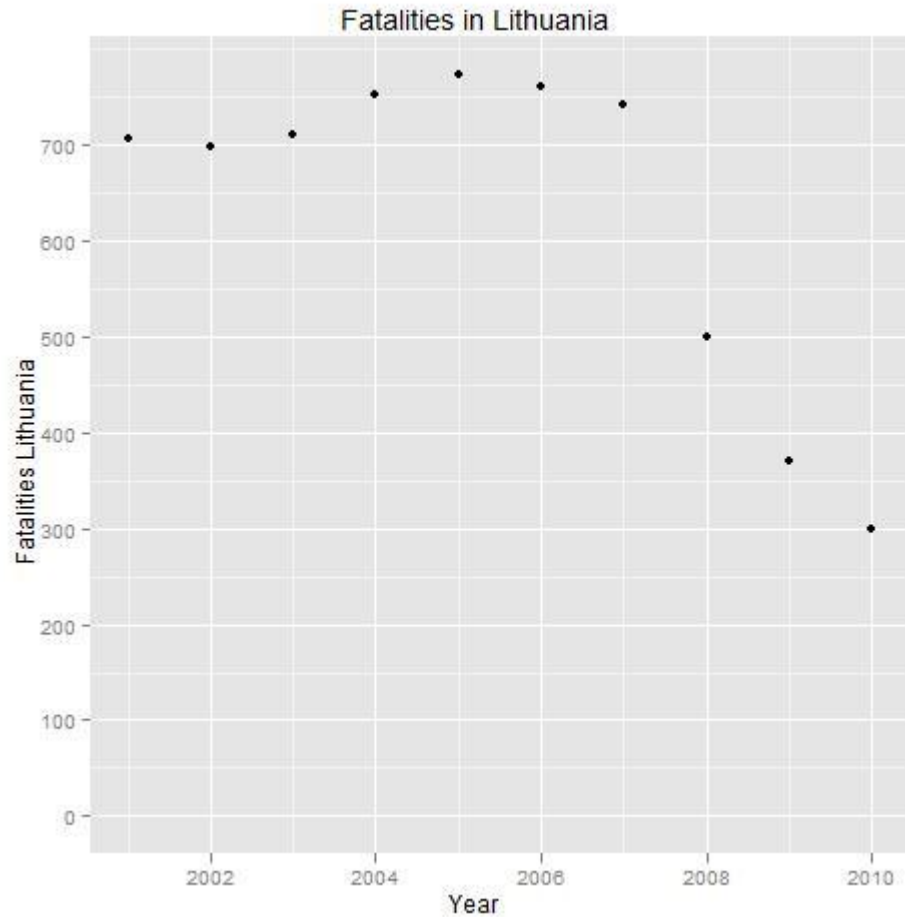# Lithuania

Fatalities

Fatalities in Lithuania

From 2007 to 2008 the number of fatalities dropped by 30%.

- The fatality series available for Lithuania covers only 10 years
  - o 2001 – 2007: stagnation.
  - o 2007 – 2008: a sudden drop by more than 30%.
  - o 2008 – 2010: further strong reduction.
- Overall, annual reduction by 9%.
- According to [1] reduction was reached due to a concerted effort to increase traffic safety, including awareness campaigns, infrastructure audits, lowering the legal BAC to 0.4g/l, increased speeding fines and the threat of license suspension for young drivers in the case of excessive speeding.
- At the same time, the economic recession showing an effect on road traffic fatalities in almost all European countries, probably also contributed to the reduction. The biggest drop does however, precede the onset of the recession (as indicated by drop in GDP), suggesting that the strong reduction in fatalities is not simply a by-effect of the economic recession.

Forecasts to 2020

- Forecasting model (technical definition [2]):
  - o Local Linear Trend model.
  - o Variable: yearly number of fatalities.
  - o Fixed components: slope
- If road safety is improved at the same rate as previously and the past development of mobility continues, the following forecasts can be made for the number of fatalities in 2020:

Forecast plots
LLT Model Lithuania
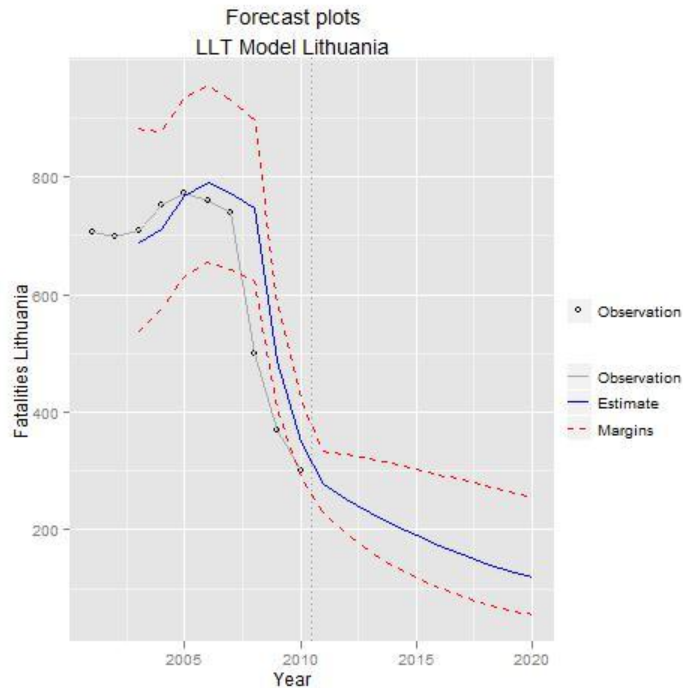
If RS efforts continue at the same level, the expected number of fatalities in 2020 is 119.

Forecast of road-traffic fatalities in Greece up to 2020

Year	Prediction	Lower CI	Upper CI
2011	**277**	192	398
2012	**252**	149	426
2013	**229**	118	447
2014	**209**	94	463
2015	**190**	75	478
2016	**173**	61	492
2017	**157**	49	504
2018	**143**	40	516
2019	**130**	32	528
2020	**119**	26	539

Disclaimer

- Statistical forecasting does not offer a definite prediction of what is *actually* going to happen in the future.
- The estimates are based on the "business as usual" assumption: no *principal* changes between past and future development.
- Even in these conditions future outcomes are uncertain. This uncertainty is represented in the confidence intervals (plotted in the red margins: 68%; printed in table: 95%).

References

[1] EC National Expert for road accident statistics and road safety performance indicators.

|2] Dupont & Martensen (Eds.) 2012. Forecasting road traffic fatalities in European countries. Deliverable 4.4 of the EC FP7 project DaCoTA.

[3] Bijleveld F., Commandeur J., Gould P., Koopman S. J. (2008),. Model-based measurement of latent risk in time series with applications. Journal of the Royal Statistical Society, Series A, 2008.

[4] Martensen & Dupont (Eds.) 2010. Forecasting road traffic fatalities in European countries: model and first results. Deliverable 4.2 of the EC FP7 project DaCoTA.

[5] Commandeur, J. & Koopman, S.J. (2007) An Introduction to State Space Time Series Analysis. Oxford University Press.