



GloFAS as a flood alert system in Acre civil defense: performance analysis





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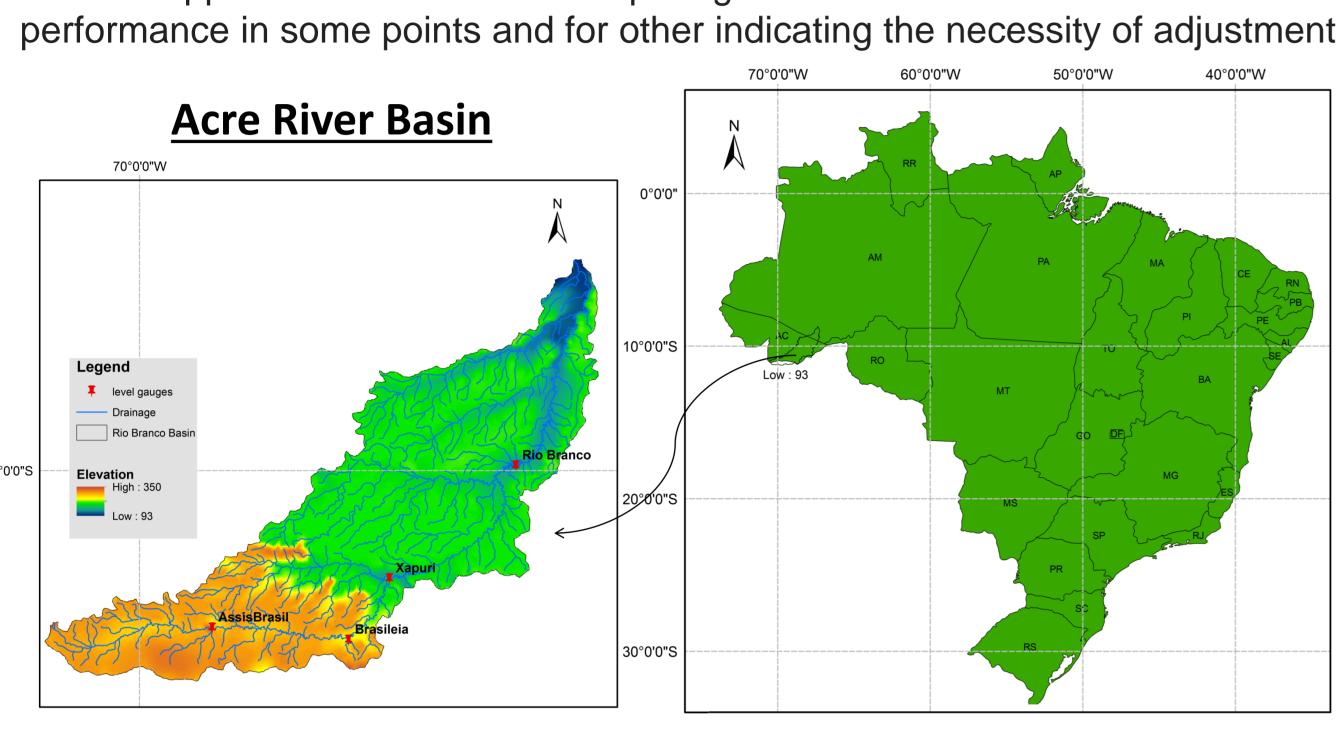
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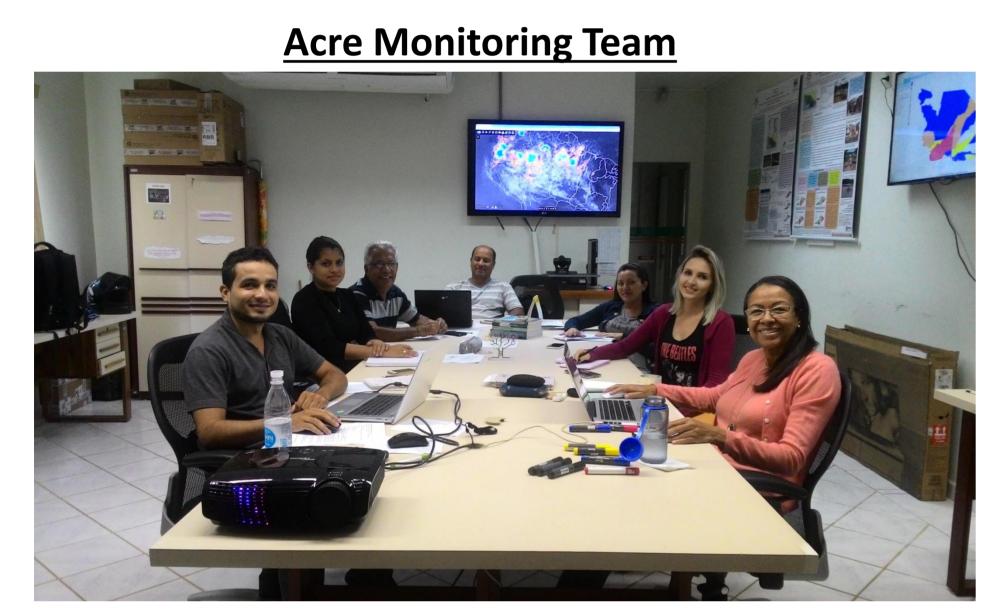
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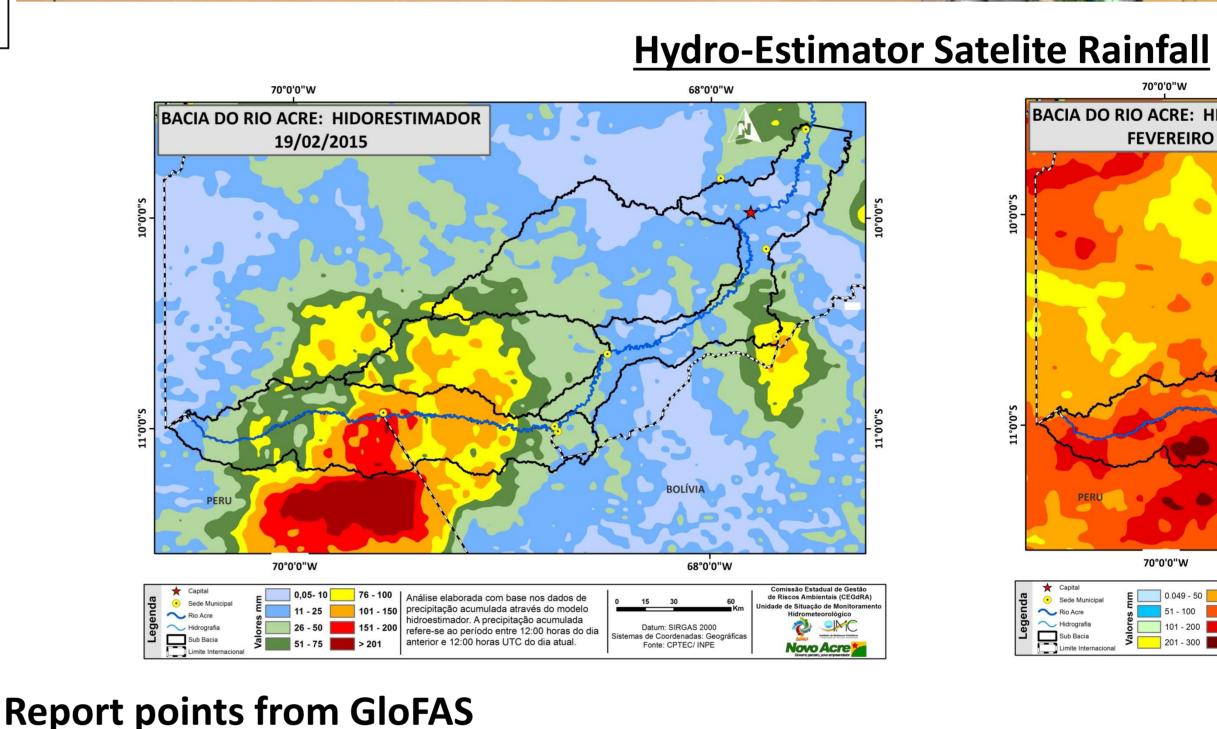
Abstract

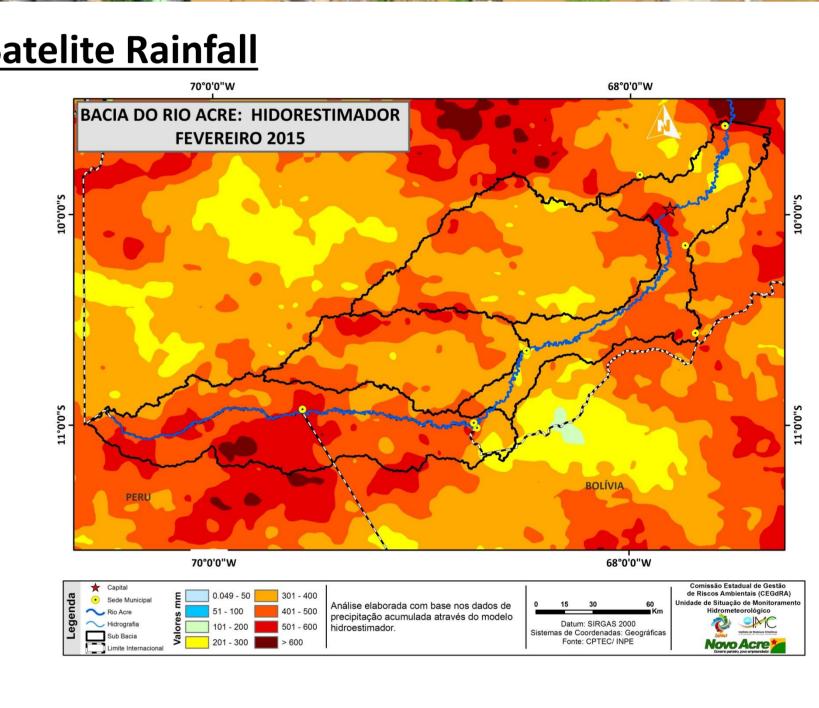
In recent years, flooding in the Amazon basin has been intensifying and reaching several rural and urban areas causing impacts on riverine and urban populations. In 2014 the Madeira River had its biggest flood already registered since 1967, where the impacts forced thousands of people to leave their residences and also the isolation of several cities in Acre, due to the flood in the highway to prevent the passage of cargo transportation. Floods have been affecting thousands of people in the state of Acre, northern Brazil, in February 2015, when some of the state's rivers, in particular the River Acre, overflowed. Further heavy rainfall has forced river levels higher still, and in March 2015 Brazil's federal government declared a state of emergency in Acre. From this, there is a great need for a flood awareness system so that surrounding populations can be alerted and able to vacate the areas subject to floods and the government can plan actions in all affected areas. The Global Flood Awareness System (GloFAS), jointly developed by the European Commission and the European Centre for Medium-Range Weather Forecasts (ECMWF), is an excellent tool that provides flood forecast with a lead time of two weeks. This work has the subject to evaluate the performance of GloFAS applied to Acre basins comparing the forecasts with observed discharge data from selected points where there are stations with real time data. The first result shows good performance in some points and for other indicating the necessity of adjustments in the model.

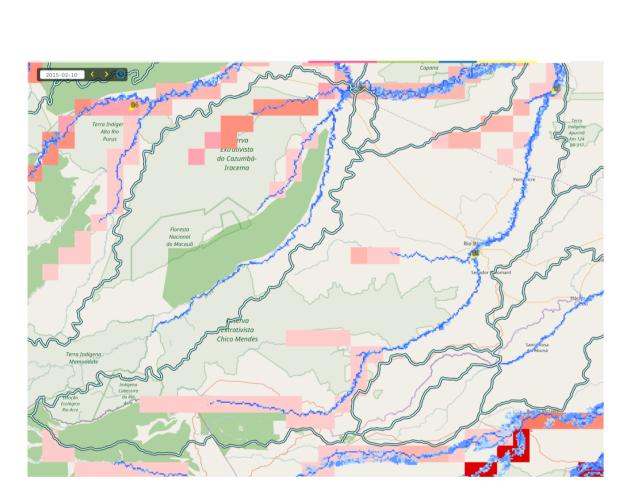


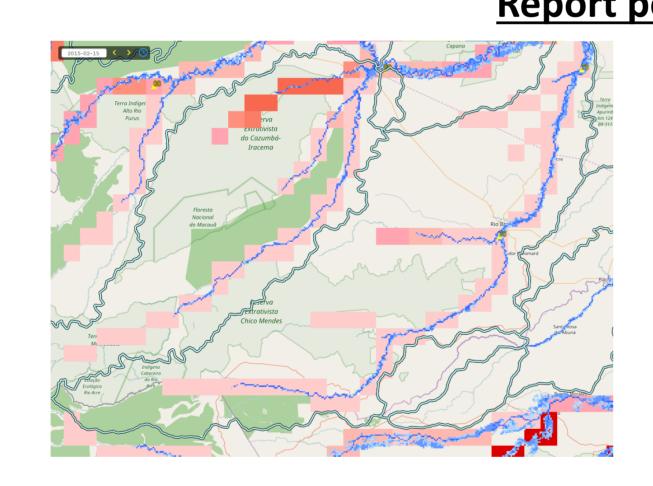


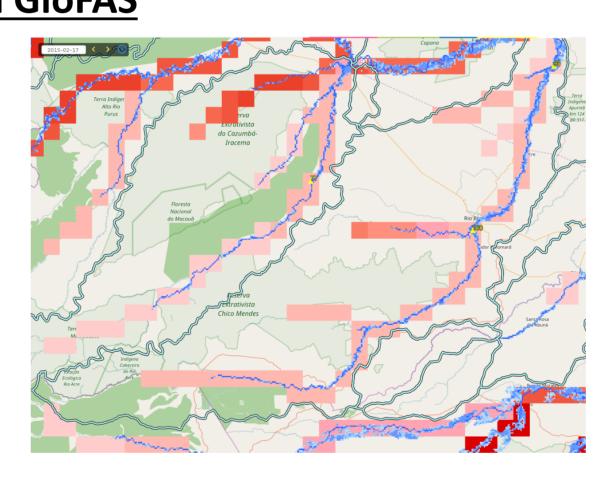


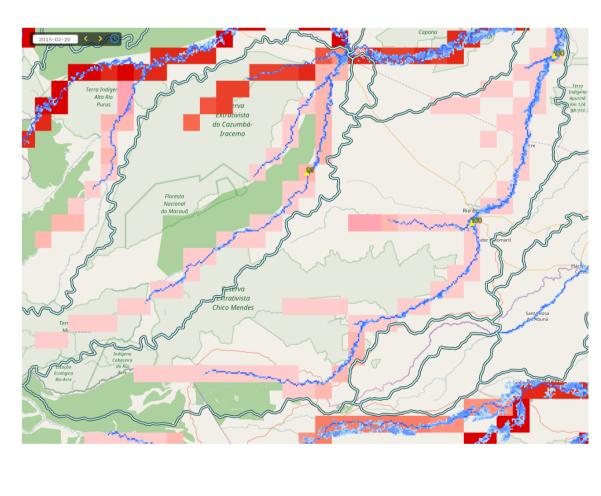


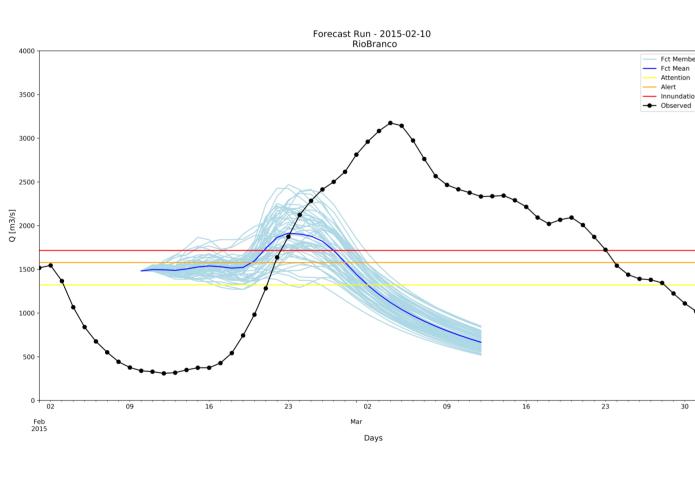


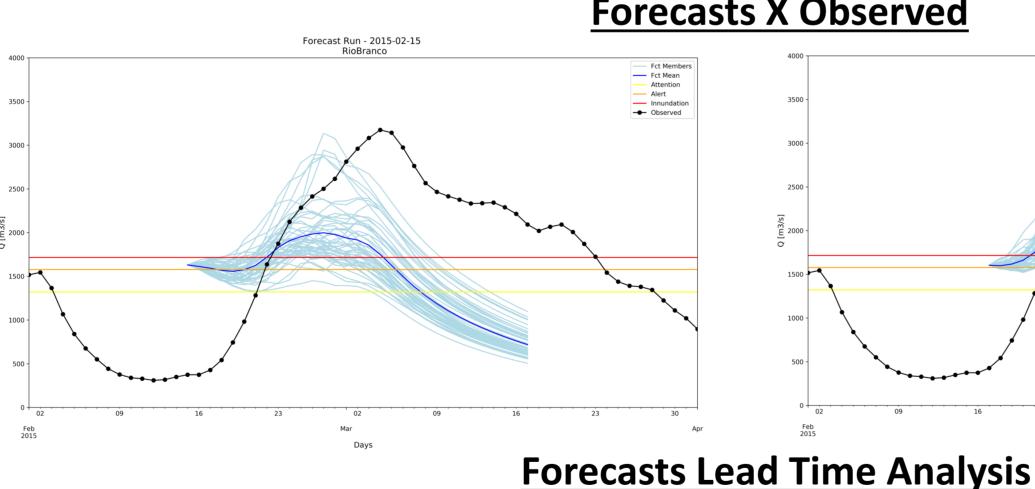


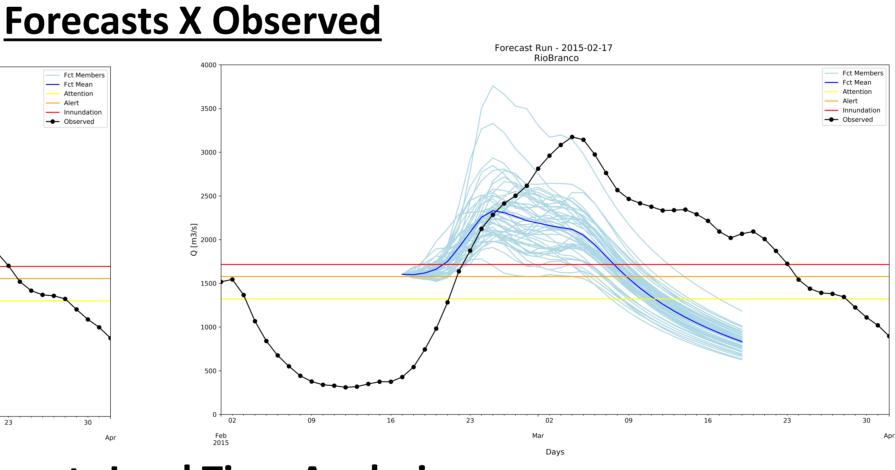


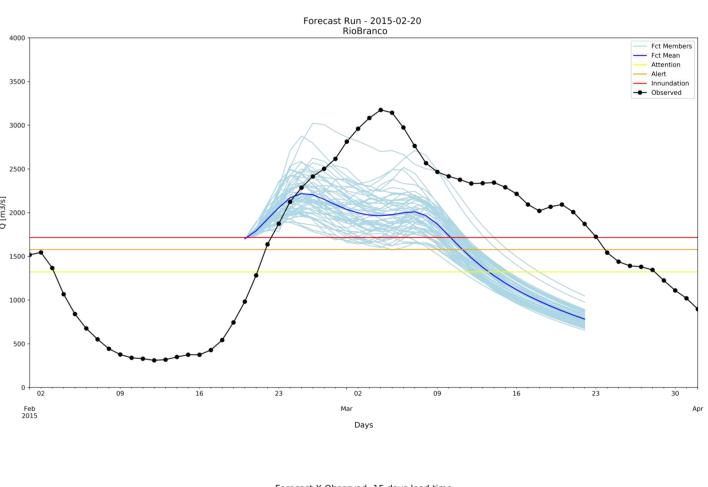


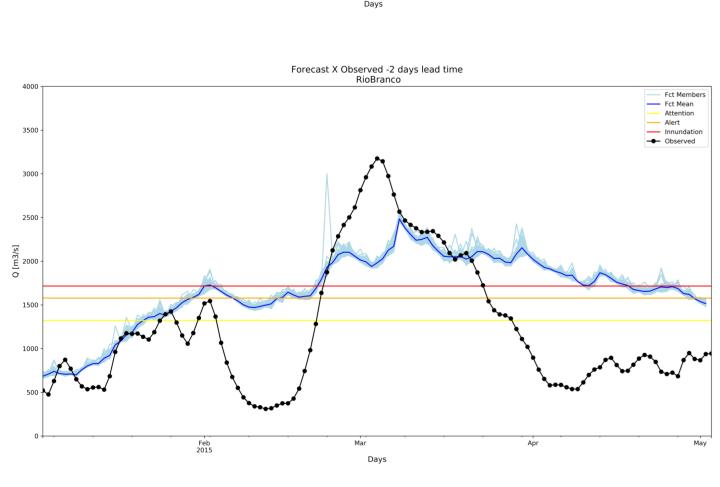


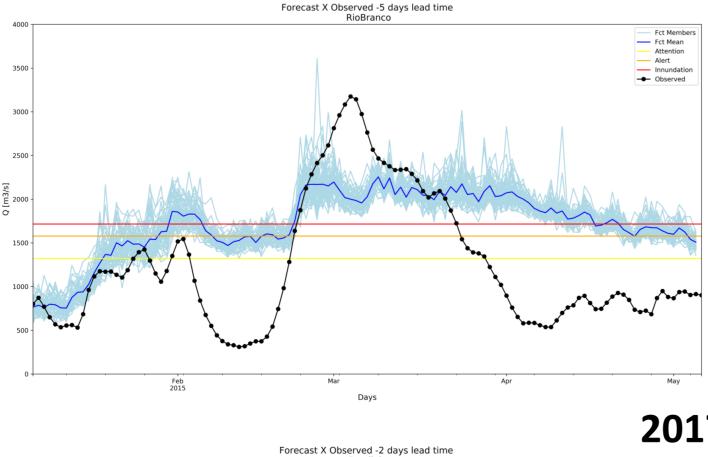


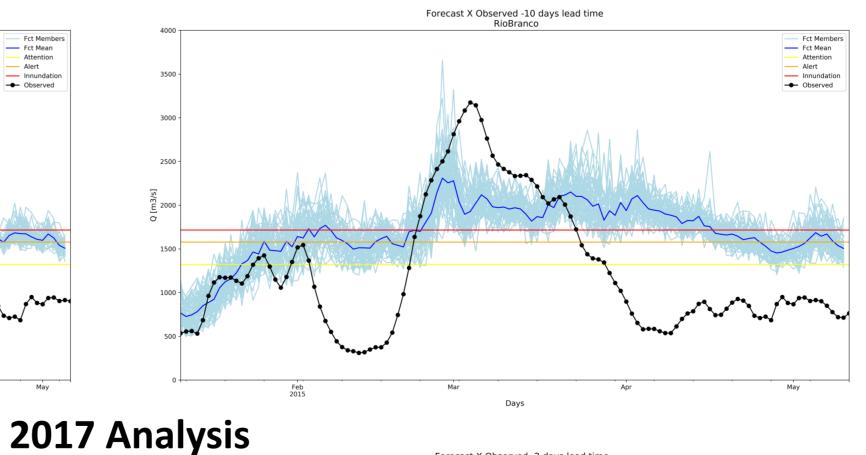


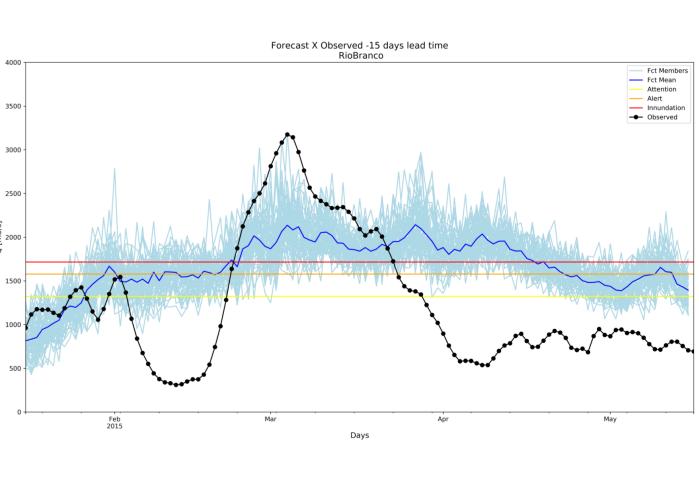


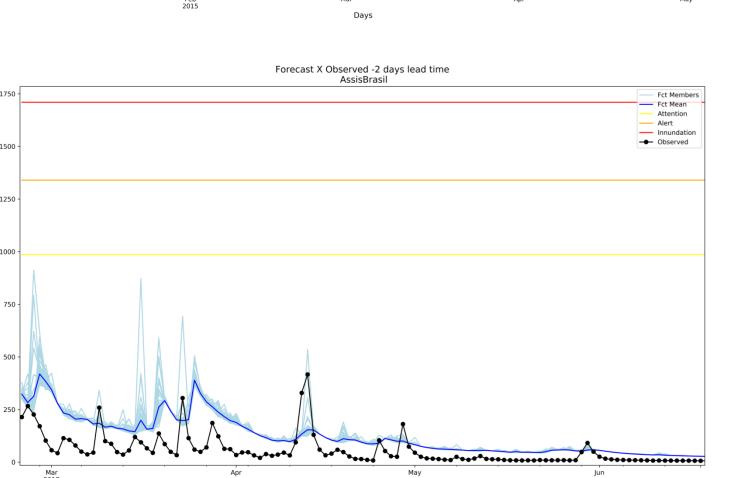




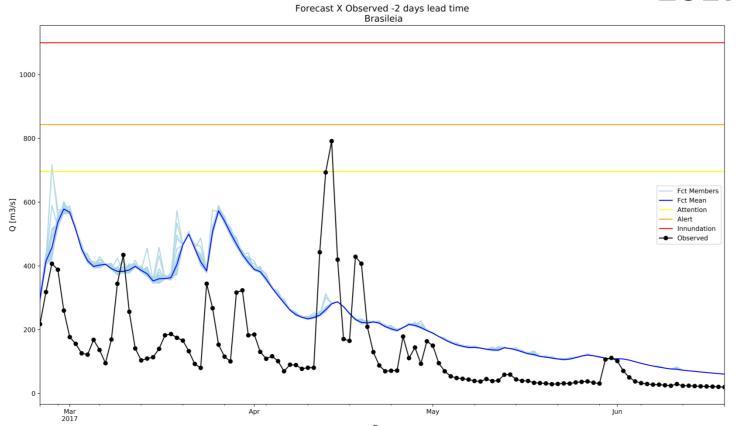


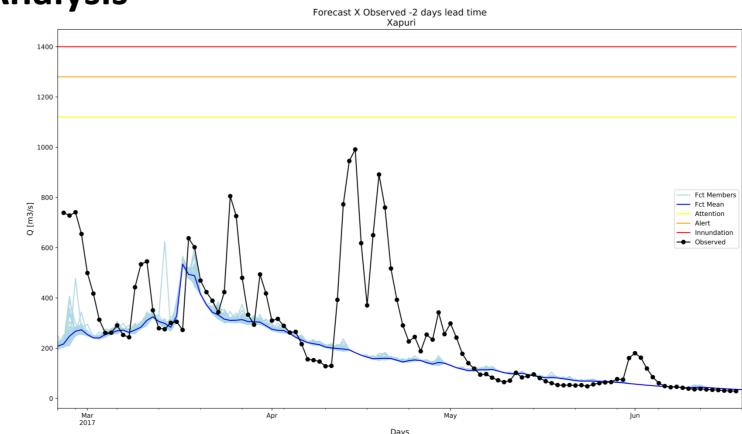


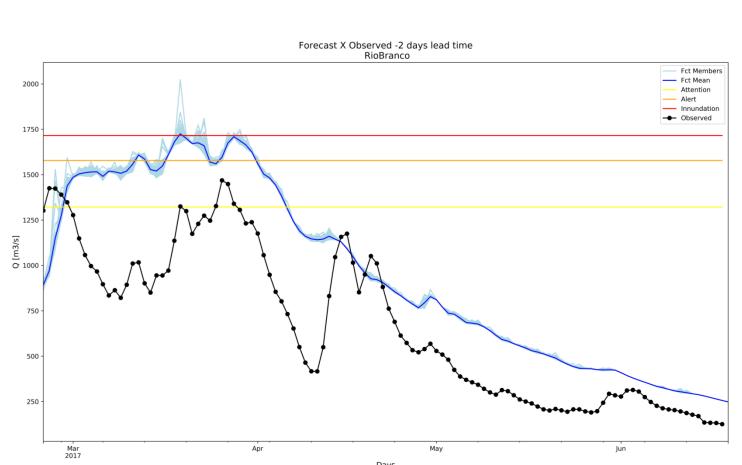




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