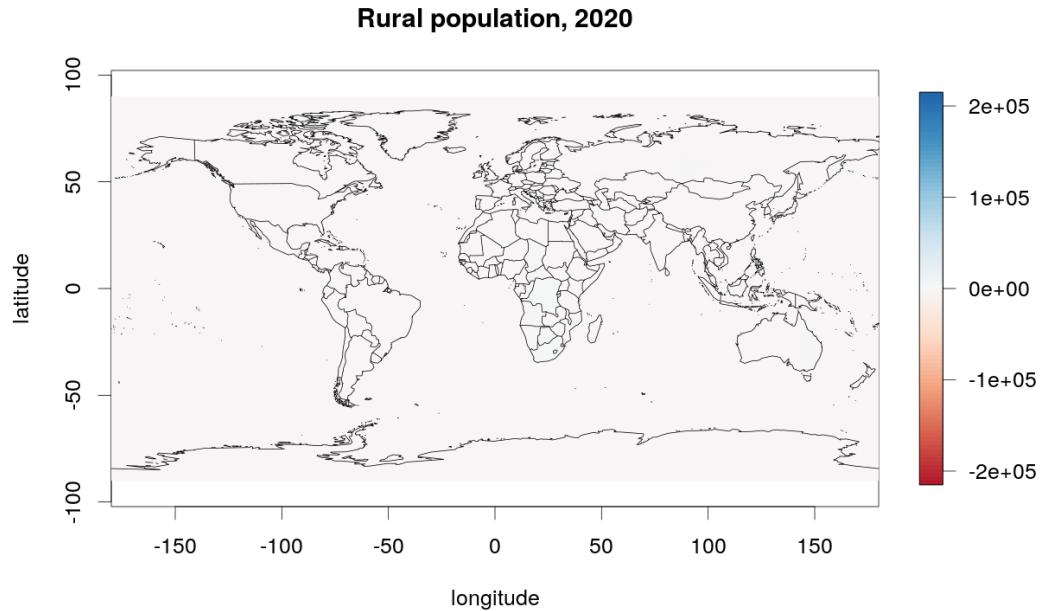
1850

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.2706e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.28702e+09 \\
 \sum_x \Delta_x &= 1.64181e+07 \\
 \sum_x |\Delta_x| &= 1.84057e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0129215 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0144858 \\
 \max_x \Delta_x &= 106852 \\
 \min_x \Delta_x &= -5971.58
 \end{aligned}$$

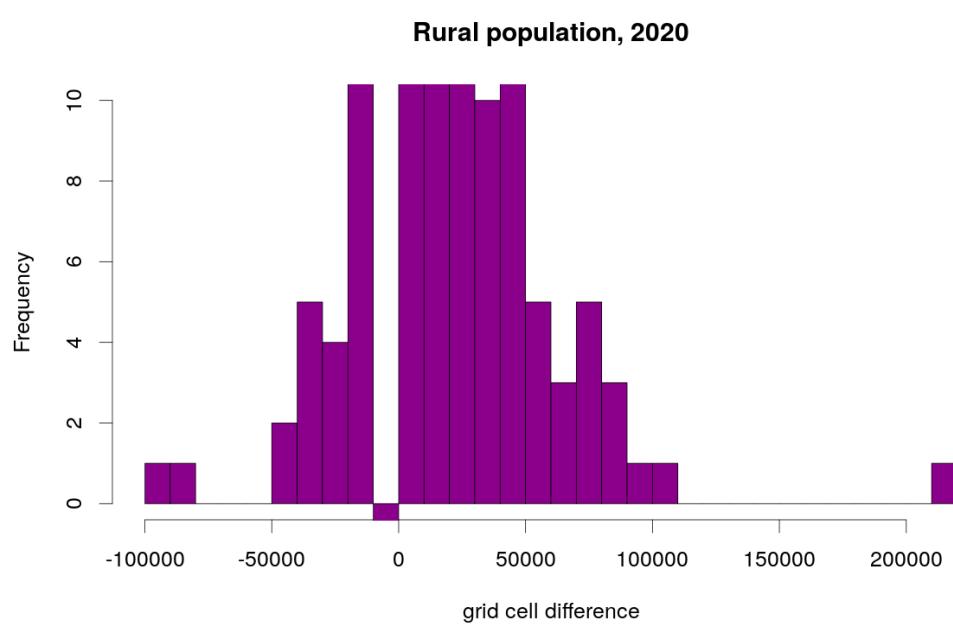
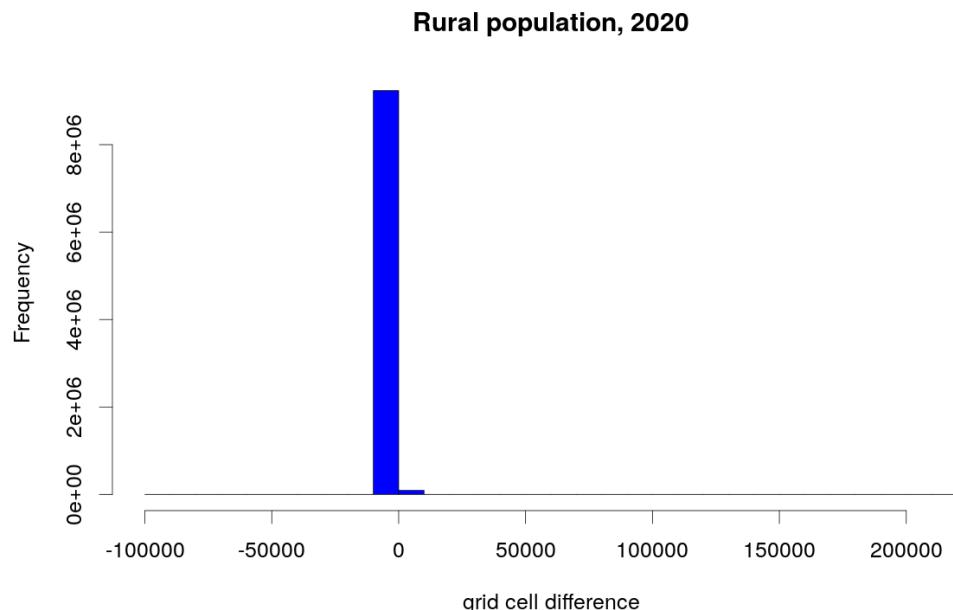


3 Rural population

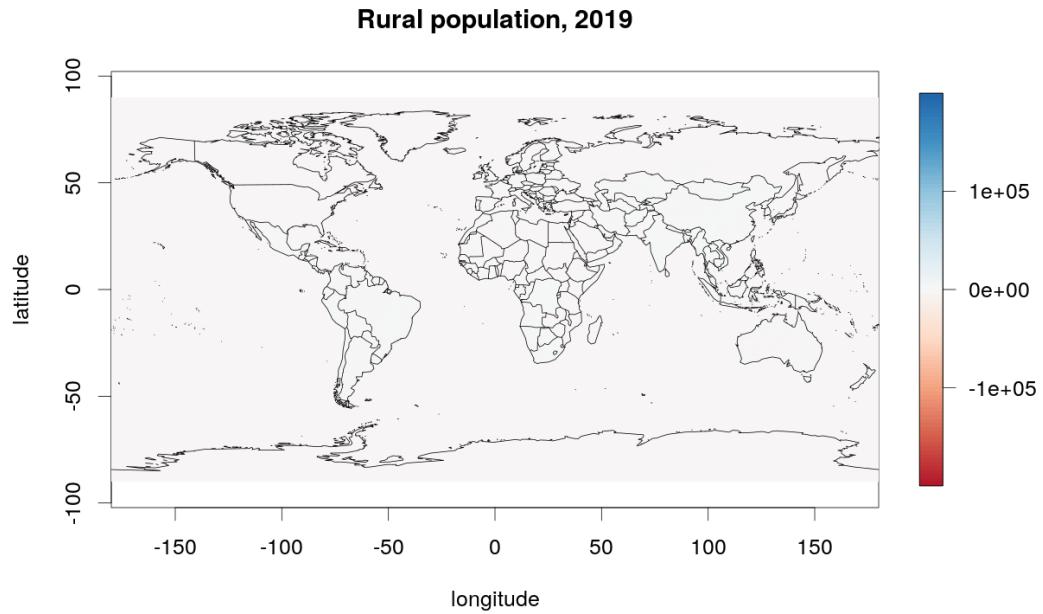
2020



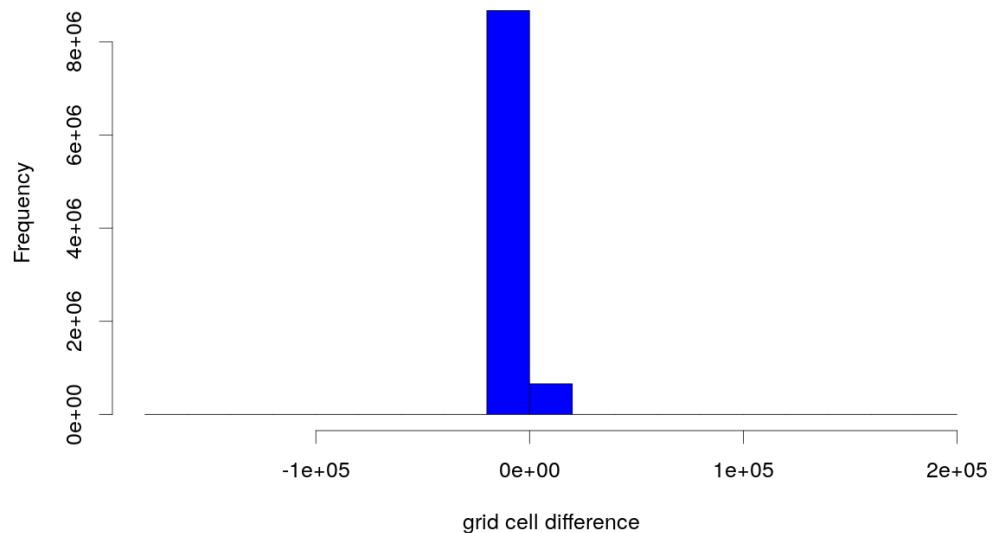
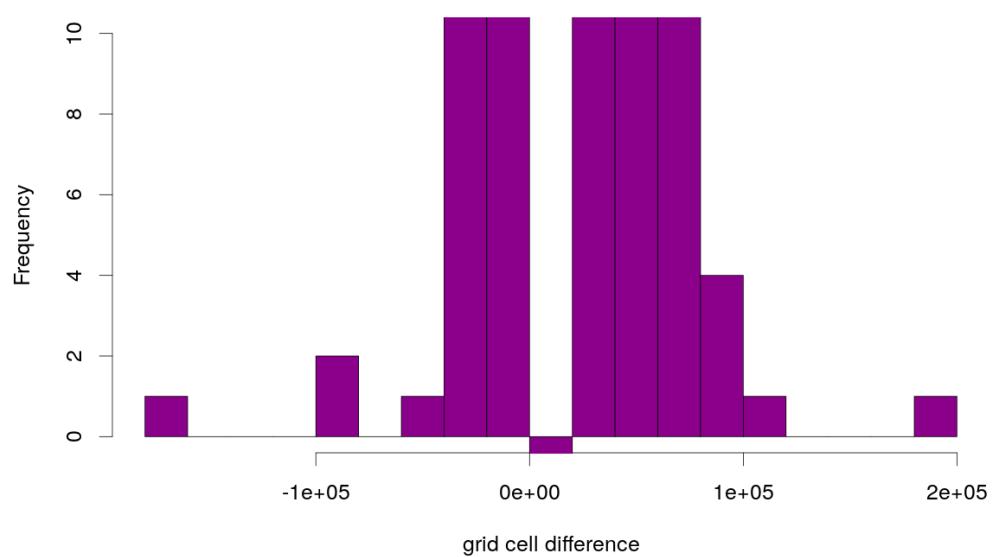
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.406e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.40863e+09 \\
 \sum_x \Delta_x &= 2.63435e+06 \\
 \sum_x |\Delta_x| &= 3.55061e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000773444 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0104246 \\
 \max_x \Delta_x &= 212859 \\
 \min_x \Delta_x &= -94855.7
 \end{aligned}$$



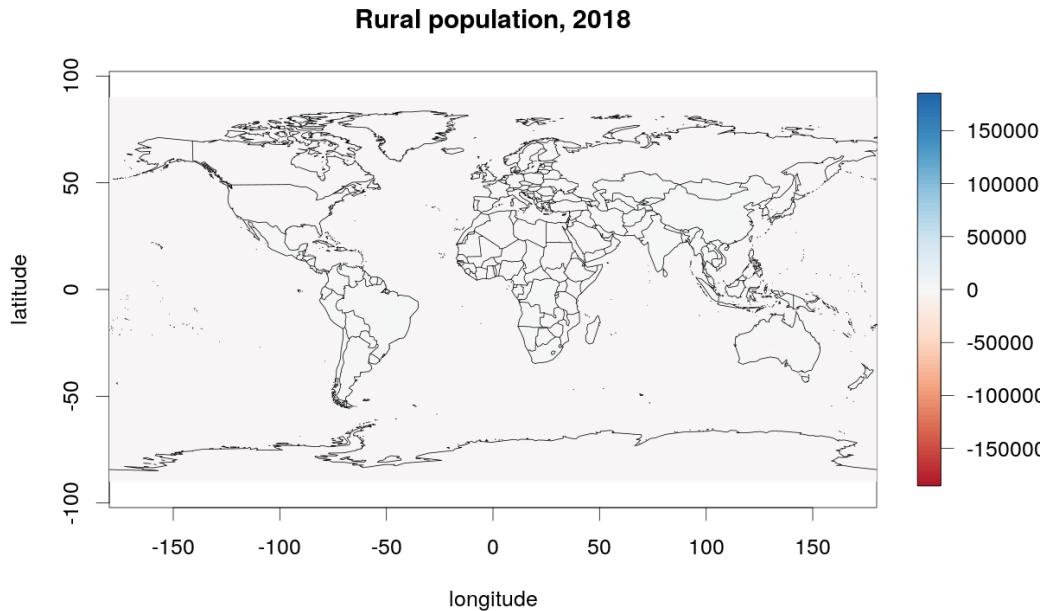
2019



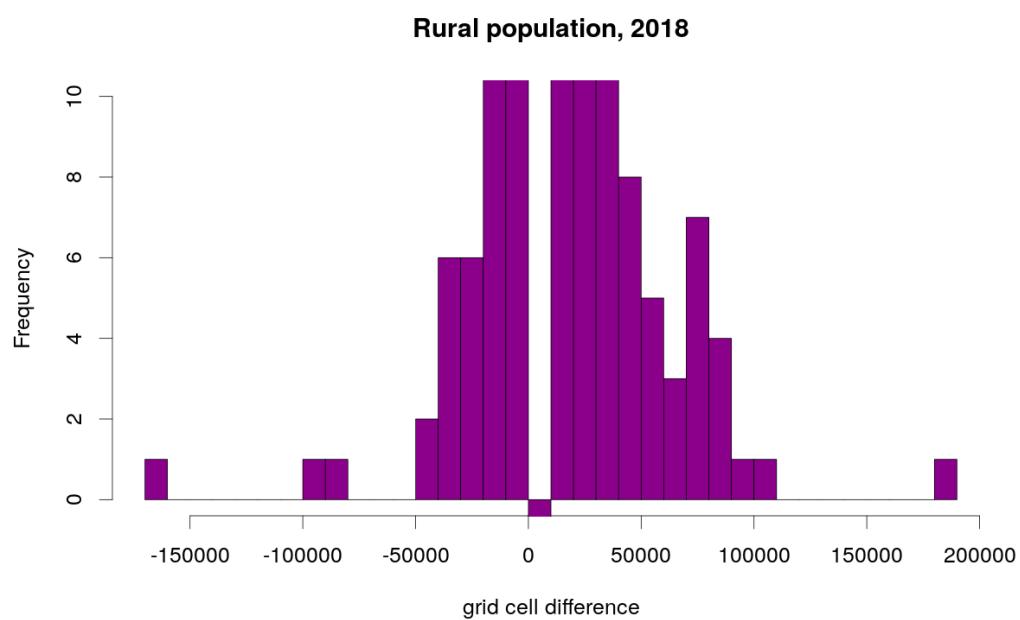
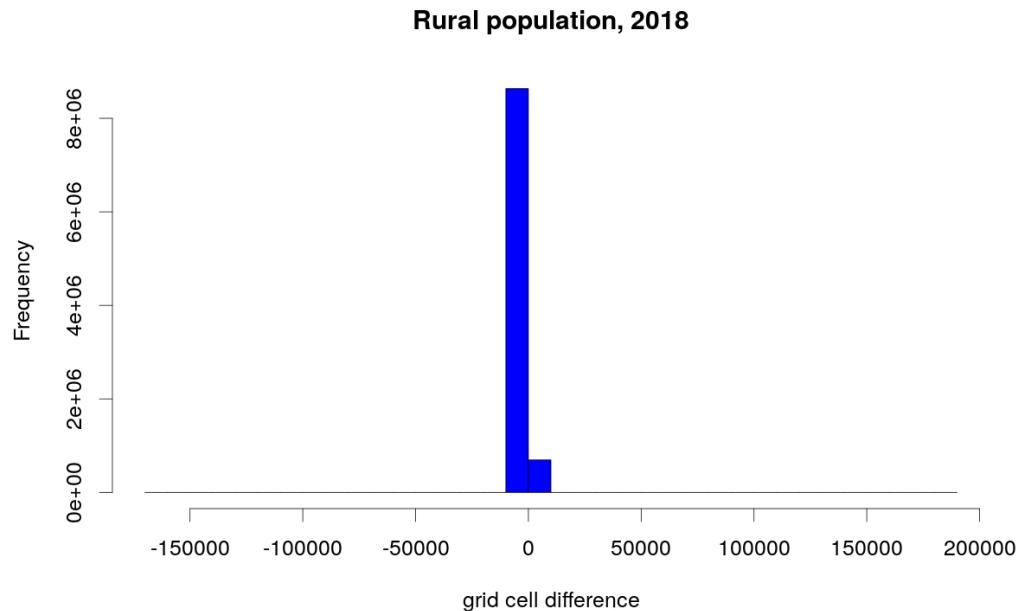
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.40765e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.41094e+09 \\
 \sum_x \Delta_x &= 3.29309e+06 \\
 \sum_x |\Delta_x| &= 4.22639e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000966382 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0124027 \\
 \max_x \Delta_x &= 197741 \\
 \min_x \Delta_x &= -161176
 \end{aligned}$$

Rural population, 2019**Rural population, 2019**

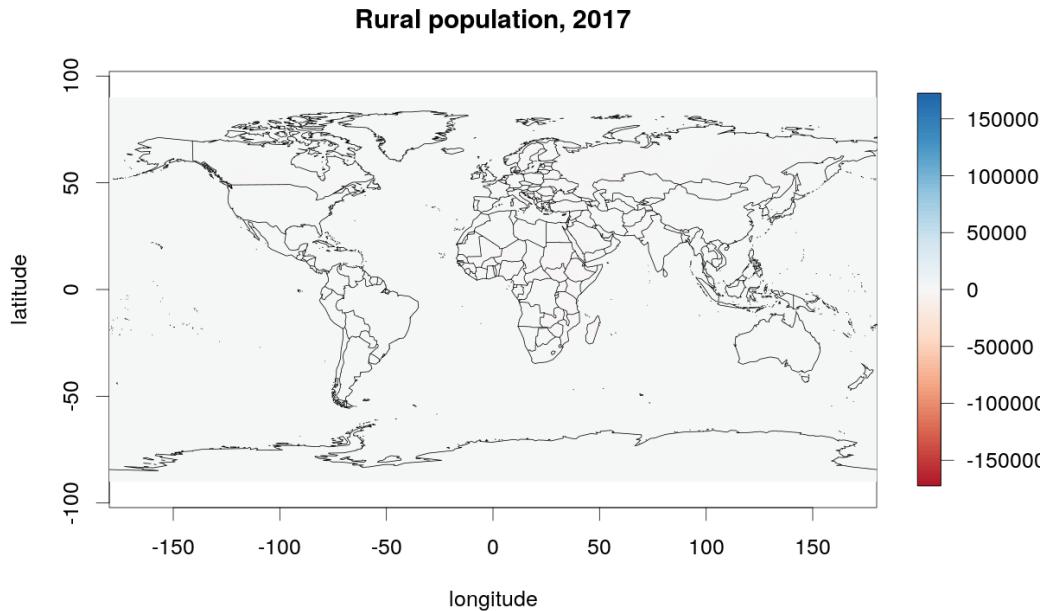
2018



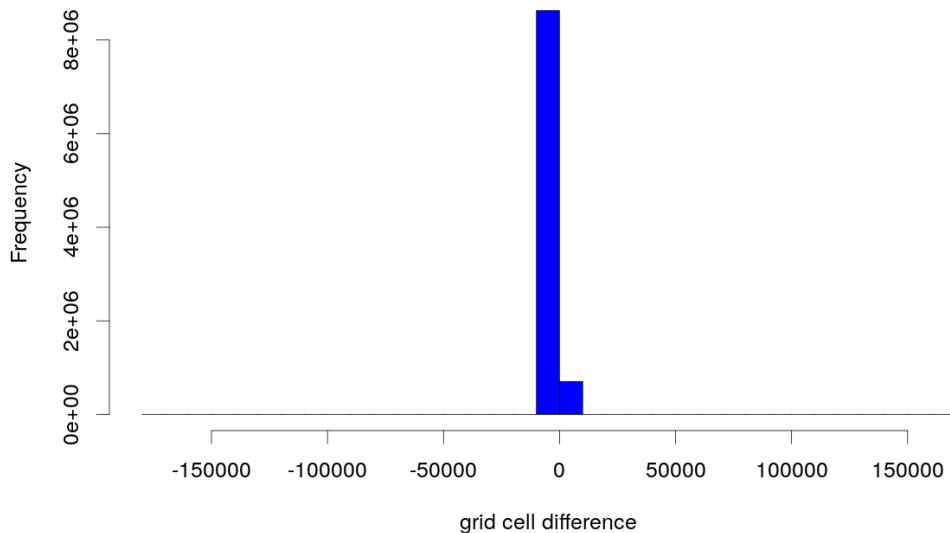
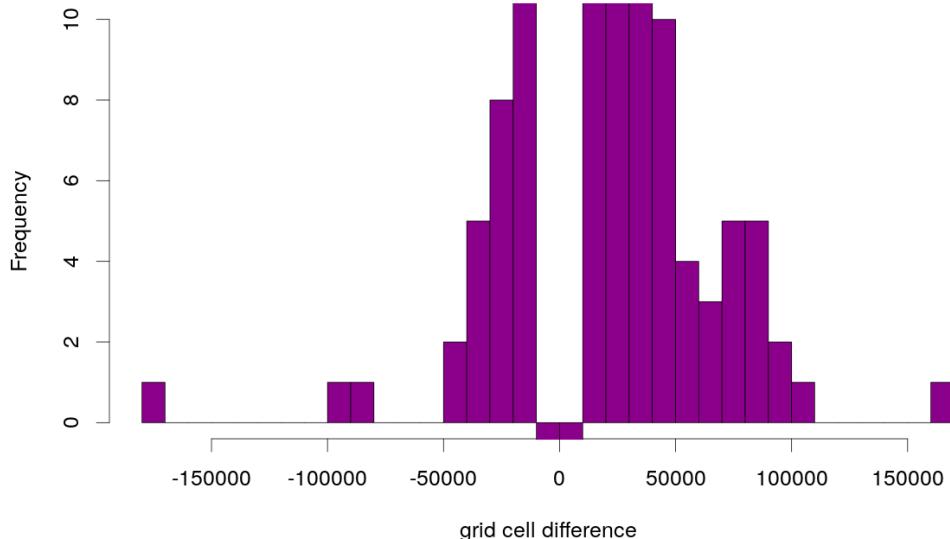
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.40854e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.41155e+09 \\
 \sum_x \Delta_x &= 3.00271e+06 \\
 \sum_x |\Delta_x| &= 4.29163e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000880937 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0125908 \\
 \max_x \Delta_x &= 183413 \\
 \min_x \Delta_x &= -166017
 \end{aligned}$$



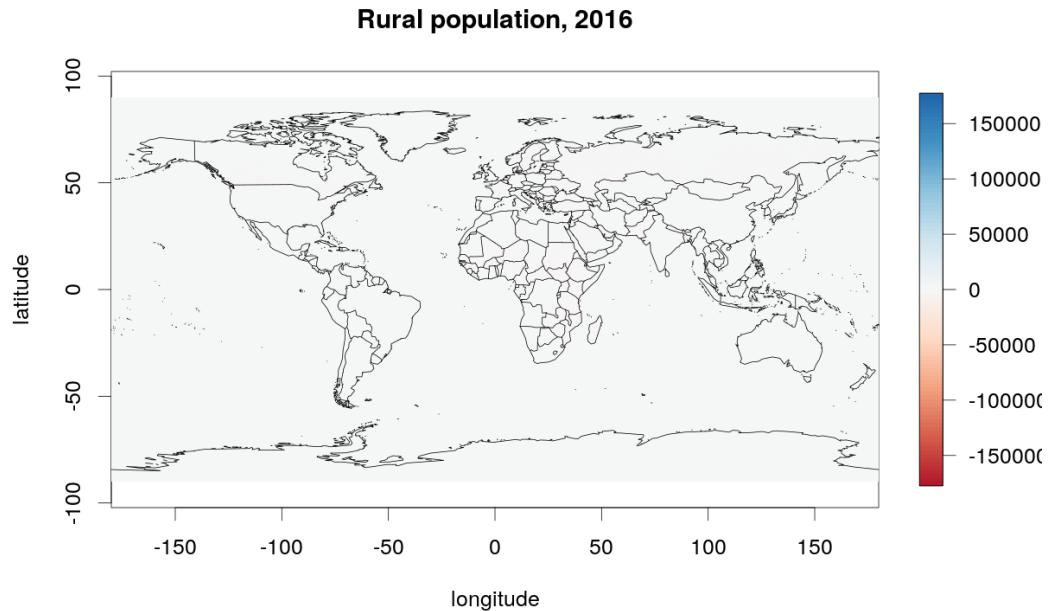
2017



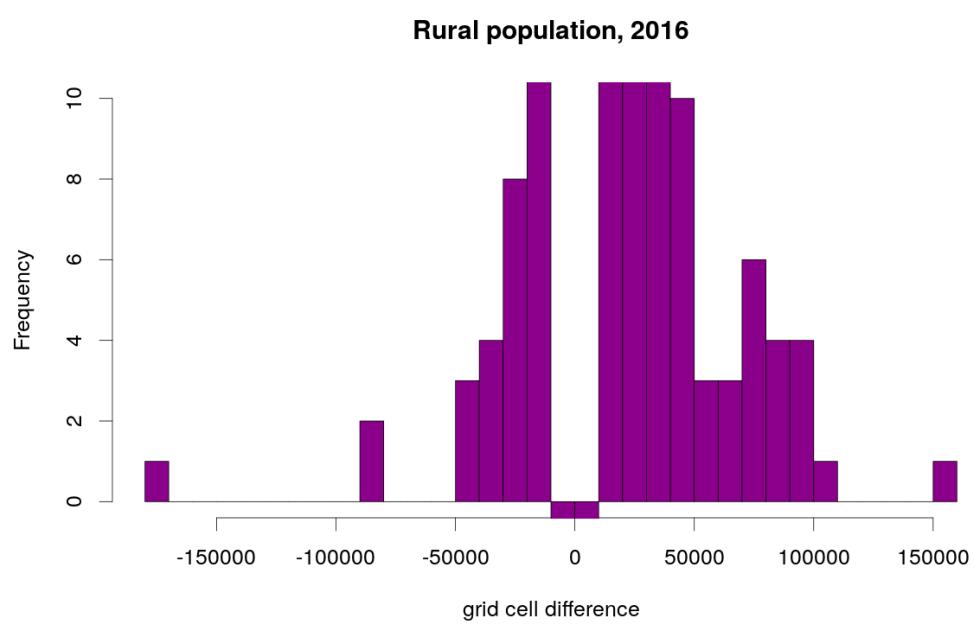
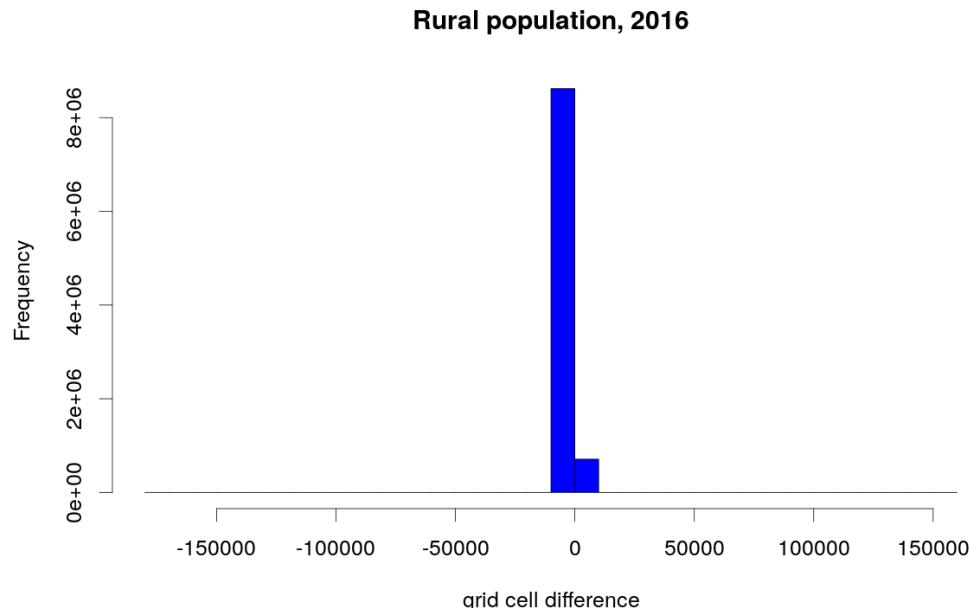
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.40834e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.41146e+09 \\
 \sum_x \Delta_x &= 3.12008e+06 \\
 \sum_x |\Delta_x| &= 4.29931e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000915425 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0126141 \\
 \max_x \Delta_x &= 169784 \\
 \min_x \Delta_x &= -170784
 \end{aligned}$$

Rural population, 2017**Rural population, 2017**

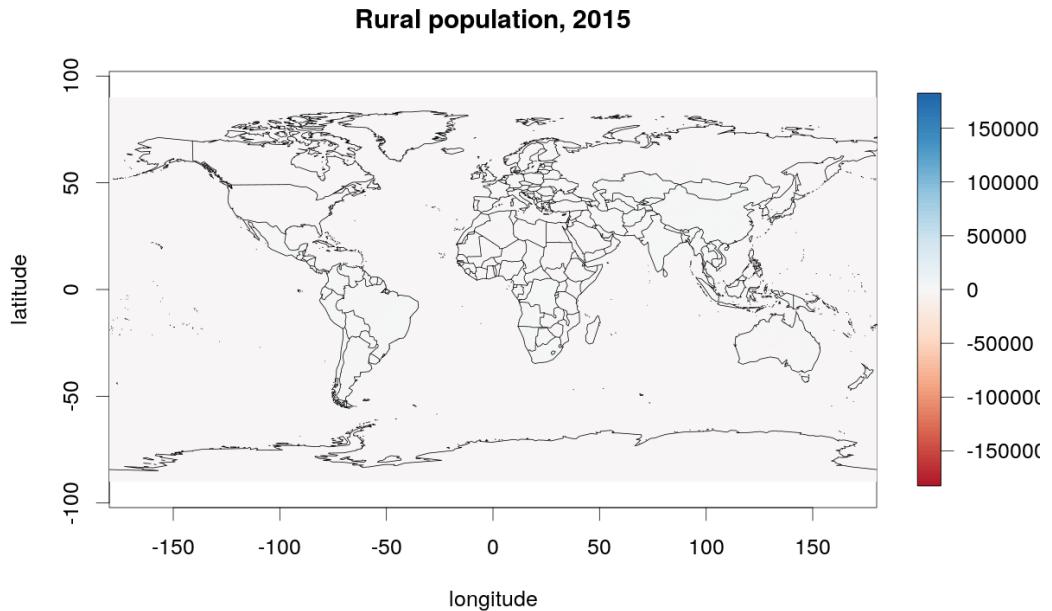
2016



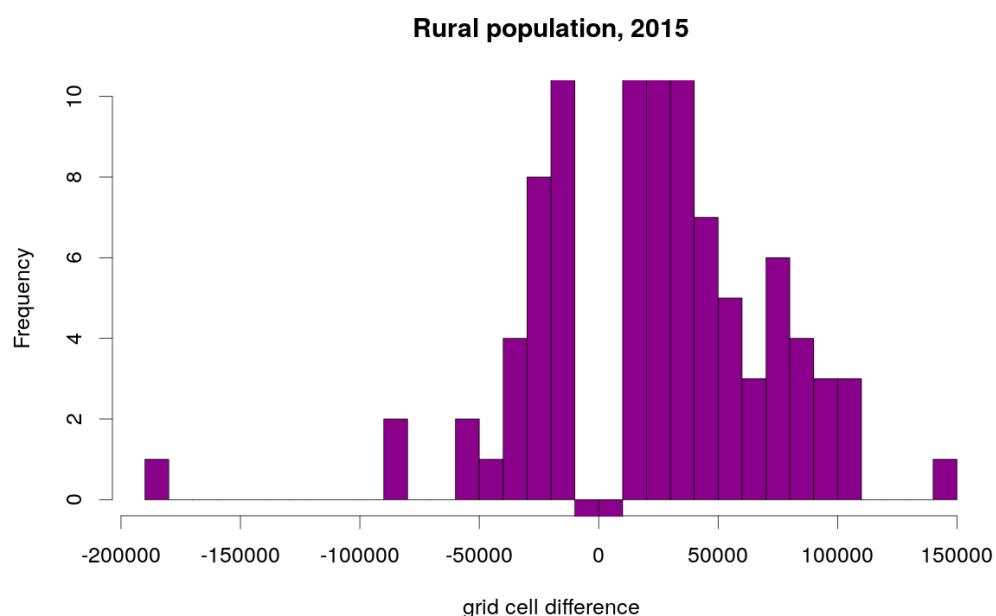
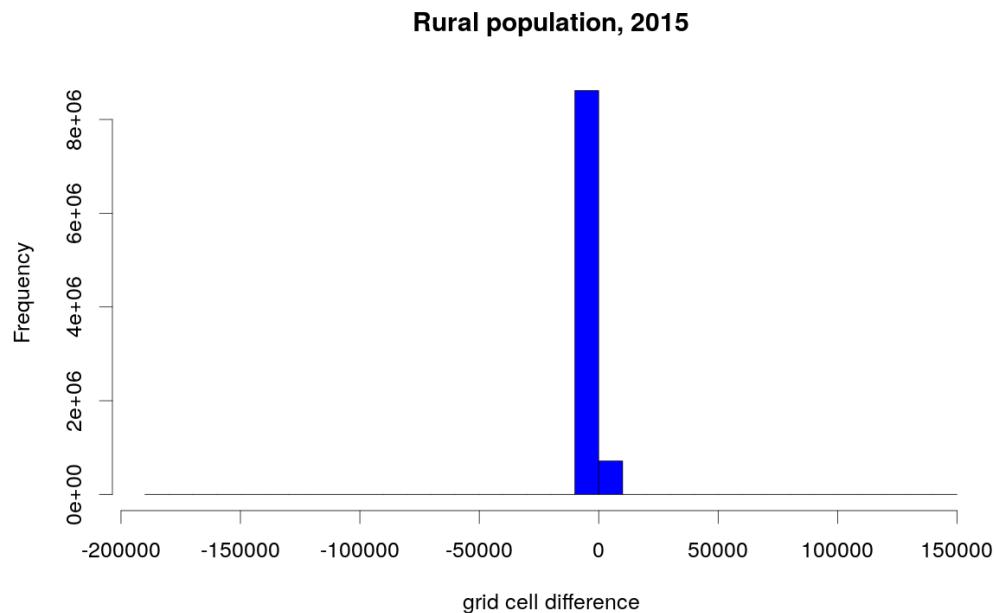
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.4076e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.41069e+09 \\
 \sum_x \Delta_x &= 3.08517e+06 \\
 \sum_x |\Delta_x| &= 4.36177e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000905379 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0128001 \\
 \max_x \Delta_x &= 156690 \\
 \min_x \Delta_x &= -175629
 \end{aligned}$$



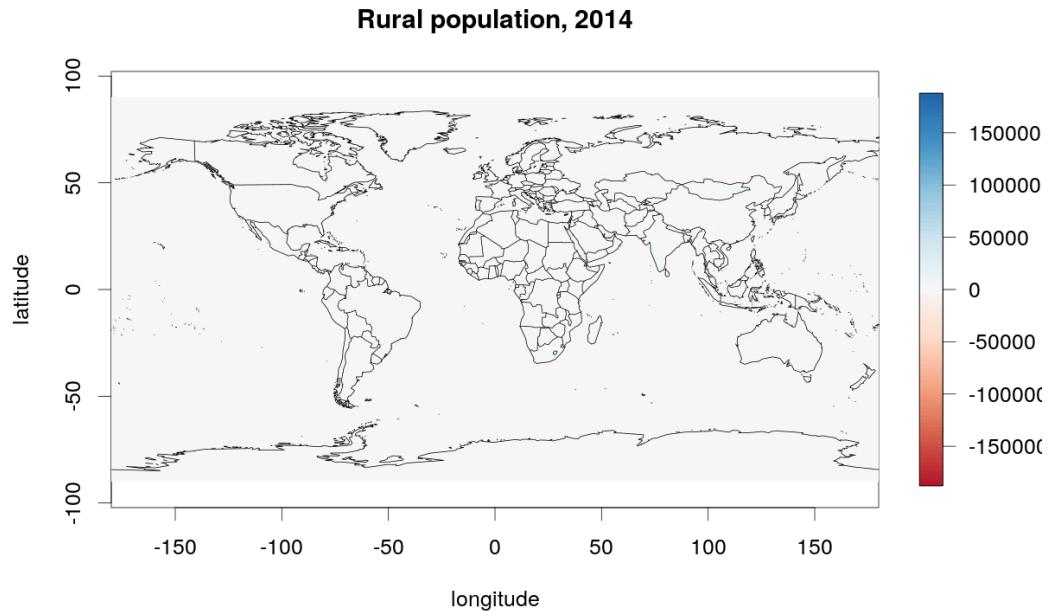
2015



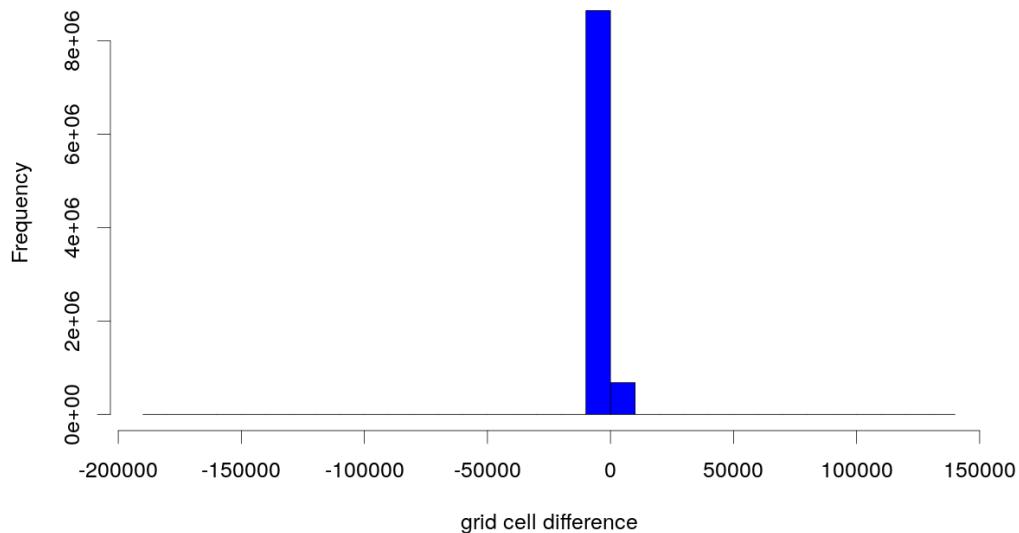
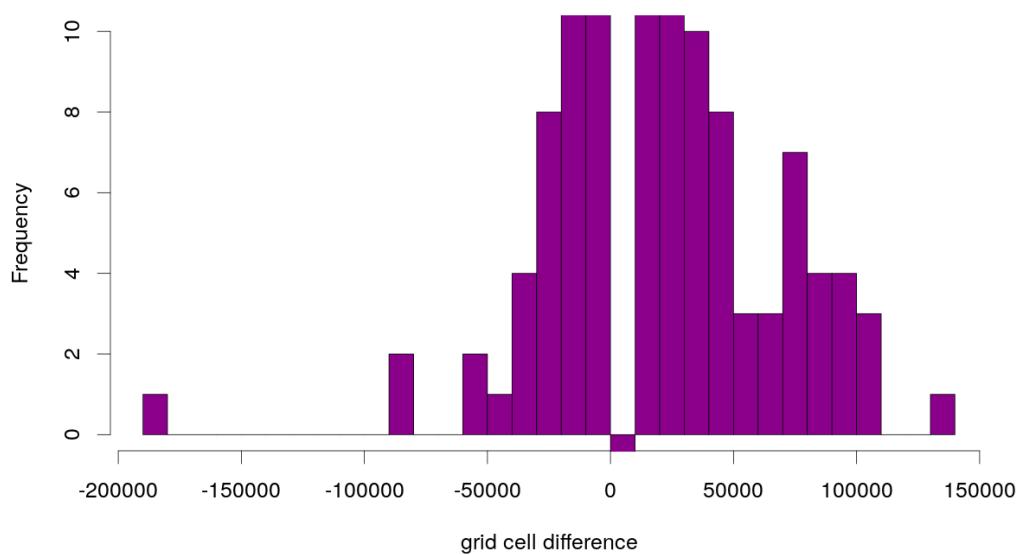
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.40611e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.40924e+09 \\
 \sum_x \Delta_x &= 3.1276e+06 \\
 \sum_x |\Delta_x| &= 4.44281e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000918232 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0130436 \\
 \max_x \Delta_x &= 147657 \\
 \min_x \Delta_x &= -180669
 \end{aligned}$$



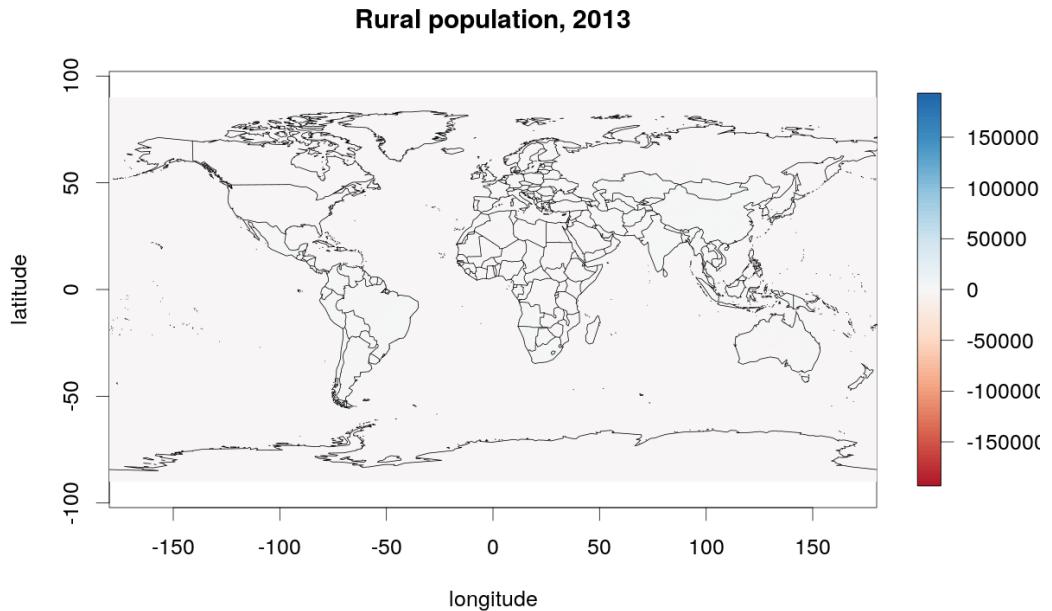
2014



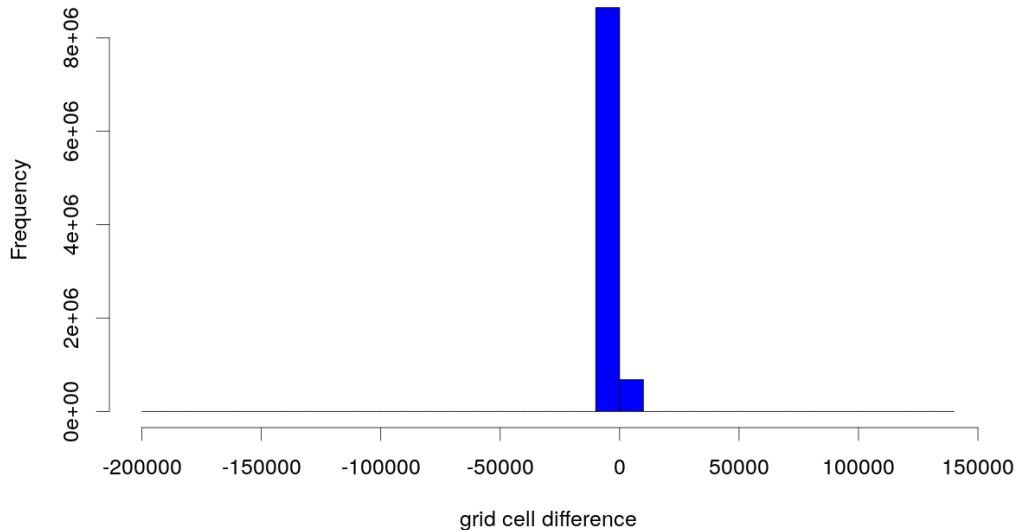
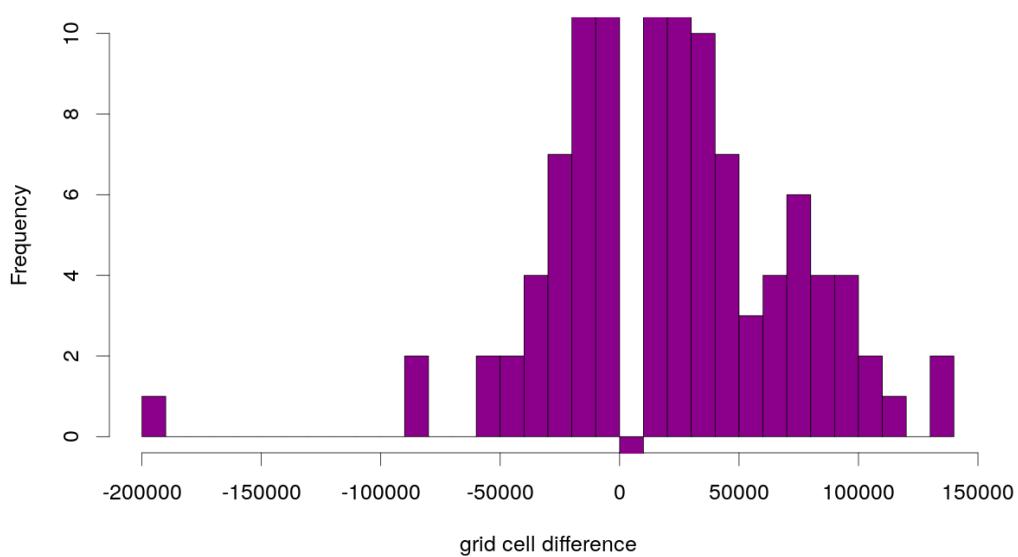
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.40386e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.40619e+09 \\
 \sum_x \Delta_x &= 2.33392e+06 \\
 \sum_x |\Delta_x| &= 4.27044e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000685669 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0125459 \\
 \max_x \Delta_x &= 139285 \\
 \min_x \Delta_x &= -185903
 \end{aligned}$$

Rural population, 2014**Rural population, 2014**

2013

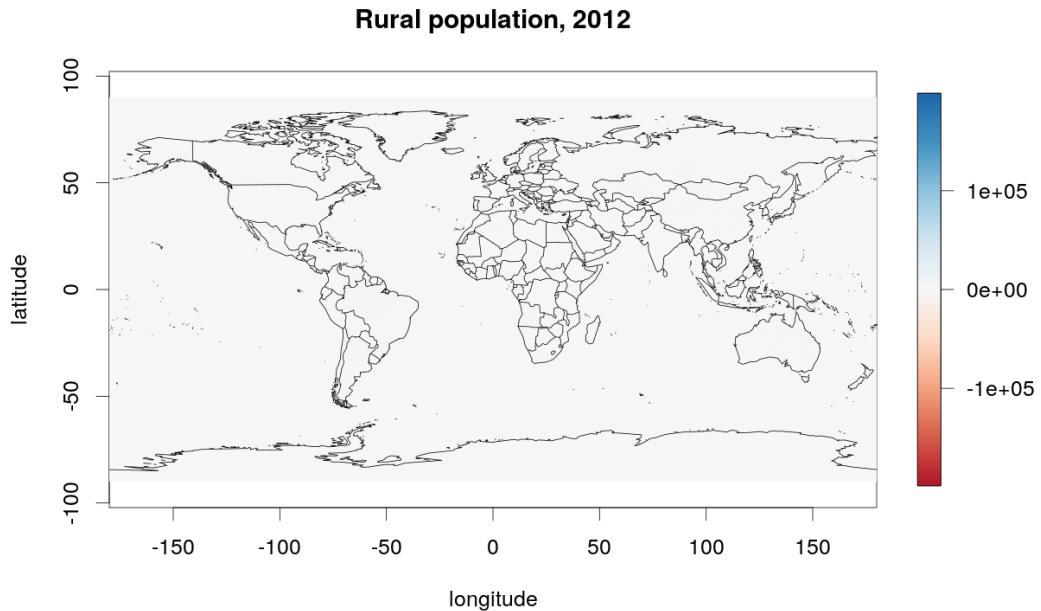


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.40085e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.40277e+09 \\
 \sum_x \Delta_x &= 1.9242e+06 \\
 \sum_x |\Delta_x| &= 4.15064e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0005658 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0122047 \\
 \max_x \Delta_x &= 132095 \\
 \min_x \Delta_x &= -191329
 \end{aligned}$$

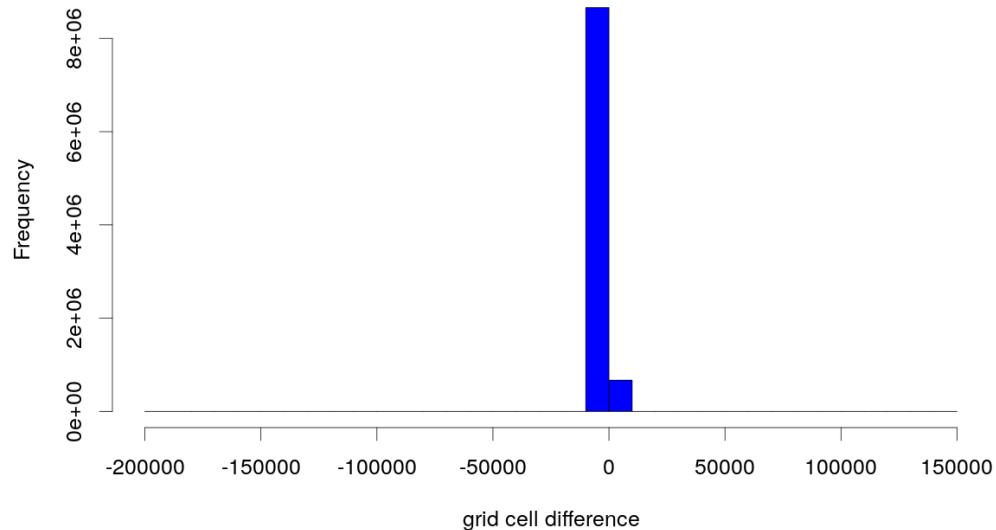
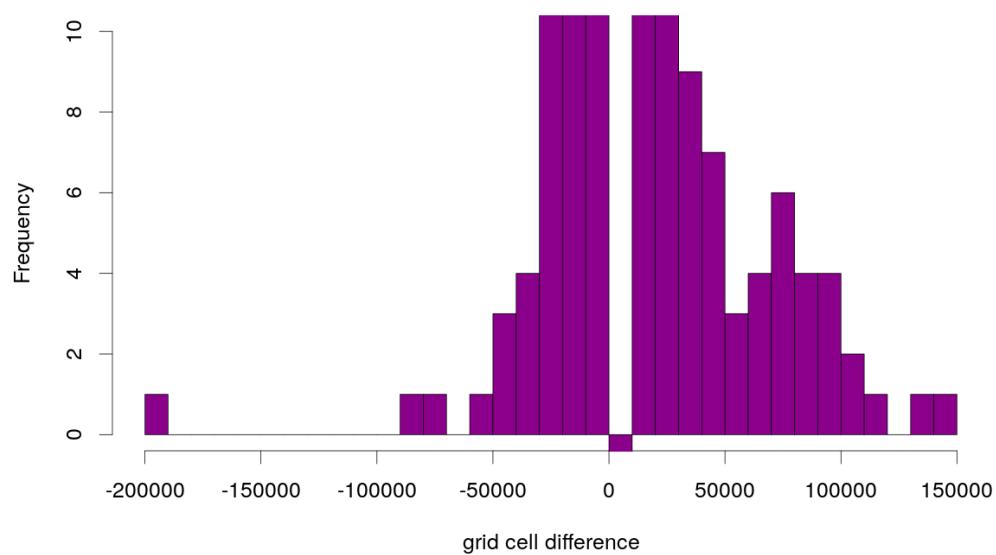
Rural population, 2013**Rural population, 2013**

90

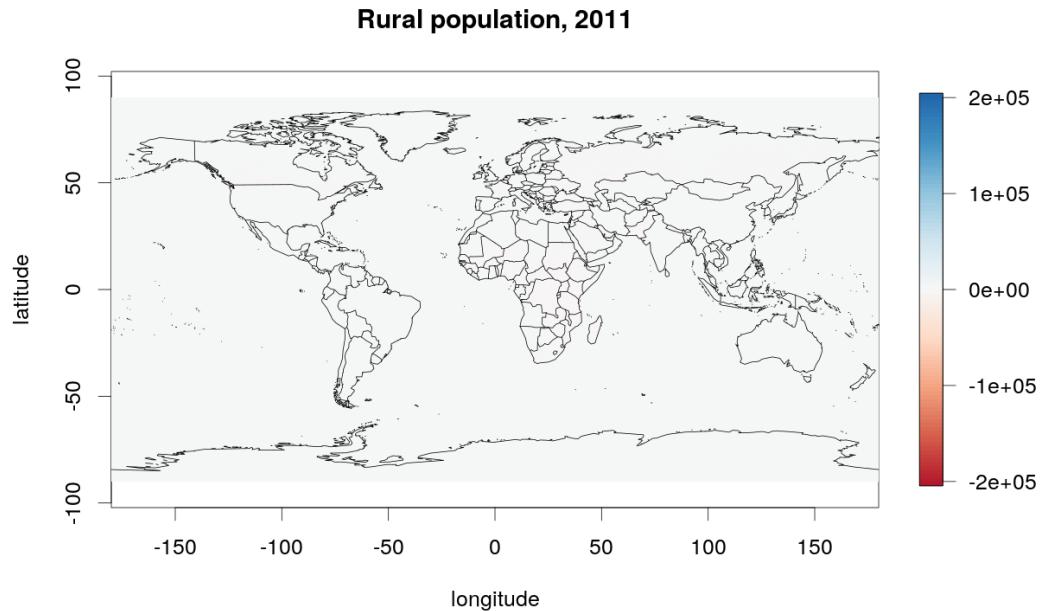
2012



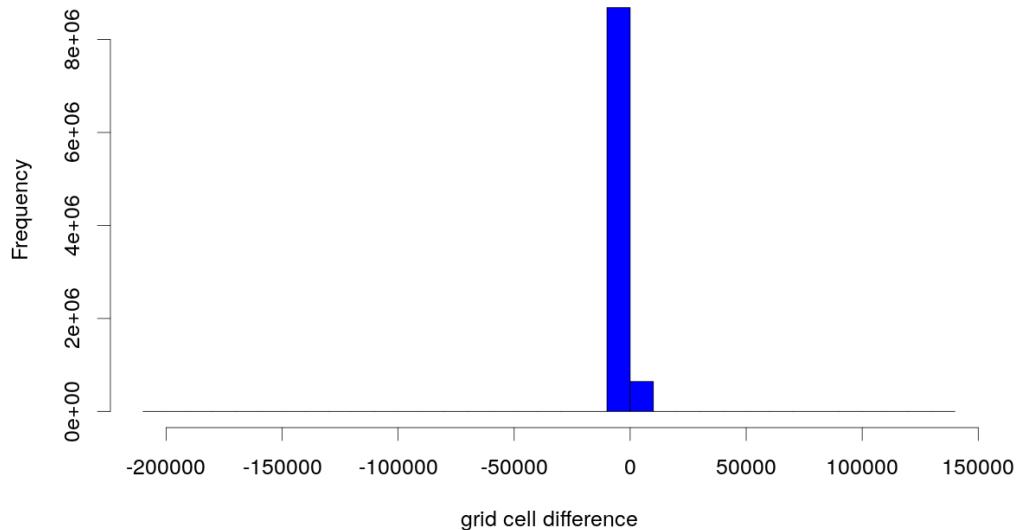
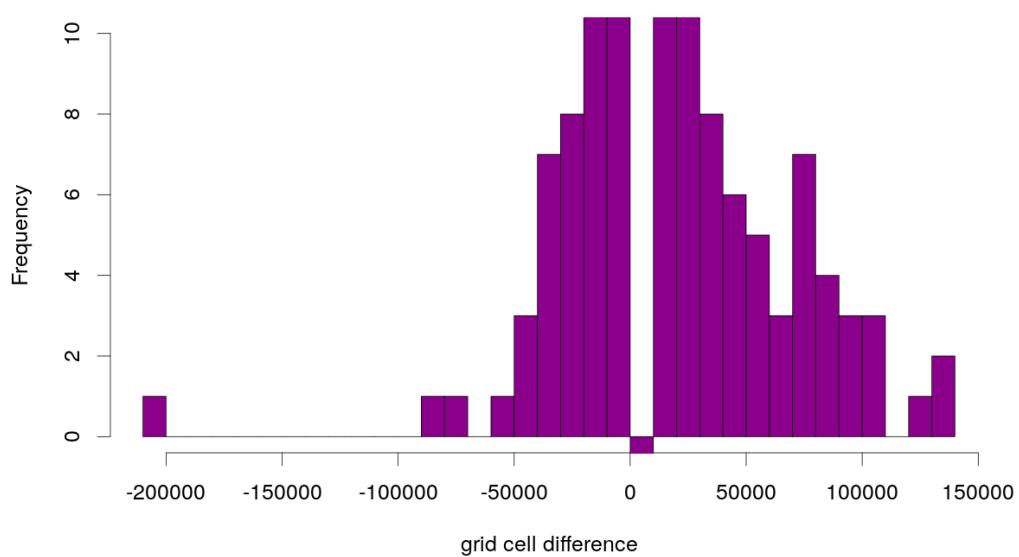
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.39708e+09 \\ \sum_x p_x^{(v3.3)} &= 3.39847e+09 \\ \sum_x \Delta_x &= 1.39247e+06 \\ \sum_x |\Delta_x| &= 4.02253e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000409902 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0118411 \\ \max_x \Delta_x &= 142931 \\ \min_x \Delta_x &= -196673\end{aligned}$$

Rural population, 2012**Rural population, 2012**

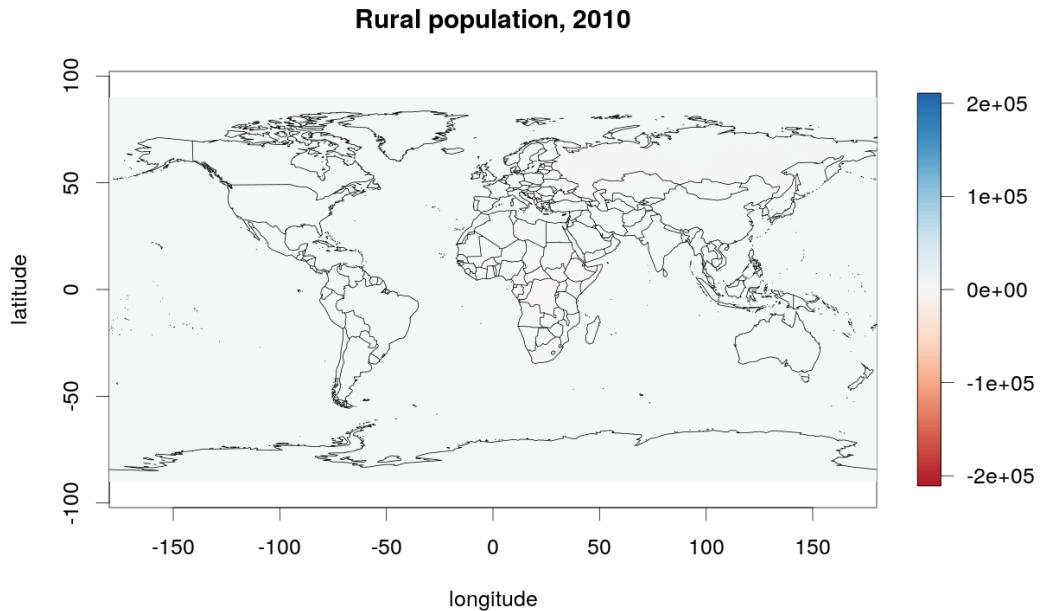
2011



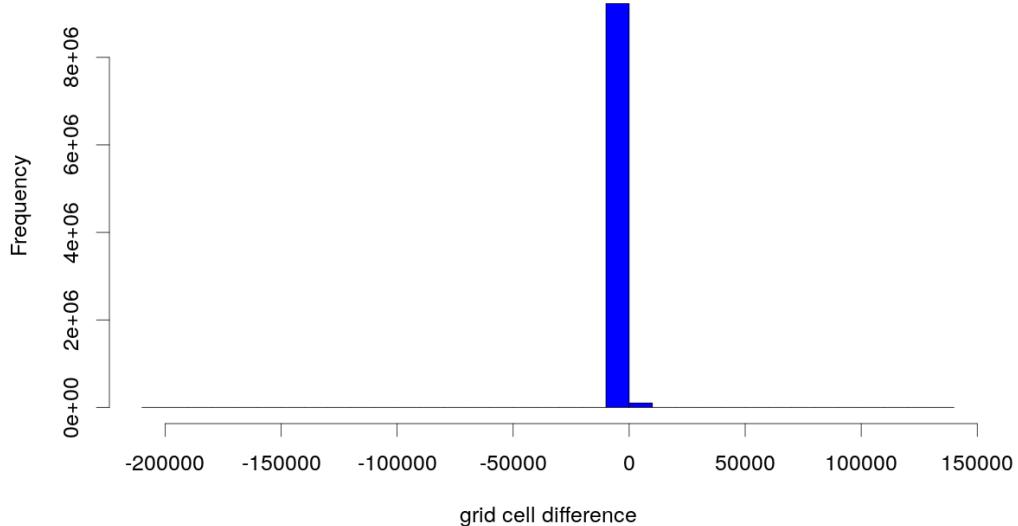
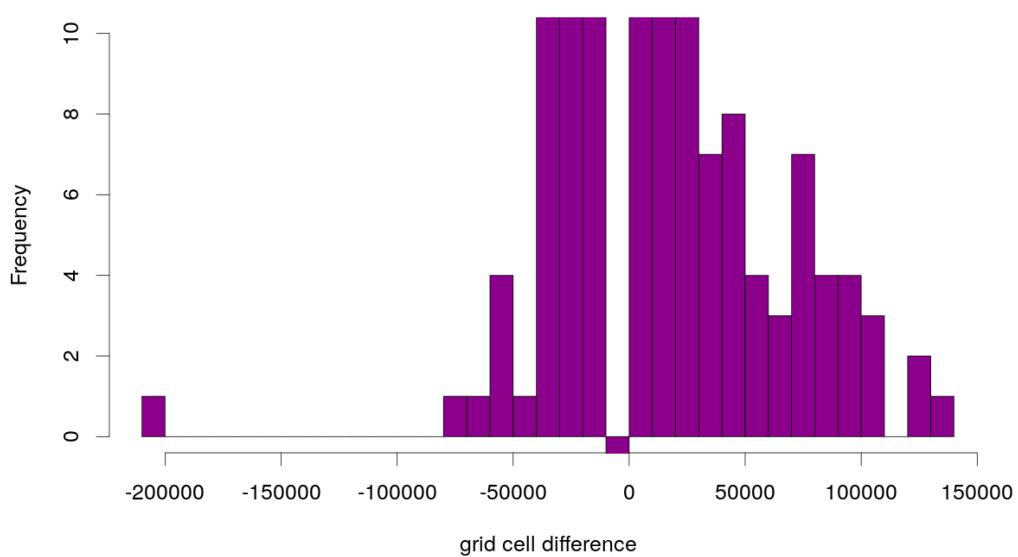
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.39255e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.39352e+09 \\
 \sum_x \Delta_x &= 969563 \\
 \sum_x |\Delta_x| &= 3.90213e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000285792 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0115021 \\
 \max_x \Delta_x &= 135083 \\
 \min_x \Delta_x &= -202419
 \end{aligned}$$

Rural population, 2011**Rural population, 2011**

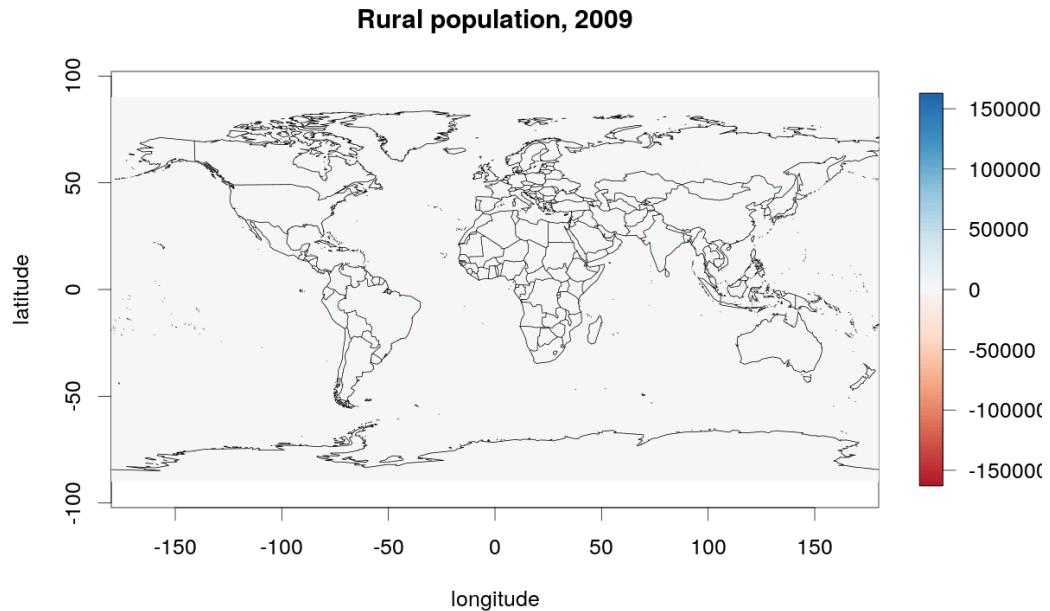
2010



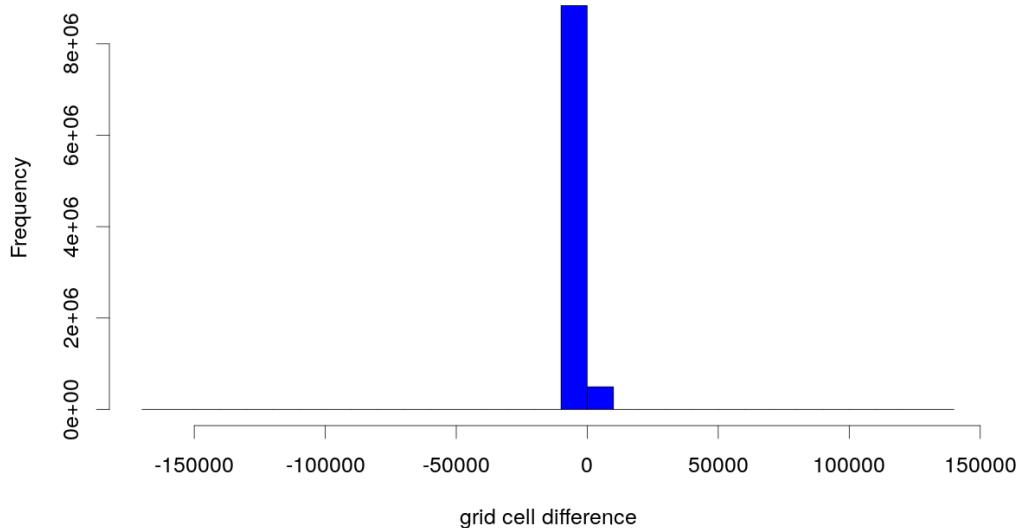
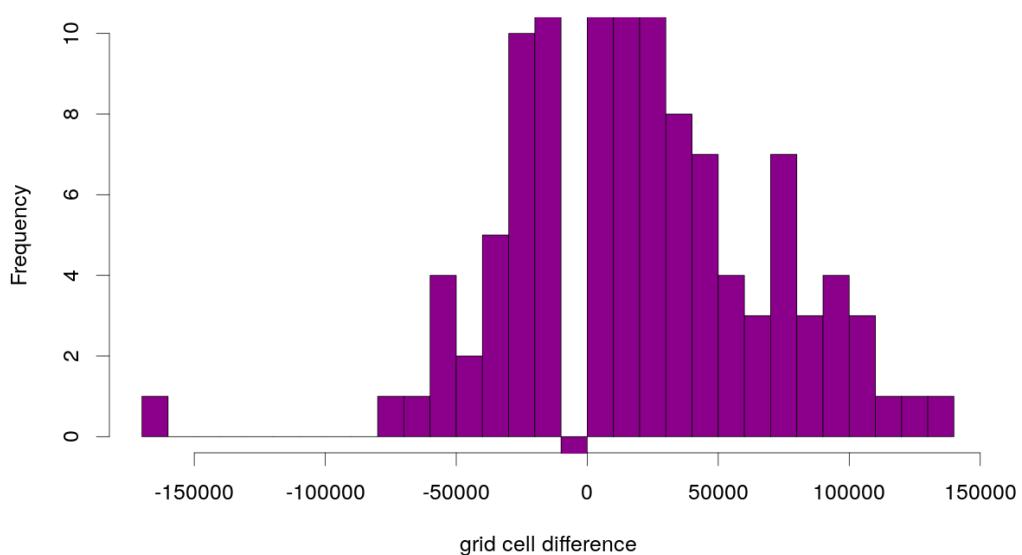
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.38727e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.38584e+09 \\
 \sum_x \Delta_x &= -1.43403e+06 \\
 \sum_x |\Delta_x| &= 4.01391e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000423359 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.01185 \\
 \max_x \Delta_x &= 133786 \\
 \min_x \Delta_x &= -208644
 \end{aligned}$$

Rural population, 2010**Rural population, 2010**

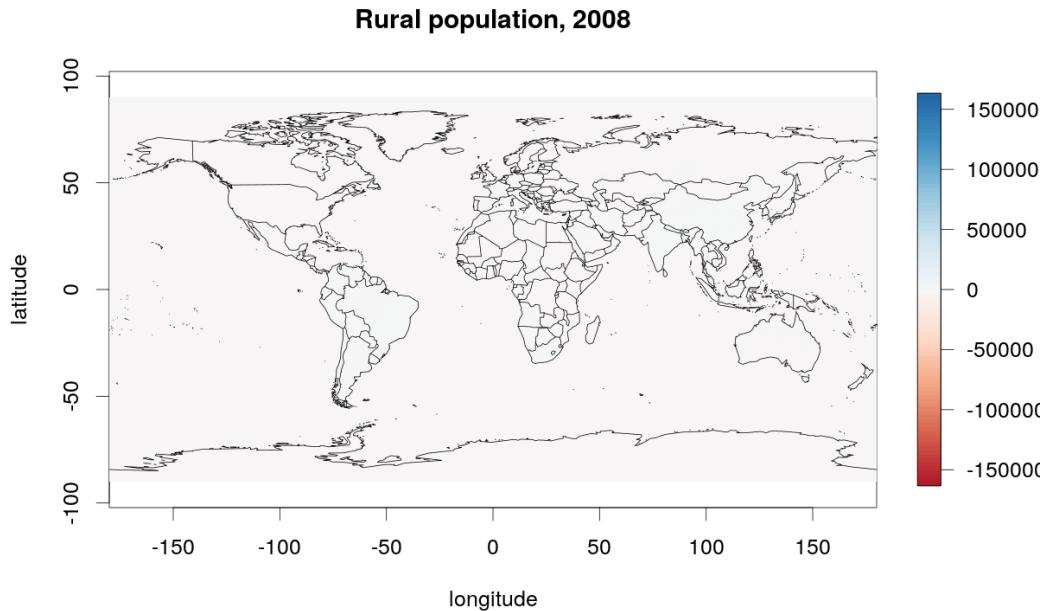
2009



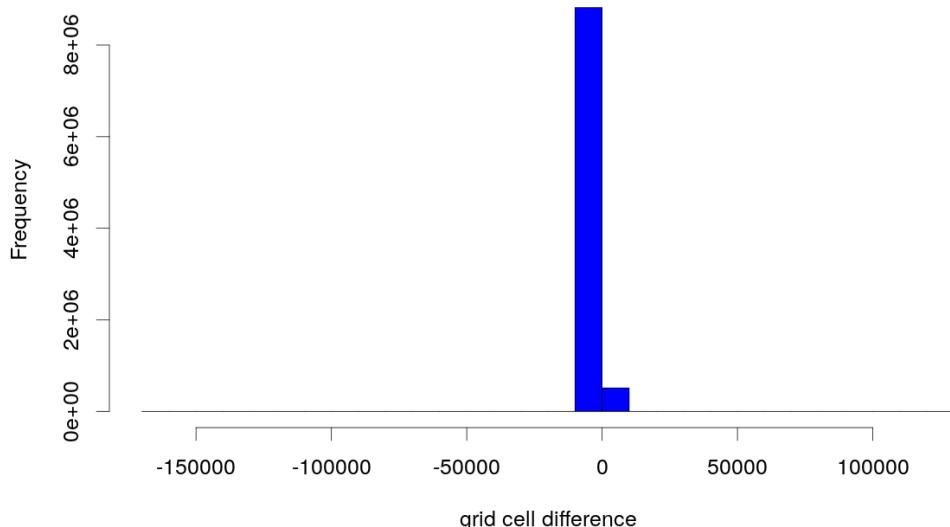
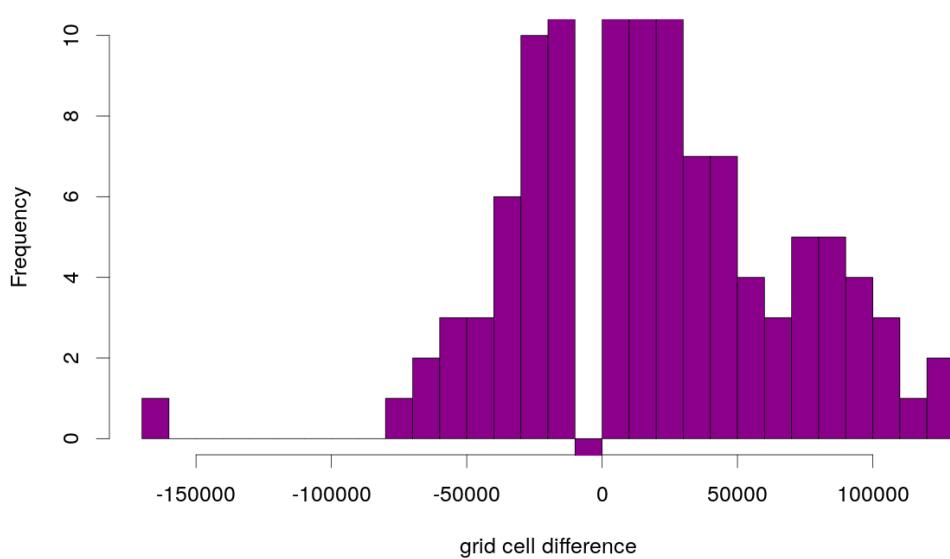
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.37661e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.37655e+09 \\
 \sum_x \Delta_x &= -63244.6 \\
 \sum_x |\Delta_x| &= 3.98808e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -1.87302e-05 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0118109 \\
 \max_x \Delta_x &= 134607 \\
 \min_x \Delta_x &= -161244
 \end{aligned}$$

Rural population, 2009**Rural population, 2009**

2008

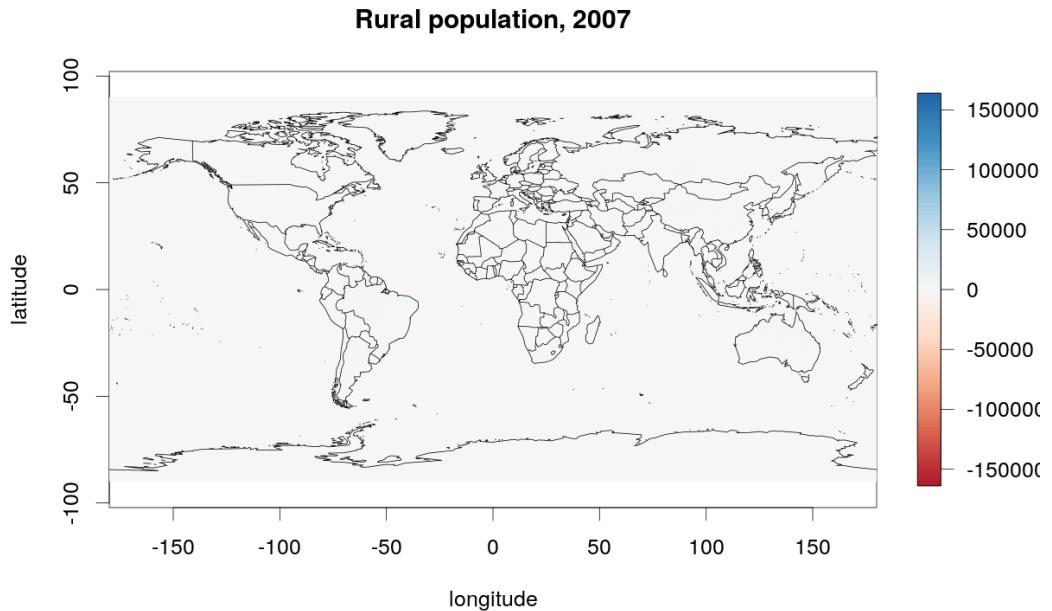


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.36532e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.36482e+09 \\
 \sum_x \Delta_x &= -505061 \\
 \sum_x |\Delta_x| &= 4.20545e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000150078 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0124964 \\
 \max_x \Delta_x &= 129731 \\
 \min_x \Delta_x &= -161712
 \end{aligned}$$

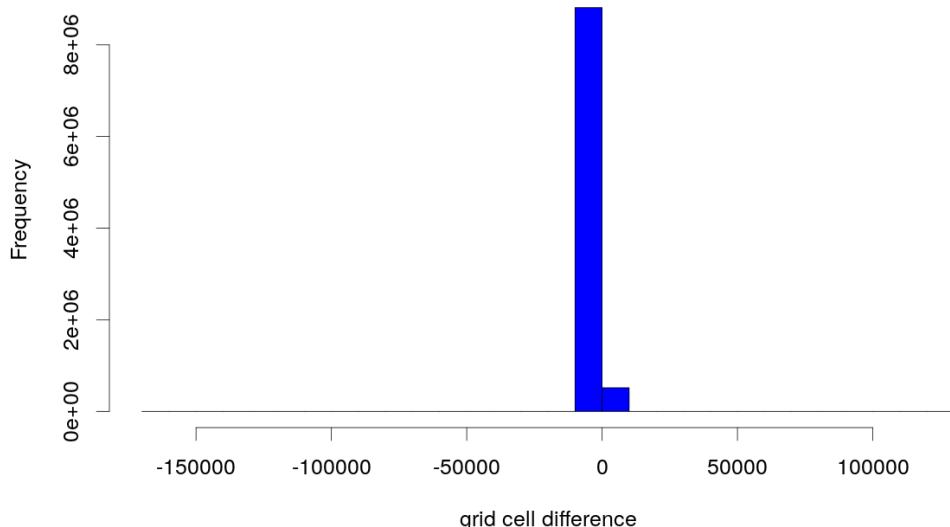
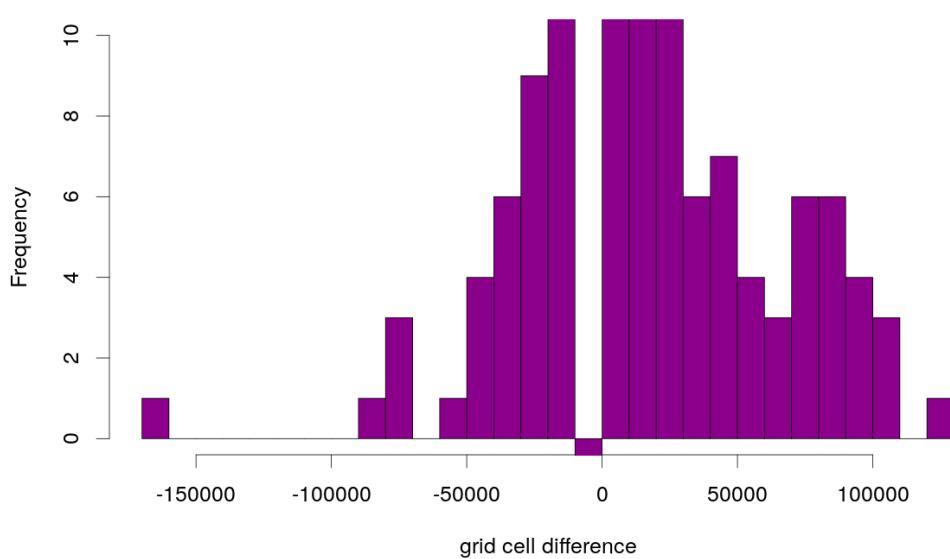
Rural population, 2008**Rural population, 2008**

100

2007

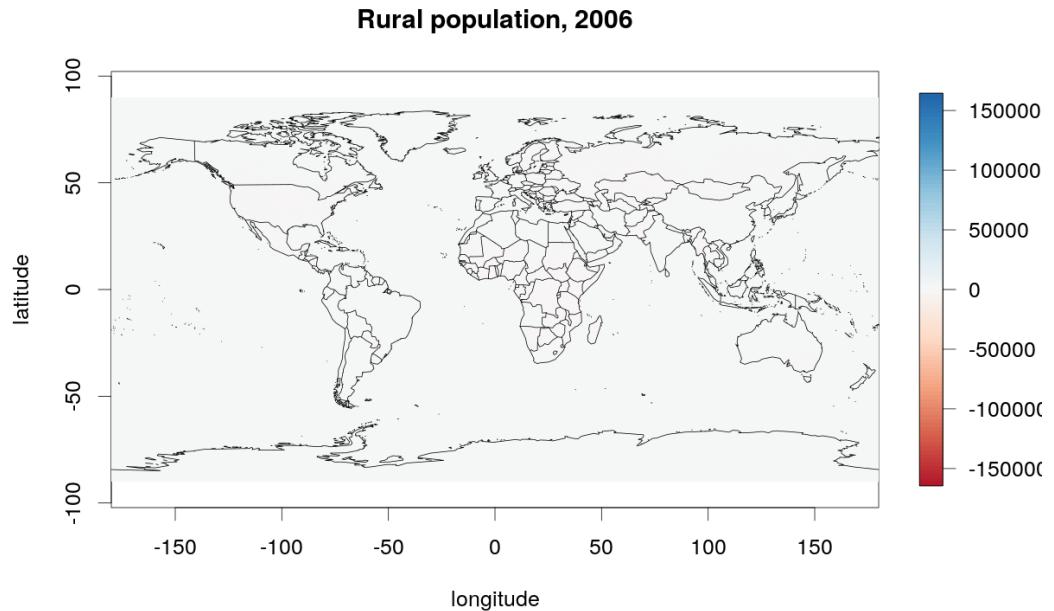


$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.35341e+09 \\ \sum_x p_x^{(v3.3)} &= 3.35255e+09 \\ \sum_x \Delta_x &= -855066 \\ \sum_x |\Delta_x| &= 4.43269e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000254984 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0132185 \\ \max_x \Delta_x &= 125202 \\ \min_x \Delta_x &= -162189\end{aligned}$$

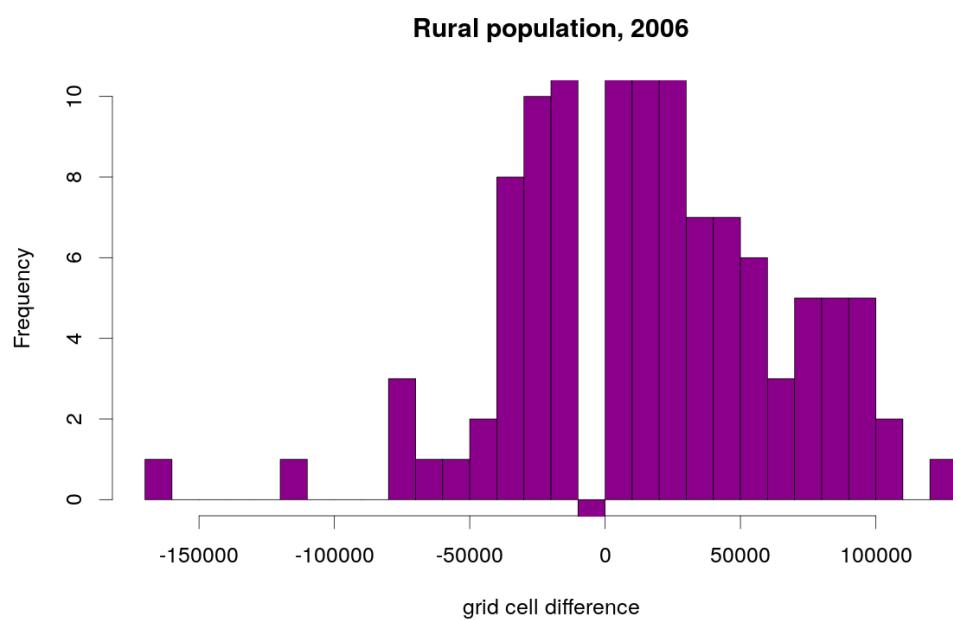
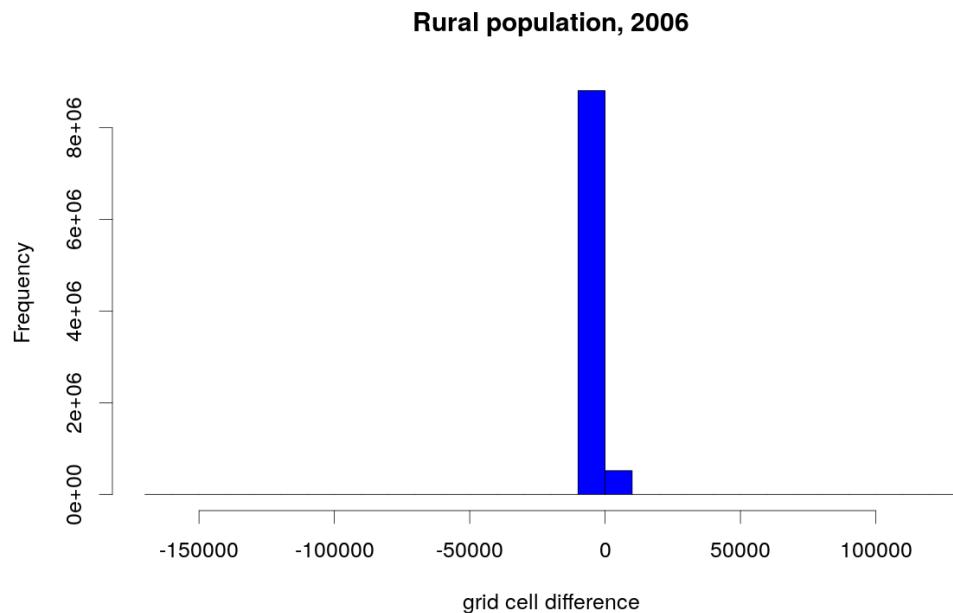
Rural population, 2007**Rural population, 2007**

102

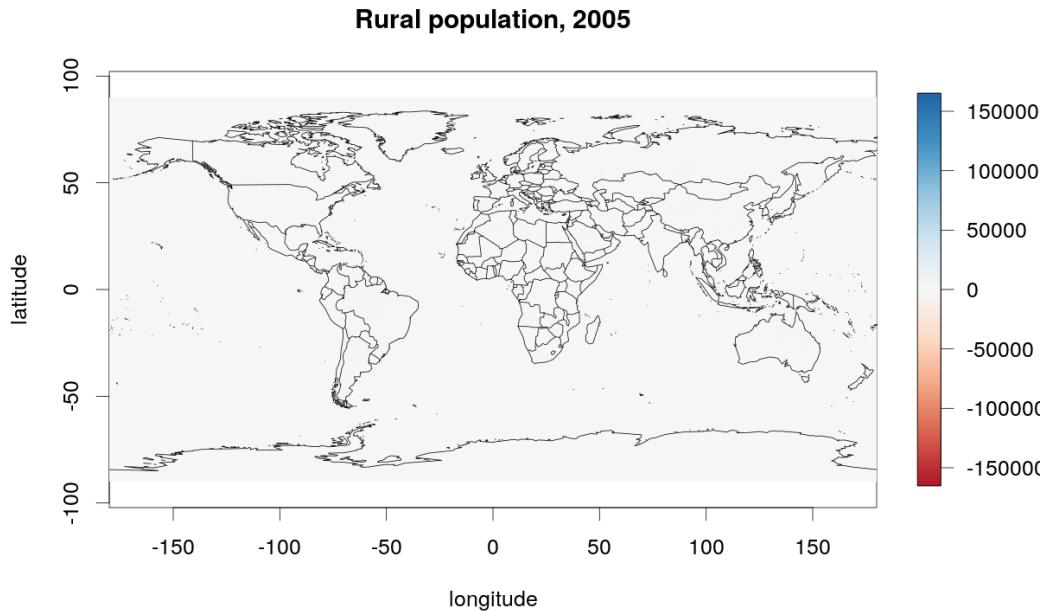
2006



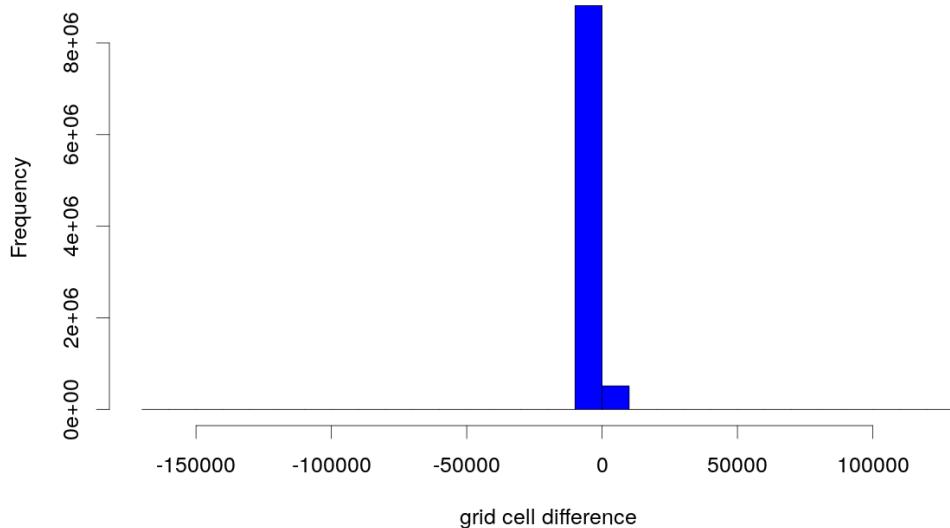
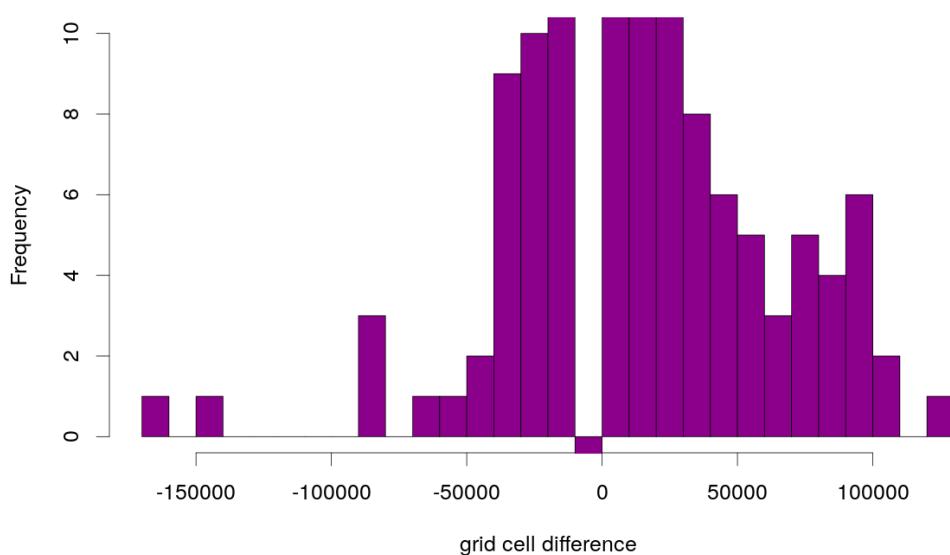
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.34087e+09 \\ \sum_x p_x^{(v3.3)} &= 3.33977e+09 \\ \sum_x \Delta_x &= -1.1024e+06 \\ \sum_x |\Delta_x| &= 4.65831e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000329974 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0139434 \\ \max_x \Delta_x &= 123034 \\ \min_x \Delta_x &= -162797\end{aligned}$$



2005

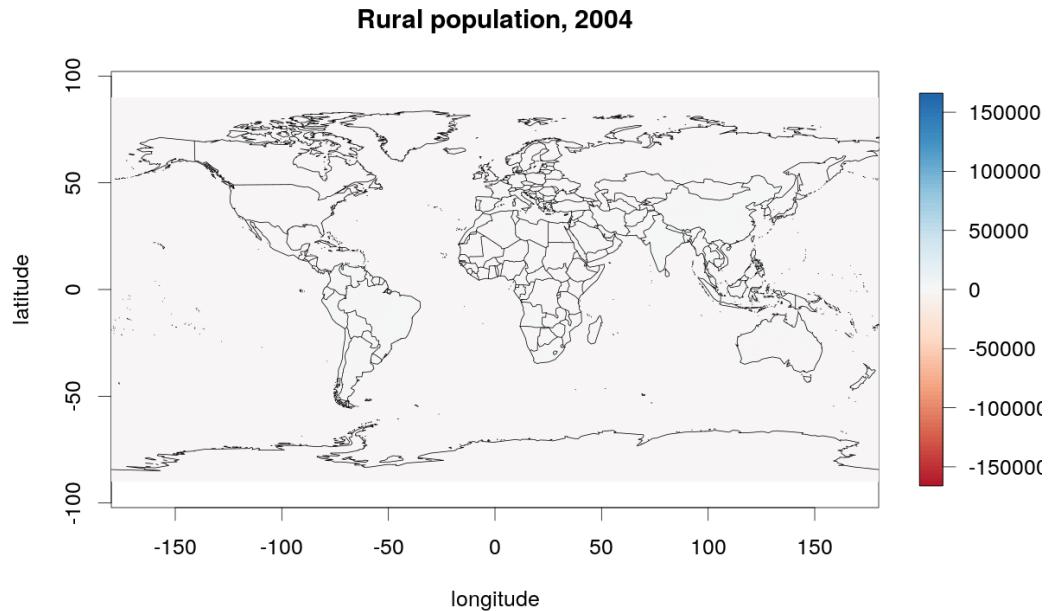


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.32771e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.32647e+09 \\
 \sum_x \Delta_x &= -1.23611e+06 \\
 \sum_x |\Delta_x| &= 4.8818e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00037146 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0146701 \\
 \max_x \Delta_x &= 120877 \\
 \min_x \Delta_x &= -163529
 \end{aligned}$$

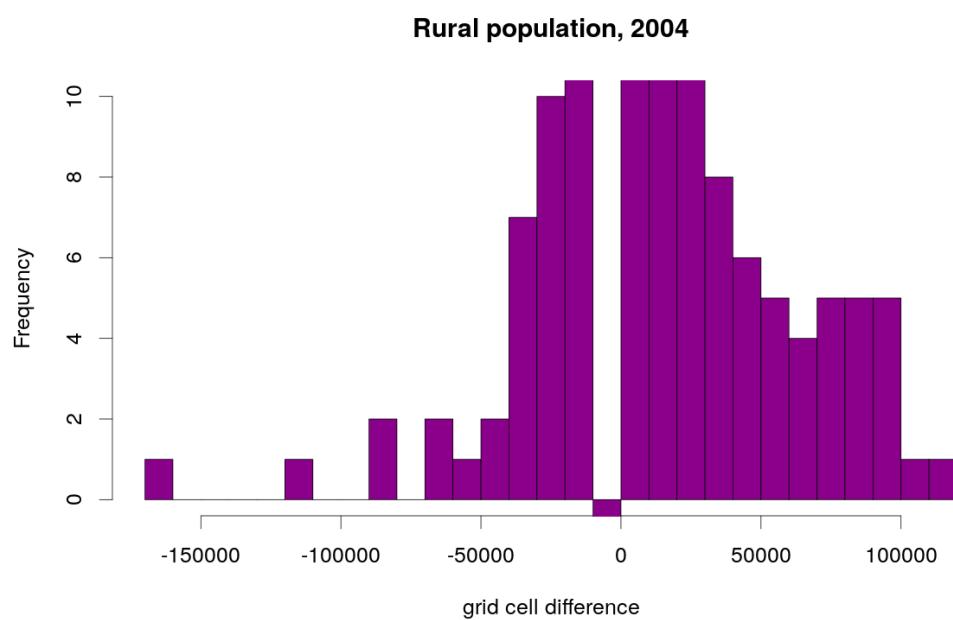
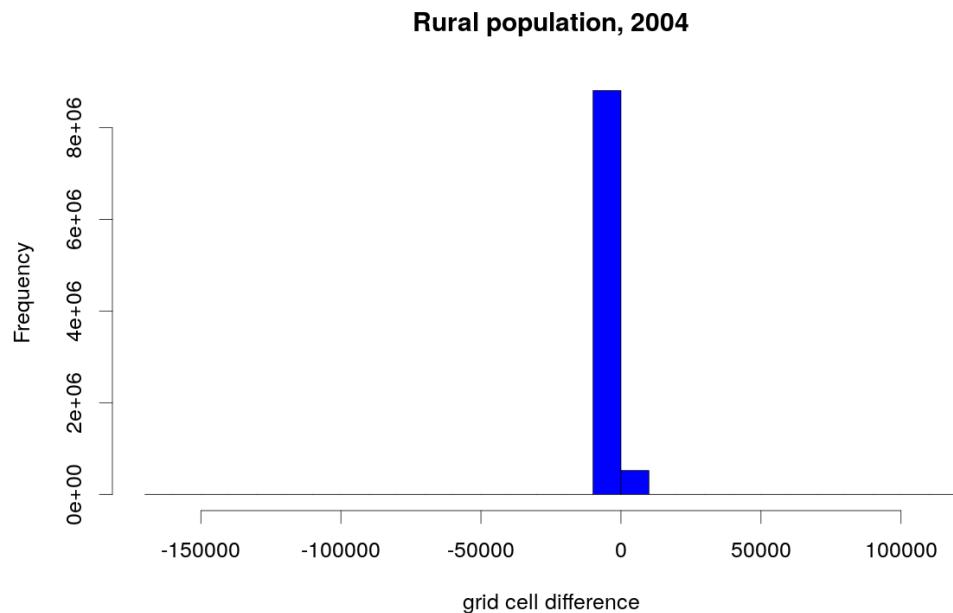
Rural population, 2005**Rural population, 2005**

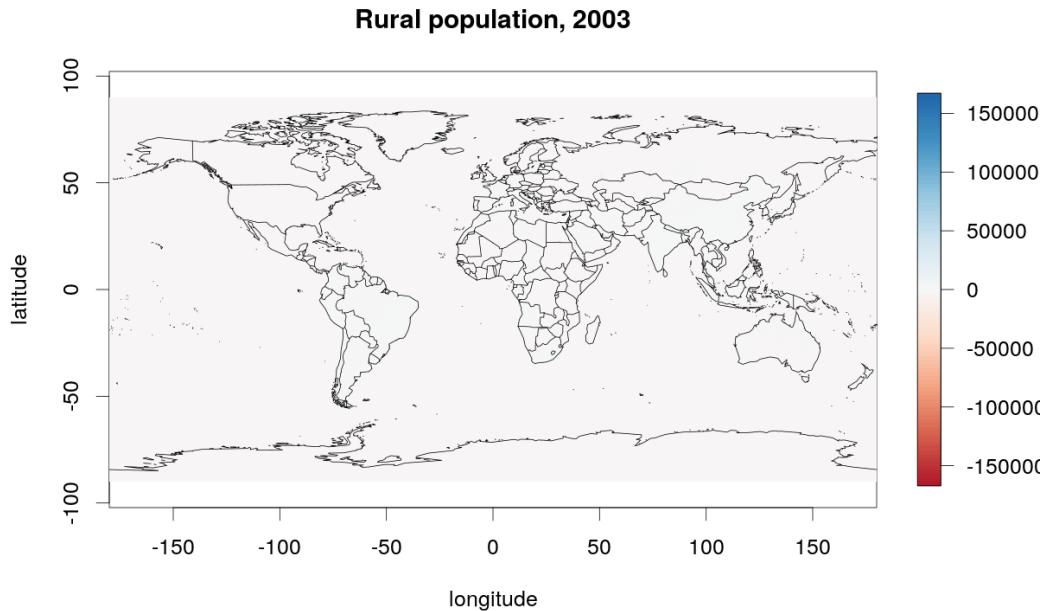
106

2004

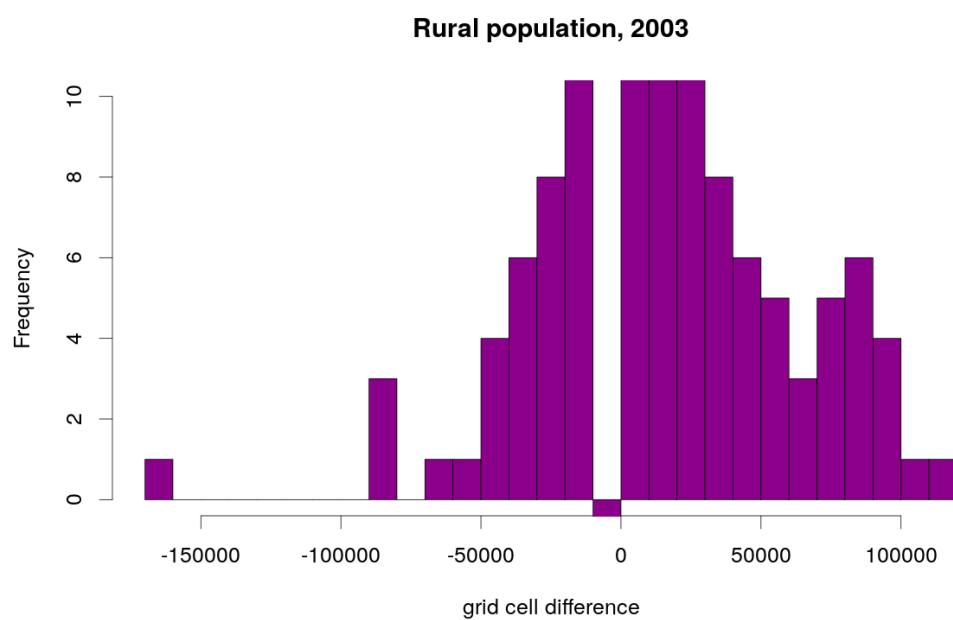
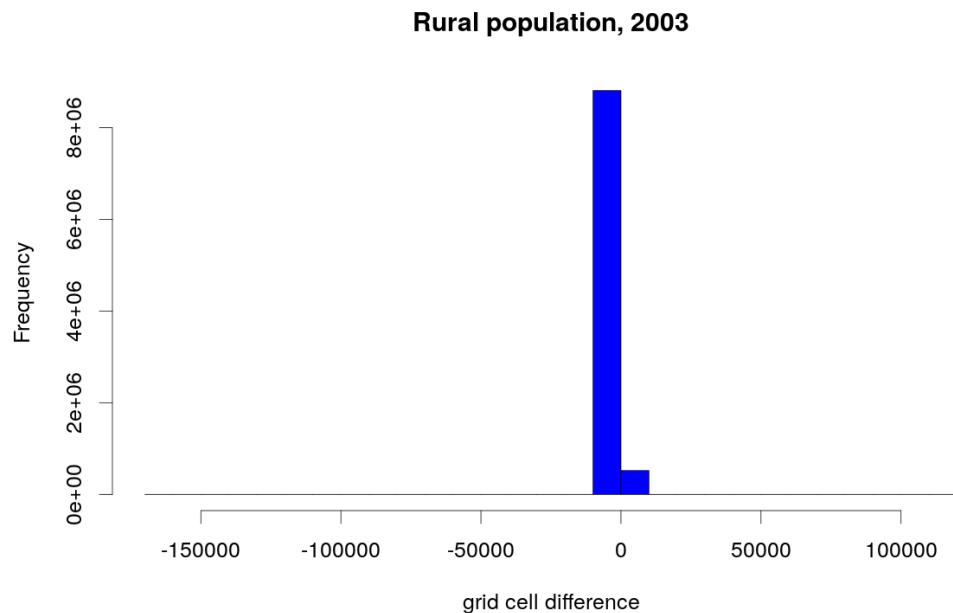


$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.31392e+09 \\ \sum_x p_x^{(v3.3)} &= 3.31284e+09 \\ \sum_x \Delta_x &= -1.08075e+06 \\ \sum_x |\Delta_x| &= 4.65872e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000326124 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.014058 \\ \max_x \Delta_x &= 118805 \\ \min_x \Delta_x &= -164375\end{aligned}$$



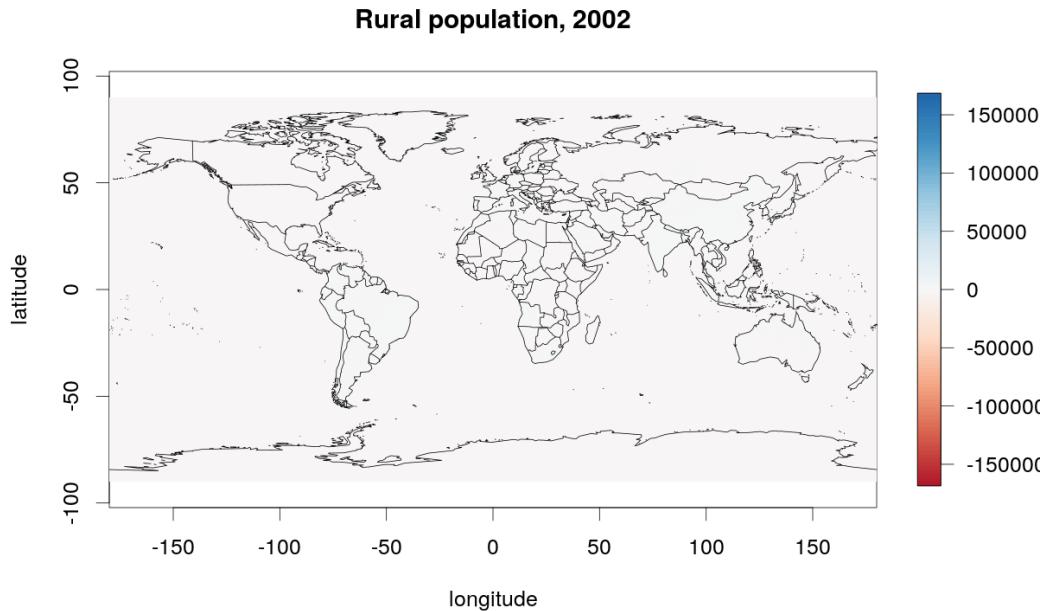
2003

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.29951e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.29852e+09 \\
 \sum_x \Delta_x &= -987972 \\
 \sum_x |\Delta_x| &= 4.41701e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00029943 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0133869 \\
 \max_x \Delta_x &= 116680 \\
 \min_x \Delta_x &= -165423
 \end{aligned}$$

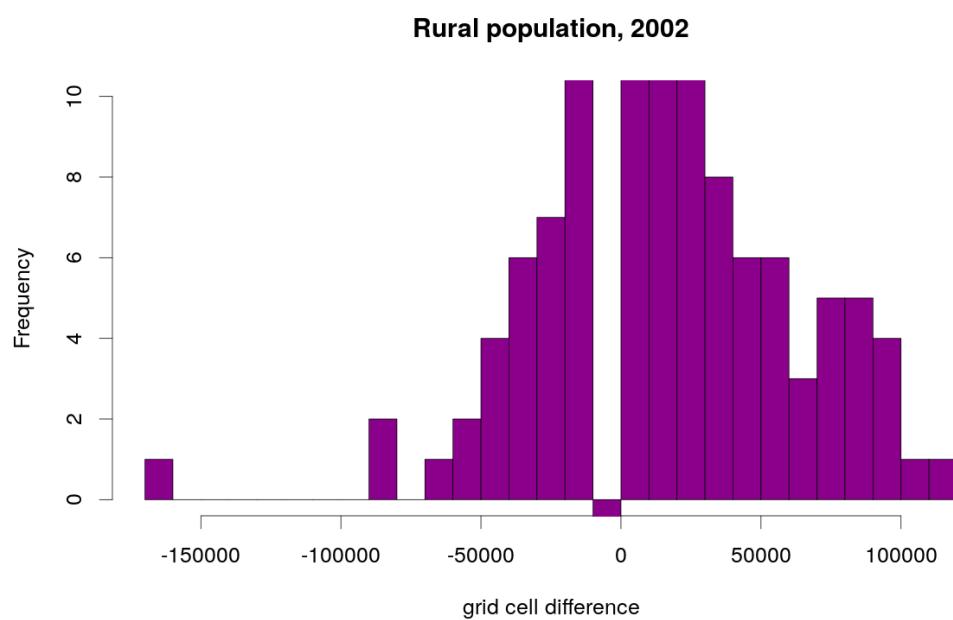
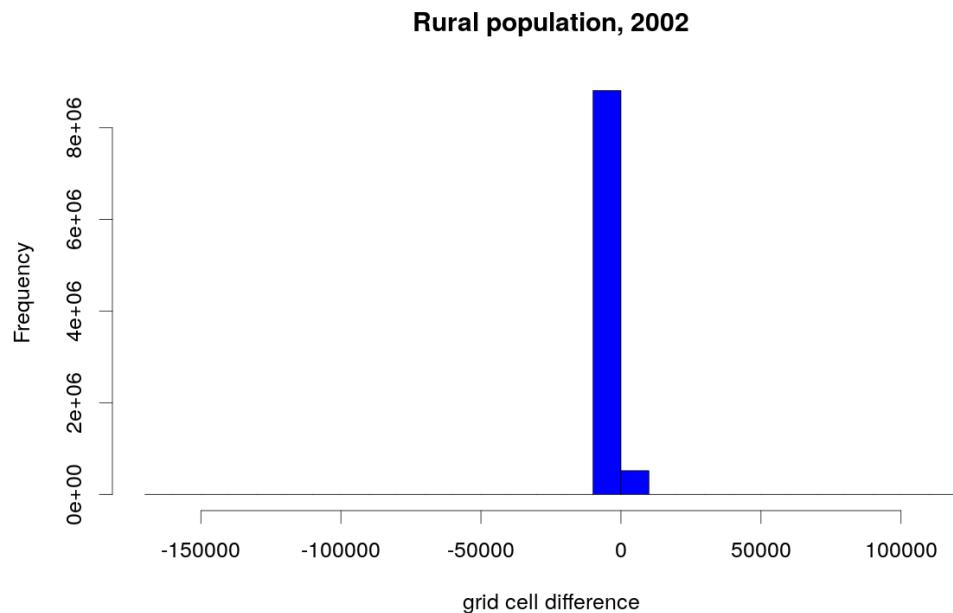


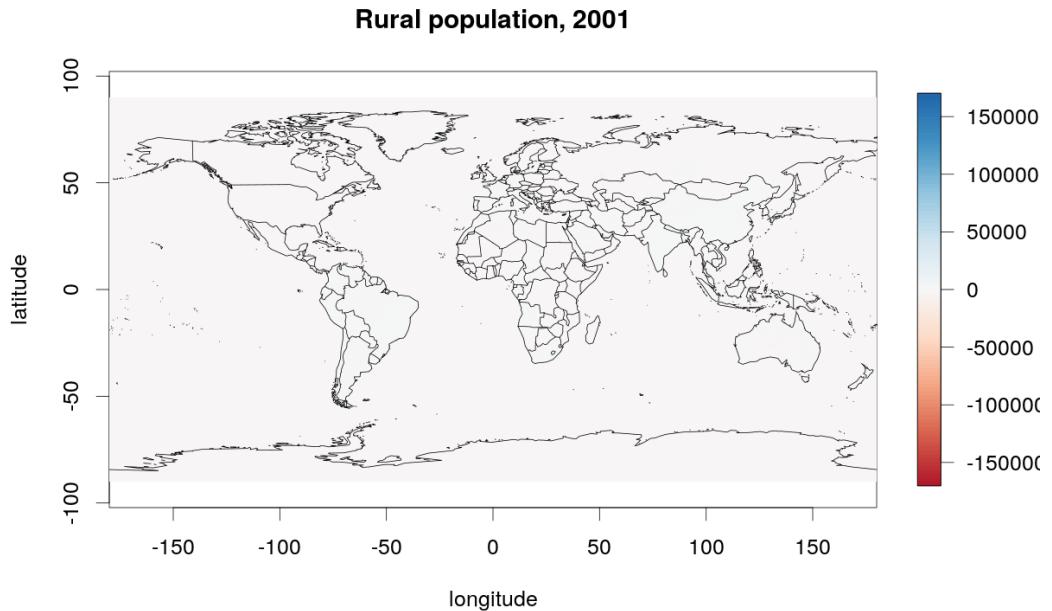
110

2002

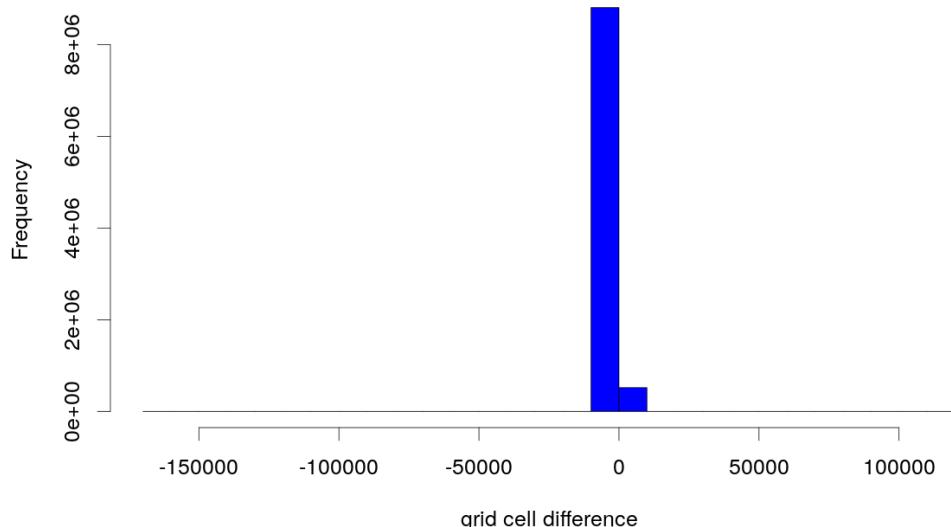
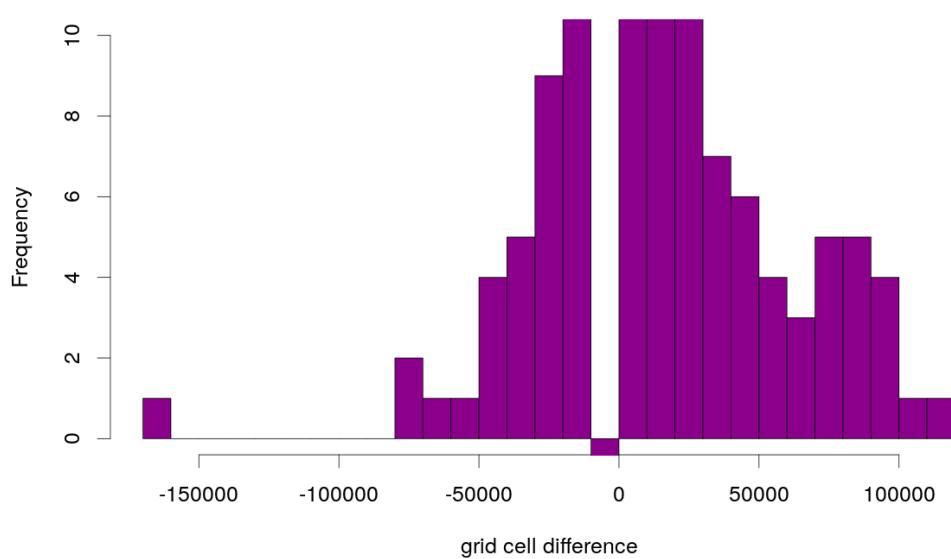


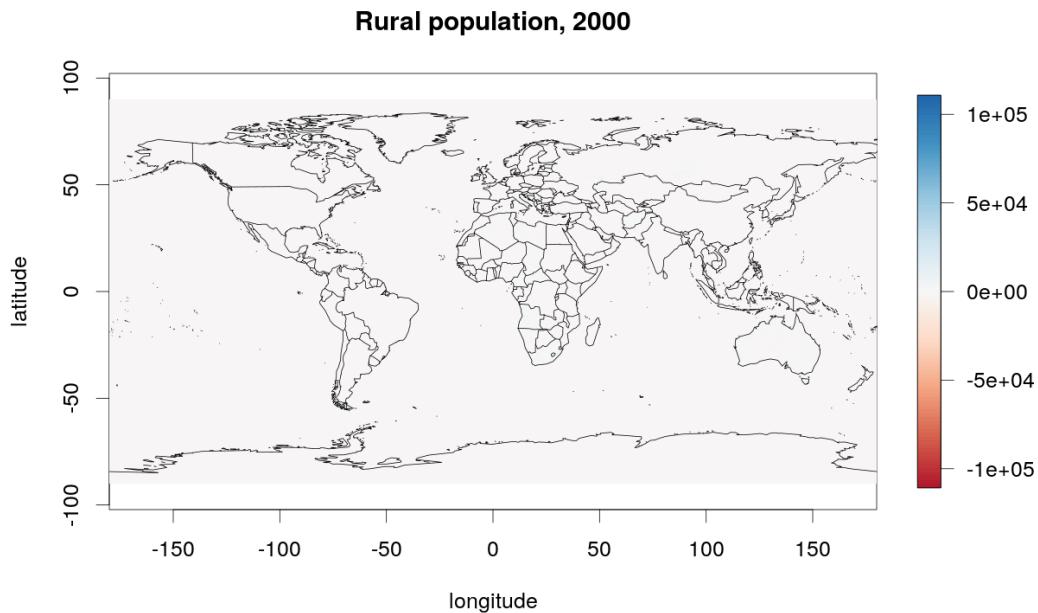
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.28447e+09 \\ \sum_x p_x^{(v3.3)} &= 3.28369e+09 \\ \sum_x \Delta_x &= -775939 \\ \sum_x |\Delta_x| &= 4.16839e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000236245 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0126912 \\ \max_x \Delta_x &= 114484 \\ \min_x \Delta_x &= -166794\end{aligned}$$



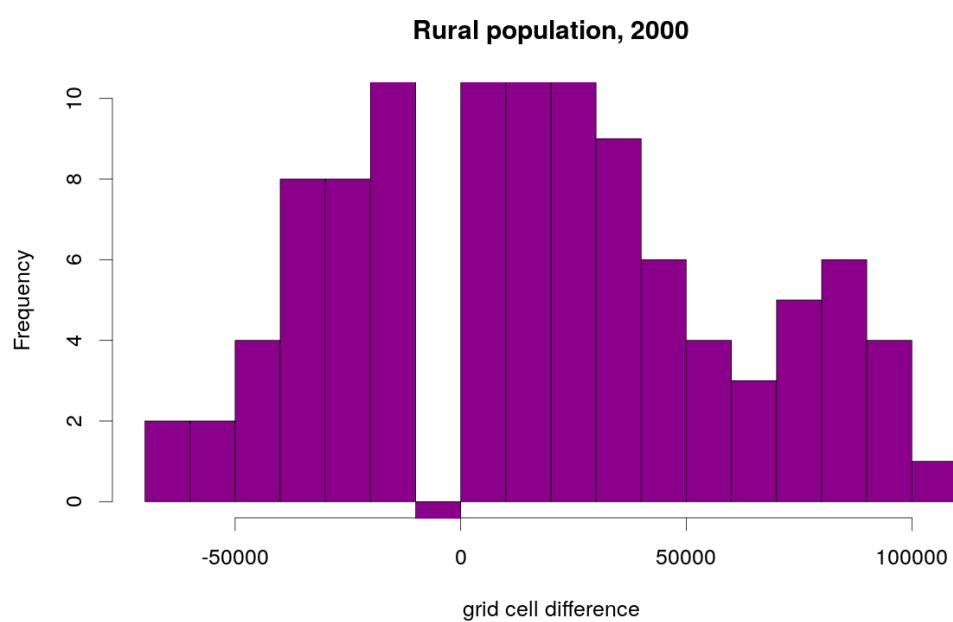
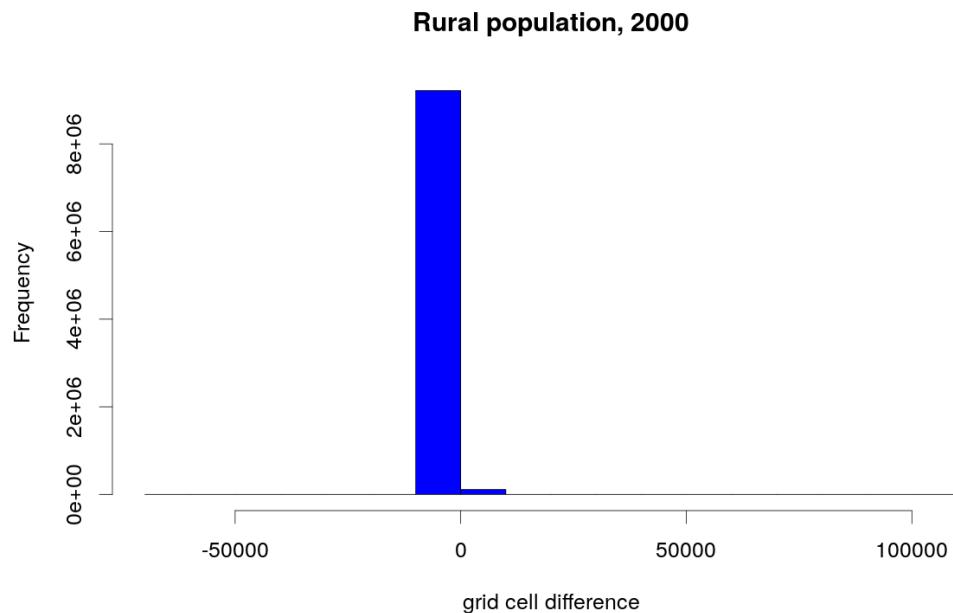
2001

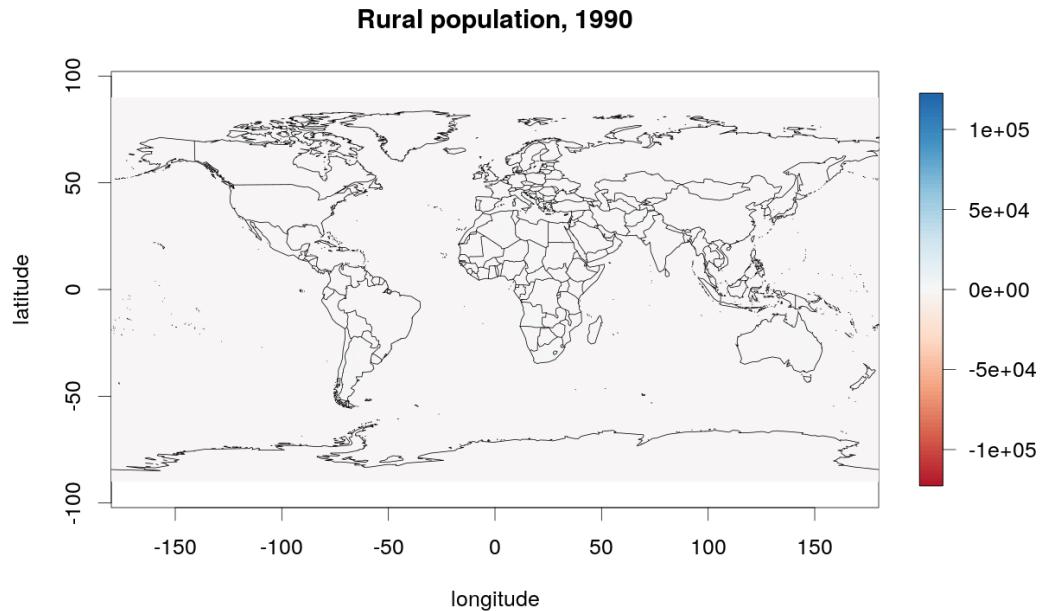
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.2688e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.2684e+09 \\
 \sum_x \Delta_x &= -405474 \\
 \sum_x |\Delta_x| &= 3.91621e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000124044 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0119806 \\
 \max_x \Delta_x &= 112155 \\
 \min_x \Delta_x &= -168550
 \end{aligned}$$

Rural population, 2001**Rural population, 2001**

2000

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.25251\text{e}+09 \\
 \sum_x p_x^{(v3.3)} &= 3.25146\text{e}+09 \\
 \sum_x \Delta_x &= -1.04864\text{e}+06 \\
 \sum_x |\Delta_x| &= 3.8228\text{e}+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.000322409 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0117534 \\
 \max_x \Delta_x &= 109648 \\
 \min_x \Delta_x &= -69871.9
 \end{aligned}$$



1990

$$\sum_x p_x^{(v3.2.1)} = 3.0173e+09$$

$$\sum_x p_x^{(v3.3)} = 3.01502e+09$$

$$\sum_x \Delta_x = -2.27589e+06$$

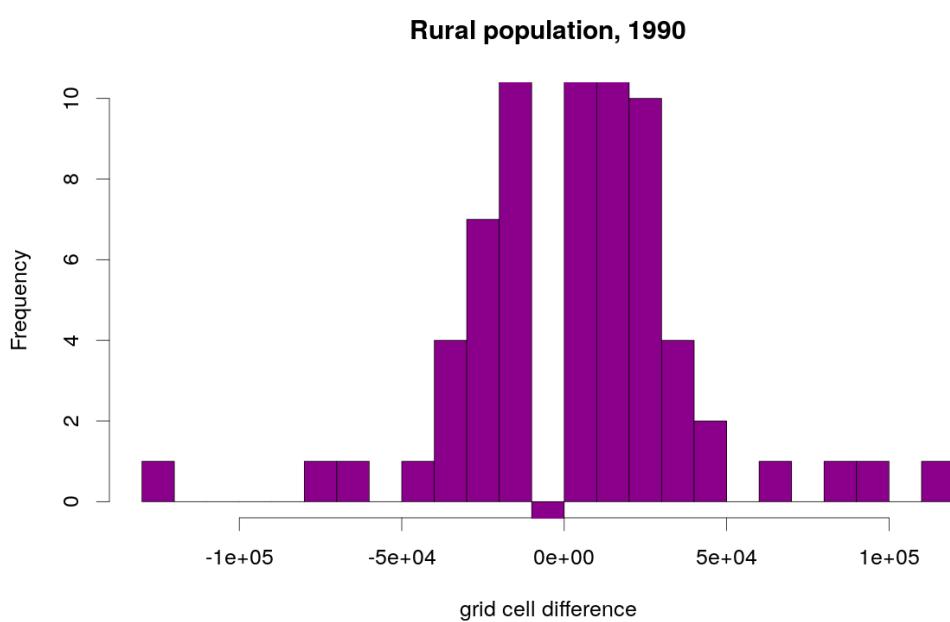
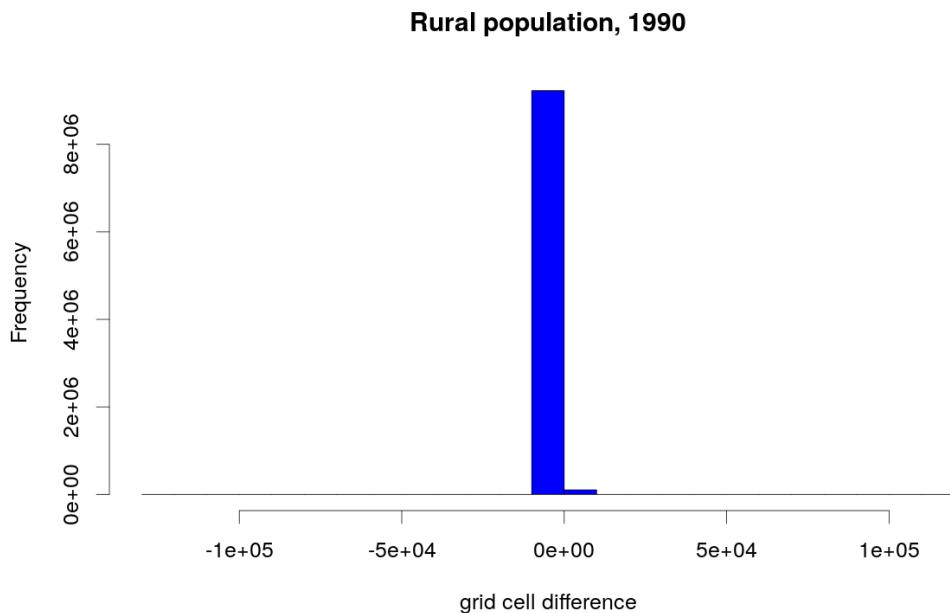
$$\sum_x |\Delta_x| = 2.27617e+07$$

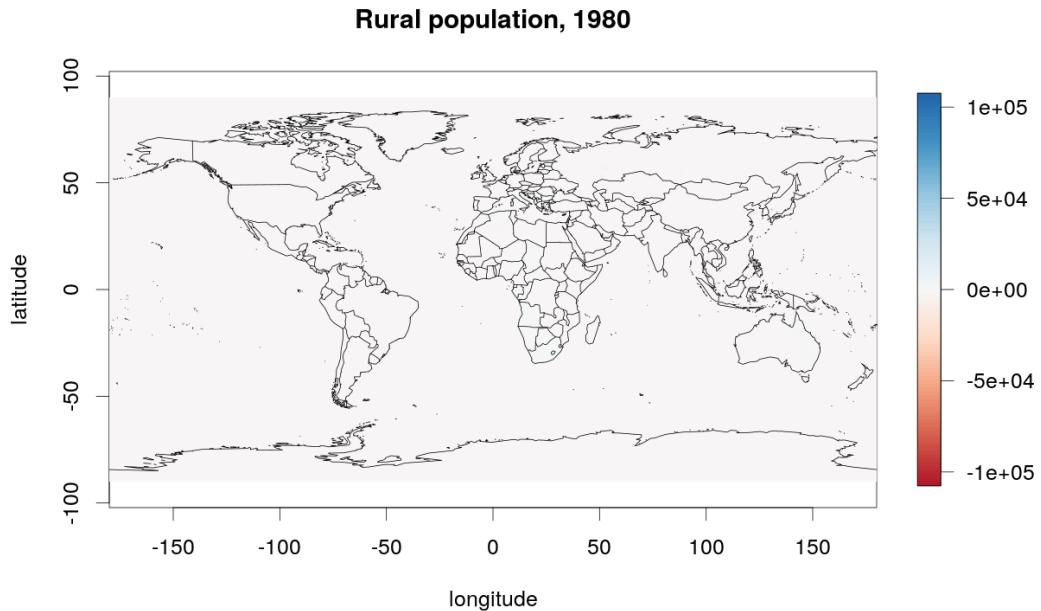
$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = -0.00075428$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.00754373$$

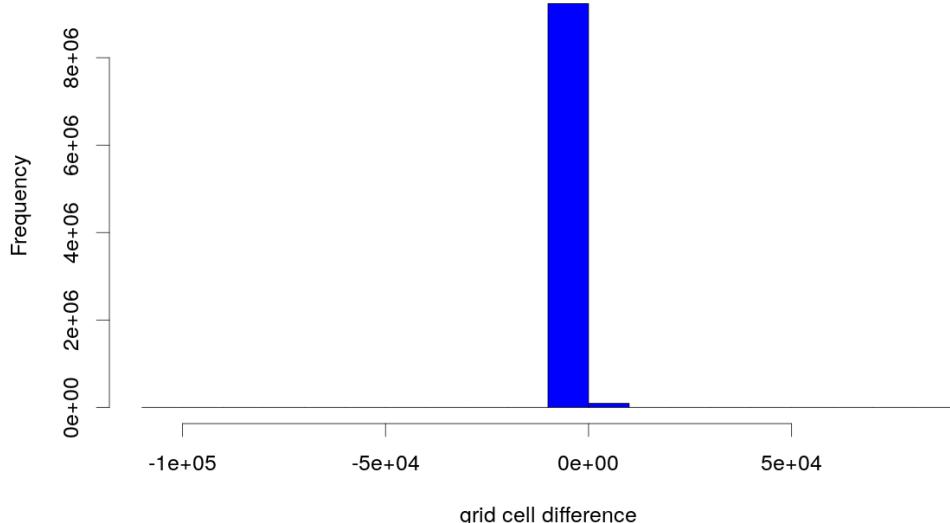
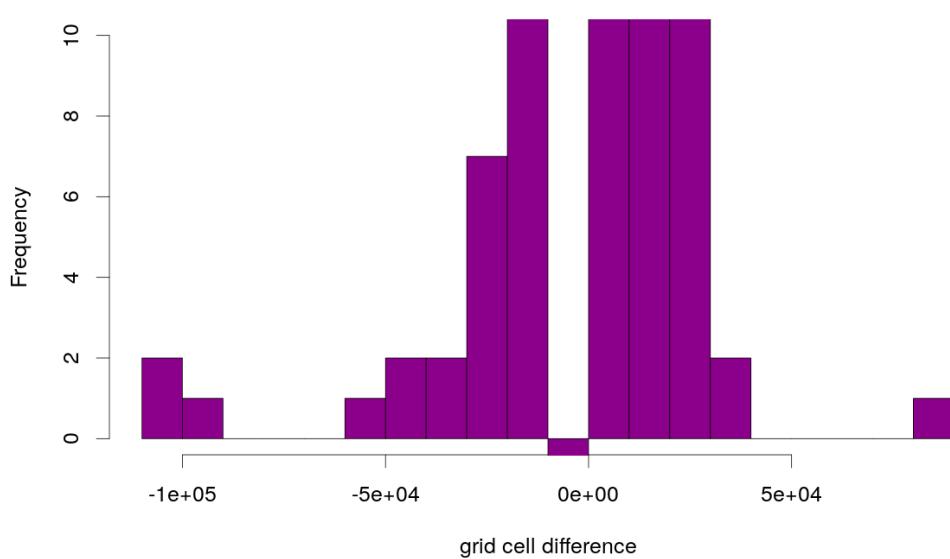
$$\max_x \Delta_x = 118222$$

$$\min_x \Delta_x = -121386$$



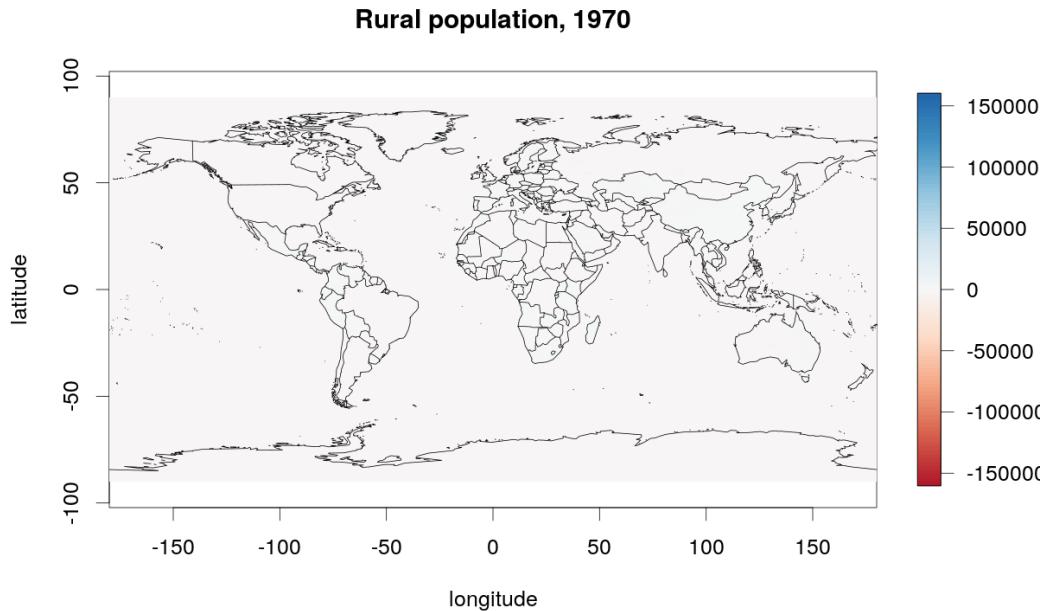
1980

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.70368e+09 \\
 \sum_x p_x^{(v3.3)} &= 2.70073e+09 \\
 \sum_x \Delta_x &= -2.94992e+06 \\
 \sum_x |\Delta_x| &= 2.40498e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00109108 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.00889521 \\
 \max_x \Delta_x &= 83178.2 \\
 \min_x \Delta_x &= -106510
 \end{aligned}$$

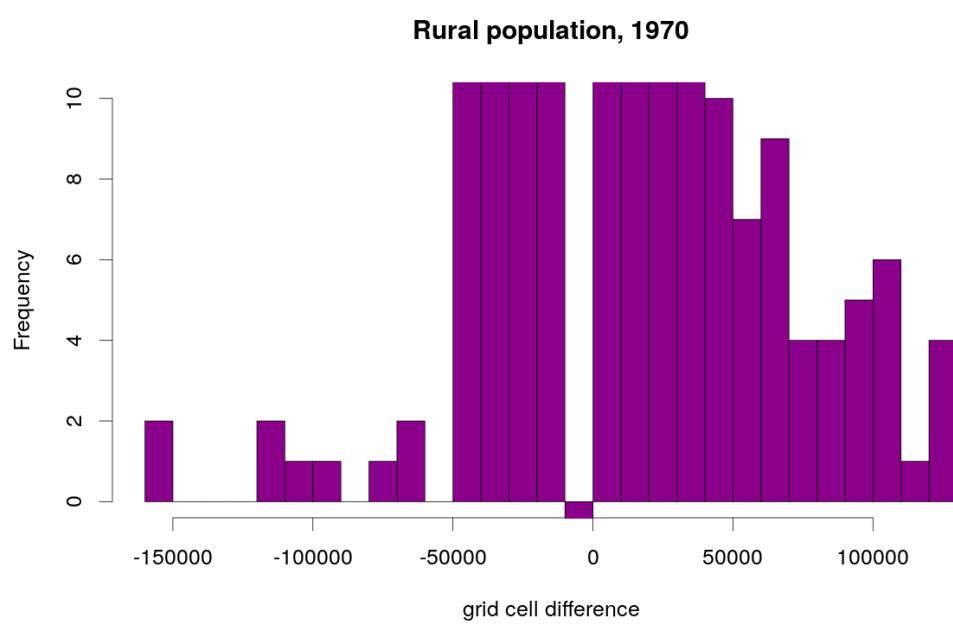
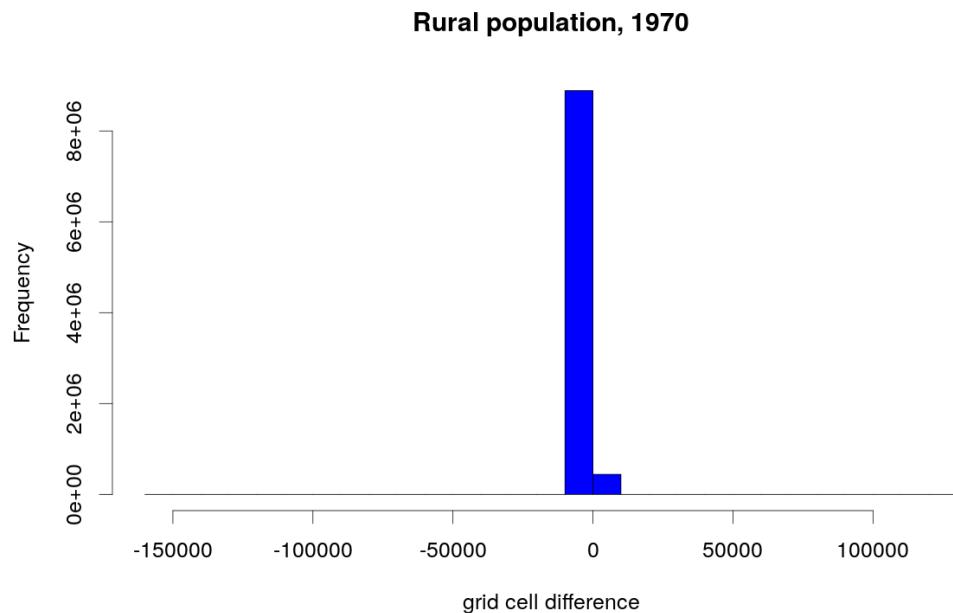
Rural population, 1980**Rural population, 1980**

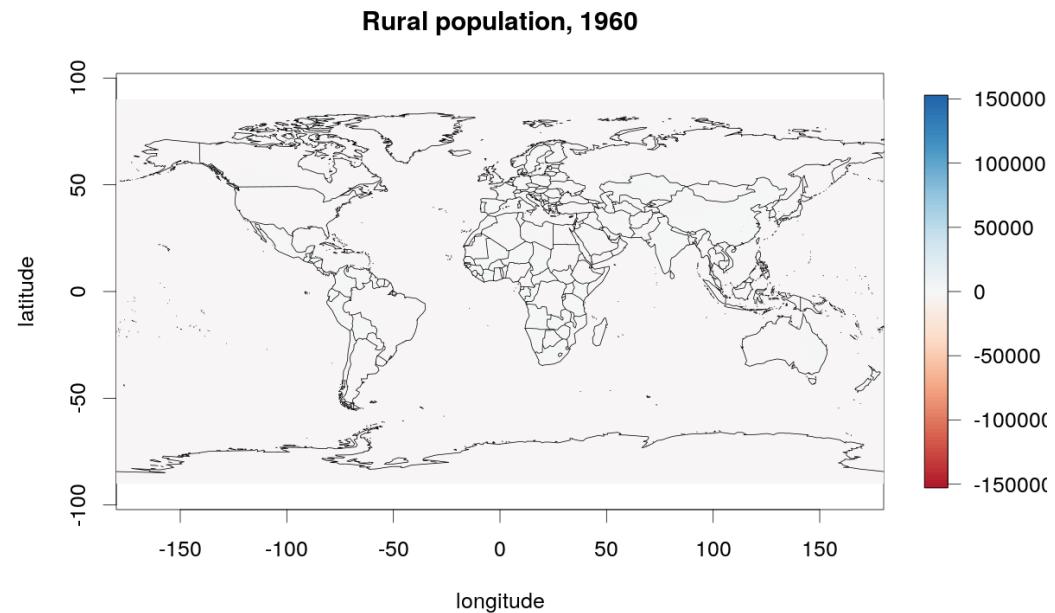
120

1970

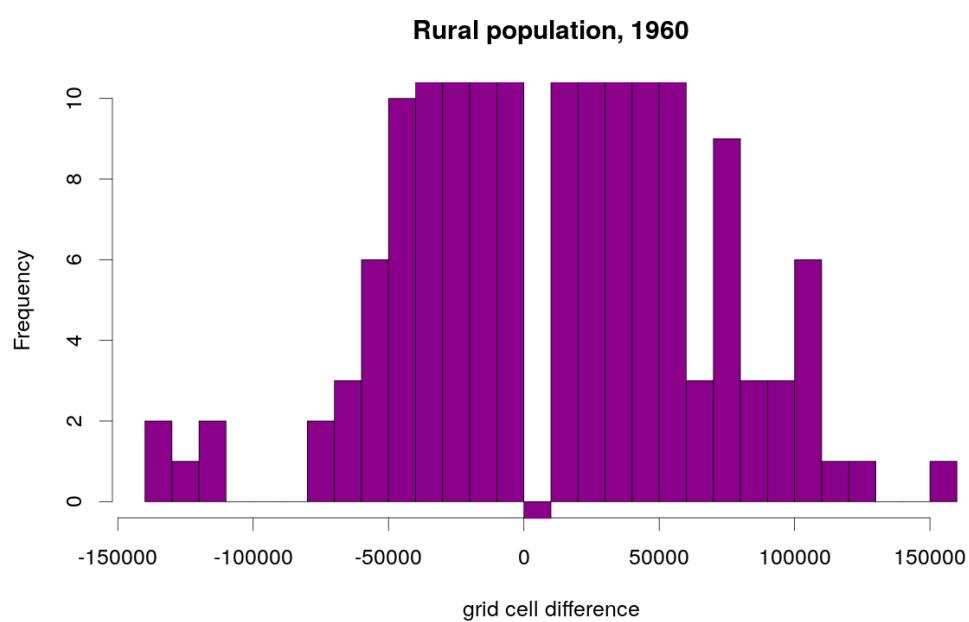
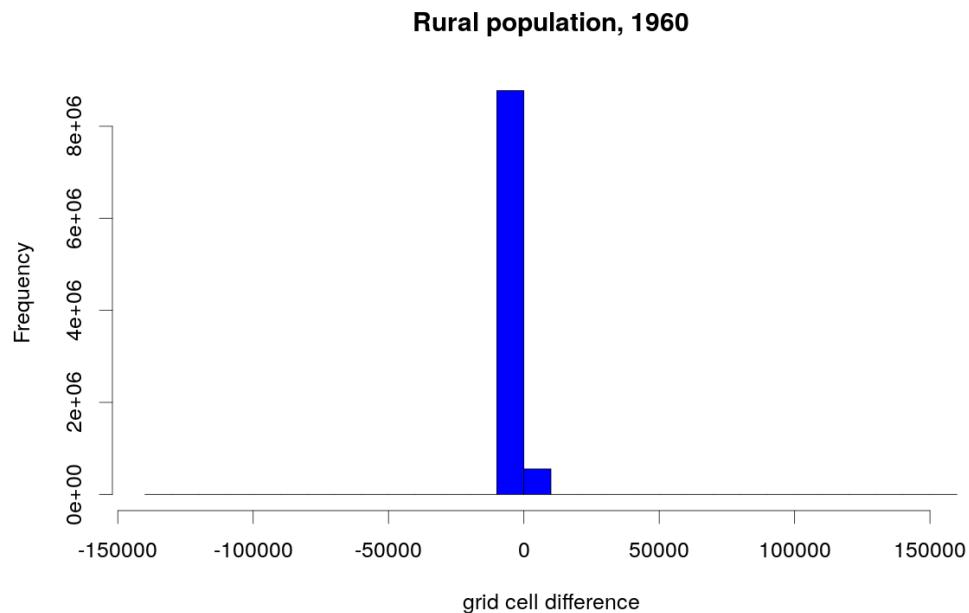


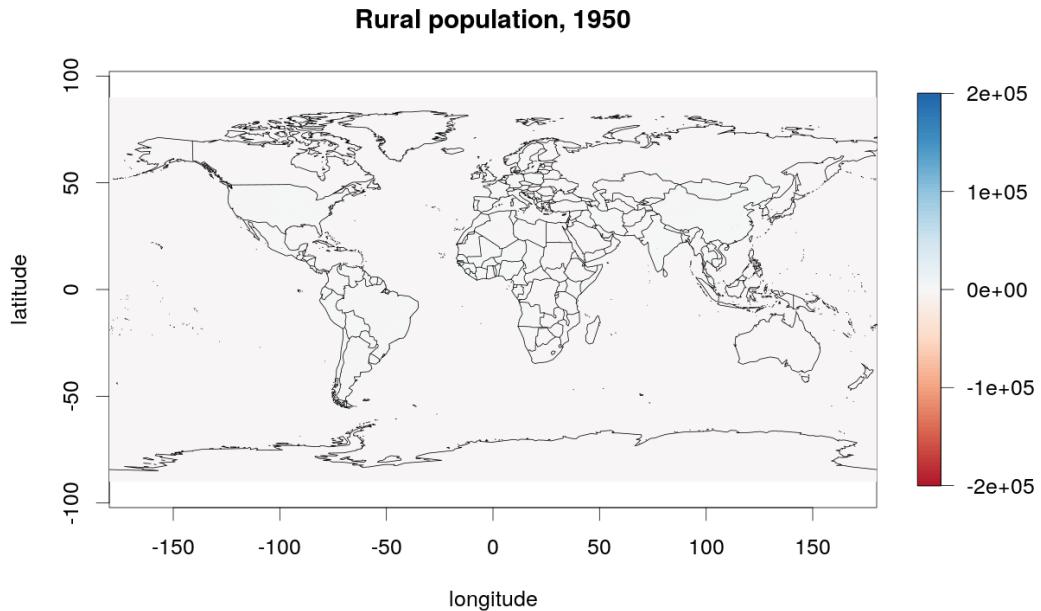
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 2.35998e+09 \\ \sum_x p_x^{(v3.3)} &= 2.35697e+09 \\ \sum_x \Delta_x &= -3.01218e+06 \\ \sum_x |\Delta_x| &= 7.69333e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00127636 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0325991 \\ \max_x \Delta_x &= 124962 \\ \min_x \Delta_x &= -158700\end{aligned}$$



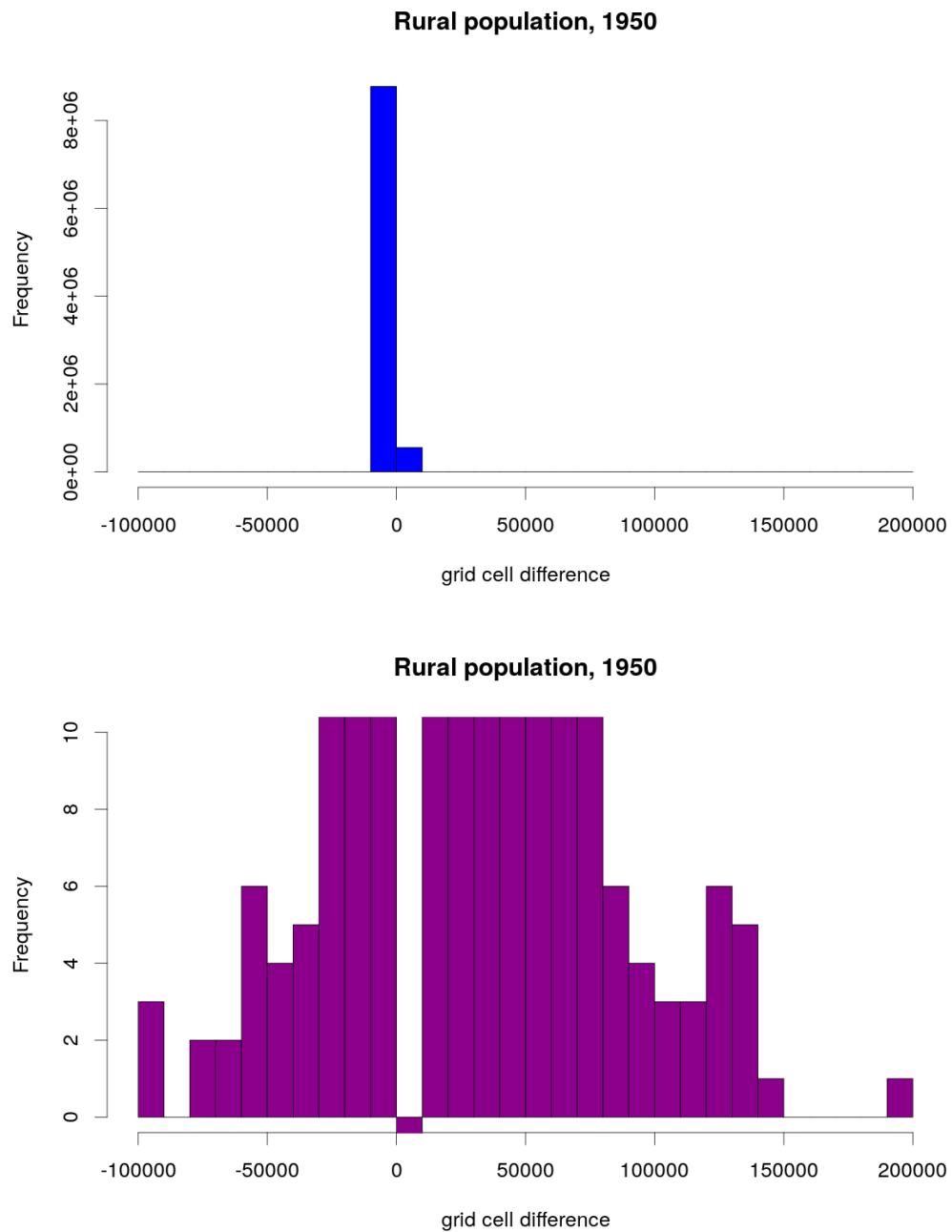
1960

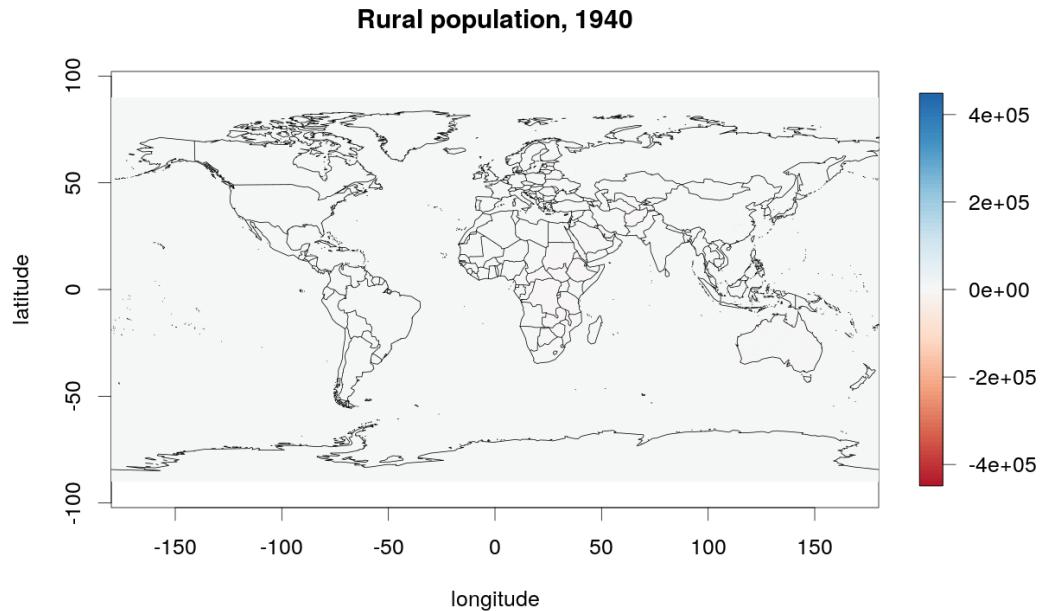
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.02518e+09 \\
 \sum_x p_x^{(v3.3)} &= 2.03078e+09 \\
 \sum_x \Delta_x &= 5.59922e+06 \\
 \sum_x |\Delta_x| &= 9.4753e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0027648 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0467874 \\
 \max_x \Delta_x &= 151357 \\
 \min_x \Delta_x &= -133237
 \end{aligned}$$



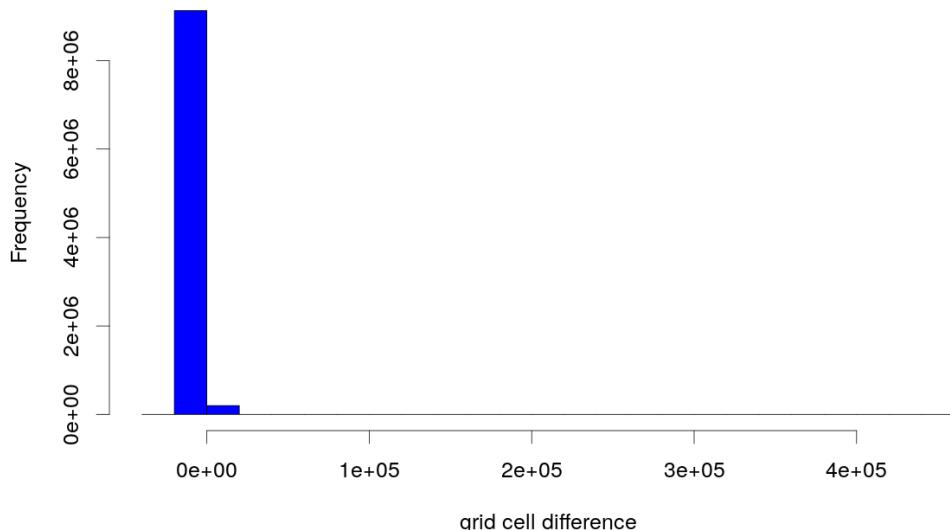
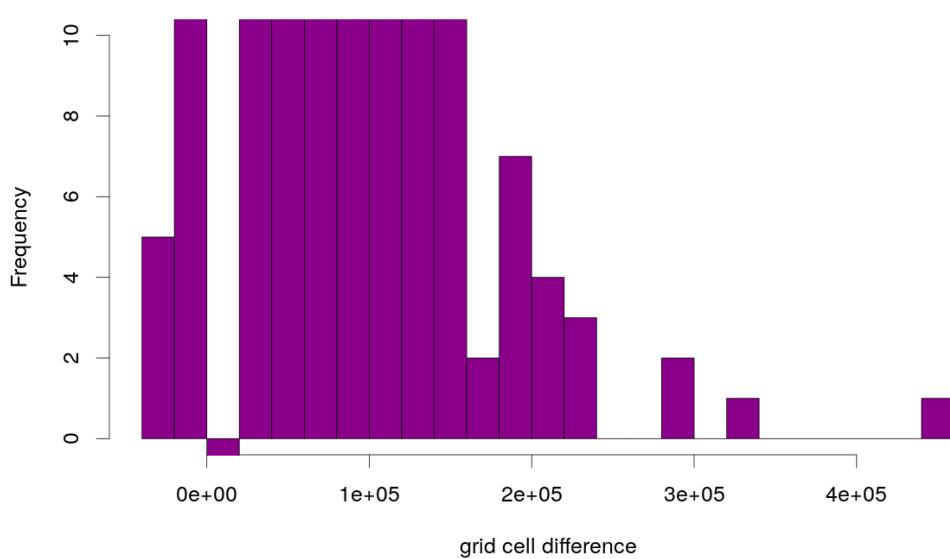
1950

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.75099e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.7962e+09 \\
 \sum_x \Delta_x &= 4.52104e+07 \\
 \sum_x |\Delta_x| &= 1.24233e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0258199 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0709501 \\
 \max_x \Delta_x &= 198170 \\
 \min_x \Delta_x &= -97907.9
 \end{aligned}$$



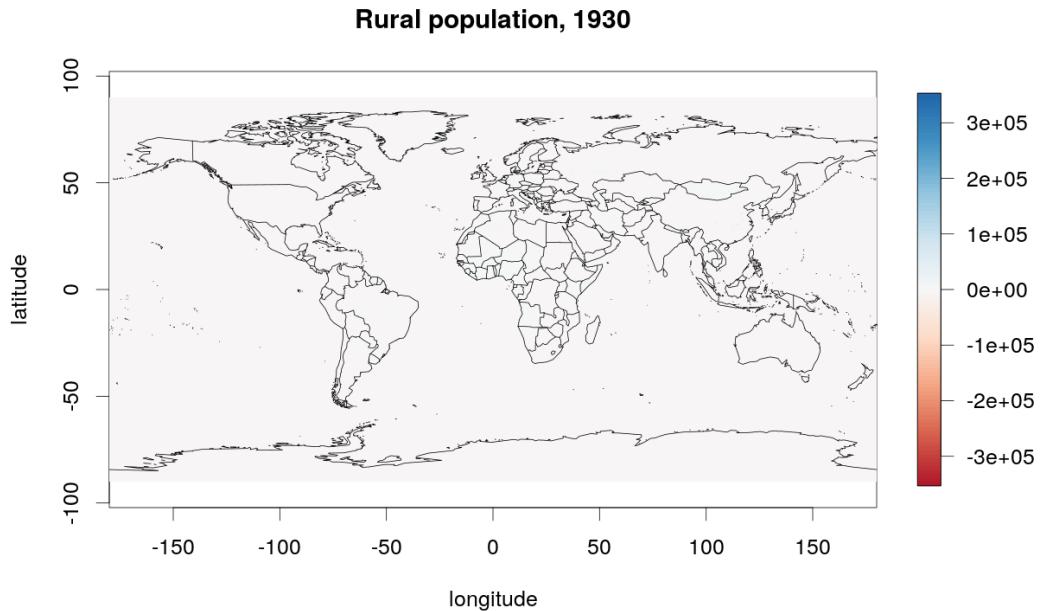
1940

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.59206e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.74074e+09 \\
 \sum_x \Delta_x &= 1.4868e+08 \\
 \sum_x |\Delta_x| &= 1.6295e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0933884 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.102352 \\
 \max_x \Delta_x &= 444255 \\
 \min_x \Delta_x &= -36927
 \end{aligned}$$

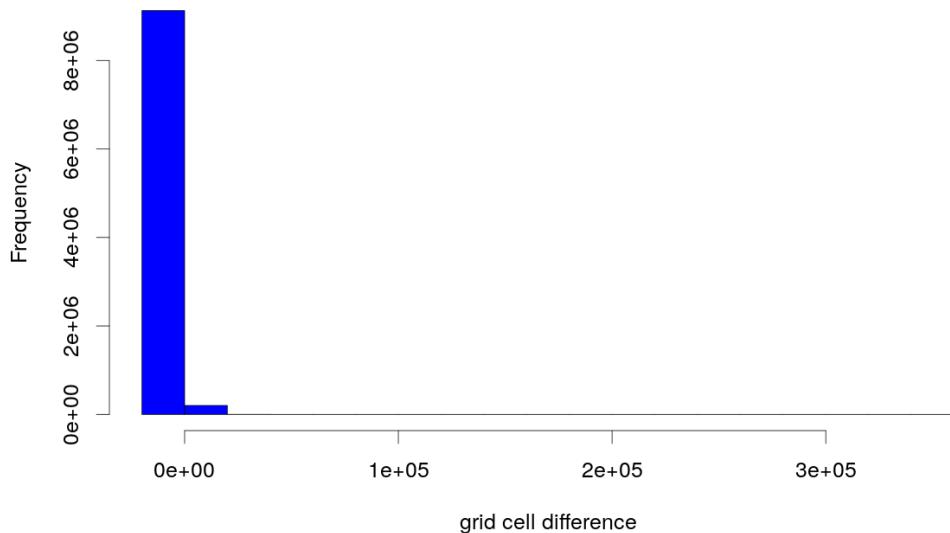
Rural population, 1940**Rural population, 1940**

128

1930

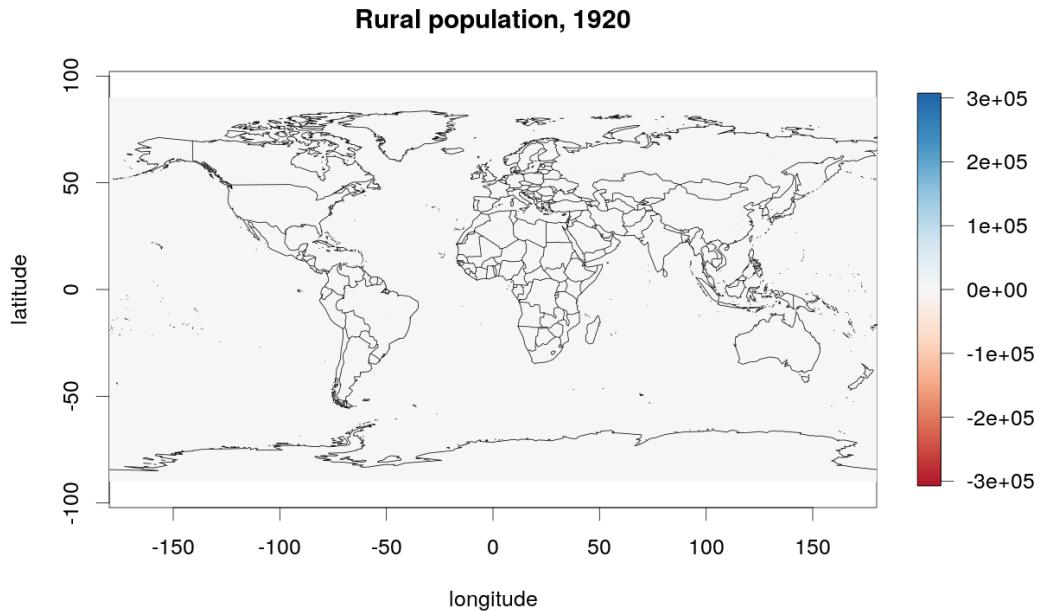


$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 1.44751\text{e+09} \\ \sum_x p_x^{(v3.3)} &= 1.62991\text{e+09} \\ \sum_x \Delta_x &= 1.82405\text{e+08} \\ \sum_x |\Delta_x| &= 1.91343\text{e+08} \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.126013 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.132188 \\ \max_x \Delta_x &= 349560 \\ \min_x \Delta_x &= -17258.2\end{aligned}$$

Rural population, 1930

130

1920



$$\sum_x p_x^{(v3.2.1)} = 1.33634e+09$$

$$\sum_x p_x^{(v3.3)} = 1.54035e+09$$

$$\sum_x \Delta_x = 2.04014e+08$$

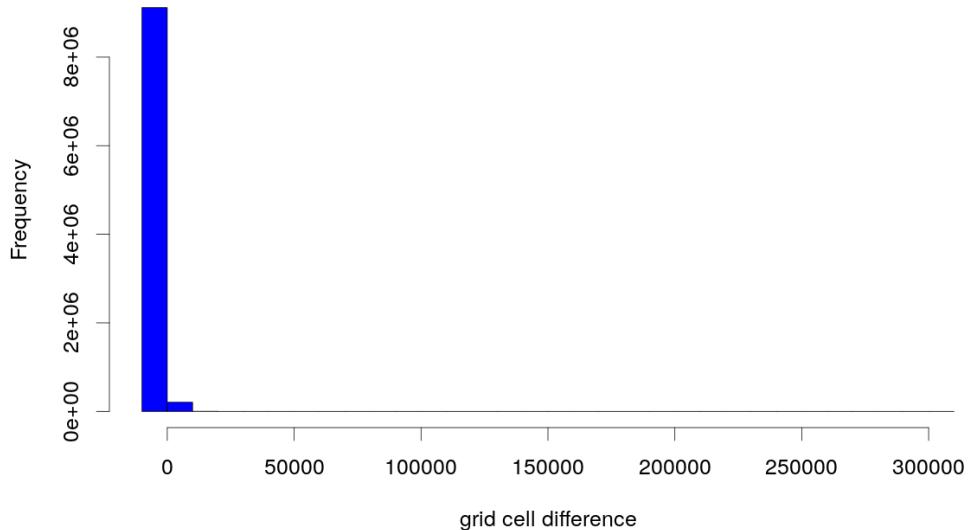
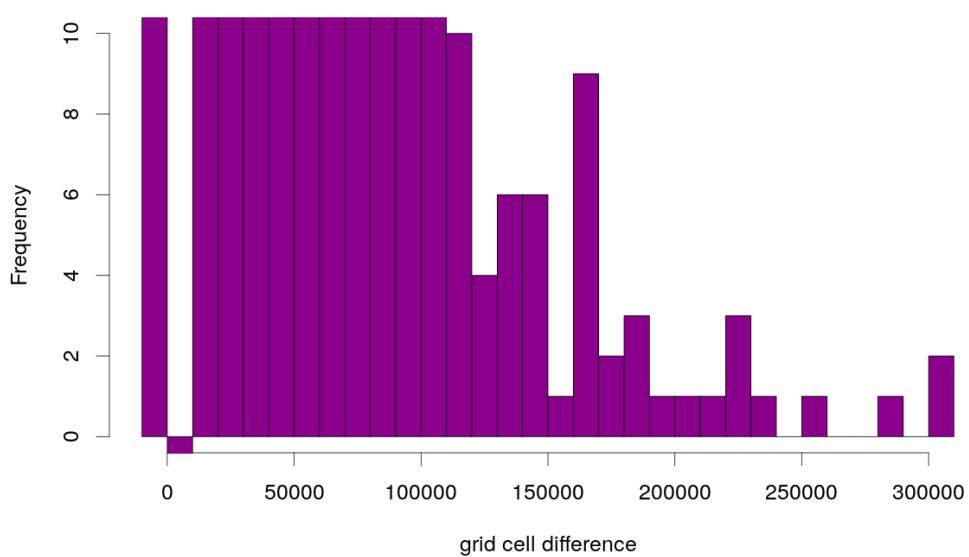
$$\sum_x |\Delta_x| = 2.07984e+08$$

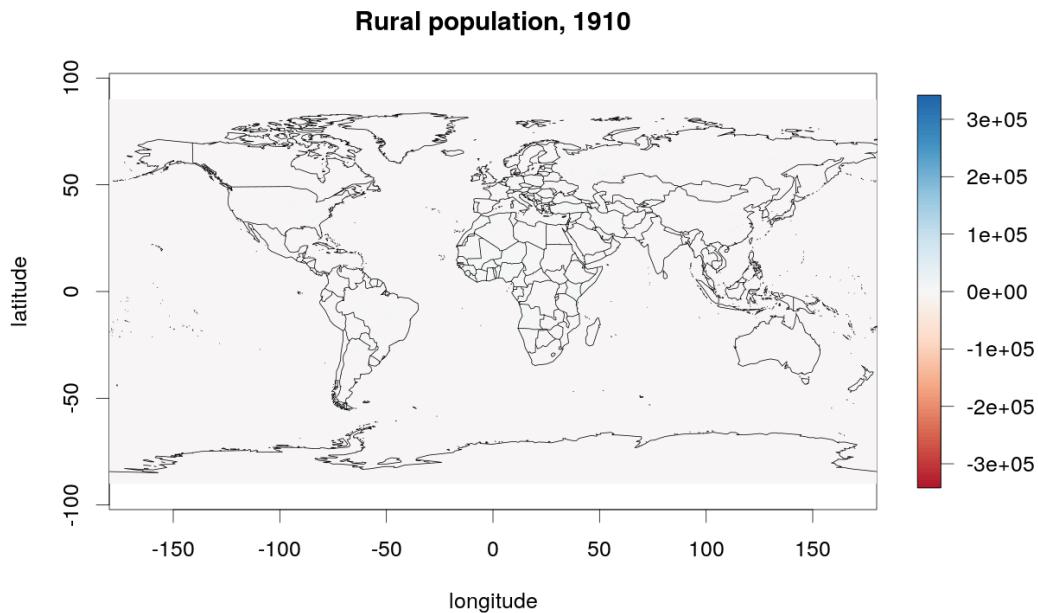
$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = 0.152666$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.155637$$

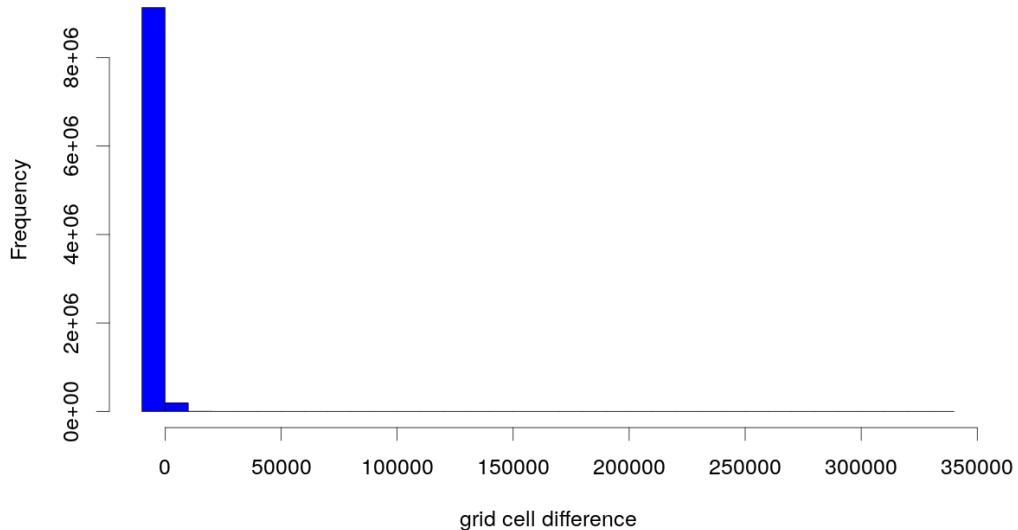
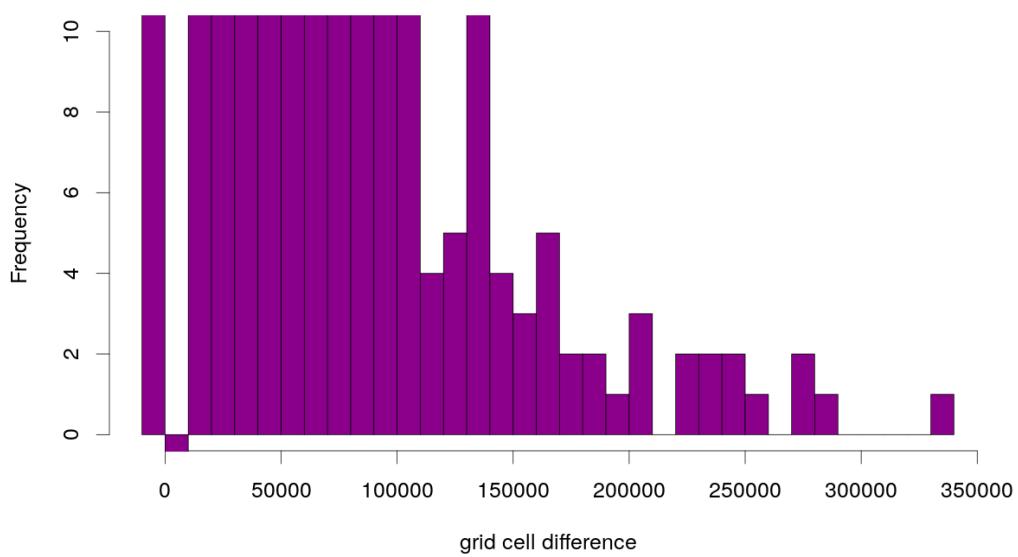
$$\max_x \Delta_x = 304320$$

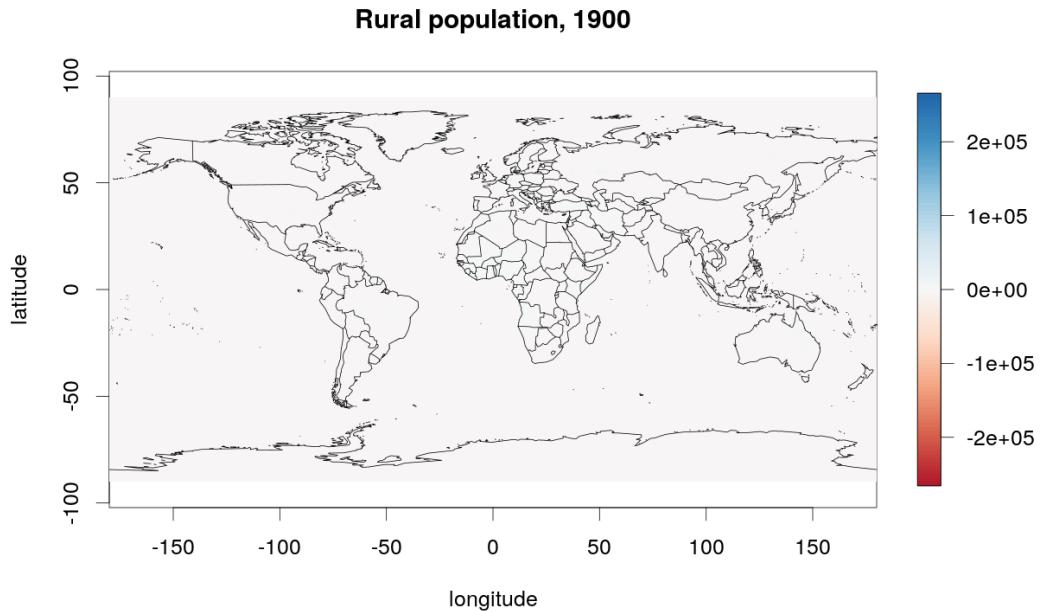
$$\min_x \Delta_x = -6854.48$$

Rural population, 1920**Rural population, 1920**

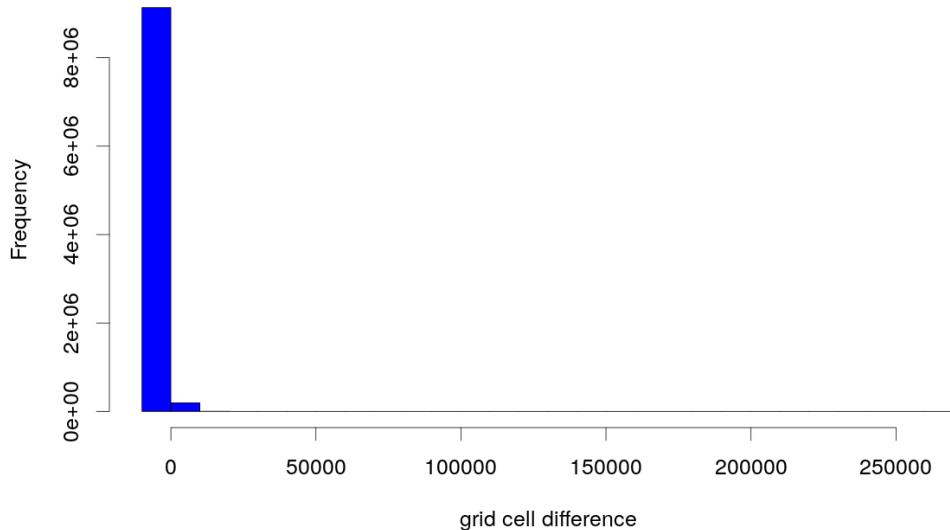
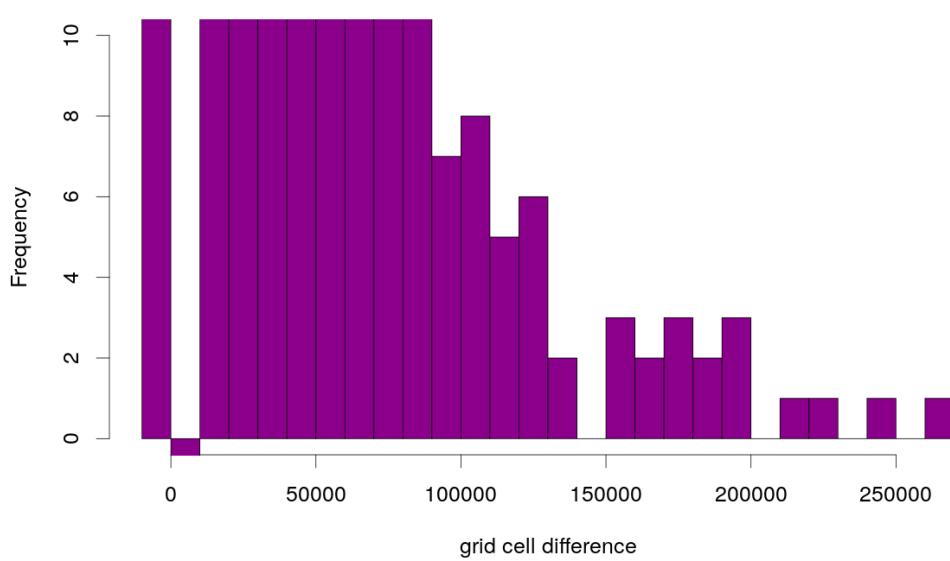
1910

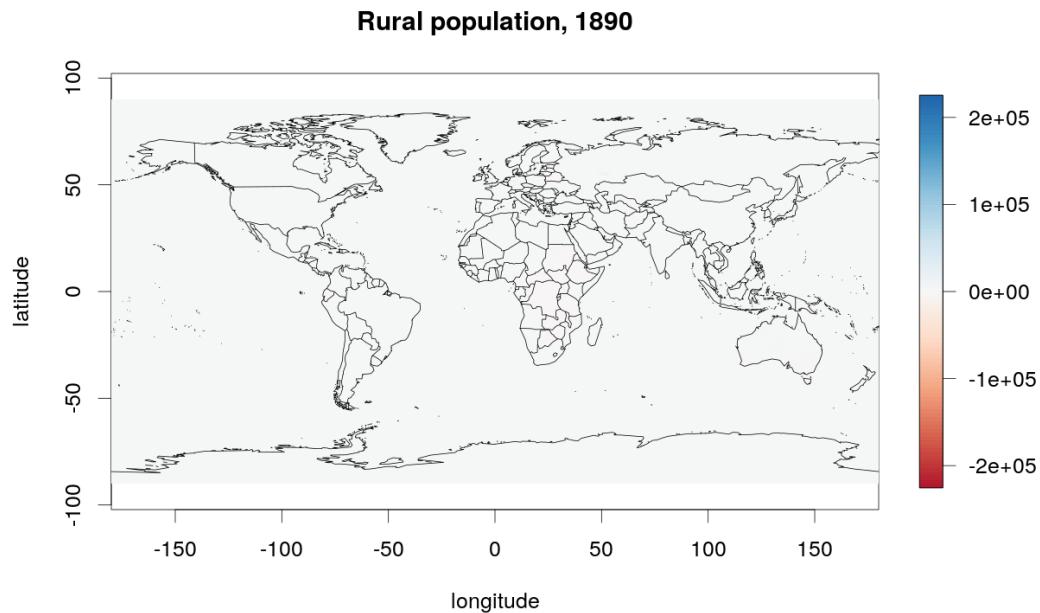
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.2477e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.47335e+09 \\
 \sum_x \Delta_x &= 2.25652e+08 \\
 \sum_x |\Delta_x| &= 2.2804e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.180854 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.182768 \\
 \max_x \Delta_x &= 338401 \\
 \min_x \Delta_x &= -6817.06
 \end{aligned}$$

Rural population, 1910**Rural population, 1910**

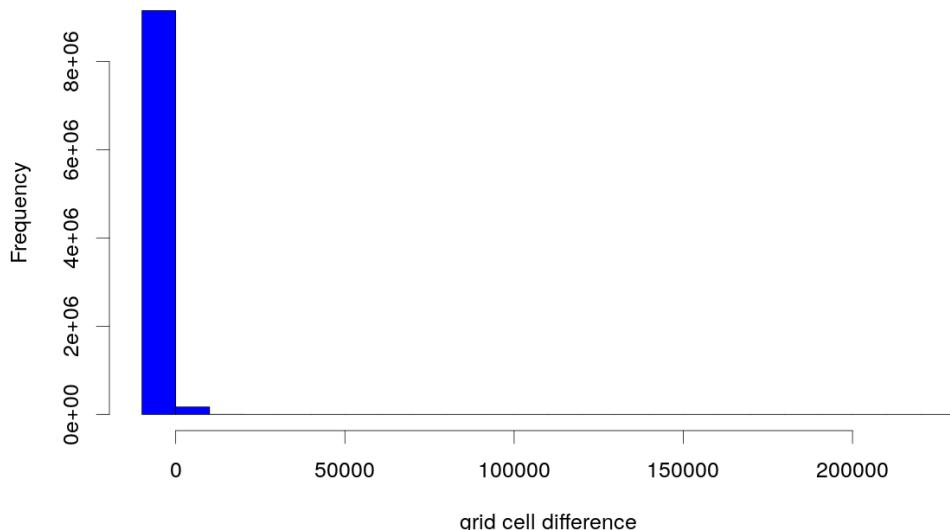
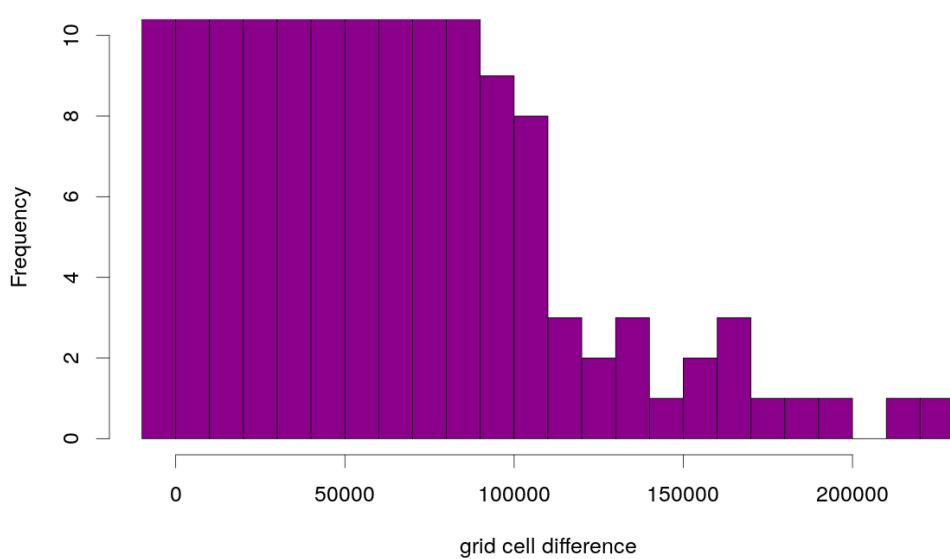
1900

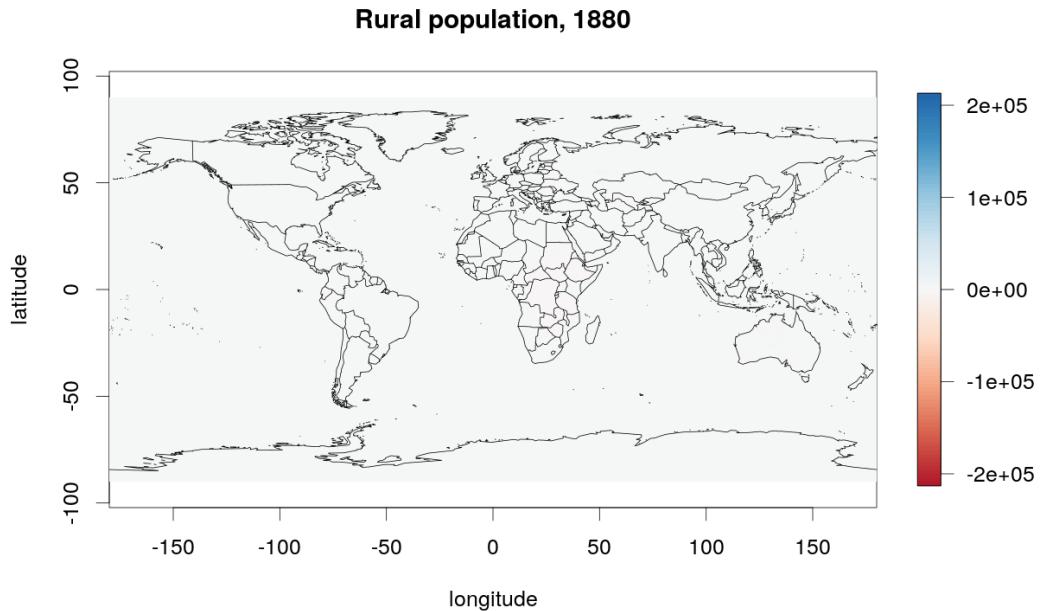
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.24509e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.39923e+09 \\
 \sum_x \Delta_x &= 1.54144e+08 \\
 \sum_x |\Delta_x| &= 1.56433e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.123801 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.12564 \\
 \max_x \Delta_x &= 263034 \\
 \min_x \Delta_x &= -6687.17
 \end{aligned}$$

Rural population, 1900**Rural population, 1900**

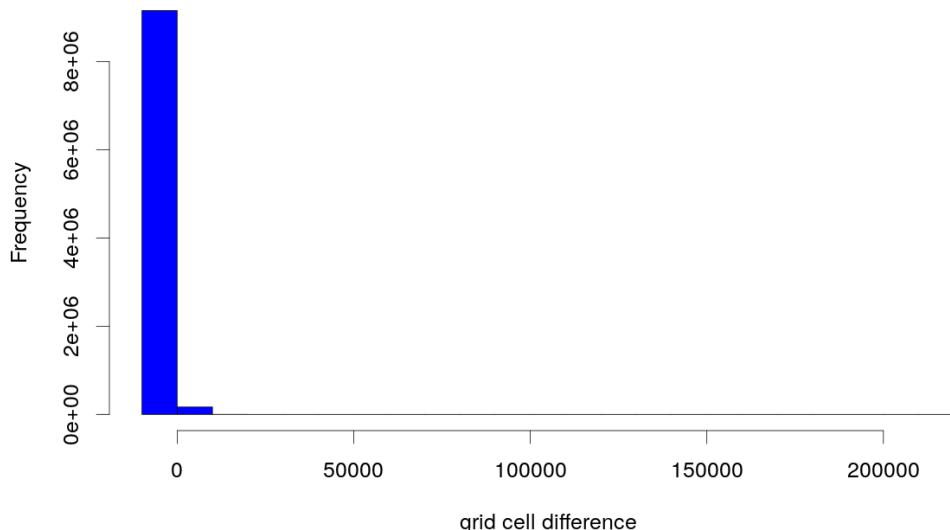
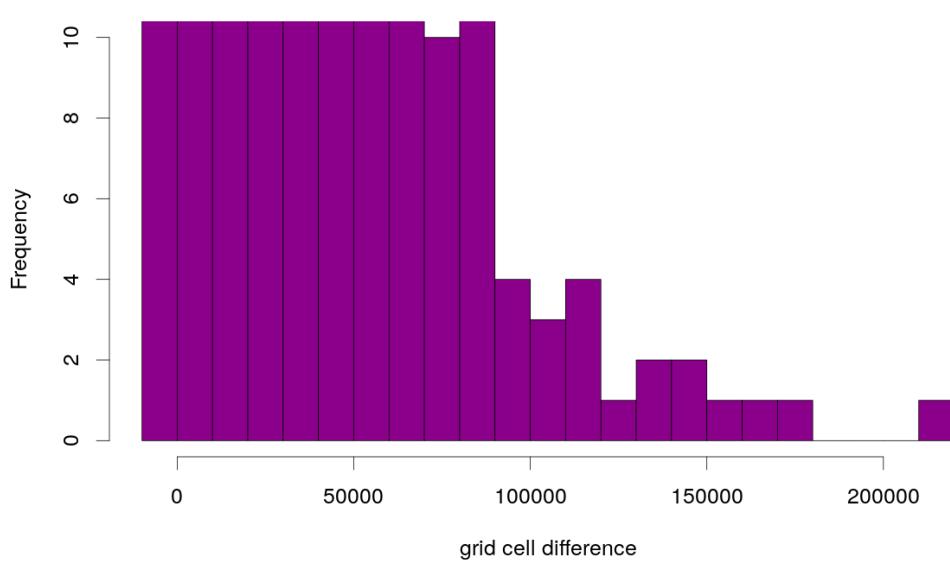
1890

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.20066e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.32837e+09 \\
 \sum_x \Delta_x &= 1.27706e+08 \\
 \sum_x |\Delta_x| &= 1.29905e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.106363 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.108195 \\
 \max_x \Delta_x &= 223249 \\
 \min_x \Delta_x &= -6553.39
 \end{aligned}$$

Rural population, 1890**Rural population, 1890**

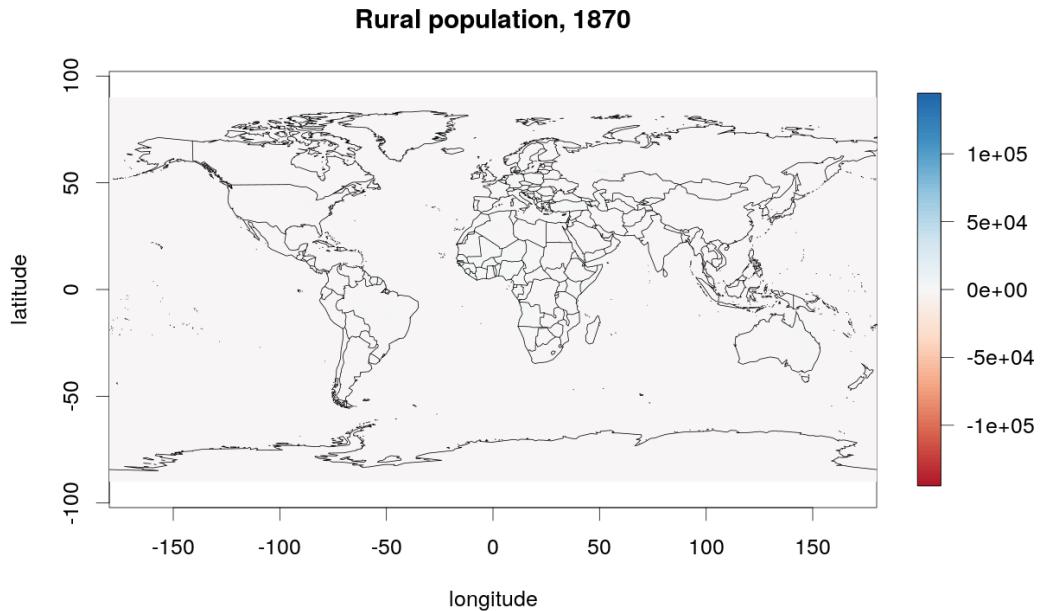
1880

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.14169e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.24588e+09 \\
 \sum_x \Delta_x &= 1.04186e+08 \\
 \sum_x |\Delta_x| &= 1.06302e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0912559 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0931093 \\
 \max_x \Delta_x &= 210850 \\
 \min_x \Delta_x &= -6416.15
 \end{aligned}$$

Rural population, 1880**Rural population, 1880**

140

1870



$$\sum_x p_x^{(v3.2.1)} = 1.10793 \times 10^9$$

$$\sum_x p_x^{(v3.3)} = 1.19062 \times 10^9$$

$$\sum_x \Delta_x = 8.269 \times 10^7$$

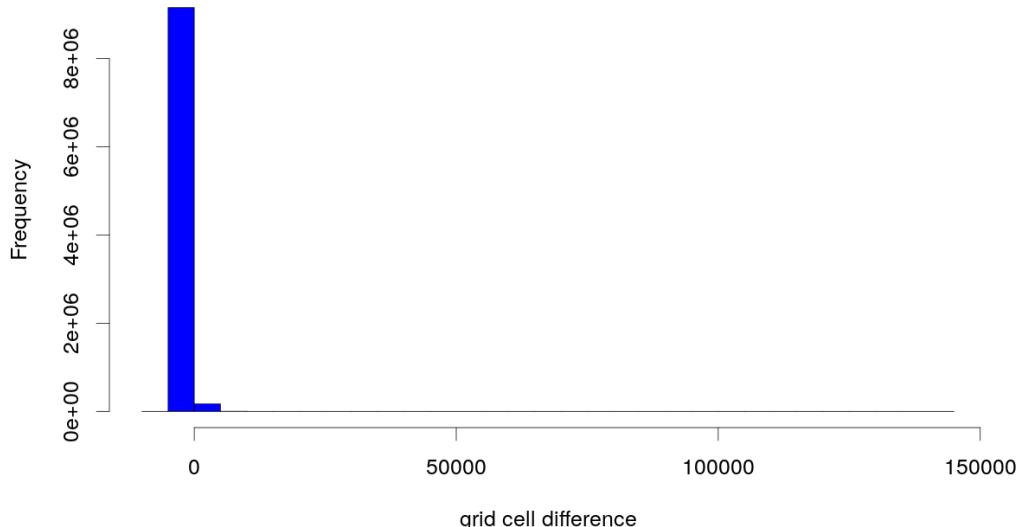
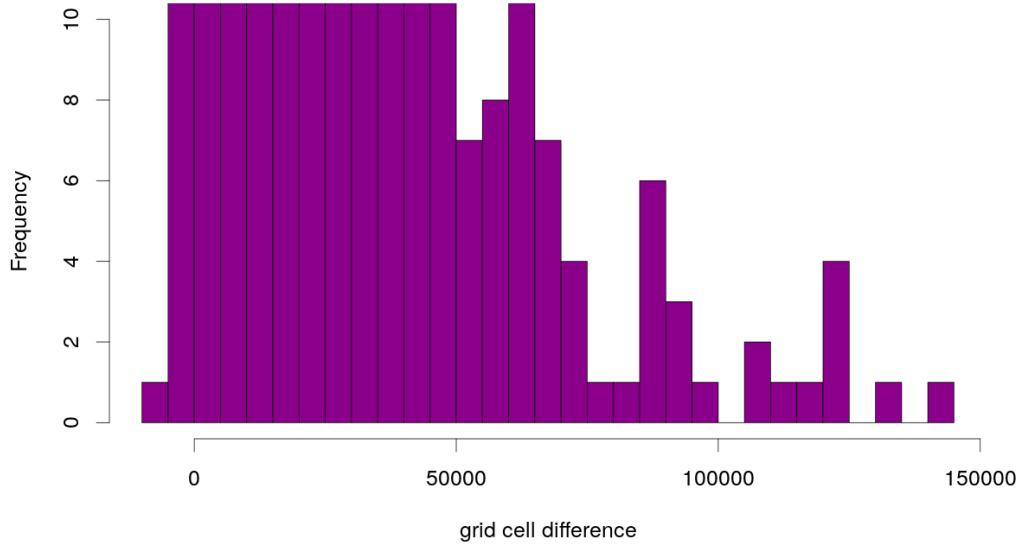
$$\sum_x |\Delta_x| = 8.47218 \times 10^7$$

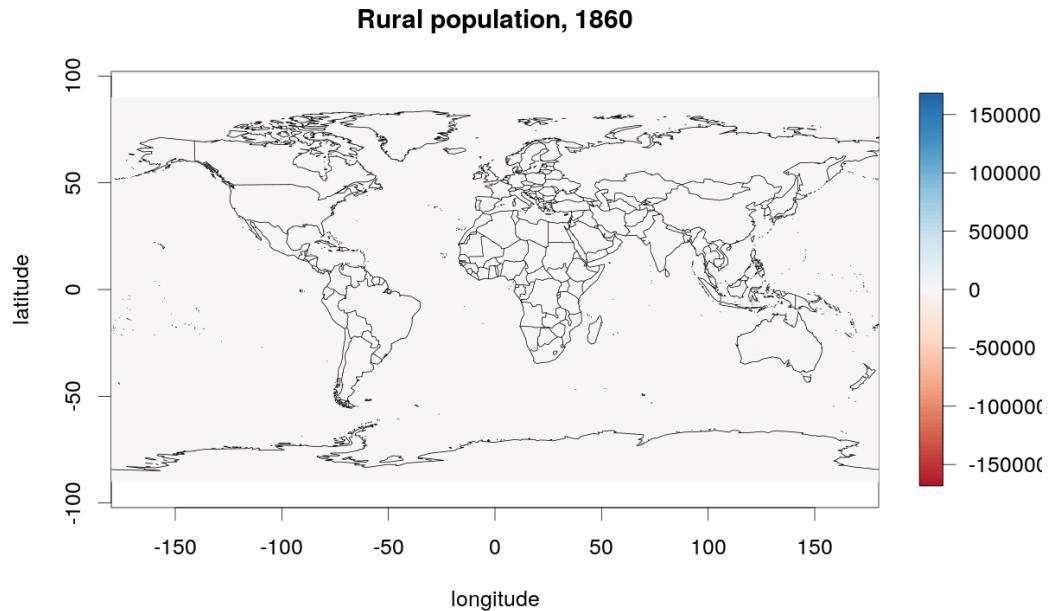
$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = 0.0746347$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.0764685$$

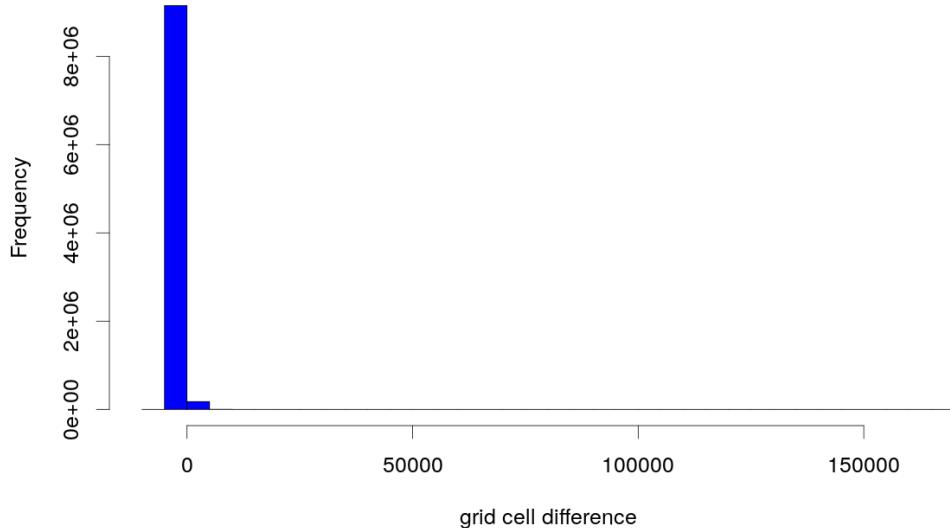
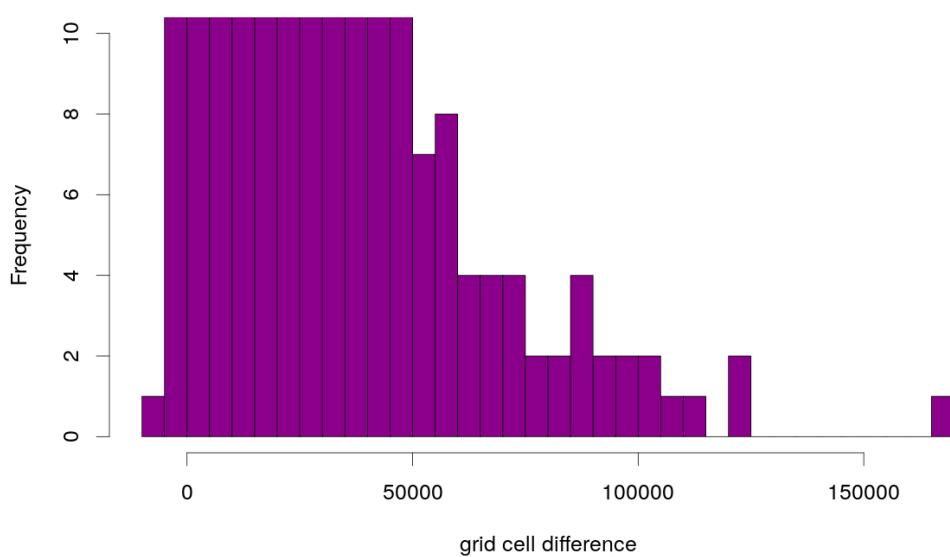
$$\max_x \Delta_x = 143151$$

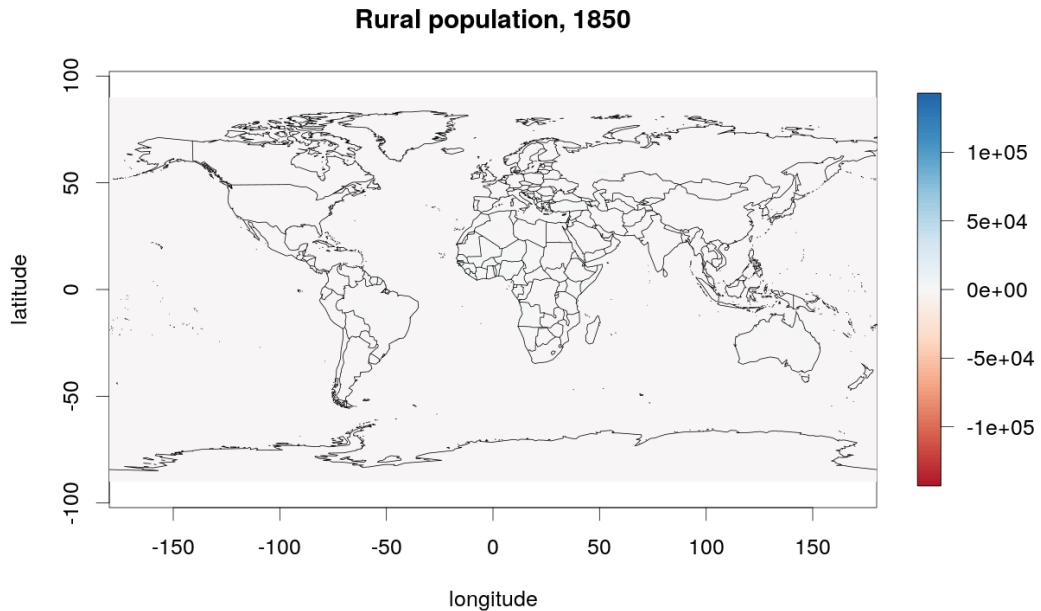
$$\min_x \Delta_x = -6275.83$$

Rural population, 1870**Rural population, 1870**

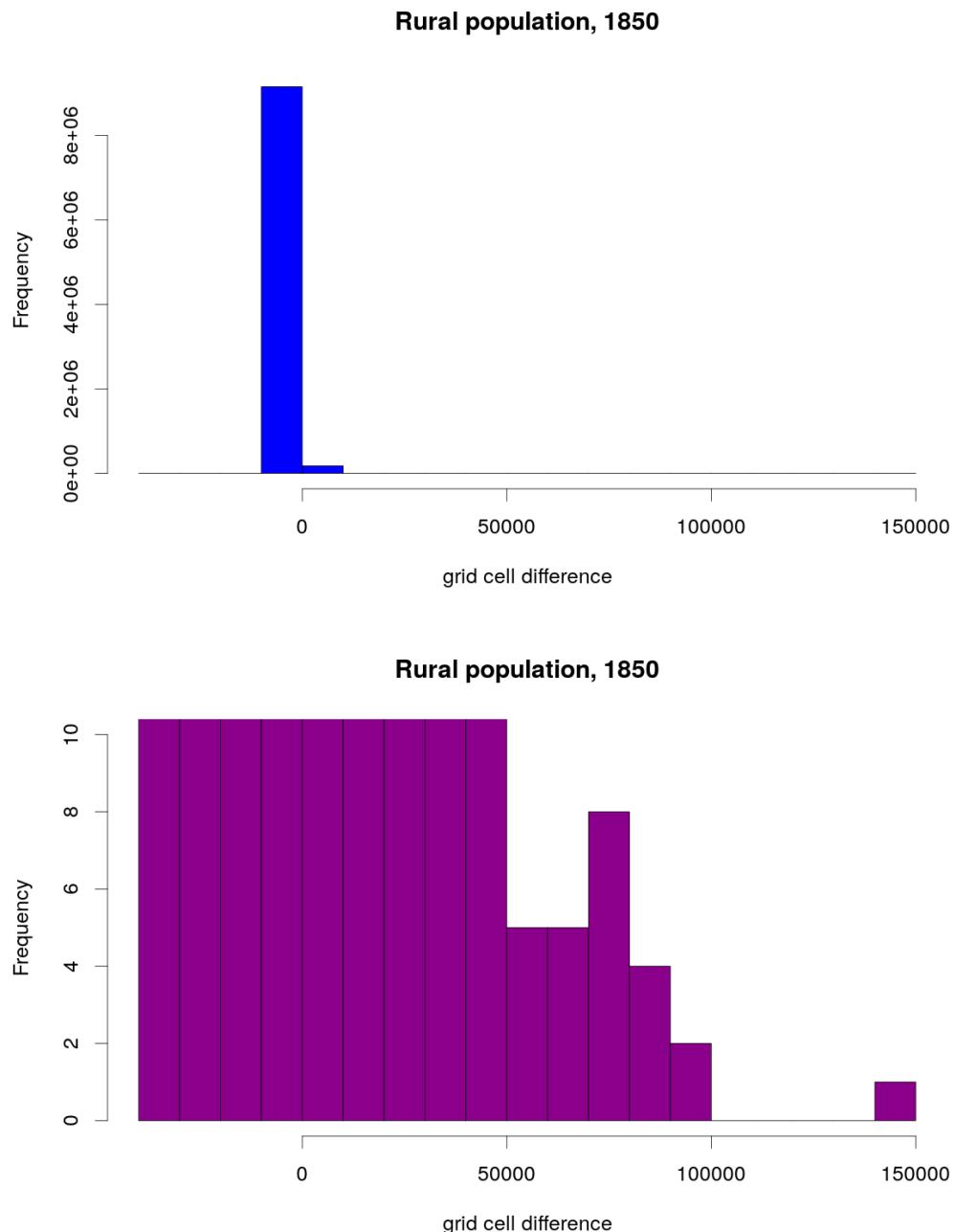
1860

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.13346e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.20278e+09 \\
 \sum_x \Delta_x &= 6.93212e+07 \\
 \sum_x |\Delta_x| &= 7.12739e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0611589 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0628817 \\
 \max_x \Delta_x &= 166572 \\
 \min_x \Delta_x &= -6132.81
 \end{aligned}$$

Rural population, 1860**Rural population, 1860**

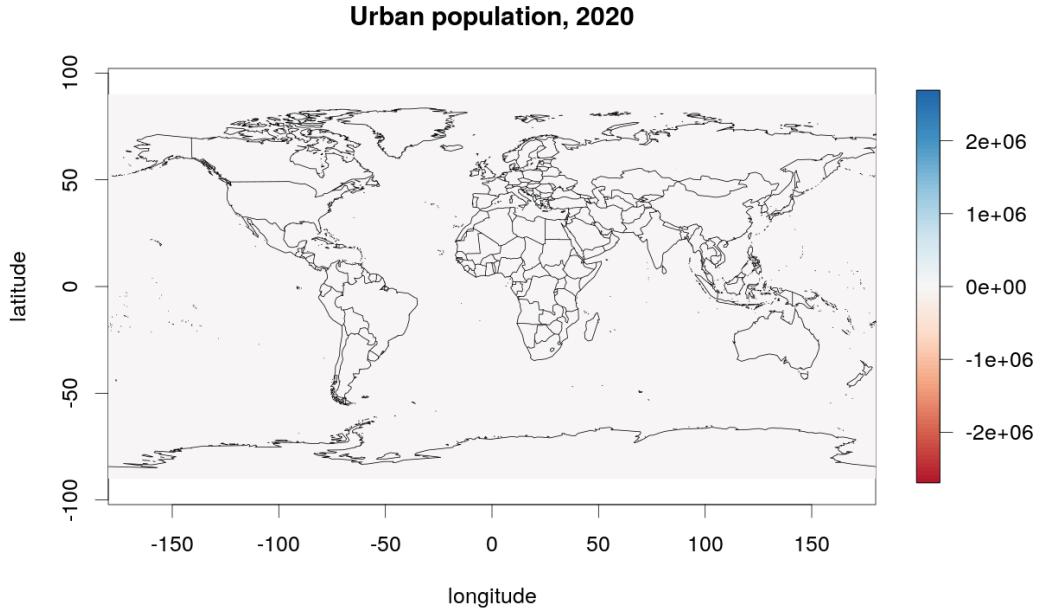
1850

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.10866e+09 \\
 \sum_x p_x^{(v3.3)} &= 1.15713e+09 \\
 \sum_x \Delta_x &= 4.84683e+07 \\
 \sum_x |\Delta_x| &= 5.49783e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0437179 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0495899 \\
 \max_x \Delta_x &= 141584 \\
 \min_x \Delta_x &= -38947.8
 \end{aligned}$$

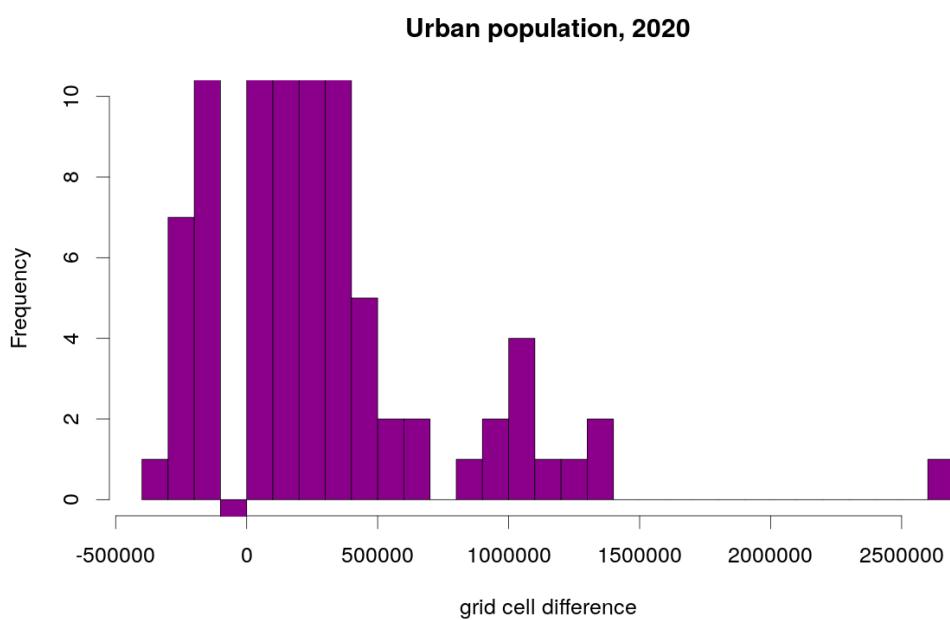
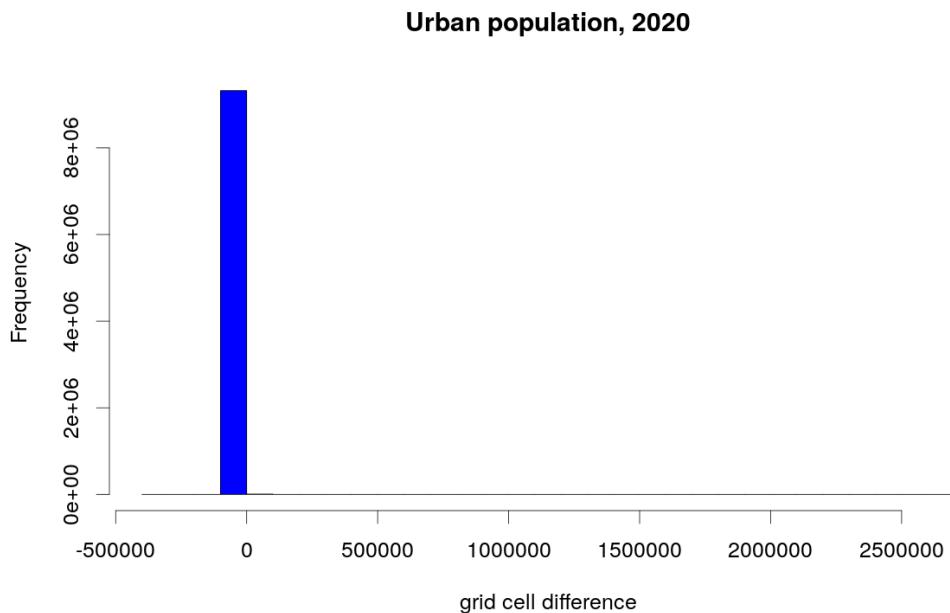


4 Urban population

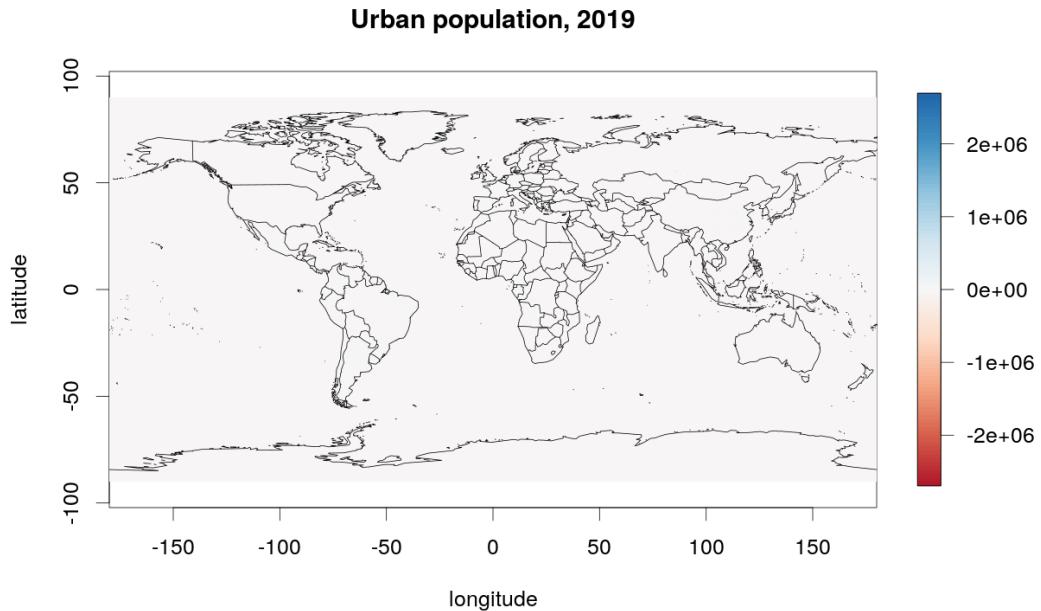
2020



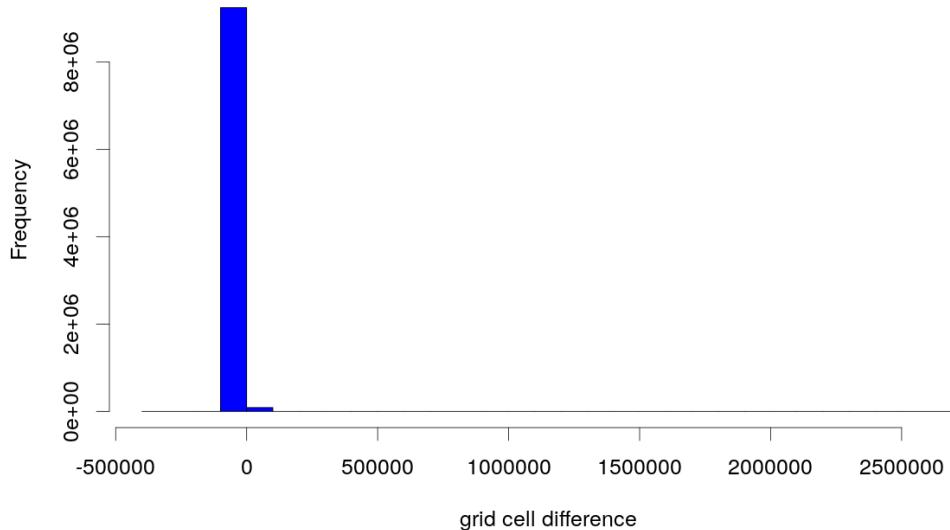
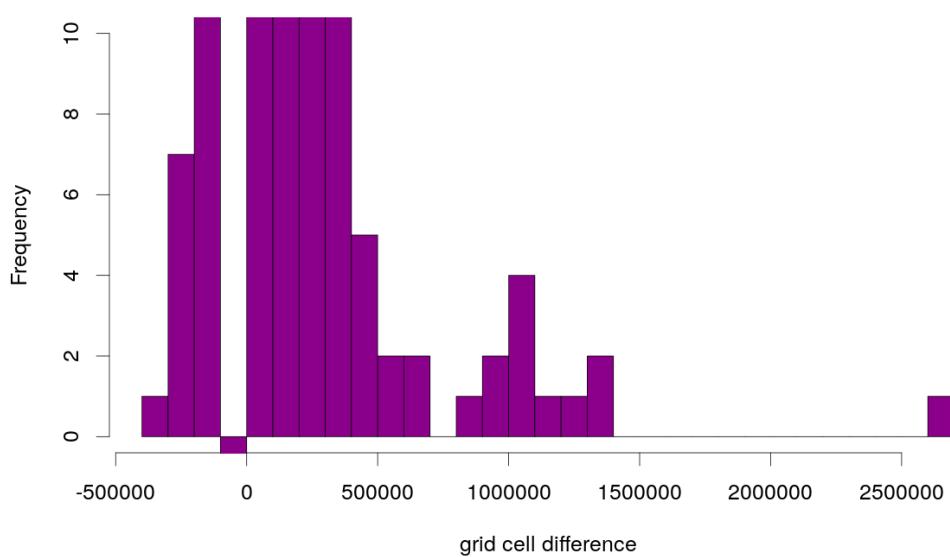
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 4.22546e+09 \\
 \sum_x p_x^{(v3.3)} &= 4.23487e+09 \\
 \sum_x \Delta_x &= 9.40816e+06 \\
 \sum_x |\Delta_x| &= 8.6161e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00222654 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0203909 \\
 \max_x \Delta_x &= 2.66658e+06 \\
 \min_x \Delta_x &= -317322
 \end{aligned}$$



2019

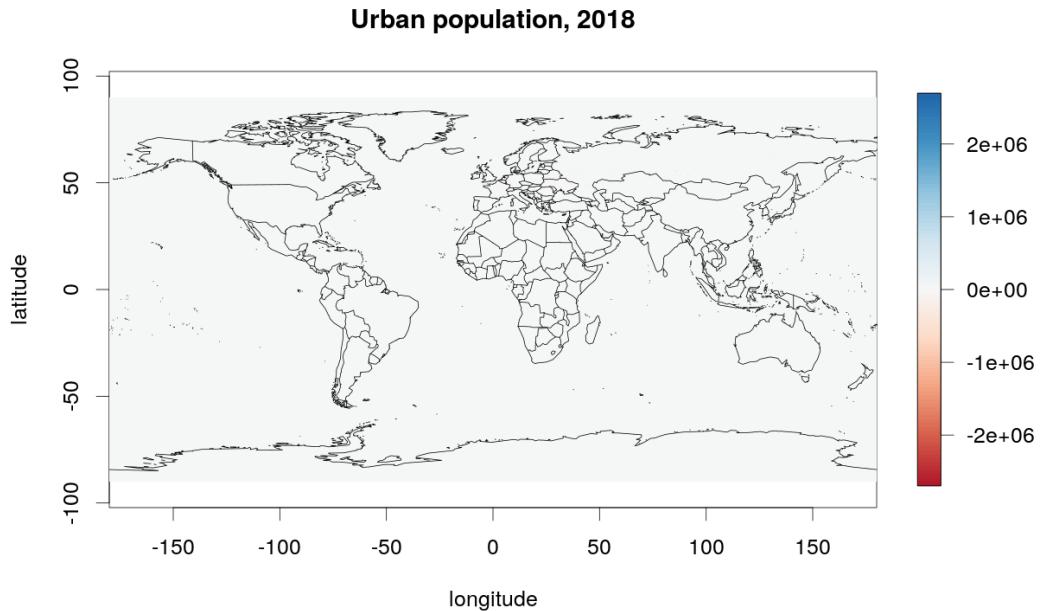


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 4.14932e+09 \\
 \sum_x p_x^{(v3.3)} &= 4.15778e+09 \\
 \sum_x \Delta_x &= 8.46041e+06 \\
 \sum_x |\Delta_x| &= 9.51999e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00203899 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0229435 \\
 \max_x \Delta_x &= 2.66844e+06 \\
 \min_x \Delta_x &= -317543
 \end{aligned}$$

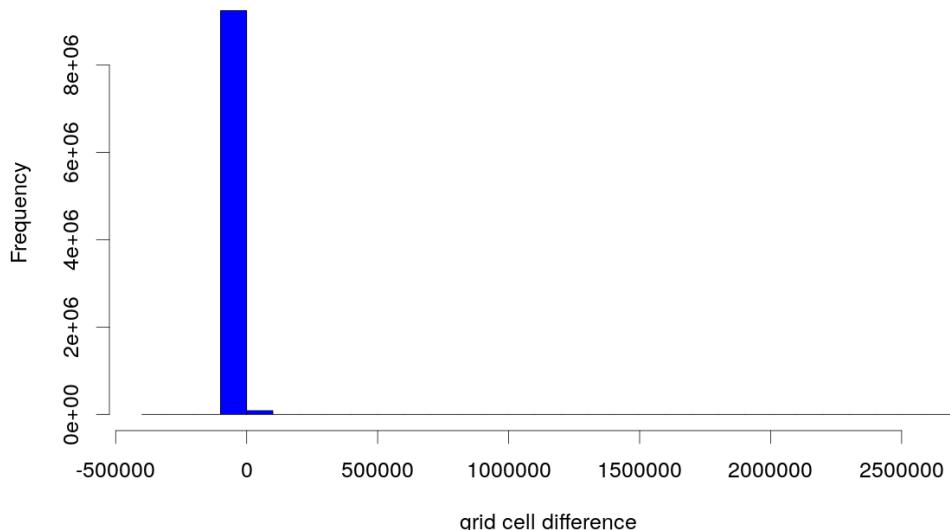
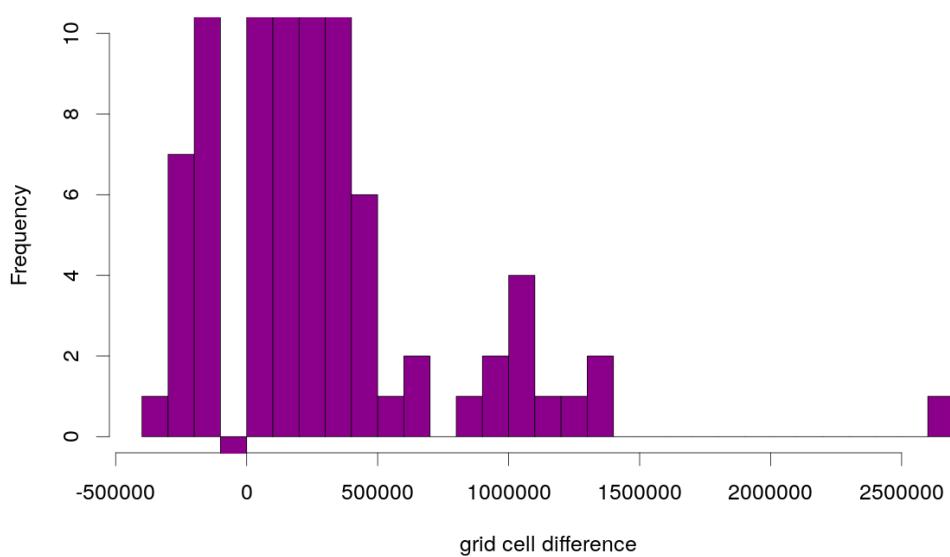
Urban population, 2019**Urban population, 2019**

150

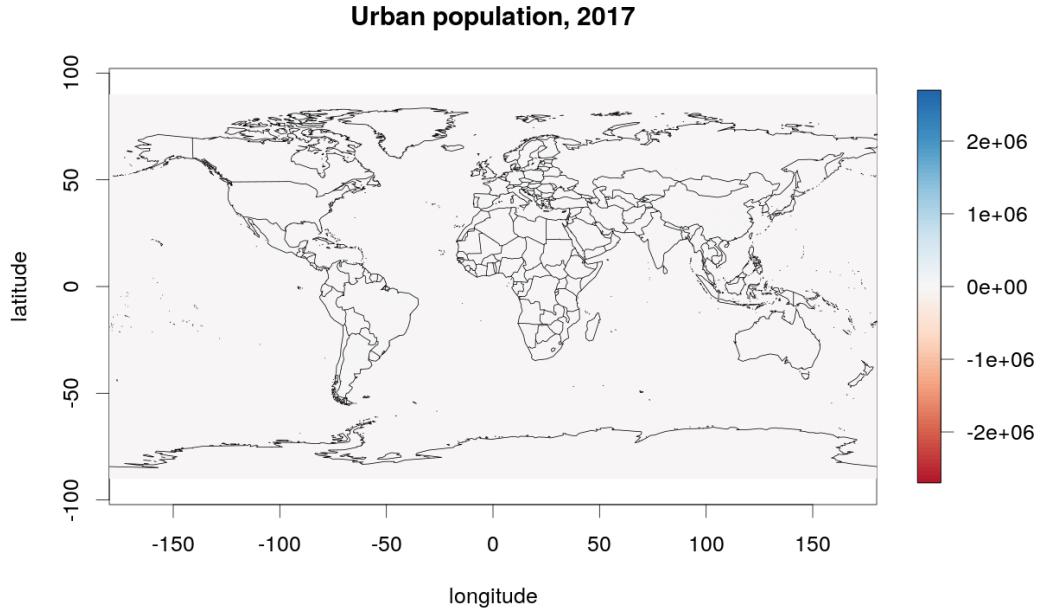
2018



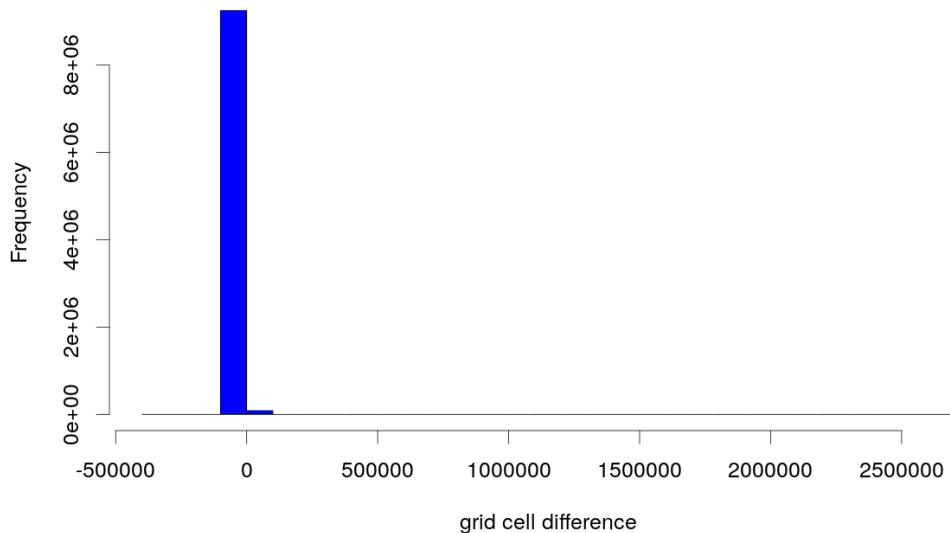
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 4.07392\text{e+09} \\ \sum_x p_x^{(v3.3)} &= 4.08235\text{e+09} \\ \sum_x \Delta_x &= 8.42135\text{e+06} \\ \sum_x |\Delta_x| &= 9.50191\text{e+07} \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00206714 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0233238 \\ \max_x \Delta_x &= 2.6703\text{e+06} \\ \min_x \Delta_x &= -317764\end{aligned}$$

Urban population, 2018**Urban population, 2018**

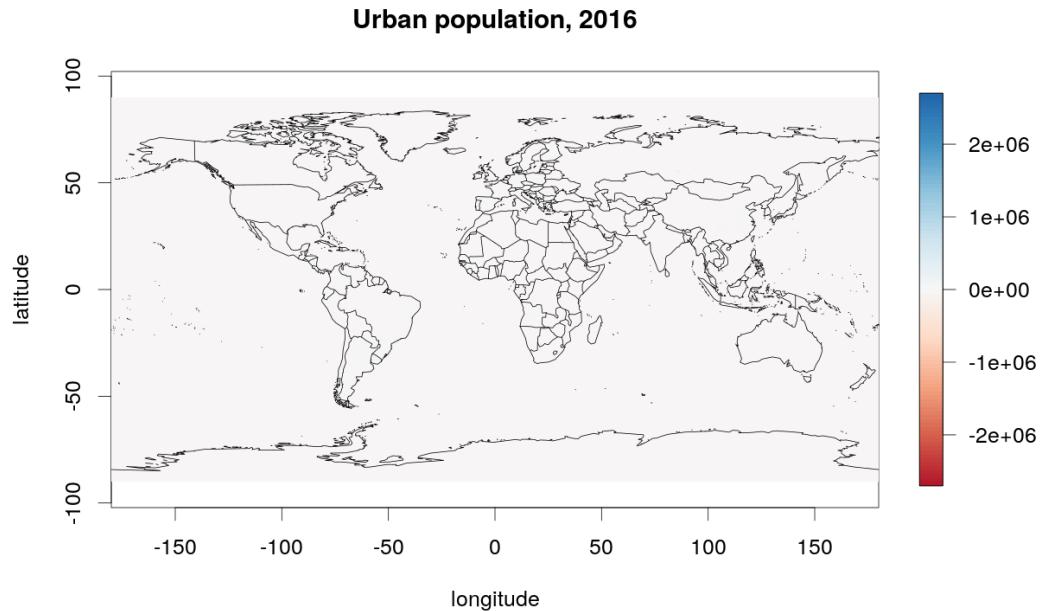
2017



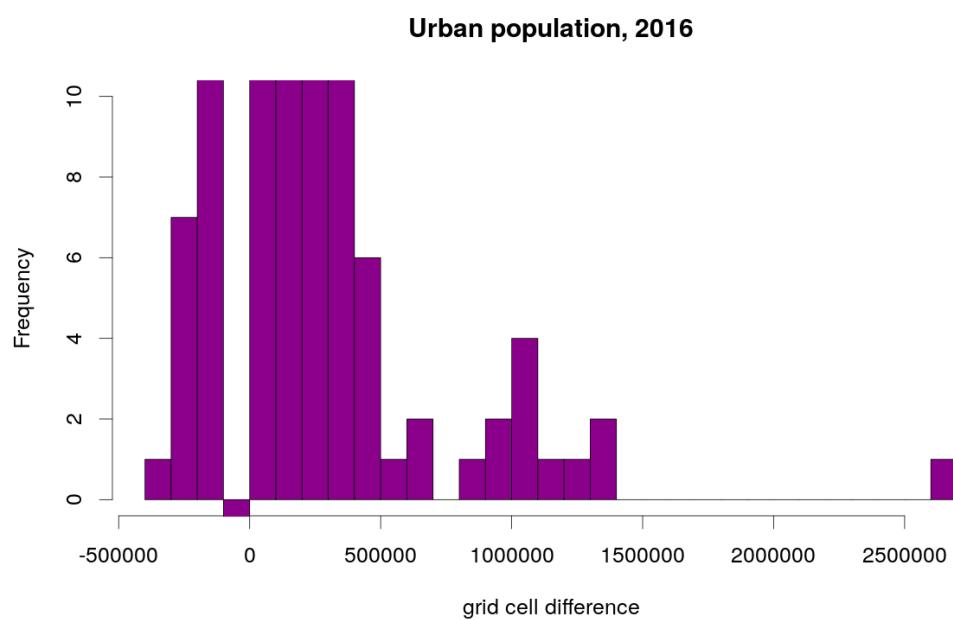
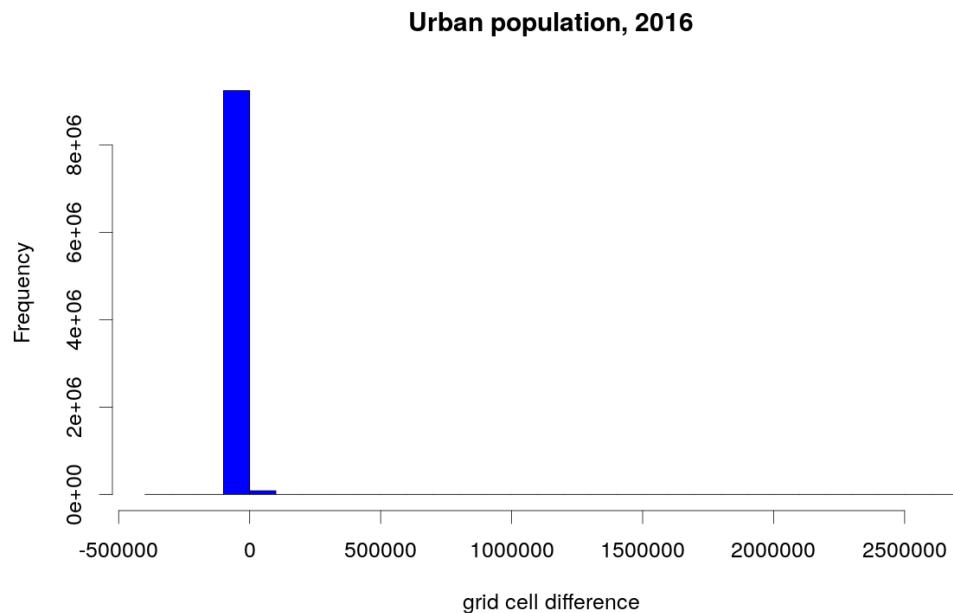
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.99842e+09 \\
 \sum_x p_x^{(v3.3)} &= 4.00772e+09 \\
 \sum_x \Delta_x &= 9.2992e+06 \\
 \sum_x |\Delta_x| &= 9.33036e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00232572 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0233351 \\
 \max_x \Delta_x &= 2.67216e+06 \\
 \min_x \Delta_x &= -317985
 \end{aligned}$$

Urban population, 2017

2016

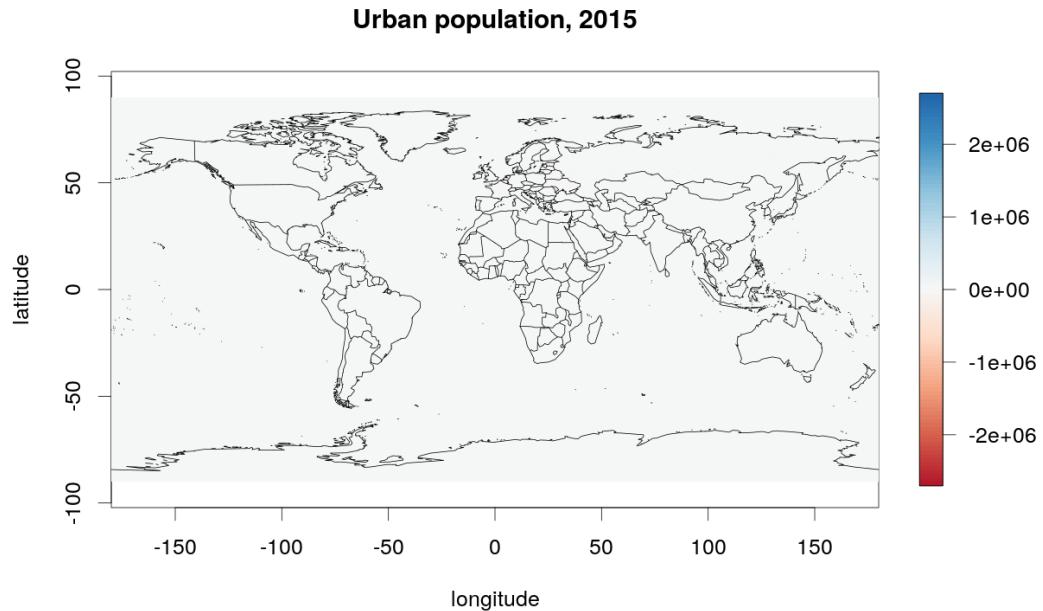


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.92426e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.93391e+09 \\
 \sum_x \Delta_x &= 9.65351e+06 \\
 \sum_x |\Delta_x| &= 9.28484e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00245996 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0236601 \\
 \max_x \Delta_x &= 2.67402e+06 \\
 \min_x \Delta_x &= -318206
 \end{aligned}$$

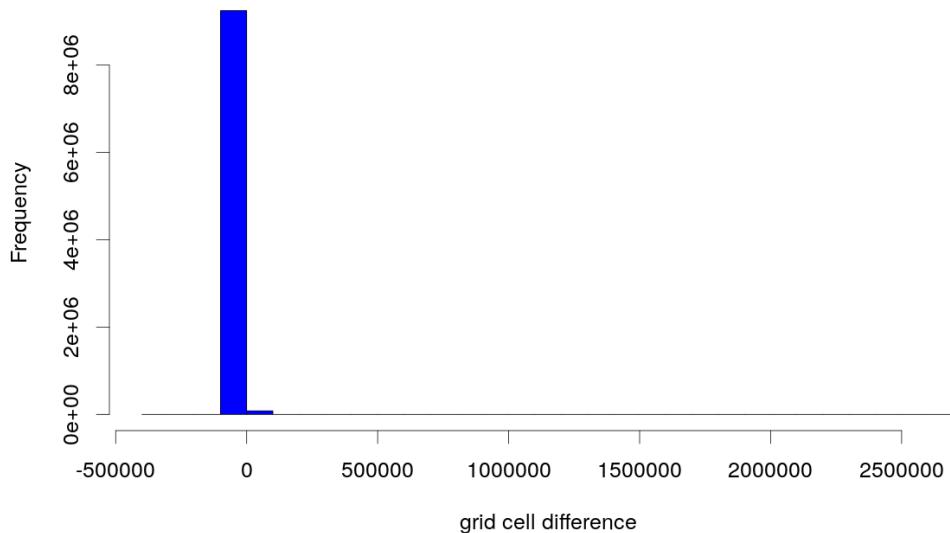
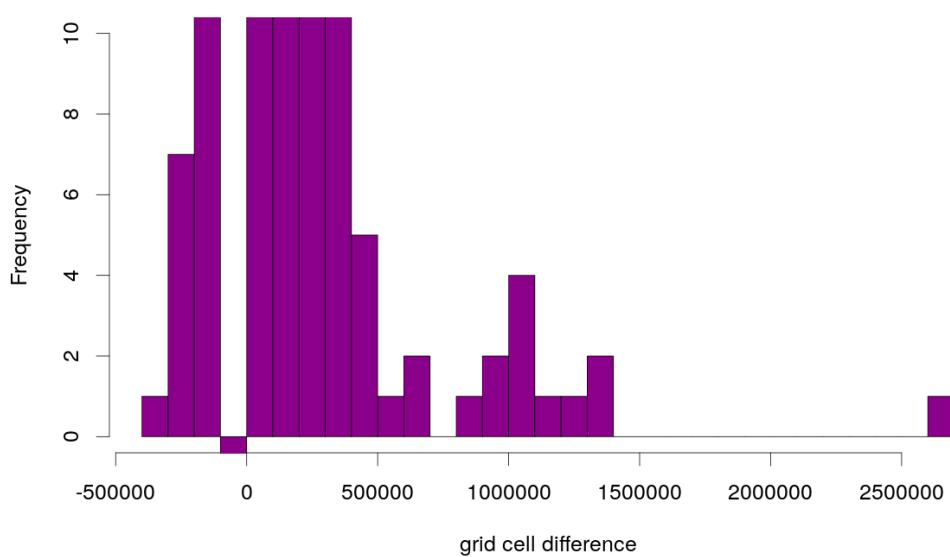


156

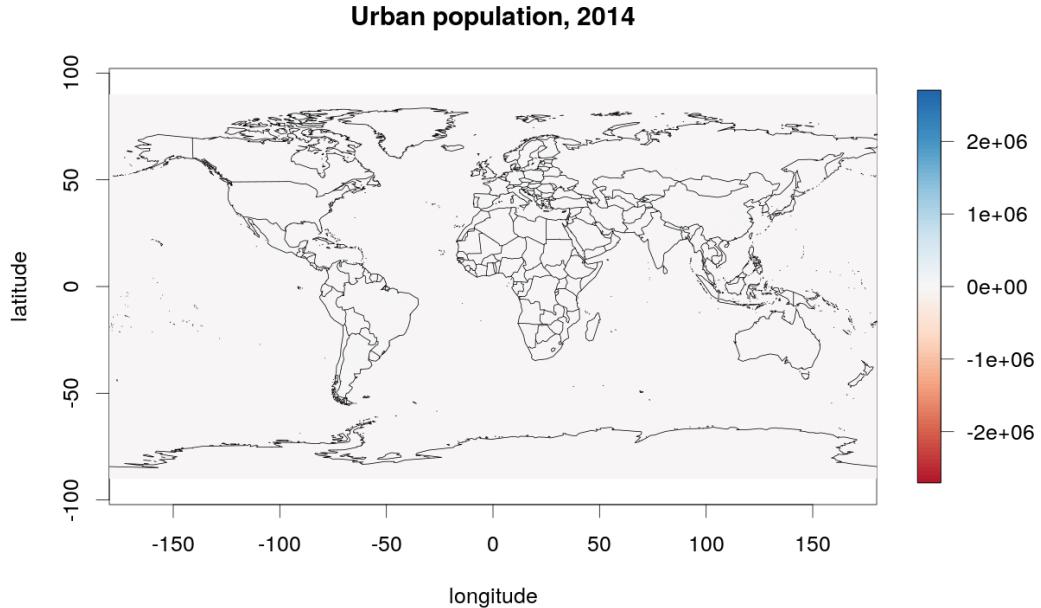
2015



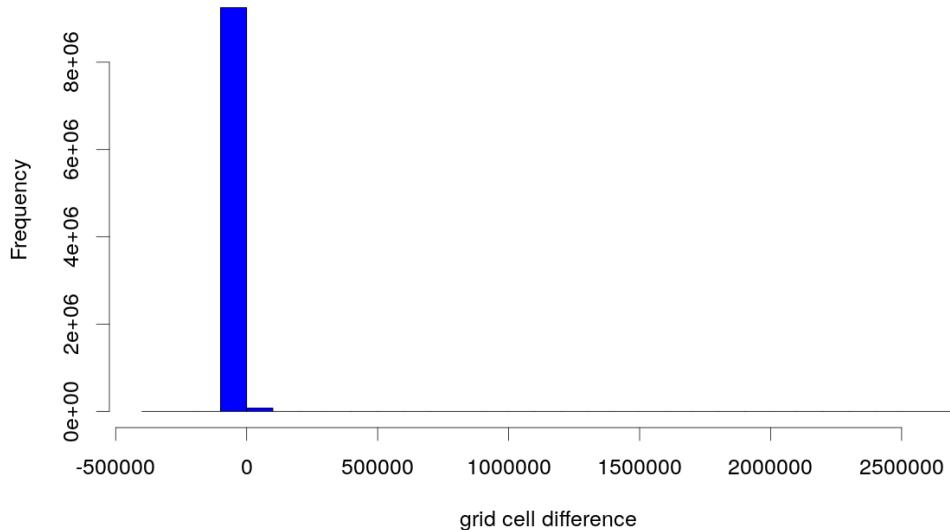
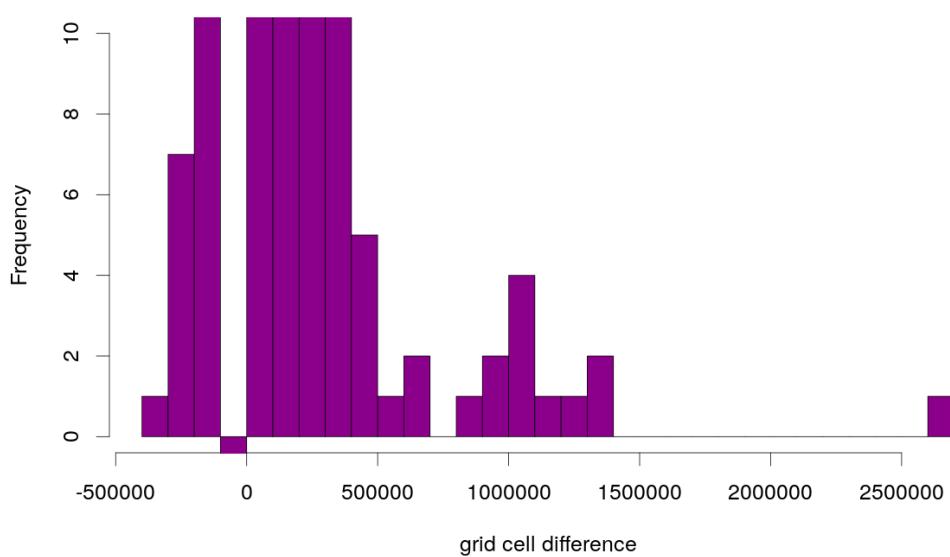
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.85085\text{e+09} \\ \sum_x p_x^{(v3.3)} &= 3.86085\text{e+09} \\ \sum_x \Delta_x &= 9.99326\text{e+06} \\ \sum_x |\Delta_x| &= 9.26566\text{e+07} \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00259508 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0240613 \\ \max_x \Delta_x &= 2.67588\text{e+06} \\ \min_x \Delta_x &= -318427\end{aligned}$$

Urban population, 2015**Urban population, 2015**

2014

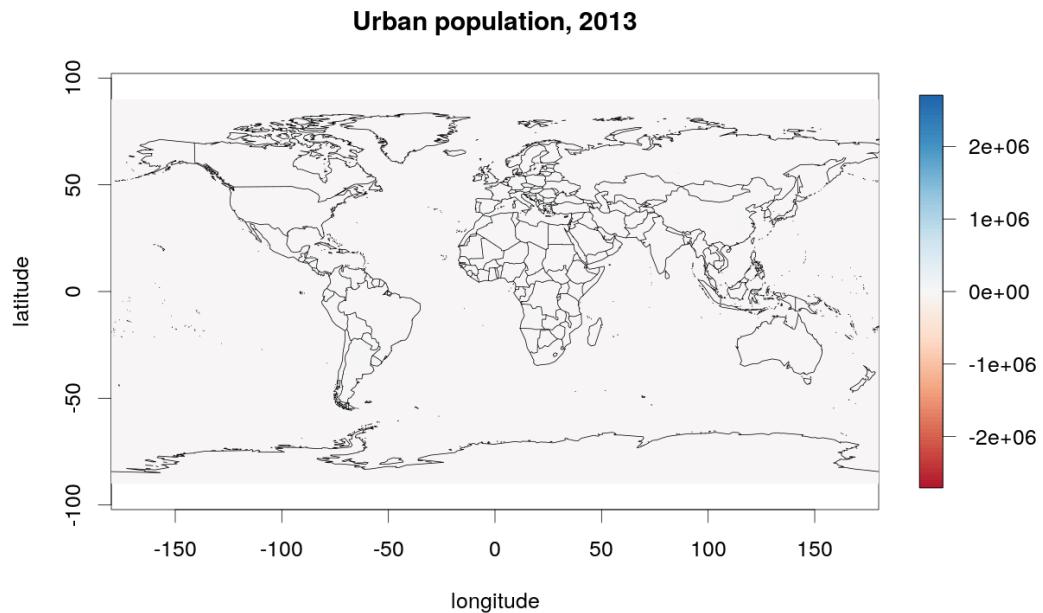


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.77821\text{e+09} \\
 \sum_x p_x^{(v3.3)} &= 3.78692\text{e+09} \\
 \sum_x \Delta_x &= 8.71572\text{e+06} \\
 \sum_x |\Delta_x| &= 8.99354\text{e+07} \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00230684 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0238037 \\
 \max_x \Delta_x &= 2.67774\text{e+06} \\
 \min_x \Delta_x &= -318649
 \end{aligned}$$

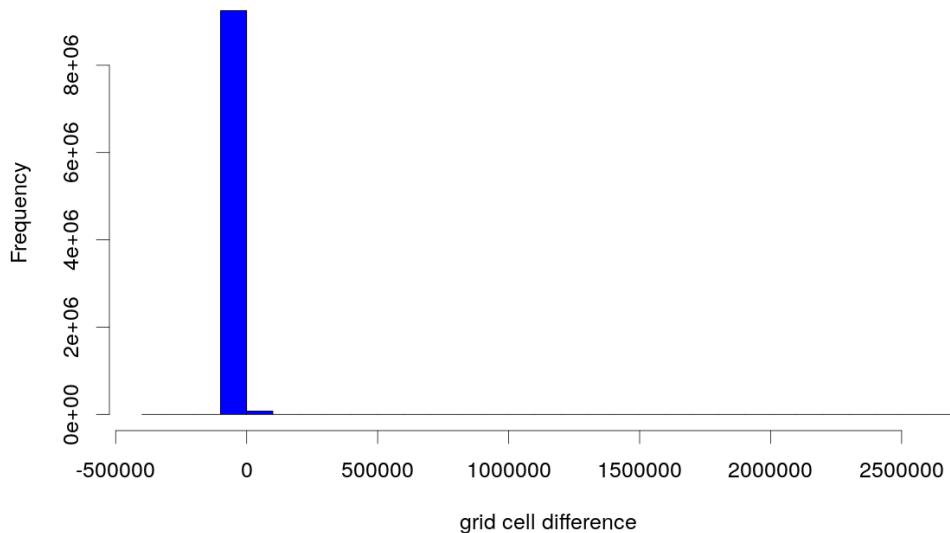
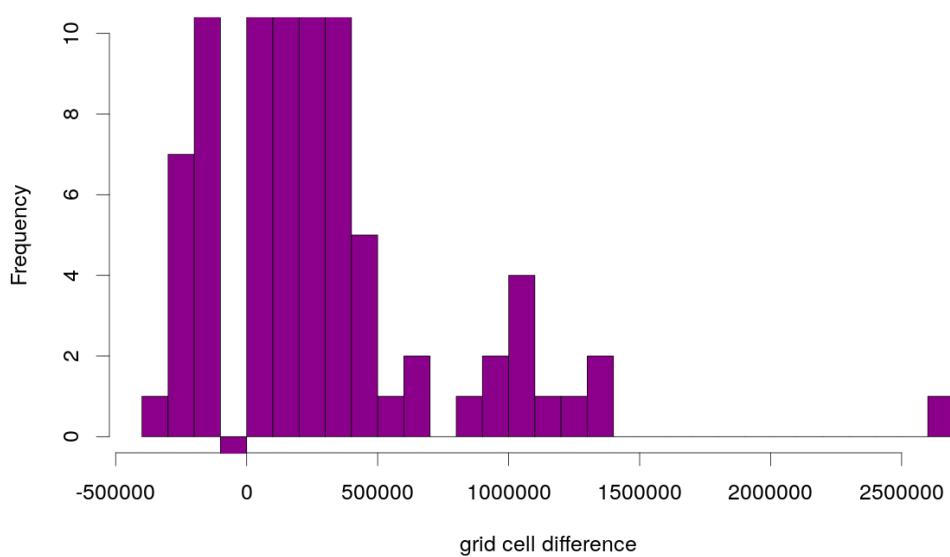
Urban population, 2014**Urban population, 2014**

160

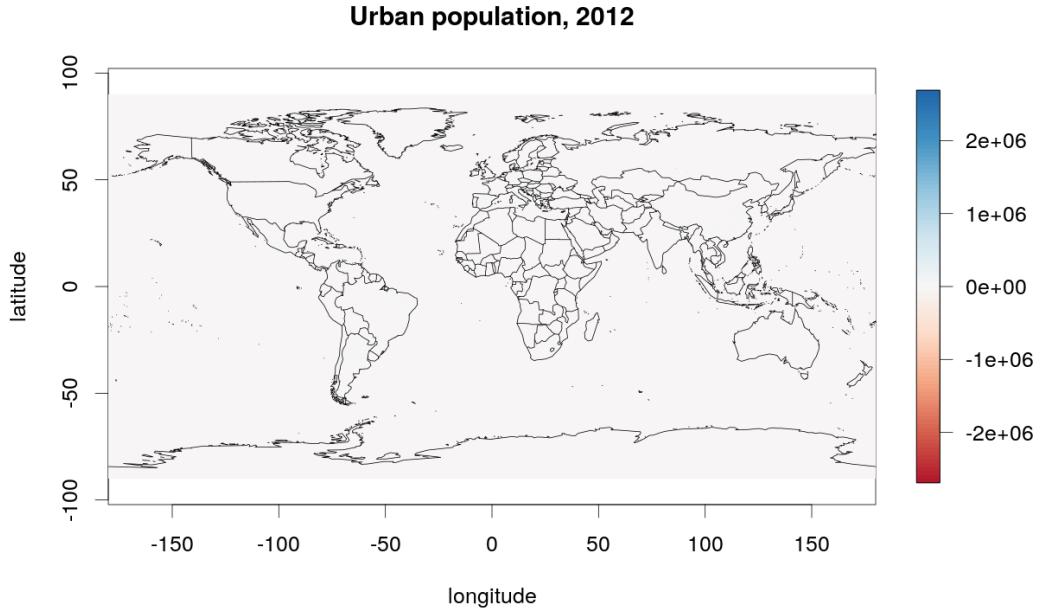
2013



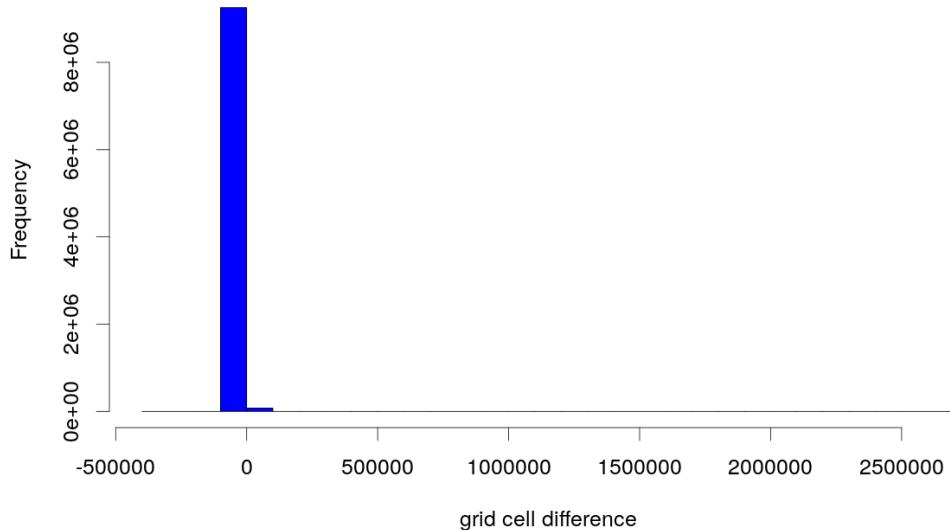
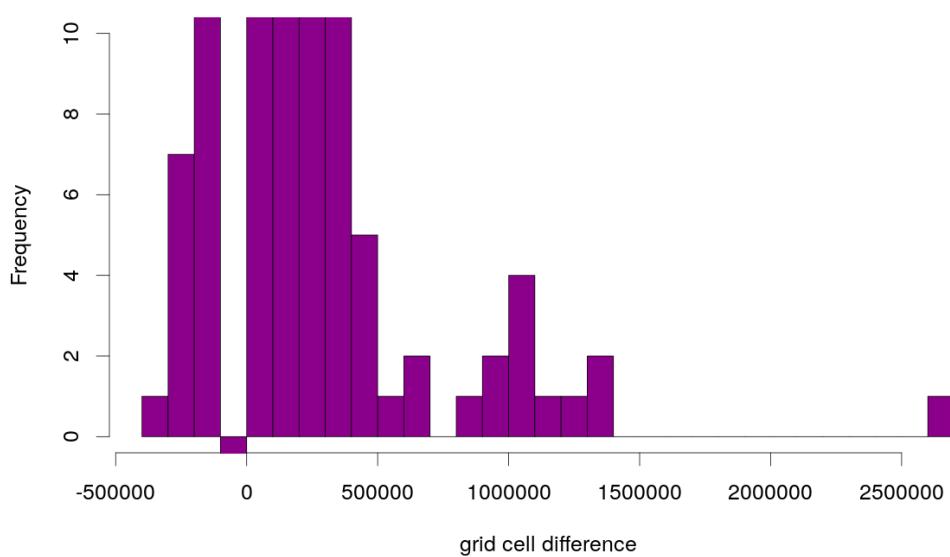
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.70632\text{e+09} \\ \sum_x p_x^{(v3.3)} &= 3.71422\text{e+09} \\ \sum_x \Delta_x &= 7.90514\text{e+06} \\ \sum_x |\Delta_x| &= 8.75782\text{e+07} \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00213288 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0236294 \\ \max_x \Delta_x &= 2.67959\text{e+06} \\ \min_x \Delta_x &= -318870\end{aligned}$$

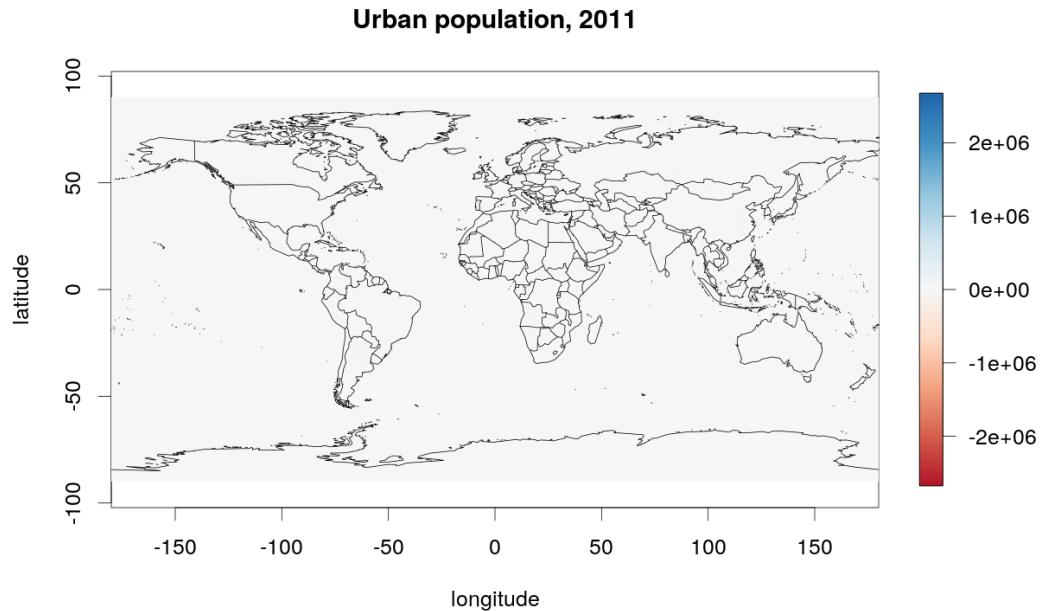
Urban population, 2013**Urban population, 2013**

2012

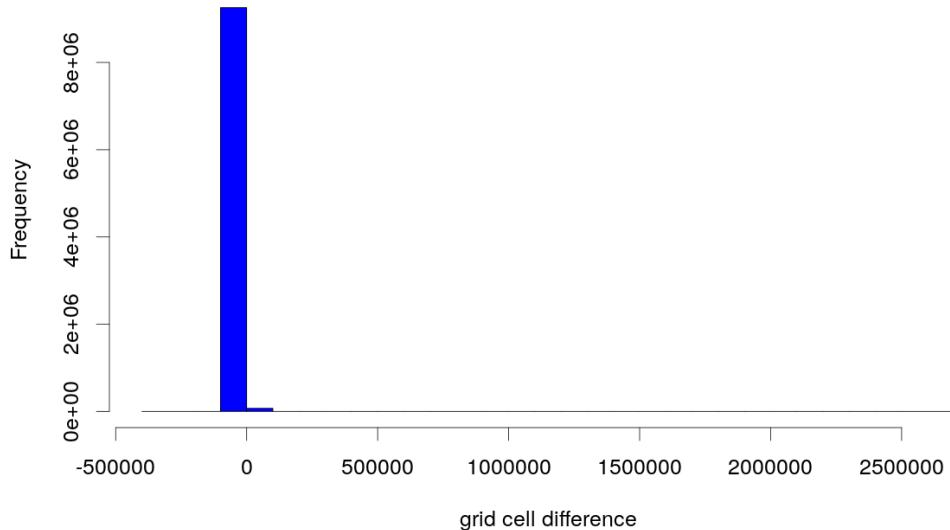
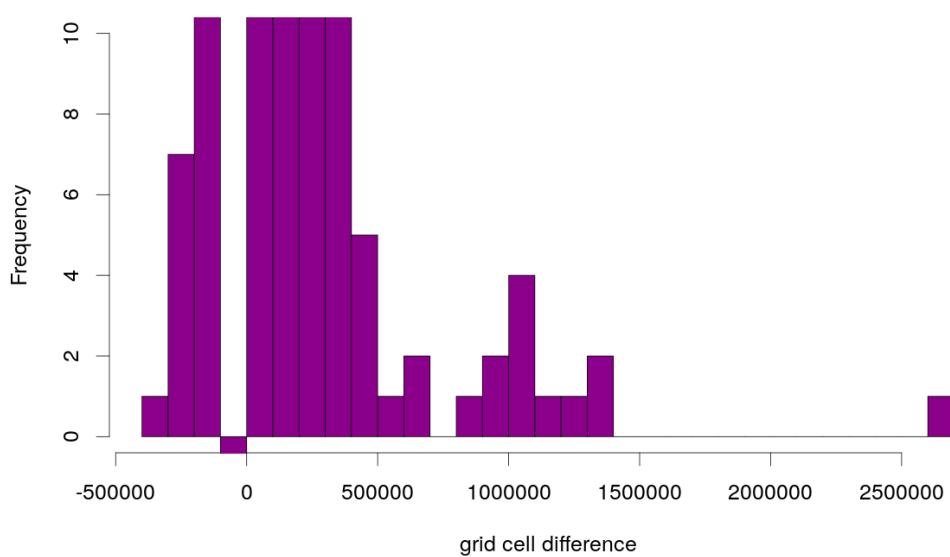


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.63519e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.64194e+09 \\
 \sum_x \Delta_x &= 6.75481e+06 \\
 \sum_x |\Delta_x| &= 8.52371e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00185817 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0234478 \\
 \max_x \Delta_x &= 2.6637e+06 \\
 \min_x \Delta_x &= -327928
 \end{aligned}$$

Urban population, 2012**Urban population, 2012**

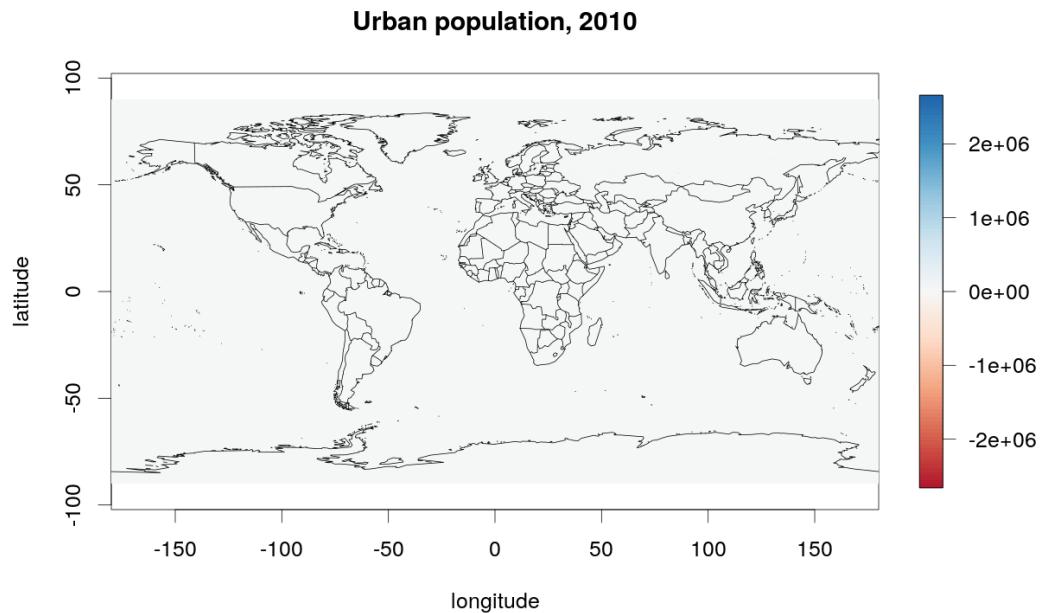
2011

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.56481\text{e+09} \\
 \sum_x p_x^{(v3.3)} &= 3.57059\text{e+09} \\
 \sum_x \Delta_x &= 5.77973\text{e+06} \\
 \sum_x |\Delta_x| &= 8.31722\text{e+07} \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.00162133 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0233315 \\
 \max_x \Delta_x &= 2.6478\text{e+06} \\
 \min_x \Delta_x &= -327164
 \end{aligned}$$

Urban population, 2011**Urban population, 2011**

166

2010



$$\sum_x p_x^{(v3.2.1)} = 3.4952\text{e+09}$$

$$\sum_x p_x^{(v3.3)} = 3.49877\text{e+09}$$

$$\sum_x \Delta_x = 3.56663\text{e+06}$$

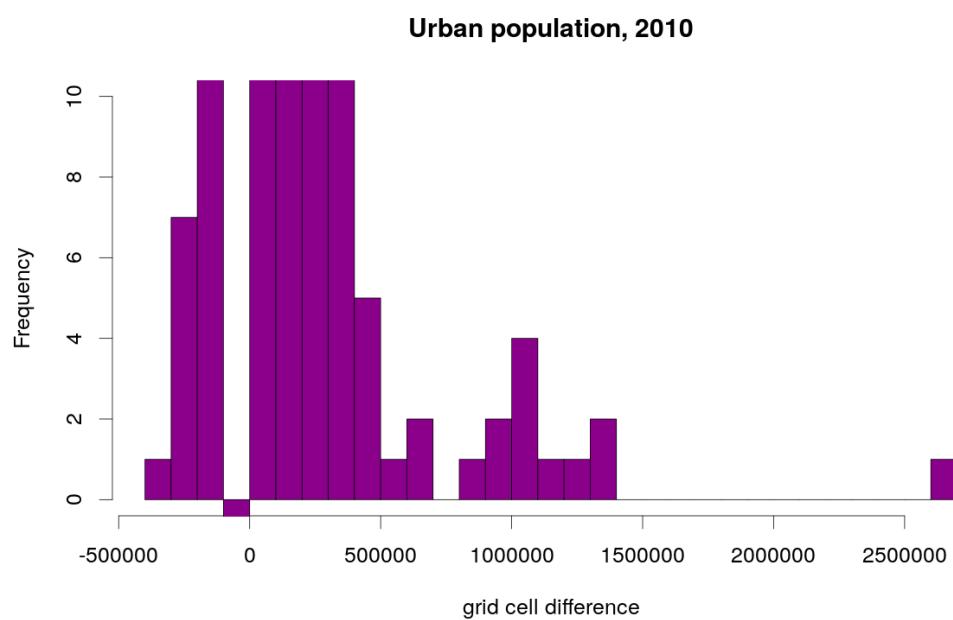
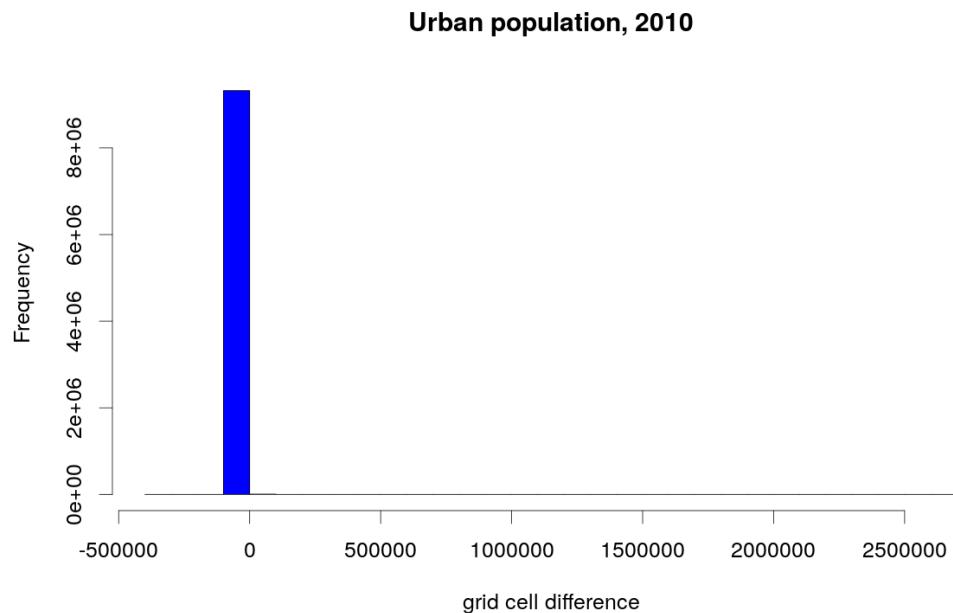
$$\sum_x |\Delta_x| = 8.31525\text{e+07}$$

$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = 0.00102044$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.0237905$$

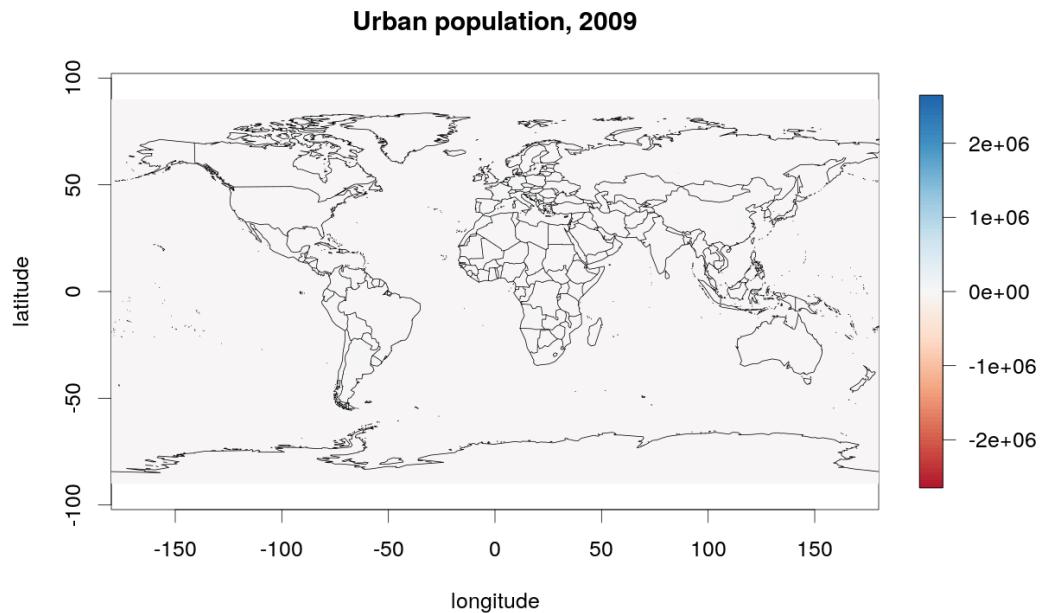
$$\max_x \Delta_x = 2.63189\text{e+06}$$

$$\min_x \Delta_x = -326399$$



168

2009



$$\sum_x p_x^{(v3.2.1)} = 3.42866e+09$$

$$\sum_x p_x^{(v3.3)} = 3.43274e+09$$

$$\sum_x \Delta_x = 4.07833e+06$$

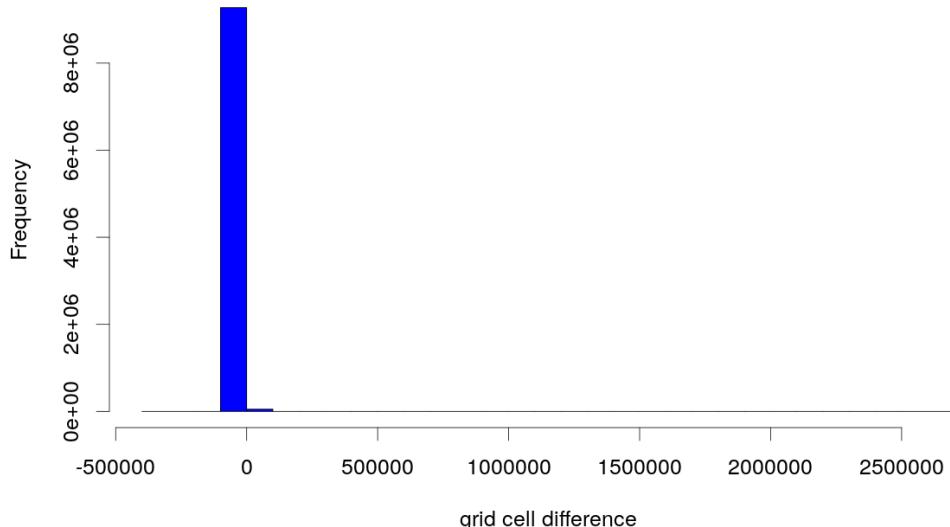
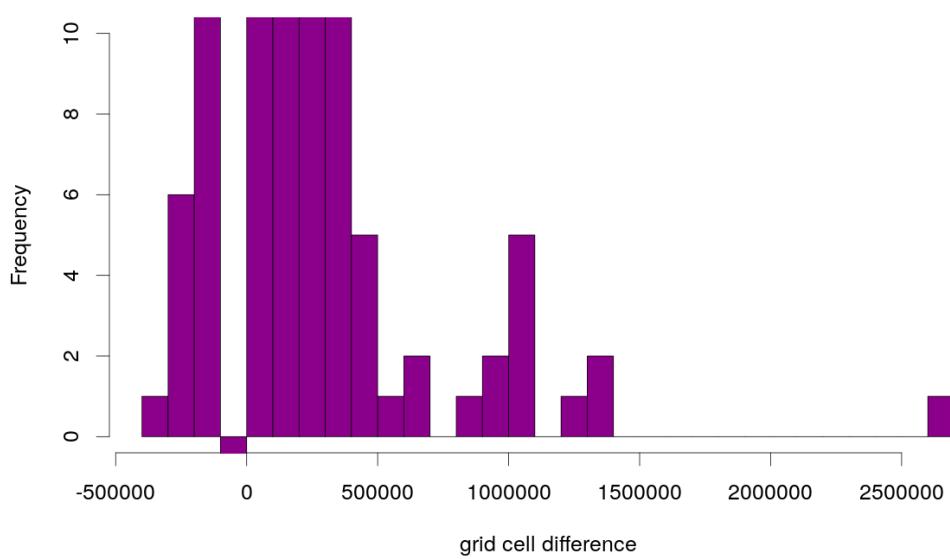
$$\sum_x |\Delta_x| = 8.32935e+07$$

$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = 0.00118948$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.0242933$$

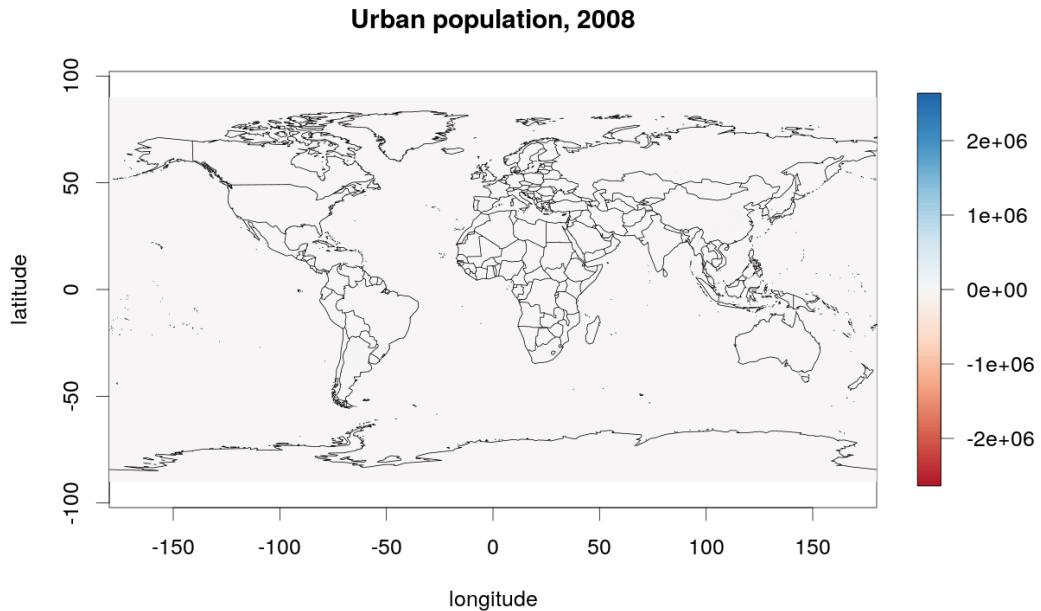
$$\max_x \Delta_x = 2.62111e+06$$

$$\min_x \Delta_x = -326272$$

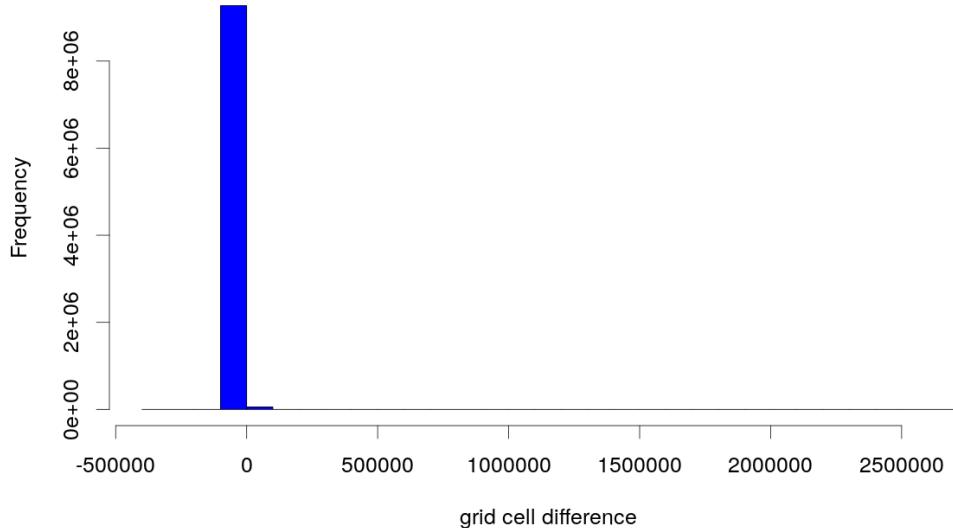
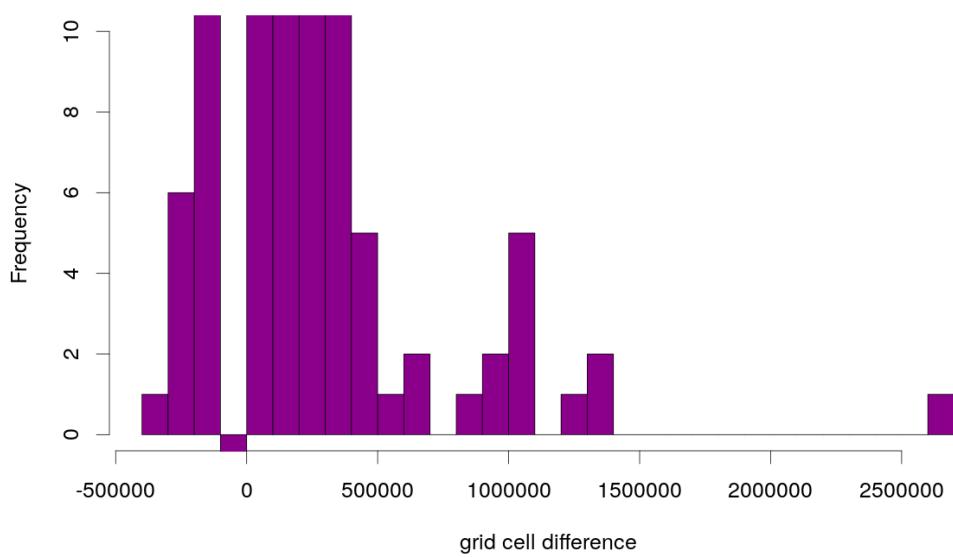
Urban population, 2009**Urban population, 2009**

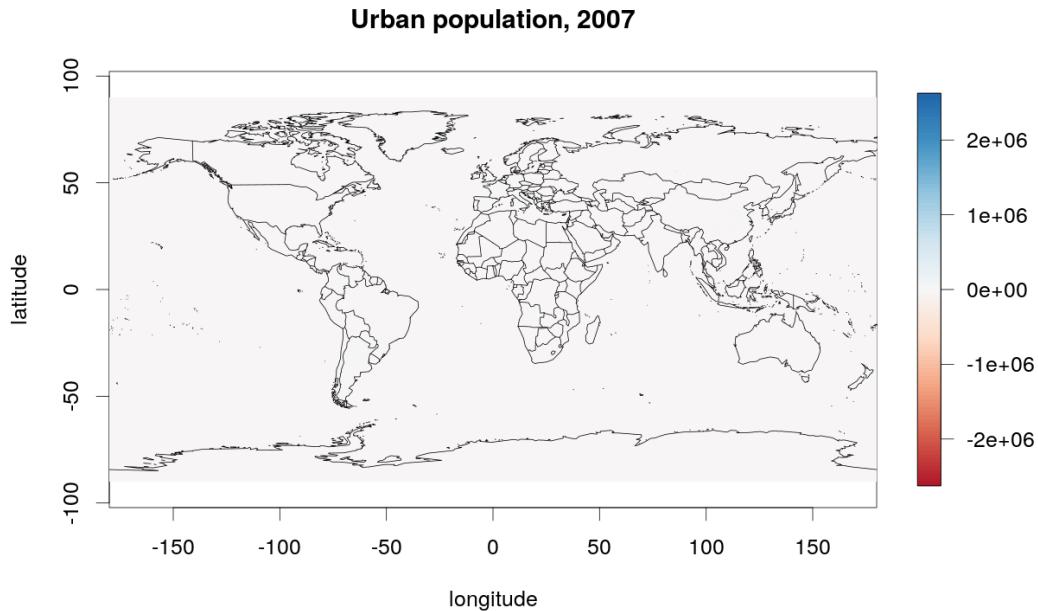
170

2008

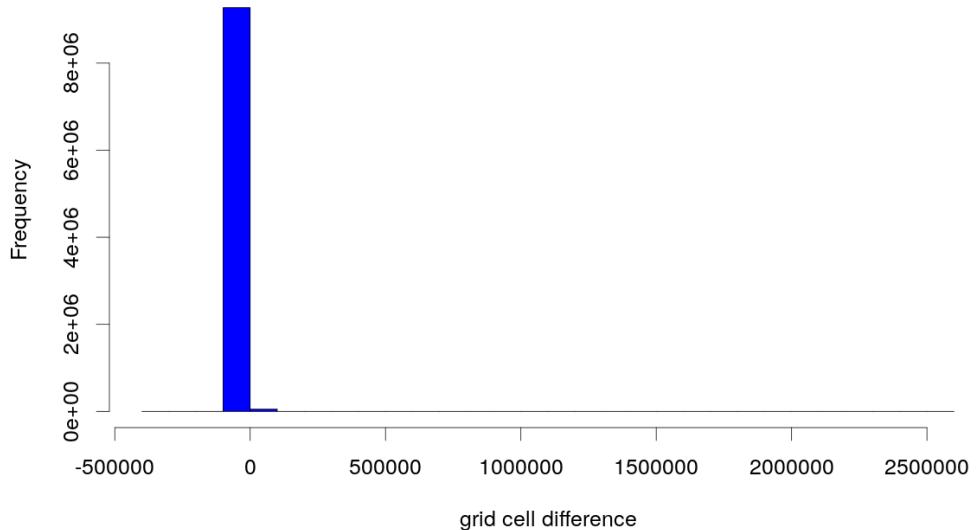
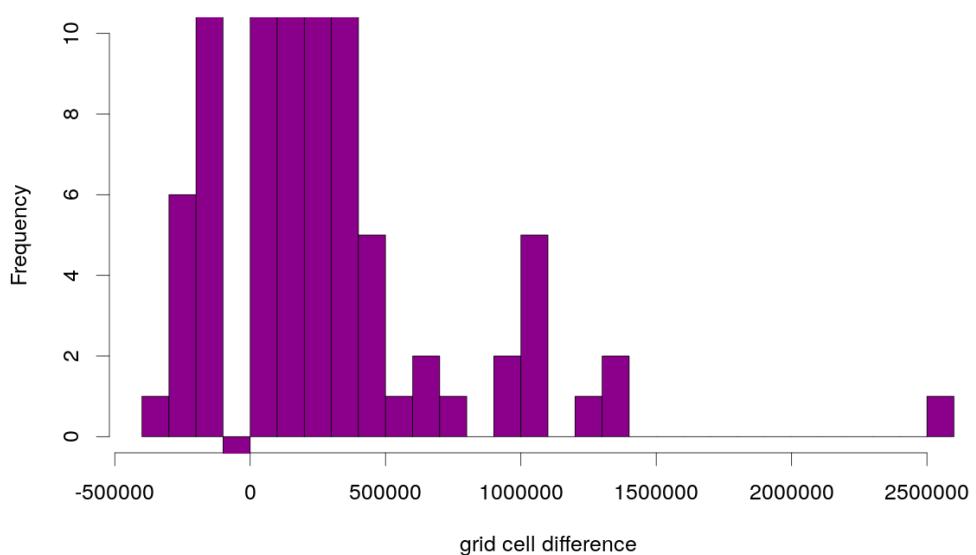


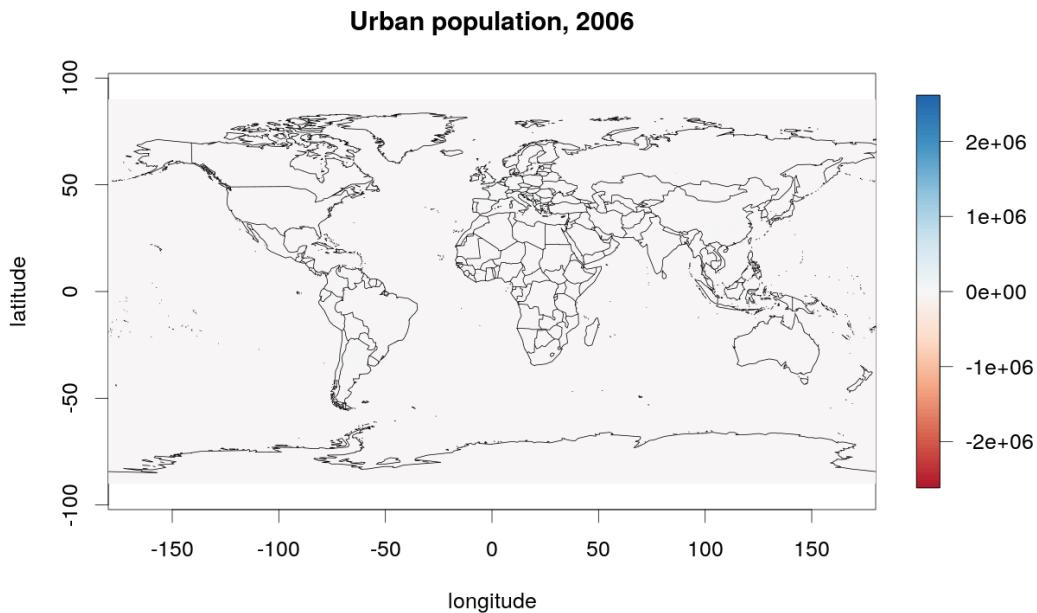
$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 3.36274\text{e+09} \\ \sum_x p_x^{(v3.3)} &= 3.36619\text{e+09} \\ \sum_x \Delta_x &= 3.44378\text{e+06} \\ \sum_x |\Delta_x| &= 8.54396\text{e+07} \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.0010241 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0254077 \\ \max_x \Delta_x &= 2.61025\text{e+06} \\ \min_x \Delta_x &= -326140\end{aligned}$$

Urban population, 2008**Urban population, 2008**

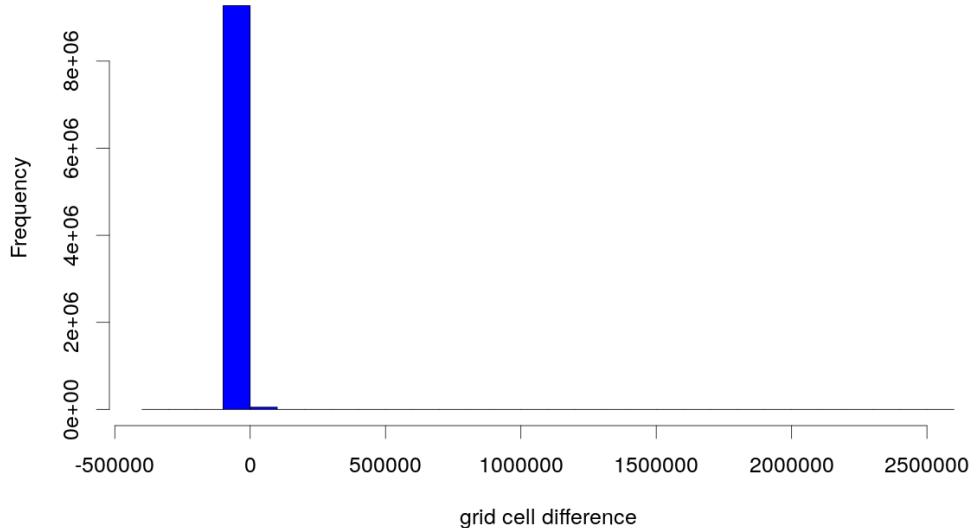
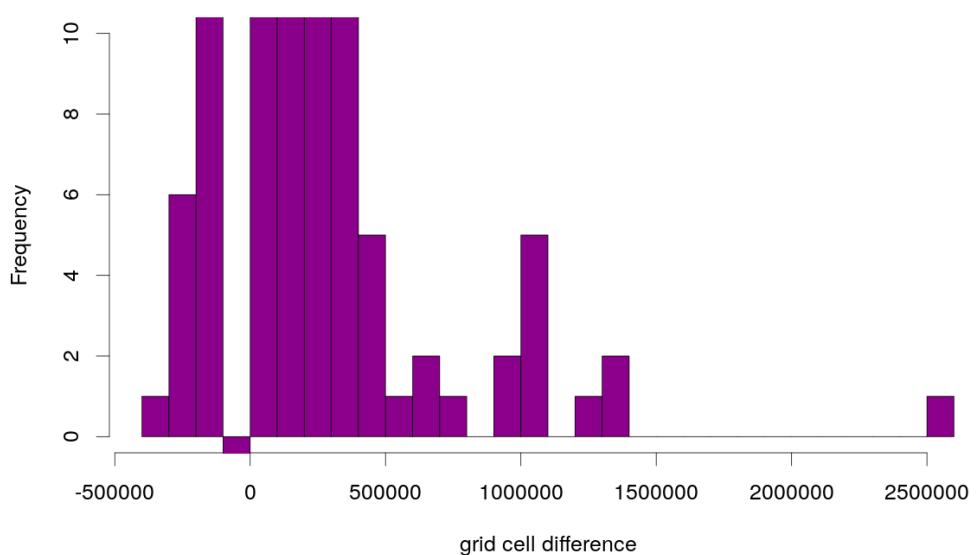
2007

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.29745e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.30031e+09 \\
 \sum_x \Delta_x &= 2.85659e+06 \\
 \sum_x |\Delta_x| &= 8.77892e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000866303 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0266234 \\
 \max_x \Delta_x &= 2.59931e+06 \\
 \min_x \Delta_x &= -326004
 \end{aligned}$$

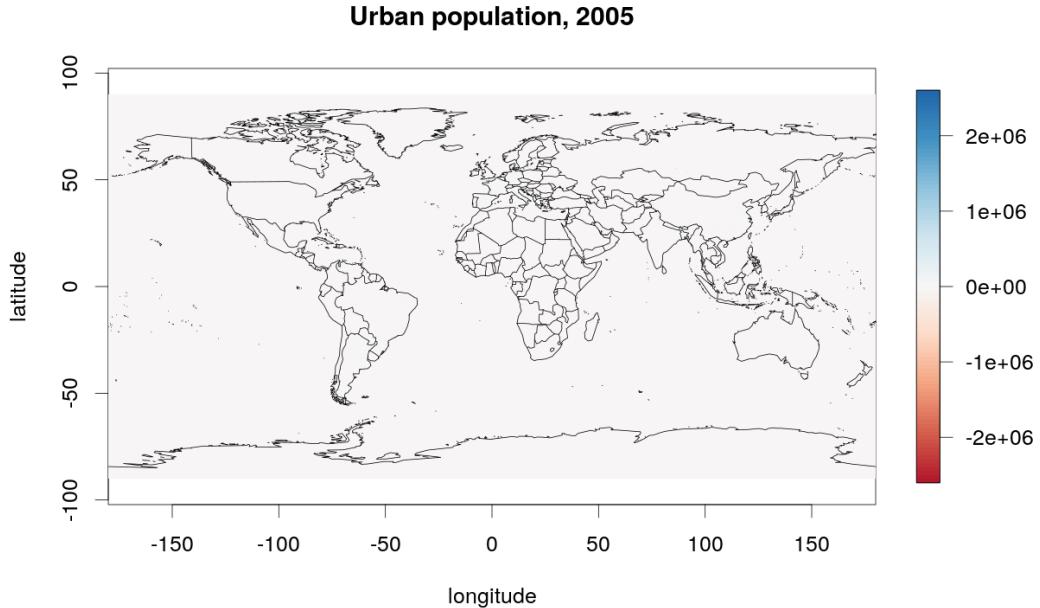
Urban population, 2007**Urban population, 2007**

2006

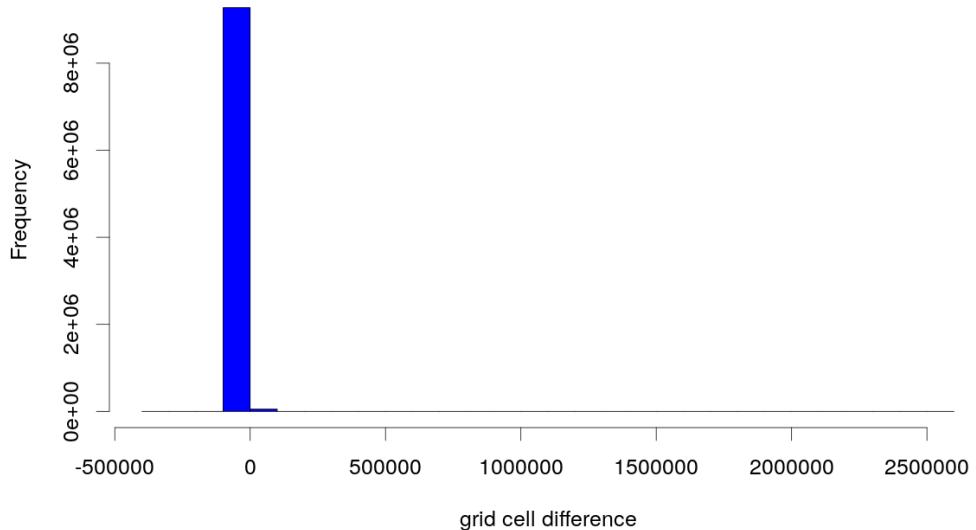
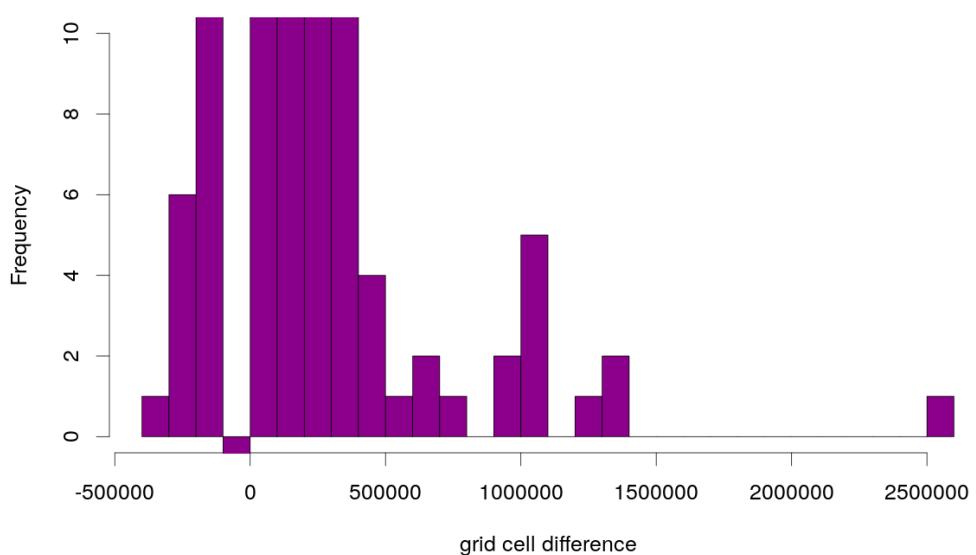
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.23279e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.23511e+09 \\
 \sum_x \Delta_x &= 2.31784e+06 \\
 \sum_x |\Delta_x| &= 9.00853e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000716978 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0278661 \\
 \max_x \Delta_x &= 2.5883e+06 \\
 \min_x \Delta_x &= -325862
 \end{aligned}$$

Urban population, 2006**Urban population, 2006**

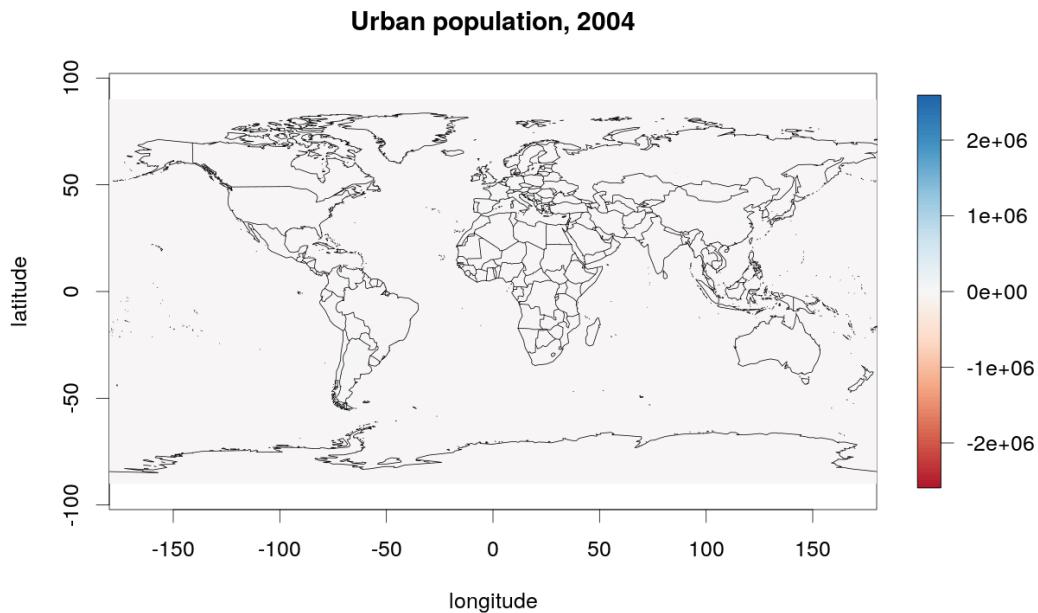
2005



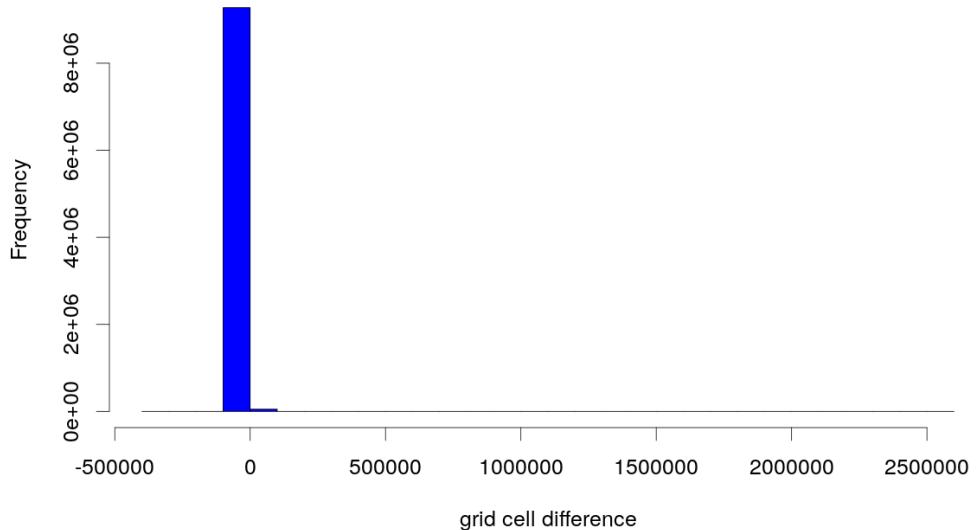
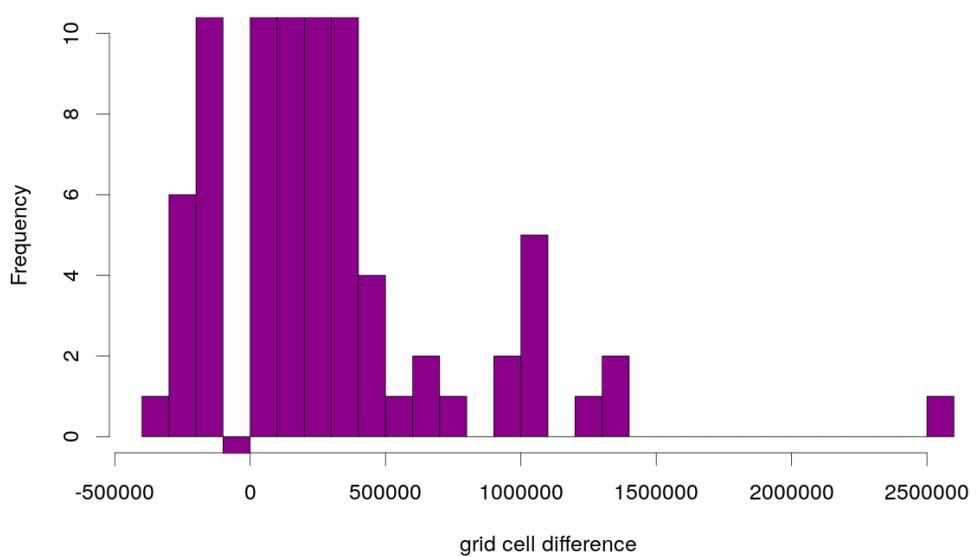
$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.16875e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.17058e+09 \\
 \sum_x \Delta_x &= 1.83032e+06 \\
 \sum_x |\Delta_x| &= 9.23243e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000577616 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0291359 \\
 \max_x \Delta_x &= 2.57721e+06 \\
 \min_x \Delta_x &= -325715
 \end{aligned}$$

Urban population, 2005**Urban population, 2005**

2004

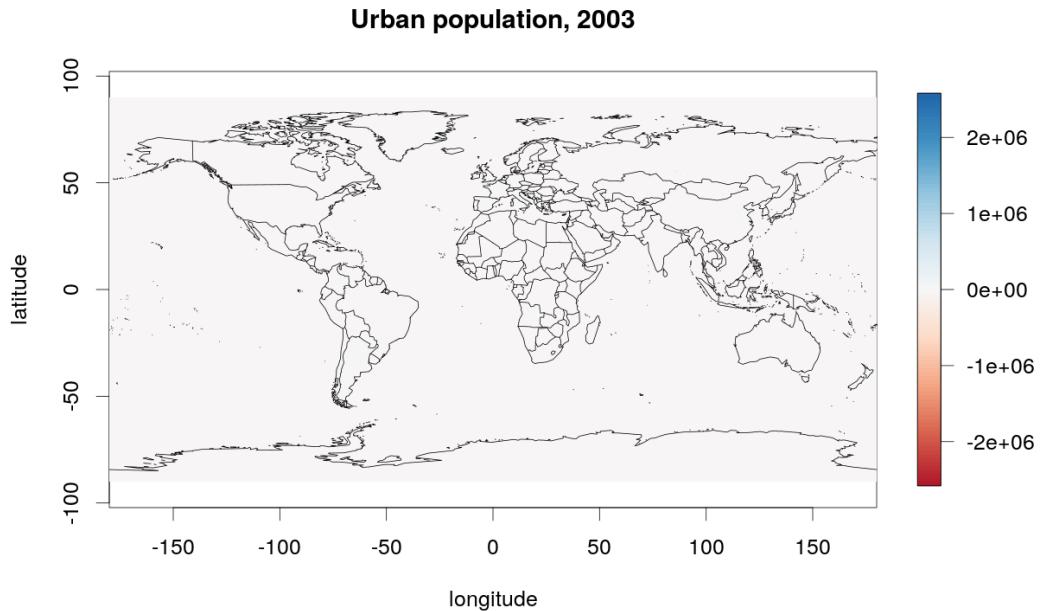


$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.10533e+09 \\
 \sum_x p_x^{(v3.3)} &= 3.10701e+09 \\
 \sum_x \Delta_x &= 1.67702e+06 \\
 \sum_x |\Delta_x| &= 9.00534e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000540046 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0289996 \\
 \max_x \Delta_x &= 2.56604e+06 \\
 \min_x \Delta_x &= -325563
 \end{aligned}$$

Urban population, 2004**Urban population, 2004**

180

2003



$$\sum_x p_x^{(v3.2.1)} = 3.04255e+09$$

$$\sum_x p_x^{(v3.3)} = 3.04409e+09$$

$$\sum_x \Delta_x = 1.54387e+06$$

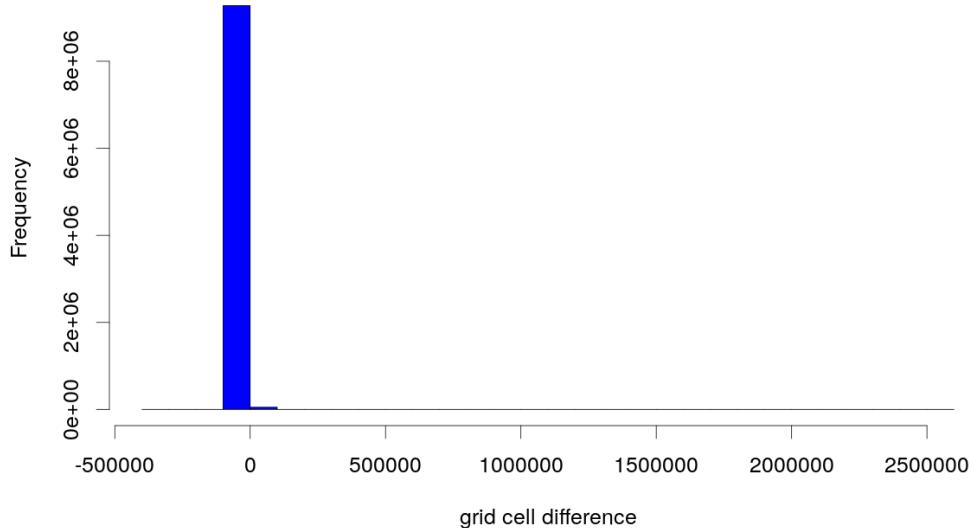
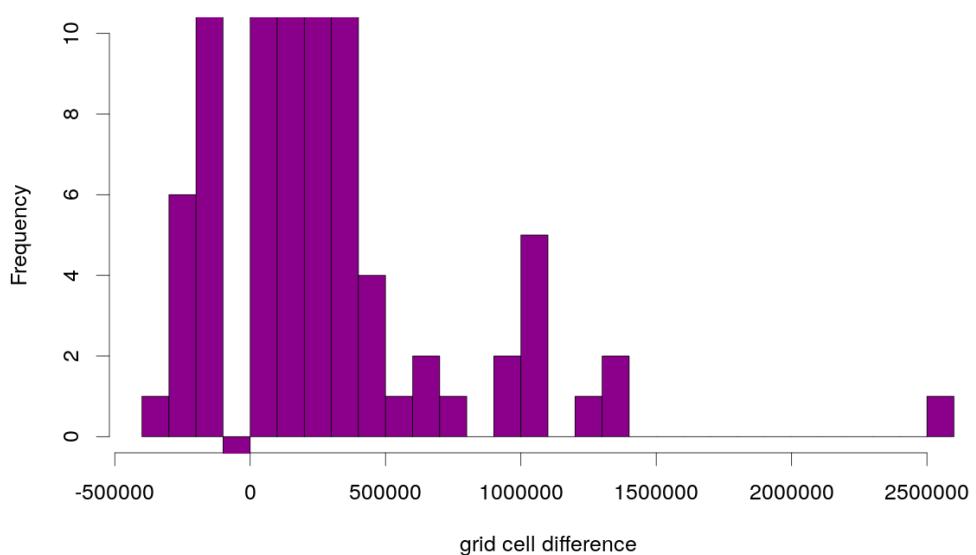
$$\sum_x |\Delta_x| = 8.77691e+07$$

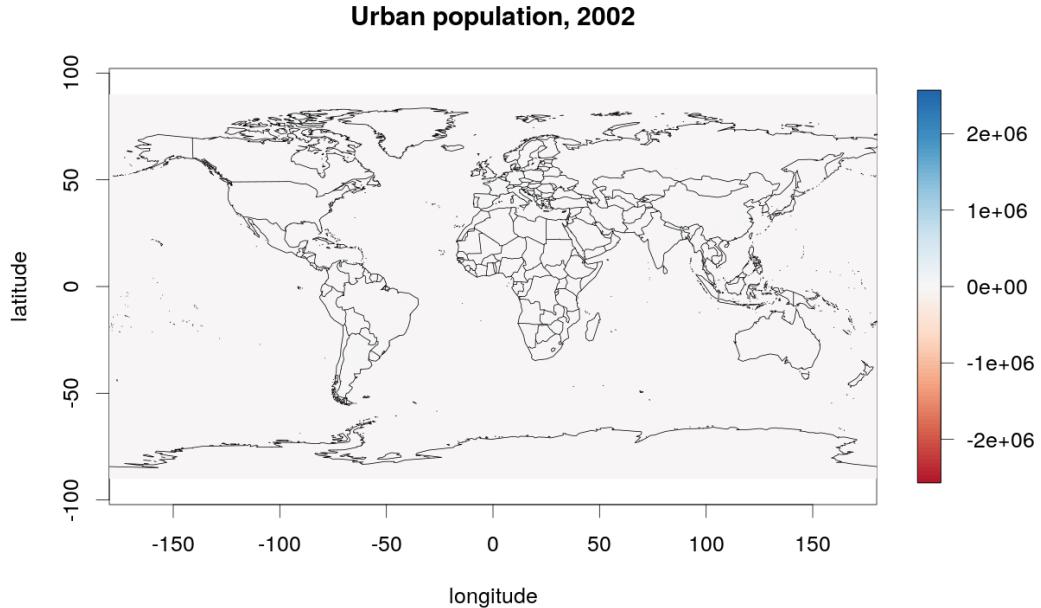
$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = 0.000507426$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.0288472$$

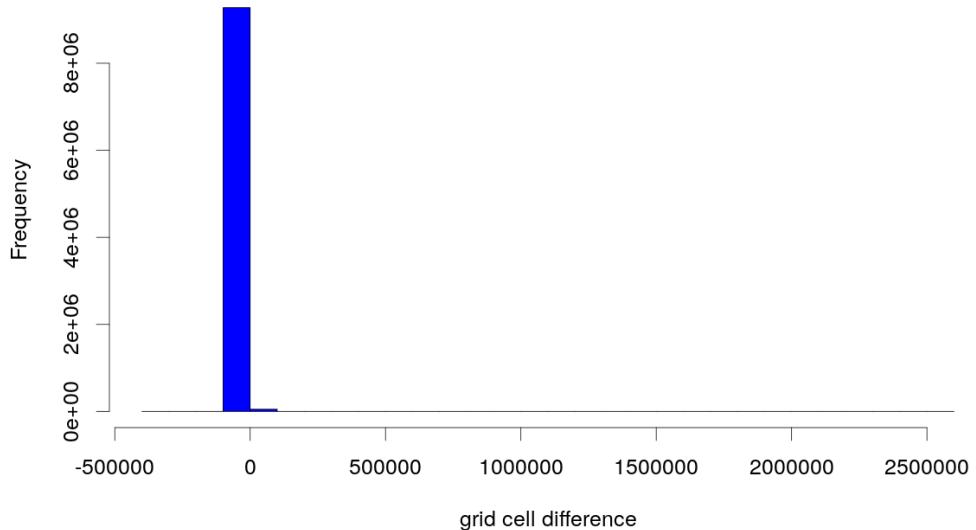
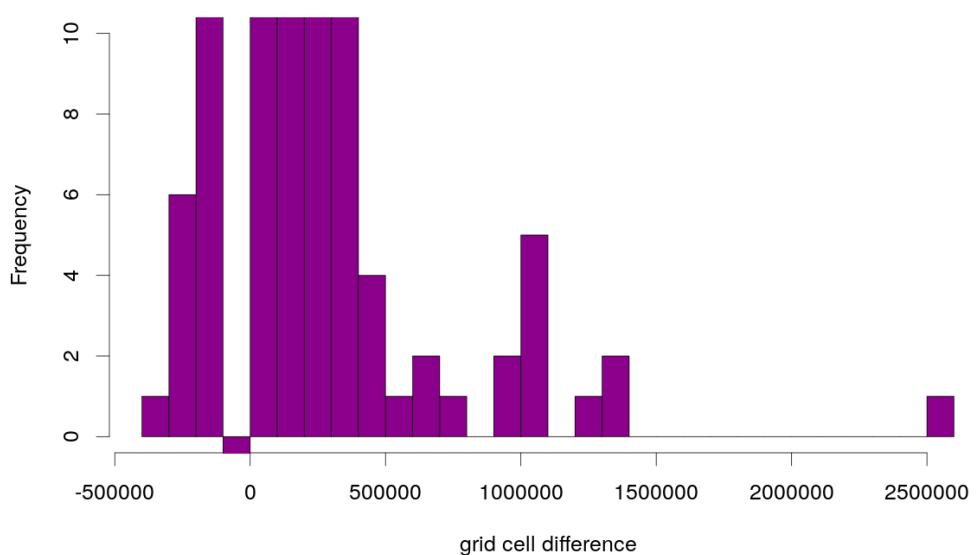
$$\max_x \Delta_x = 2.5548e+06$$

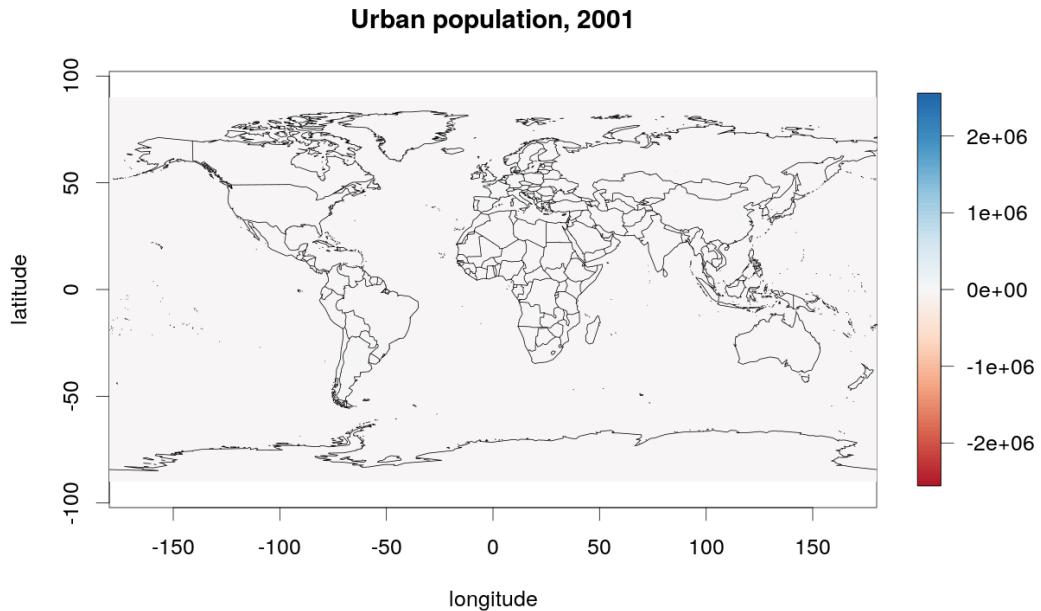
$$\min_x \Delta_x = -325406$$

Urban population, 2003**Urban population, 2003**

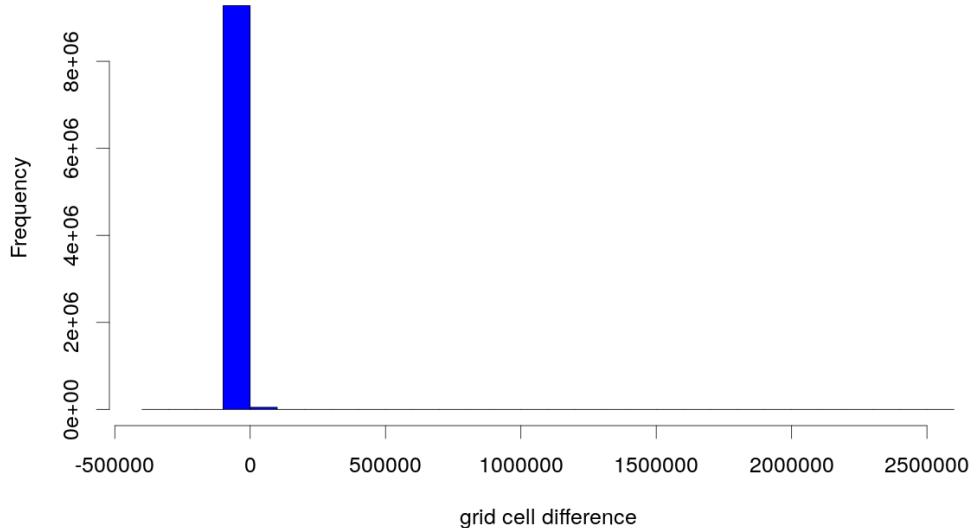
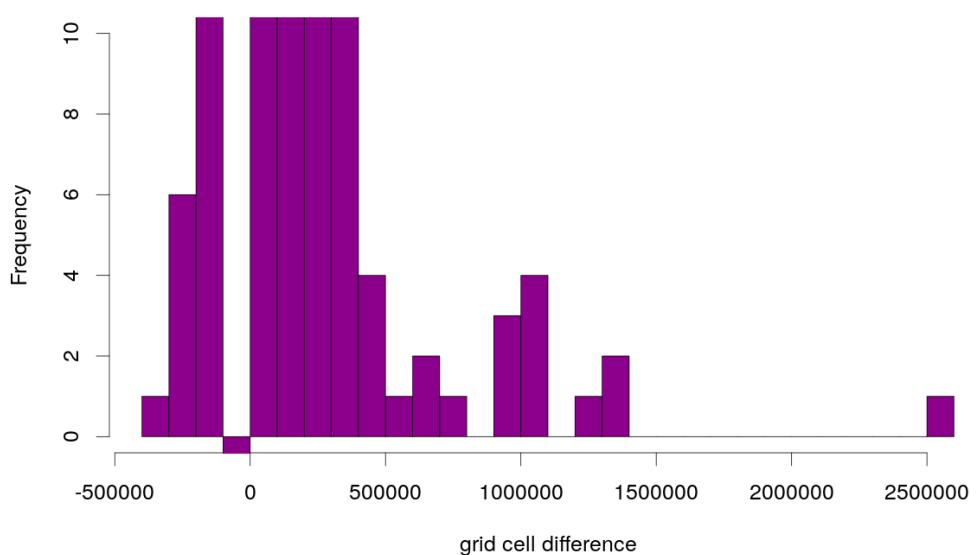
2002

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.98038e+09 \\
 \sum_x p_x^{(v3.3)} &= 2.98188e+09 \\
 \sum_x \Delta_x &= 1.5004e+06 \\
 \sum_x |\Delta_x| &= 8.55563e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000503426 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0287065 \\
 \max_x \Delta_x &= 2.54349e+06 \\
 \min_x \Delta_x &= -325244
 \end{aligned}$$

Urban population, 2002**Urban population, 2002**

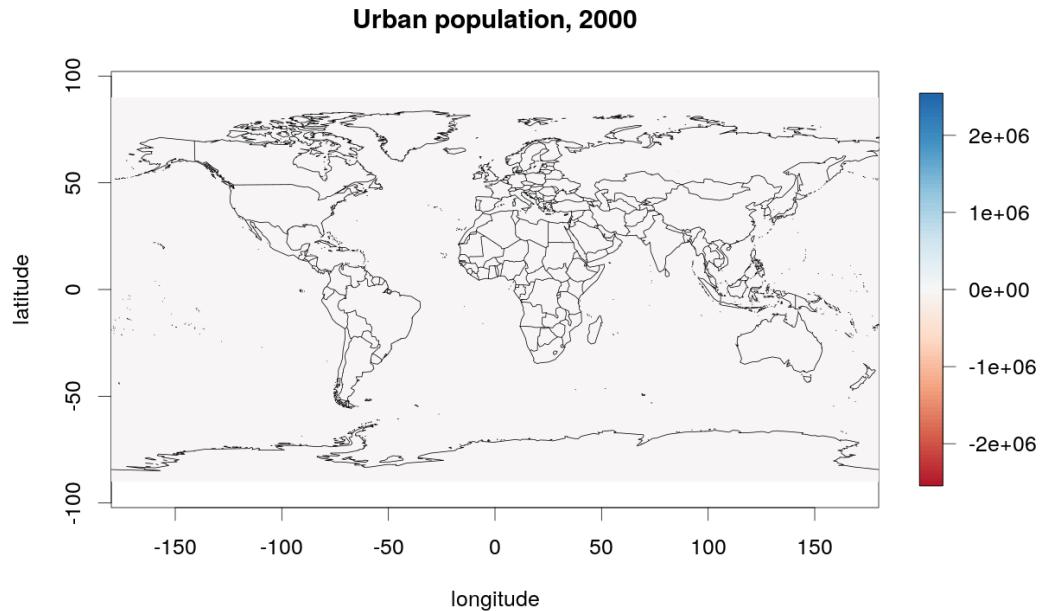
2001

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.91884\text{e+09} \\
 \sum_x p_x^{(v3.3)} &= 2.92043\text{e+09} \\
 \sum_x \Delta_x &= 1.58599\text{e+06} \\
 \sum_x |\Delta_x| &= 8.34491\text{e+07} \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000543363 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0285898 \\
 \max_x \Delta_x &= 2.53211\text{e+06} \\
 \min_x \Delta_x &= -325078
 \end{aligned}$$

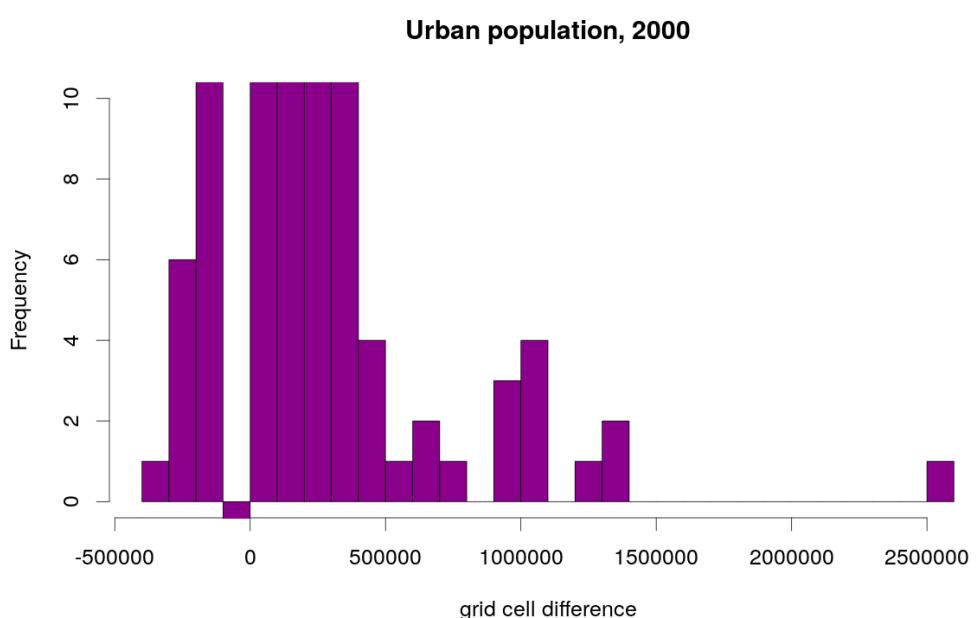
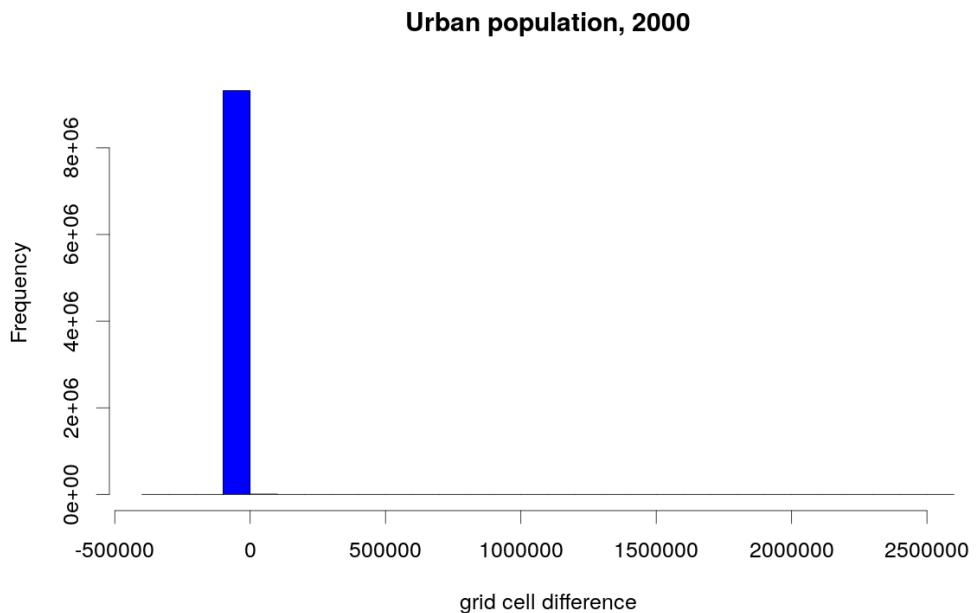
Urban population, 2001**Urban population, 2001**

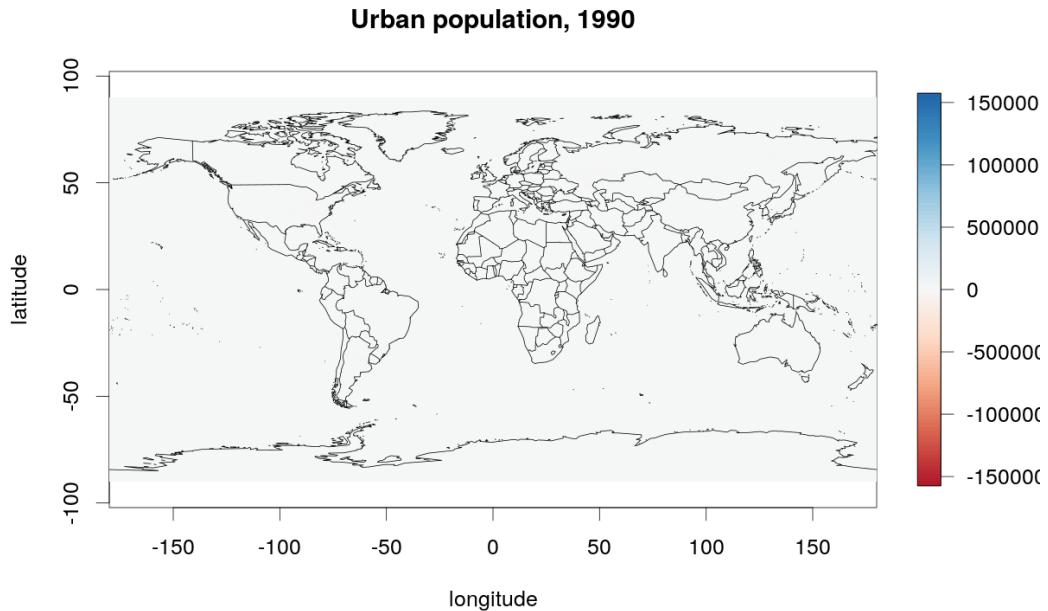
186

2000

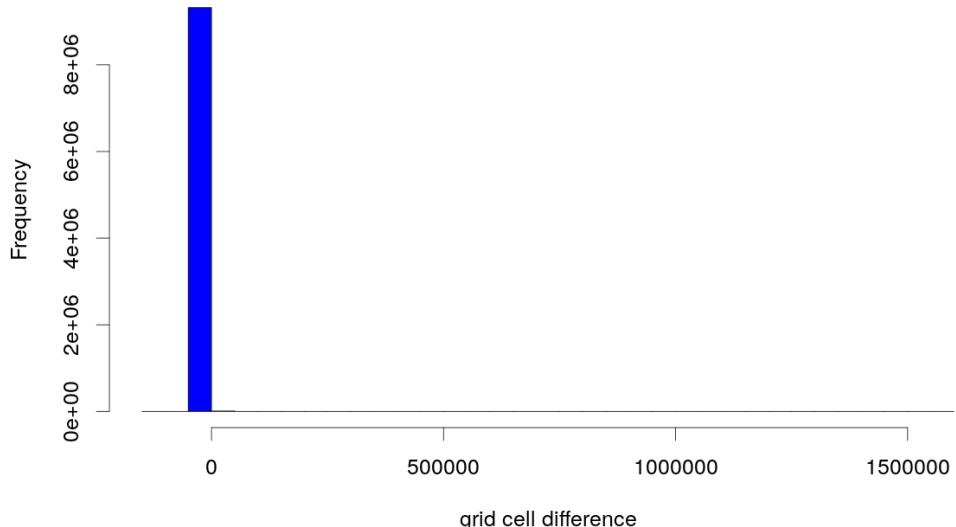
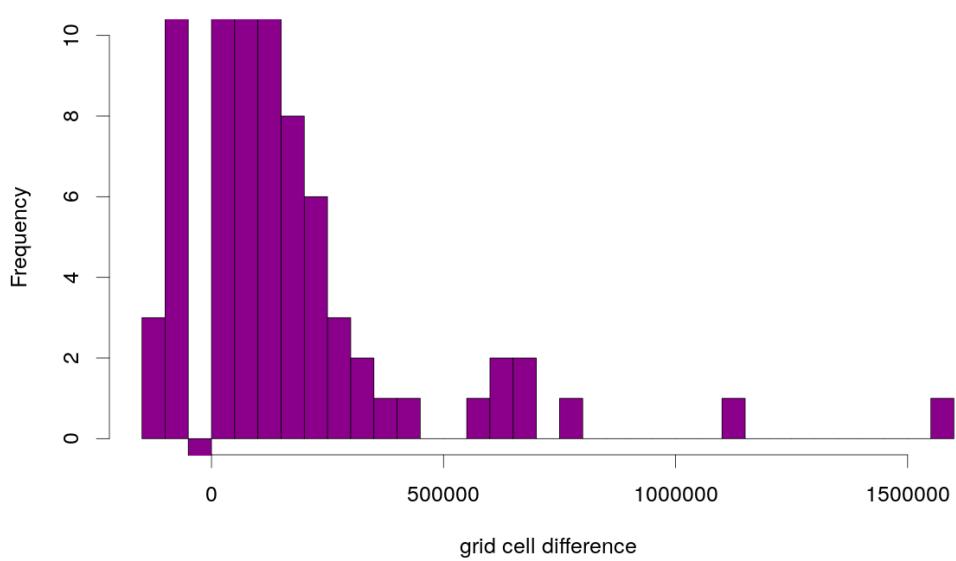


$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 2.85793e+09 \\ \sum_x p_x^{(v3.3)} &= 2.85929e+09 \\ \sum_x \Delta_x &= 1.36178e+06 \\ \sum_x |\Delta_x| &= 8.27583e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= 0.000476492 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0289574 \\ \max_x \Delta_x &= 2.52065e+06 \\ \min_x \Delta_x &= -324906\end{aligned}$$



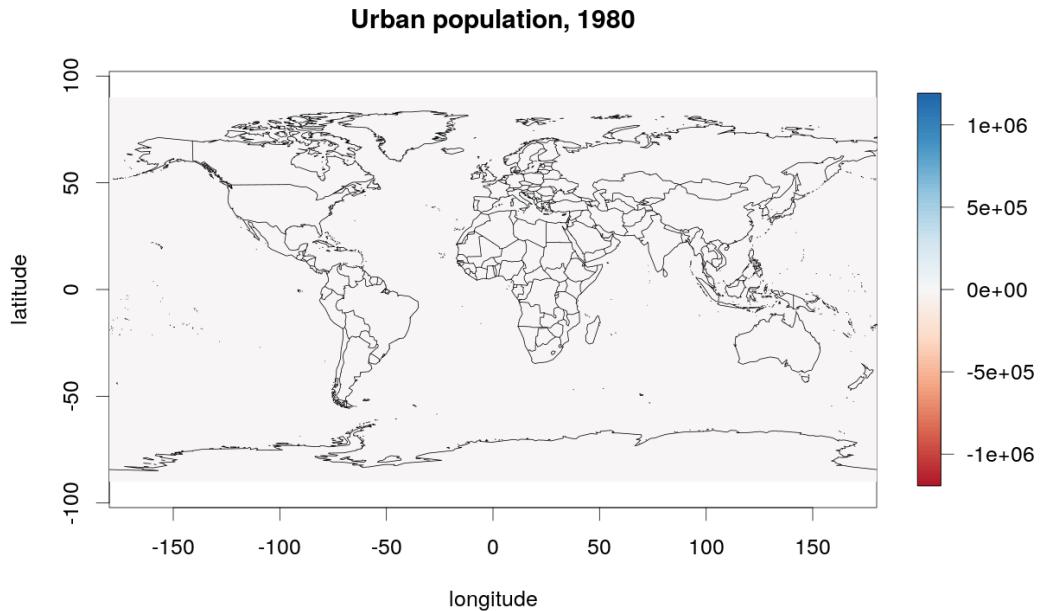
1990

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.28054e+09 \\
 \sum_x p_x^{(v3.3)} &= 2.27753e+09 \\
 \sum_x \Delta_x &= -3.00656e+06 \\
 \sum_x |\Delta_x| &= 4.35827e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00131835 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0191107 \\
 \max_x \Delta_x &= 1.55859e+06 \\
 \min_x \Delta_x &= -135920
 \end{aligned}$$

Urban population, 1990**Urban population, 1990**

190

1980



$$\sum_x p_x^{(v3.2.1)} = 1.74347 \times 10^9$$

$$\sum_x p_x^{(v3.3)} = 1.7398 \times 10^9$$

$$\sum_x \Delta_x = -3.67041 \times 10^6$$

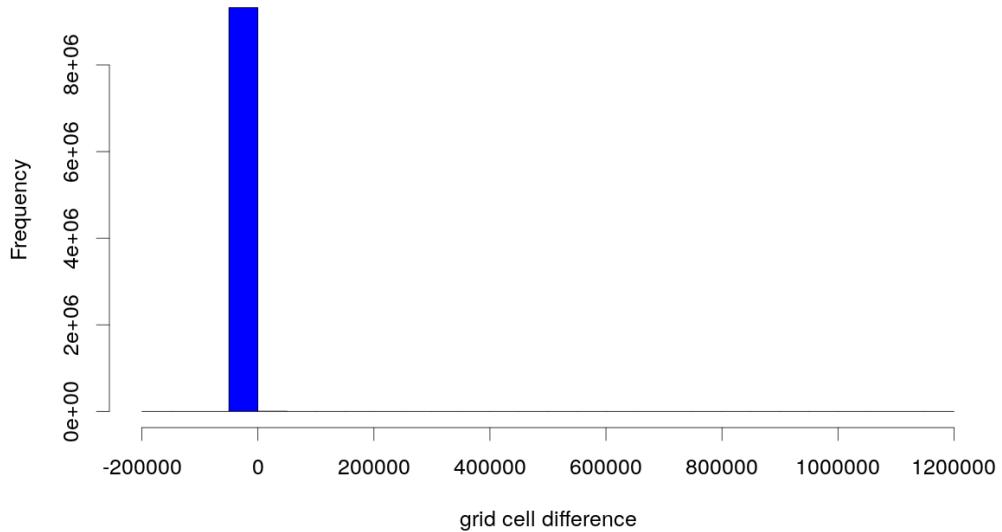
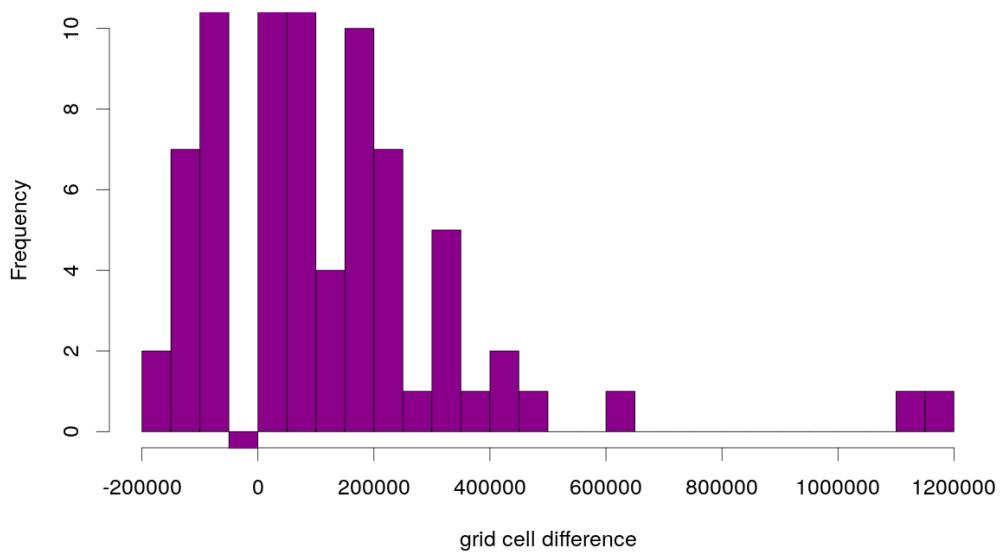
$$\sum_x |\Delta_x| = 4.41553 \times 10^7$$

$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = -0.00210523$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.0253261$$

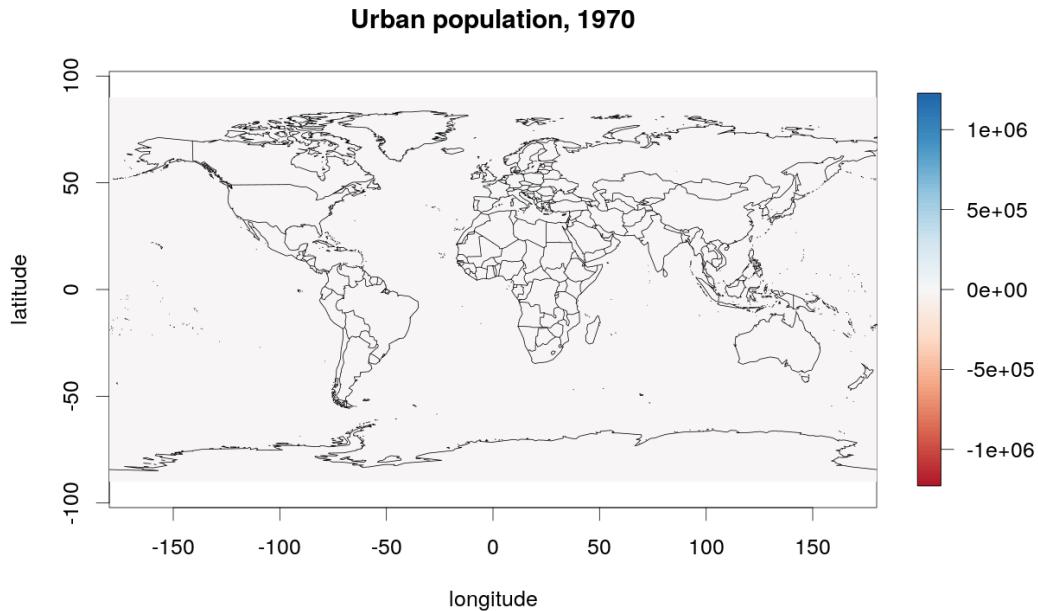
$$\max_x \Delta_x = 1.18035 \times 10^6$$

$$\min_x \Delta_x = -171458$$

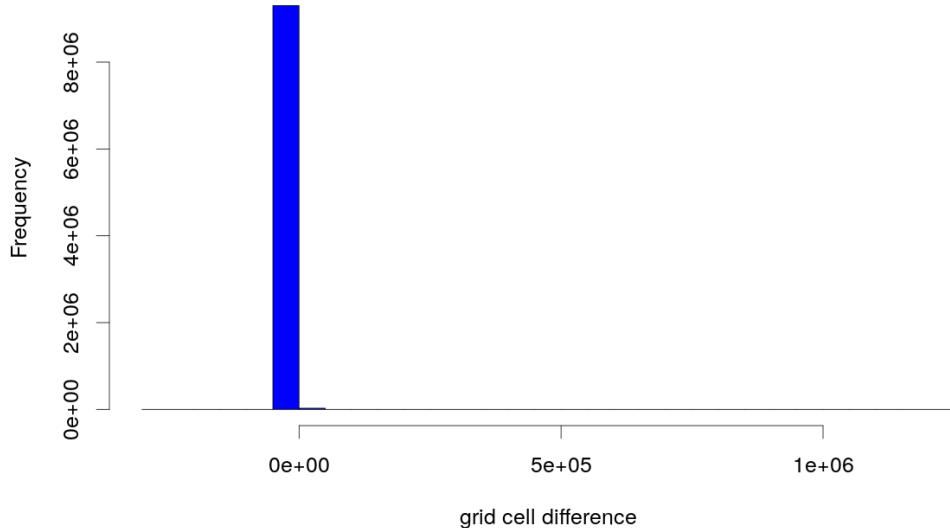
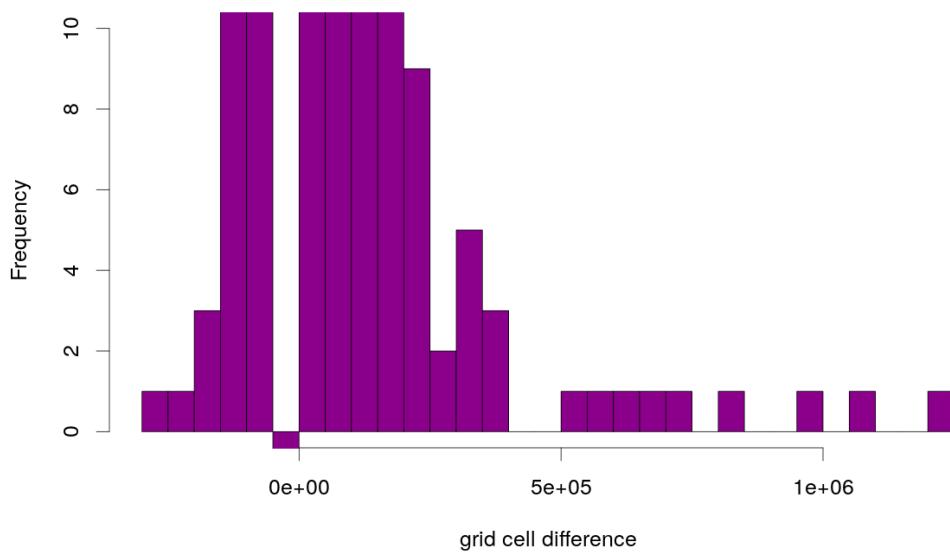
Urban population, 1980**Urban population, 1980**

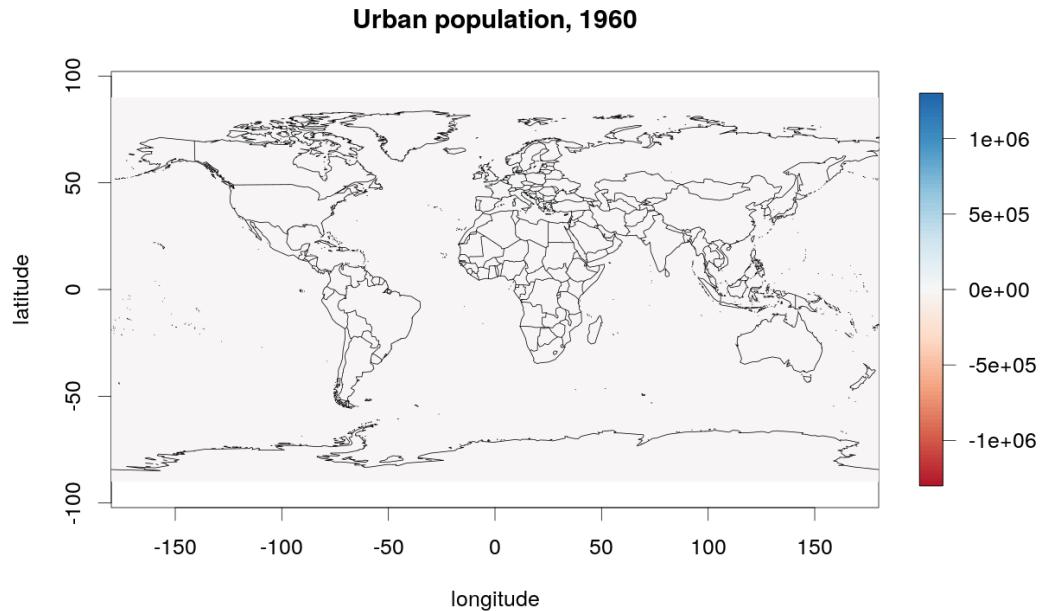
192

1970



$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 1.33413e+09 \\ \sum_x p_x^{(v3.3)} &= 1.3247e+09 \\ \sum_x \Delta_x &= -9.43294e+06 \\ \sum_x |\Delta_x| &= 7.97833e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.00707048 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.0598017 \\ \max_x \Delta_x &= 1.2154e+06 \\ \min_x \Delta_x &= -251637\end{aligned}$$

Urban population, 1970**Urban population, 1970**

1960

$$\sum_x p_x^{(v3.2.1)} = 9.97637e+08$$

$$\sum_x p_x^{(v3.3)} = 9.90165e+08$$

$$\sum_x \Delta_x = -7.47247e+06$$

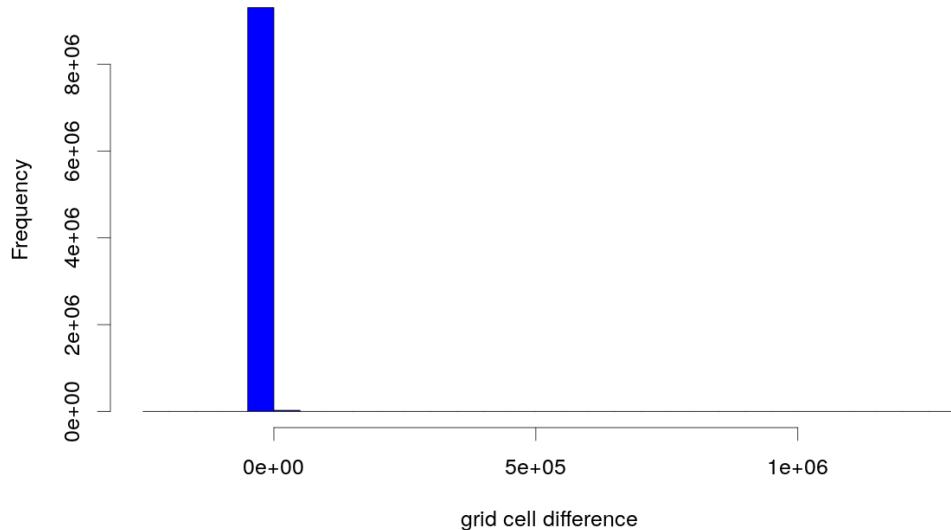
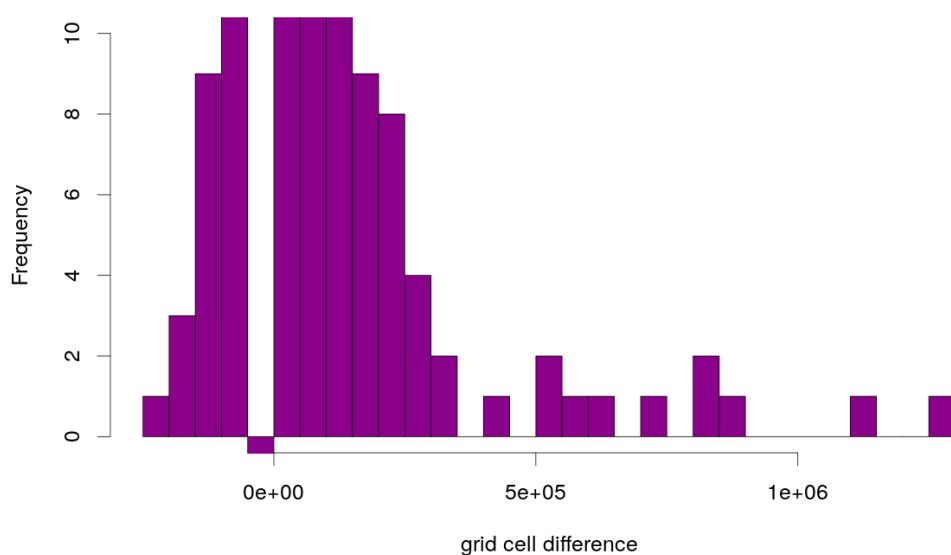
$$\sum_x |\Delta_x| = 6.45715e+07$$

$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = -0.00749017$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.0647244$$

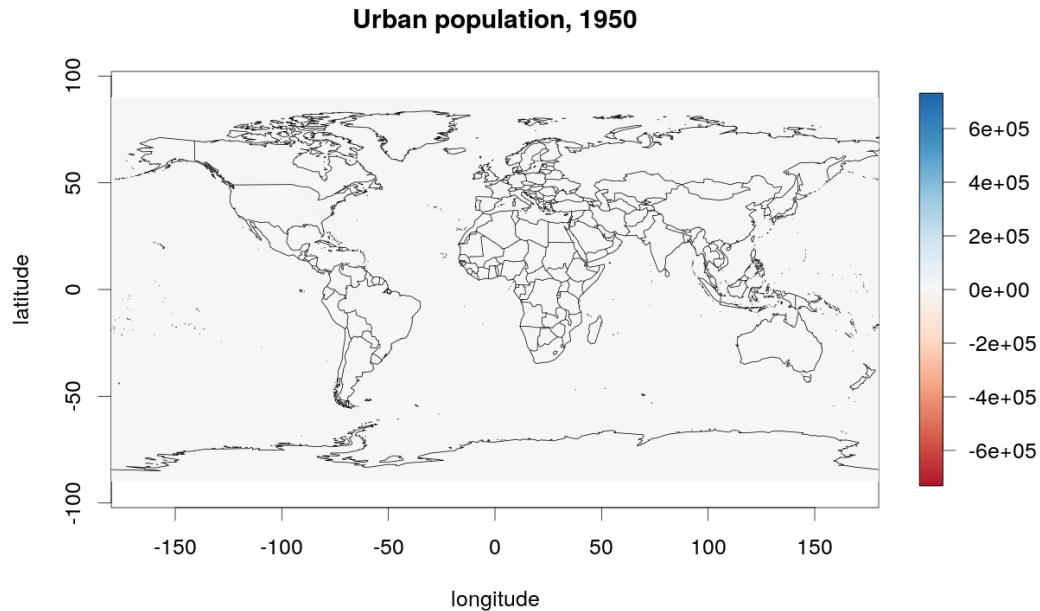
$$\max_x \Delta_x = 1.28762e+06$$

$$\min_x \Delta_x = -208091$$

Urban population, 1960**Urban population, 1960**

196

1950



$$\sum_x p_x^{(v3.2.1)} = 7.78789 \times 10^8$$

$$\sum_x p_x^{(v3.3)} = 7.35627 \times 10^8$$

$$\sum_x \Delta_x = -4.31624 \times 10^7$$

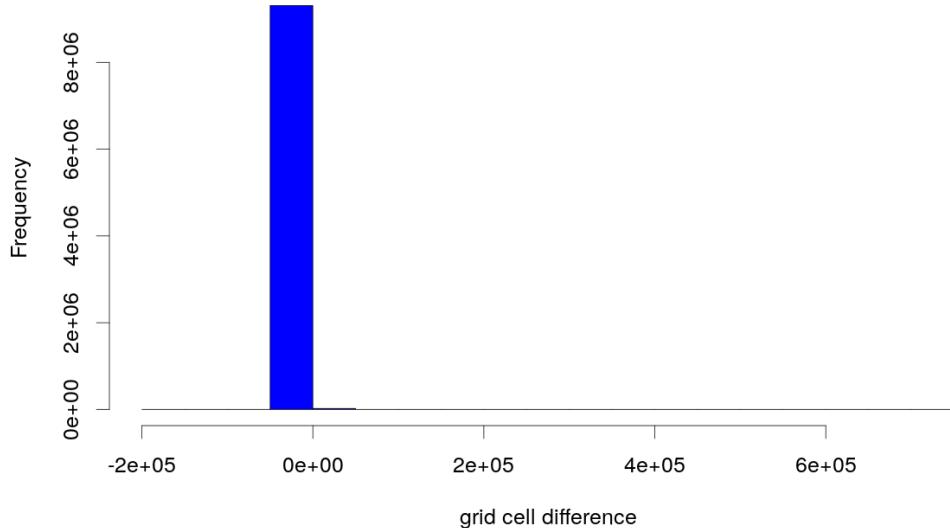
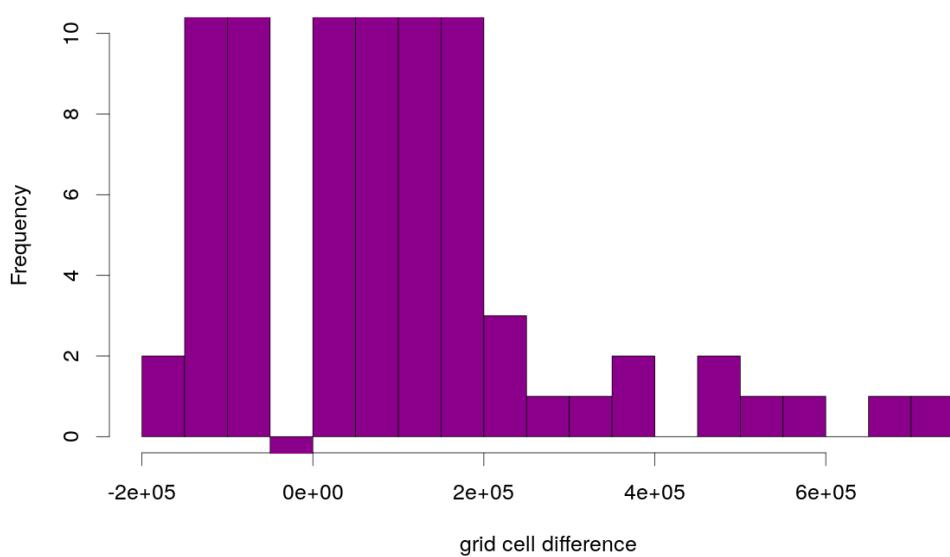
$$\sum_x |\Delta_x| = 8.02029 \times 10^7$$

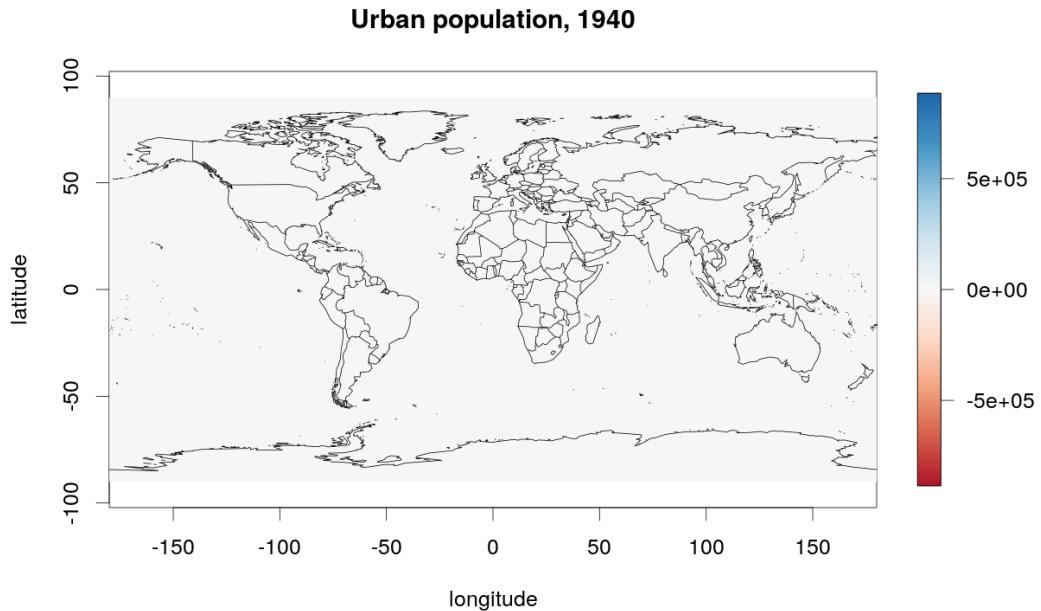
$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = -0.0554225$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.102984$$

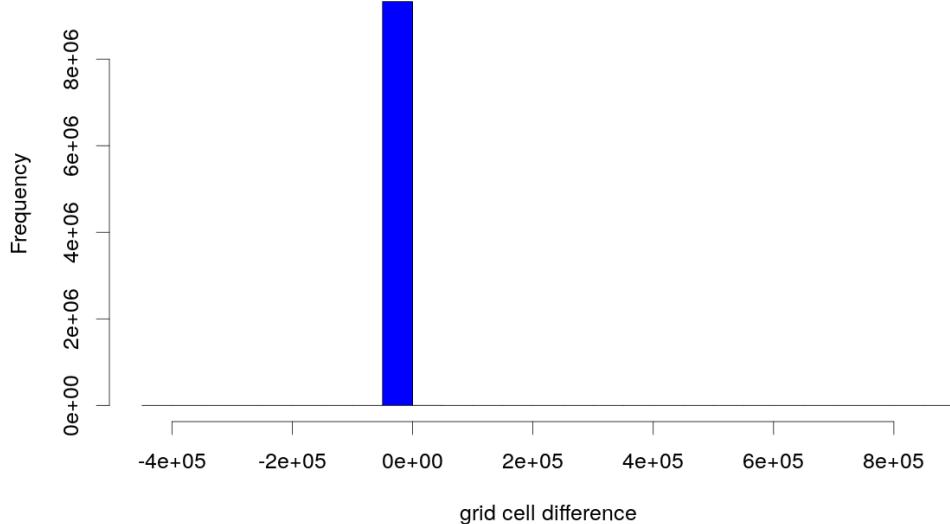
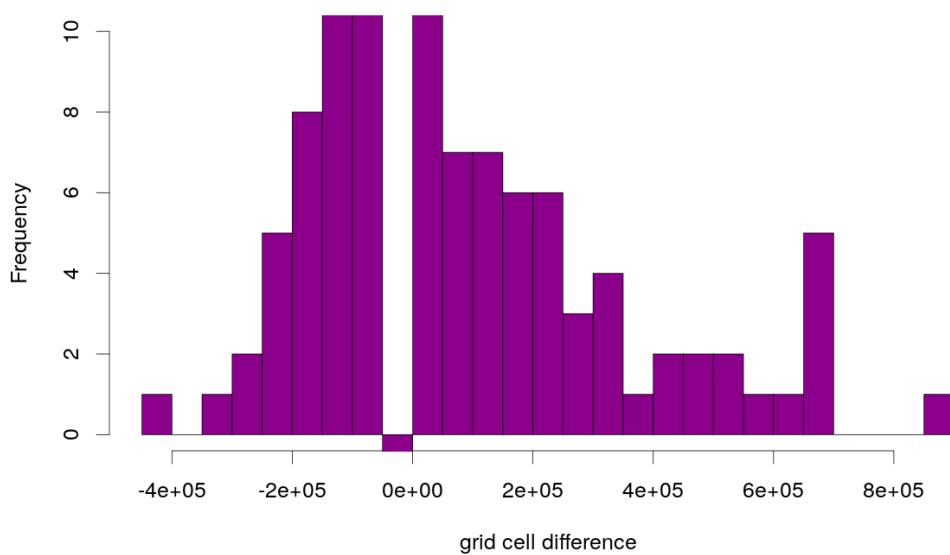
$$\max_x \Delta_x = 724354$$

$$\min_x \Delta_x = -198284$$

Urban population, 1950**Urban population, 1950**

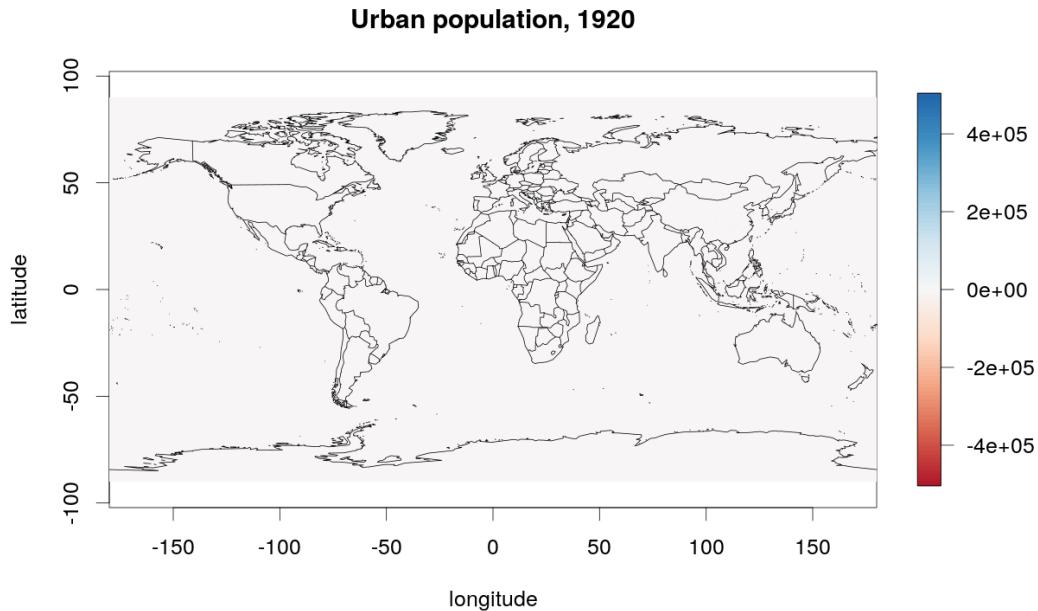
1940

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 6.97169e+08 \\
 \sum_x p_x^{(v3.3)} &= 5.87695e+08 \\
 \sum_x \Delta_x &= -1.09474e+08 \\
 \sum_x |\Delta_x| &= 1.40104e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.157026 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.200961 \\
 \max_x \Delta_x &= 876256 \\
 \min_x \Delta_x &= -444255
 \end{aligned}$$

Urban population, 1940**Urban population, 1940**

200

1920



$$\sum_x p_x^{(v3.2.1)} = 5.59181 \times 10^8$$

$$\sum_x p_x^{(v3.3)} = 3.87489 \times 10^8$$

$$\sum_x \Delta_x = -1.71692 \times 10^8$$

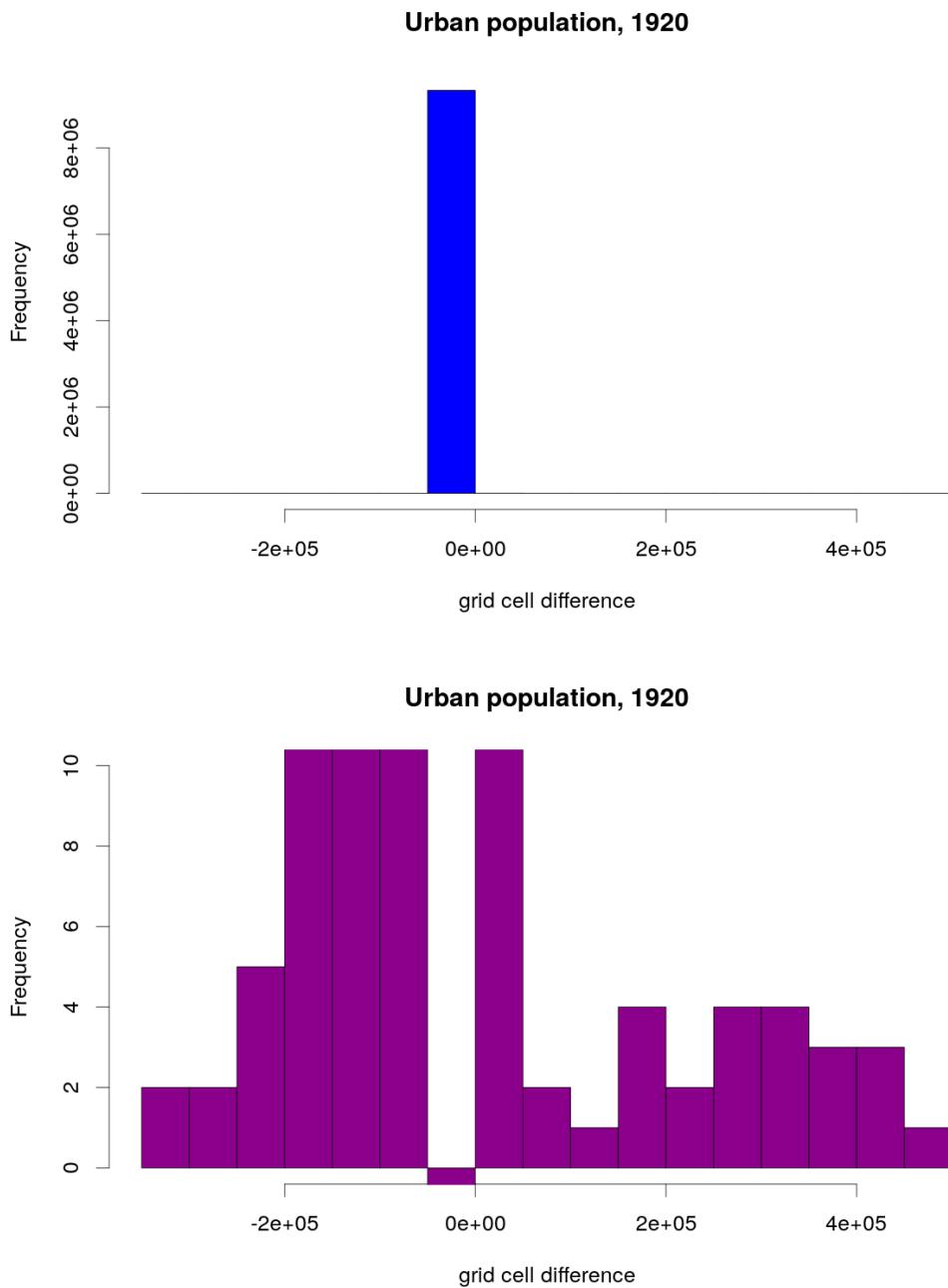
$$\sum_x |\Delta_x| = 1.85804 \times 10^8$$

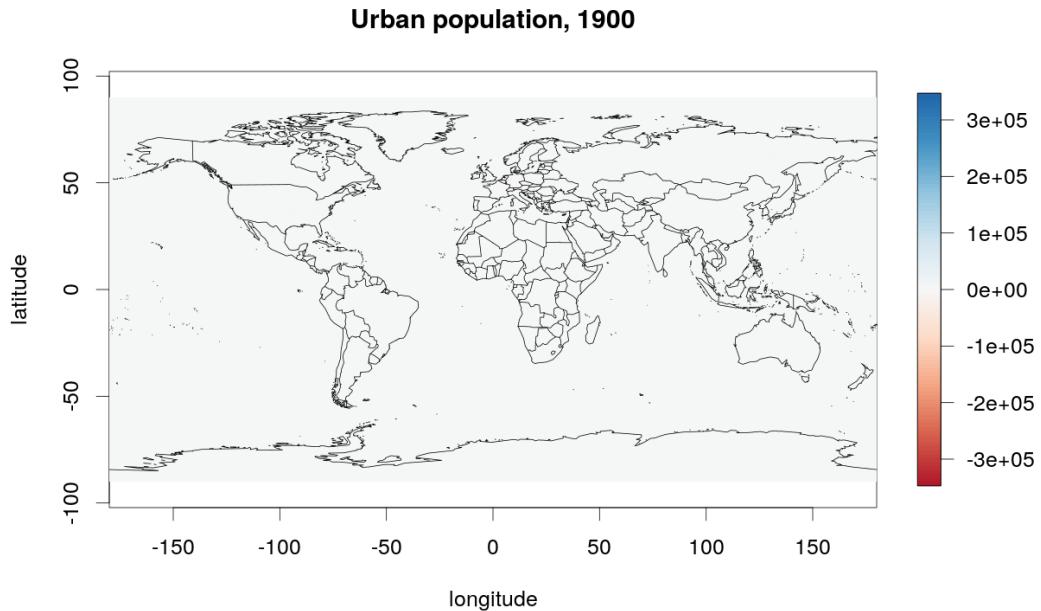
$$\sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} = -0.307042$$

$$\sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} = 0.332279$$

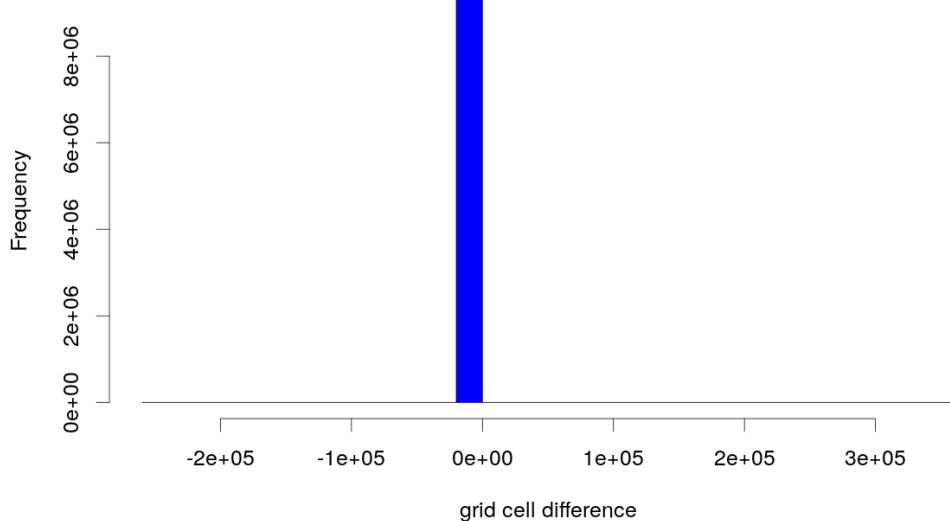
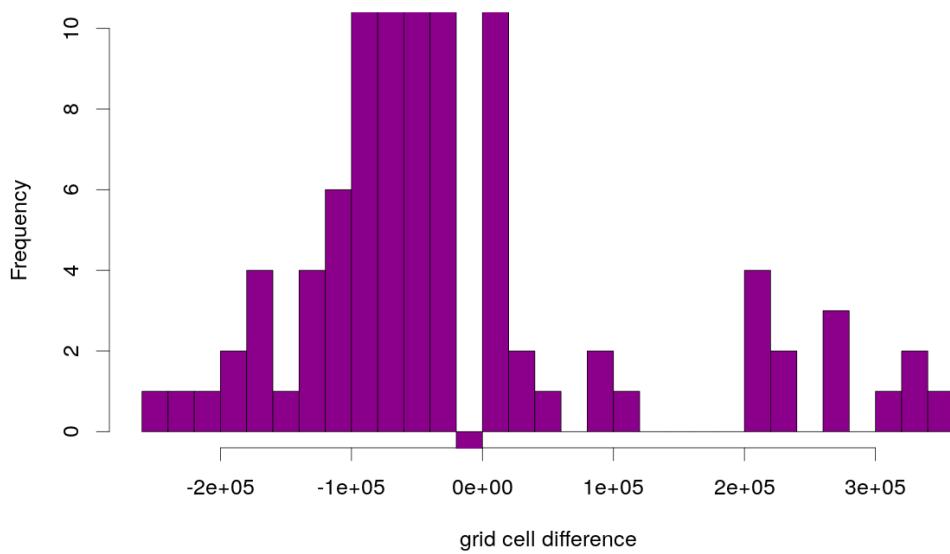
$$\max_x \Delta_x = 499194$$

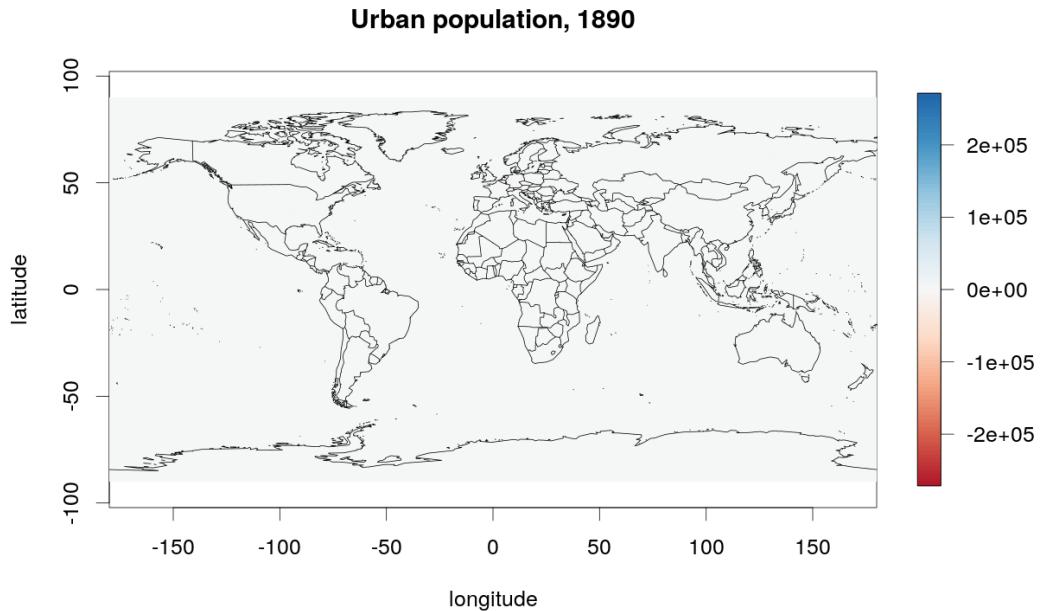
$$\min_x \Delta_x = -304320$$



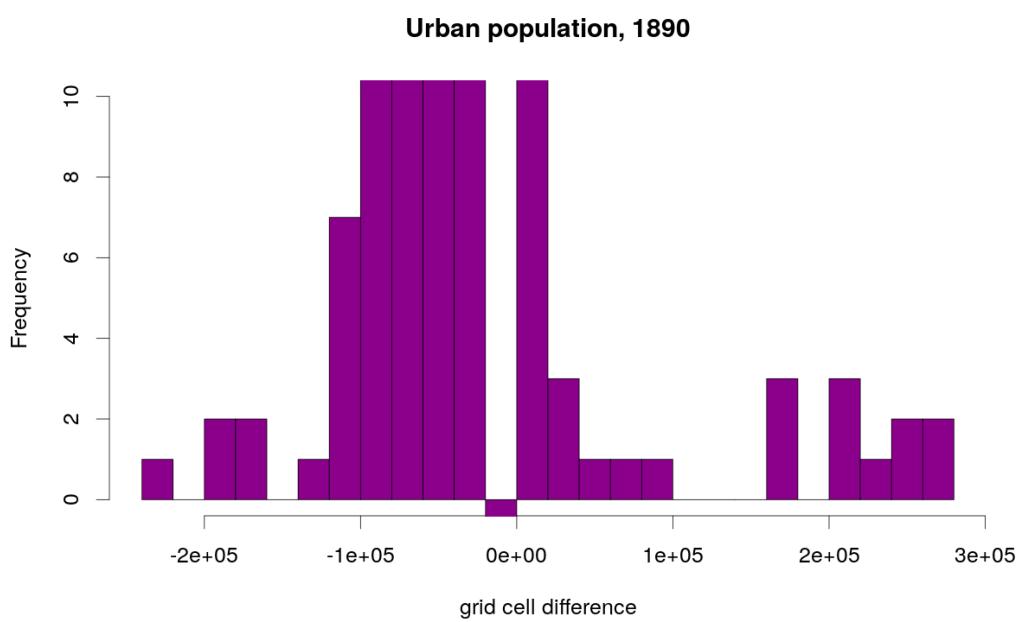
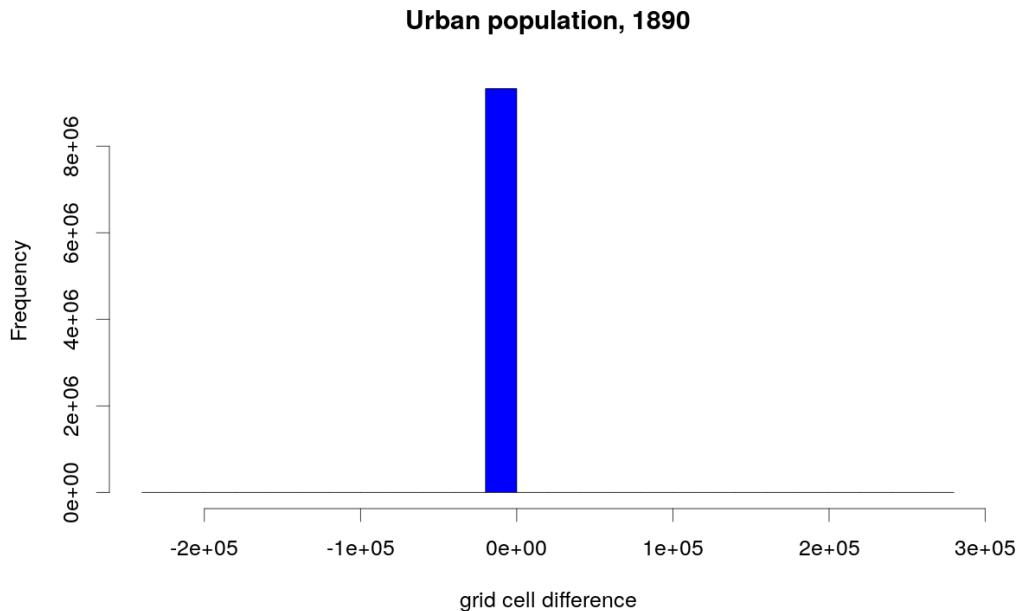
1900

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.96941\text{e}+08 \\
 \sum_x p_x^{(v3.3)} &= 2.71389\text{e}+08 \\
 \sum_x \Delta_x &= -1.25552\text{e}+08 \\
 \sum_x |\Delta_x| &= 1.33406\text{e}+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.316299 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.336085 \\
 \max_x \Delta_x &= 343675 \\
 \min_x \Delta_x &= -249039
 \end{aligned}$$

Urban population, 1900**Urban population, 1900**

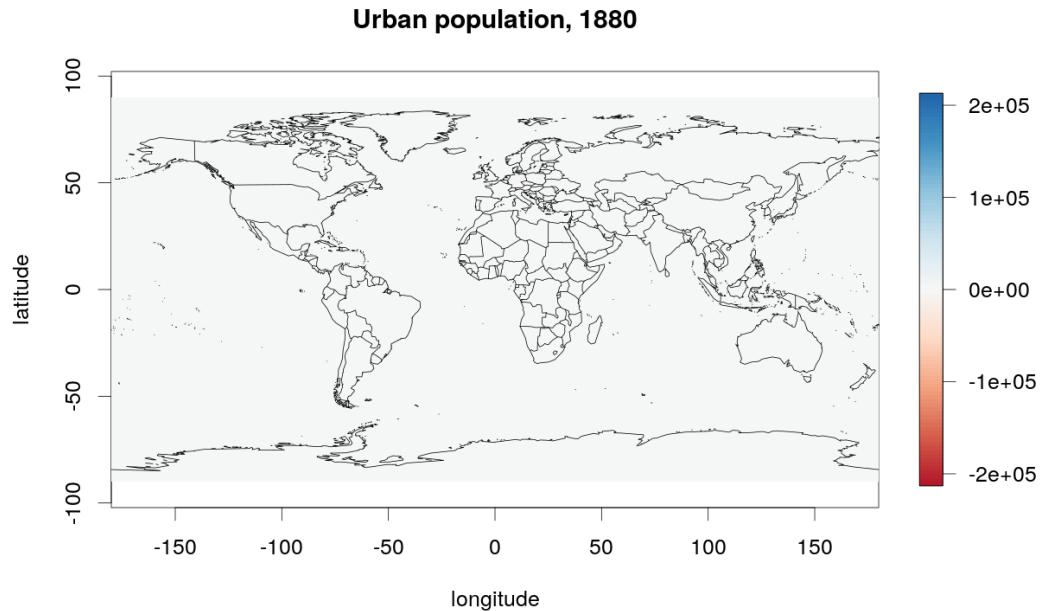
1890

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 3.22093e+08 \\
 \sum_x p_x^{(v3.3)} &= 2.20023e+08 \\
 \sum_x \Delta_x &= -1.0207e+08 \\
 \sum_x |\Delta_x| &= 1.07648e+08 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.316896 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.334214 \\
 \max_x \Delta_x &= 268720 \\
 \min_x \Delta_x &= -223249
 \end{aligned}$$

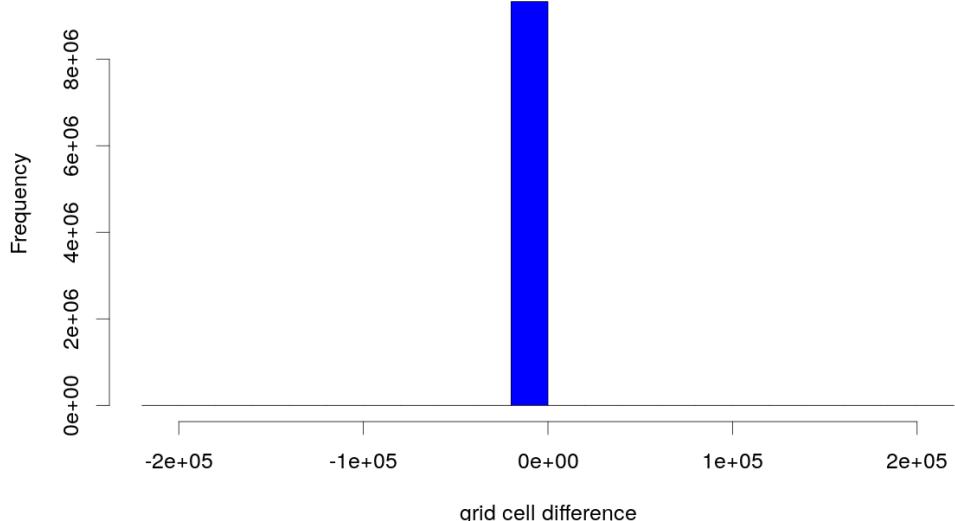
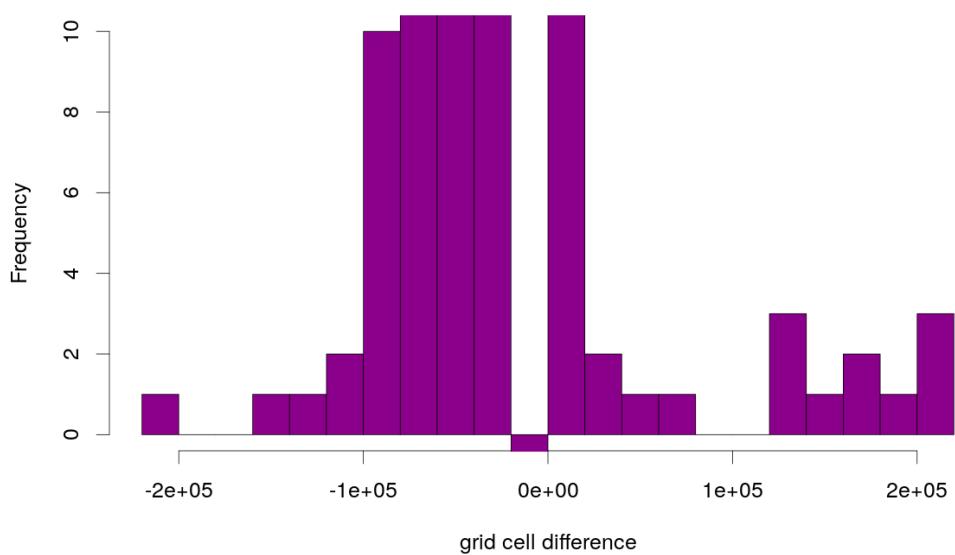


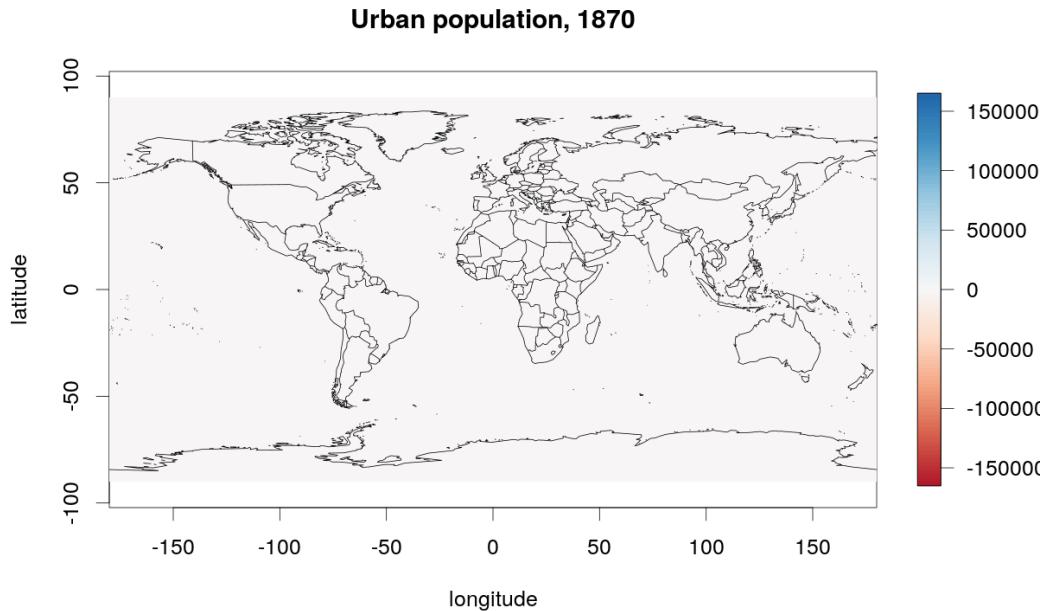
206

1880

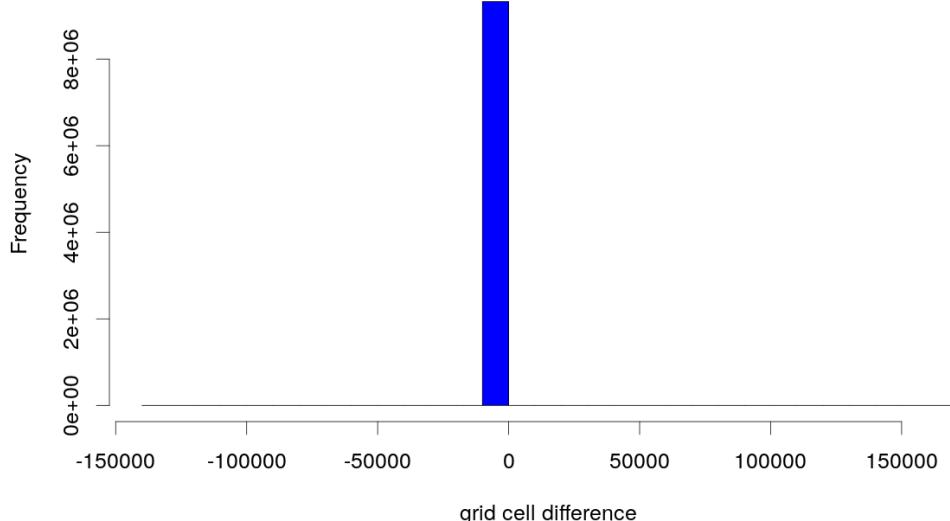
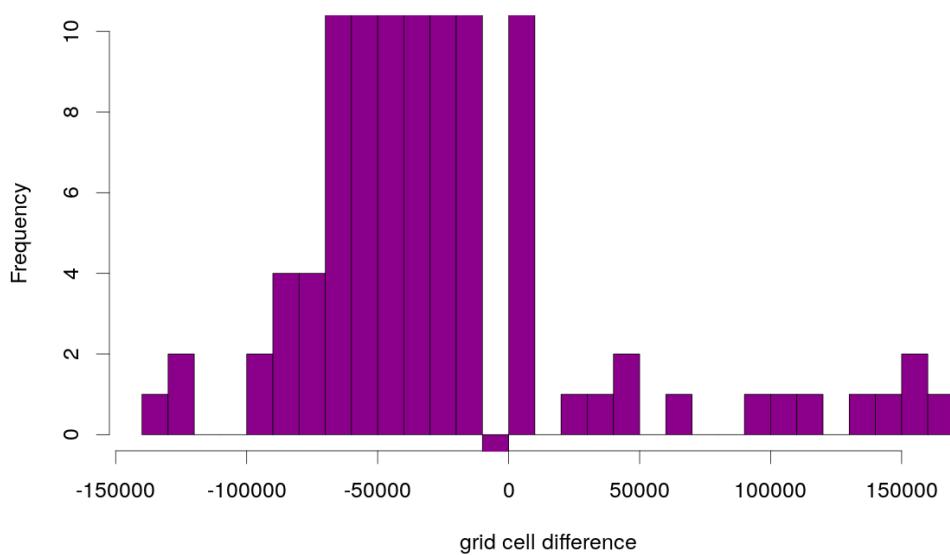


$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 2.63474\text{e+08} \\ \sum_x p_x^{(v3.3)} &= 1.81827\text{e+08} \\ \sum_x \Delta_x &= -8.16464\text{e+07} \\ \sum_x |\Delta_x| &= 8.55793\text{e+07} \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.309884 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.324811 \\ \max_x \Delta_x &= 207911 \\ \min_x \Delta_x &= -210850\end{aligned}$$

Urban population, 1880**Urban population, 1880**

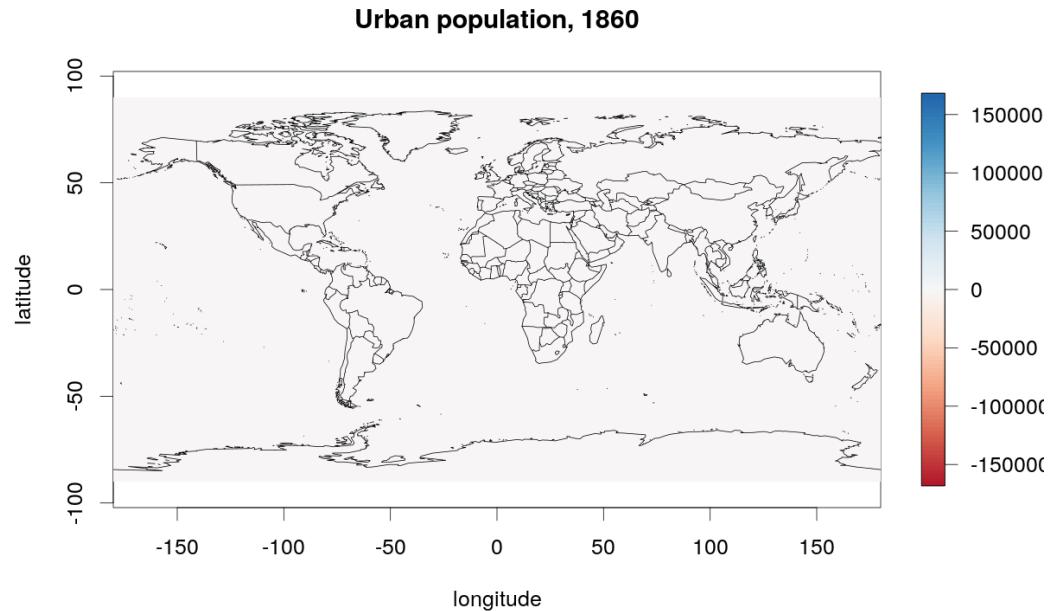
1870

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 2.18988e+08 \\
 \sum_x p_x^{(v3.3)} &= 1.56128e+08 \\
 \sum_x \Delta_x &= -6.28597e+07 \\
 \sum_x |\Delta_x| &= 6.56159e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.287046 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.299632 \\
 \max_x \Delta_x &= 163469 \\
 \min_x \Delta_x &= -133270
 \end{aligned}$$

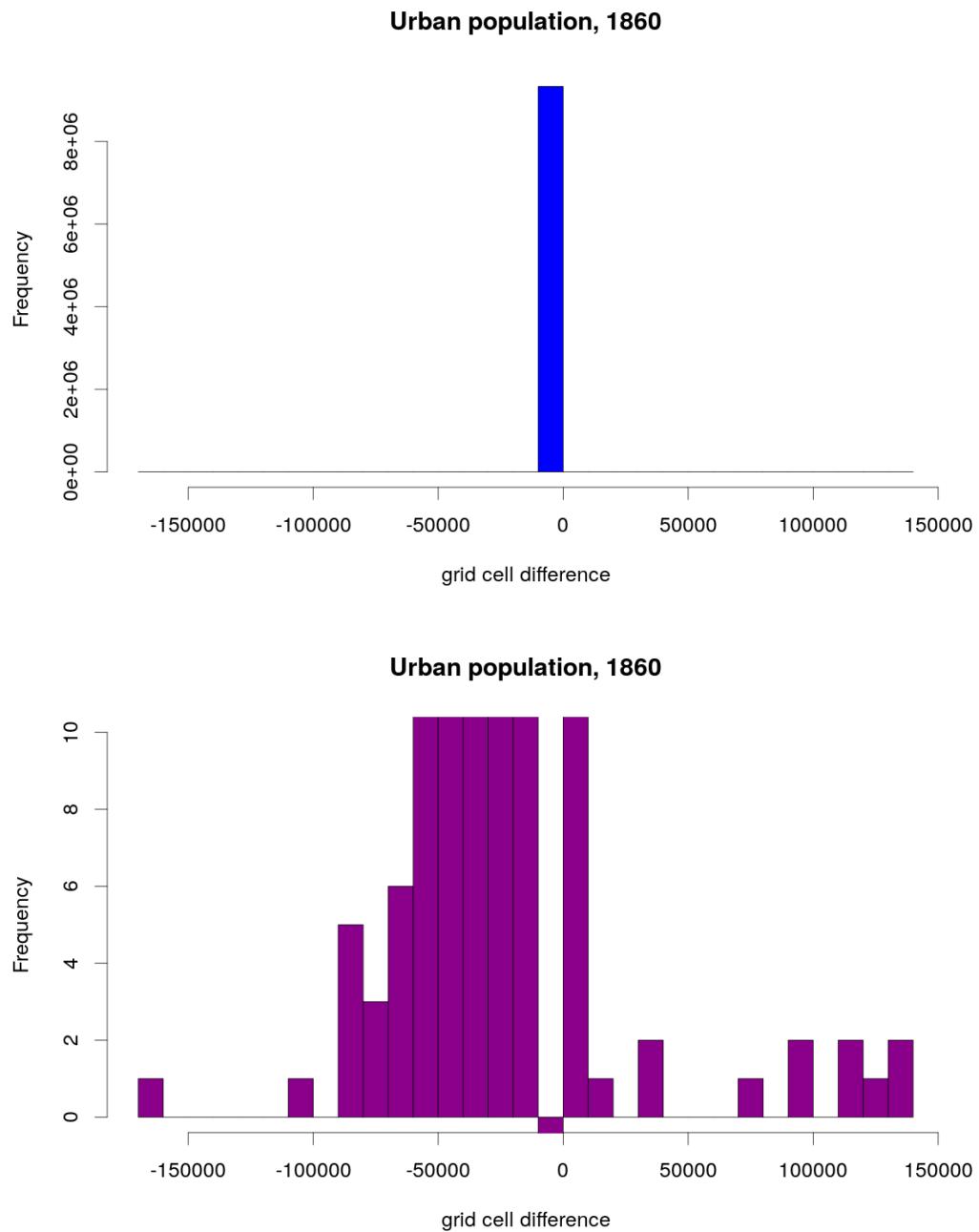
Urban population, 1870**Urban population, 1870**

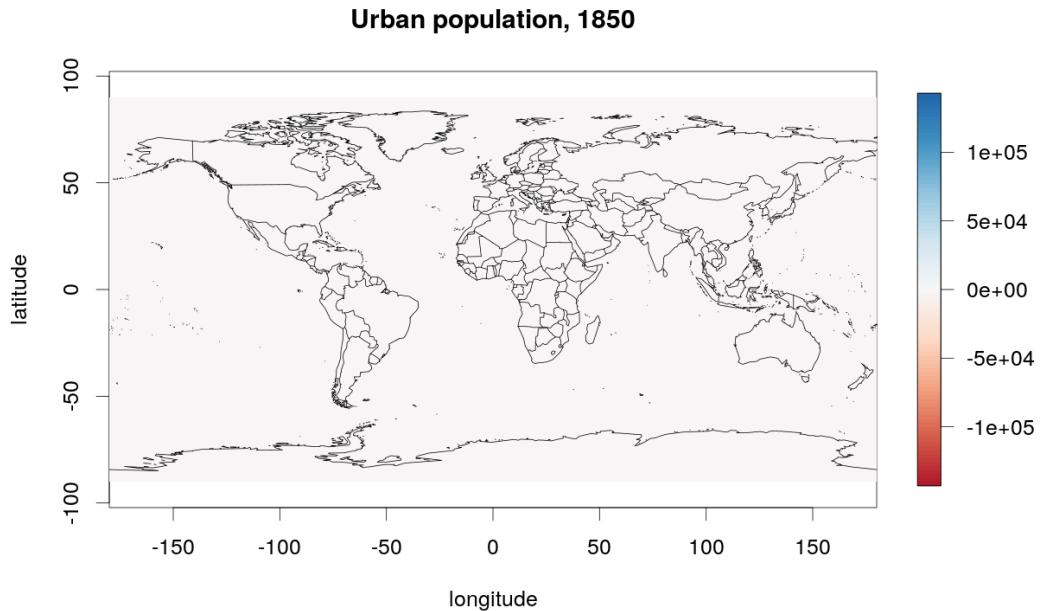
210

1860



$$\begin{aligned}\sum_x p_x^{(v3.2.1)} &= 1.94165e+08 \\ \sum_x p_x^{(v3.3)} &= 1.43298e+08 \\ \sum_x \Delta_x &= -5.08663e+07 \\ \sum_x |\Delta_x| &= 5.29515e+07 \\ \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.261975 \\ \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.272714 \\ \max_x \Delta_x &= 136229 \\ \min_x \Delta_x &= -166572\end{aligned}$$



1850

$$\begin{aligned}
 \sum_x p_x^{(v3.2.1)} &= 1.61942e+08 \\
 \sum_x p_x^{(v3.3)} &= 1.29892e+08 \\
 \sum_x \Delta_x &= -3.20502e+07 \\
 \sum_x |\Delta_x| &= 3.81588e+07 \\
 \sum_x \Delta_x / \sum_x p_x^{(v3.2.1)} &= -0.197912 \\
 \sum_x |\Delta_x| / \sum_x p_x^{(v3.2.1)} &= 0.235633 \\
 \max_x \Delta_x &= 106852 \\
 \min_x \Delta_x &= -141584
 \end{aligned}$$

