

Storms and Forecasts in the Indian Ocean

Over the past several decades the North Indian Ocean has realized a substantial increase in the severity of tropical cyclones. These storms and consequential flooding cost billions of dollars in the South and Southeast Asian regions, and affect the agricultural sector and the poorest working classes most. Therefore, there is great need of better weather prediction services in the region, a need which organizations such as RIMES (Regional Integrated Multi-Hazard Early Warning System for Africa and Asia) and SHAZAM (Sustainability through Hazard Anticipation and Mitigation) aspire to meet.

Despite accounting for 5% of the total number of tropical cyclones, the cyclones in the Indian Ocean account for 95% of the damages (in monetary cost and fatalities) attributed to tropical cyclones on a global basis and of the top 25 deadliest cyclones 17 have occurred in the Bay of Bengal. Lacking sufficient weather prediction resources, Pakistan was not able to prevent floods in 2010 from costing approximately 2000 lives, 20 billion dollars in infrastructure and leaving 11 million people homeless. With more warning, the populace would have had time to harvest their crops early and move themselves, their animals, and prized possessions to safety, cutting that cost in half.

Supported by a budget of 2 to 3 million dollars a year from 26 countries bordering the Indian Ocean, RIMES creates and distributes early warning information about severe weather events. Instead of the standard averages of weather prediction (only 2 to 3 days in advance), RIMES makes 15 day predictions twice a day, 32 day predictions twice weekly and 7 month

predictions once per month. RIMES is supported in this operation by SHAZAM which works to develop technologies associated with Indian Ocean area weather predictions.