

Covid19: Mise au point des données au 17 mars 2020 ; France & world**-France : régions : Cas confirmés du 13 au 17 mars****Covid19 : prévisions cas confirmés en France**

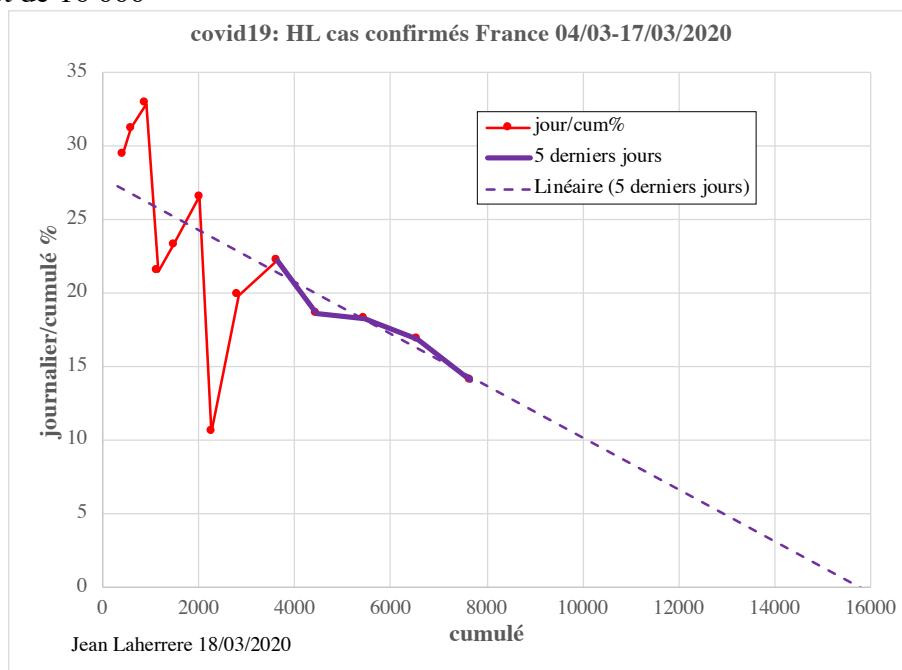
Les données des cas confirmés de 04/03/2020 à 17/03/2020 sont analysés de façon à obtenir le total ultime avec la technique dite de Linéarisation d'Hubbert, où l'extrapolation linéaire du journalier/cumulé en pourcentage versus cumulé vers le zéro indique l'ultime

Les courbes utilisées par Hubbert la fonction logistique (courbe en S) et sa dérivée courbe en cloche.

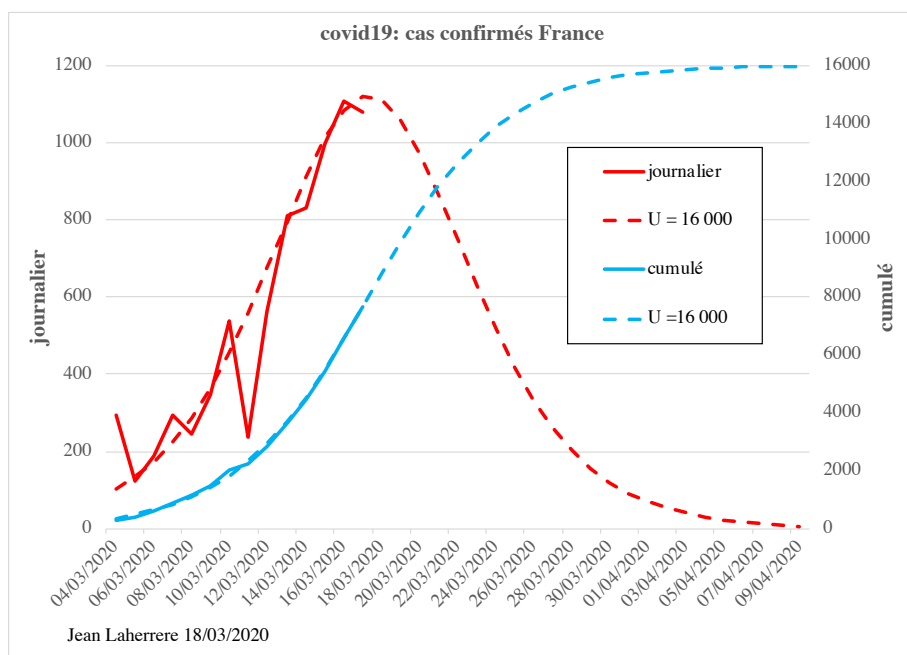
Pour ceux qui ne retiennent que la croissance exponentielle (doubler en quelques jours) ils oublient qu'après le pic la décroissance est exponentielle (diviser par 2 en quelques jours).

Pour la France

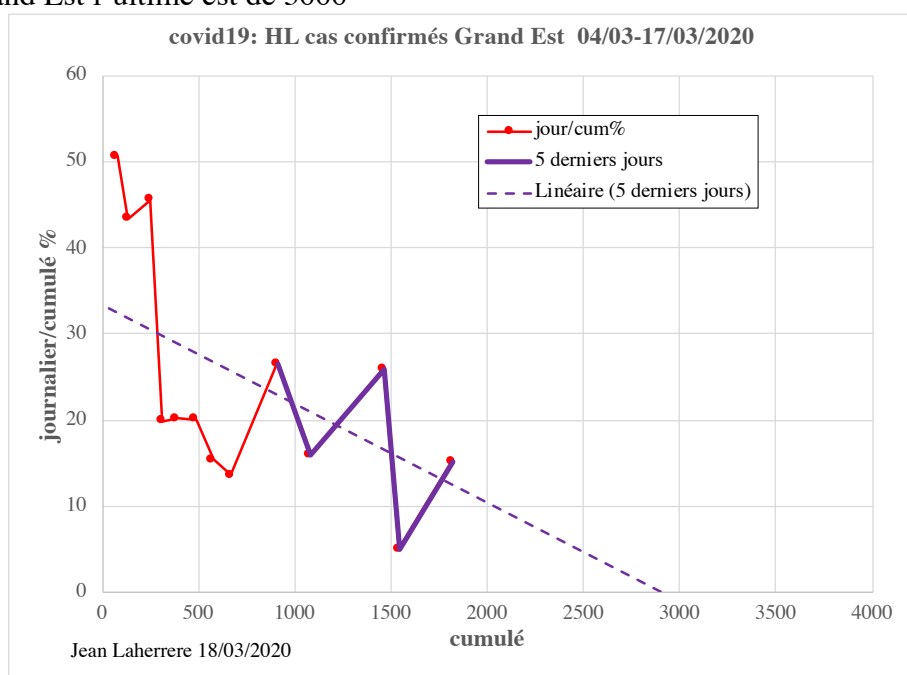
L'ultime est de 16 000



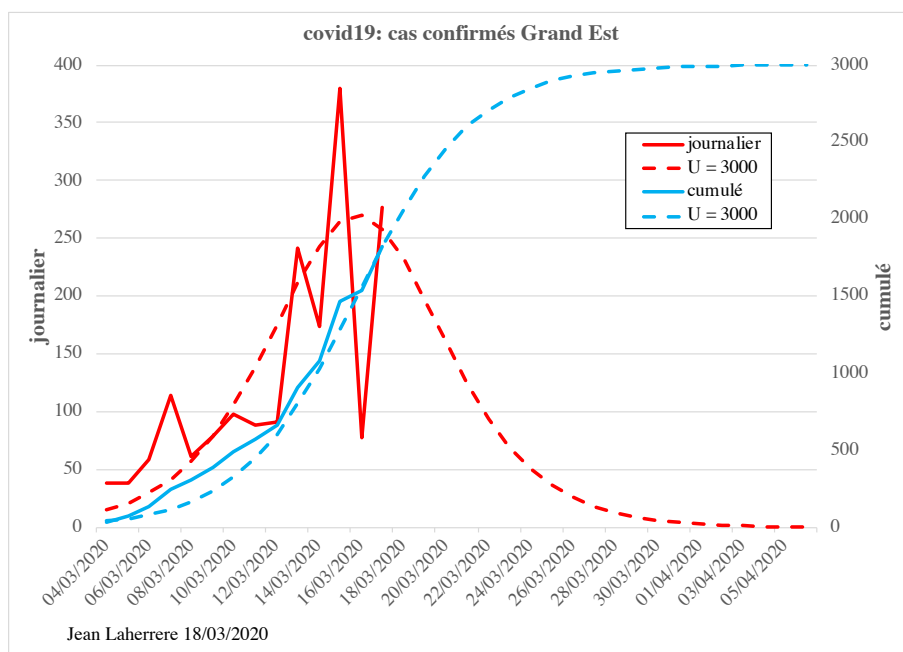
Pour cet ultime la France est au pic



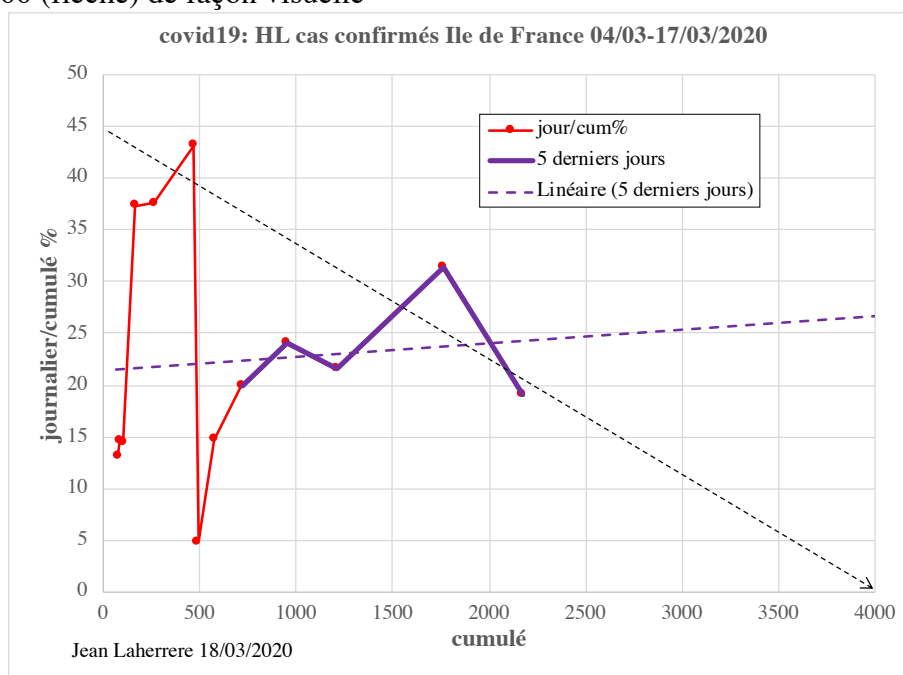
Pour le Grand Est l'ultime est de 3000



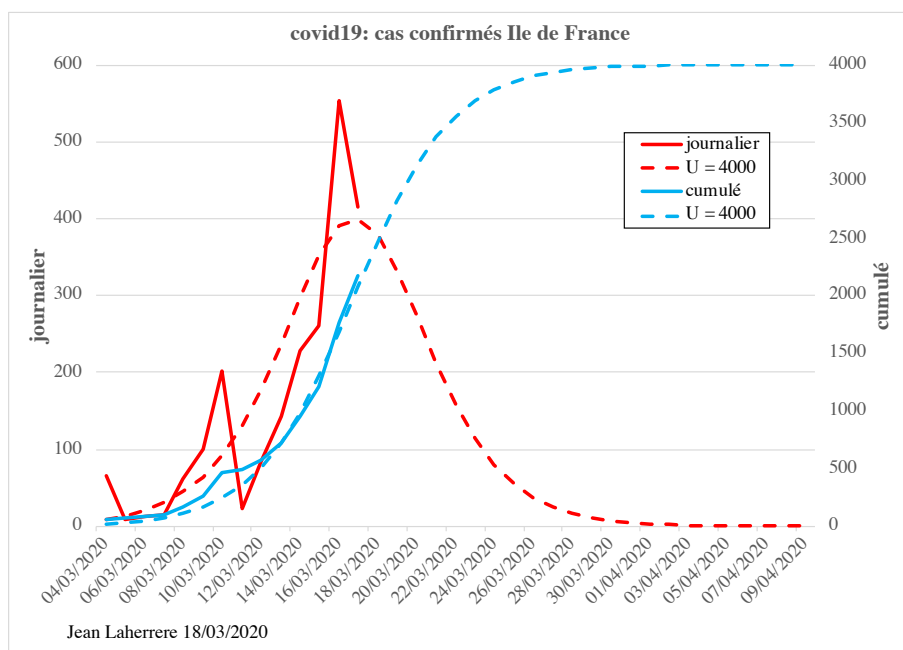
Le Grand Est est au pic pour cet ultime



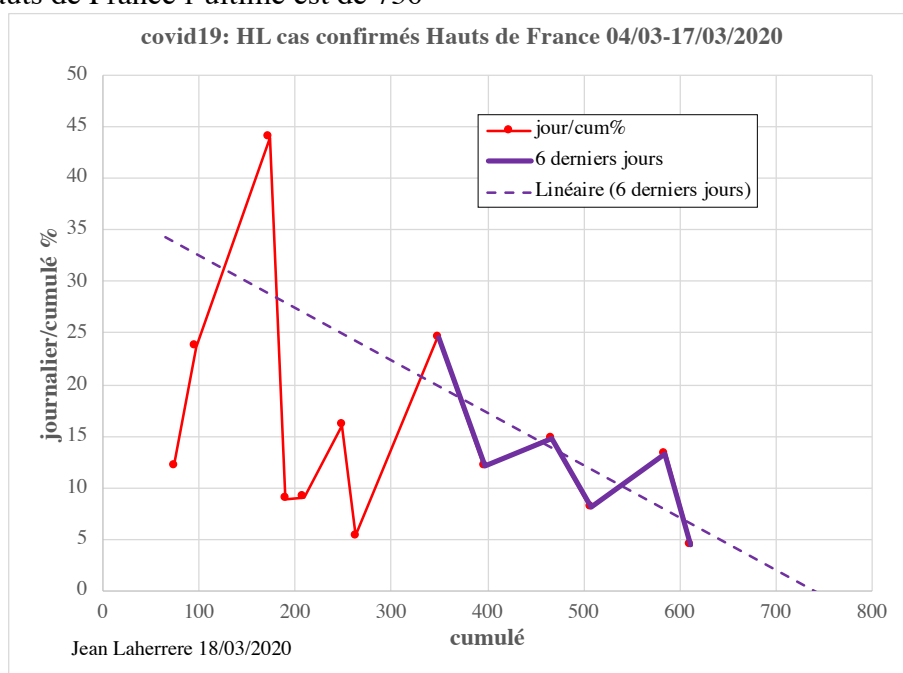
Pour l'Ile de France HL ne donne pas une intersection avec le zéro et nous avons pris un ultime a 4000 (flèche) de façon visuelle



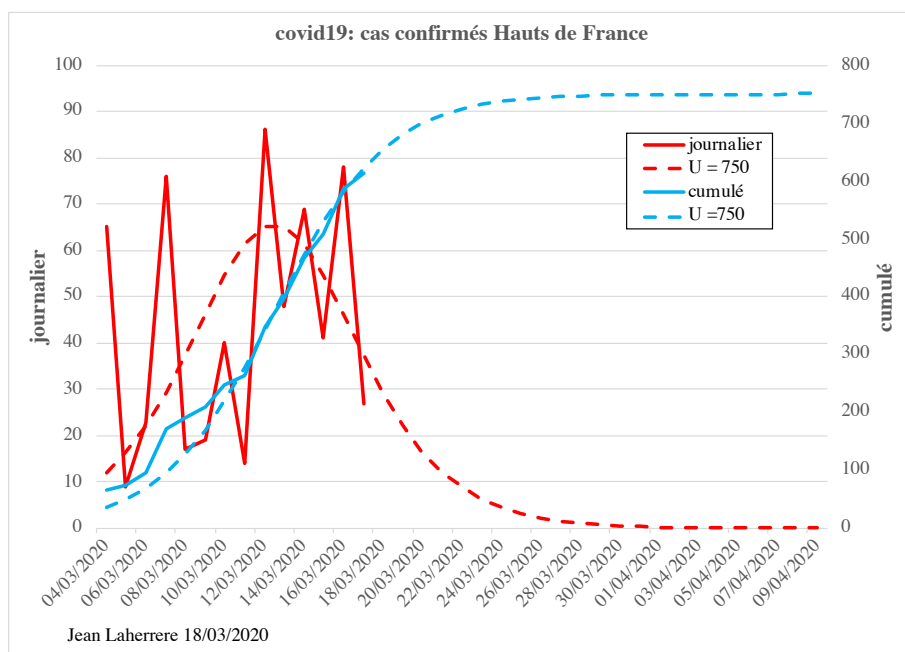
Pour un ultime de 4000 l'Ile de France est aussi au pic



Pour les Hauts de France l'ultime est de 750



Les hauts de France seraient aussi au pic



Conclusion

L'extrapolation dite d'Hubbert permet d'estimer l'ultime des cas confirmés et de prévoir le pic.

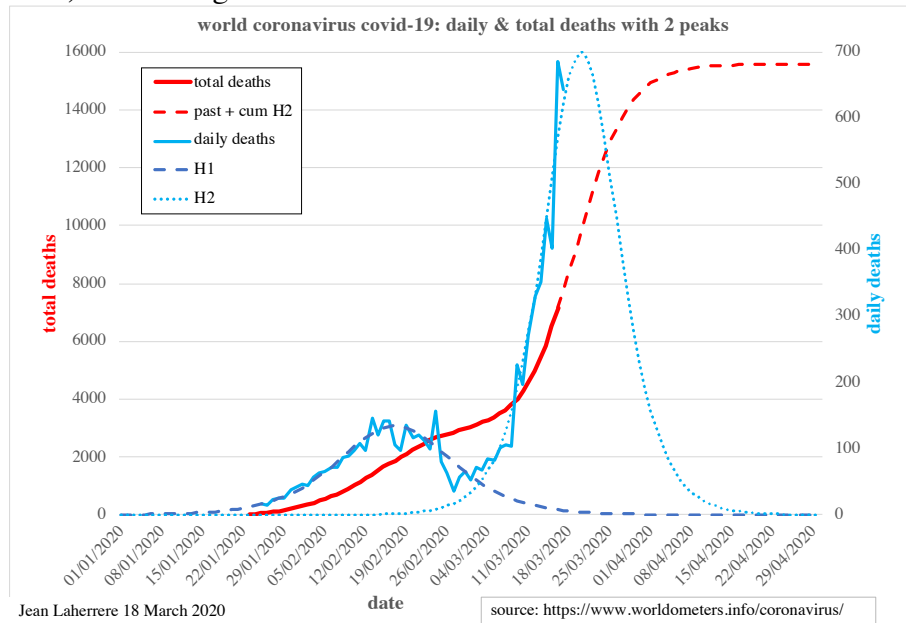
Cette estimation est basée seulement sur les 5 ou 6 derniers jours ; on peut espérer que dans quelques jours le technique sera confirmée.

-deaths by countries and for the world

Covid19 HL forecast update with data 17 March 2020

World

World covid19 deaths is modelled (visual guess) with 2 peaks H1 (China) and H2 (world excluding China) forecasting an ultimate of about 16 000 deaths



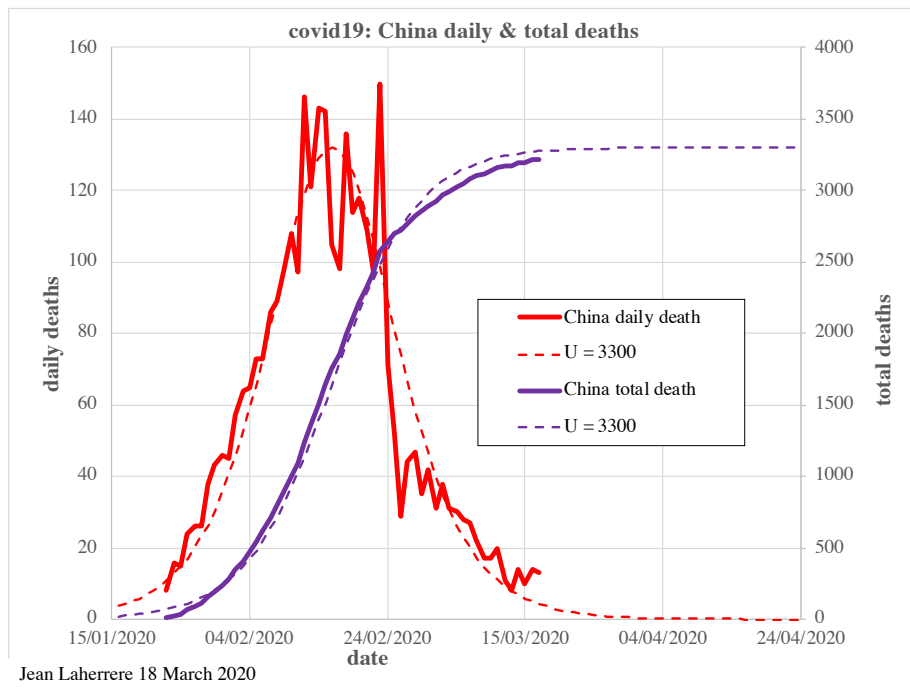
Below each country is modelled using the ultimate from the HL, even if chaotic

China

HL is close to zero and trends to 3300

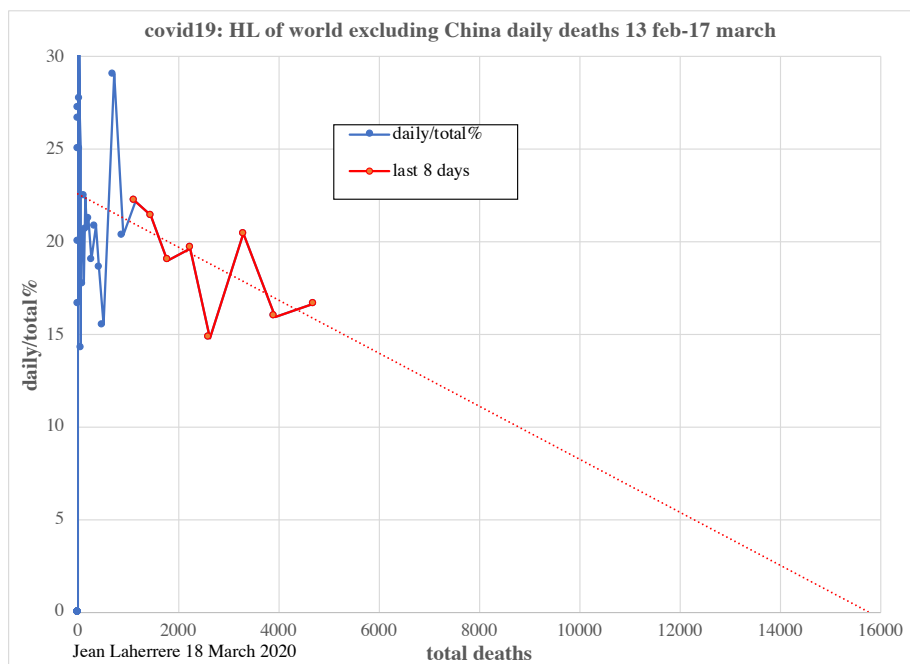


Daily death has strongly declined after a peak at 150 and is today around 10 deaths close to end

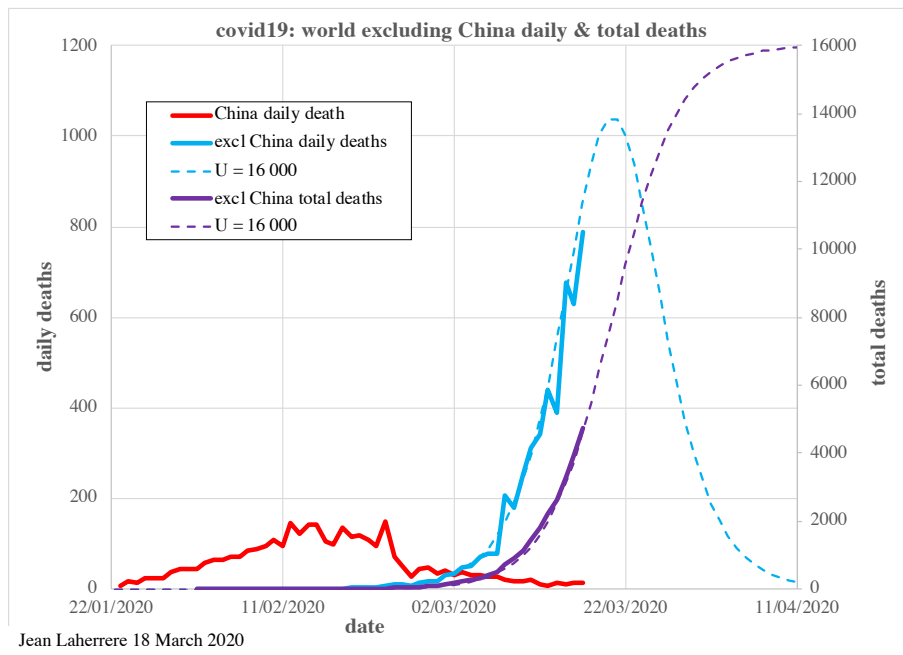


World excluding China

HL trends towards 16000 (giving a world total of 19 000 compared with 16 000 in our first graph)

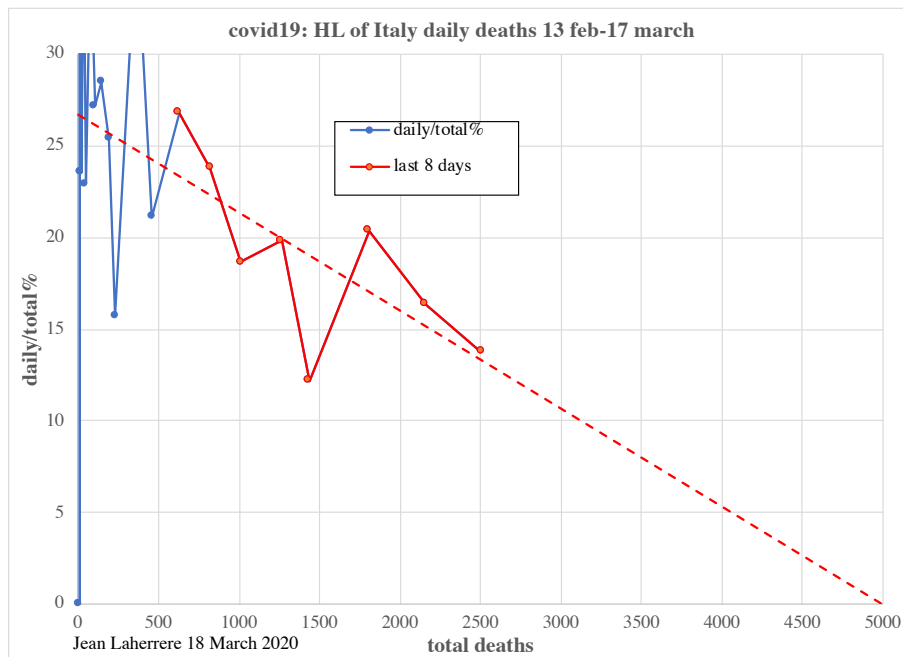


World excluding China will peak on 21 March around 1000 deaths

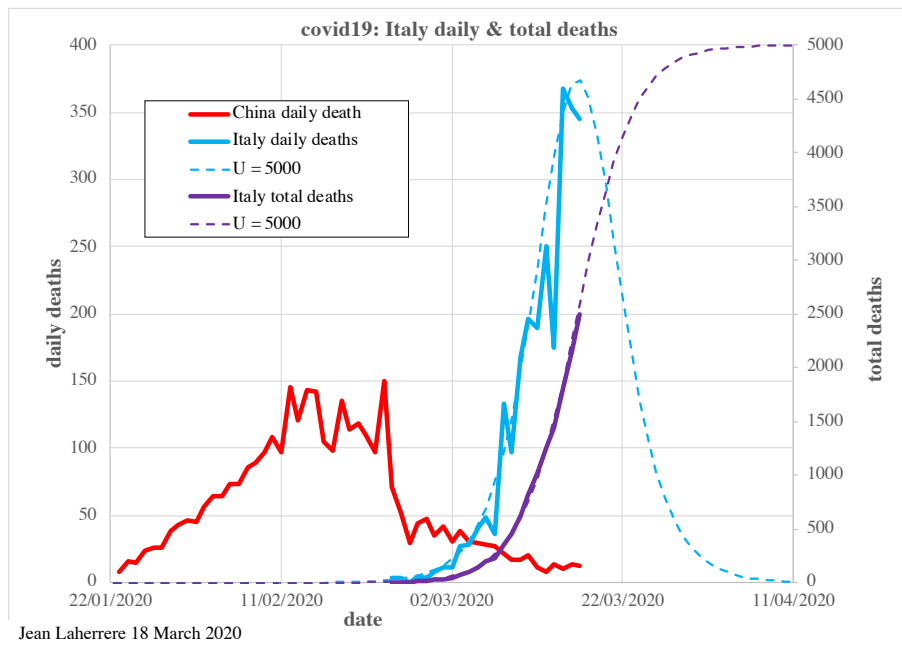


Italy

HL trends towards 5000 but is a little chaotic



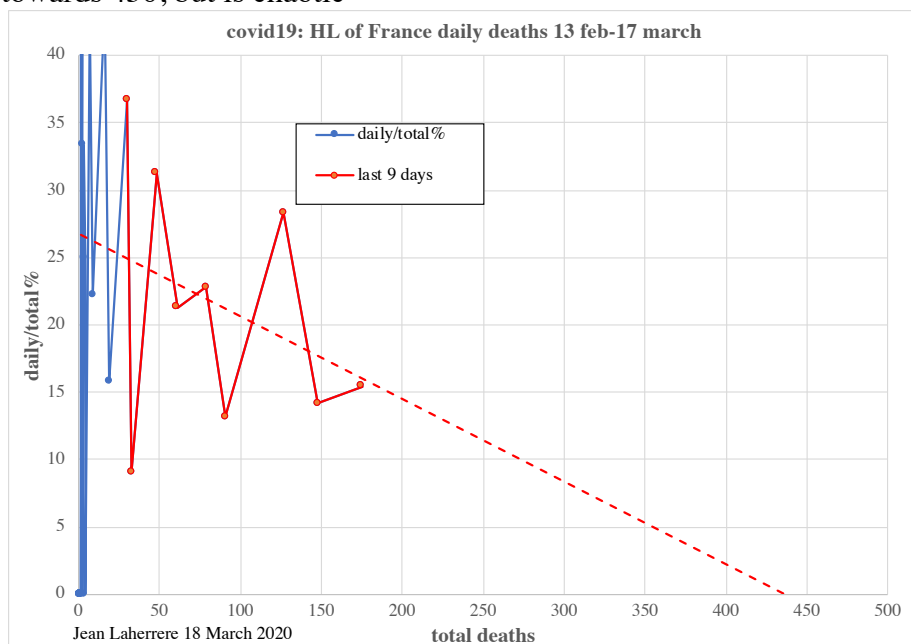
Daily deaths will peak now



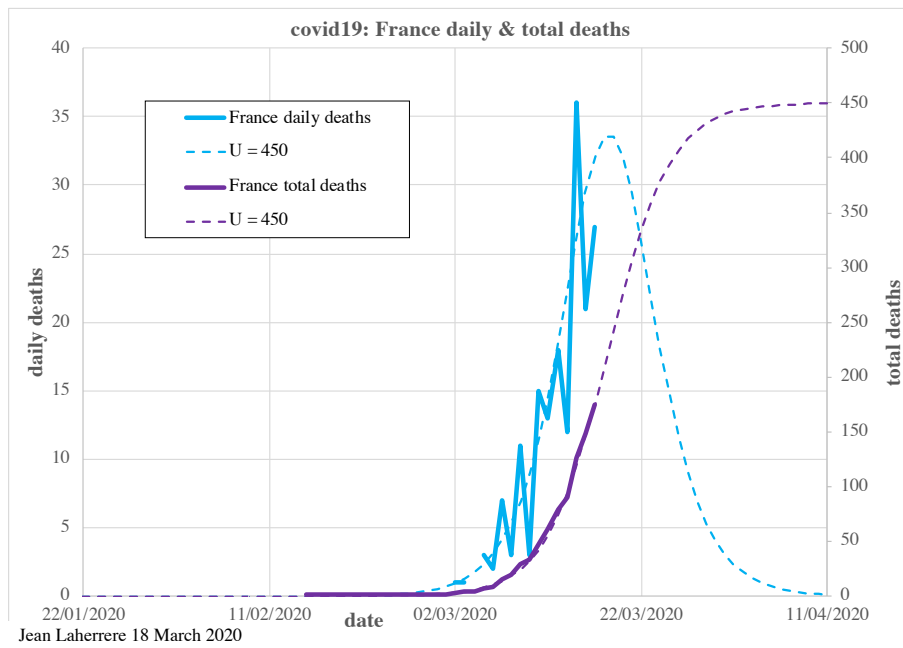
https://www.repubblica.it/cronaca/2020/03/17/news/coronavirus_il_picco_secondo_gli_esperti_dovrebbe_essere_il_25_marzo-251541010/?refresh_ce
 Covid19 peak is forecasted on 23-25 march by universita di Genova

France

HL trends towards 450, but is chaotic

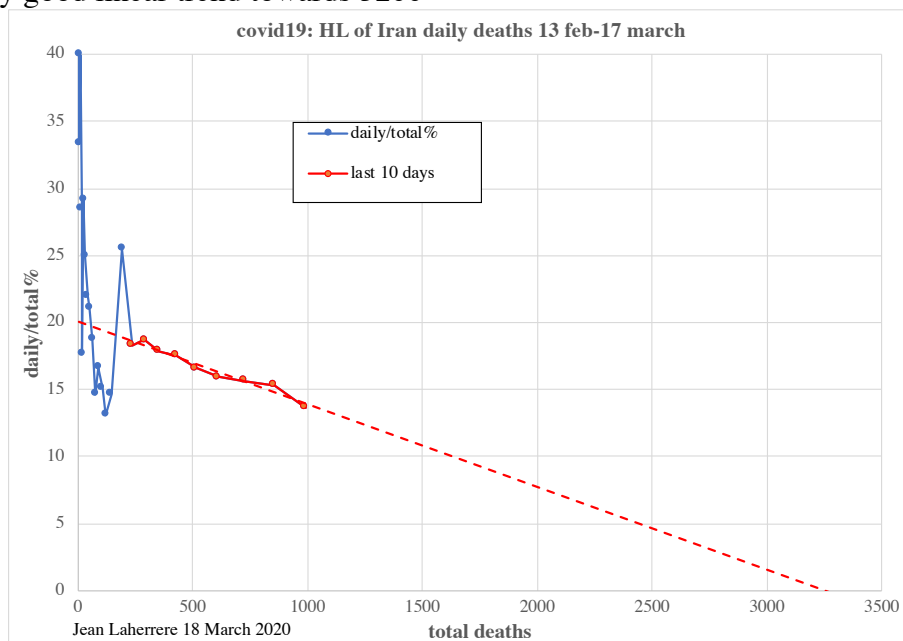


With an ultimate of 450 daily death will peak in few days

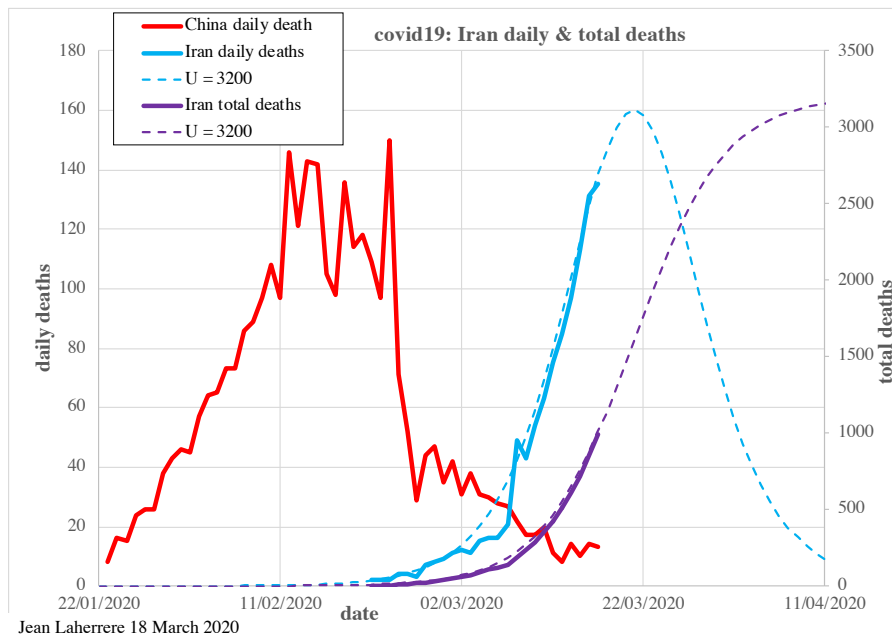


Iran

HL is a very good linear trend towards 3200

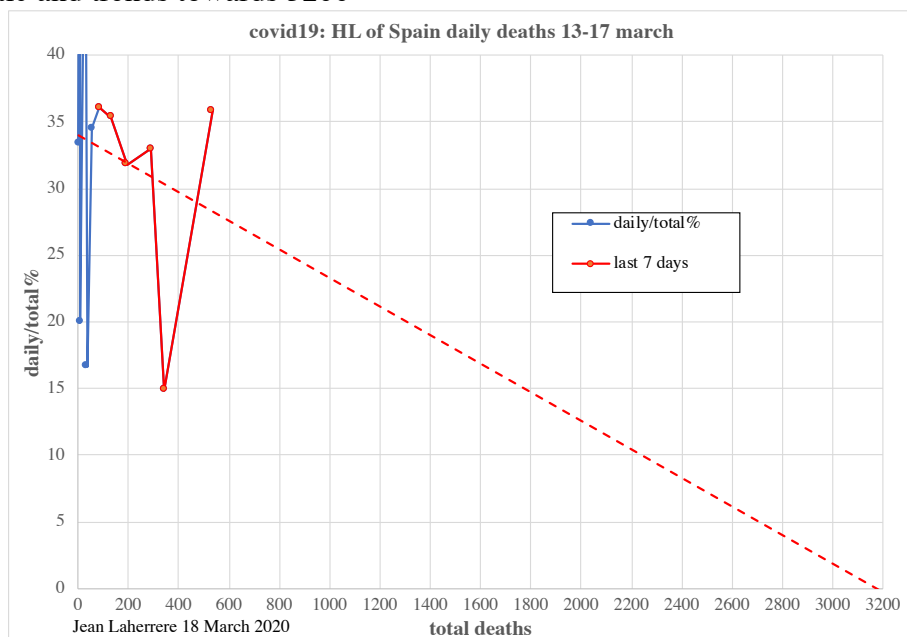


With an ultimate of 3200 daily deaths will peak on 22 March

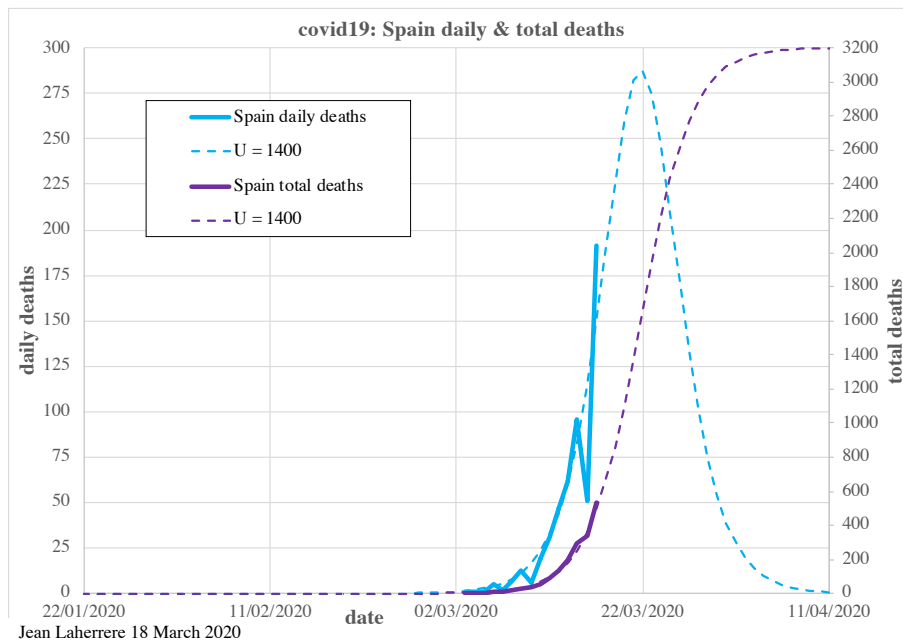


Spain

HL is chaotic and trends towards 3200

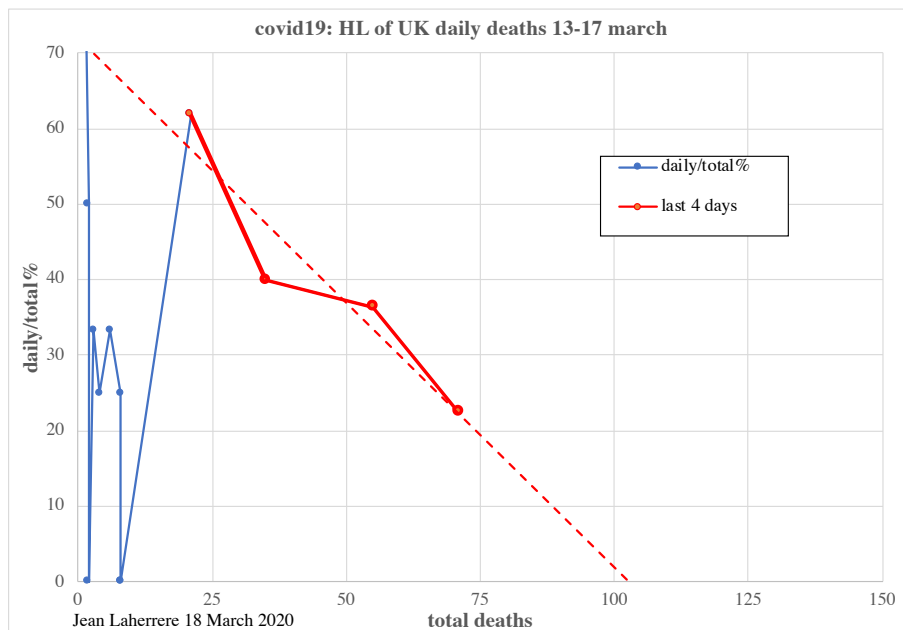


Daily deaths will peak on 22 March around 300 deaths

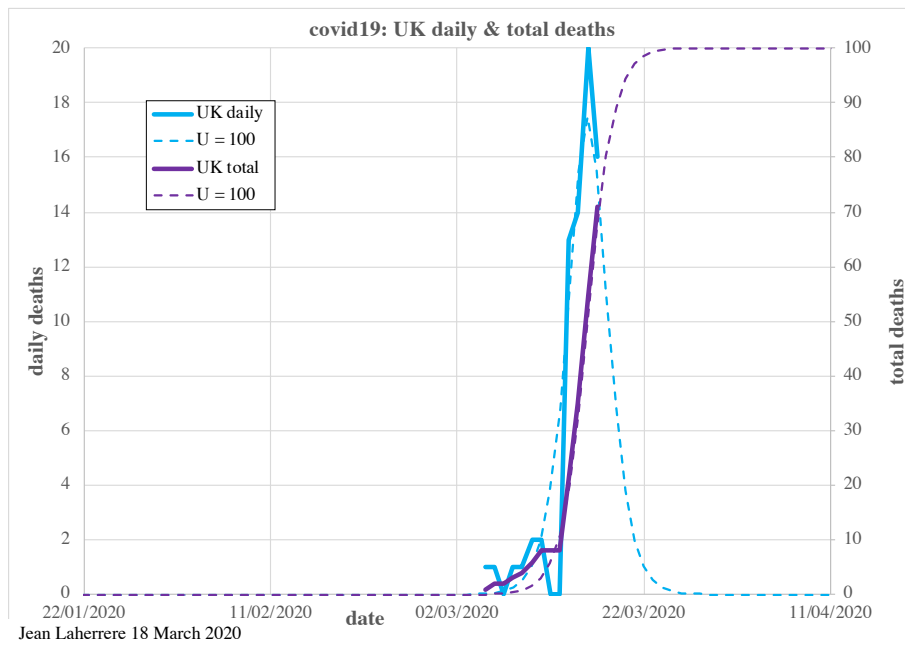


UK

HL of UK daily deaths (last 4 days) trends towards 100, when present total is 71: it looks unlikely. But UK policy on covid19 with herd immunity is strange should lead to a higher value



An ultimate of 100 means that UK daily death is on decline; it hard to believe!

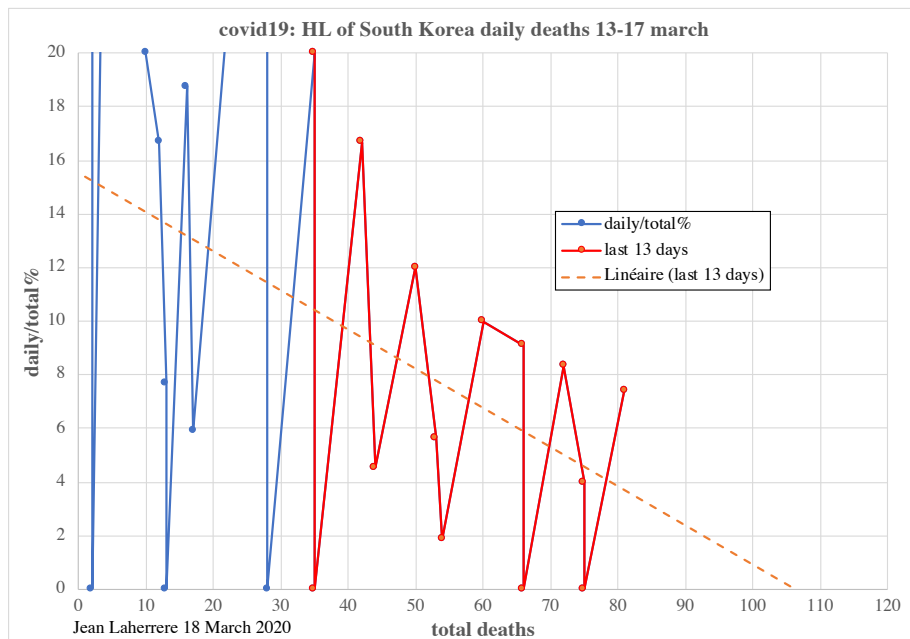


South Korea

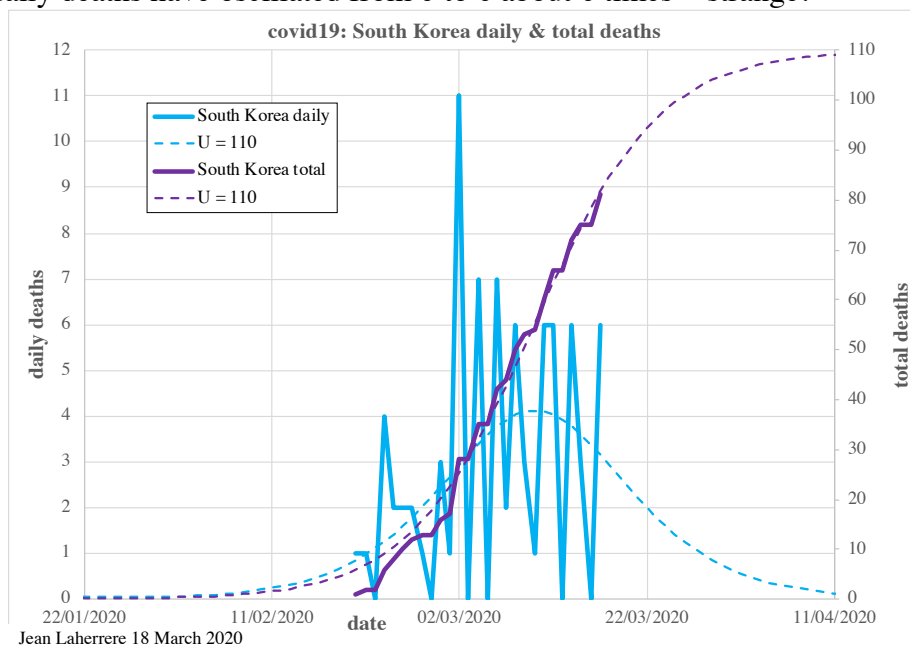
Number of covid19 cases peaked on 29 February from Statista



HL of daily deaths is chaotic but trends towards 110



Daily deaths with an ultimate of 110 peaked around 10 March, different from the peak of cases, but daily deaths have oscillated from 0 to 6 about 6 times = strange!



Conclusion

Apart Iran, HLs are still erratic and needs to stabilize to get better forecasts of peak. However as stated in previous papers, peak time of every country varies within a short range despite the large variation of estimates from HLs