```
Index: AdjustedAreas.R
===================================================================
--- AdjustedAreas.R (revision 3130)
+++ AdjustedAreas.R (revision 3131)
@@ -1,6 +1,5 @@


-
 formatDecimal <- function(x) {
   return(format(round(x, 4), nsmall = 4))
 }
@@ -25,7 +24,7 @@
    }

    # AA sample size in strata (strata = change class)
-   n1 <- table(aa_sample[, 1])
+   n1 <- table(aa_sample[,1])
    # Sort AA sample by change class (mapped class = predicted)
    names(aa_sample) <- c("predicted", "observed")
    aa_sample <- with(aa_sample, aa_sample[order(predicted), ])
@@ -38,8 +37,8 @@


    # Create data.frame that collects the results of the bootstrap runs
-   Ais1 <- rep(0, length(unique(aa_sample[, 1])))
-   names(Ais1) <- paste0("class_", unique(aa_sample[, 1]))
+   Ais1 <- rep(0, length(unique(aa_sample[,2])))
+   names(Ais1) <- paste0("class_", sort(unique(aa_sample[, 2])))

    # Vector to select rows from the AA sample (see 'n1' above)
    ns <- c(rbind(c(1, cumsum(n1) + 1)[-(length(n1) + 1)], cumsum(n1)))
@@ -65,7 +64,7 @@
      emi <- table(rsi[, 1], rsi[, 2])

      # Compute error matrix with estimated area proportions
-     empi <- rep(weight_class_i, length.out = length(weight_class_i)^2) *
+     empi <- rep(weight_class_i, length.out =                                ↵
length(levels(aa_sample$predicted)) * length(levels(aa_sample$observed))) *
        (emi / rowSums(emi))

      # Estimate bias-adjusted areas for run i
@@ -78,7 +77,7 @@
    Ais1 <- Ais1[-1, ] # Remove first dummy row
    aab <- data.frame(Ais1) # Rename to aab
    row.names(aab) <- 1:nrow(aab) # Change row names (starting at 1)
-   names(aab) <- areas_mapped[, 1]
+   names(aab) <- sort(unique(aa_sample[, 2]))
    return(aab) # Return data frame
 }

@@ -102,6 +101,7 @@
    # Number of sample points in the mapped classes
    if (debug_er) print(table(aa_sample$predicted))

+
```

```
55      # Get the total area mapped [ha]
56      A_mapped <- sum(lcc_mapped_areas[, 2])
57
58    @@ -112,16 +112,21 @@
59      # Compute the area proportion (mapped) of class i
60      round(W_i <- A_mapped_i / A_mapped, 5)
61
62    -  aa_sample$predicted <- factor(aa_sample$predicted, levels = c("111", ↵
      "112", "171", "172", "711", "712", "777"))
63    -  aa_sample$observed <- factor(aa_sample$observed, levels = c("111", ↵
      "112", "171", "172", "711", "712", "777"))
64
65    +  reference_codes <- c("111","112","171","172","711","712","777")
66    +  mapped_class <- c("111","112","171","172","555", "711","712","777", ↵
      "1115", "1125", "7775")
67    +  aa_sample$predicted <- factor(aa_sample$predicted )
68    +  aa_sample$observed <- factor(aa_sample$observed,levels = ↵
      reference_codes )
69    +
70    +
71      # Compute the sample error matrix (counts); map class in rows, ↵
      reference class in columns
72      err <- with(aa_sample, table(predicted, observed))
73
74
75      # Compute the sample error matrix (area proportions); map class in ↵
      rows, reference class in columns
76    -  errp <- rep(W_i, length.out = length(W_i)^2) * (err / rowSums(err))
77    +  errp <- rep(W_i, length.out = length(levels(aa_sample$predicted)) * ↵
      length(levels(aa_sample$observed))) * (err / rowSums(err))
78
79    +
80      if (debug_er) {
81        print(err)
82        print(round(errp, 5))
83    @@ -128,7 +133,7 @@
84      }
85
86      # Estimate class areas [ha]
87    -  (aa_est_areas <- A_mapped * colSums(errp))
88    +  aa_est_areas <- A_mapped * colSums(errp)
89
90      runs <- 1000
91      if (exists("MCRuns")) {
92    @@ -152,7 +157,7 @@
93      # Results of the accuracy assessment
94      rs_AA <- data.frame(
95        # Change class code
96    -    class_code = lcc_mapped_areas[, 1],
97    +    class_code = lcc_mapped_areas[match(reference_codes, ↵
      lcc_mapped_areas$class_code), 1],
98        # Class description
99        class_desc = c(
100         "Stable LF", # LF = Lowland Natural Forest
101   @@ -163,16 +168,17 @@
```

```
102           "AR Upland",
103           "Stable NF" # NF = Non-Forest
104         ),
105 +
106         # Mapped areas of change classes [ha]
107 -       area_mapped_ha = lcc_mapped_areas[, 2],
108 +       area_mapped_ha = lcc_mapped_areas[match(reference_codes,
    lcc_mapped_areas$class_code), 2],
109         # Estimated areas of change classes [ha]
110         area_est_ha = aa_est_areas,
111         # Mean of aa boot
112 -       aaboot_mean = do.call(rbind, lapply(aa_boot, mean)),
113 +       aaboot_mean = do.call(rbind, lapply(aa_boot[,reference_codes ], mean)),
114         # Lower limit of the 90%-confidence interval
115 -       lci_area_ha = apply(aa_boot, 2, function(x) quantile(x, probs = QLCI)),
116 +       lci_area_ha = apply(aa_boot[,reference_codes ], 2, function(x)
    quantile(x, probs = QLCI)),
117         # Upper limit of the 90%-confidence interval
118 -       uci_area_ha = apply(aa_boot, 2, function(x) quantile(x, probs = QUCI))
119 +       uci_area_ha = apply(aa_boot[,reference_codes ], 2, function(x)
    quantile(x, probs = QUCI))
120       )
121       # Rename rows
122       row.names(rs_AA) <- 1:nrow(rs_AA)
123
```