COVID19_PH : Epidemiological models of COVID-19 in the Philippines

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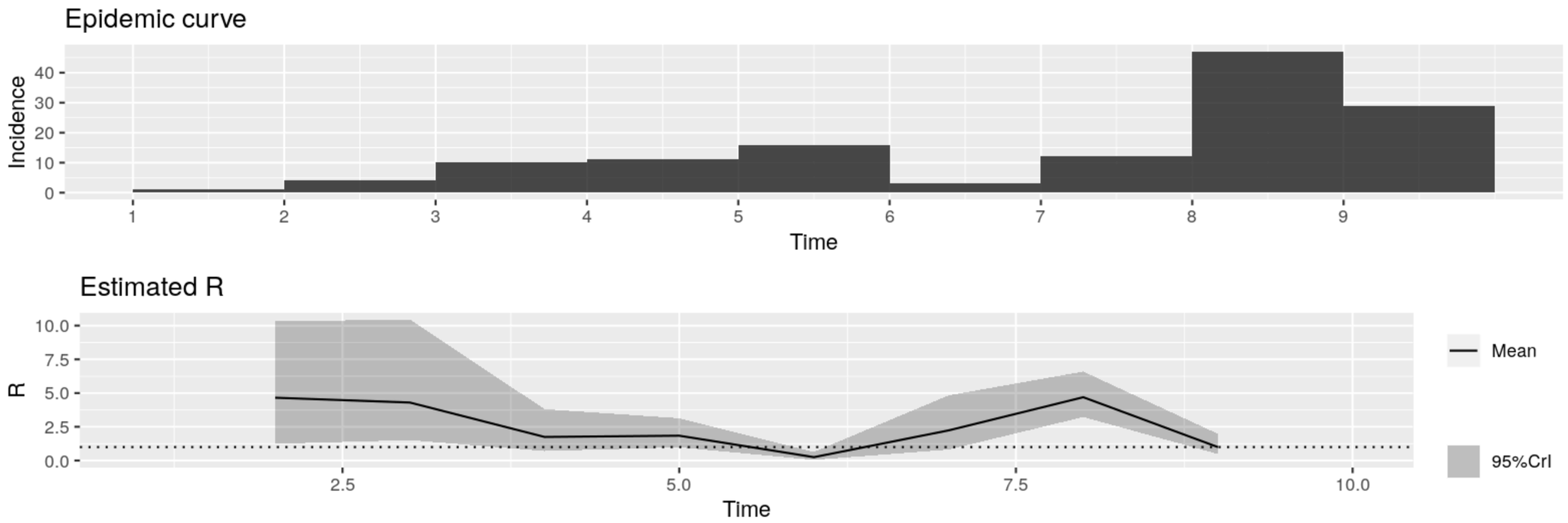
COVID-19 reproductive number for Philippines

Current (March 15, 2020) : 2.5 (CI 95% 1.1-2.5)

Previous: (March 13, 2020): 2.7 (CI 95% .8- 4.8)

Interpretation: Disease continues to spread is R is > 1



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What is **reproductive number**?

Reproductive number (R) is an epidemiological metric of **contagiousness or transmissibility of infectious agents.**

How do we interpret R?

R value of >1 means the disease will spread

R value of <1 means disease will not propagate

Epidemiological model of COVID19 outbreak in the Philippines

1.) Determine when is the **peak** of the outbreak

2.) Calculate projected number of cases of COVID-19 in the Philippines

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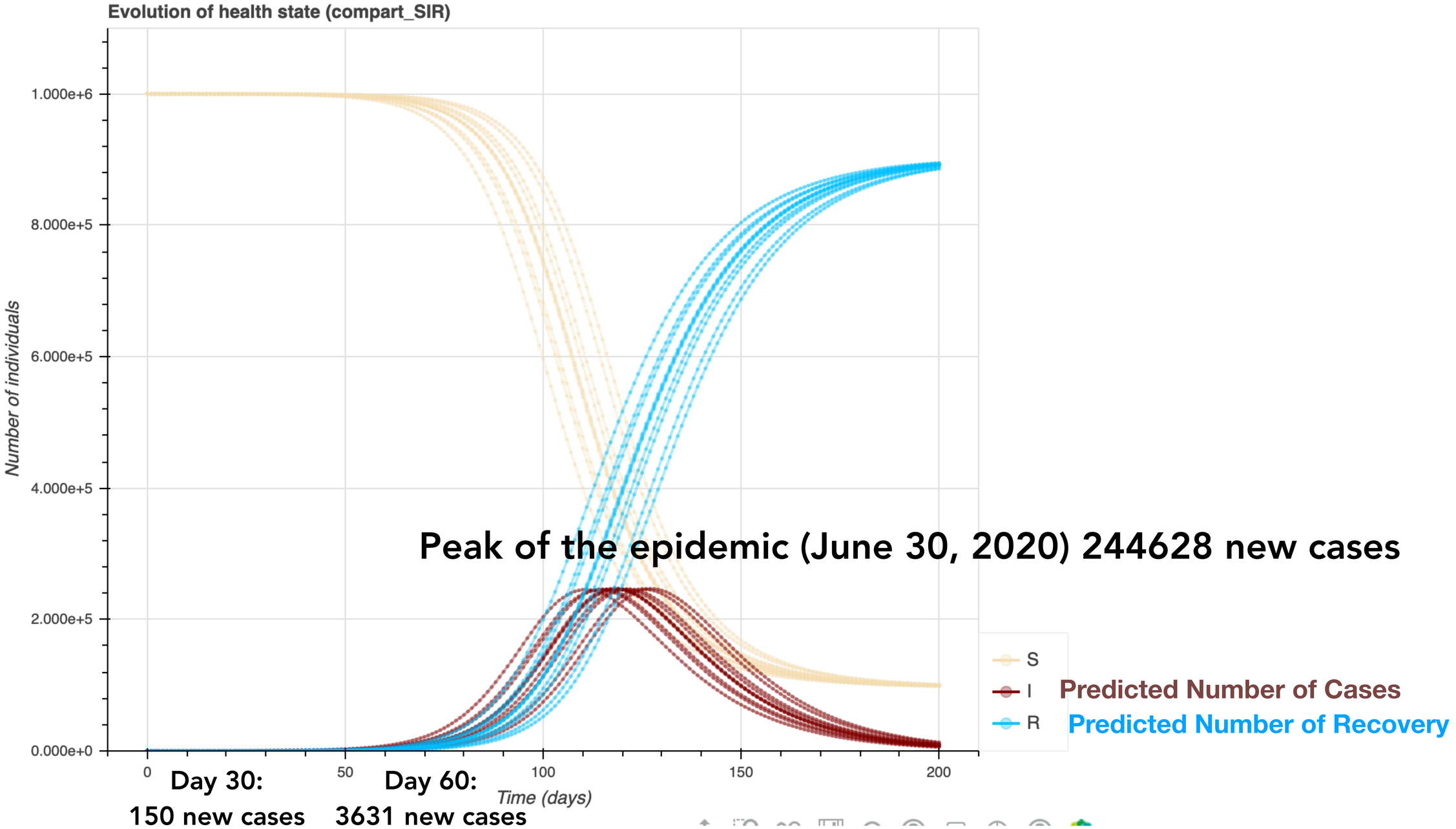
Epidemiological Model parameters:

```
  initial_population_size:
    desc: 'initial number of individuals in the population'
    value: 100000
  initial_infected:
    desc: 'initial number of infectious individuals in the population'
    value: 10
  transmission_I:
    desc: 'transmission rate from infectious individuals (/day)'
    value: 0.189
  recovery:
    desc: 'recovery rate (/day)'
    value: 0.07
```



Peak of the epidemic (June 30, 2020) 244628 new cases

Predicted Number of Cases

Predicted Number of Recovery

Day 30:
150 new cases

Day 60:
3631 new cases