POLLUTION AND RENEWABLE ENERGY

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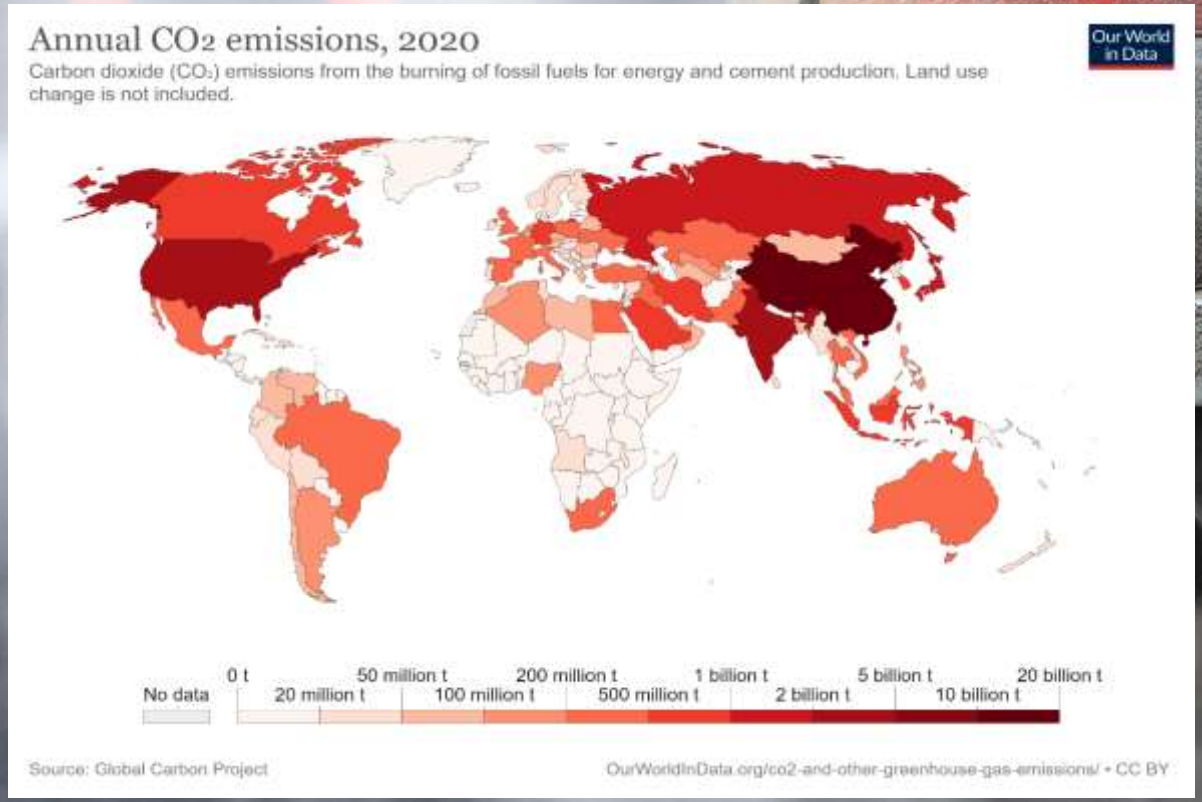
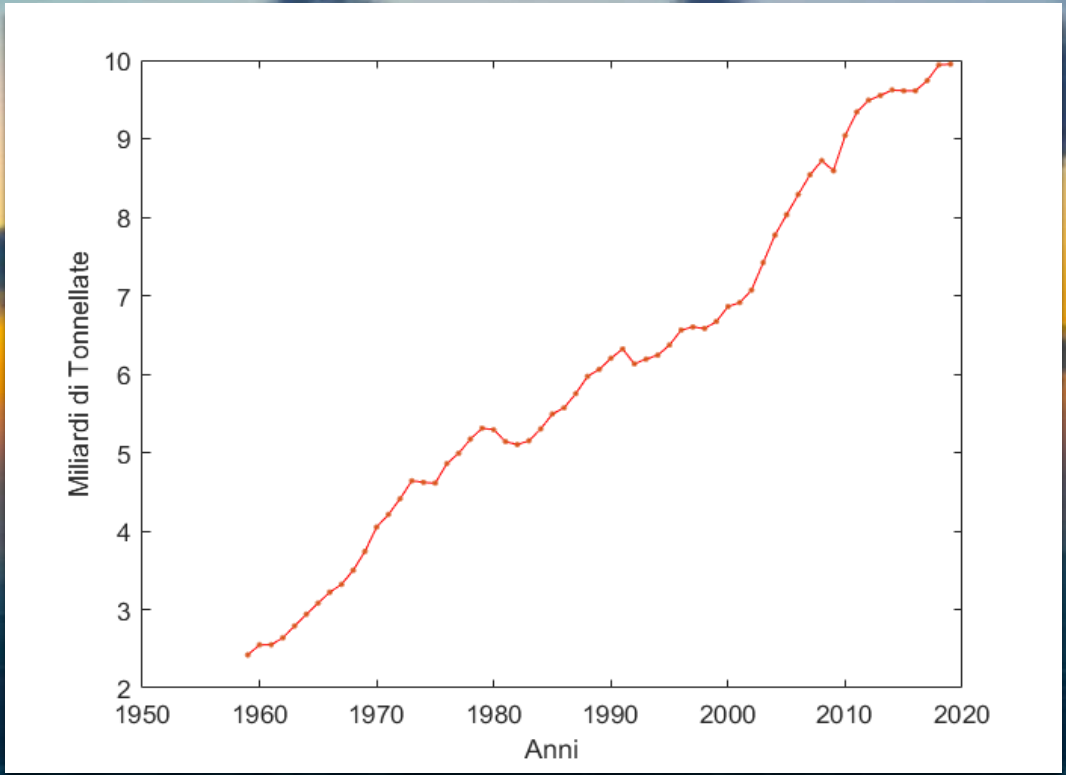
“La nazione che distrugge il proprio suolo distrugge se stessa”
FRANKLIN DELANO ROOSVELT

Inquiniamo davvero così tanto?

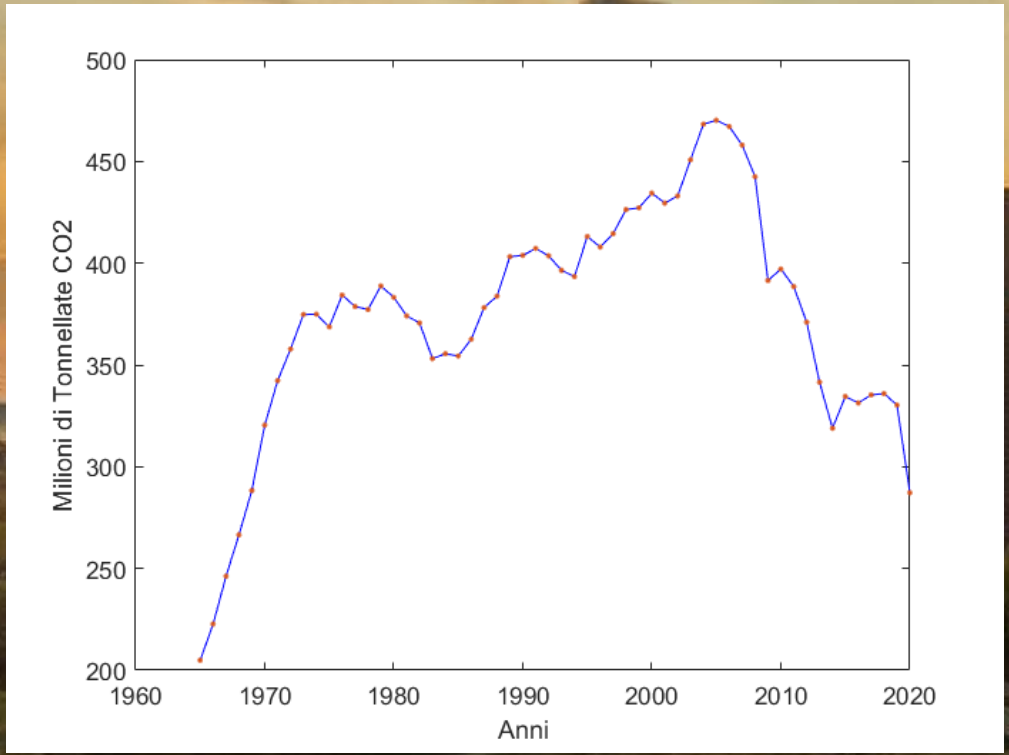


Emissioni di CO2 nel mondo

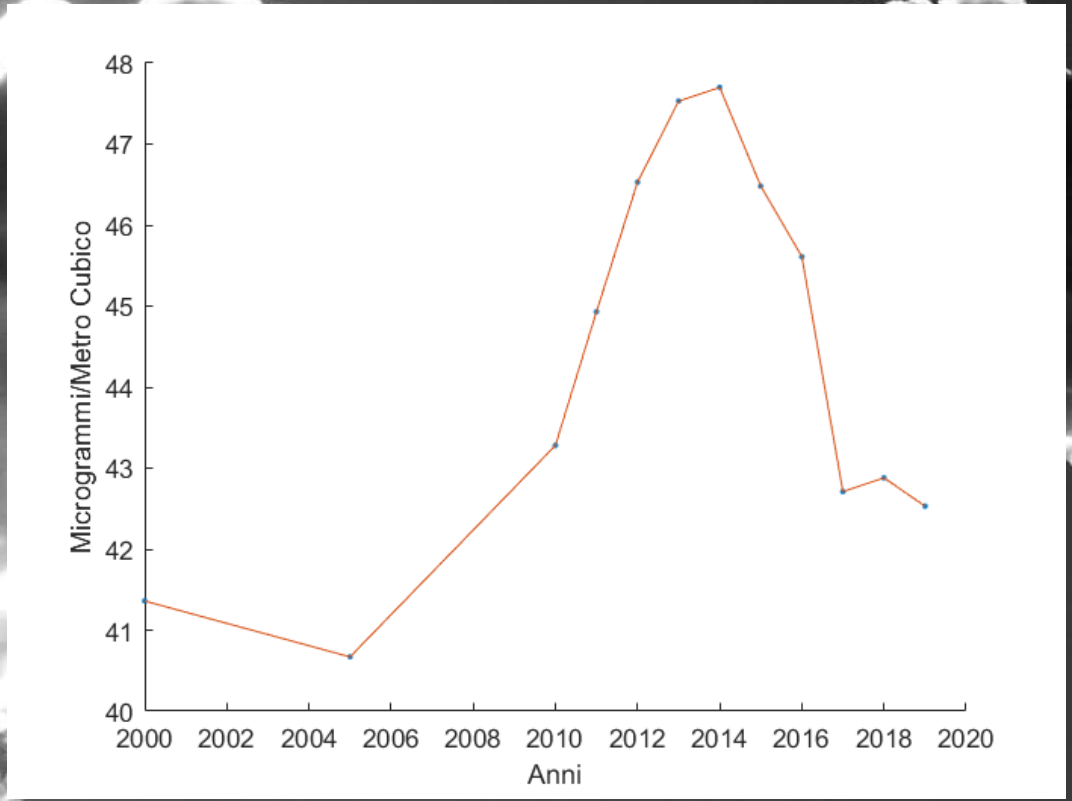


E in Italia?

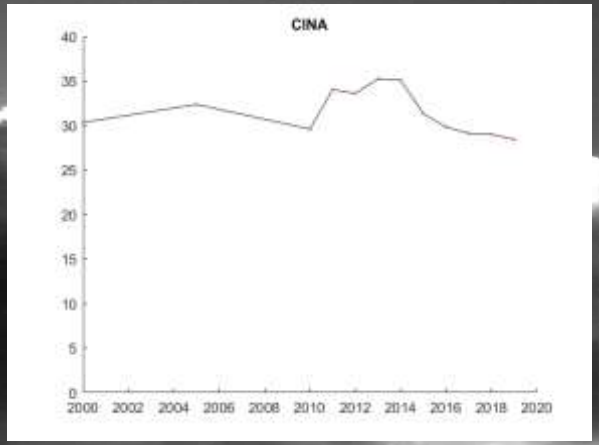
Emissioni di CO2 in Italia

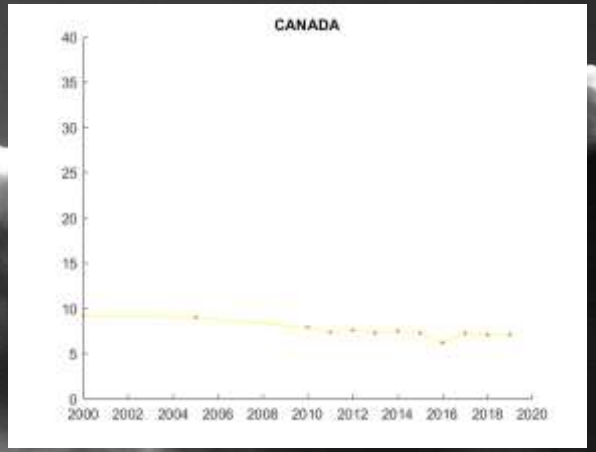


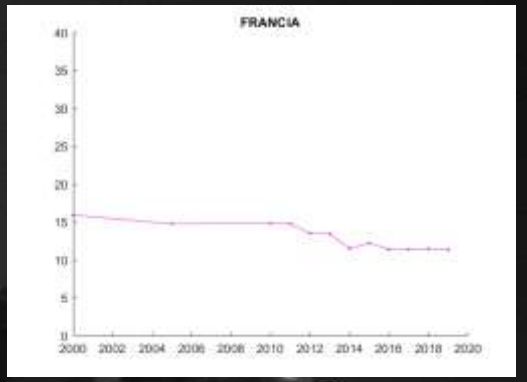
Esposizione al particolato PM2.5 nel mondo

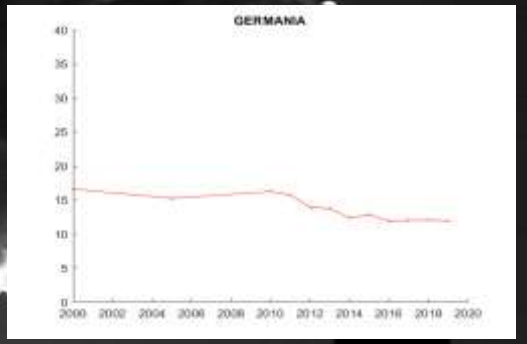


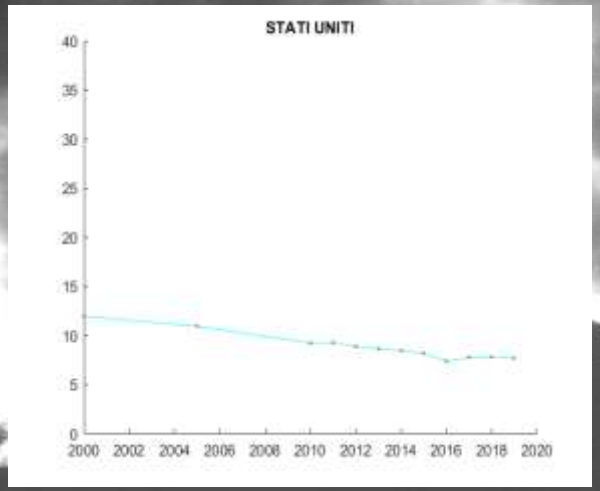
Facendo un confronto

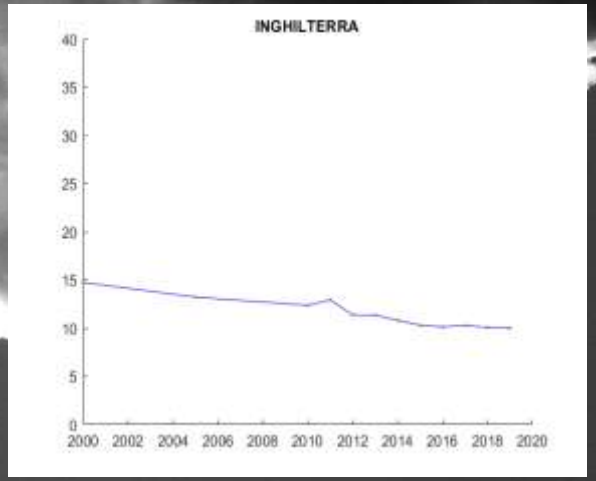


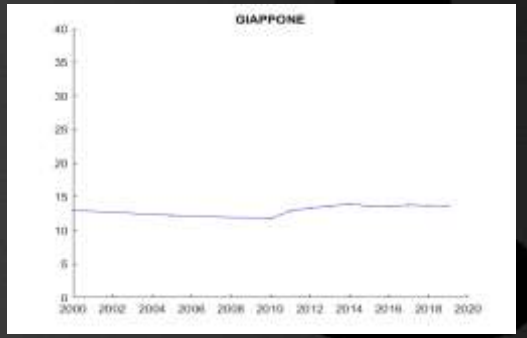




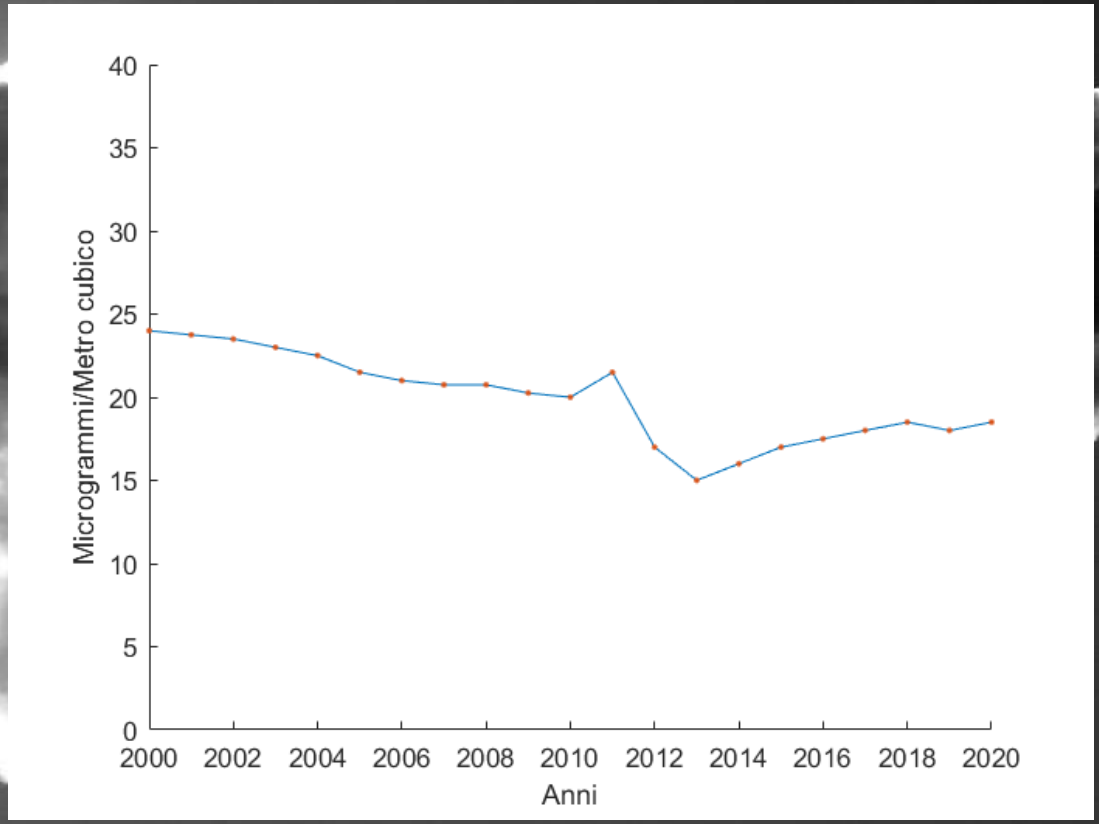




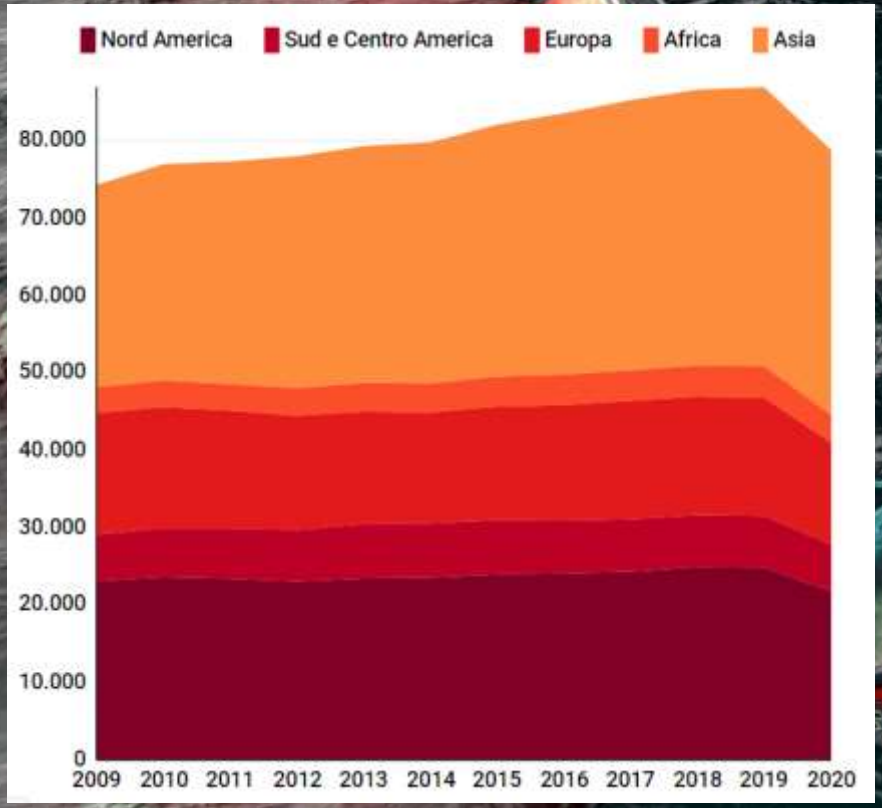




Esposizione al particolato PM2.5 in Italia



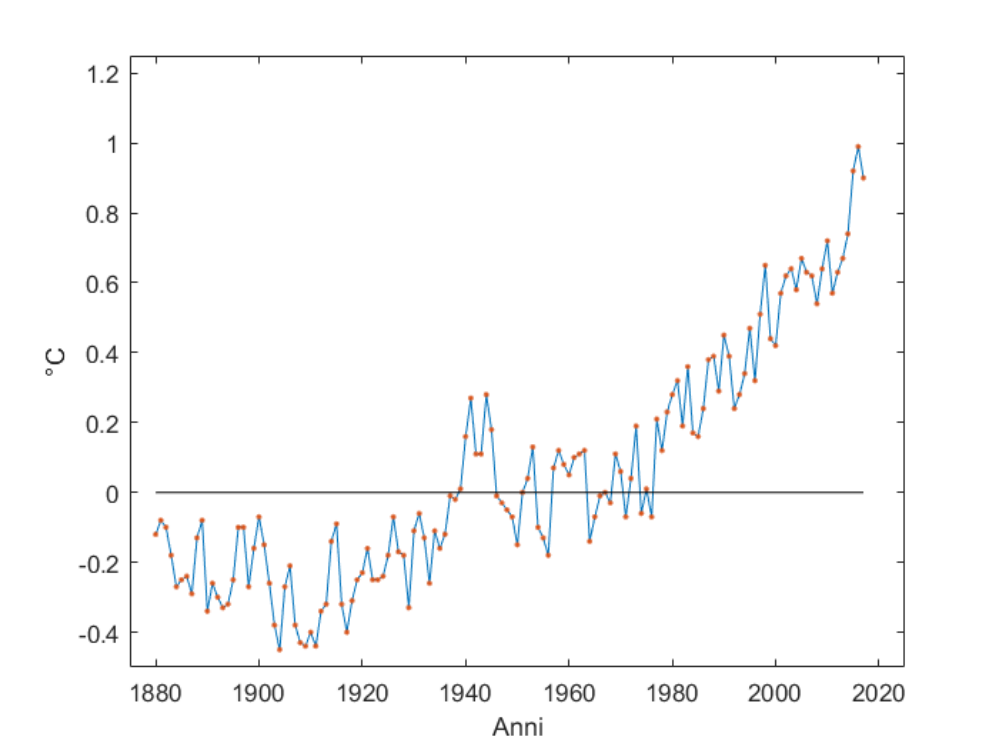
Consumo in barili di petrolio annui



Ma gli effetti di tutto questo inquinamento si vedono davvero?

Siamo a temperatura?

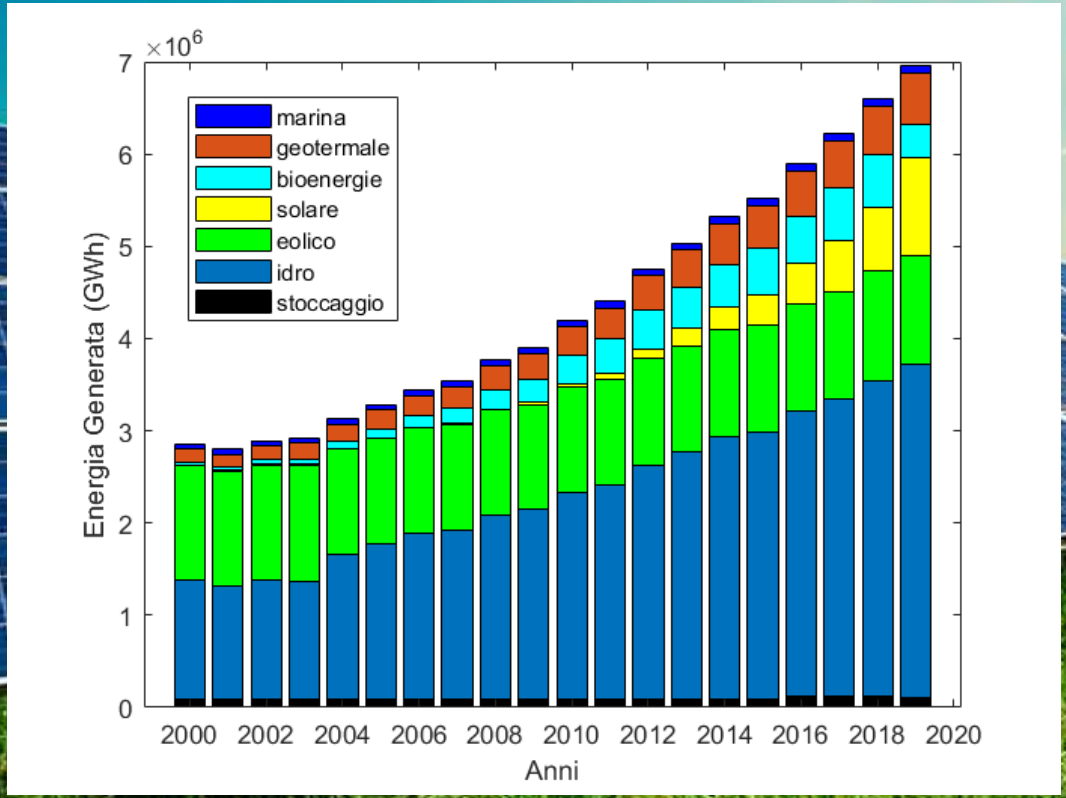
Scostamento temperatura annuale dalla media 20esimo secolo



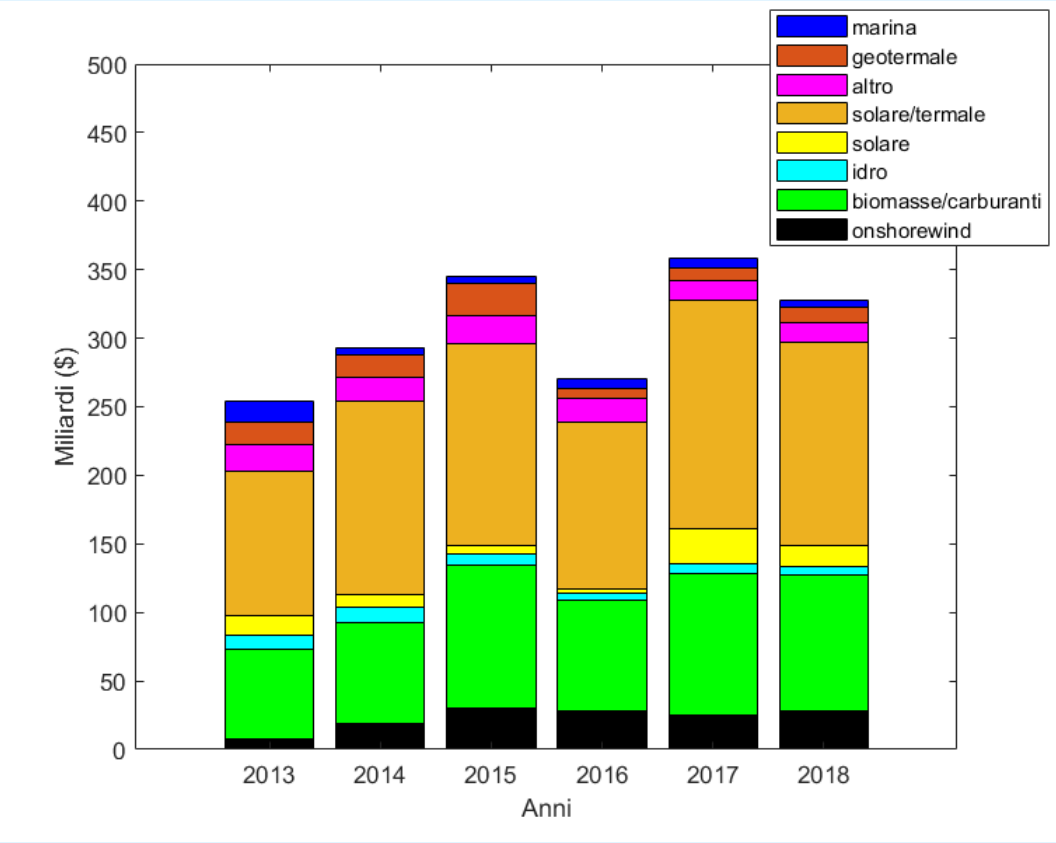

QUINDI,COME E’
POSSIBILE
MIGLIORARE
LA SITUAZIONE?


SEMPLICE :
ENERGIA
RINNOVABILE!

Anzitutto, quanta energia producono?



Quanto siamo disposti ad investire per il futuro?



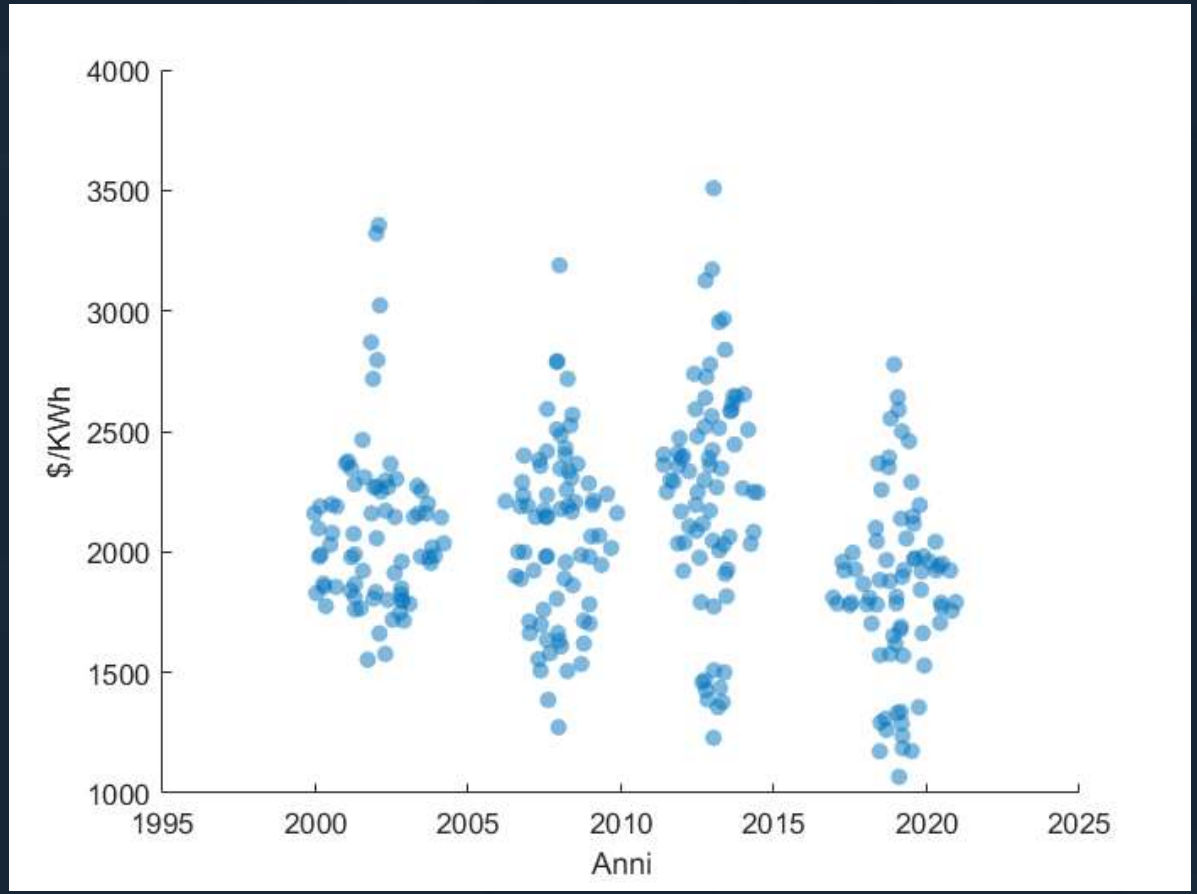
Investimenti in miliardi di dollari per settore

Come ho strutturato il grafico:

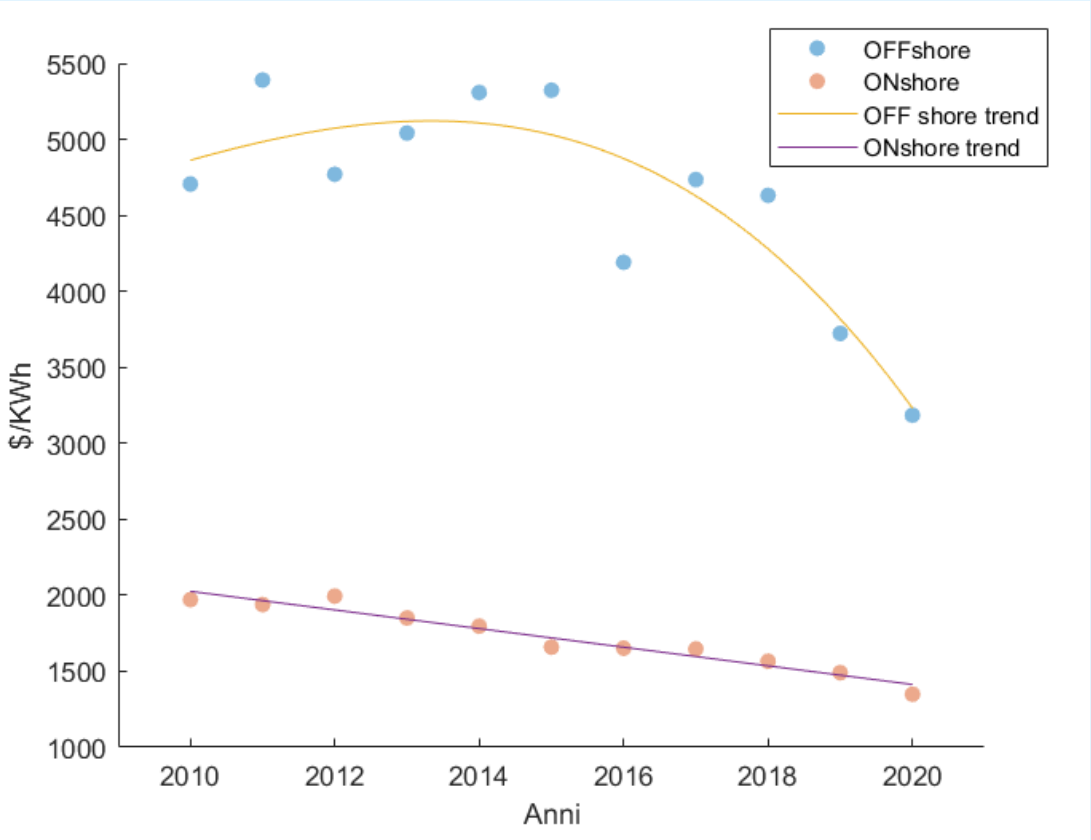
```
anno8 = [2013 2014 2015 2016 2017 2018];
onshorewind = [7.97349 19.18155 30.05657 28.50084
24.55427 27.99614];
HG = bar(anno8,onshorewind,'facecolor','k');
hold on

ylim([0 500])
xlabel('Anni')
ylabel('Miliardi ($)')
legend('marina','geotermale','altro','solare/termale','solare'
,'idro','biomasse/carburanti','onshorewind')
```

Creiamo nuovi posti di lavoro

Costo installazione negli anni Onshore in $/KWh



Confronto costi KWh Onshore & OFFshore

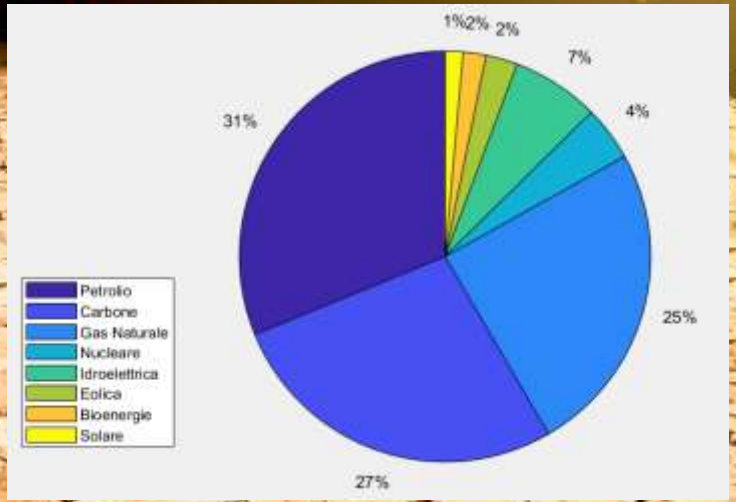


Costruzione del grafico:

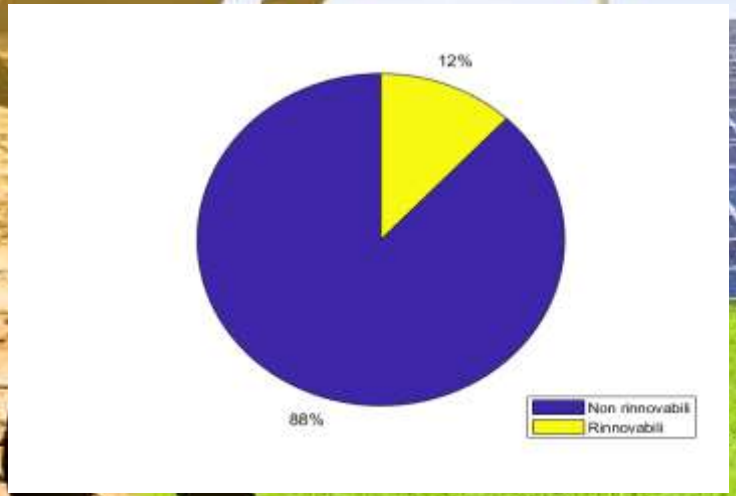
```
year = [2010 2011 2012 2013 2014 2015 2016 2017 2018
2019 2020];
OFFshore = [4706 5390 4770 5041 5308 5323 4191 4735
4631 3723 3185];
ONshore = [1971 1939 1995 1851 1797 1659 1652 1647 1566
1491 1349];
scatter
(year,OFFshore,'filled','MarkerFaceAlpha',0.5,'MarkerEdgeAlp
ha',0.5);
hold on;
scatter
(year,ONshore,'filled','MarkerFaceAlpha',0.5,'MarkerEdgeAlph
a',0.5);
hold on;
xx = linspace(min(year), max(year), 100);
trend1 = polyfit (year, OFFshore,3);
trend2 = polyfit (year, ONshore,1);
line1=
trend1(1)*xx.^3+trend1(2)*xx.^2+trend1(3)*xx+trend1(4);
line2= trend2(1)*xx+trend2(2);
plot (xx,line1);
hold on;
plot(xx,line2);
xlim([2009 2021])
xlabel('Anni')
ylabel('$/KWh')
legend('OFFshore','ONshore','OFF shore trend','ONshore
```

Alcuni confronti

Consumo energie 2020



Rapporto energie rinnovabili e non



I Progetti per il Futuro

Come ho costruito il grafico:

```
y2030 = [28 72];
y2050 = [5 95];
labels = {'Energie NON rinnovabili','Energie rinnovabili'};
t=tiledlayout(1,2,'TileSpacing');
% Create pie charts
ax1 = nexttile;
pie(ax1,y2030)
ax2 = nexttile;
pie(ax2,y2050);
% Create legend
```

Principali dataset ricavati da:

https://www.irena.org/

GRAZIE PER L'ASCOLTO!

Disponibili su Microsoft Teams e GitHub tutti i dataset e fonti da cui abbiamo ricavato i grafici