**The queries appendix**

SELECT \*

FROM forest\_area

\_\_\_  
SELECT \*

FROM land\_area

------  
SELECT \*

FROM regions

## **1. GLOBAL SITUATION**

CREATE VIEW Forestation

AS

(SELECT

f.year AS year,

f.forest\_area\_sqkm AS forest\_area\_sqkm,

f.country\_name AS country\_name,

f.country\_code AS country\_code,

(l.total\_area\_sq\_mi\*2.59) AS land\_total\_area\_sqkm,

r.region AS region,

r.income\_group AS income\_group,

(f.forest\_area\_sqkm) /

(l.total\_area\_sq\_mi\*2.59)\*100 AS percentage\_forest\_area

FROM forest\_area f

JOIN land\_area l

ON f.country\_code=l.country\_code AND f.year=l.year

JOIN regions r

ON r.country\_code=f.country\_code

)

land total area sqmi = **land\_total\_area\_sqkm**

SELECT (land\_total\_area\_sq\_mi \*2.59) AS land\_total\_area\_sqkm

FROM forestation

a.

SELECT country\_name , year, forest\_area\_sqkm

FROM forestation

WHERE region= 'World' and year=1990

b.

SELECT country\_name , year, forest\_area\_sqkm

FROM forestation

WHERE region= 'World' and year='2016'

c.

WITH CTE\_1990 AS

(SELECT country\_name , year, forest\_area\_sqkm

FROM forestation

WHERE region= 'World' and year=1990),

CTE\_2016 AS

(SELECT country\_name , year, forest\_area\_sqkm

FROM forestation

WHERE region= 'World' and year=2016)

SELECT (CTE\_1990.forest\_area\_sqkm-CTE\_2016.forest\_area\_sqkm) AS new\_area

FROM CTE\_1990

JOIN CTE\_2016

ON CTE\_1990.country\_name=CTE\_2016.country\_name

d.

WITH CTE\_1990 AS

(SELECT country\_name , year, forest\_area\_sqkm

FROM forestation

WHERE region= 'World' and year=1990),

CTE\_2016 as

(SELECT country\_name , year, forest\_area\_sqkm

FROM forestation

WHERE region= 'World' and year=2016)

SELECT (CTE\_1990.forest\_area\_sqkm-CTE\_2016.forest\_area\_sqkm) AS new\_area,

ROUND(((CTE\_2016.forest\_area\_sqkm-CTE\_1990.forest\_area\_sqkm)\*100/CTE\_1990.forest\_area\_sqkm)::numeric,2) AS percent\_change

FROM CTE\_1990

JOIN CTE\_2016

ON CTE\_1990.country\_name=CTE\_2016.country\_name

e.

SELECT year, country\_name, land\_total\_area\_sqkm, forest\_area\_sqkm

FROM forestation

WHERE year='2016'

AND land\_total\_area\_sqkm BETWEEN 1200000 and 140000

## **2. REGIONAL OUTLOOK**

Finding percentage forest from the whole world

Create table by instructions

CREATE VIEW regional\_area as

(SELECT

region,

year,

country\_name,

SUM (forest\_area\_sqkm) AS total\_forest\_area\_sqkm,

SUM (forest\_area\_sqkm)/SUM (land\_total\_area\_sqkm)\*100 AS percentage\_forest\_area

FROM forestation

WHERE year='2016' or year='1990'

GROUP BY 1,2,3

ORDER BY 1,2)

FILL IN Table 2.1

forest percent of world 1990

SELECT

region,

round(percentage\_forest\_area::numeric,2)

FROM regional\_area

WHERE year=1990

ORDER BY 2

forest percent of world 2016

SELECT

region,

ROUND (percentage\_forest\_area::numeric,2)

FROM regional\_area

WHERE year=2016

ORDER BY 2

Region highest 2016

SELECT

region,

ROUND(percentage\_forest\_area::numeric,2)

FROM regional\_area

WHERE year='2016'

ORDER BY 2 desc

Region lowest 2016

SELECT

region,

ROUND (percentage\_forest\_area::numeric,2)

FROM regional\_area

WHERE year='2016'

ORDER BY 2

Region lowest 1990

SELECT

region,

ROUND (percentage\_forest\_area::numeric,2)

FROM regional\_area

WHERE year='1990'

ORDER BY 2

Region highest 1990

SELECT

region,

ROUND (percentage\_forest\_area::numeric,2)

FROM regional\_area

WHERE year='1990'

ORDER BY 2 desc

## 3. **COUNTRY-LEVEL DETAIL**

Fill in the success stories

WITH

forest\_increas\_90 AS

(select country\_name AS name\_90,

forest\_area\_sqkm AS forest\_90

FROM forestation

WHERE year =1990 AND forest\_area\_sqkm IS NOT NULL

ORDER BY 2 desc),

forest\_increas\_16 AS

(SELECT

country\_name AS name\_16,

forest\_area\_sqkm AS forest\_16

FROM forestation

WHERE year =2016 AND forest\_area\_sqkm IS NOT NULL

ORDER BY 1 desc)

SELECT

name\_90,

ABS(forest\_16-forest\_90) AS forest\_new

FROM forest\_increas\_90

JOIN forest\_increas\_16

ON forest\_increas\_90.name\_90=forest\_increas\_16.name\_16

ORDER BY 2 DESC

LIMIT 5

**(ABC func. I put into the code in order to have the absolute prectenge+ desc in order by)**

**Fill in table 3.1**

WITH

forest\_increas\_90 AS

(select country\_name AS name\_90,

forest\_area\_sqkm AS forest\_90

FROM forestation

WHERE year =1990 AND forest\_area\_sqkm IS NOT NULL

ORDER BY 2 desc),

forest\_increas\_16 AS

(SELECT

country\_name AS name\_16,

region,

forest\_area\_sqkm AS forest\_16

FROM forestation

WHERE year =2016 AND forest\_area\_sqkm IS NOT NULL

ORDER BY 1 desc)

SELECT

name\_90,

(forest\_90-forest\_16) AS forest\_new,

region

FROM forest\_increas\_90

JOIN forest\_increas\_16

ON forest\_increas\_90.name\_90=forest\_increas\_16.name\_16

ORDER BY 2 DESC

LIMIT 6 (choose 6 and not 5 because I didn't calculate the "World" which came first)

### LARGEST CONCERNS

5 countries which have increase their forest

WITH

country\_years AS

(

SELECT forestation.\*

FROM forestation where

year in (1990 , 2016)

AND country\_code !='WLD' /\*excluded\*/

ORDER BY country\_code , year desc

),

y2016 AS

(select year, forest\_area\_sqkm,country\_name, region

FROM country\_years

WHERE year=2016 AND forest\_area\_sqkm IS NOT NULL) ,

y1990 AS

(SELECT year, forest\_area\_sqkm,country\_name, region

FROM country\_years

WHERE year=1990 AND forest\_area\_sqkm IS NOT NULL)

SELECT

y2016.country\_name,y2016.region,

(y2016.forest\_area\_sqkm-y1990.forest\_area\_sqkm)/y1990.forest\_area\_sqkm\*100 AS diff\_perc

FROM y2016

JOIN y1990 ON y2016.country\_name=y1990.country\_name

ORDER BY 3 desc

LIMIT 5

### 4 .**QUARTILES**

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

WITH tab\_2016

AS (SELECT \*

FROM forestation

WHERE year = 2016),

quar1

AS (SELECT \*

FROM tab\_2016

WHERE percentage\_forest\_area BETWEEN 0 AND 25),

quar2

AS (SELECT \*

FROM tab\_2016

WHERE percentage\_forest\_area BETWEEN 25 AND 50 AND country\_name NOT IN ('World')),

quar3

AS (SELECT \*

FROM tab\_2016

WHERE percentage\_forest\_area BETWEEN 50 AND 75),

quar4

AS (SELECT \*

FROM tab\_2016

WHERE percentage\_forest\_area BETWEEN 75 AND 100),

quarentiles

AS (SELECT '1' AS quarentile,

Count(\*)

FROM quar1

UNION

SELECT '2' AS quarentile,

Count(\*)

FROM quar2

UNION

SELECT '3' AS quarentile,

Count(\*)

FROM quar3

UNION

SELECT '4' AS quarentile,

Count(\*)

FROM quar4)

SELECT \*

FROM quarentiles

ORDER BY quarentile\_\_\_\_\_\_\_\_

Table 3.4: Top Quartile Countries, 2016:

WITH tab\_2016

AS (SELECT \*

FROM forestation

WHERE year = 2016),

quar4

AS (SELECT \*

FROM tab\_2016

WHERE percentage\_forest\_area BETWEEN 75 AND 100)

SELECT country\_name,region, percentage\_forest\_area

FROM quar4

ORDER BY 3 desc