

Report for ForestQuery into Global Deforestation, 1990 to 2016



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Sections

1. GLOBAL SITUATION
2. REGIONAL OUTLOOK
3. COUNTRY-LEVEL DETAIL
4. RECOMMENDATIONS
5. APPENDIX: SQL queries used



ForestQuery is on a mission to combat deforestation around the world and to raise awareness about this topic and its impact on the environment. The data analysis team at ForestQuery has obtained data from the World Bank that includes forest area and total land area by country and year from 1990 to 2016, as well as a table of countries and the regions to which they belong.

The data analysis team has used SQL to bring these tables together and to query them in an effort to find areas of concern as well as areas that present an opportunity to learn from successes.





Global Situation



According to the World Bank, the total forest area of the world was 41,282,694.9 sq km in 1990. As of 2016, the most recent year for which data was available, that number had fallen to 39,958,245.9, a loss of 1,324,449 sq km, or 3.21%.

The forest area lost over this time period is slightly more than the entire land area of Peru listed for the year 2016 (which is 1,279,999.9891 sq km).





Regional Outlook

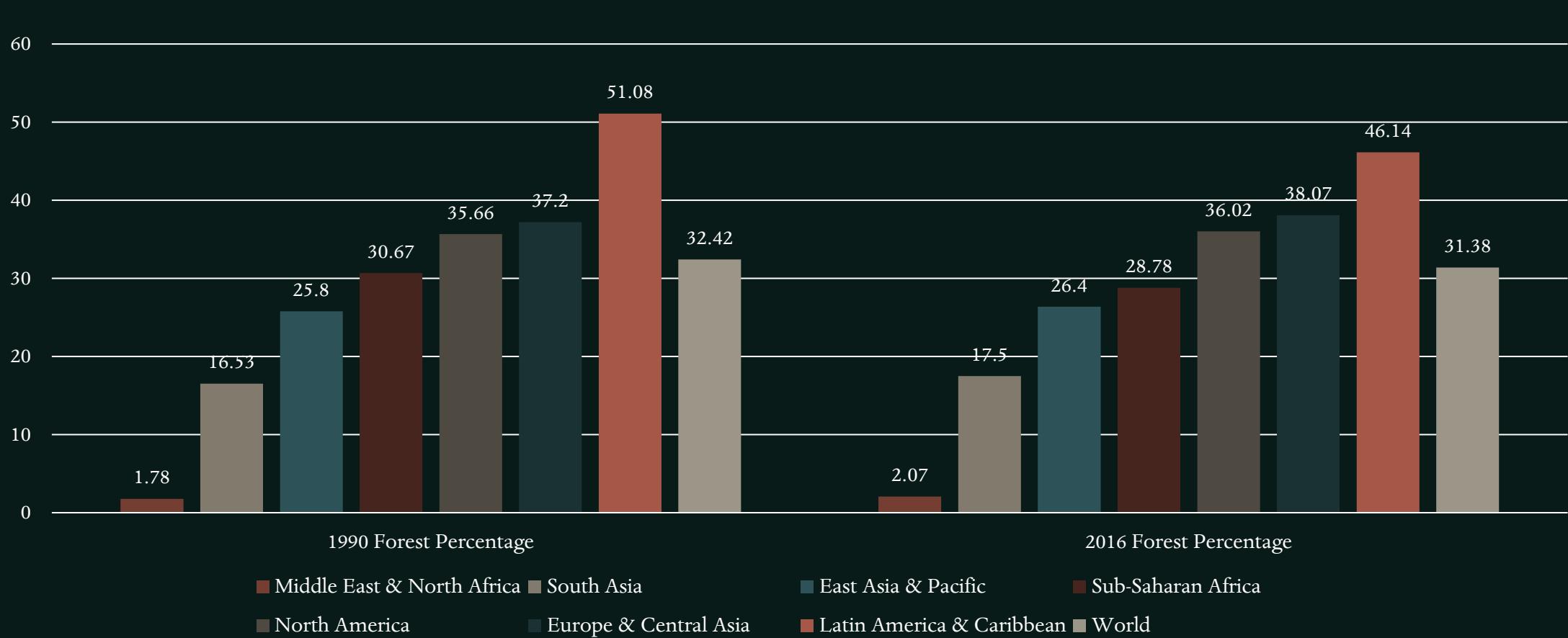


In 2016, the percentage of the total land area of the world designated as forest was **31.38%**. The region with the highest relative forestation was **Latin America & Caribbean**, with **46.14%**, and the region with the lowest relative forestation was **Middle East & North Africa**, with **2.07%** forestation.

In 1990, the percentage of the total land area of the world designated as forest was **32.42%**. The region with the highest relative forestation was **Latin America & Caribbean**, with **51.08%**, and the region with the lowest relative forestation was **Middle East & North Africa**, with **1.78%** forestation.



Chart 2.1: Percent Forest Area by Region, 1990 & 2016:



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- The only regions of the world that decreased in percent forest area from 1990 to 2016 were Latin America & Caribbean (dropped from 51.08% to 46.14%) and Sub-Saharan Africa (30.67% to 28.79%). All other regions actually increased in forest area over this time period. However, the drop in forest area in the two aforementioned regions was so large, the percent forest area of the world decreased over this time period from 32.42% to 31.38%.



Country-Level
Detail



A. SUCCESS STORIES

There is one particularly bright spot in the data at the country level, **China**. This country actually increased in forest area from 1990 to 2016 by **527,229.06 sq km**. It would be interesting to study what has changed in this country over this time to drive this figure in the data higher. The country with the next largest increase in forest area from 1990 to 2016 was the **United States**, but it only saw an increase of **79,200 sq km**, much lower than the figure for **China**.

China and the **United States** are of course very large countries in total land area, so when we look at the largest percent change in forest area from 1990 to 2016, we aren't surprised to find a much smaller country listed at the top. **Iceland's** forest area increased by **213.66%** from 1990 to 2016.





B. LARGEST CONCERNS

Which countries are seeing deforestation to the largest degree? We can answer this question in two ways. First, we can look at the absolute square kilometer decrease in forest area from 1990 to 2016. The following 3 countries had the largest decrease in forest area over the time period under consideration:



Table 3.1: Top 5 Amount Decrease in Forest Area by Country, 1990 & 2016:

Country	Region	Absolute Forest Area Change
Brazil	Latin America & Caribbean	541,510.00
Indonesia	East Asia & Pacific	282,193.98
Myanmar	East Asia & Pacific	107,234.00
Nigeria	Sub-Saharan Africa	106,506.00
Tanzania	Sub-Saharan Africa	102,320.00

The second way to consider which countries are of concern is to analyze the data by percent decrease.

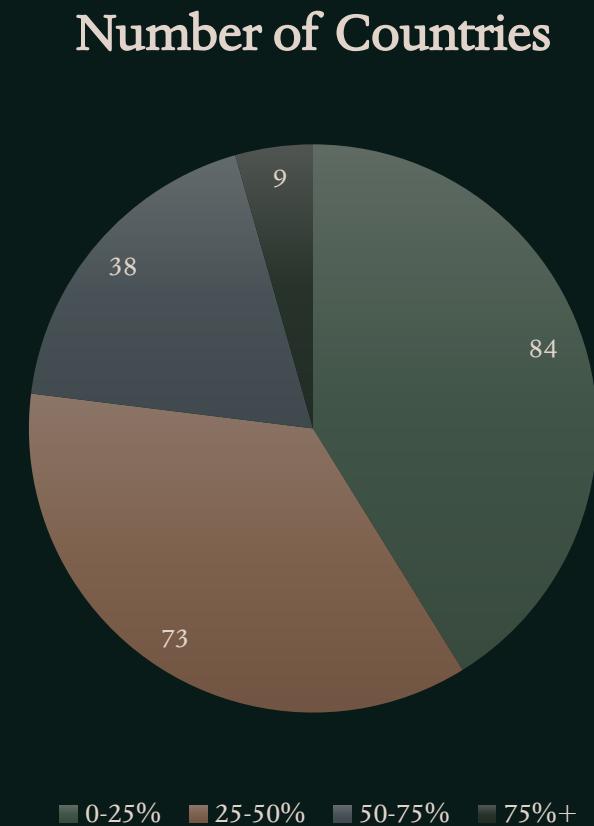
Table 3.2: Top 5 Percent Decrease in Forest Area by Country, 1990 & 2016:

Country	Region	Absolute Forest Area Change
Togo	Sub-Saharan Africa	-75.45%
Nigeria	Sub-Saharan Africa	-61.80%
Uganda	Sub-Saharan Africa	-59.13%
Mauritania	Sub-Saharan Africa	-46.75%
Honduras	Latin America & Caribbean	-45.03%

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- When we consider countries that decreased in forest area percentage the most between 1990 and 2016, we find that four of the top 5 countries on the list are in the region of Sub-Saharan Africa. The countries are Togo, Nigeria, Uganda, and Mauritania. The 5th country on the list is Honduras, which is in the Latin America & Caribbean region.
 - From the above analysis, we see that Nigeria is the only country that ranks in the top 5 both in terms of absolute square kilometer decrease in forest as well as percent decrease in forest area from 1990 to 2016. Therefore, this country has a significant opportunity ahead to stop the decline and hopefully spearhead remedial efforts.

C. QUARTILES

Chart 3.3: Count of Countries Grouped by Forestation Percent Quartiles, 2016:



The largest number of countries in 2016 were found in the **0-25** quartile.

There were **9** countries in the top quartile in 2016. These are countries with a very high percentage of their land area designated as forest. The following is a list of countries and their respective forest land, denoted as a percentage.



Table 3.4: Top Quartile Countries, 2016:

Country	Region	Absolute Forest Area Change
Suriname	Latin America & Caribbean	98.26
Micronesia, Fed. Sts.	East Asia & Pacific	95.39
Palau	East Asia & Pacific	90.98
Gabon	Sub-Saharan Africa	90.04
Seychelles	Sub-Saharan Africa	88.41
American Samoa	East Asia & Pacific	87.50
Guayana	Latin America & Caribbean	83.90
Lao PDR	East Asia & Pacific	82..11
Solomon Islands	East Asia & Pacific	77.86



Recommendations

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- After analyzing the data from the World Bank Data, we can see that the most affected region is Sub-Saharan Africa.
 - We should focus our efforts on the most affected regions, dig deeper into the data to investigate what's causing such a tremendous decrease in the forest areas of those countries.
 - We should also mirror what other countries have done to preserve and increase their forest areas.



Please see the appendix file for
the SQL queries.

THANKS