

Forecasting of coronavirus COVID19 epidemic (SIR model)

It is assumed that the model is a reasonable description of the one-stage epidemic. In particular, the model assumes a constant population, uniform mixing of the people, and equally likely recovery of infected. The model is data-driven, so its forecast is as good as data are. The forecasting change with new or changed data.

DISCLAIMER: The model may fail in some situations. In particular, the model may be inadequate; the model may fail in the initial phase and in when additional epidemic stages or outbreaks (not described by SIR model) are encountered. Use it at your own discretion.

Source of data

<https://www.worldometers.info/coronavirus/coronavirus-cases/#case-tot-outchina>

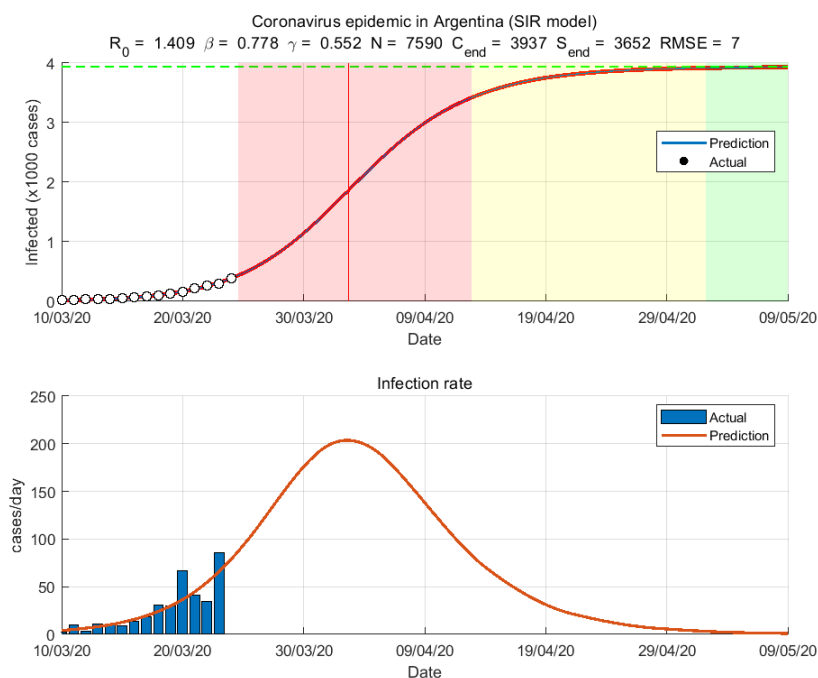
https://en.wikipedia.org/wiki/2019%E2%80%9320_coronavirus_pandemic_by_country_and_territory

An actual source of data is for each country reported in the corresponding getData function.

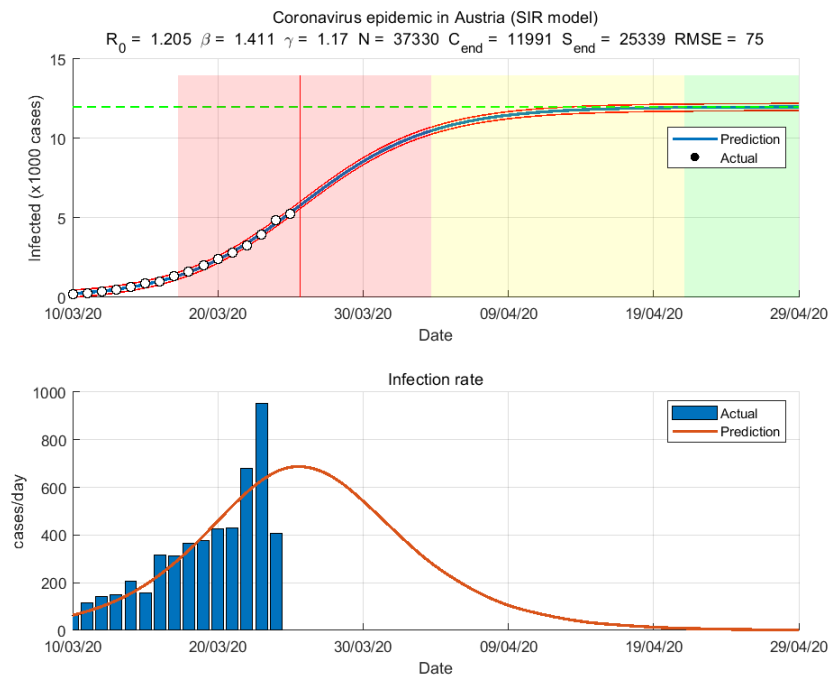
Report

Date: 25-Mar-2020

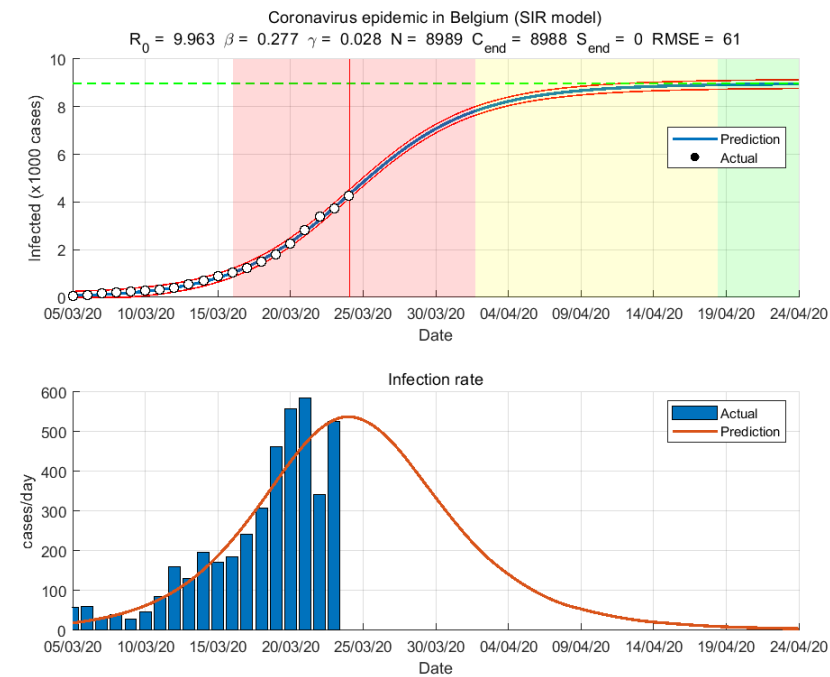
Argentina



Austria



Belgium

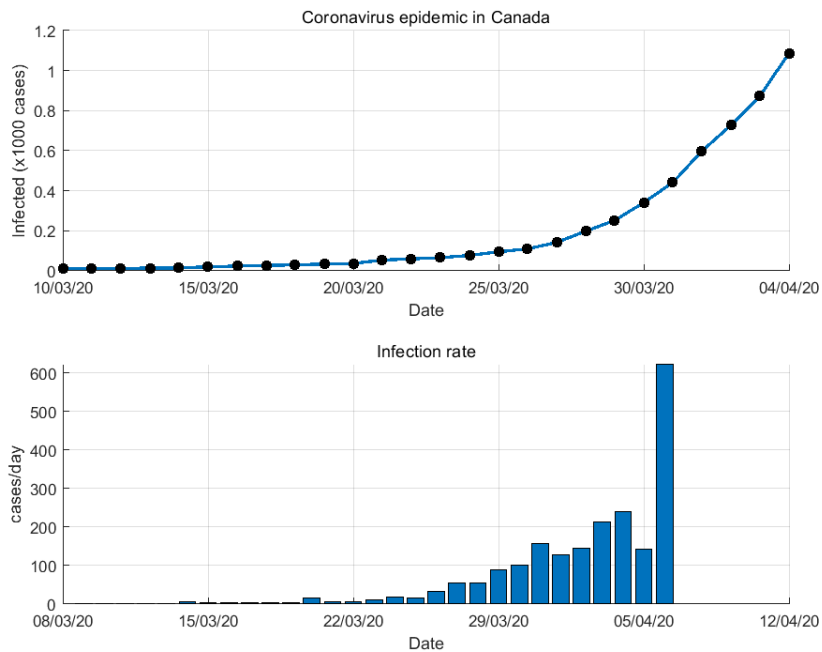


Canada

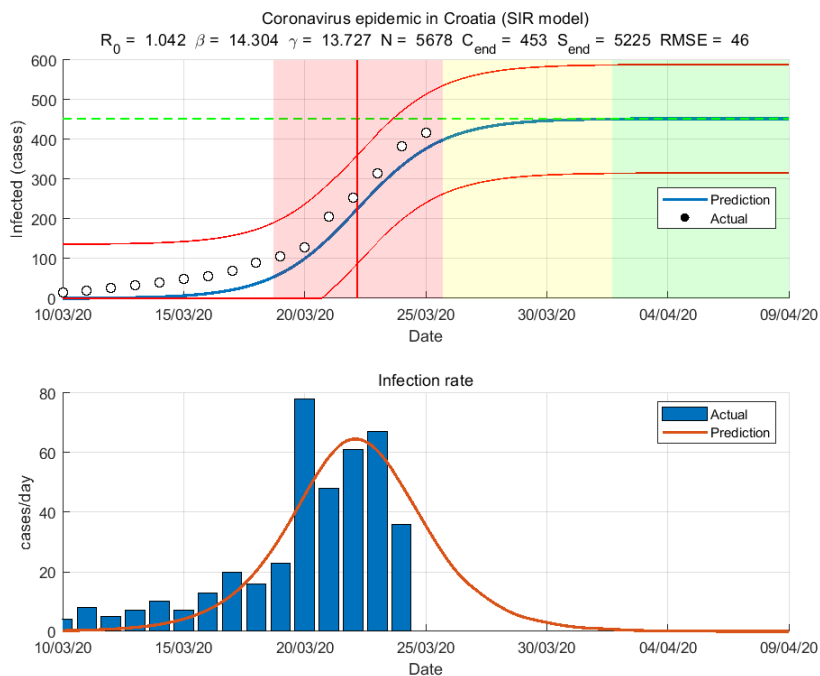
Fail to obtain parameters.

ini: $\beta = 0.845523$ $\gamma = 0.563682$ $N = 11675.4$ $I_0 = 0.554123$

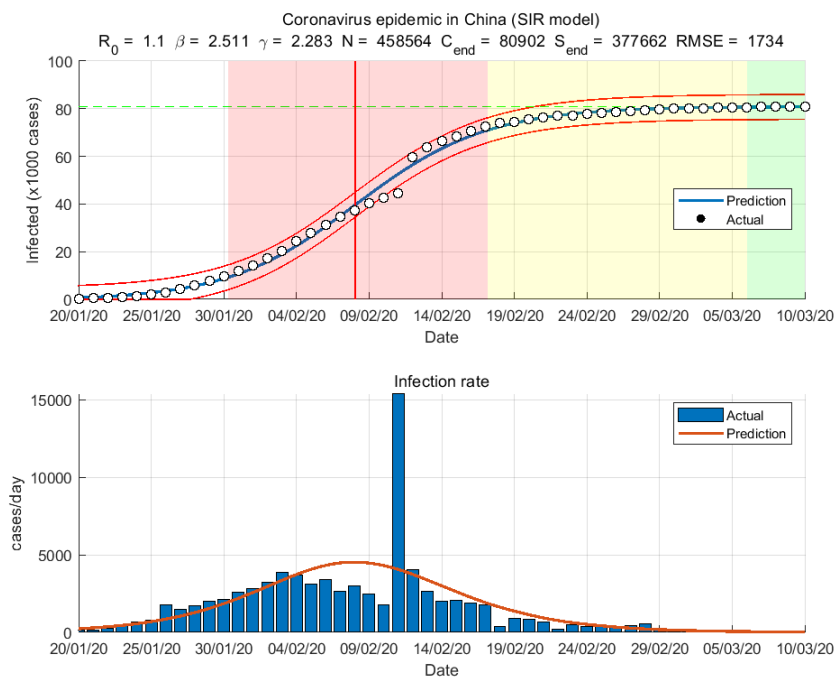
calc: $\beta = 0.461908$ $\gamma = 0.183288$ $N = 2.18236e+07$ $I_0 = 0.362171$



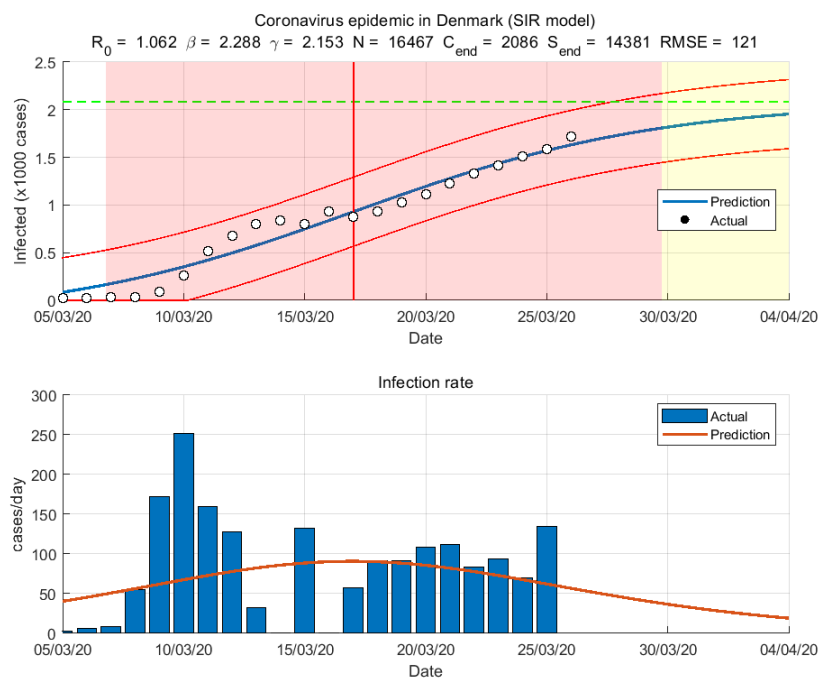
Croatia



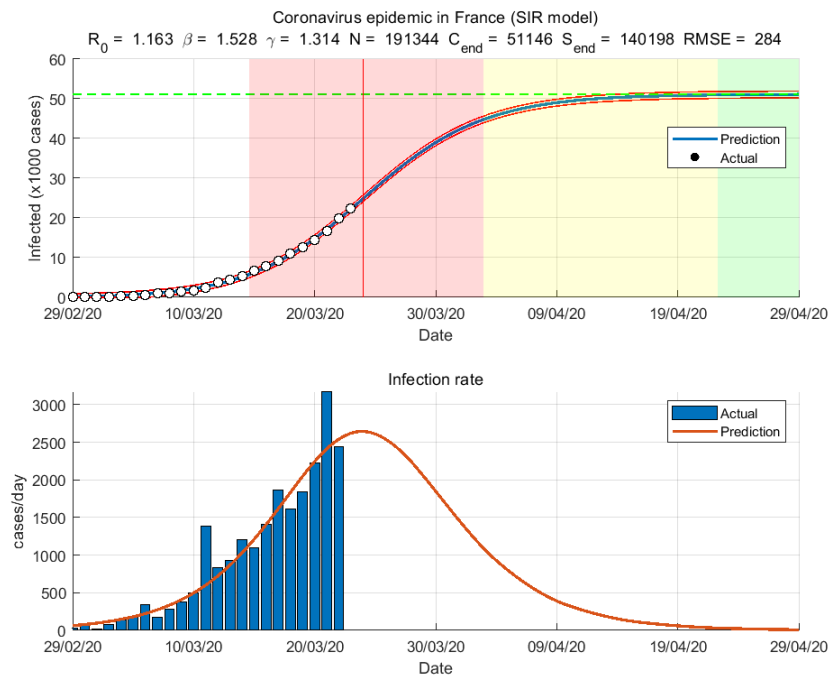
China



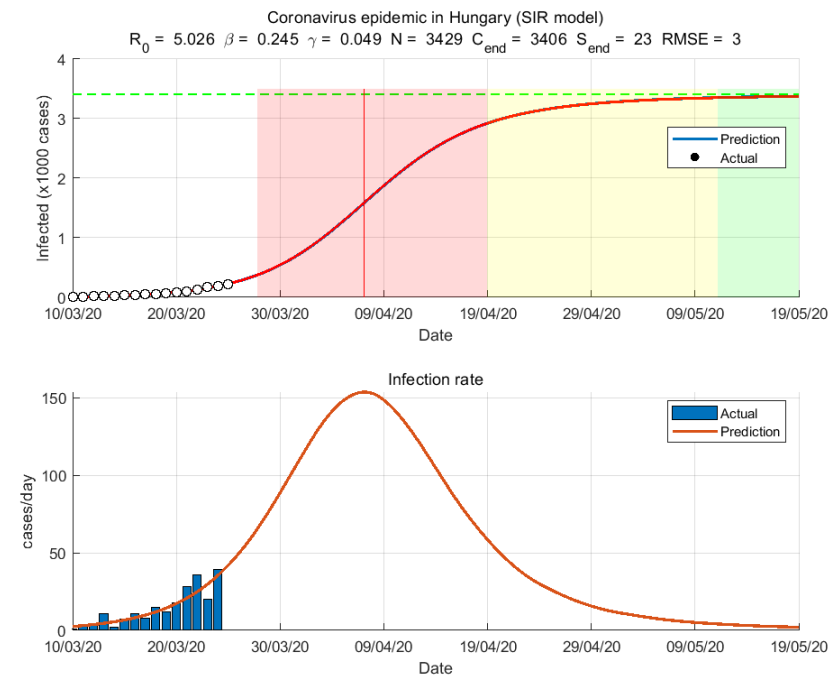
Denmark



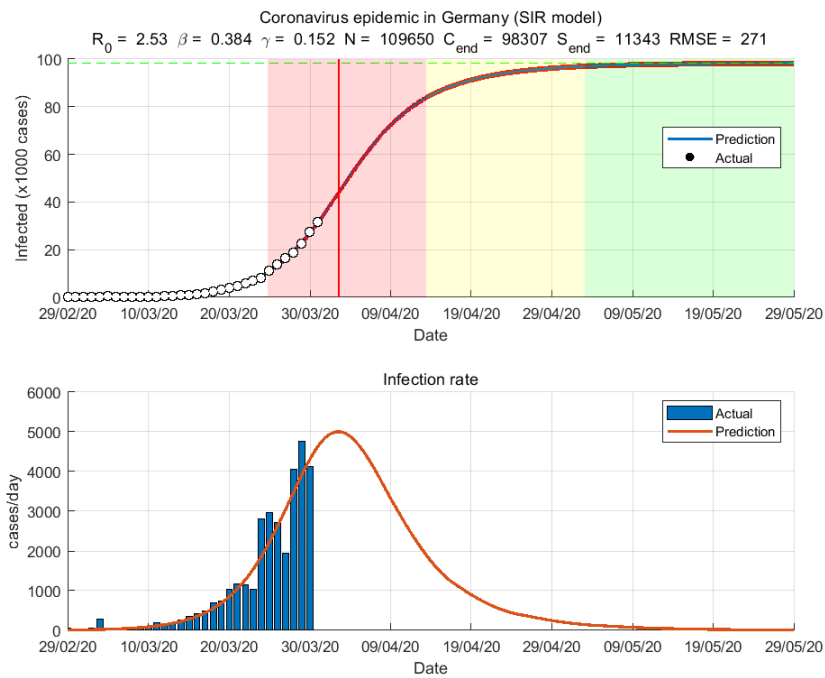
France



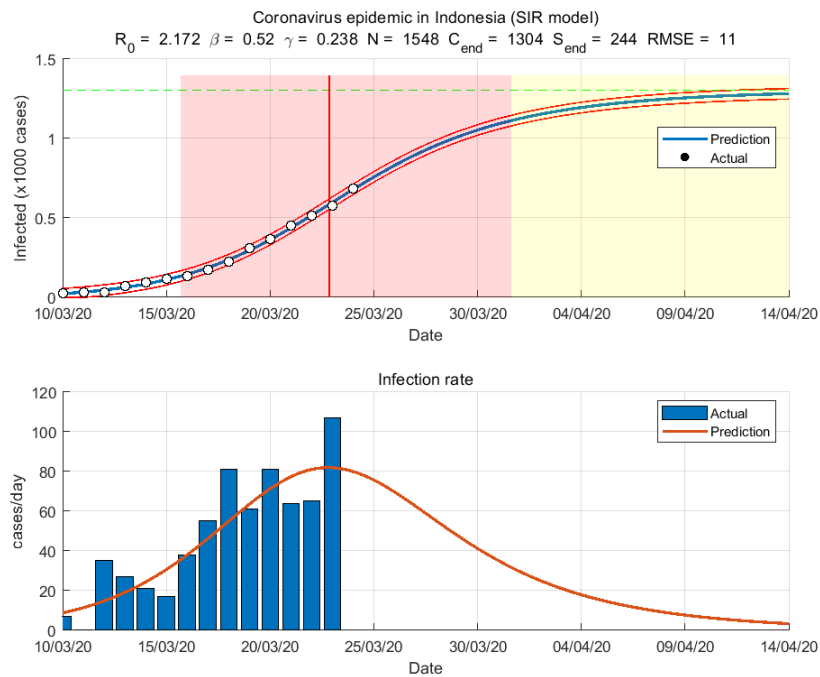
Hungary



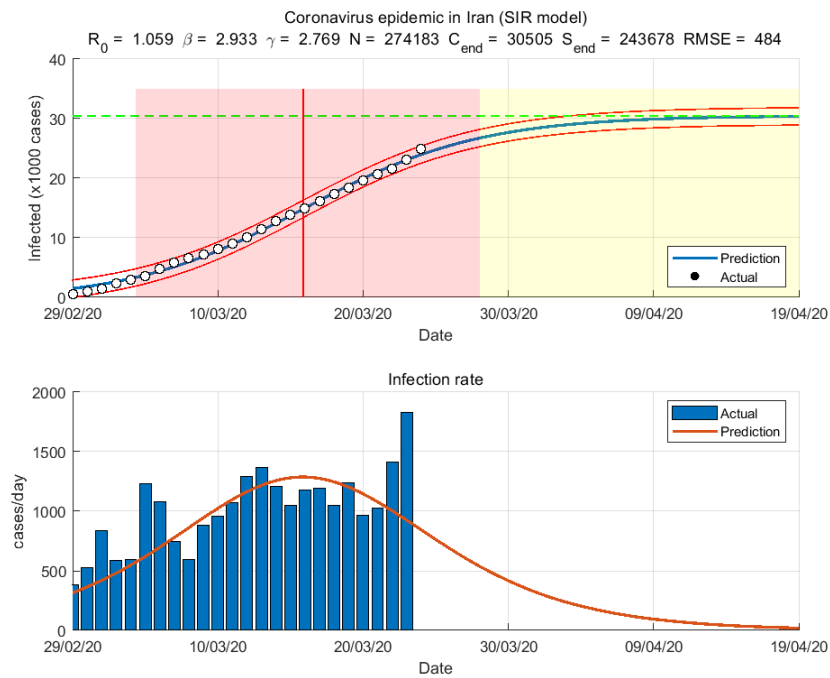
Germany



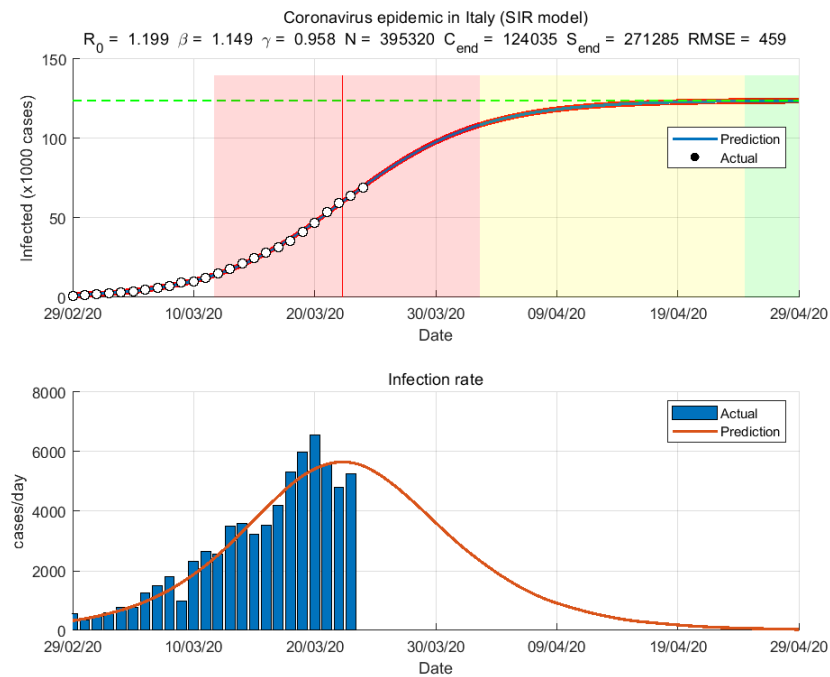
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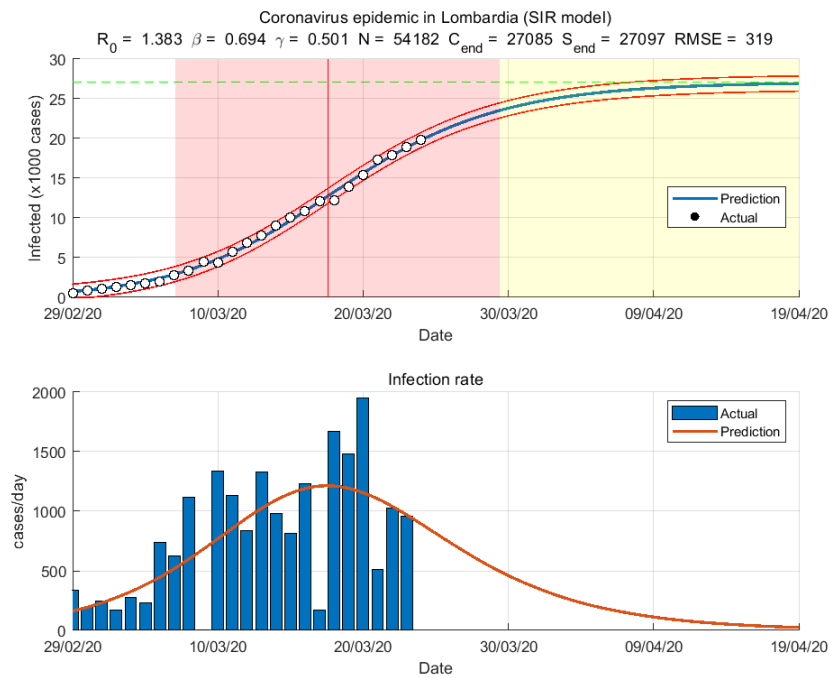
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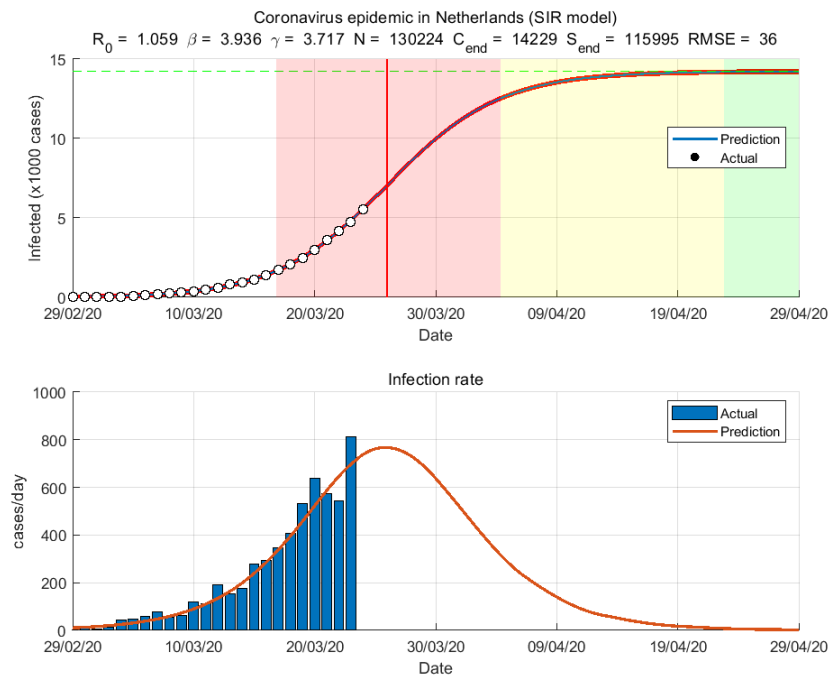
Italy



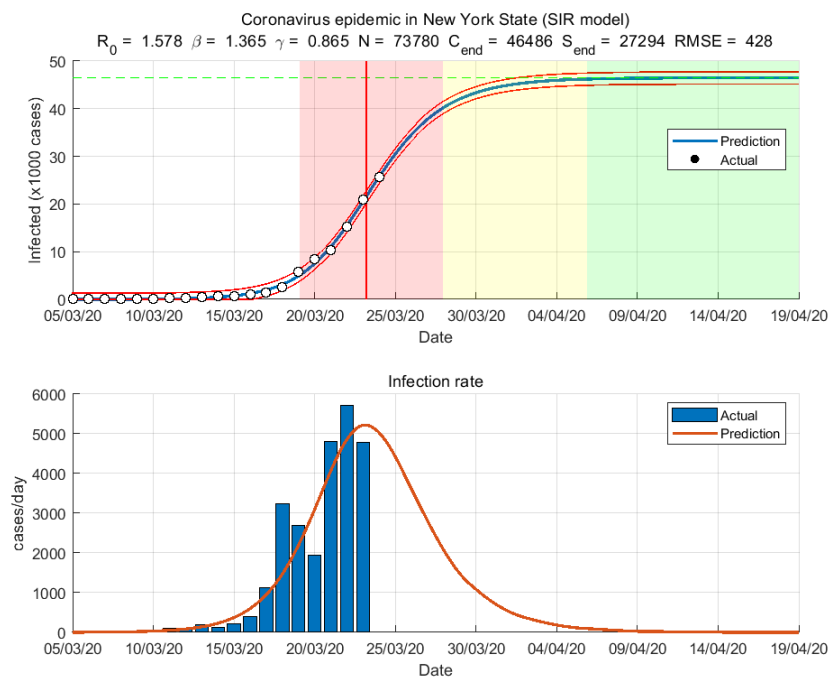
Lombardia



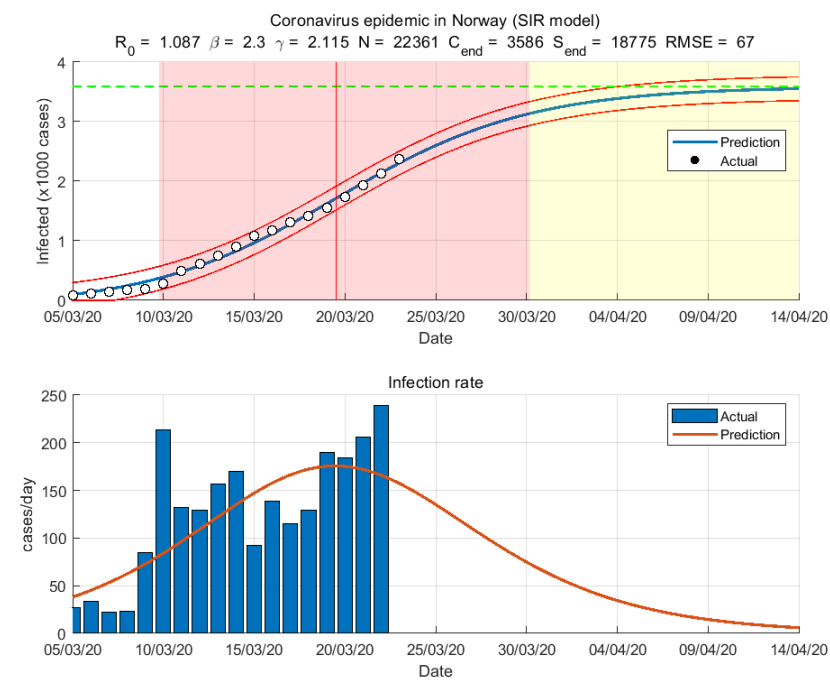
Netherlands



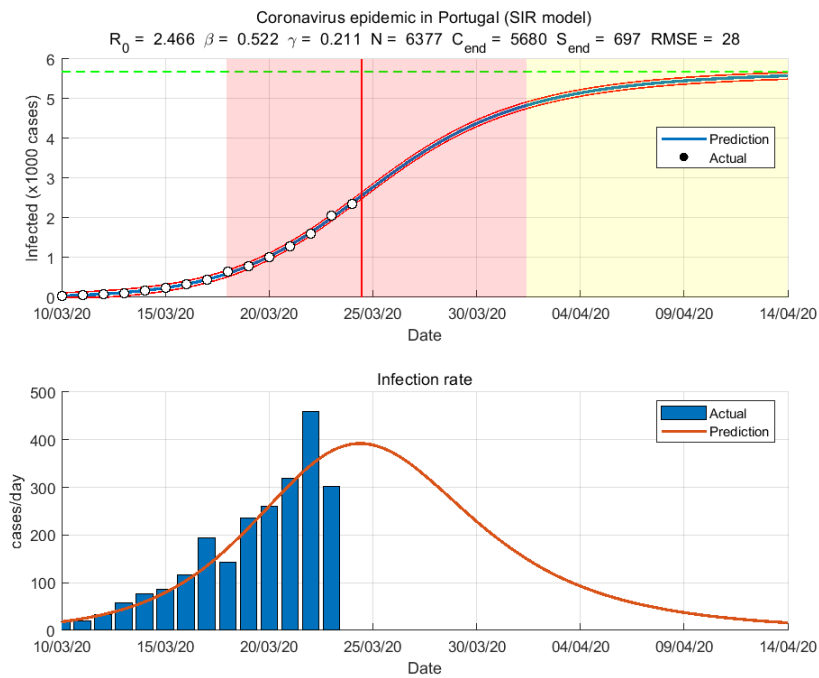
New York State



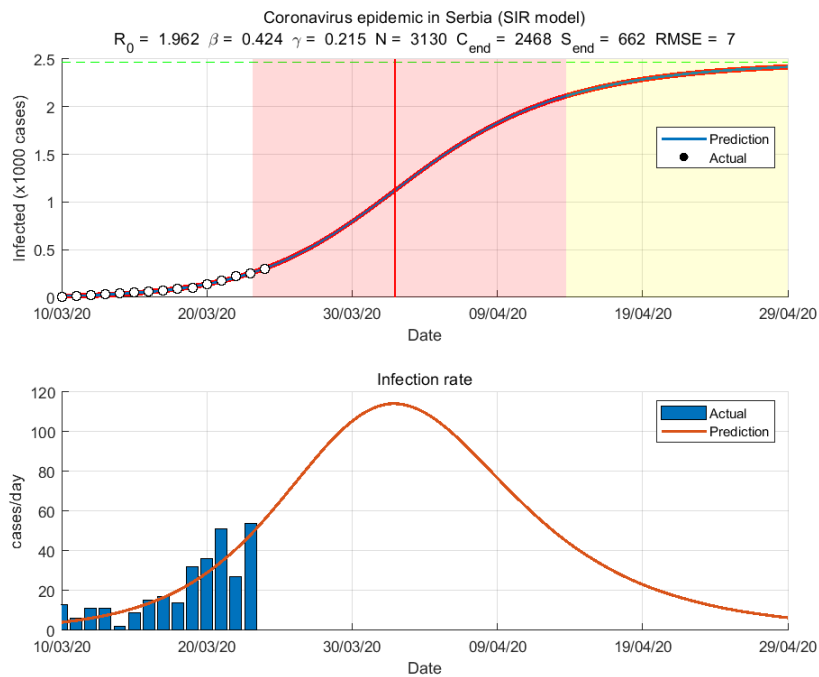
Norway



Portugal

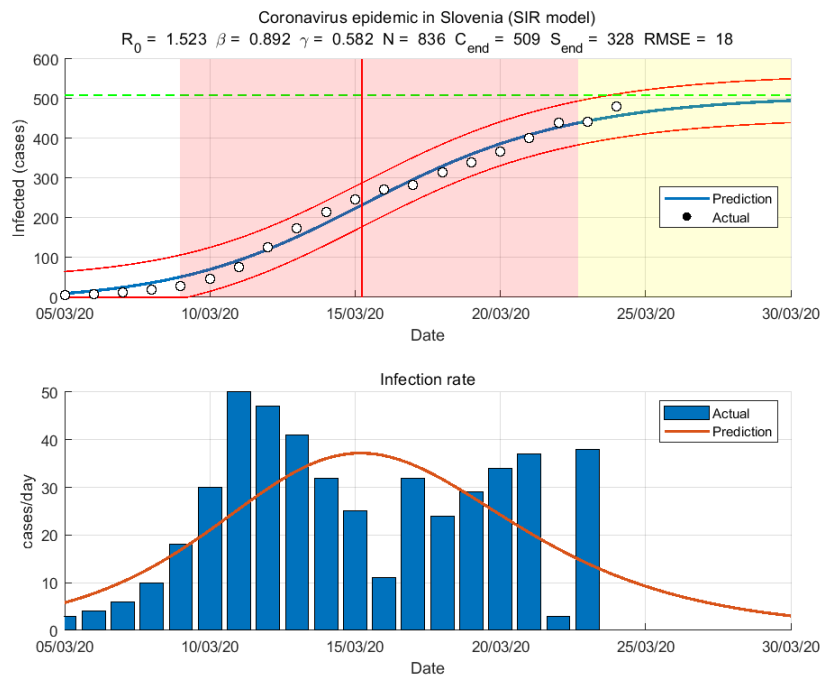


Serbia

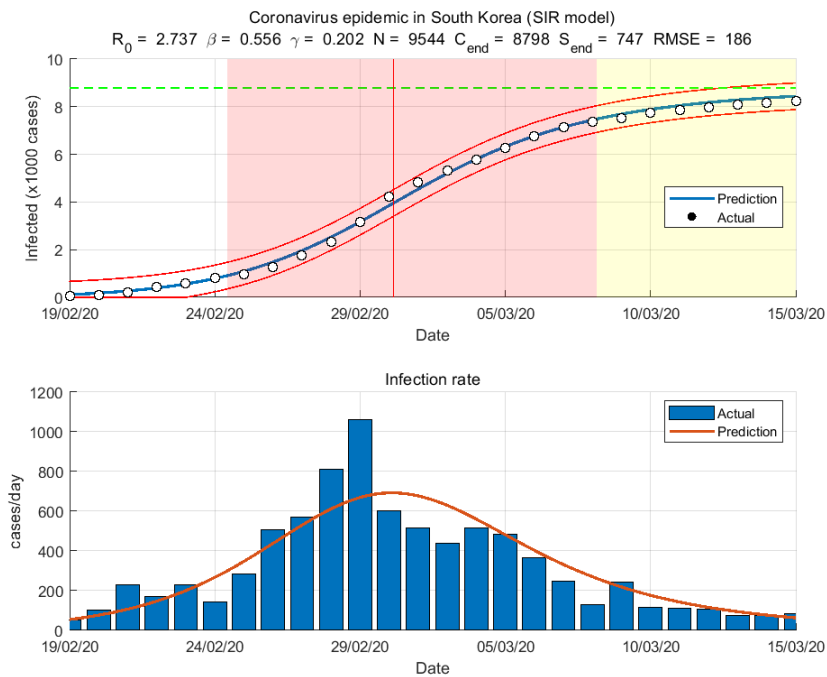


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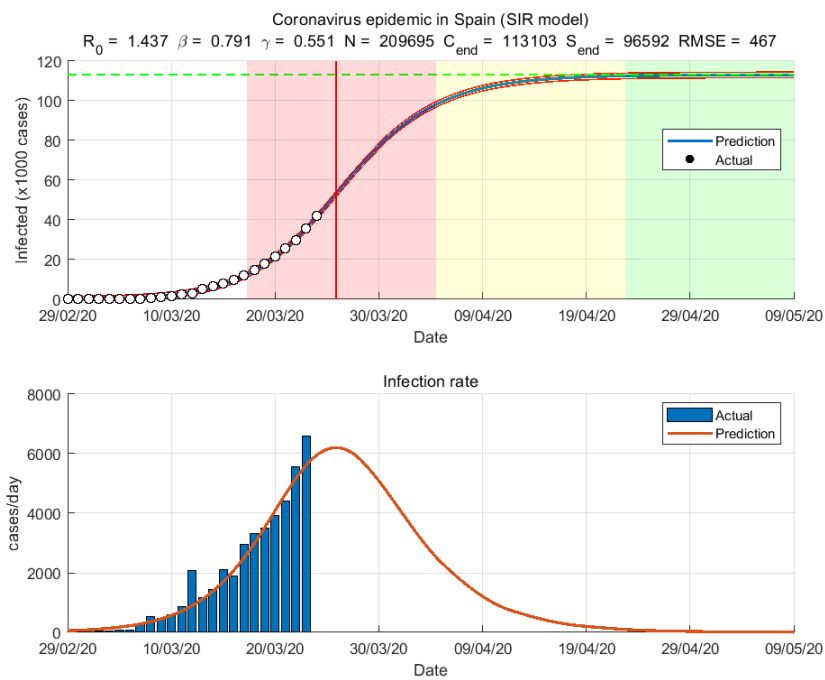
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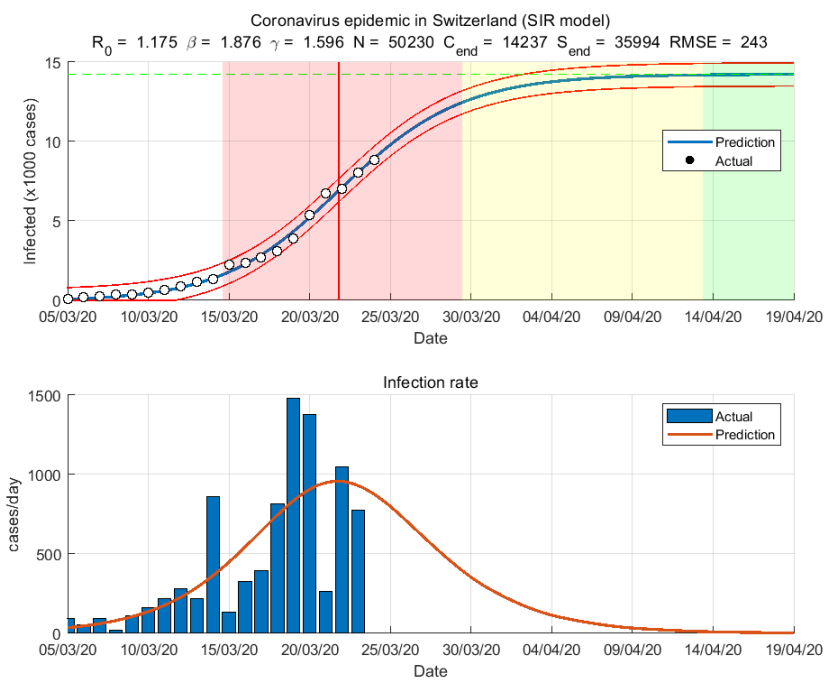
South Korea



Spain

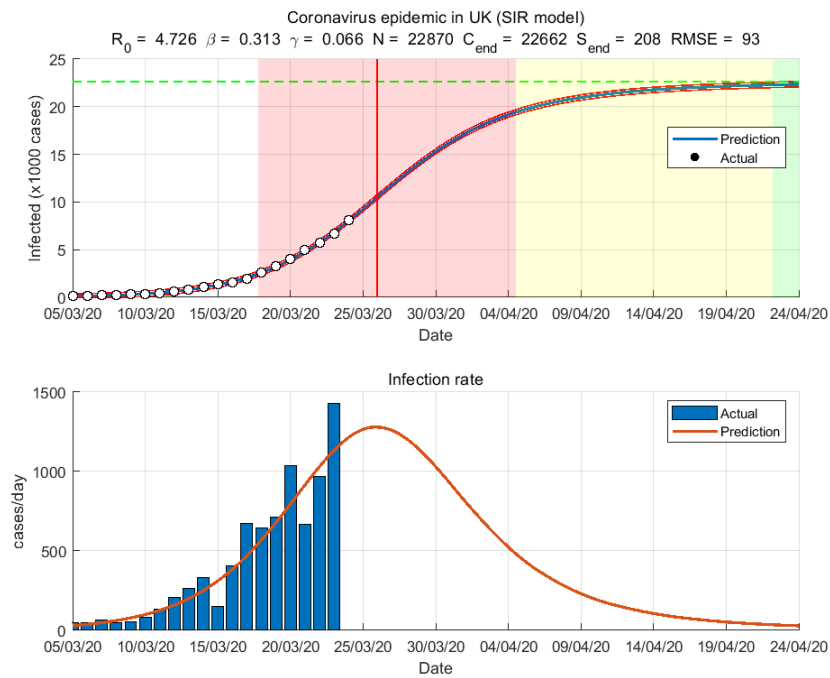


Switzerland

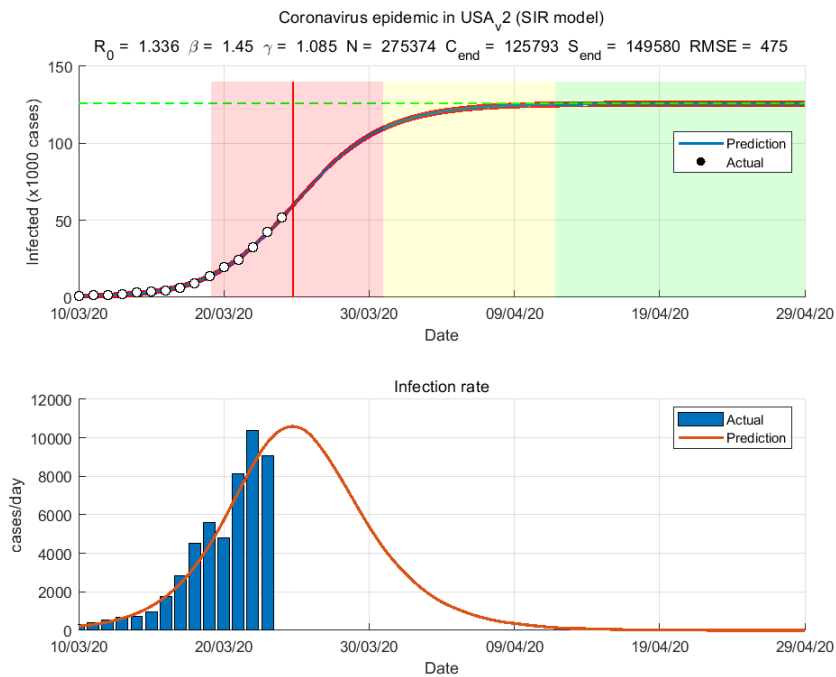


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UK



USA



Countries outside of China

