REPORT ON WEEKLY DEATHS IN SOUTH AFRICA

1 JANUARY – 26 MAY 2020 (WEEK 21)

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UCT Centre
for Actuarial
Research

Data Source

Basic demographic information for all deaths registered on the National Population Register are provided to the SAMRC on a weekly basis. Since the weekly number of deaths has a seasonal trend, historical data from 2018 and 2019 have been used to predict the number of deaths that could be expected during 2020.

The excel forecast function[1] has been used to predict values for each week of 2020 based on a linear annual trend, allowing for a seasonal effect over the year. In addition, 95% prediction intervals have been estimated for the predicted weekly number of deaths for 2020 to give a basis to assess fluctuations.

Graphs of the weekly number of deaths up until epidemiological **week 21** (i.e. the period from **1 January 2020** till **26 May 2020)** based on the data received on 1 June 2020 are shown below. *The figures plot the numbers at the start date of each week*.

Data for the most recent week has been scaled up to account for the lag in processing registrations. Based on previous data, the numbers at the national level have been increased by 4%.

It must be noted that the National Population Register only includes deaths of persons with a national ID number. Unregistered deaths as well as the registered deaths of persons without a national ID number are not recorded.
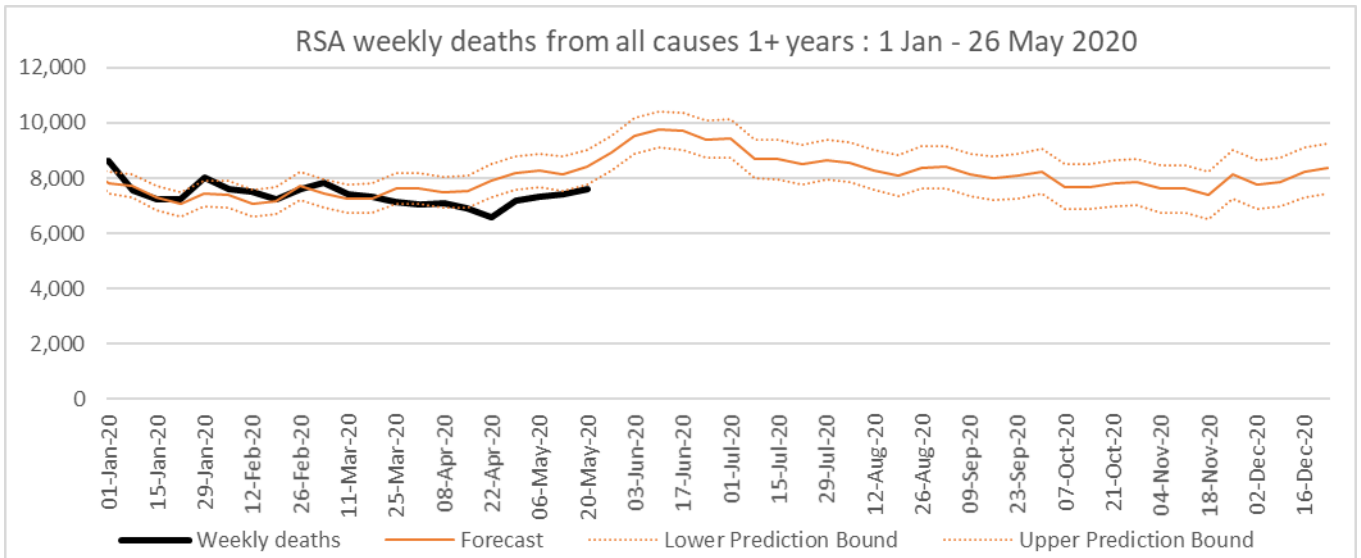
Sub-national statistics have been compiled for the provinces and metros by allocating the deaths according to the Home Affairs office where the death was registered. It is assumed that most of the deaths within an area are registered at an office in the same area. **The numbers of deaths from natural causes are reported for each of the metros.**

Births were not registered by the Department of Home Affairs during lockdown stage 5. This means any that die before the backlog is processed will not be placed on the National Population Register and thus that the deaths of these births will not be captured. **This report presents weekly deaths of persons 1 year and older**. Registered births are again being added to the population register, but it doesn't appear the backlog has been caught up yet. Once we have confidence that registration of deaths is back to previous levels we will include deaths under age 1.
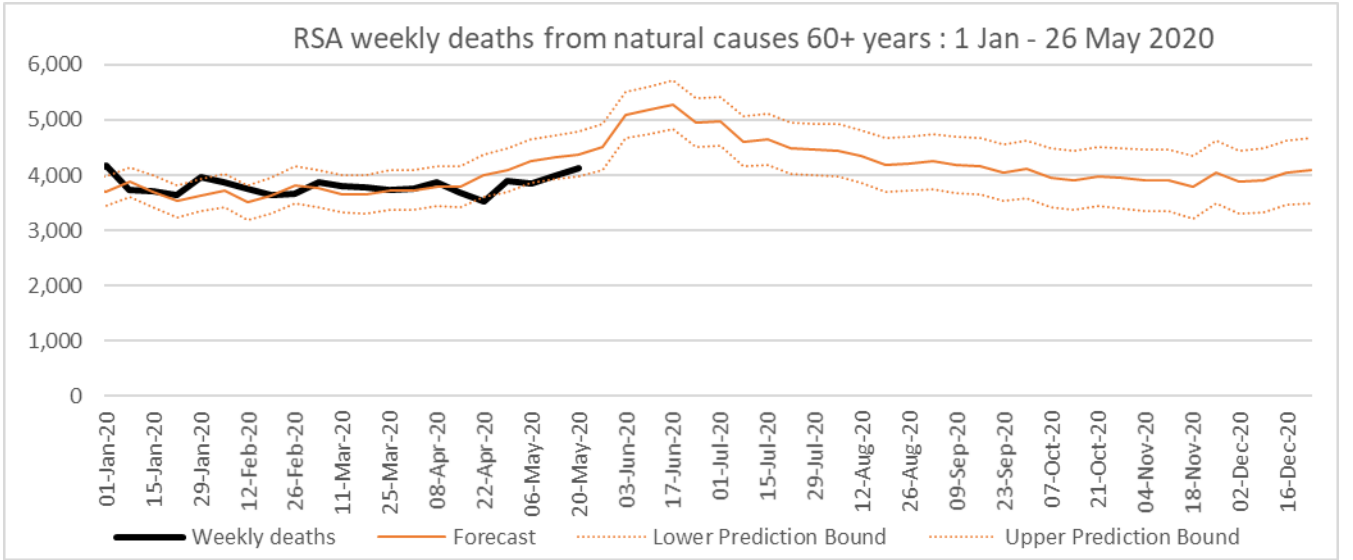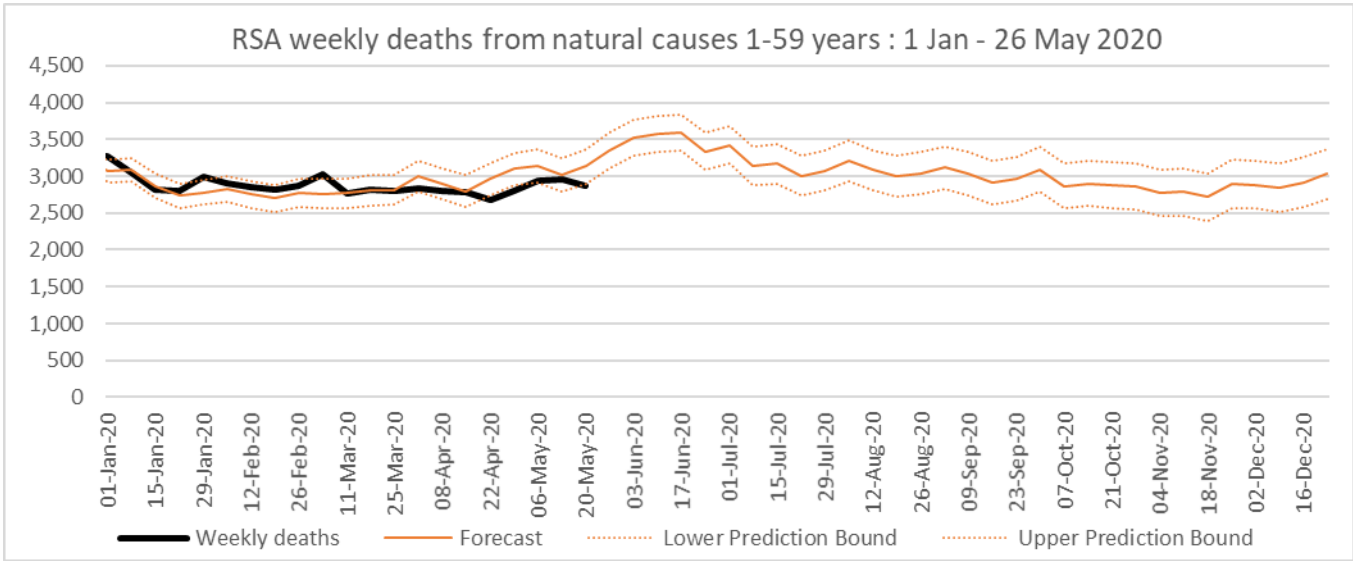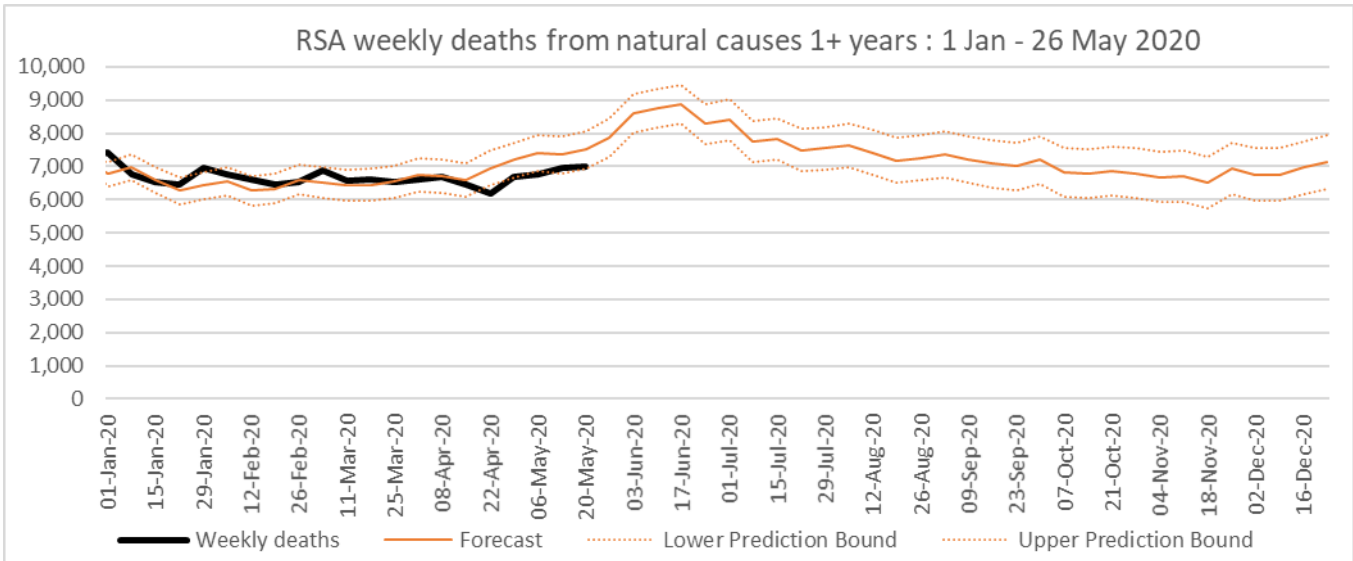
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[1] The Excel function implements is the Holt-Winters triple exponential smoothing (the AAA sub-method).
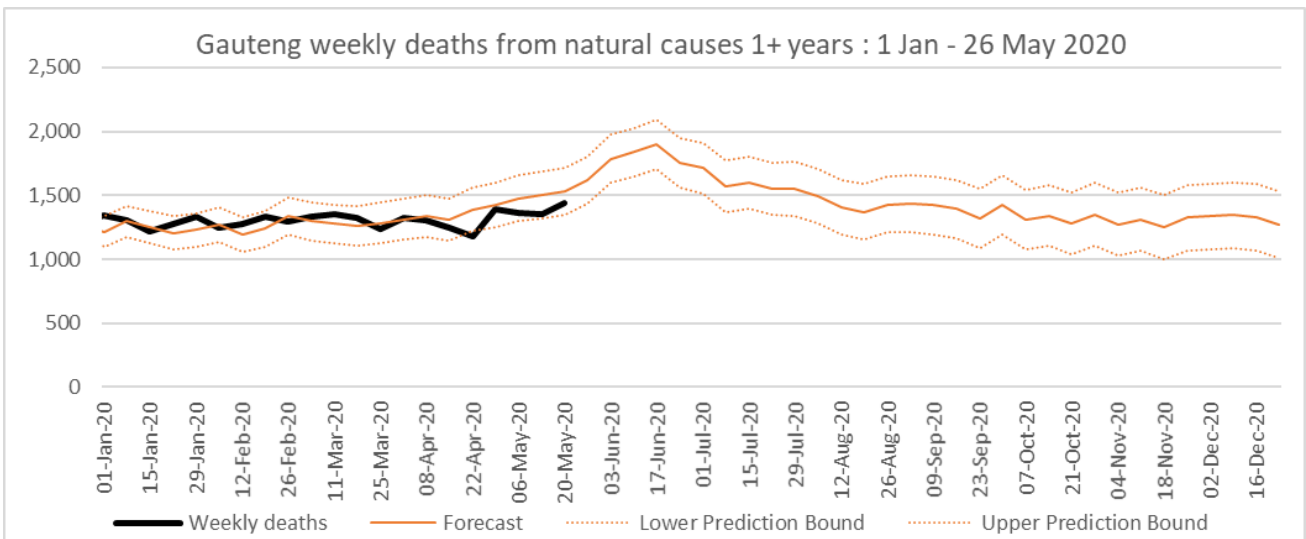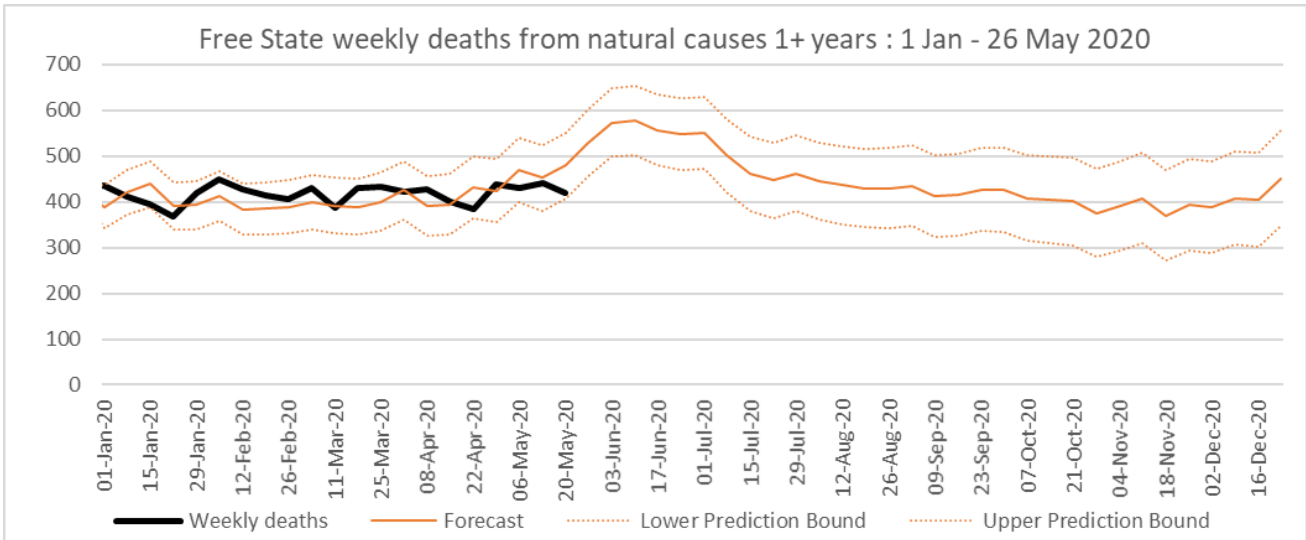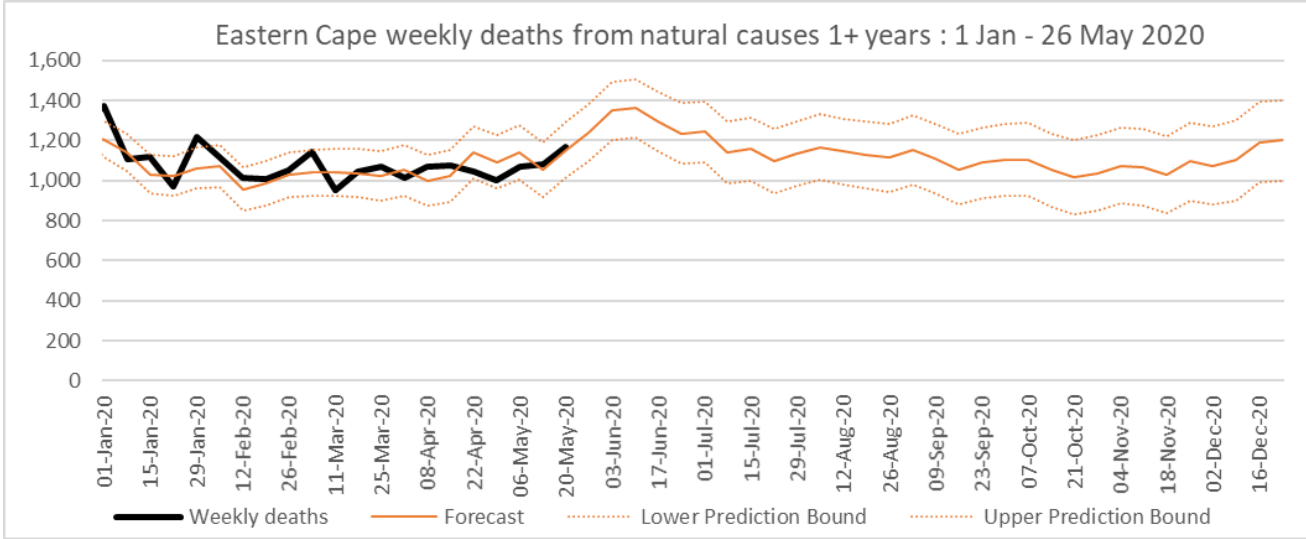
Trends

- The national weekly number of deaths from all causes of persons 1+ years of age up till **26 May 2020** remain lower than the number that would have been expected based on the historical data, mainly due to the decline in the number of deaths from unnatural causes as well as a slight decrease in the number of natural deaths during the weeks of lockdown.
- The weekly number of deaths from natural causes of persons 1+ years of age in the **City of Cape Town** exceeds the predicted number of deaths by about 25% in the week up till **26 May 2020** and is somewhat above the upper prediction bound indicating a statistically significant increase.
- Drops in the number of natural deaths have been observed in **Buffalo City** for the past three weeks and more recently **eThekwini** and **Mpumalanga**. It is possible that these declines are related to delays in processing death registrations due to office closure arising from COVID-19. This should be borne in mind when considering the provincial and to a lesser extent, the national numbers.
- The number of deaths from unnatural causes (e.g. road traffic fatalities and homicide) was significantly lower during lockdown than projected on the basis of past trends but appeared to increase with the easing of lockdown. The number for the last three weeks appears to track the predicted trend, at a much lower level.
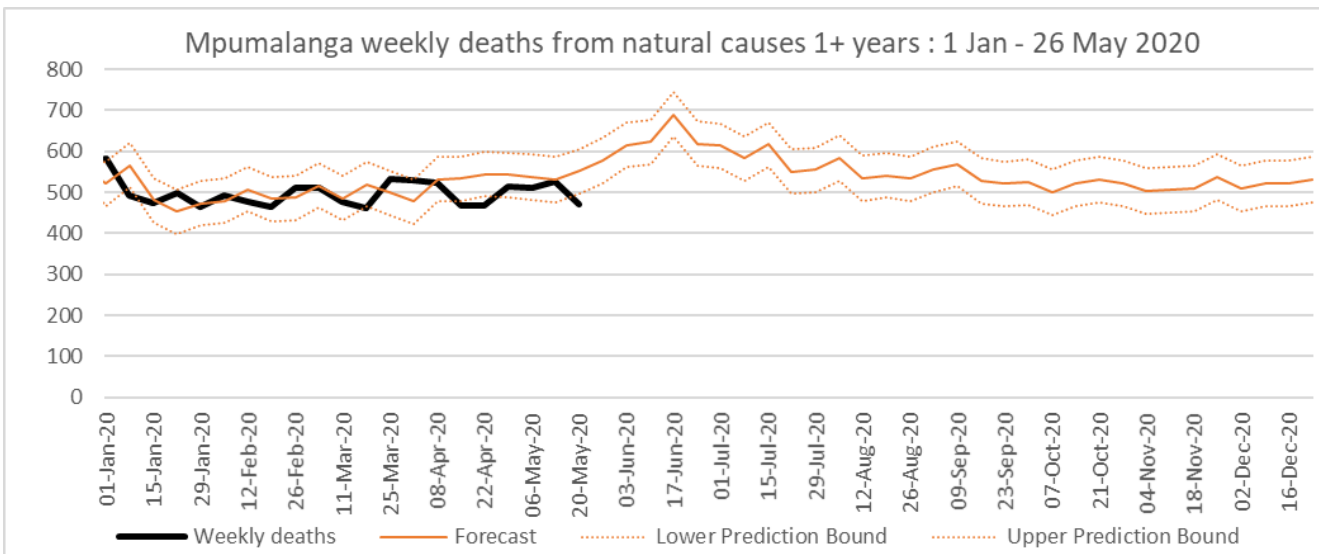

Numbers for the last week has been adjusted for delayed registrations

RSA weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

Weekly deaths — **Forecast** ---- **Lower Prediction Bound** ---- **Upper Prediction Bound**

RSA weekly deaths from natural causes 1-59 years : 1 Jan - 26 May 2020

Weekly deaths — **Forecast** ---- **Lower Prediction Bound** ---- **Upper Prediction Bound**

RSA weekly deaths from natural causes 60+ years : 1 Jan - 26 May 2020

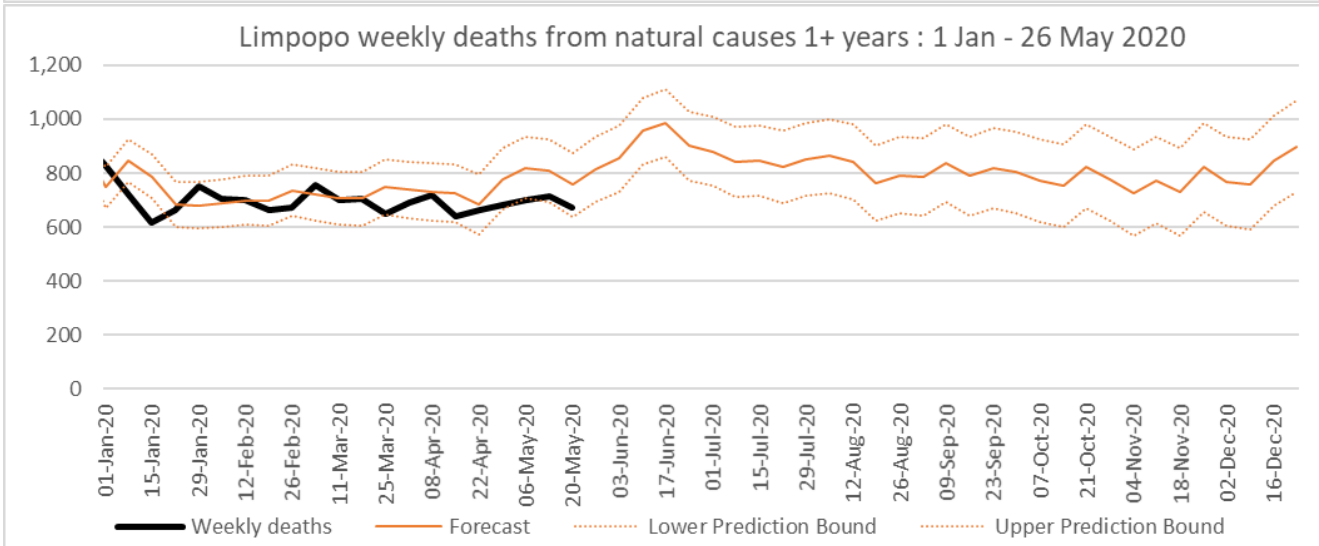**Weekly deaths** — **Forecast** ---- **Lower Prediction Bound** ---- **Upper Prediction Bound**

Numbers for the last week has been adjusted for delayed registrations

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Eastern Cape weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

Legend: Weekly deaths — Forecast — Lower Prediction Bound — Upper Prediction Bound

Free State weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

Legend: Weekly deaths — Forecast — Lower Prediction Bound — Upper Prediction Bound

Gauteng weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

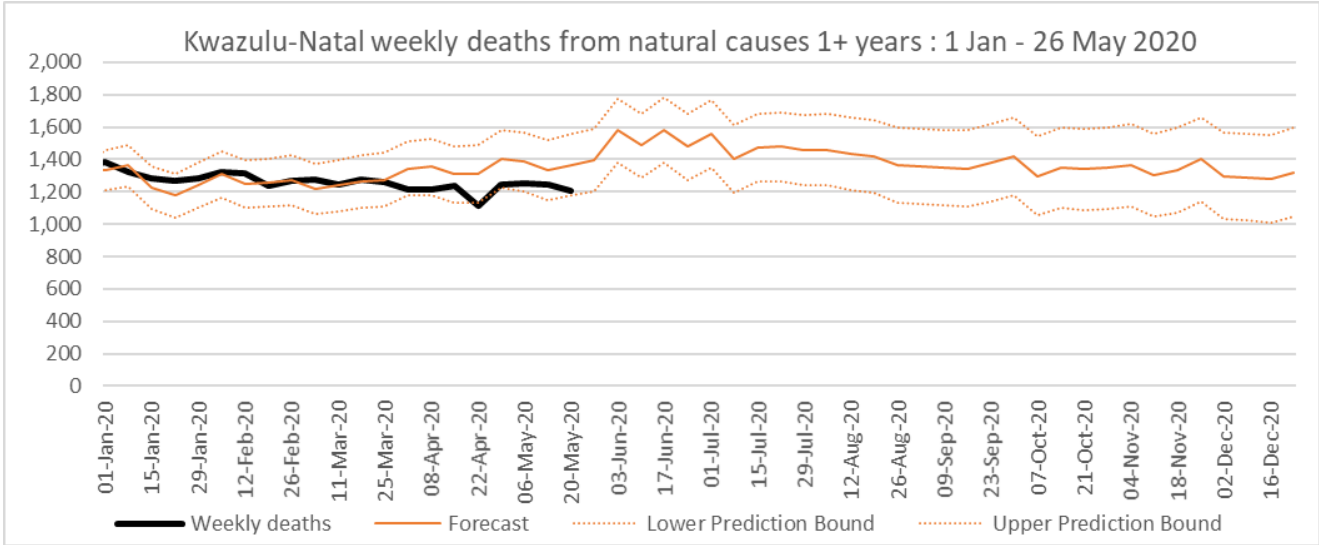Legend: Weekly deaths — Forecast — Lower Prediction Bound — Upper Prediction Bound

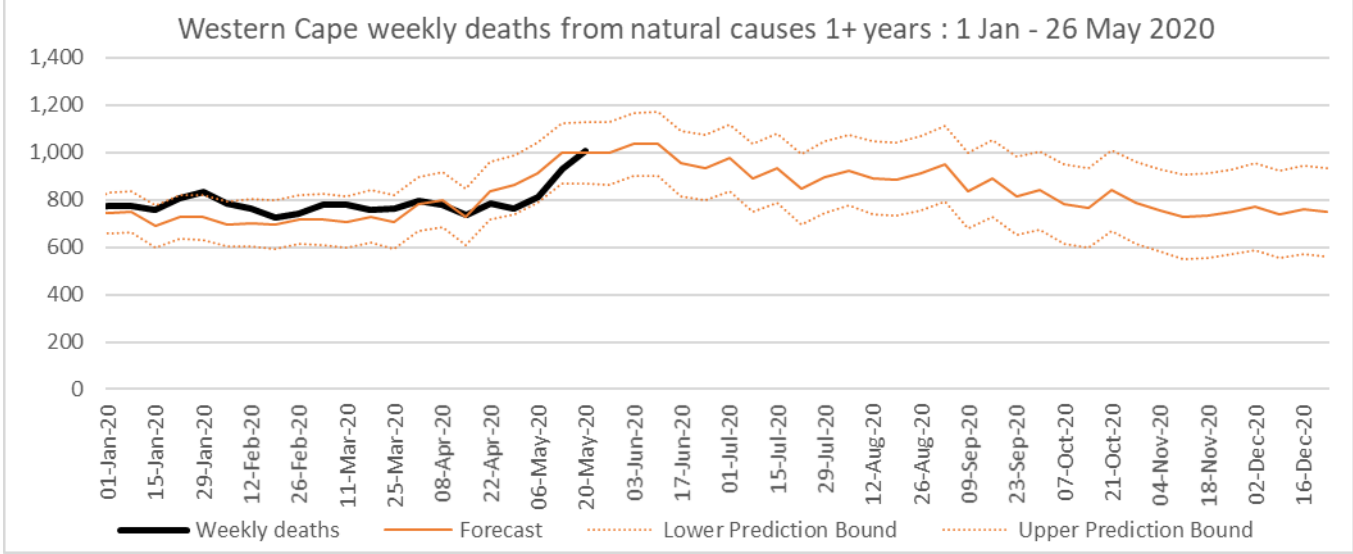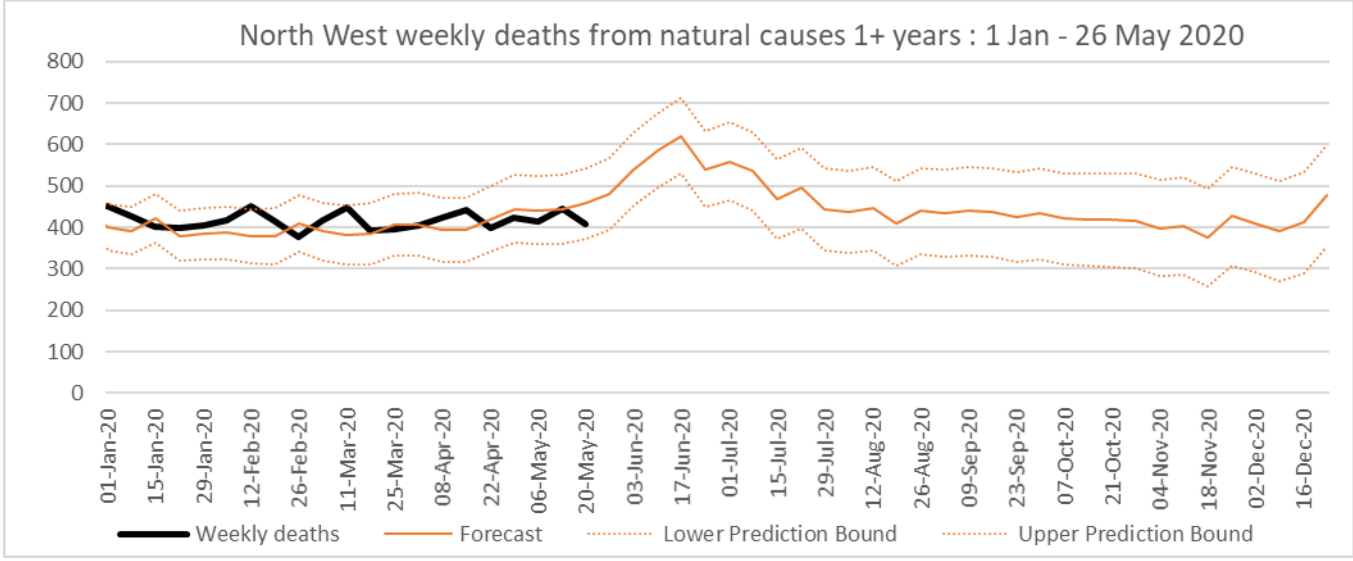*Numbers for the last week has been adjusted for delayed registrations*

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Kwazulu-Natal weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

Weekly deaths — Forecast — Lower Prediction Bound — Upper Prediction Bound

Limpopo weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

Weekly deaths — Forecast — Lower Prediction Bound — Upper Prediction Bound

Mpumalanga weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

Weekly deaths — Forecast — Lower Prediction Bound — Upper Prediction Bound

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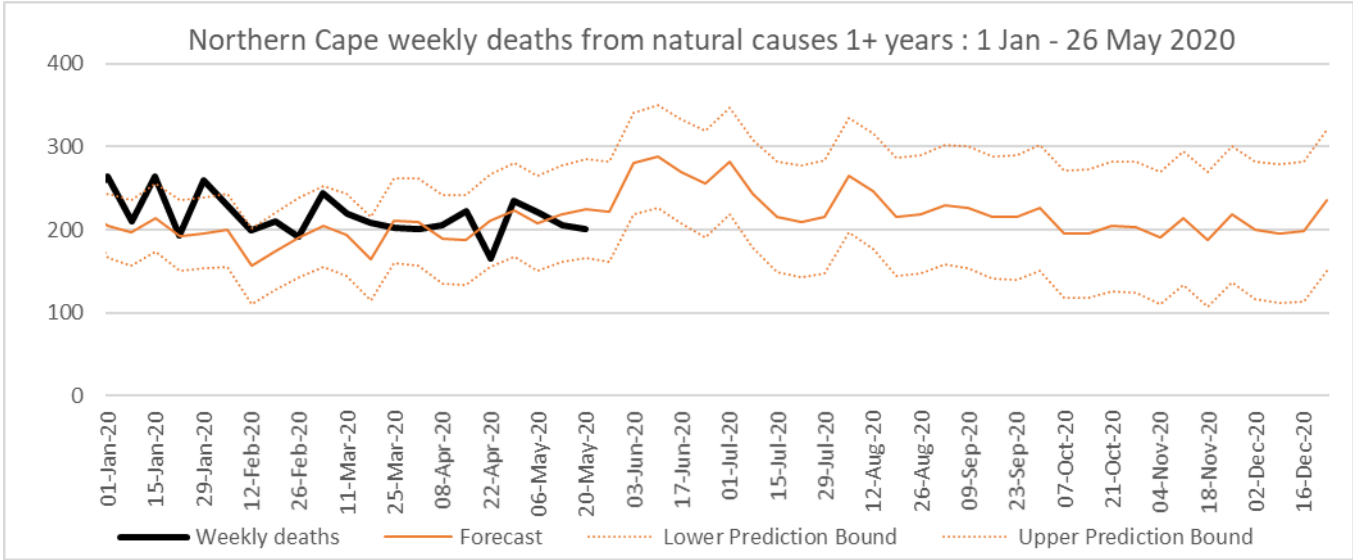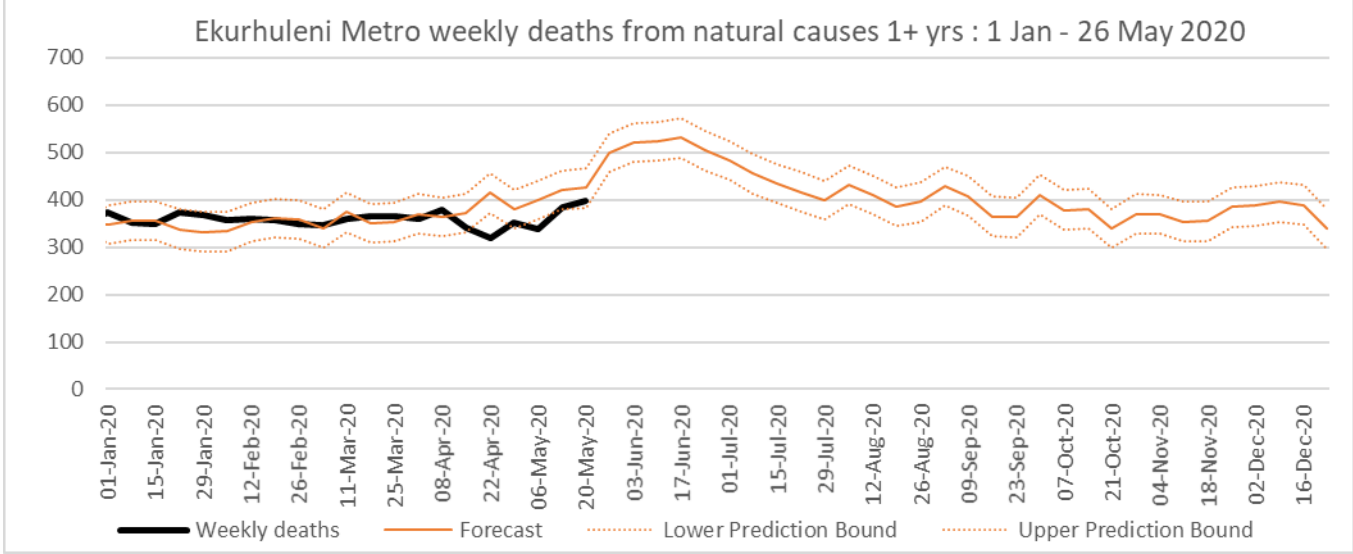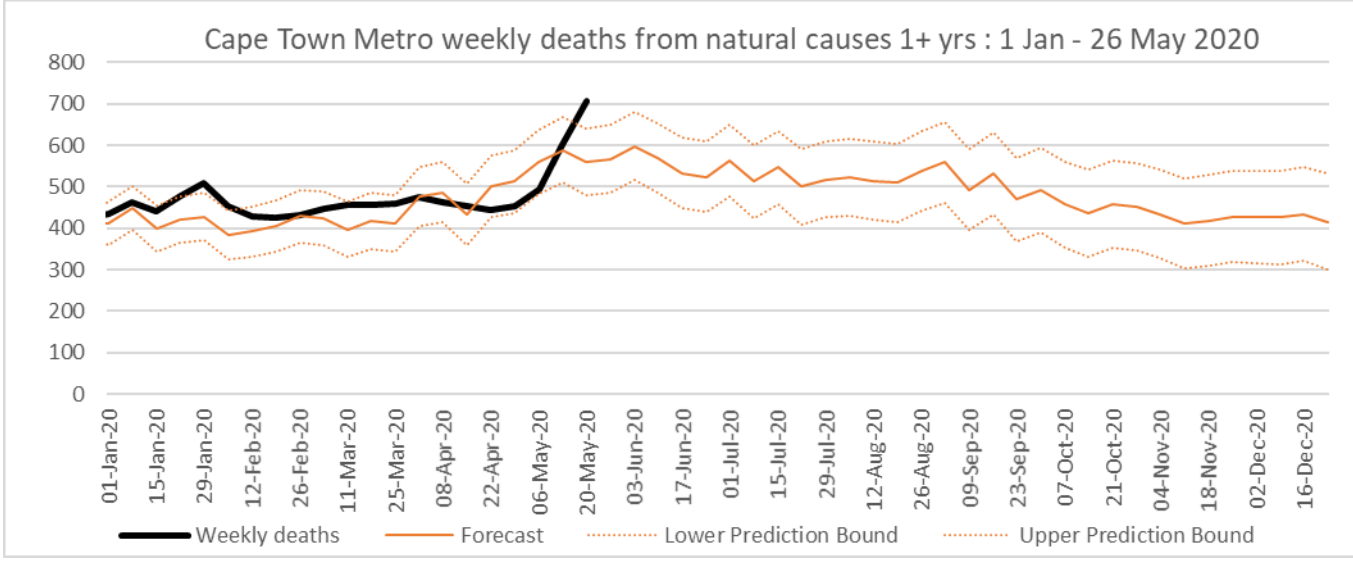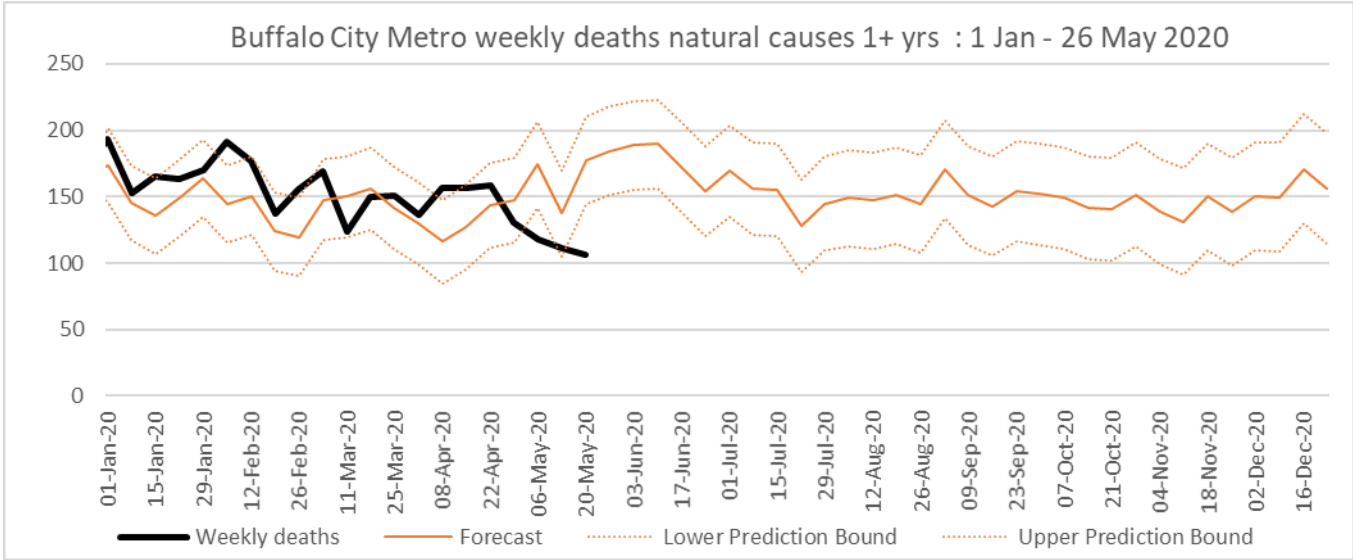**Northern Cape weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020**

— Weekly deaths — Forecast ······ Lower Prediction Bound ······ Upper Prediction Bound

North West weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

— Weekly deaths — Forecast ······ Lower Prediction Bound ······ Upper Prediction Bound

Western Cape weekly deaths from natural causes 1+ years : 1 Jan - 26 May 2020

— Weekly deaths — Forecast ······ Lower Prediction Bound ······ Upper Prediction Bound

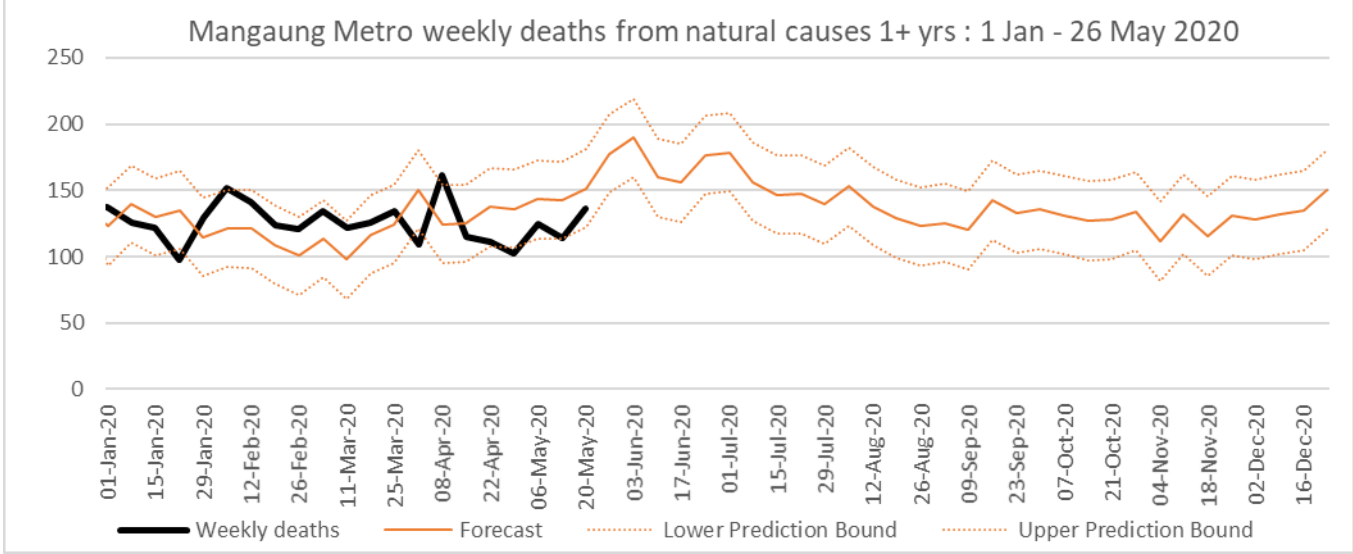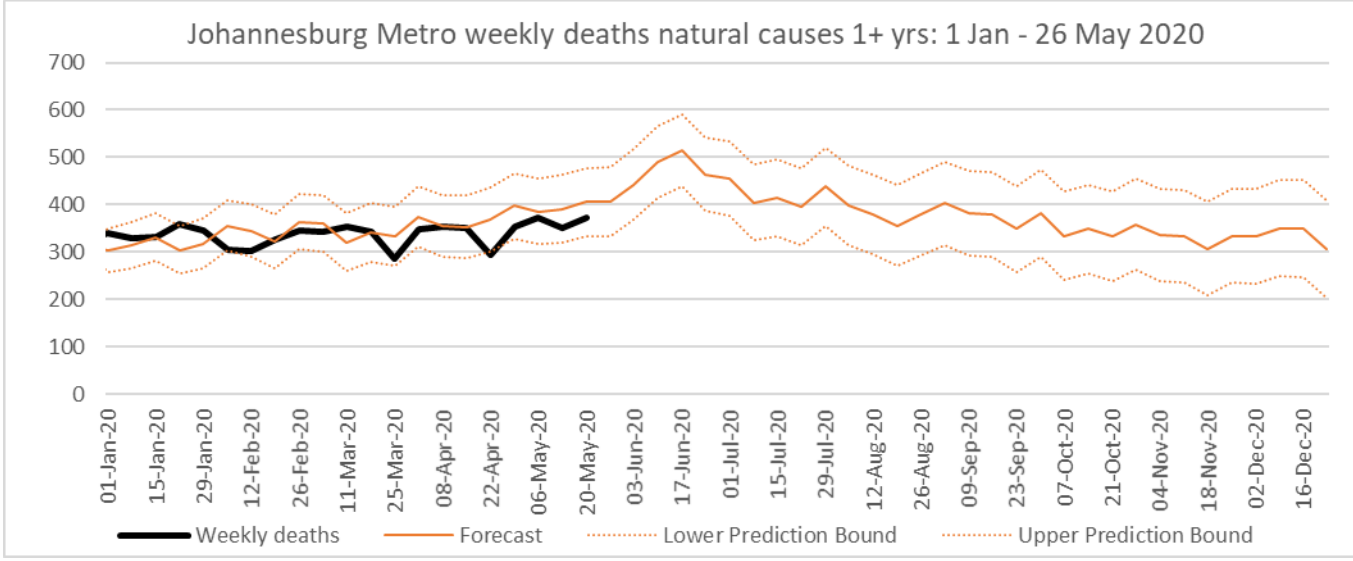*Numbers for the last week has been adjusted for delayed registrations*

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Buffalo City Metro weekly deaths natural causes 1+ yrs : 1 Jan - 26 May 2020

Cape Town Metro weekly deaths from natural causes 1+ yrs : 1 Jan - 26 May 2020

Ekurhuleni Metro weekly deaths from natural causes 1+ yrs : 1 Jan - 26 May 2020

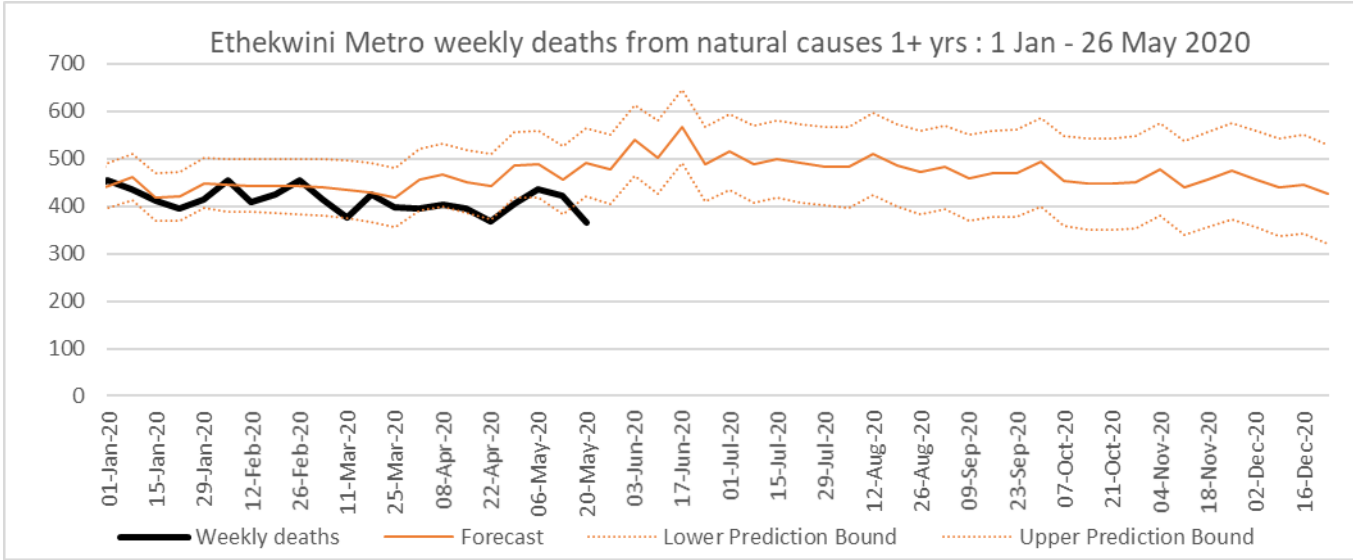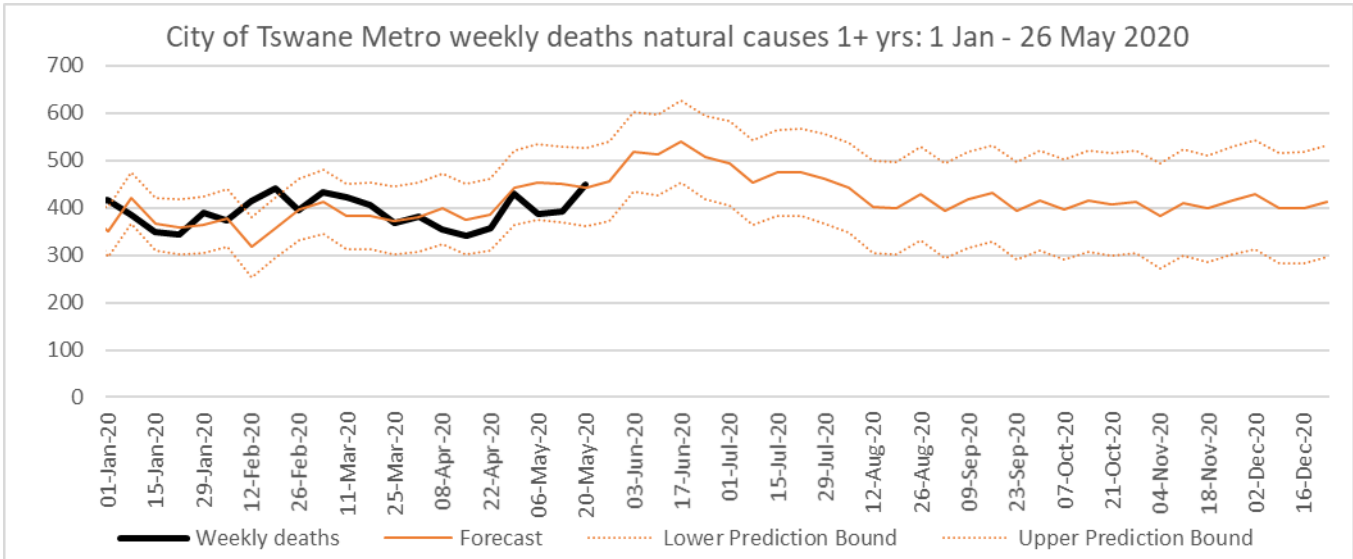*Numbers for the last week has been adjusted for delayed registrations*

7

Ethekwini Metro weekly deaths from natural causes 1+ yrs : 1 Jan - 26 May 2020

Johannesburg Metro weekly deaths natural causes 1+ yrs: 1 Jan - 26 May 2020

Mangaung Metro weekly deaths from natural causes 1+ yrs : 1 Jan - 26 May 2020

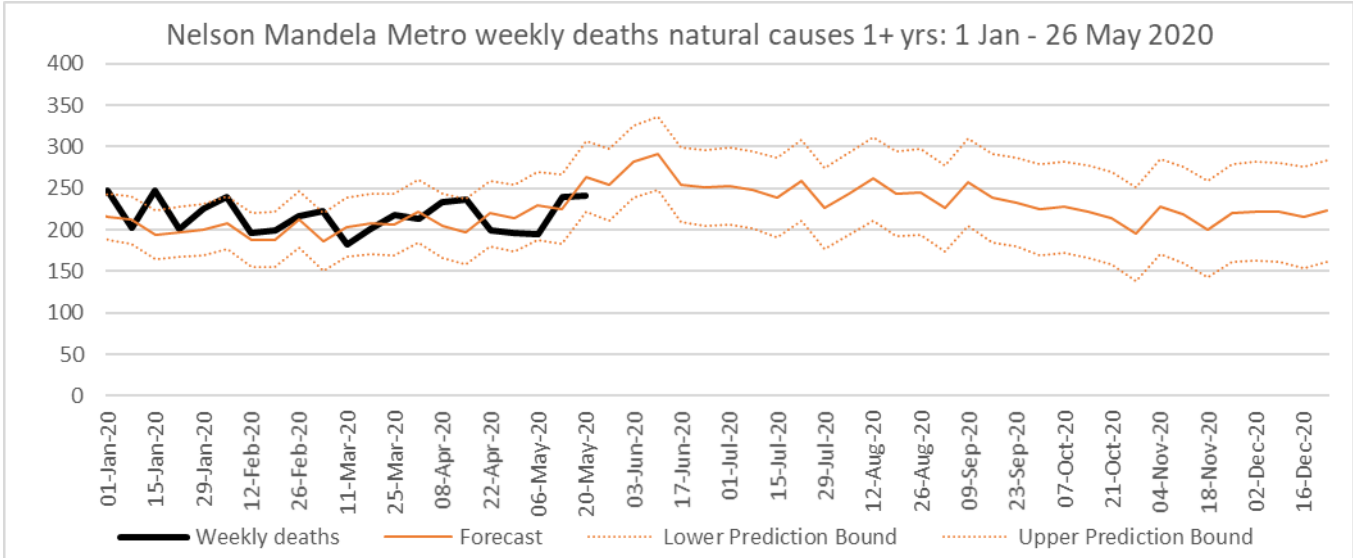*Numbers for the last week has been adjusted for delayed registrations*

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Nelson Mandela Metro weekly deaths natural causes 1+ yrs: 1 Jan - 26 May 2020

City of Tswane Metro weekly deaths natural causes 1+ yrs: 1 Jan - 26 May 2020

Numbers for the last week has been adjusted for delayed registrations

RSA weekly deaths from unnatural causes : 1 Jan - 26 May 2020

Legend: Weekly deaths — Forecast — Lower Prediction Bound — Upper Prediction Bound

Numbers for the last week has been adjusted for delayed registrations