Using ECMWF precipitation and temperature forecasts to predict vector-borne disease in the QWeCI project

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In order to provide useful forecasts of incidence of vector-borne diseases such as Malaria, forecasts of the temperature and precipitation drivers at weekly, monthly and seasonal lead-times are required. These must be bias corrected and downscaled, and fused seamlessly before they can be used to drive statistical or dynamical disease models. A strategy to this end is being developed within the EU funded QWeCI project and applied to three countries in Africa, with each pilot region having a separate research focus. The aims of the project are presented along with preliminary results using a suite of monthly and seasonal hindcasts from the European Centre for Medium Range Weather Forecasts (ECMWF) spanning two decades. The potential for improving the atmosphere-disease model cascade through development of the hydrological component will be discussed.