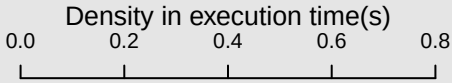
./scripts/E.R




```
1  generate.patches <−
2  function(environment.raster, n.patches = 50, patch.size = 10)
3  {
4    dummy.raster <− environment.raster
5
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   env.m[!is.na(env.m)] <− 1
12
13   # Select the number of patches
14   # n.patches <− 50
15   # Define the starting points for each patch
16   starts <− sample(x = which(!is.na(env.m)), size = n.patches, replace = FALSE)
17   # Select patch size
18   # patch.size <− sample(5:20, n.patches, replace = T)
19   ids <− rep(NA, length = patch.size * n.patches)
20   for (run in 1:n.patches)
21   {
22     s <− starts[run]
23     # patch.s <− patch.size[run]
24     # Create the patch (same matrix as env.m, but with values of 2 where the patch exist)
25     patch <− expand(x = env.m, n.size = patch.size, start = s)
26     # Get patch cell ids
27     ids[(run − 1) * patch.size + (1:patch.size)] <− which(patch == 2)
28   }
29
30   # Attribute all patch values in the environment matrix (NA = sea, 0 = no patch, 1 = patch)
31   env.m[!(is.na(env.m))] <− 0
32   env.m[ids] <− 1
33
34   patch.raster <− setValues(dummy.raster,
35                             env.m)
36
37   return(patch.raster)
38 }
```