ITT9: Drought modelling

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- Other data — good availability of African Rainfall Climatology (ARC) satellite data (brownness of land), Water Requirement Satisfaction Index, ARV data.

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- 'National ARV Response Costs', 'Historical Losses' 'Simulated Losses' — Provided by WTW.

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- Not a new area of research, with plenty of philosophical, psychological, statistical and policy research having been done.
- However we wanted to direct our time better.

The four situations

	Aid given	Aid withheld
Famine	Correct Prediction Worthy action	Mis- response cost
No Famine	False alarm Act in Vain	Correct rejecton No Cost

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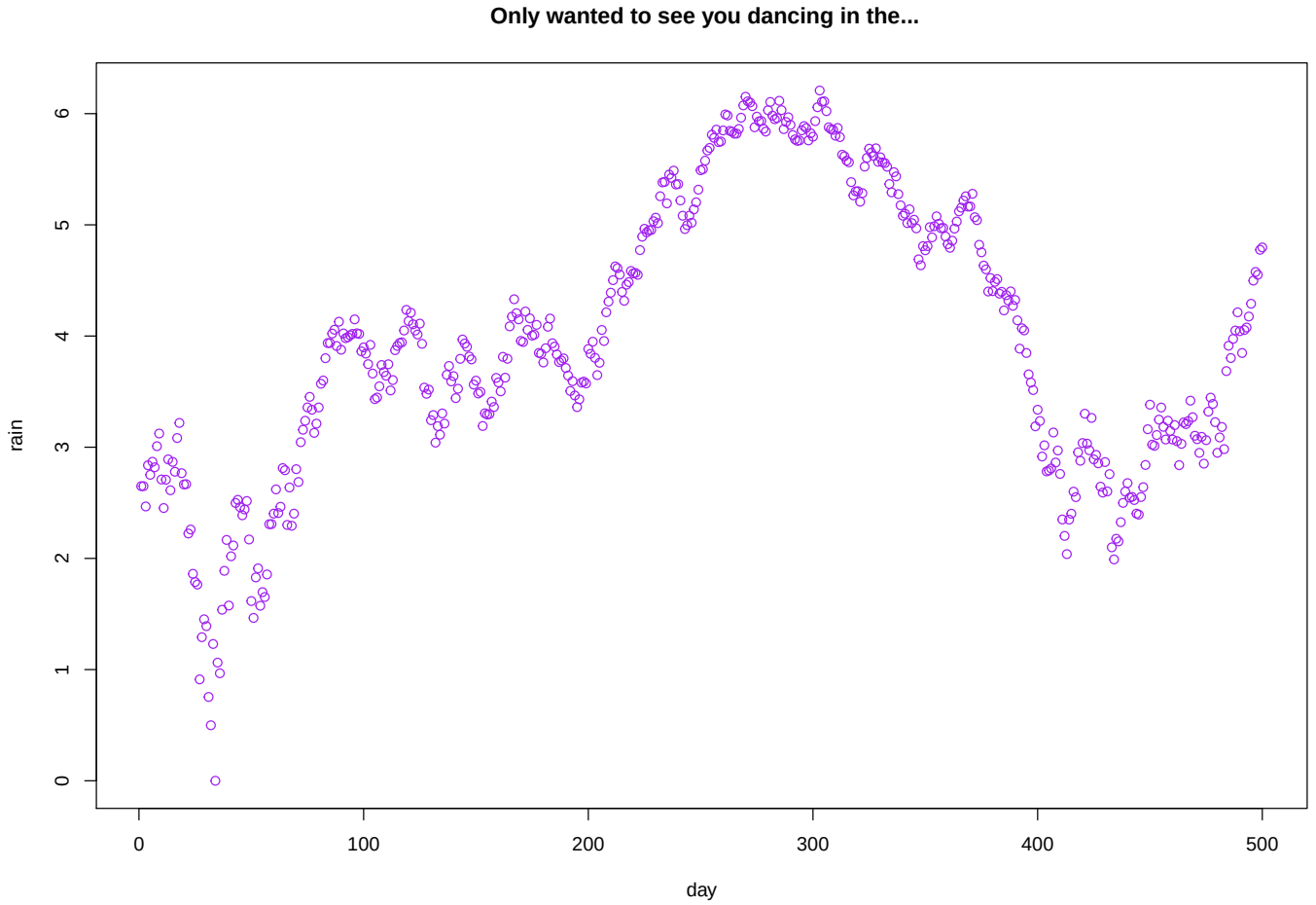
- L(Famine, No aid)= f(Severity)

Simulations: Modelling thresholds for drought

Simulate rainfall data, used as a proxy for dryness of ground.



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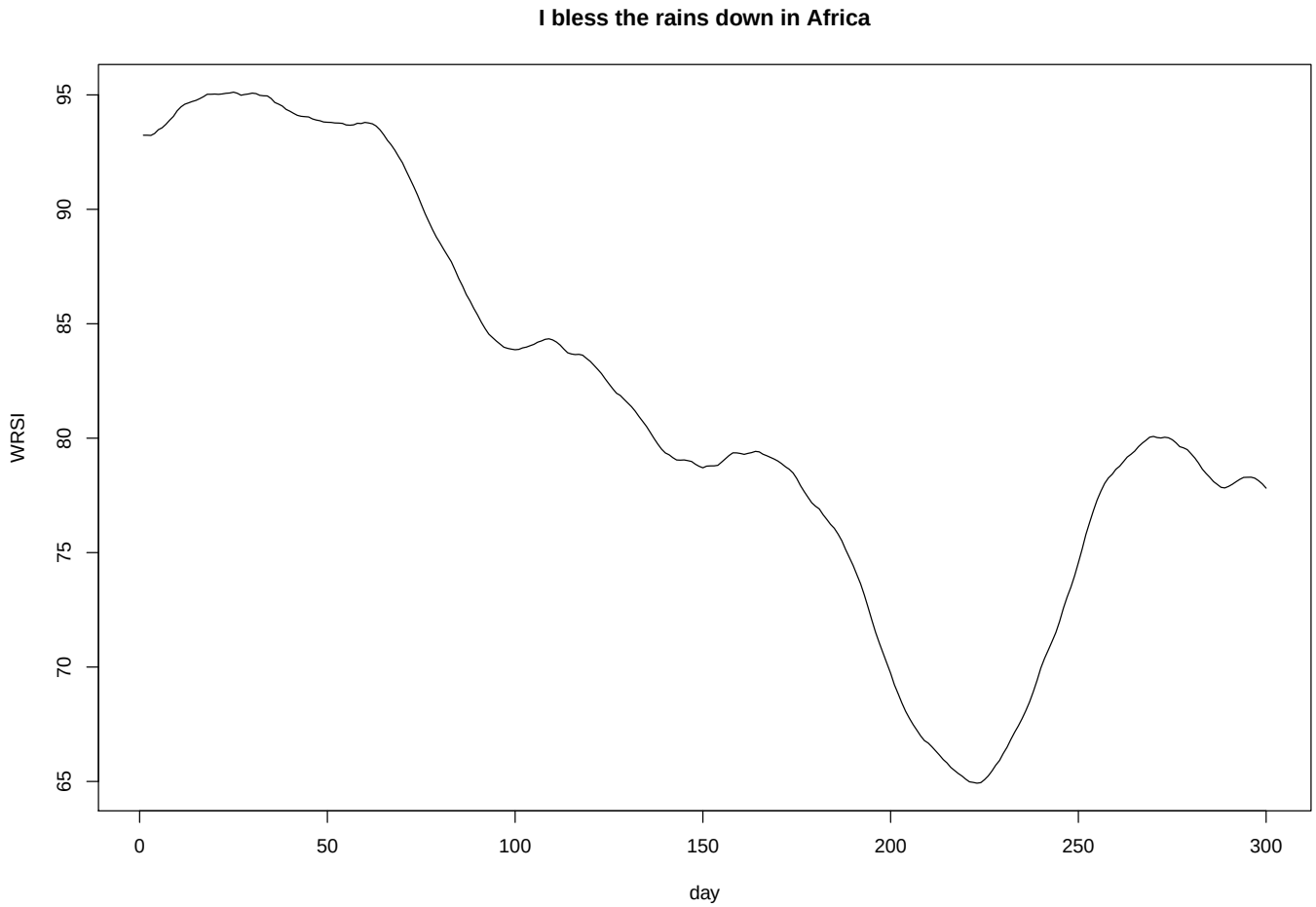
Using this, WRSI index is simulated using rainfall from the last 30 days.



Simulation results

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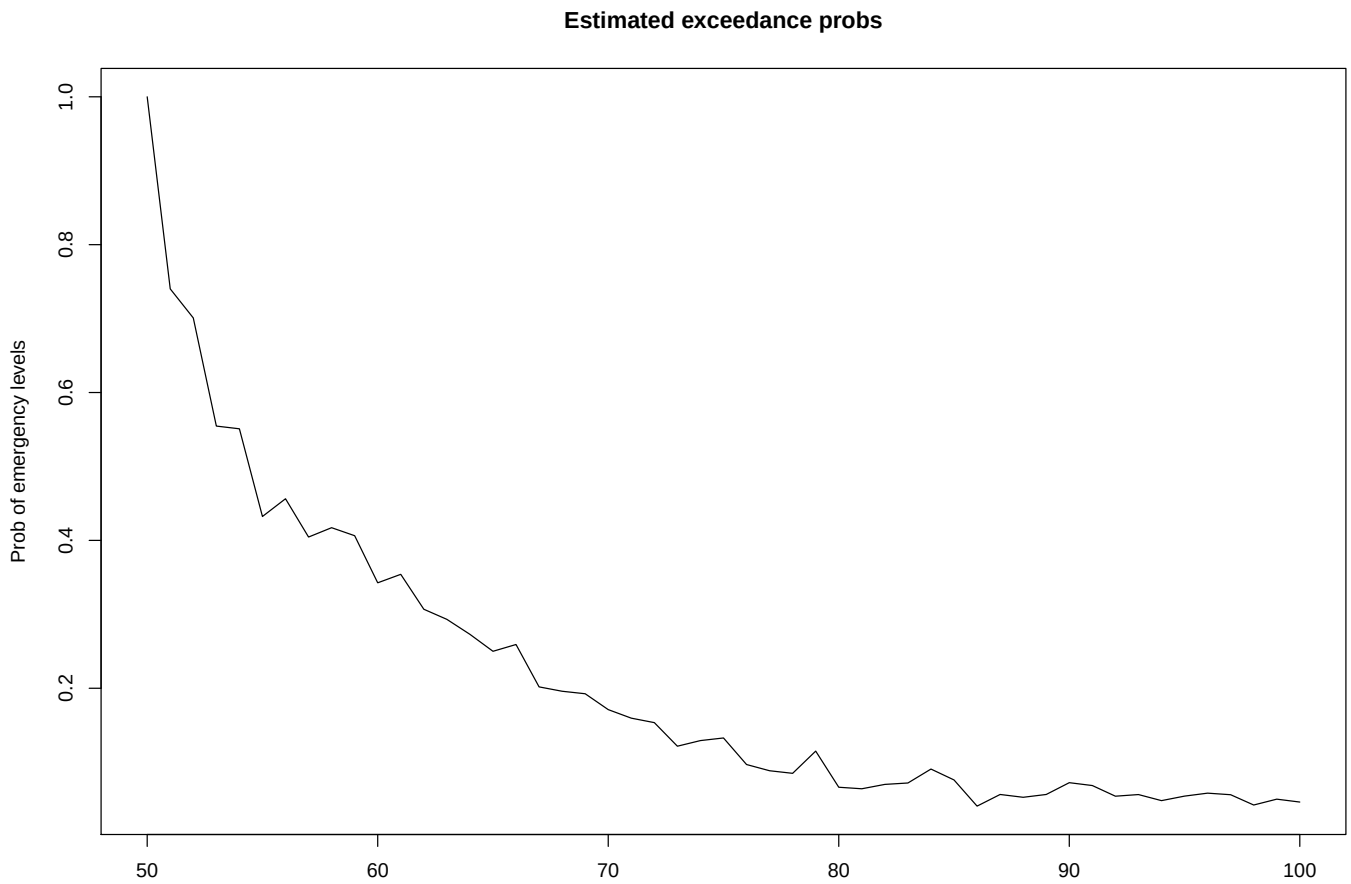
At each t, can calculate expected unnecessary financial cost of acting and human cost of not acting.



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Note: Expert information to say how components of the cost function should be weighted.

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- Extend spatially, include regional factors within this model.