

# Targeting Trachoma Control Through Risk Mapping

## The Example of Southern Sudan

Trachoma, caused by the bacterium *Chlamydia trachomatis*, is one of the main causes of blindness in Southern Sudan. Like all other neglected tropical diseases, it is associated with poverty and poor hygiene. Trachoma is an infectious disease that is spread through flies or passed between affected people through contact with their eye, nose, and throat secretions.

While it is clear that trachoma is a serious problem affecting many people in Southern Sudan, the exact distribution of the disease throughout the country is unknown. This means that many communities in need of prevention, drug treatment and surgery have not been identified or targeted. Incomplete mapping and intervention coverage is largely attributable to trachoma resources being scarce and not always deployed most efficiently.

Generating a better understanding of the geographical distribution of trachoma is therefore important so that the limited available resources can be better targeted to the areas and people that need the most help.



## Aim of study

The present study aimed at improving programme efficiency by developing a tool to target the available resources for trachoma surveys and interventions to areas where these are most needed.

Studies have shown trachoma risk to be associated with attributes of the physical and social environment. Therefore, it should be possible to predict the potential location of areas at high risk of trachoma using data regarding the location of the disease and the conditions of the surrounding environment. To do so, data on active trachoma prevalence, collected during baseline surveys between 2001-2009, were incorporated into a statistical model, to develop a national trachoma risk map.



## Results of study

### High Priority

The risk map shows that trachoma is most prevalent in the centre, north and east of the country.

### Low Priority

The map also shows that large areas in the south-west have a low prevalence of trachoma.

The risk map can be used to prioritise:

- Trachoma rapid assessments designed to confirm suspected high-risk areas.
- Population-based prevalence surveys to generate baseline data in confirmed high-risk areas to monitor and evaluate interventions in areas of the country that are currently not benefitting from trachoma control.

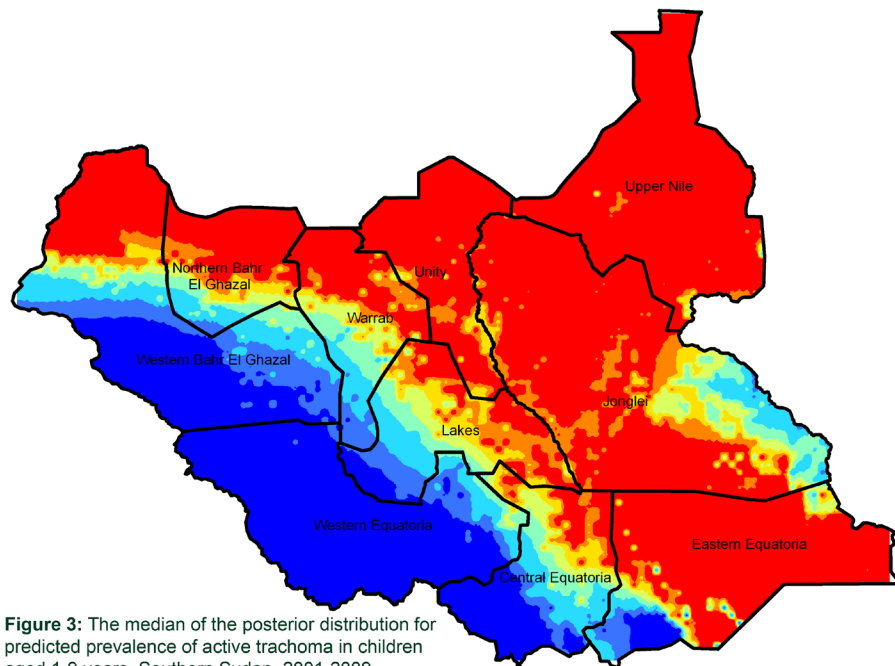


Figure 3: The median of the posterior distribution for predicted prevalence of active trachoma in children aged 1-9 years, Southern Sudan, 2001-2009.

## Further studies

Over time, the risk map should be refined by including new trachoma prevalence data from Southern Sudan. Additional data will increase the accuracy of the present predictions, thus further improving our ability to target areas in greatest need of intervention.

