In [1]:
```python
import pandas as pd
import numpy as np
import plotly as pxe
import plotly.express as px

country = pd.read_csv(r'C:\Users\Master\Desktop\Jupyter\country_vaccinations.csv')
country.describe()
```

Out[1]:

	total_vaccinations	people_vaccinated	people_fully_vaccinated	daily_vaccinations_raw	daily_vaccinations	total_vaccinations_per_hundred	people_vaccinated_per_hundred
count	1.989100e+04	1.900400e+04	1.614300e+04	1.640100e+04	3.551600e+04	19891.000000	19004.000000
mean	1.474294e+07	6.617335e+06	3.928109e+06	2.448858e+05	1.226402e+05	34.217120	21.683994
std	8.343918e+07	2.401025e+07	1.373948e+07	1.317651e+06	8.772671e+05	38.720815	22.184084
min	0.000000e+00	0.000000e+00	1.000000e+00	0.000000e+00	0.000000e+00	0.000000	0.000000
25%	1.508770e+05	1.242755e+05	5.690400e+04	4.672000e+03	8.520000e+02	3.680000	2.990000
50%	1.056895e+06	7.567405e+05	4.384070e+05	2.271000e+04	6.755500e+03	18.210000	12.870000
75%	5.320759e+06	3.491274e+06	2.086364e+06	1.028360e+05	3.788175e+04	54.205000	36.670000
max	1.757780e+09	6.220000e+08	2.232990e+08	2.474100e+07	2.242429e+07	232.880000	116.770000

In [2]:
```python
country
```

Out[2]:

	country	iso_code	date	total_vaccinations	people_vaccinated	people_fully_vaccinated	daily_vaccinations_raw	daily_vaccinations	total_vaccinations_per_hundred
0	Afghanistan	AFG	2021-02-22	0.0	0.0	NaN	NaN	NaN	0.00
1	Afghanistan	AFG	2021-02-23	NaN	NaN	NaN	NaN	1367.0	NaN
2	Afghanistan	AFG	2021-02-24	NaN	NaN	NaN	NaN	1367.0	NaN
3	Afghanistan	AFG	2021-02-25	NaN	NaN	NaN	NaN	1367.0	NaN
4	Afghanistan	AFG	2021-02-26	NaN	NaN	NaN	NaN	1367.0	NaN
...	...	...	...	...	...	...	...	...	...
35769	Zimbabwe	ZWE	2021-07-31	2413509.0	1645599.0	767910.0	38148.0	42406.0	16.24
35770	Zimbabwe	ZWE	2021-08-01	2433341.0	1654112.0	779229.0	19832.0	43706.0	16.37
35771	Zimbabwe	ZWE	2021-08-02	2473590.0	1674710.0	798880.0	40249.0	42126.0	16.64
35772	Zimbabwe	ZWE	2021-08-03	2540555.0	1707671.0	832884.0	66965.0	46246.0	17.09
35773	Zimbabwe	ZWE	2021-08-04	2604265.0	1740598.0	863667.0	63710.0	46978.0	17.52

35774 rows × 15 columns

In [3]:
```python
np.unique(country['country'],return_counts= True)
```

Out[3]:
```
(array(['Afghanistan', 'Albania', 'Algeria', 'Andorra', 'Angola',
        'Anguilla', 'Antigua and Barbuda', 'Argentina', 'Armenia', 'Aruba',
        'Australia', 'Austria', 'Azerbaijan', 'Bahamas', 'Bahrain',
        'Bangladesh', 'Barbados', 'Belarus', 'Belgium', 'Belize', 'Benin',
        'Bermuda', 'Bhutan', 'Bolivia', 'Bonaire Sint Eustatius and Saba',
        'Bosnia and Herzegovina', 'Botswana', 'Brazil',
        'British Virgin Islands', 'Brunei', 'Bulgaria', 'Burkina Faso',
        'Cambodia', 'Cameroon', 'Canada', 'Cape Verde', 'Cayman Islands',
        'Central African Republic', 'Chad', 'Chile', 'China', 'Colombia',
        'Comoros', 'Congo', 'Cook Islands', 'Costa Rica', "Cote d'Ivoire",
        'Croatia', 'Cuba', 'Curacao', 'Cyprus', 'Czechia',
        'Democratic Republic of Congo', 'Denmark', 'Djibouti', 'Dominica',
        'Dominican Republic', 'Ecuador', 'Egypt', 'El Salvador', 'England',
        'Equatorial Guinea', 'Estonia', 'Eswatini', 'Ethiopia',
        'Faeroe Islands', 'Falkland Islands', 'Fiji', 'Finland', 'France',
        'French Polynesia', 'Gabon', 'Gambia', 'Georgia', 'Germany',
        'Ghana', 'Gibraltar', 'Greece', 'Greenland', 'Grenada',
        'Guatemala', 'Guernsey', 'Guinea', 'Guinea-Bissau', 'Guyana',
        'Haiti', 'Honduras', 'Hong Kong', 'Hungary', 'Iceland', 'India',
        'Indonesia', 'Iran', 'Iraq', 'Ireland', 'Isle of Man', 'Israel',
        'Italy', 'Jamaica', 'Japan', 'Jersey', 'Jordan', 'Kazakhstan',
        'Kenya', 'Kosovo', 'Kuwait', 'Kyrgyzstan', 'Laos', 'Latvia',
        'Lebanon', 'Lesotho', 'Liberia', 'Libya', 'Liechtenstein',
        'Lithuania', 'Luxembourg', 'Macao', 'Madagascar', 'Malawi',
        'Malaysia', 'Maldives', 'Mali', 'Malta', 'Mauritania', 'Mauritius',
        'Mexico', 'Moldova', 'Monaco', 'Mongolia', 'Montenegro',
        'Montserrat', 'Morocco', 'Mozambique', 'Myanmar', 'Namibia',
        'Nauru', 'Nepal', 'Netherlands', 'New Caledonia', 'New Zealand',
        'Nicaragua', 'Niger', 'Nigeria', 'Niue', 'North Macedonia',
        'Northern Cyprus', 'Northern Ireland', 'Norway', 'Oman',
        'Pakistan', 'Palestine', 'Panama', 'Papua New Guinea', 'Paraguay',
        'Peru', 'Philippines', 'Pitcairn', 'Poland', 'Portugal', 'Qatar',
        'Romania', 'Russia', 'Rwanda', 'Saint Helena',
        'Saint Kitts and Nevis', 'Saint Lucia',
        'Saint Vincent and the Grenadines', 'Samoa', 'San Marino',
        'Sao Tome and Principe', 'Saudi Arabia', 'Scotland', 'Senegal',
        'Serbia', 'Seychelles', 'Sierra Leone', 'Singapore',
        'Sint Maarten (Dutch part)', 'Slovakia', 'Slovenia',
        'Solomon Islands', 'Somalia', 'South Africa', 'South Korea',
        'South Sudan', 'Spain', 'Sri Lanka', 'Sudan', 'Suriname', 'Sweden',
        'Switzerland', 'Syria', 'Taiwan', 'Tajikistan', 'Thailand',
        'Timor', 'Togo', 'Tonga', 'Trinidad and Tobago', 'Tunisia',
        'Turkey', 'Turkmenistan', 'Turks and Caicos Islands', 'Tuvalu',
        'Uganda', 'Ukraine', 'United Arab Emirates', 'United Kingdom',
        'United States', 'Uruguay', 'Uzbekistan', 'Vanuatu', 'Venezuela',
        'Vietnam', 'Wales', 'Wallis and Futuna', 'Yemen', 'Zambia',
        'Zimbabwe'], dtype=object),
 array([161, 208, 182, 176, 156, 177, 170, 221, 124, 131, 173, 222, 201,
        147, 227, 192, 170, 217, 221, 157,  84, 209, 133, 190,   1, 161,
        131, 203,  71, 125, 221,  53, 179, 115, 236, 139, 224,  86,  57,
        222, 235, 169, 105, 107,  57, 215, 157, 219,  78, 131, 212, 223,
        108, 232,  69, 170, 172, 197, 194, 170, 241, 142, 222, 127, 119,
        190,  67, 139, 219, 222, 182, 137, 129, 146, 222, 141, 202, 222,
        192, 170, 162, 195, 126,  69, 175,  21, 160, 166, 206, 220, 204,
        207, 176, 133, 218, 195, 231, 223, 151, 170, 141, 202, 188, 154,
        131, 188, 132, 143, 246, 175, 140,  62, 111, 227, 223, 220, 179,
         48, 141, 164, 183, 127, 201, 133, 191, 225, 155, 220, 166, 168,
        173, 191, 150, 157, 140, 111, 193, 209, 182, 166, 138, 100, 131,
         16, 171, 165, 236, 247, 210, 186, 129, 197, 126, 155, 179, 159,
         49, 221, 223, 228, 222, 235, 170,  92, 165, 172, 141,  91, 160,
        142, 213, 241, 163, 211, 195, 114, 206,  85, 215, 223, 133, 108,
        171, 162, 106, 214, 191, 145, 166, 223, 227, 131, 139,  85, 160,
        112, 148, 105, 173, 146, 206,   1, 195,  50, 150, 164, 214, 236,
        230, 161, 125,  57, 146, 152, 236, 133,  80, 115, 168], dtype=int64))
```

In [4]:
```python
Brazil = country.loc[country['country'] == 'Brazil']
Brazil
```

Out[4]:

	country	iso_code	date	total_vaccinations	people_vaccinated	people_fully_vaccinated	daily_vaccinations_raw	daily_vaccinations	total_vaccinations_per_hundred	people_vaccinated_per_hundred
4542	Brazil	BRA	2021-01-16	0.0	0.0	NaN	NaN	NaN	0.00	0.0
4543	Brazil	BRA	2021-01-17	112.0	112.0	NaN	112.0	112.0	0.00	0.0
4544	Brazil	BRA	2021-01-18	1109.0	1109.0	NaN	997.0	554.0	0.00	0.0
4545	Brazil	BRA	2021-01-19	11470.0	11470.0	NaN	10361.0	3823.0	0.01	0.0
4546	Brazil	BRA	2021-01-20	28543.0	28543.0	NaN	17073.0	7136.0	0.01	0.0
...	...	...	...	...	...	...	...	...	...	...
4740	Brazil	BRA	2021-08-02	142559470.0	105105405.0	41515443.0	NaN	1145694.0	67.07	49.4
4741	Brazil	BRA	2021-08-03	145558264.0	106917279.0	42756263.0	2998794.0	1292654.0	68.48	50.3
4742	Brazil	BRA	2021-08-04	147214665.0	107980946.0	43375897.0	1656401.0	1333416.0	69.26	50.8
4743	Brazil	BRA	2021-08-05	NaN	NaN	NaN	NaN	1187630.0	NaN	NaN
4744	Brazil	BRA	2021-08-06	149469803.0	109376148.0	44266214.0	NaN	1328656.0	70.32	51.4

203 rows × 15 columns

In [5]:
```python
country.isnull().sum()
```

Out[5]:
```
country                                    0
iso_code                                   0
date                                       0
total_vaccinations                     15883
people_vaccinated                      16770
people_fully_vaccinated                19631
daily_vaccinations_raw                 19373
daily_vaccinations                       258
total_vaccinations_per_hundred         15883
people_vaccinated_per_hundred          16770
people_fully_vaccinated_per_hundred    19631
daily_vaccinations_per_million           258
vaccines                                   0
source_name                                0
source_website                             0
dtype: int64
```

In [6]:
```python
Brazil['daily_vaccinations'].max()
```

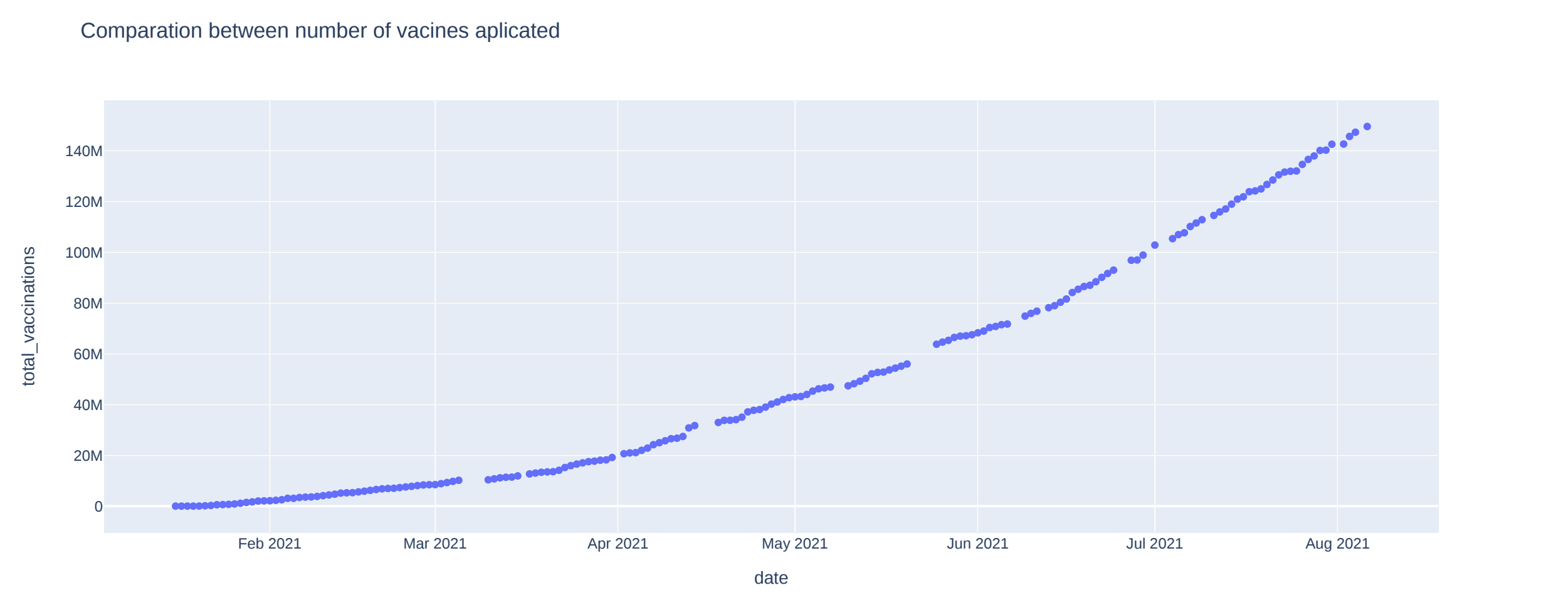
Out[6]: 1520483.0

In [7]:
```python
#Day with mores peoople been vacinated
Brazil[Brazil['daily_vaccinations'] == 1520483.0]
```

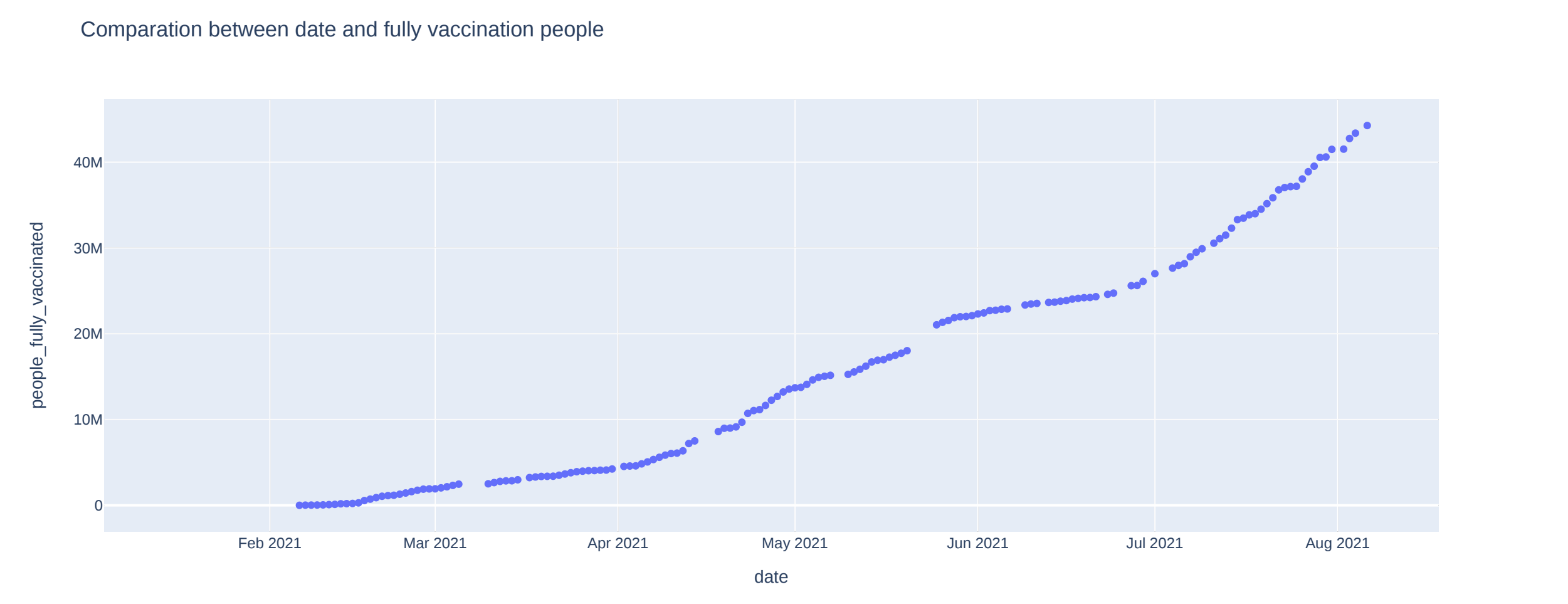
Out[7]:

	country	iso_code	date	total_vaccinations	people_vaccinated	people_fully_vaccinated	daily_vaccinations_raw	daily_vaccinations	total_vaccinations_per_hundred	people_vaccinated_per_hundred
4738	Brazil	BRA	2021-07-31	142488679.0	105057816.0	41489804.0	2319465.0	1520483.0	67.03	49.4

In [8]:
```python
grafico1 = px.scatter(Brazil, x='date',   y='total_vaccinations', title='Comparation between number of vacines aplicated')
grafico1
```



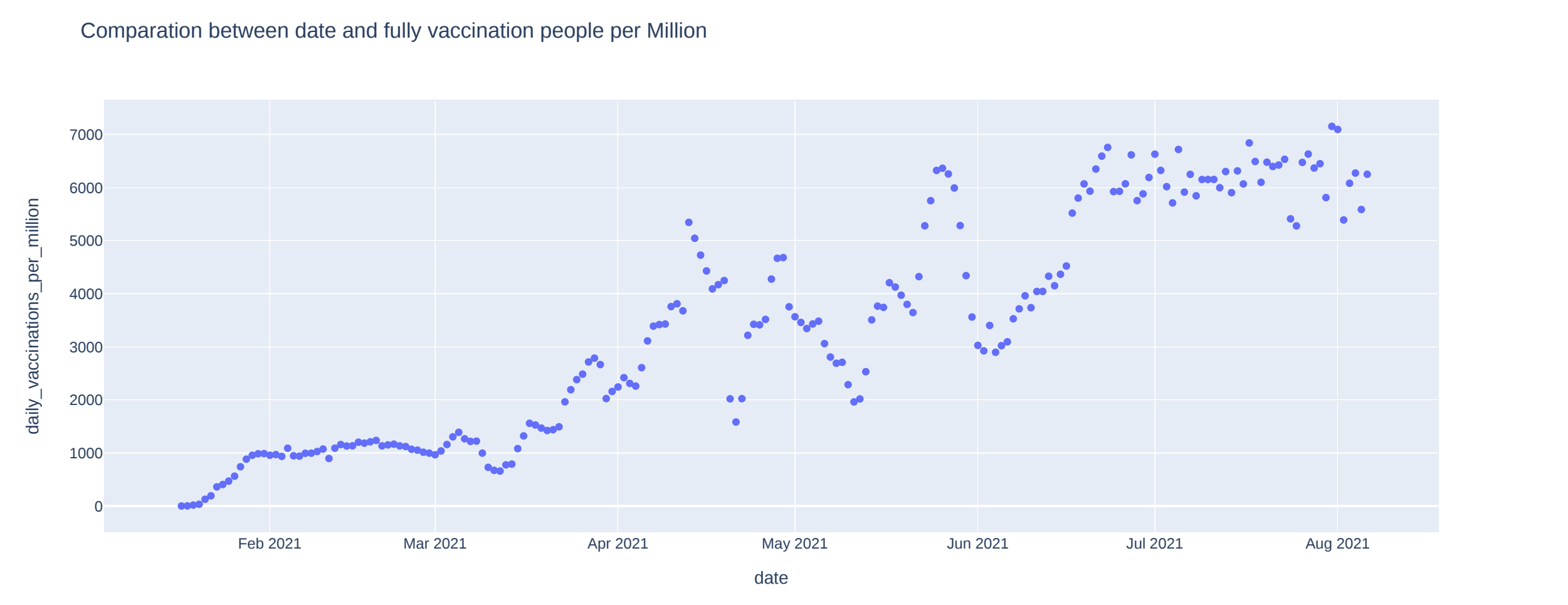
In [10]:
```python
grafico2 = px.scatter(Brazil, x='date', y='people_fully_vaccinated', title='Comparation between date and fully vaccination people')
grafico2
```



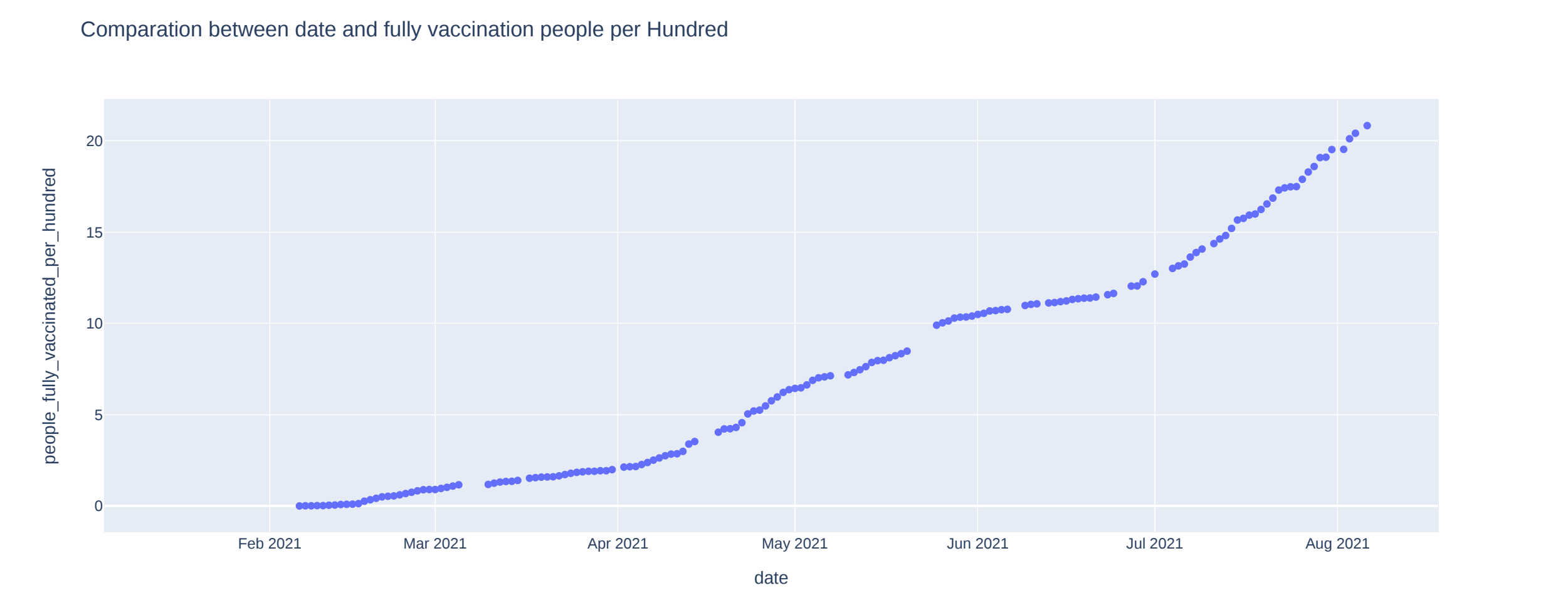
In [11]:
```python
#Percent of peoople fully vacinated in Brazil
BrazilPopulation = 210
FullVaccination = 40
peooplevacc = FullVaccination/BrazilPopulation *100
peooplevacc
```

Out[11]: 19.047619047619047

In [12]:
```python
grafico2 = px.scatter(Brazil, x='date', y='daily_vaccinations_per_million', title='Comparation between date and fully vaccination people per Million')
grafico2
```



In [13]:
```python
grafico3 = px.scatter(Brazil, x='date', y='people_fully_vaccinated_per_hundred', title='Comparation between date and fully vaccination people per Hundred')
grafico3
```



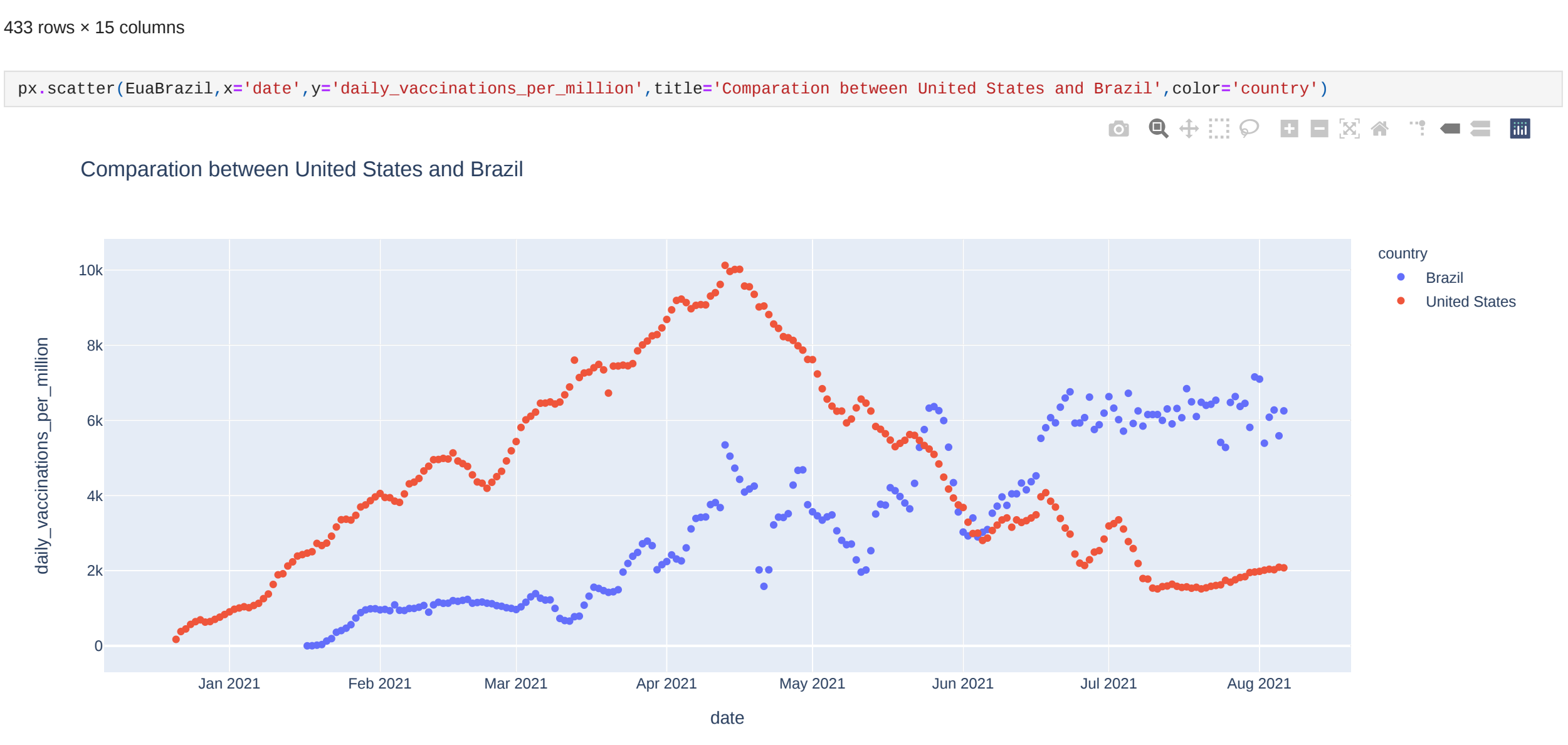
In [14]:
```python
EuaBrazil = country[country['country'].isin(['Brazil','United States'])]
EuaBrazil
```

Out[14]:

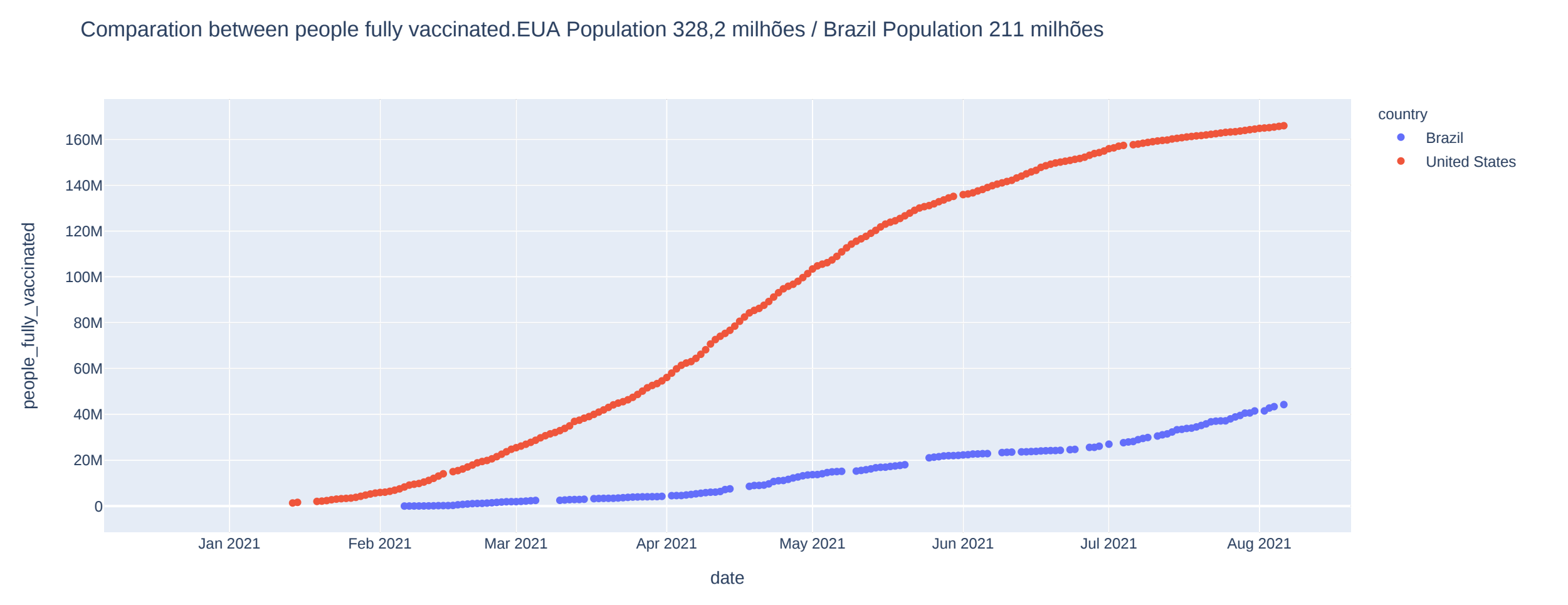
	country	iso_code	date	total_vaccinations	people_vaccinated	people_fully_vaccinated	daily_vaccinations_raw	daily_vaccinations	total_vaccinations_per_hundred	people_vaccinated_per_hundred
4542	Brazil	BRA	2021-01-16	0.0	0.0	NaN	NaN	NaN	0.00	0.
4543	Brazil	BRA	2021-01-17	112.0	112.0	NaN	112.0	112.0	0.00	0.
4544	Brazil	BRA	2021-01-18	1109.0	1109.0	NaN	997.0	554.0	0.00	0.
4545	Brazil	BRA	2021-01-19	11470.0	11470.0	NaN	10361.0	3823.0	0.01	0.
4546	Brazil	BRA	2021-01-20	28543.0	28543.0	NaN	17073.0	7136.0	0.01	0.
...	...	...	...	...	...	...	...	...	...	
34396	United States	USA	2021-08-02	346924345.0	191818585.0	164919666.0	467676.0	673185.0	103.73	57.
34397	United States	USA	2021-08-03	347377149.0	192120576.0	165081416.0	452804.0	681373.0	103.87	57.
34398	United States	USA	2021-08-04	348102478.0	192614017.0	165334987.0	725329.0	677279.0	104.08	57.
34399	United States	USA	2021-08-05	348966419.0	193199353.0	165637566.0	863941.0	699261.0	104.34	57.
34400	United States	USA	2021-08-06	349787479.0	193764457.0	165918256.0	821060.0	694138.0	104.59	57.

433 rows × 15 columns

In [15]:
```python
px.scatter(EuaBrazil,x='date',y='daily_vaccinations_per_million',title='Comparation between United States and Brazil',color='country')
```



In [16]:
```python
px.scatter(EuaBrazil, x='date', y='people_fully_vaccinated', title='Comparation between people fully vaccinated.EUA Population 328,2 milhões / Brazil Populati
```



In [ ]: