In response to persistent drought, famine, mass population movement and widespread and pernicious insecurity, the World Health Organization and its Roll Back Malaria partners were concerned about the likely severity of the forthcoming malaria season in the Horn of Africa in order to estimate the anti-malaria drug requirements in the refugee camps. Malnutrition and high mortality rates in the camps in southern Ethiopia and northern Kenya indicate very high levels of vulnerability; the camps are perpetually close to reaching a crisis level. The October-to-December short rains, while improving the food security outlook by extending pasture areas, have the potential to generate malaria epidemics with potentially devastating effect. However, epidemics are really only likely in the region if the rains are unusually wet.

Three important elements in preventing the generation of malaria epidemics in this region are: 1. an analysis of historical climate and malaria data in order to understand which environmental factors lead to malaria epidemics; 2. an understanding of which individuals within a community are most vulnerable during a malaria epidemic; 3. capability to present forecasts to policy makers in a format that can lead to appropriate decisions regarding when to implement interventions in order to prevent malaria epidemics.

The Malaria Early Warning System (MEWS) incorporates weather monitoring, seasonal climate forecasts, vulnerability assessment and case surveillance. The MEWS is most effective in areas that have predictable seasonal forecasts. In 2003, IRI analyzed climate data from Kenya ranging from 1961-1999 and determined that the area-average rainfall prediction for the months of October, November, and December is very accurate, which means that Kenya has high climate predictability. While the seasonal forecasts are important for engaging policy makers, practical responses require that these forecasts are integrated with vulnerability assessments (including the ‘normal’ historical malaria risk) as well as climate and environmental monitoring information and routine surveillance of properly diagnosed cases according to the WHO framework (WHO, 2002).
Finally, studies in the field of decision science have found that decision makers are risk-averse when the prospective impact of alternative interventions are framed as the number of lives that will be saved but risk-seeking when the prospective impacts of the same interventions are framed as the number of individuals who will die. We present new findings from a survey we conducted of infectious disease scientists and policy makers. These findings suggest that the impact of framing effects on decision making must be taken into account when presenting malaria epidemic forecasts to policy makers.