

Wikiprint Book

Title: EXAMPLE 1: Loading and plotting various members

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Total precipitation at the Gulf of Guinea for January 2010 forecasted in October 2009 (lead month 3) by the System4 model (seasonal range, 15 members) is next represented for each member, using the `spplot` method for the `SpatialGridDataFrame` class of library `sp`:

Data are loaded by introducing the required values for dataset, spatio-temporal window and lead month definition. Note that the argument `members` is omitted, which means that by default all available members (15 in this case, will be returned).

```
gg.pr <- loadSeasonalForecast("System4_seasonal_15", var="tp", lonLim=c(-30,20), latLim=c(-12,15), season=1, years=2010, 1
```

Next, total accumulated precipitation is computed for each grid point, and a `SpatialGridDataFrame` is created:

```
df <- sapply(gg.pr$MemberData, colSums)
sgdf <- SpatialGridDataFrame(gg.pr$LonLatCoords, as.data.frame(df))
spplot(sgdf, scales=list(draw=TRUE), col.regions=rev(terrain.colors(50)), at=seq(0,ceiling(max(sgdf@data)),10))
```



It is often useful to have a world map as a backdrop for visual reference. The dataset `world_map` is built-in in the `ecomsUDG.Raccess` package:

```
data(world_map)
wl <- as(world_map, "SpatialLines")
ll <- list("sp.lines", wl)
```

For the visualization of a subset of members we use the `zcol` argument. For instance, members 4, 9, 13 and 14 yield a high precipitation forecast in the southern region:

```
spplot(sgdf, zcol=c(4,9,13,14), scales=list(draw=TRUE), col.regions=rev(terrain.colors(50)), at=seq(0, ceiling(max(sgdf@da
```

