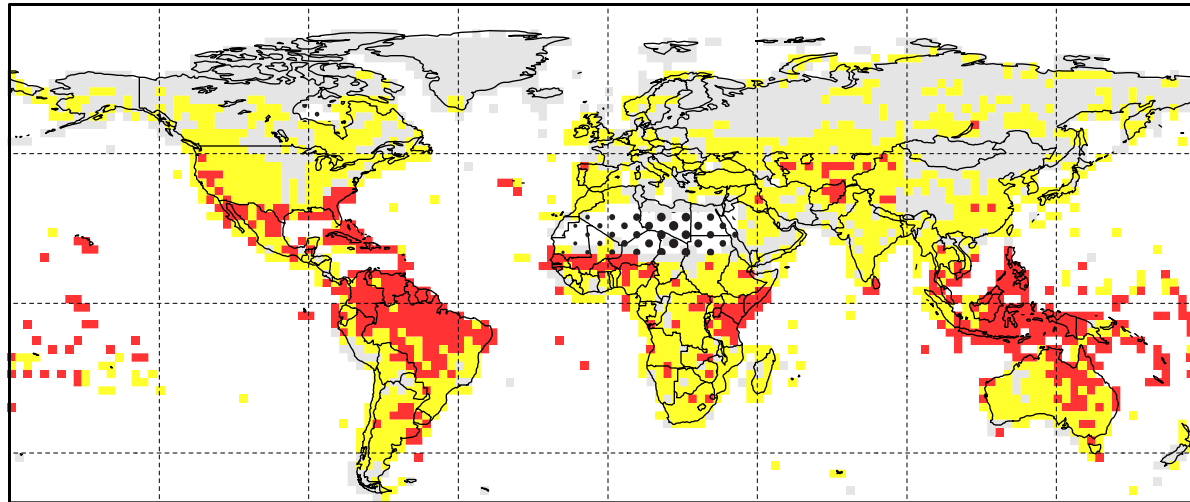


## Precipitation forecast skill: best of all seasons



Unknown skill



Little or no skill



Some skill



Good skill

Skill is incorporated directly into probabilistic seasonal forecasts through the size of the probability shift, or confidence level. For example, a forecast with high skill will have a large probability shift, or high confidence level. However maps that show the skill of past seasonal forecasts are also valuable for disaster risk management because users can determine in a single glance where and when seasonal forecasts are worth monitoring. If there is little to no seasonal forecast skill in a specific location (and season), any shift in probabilities will likely be small, and early warning opportunities would be extremely limited.

Some users find it difficult to determine the actual value of a forecast from abstract skill numbers alone. These maps (Fig x, Fig y) translate skill into financial terms by calculating how much money could be made by gambling on the forecast. Say you "bet" on the forecast by putting money on each of tercile categories exactly proportional to the forecast probabilities (If the forecast indicates a 50% chance of wet, 35% chance of normal, and 15% chance of dry, and you had a \$100, you would bet \$50 dollars on wet, \$35 dollars on normal and \$15 dollars on dry) . You get triple the money back on the category that ends up "winning" (i.e. if you "bet" \$50 on wet and it ends up being a wetter than average season, you would "win" \$150). You would then reinvest all the money won on the next seasonal forecast. This "betting" method calculates the average effective interest rate, also called the rate of return, or rate of profit, that you would make on your initial investment if you bet on all forecasts issued by IRI over the past 13 years. For these maps a rate of return greater than 5% is considered "some skill" and a rate of return greater than 10% is considered "good skill". In contrast, if you ignored the forecast and always bet equally on each of the three tercile categories (e.g. \$33 on wet, \$33 on normal, \$33 on dry), you would break even, a 0% rate of return.