A. Model-data agreement B. Seasonal basic reproduction number Agadez Agadez Maradi Maradi $R^2 = 0.54$ $R^2 = 0.89$ 30 -30 -6 20 20 7 10 -10 Expected log(cases + Feb Apr Jun Aug Oct Dec Feb Apr Jun Aug Oct Dec $_{0}^{R}$ Niamey Zinder Niamey Zinder $R^2 = 0.86$ $R^2 = 0.87$ 30 30 -20 20 10-10 Feb Apr Jun Aug Oct Dec Feb Apr Jun Aug Oct Dec Observed log(cases + 1) Time of year