SDMPlay

Danielle Lawrence

10/22/2019

### Introduction

Species distribution models (SDMs) are used to address the impact that humans have directly with the ecosystem. These models predict the possible potential distibution shifts of species that are invasive. This pakage is a pedagogic package, which means it is used as a learning tool. **SDMPlay** comes with a biological dataset that contains data about two echinoid species from the Kerguelen Plateau. The data also includes stacks of raster layers that give information about the different environmental factors of the Kerguelen Plateau during different times.

This package relates to my major, Marine Science, because it is used to address conservation issues. **SDMPlay** can help scientists predict the affects of human activity, and can come up with ways to avoid or repair these damages.

### Popular Functions

**SDMPlay** functions:  
- SDMtab()  
– creates data frame  
- compute.brt()  
- compute.maxent()  
– performs the model for a BRT (Boosted Regression Trees)  
- plot()

### Resources

To learn more about **SDMPlay** you can check out these websites:  
- **SDMPlay** Package: <https://cran.r-project.org/web/packages/SDMPlay/index.html>  
- **SDMPlay** Practice: <https://rdrr.io/cran/SDMPlay/src/R/SDMeval.R>

### More Packages

* **ModelMap**: models, validates, and maps over large geographic areas, and creates predictive models.
* **EnvStats**: analyzes environmental data for monitoring
* **biomod2**: another sampling strategy
* rOpenSci is a website is an open source tool for reproducible research, by sharing data and software. It caontains a blog, list of useful packages, and a discussion board. <https://ropensci.org/about/>