./scripts/B.R

Density in execution time(s)

0.0   0.2   0.4   0.6   0.8   1.0
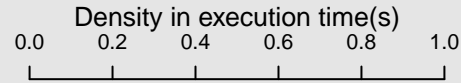
```r
1   generate.patches <-
2   function(environment.raster, n.patches = 50, patch.size = 10)
3   {
4     dummy.raster <- environment.raster
5     dummy.raster[!is.na(dummy.raster)] <- 1
6     n.cols <- ncol(dummy.raster)
7     n.rows <- nrow(dummy.raster)
8
9     # Get the environment matrix
10    env.m <- getValues(dummy.raster, format = "matrix")
11
12    # Select the number of patches
13    # n.patches <- 50
14    # Define the starting points for each patch
15    starts <- sample(x = which(!is.na(env.m)), size = n.patches, replace = FALSE)
16    # Select patch size
17    # patch.size <- sample(5:20, n.patches, replace = T)
18    patch.s <- patch.size
19    patches <- apply(sapply(starts, FUN = function(s1, x1, patch.s1)
20    {
21      expand(start = s1, x = x1, n.size = patch.s1)
22    }, x1 = env.m, patch.s1 = patch.s),
23    1, sum, na.rm = T)
24    ids <- which(patches == 2)
25
26    # Attribute all patch values in the environment matrix (NA = sea, 0 = no patch, 1 = patch)
27    env.m[!(is.na(env.m))] <- 0
28    env.m[ids] <- 1
29
30    patch.raster <- setValues(dummy.raster,
31                env.m)
32
33    return(patch.raster)
34  }
```