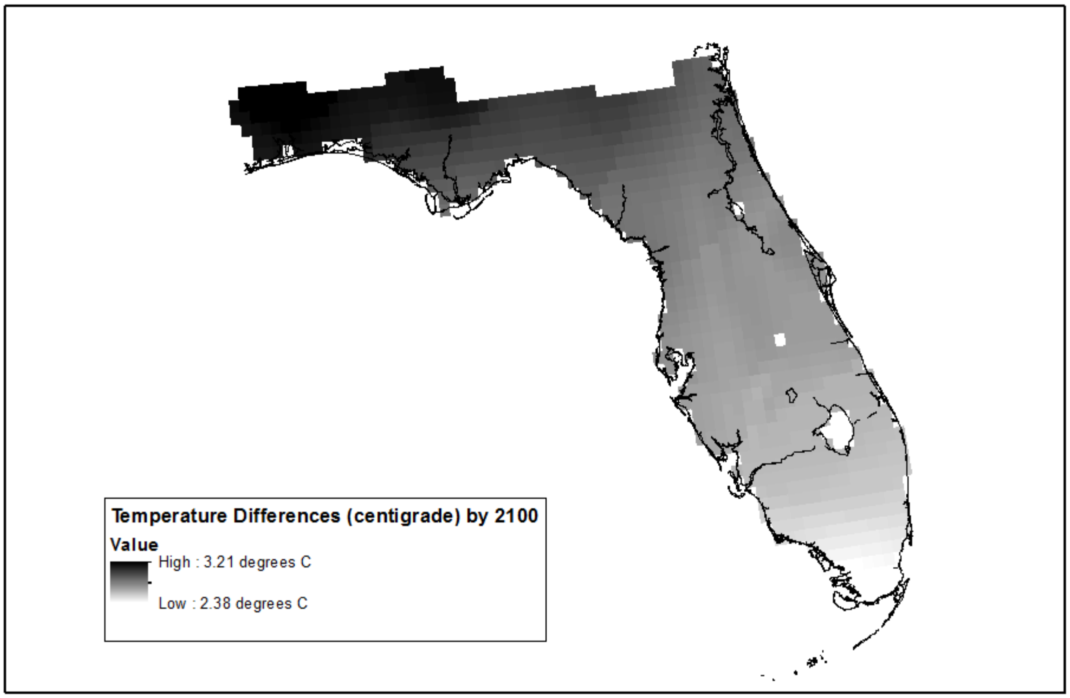
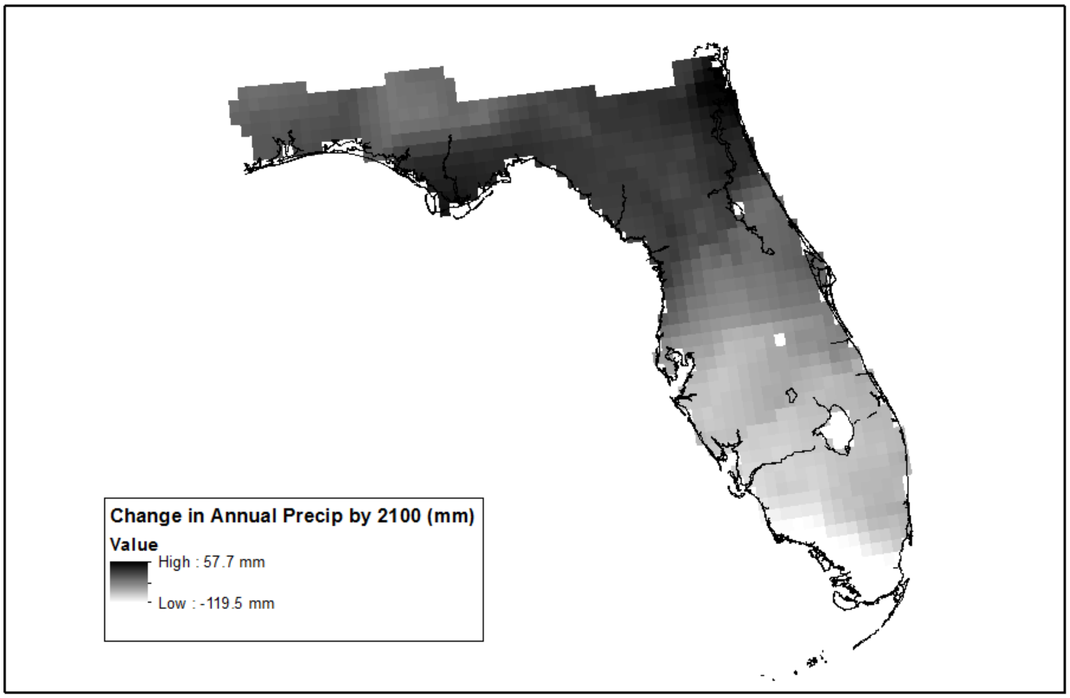
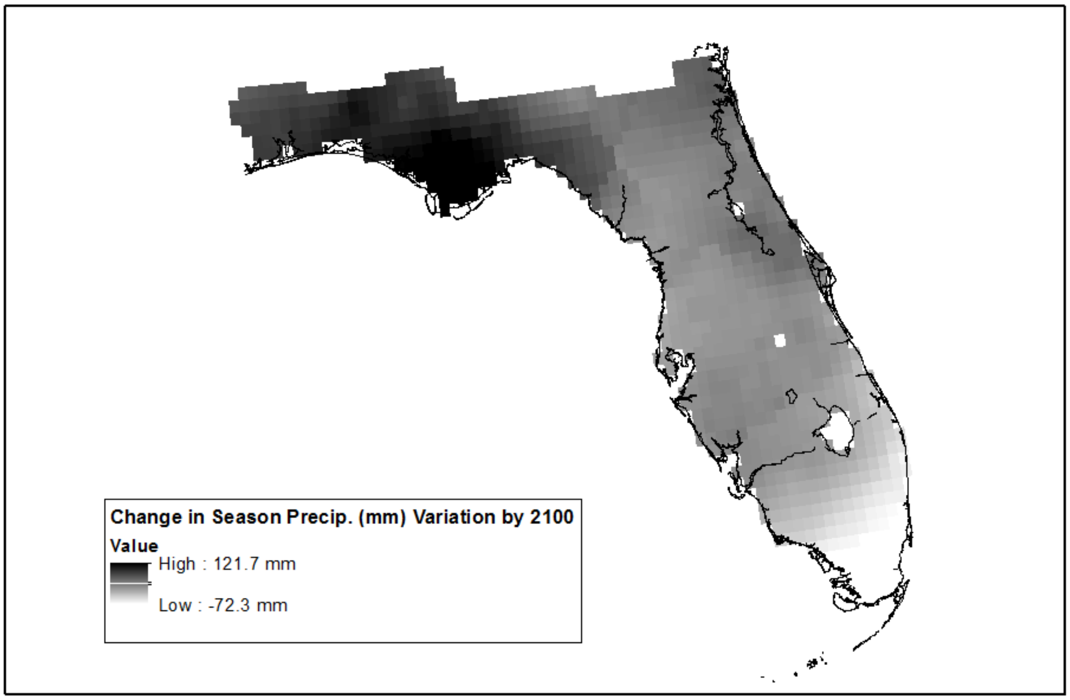
Supplemental Figure 1. Projected temperature changes from the period spanning 1950 to 2000 to the period spanning 2000 to 2100. See methods for model parameters.



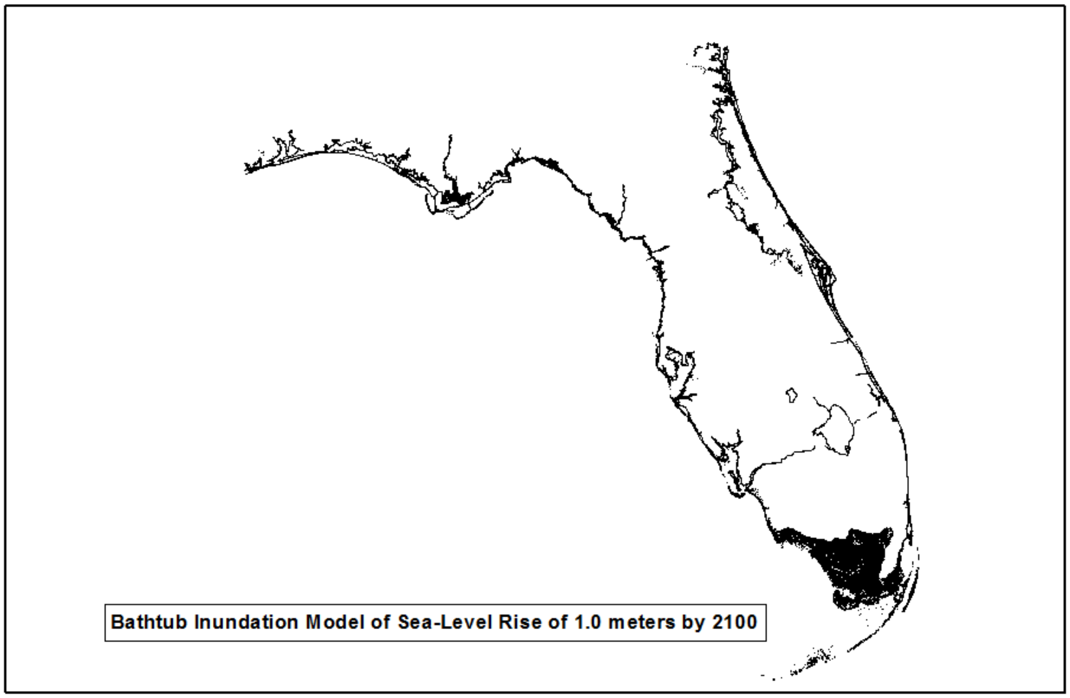
Supplemental Figure 2. Projected changes in annual precipitation from the period spanning 1950 to 2000 to the period spanning 2000 to 2100. See methods for model parameters.



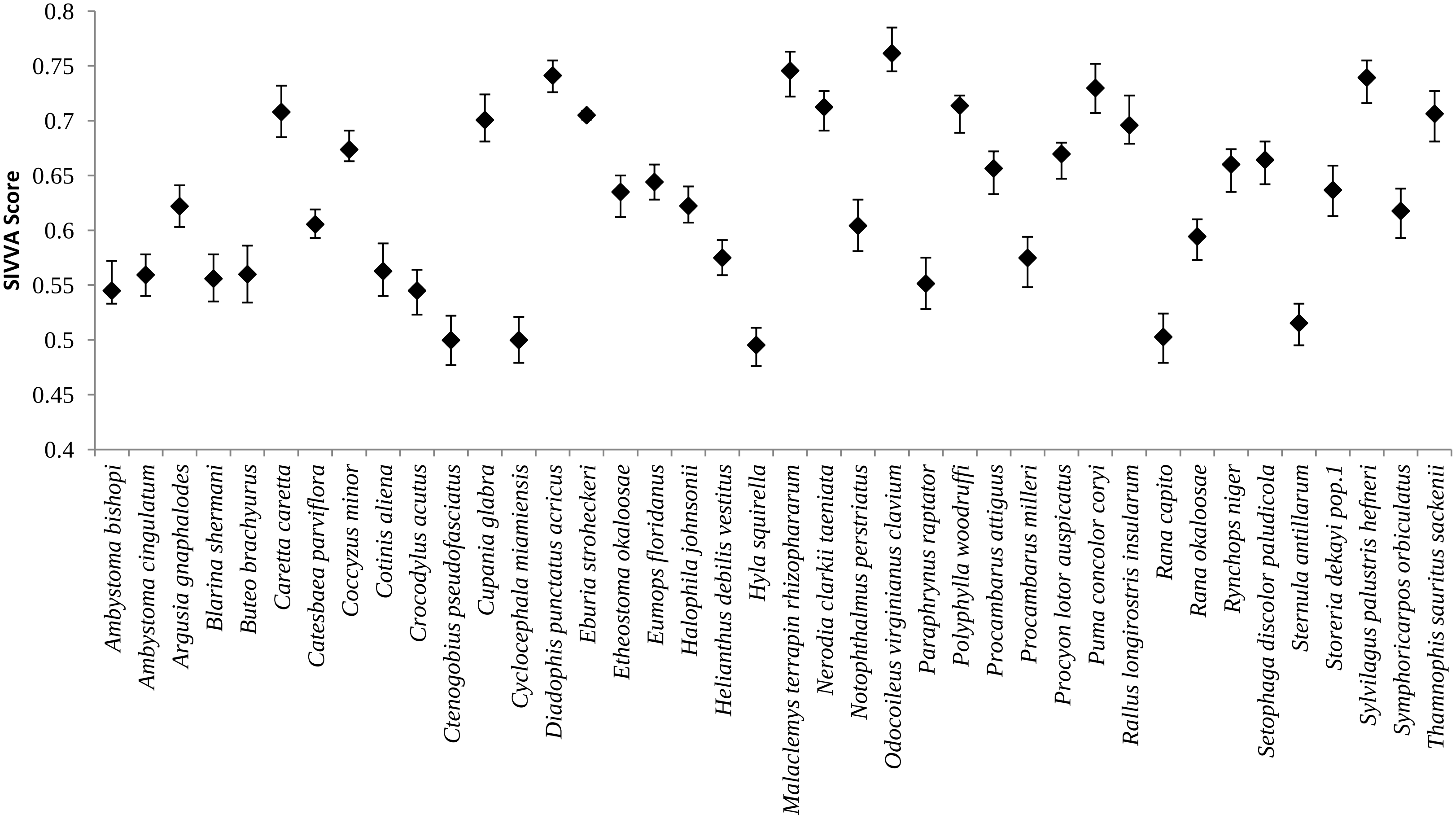
Supplemental Figure 3. Projected changes in seasonal precipitation from the period spanning 1950 to 2000 to the period spanning 2000 to 2100. See methods for model parameters.



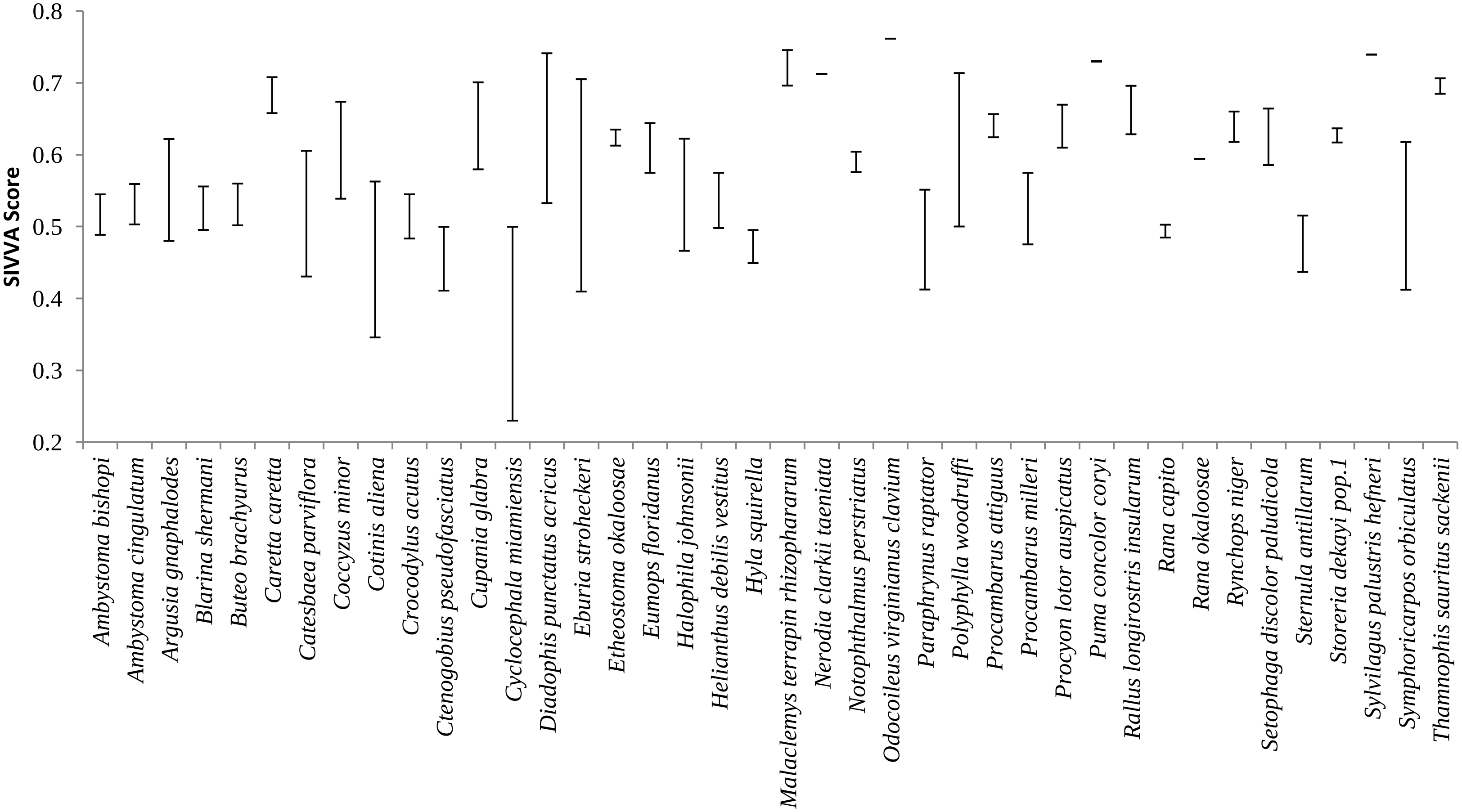
Supplemental Figure 4. Graphic of Florida depicting 1.0 meter of inundation due to sea-level rise.



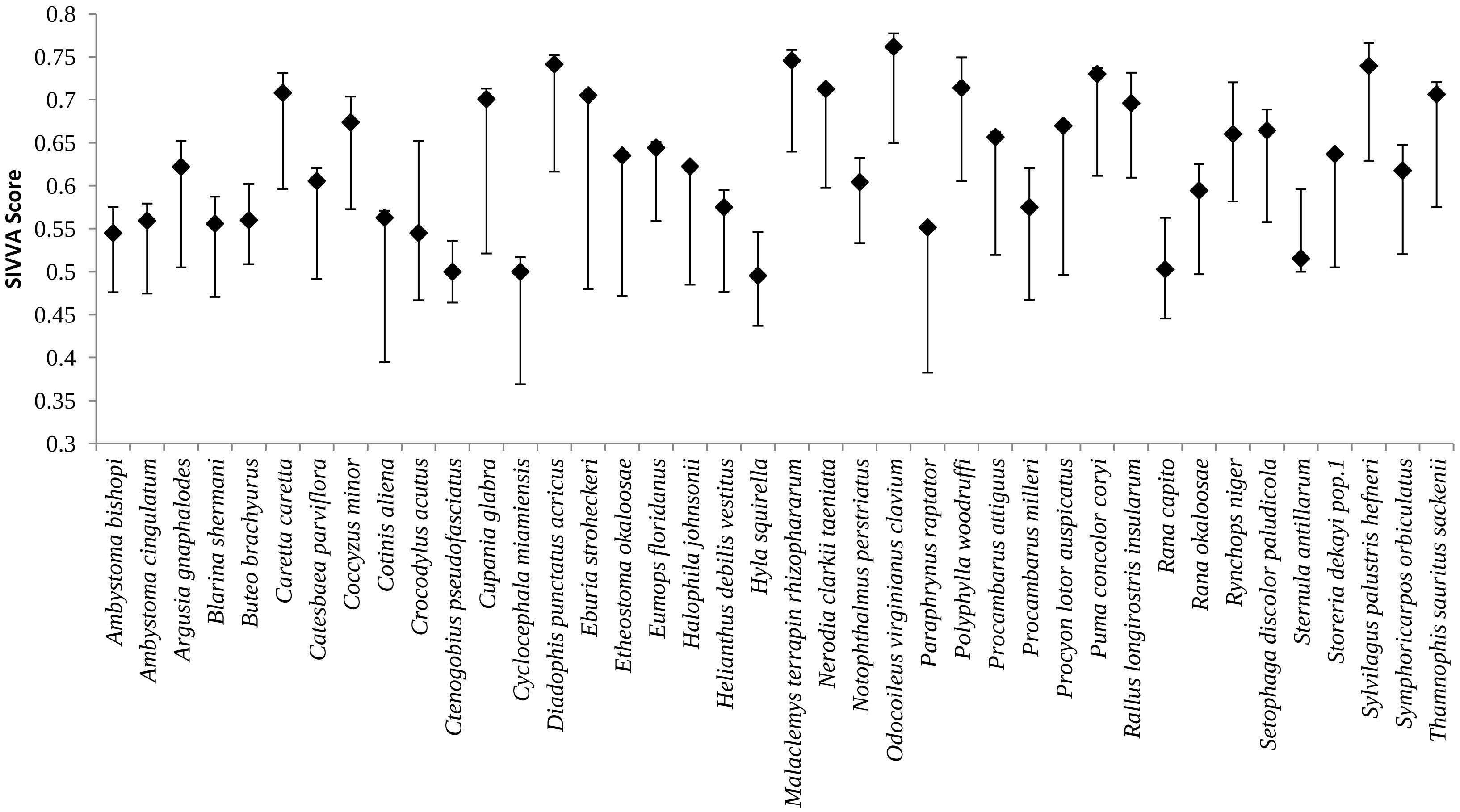
Supplemental Figure 5. Plot of SIVVA scores using the module weighting scheme in option #2 (Table 5), including scoring uncertainty.



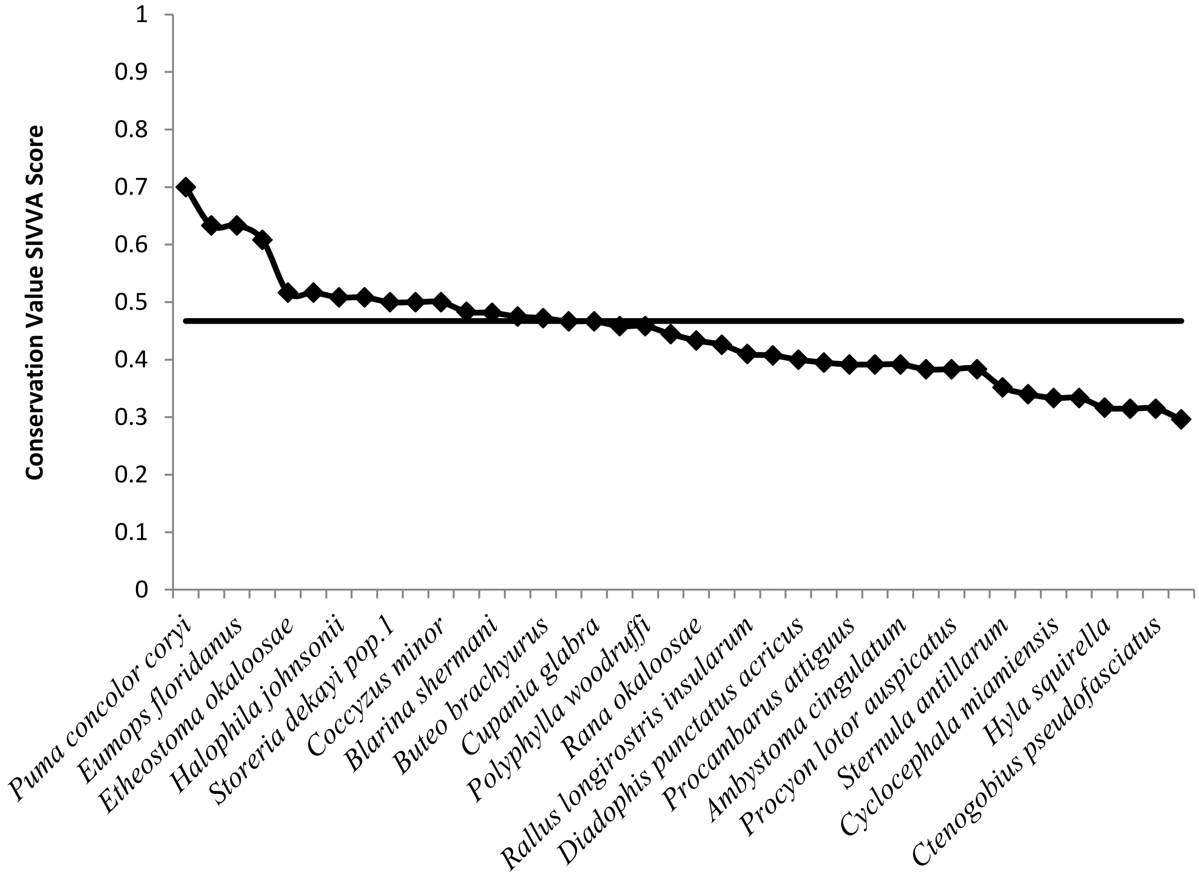
Supplemental Figure 6. Plot of SIVVA scores using the module weighting scheme in option #2 (Table 5), including uncertainty due to missing information.



Supplemental Figure 7. Plot of SIVVA scores using the module weighting scheme in option #2 (Table 5), including weighting uncertainty.



Supplemental Figure 8. Plot of SIVVA Conservation Value scores. The horizontal line represents the threshold of conservation value used in the stepwise prioritization method (option #1; Table 5).



Appendix A1. R code for input file and for creation of pie charts, also called "aster plots.”

The aster function was created and provided by the authors of Halpern et al. 2012*.

*Halpern, B.S., Longo, C., Hardy, D., McLeod, K.L., Samhouri, J.F., Katona, S.K., Kleisner, K., Lester, S.E., O/'Leary, J., Ranelletti, M., Rosenberg, A.A., Scarborough, C., Selig, E.R., Best, B.D., Brumbaugh, D.R., Chapin, F.S., Crowder, L.B., Daly, K.L., Doney, S.C., Elfes, C., Fogarty, M.J., Gaines, S.D., Jacobsen, K.I., Karrer, L.B., Leslie, H.M., Neeley, E., Pauly, D., Polasky, S., Ris, B., St Martin, K., Stone, G.S., Sumaila, U.R., Zeller, D., 2012. An index to assess the health and benefits of the global ocean. Nature 488, 615-620.

R-input file:

```
taxonomic group,species,VU,LAC,CV,IA,2,3,4,5,op2,op3,op4,op5,
mammal,Puma concolor
coryi,0.73,0.79,0.7,0.67,2,4,1,1,72.19195157,73.27884615,72.08689459,70.64850427,
reptile,Caretta
caretta,0.72,0.72,0.63,0.74,3,7,3,3,70.26041667,70.49652778,67.84722222,69.54513889,
mammal,Eumops
floridanus,0.73,0.56,0.63,0.44,10,17,6,6,59.25863363,64.10998498,61.96246246,57.11073
574,
mammal,Odocoileus virginianus
clavium,0.87,0.69,0.61,0.73,1,1,2,2,72.29700855,75.75267094,68.82371795,70.07264957,
fish,Etheostoma
okaloosae,0.52,0.75,0.52,0.53,17,26,16,8,57.75793651,57.57539683,56.42857143,55.5436
5079,
amphibian,Notophthalmus
perstriatus,0.6,0.71,0.52,0.53,11,22,14,7,58.93849206,60.53373016,57.37301587,56.2519
8413,
plant,Halophila
johnsonii,0.75,0.53,0.51,0.33,23,23,18,21,53.05316092,60.45402299,54.3591954,48.6652
2989,
mammal,Sylvilagus palustris
hefneri,0.9,0.54,0.51,0.78,5,5,5,4,68.23717949,72.06303419,62.06196581,66.66452991,1.
780913462
reptile,Storeria dekayi
pop.1,0.74,0.63,0.5,0.28,22,19,17,22,53.80799756,62.01312576,55.26862027,47.8403540
9,
reptile,Thamnophis sauritus pop 1 (= subspecies
sackenii),0.85,0.69,0.5,0.31,14,10,8,16,58.66147741,68.58669109,58.87362637,51.30799
756,
```

```
bird,Coccyzus minor,0.82,0.69,0.5,0.33,15,13,10,14,58.49702381,67.37797619,58.46428571,51.76488095,
reptile,Malaclemys terrapin rhizopharарum,0.86,0.81,0.48,0.64,4,2,4,5,69.81413399,74.97099673,63.9624183,64.33292484,
mammal,Blarina shermani,0.54,0.76,0.48,0.17,31,32,24,35,48.82275132,54.77248677,51.83597884,42.25661376,
reptile,Crocodylus acutus,0.72,0.33,0.48,0.51,26,30,26,19,51.06630824,55.39157706,49.96415771,50.41756272,
bird,Buteo brachyurus,0.69,0.53,0.47,0.36,25,27,25,23,51.16366366,57.09459459,51.48648649,47.36486486,
weights1,,25,25,25,25,,,,,,,,
weights2,,45,25,20,10,,,,,,,,
weights3,,20,20,50,10,,,,,,,,
weights4,,15,15,35,35,,,,,,,,
```

R code:

```
aster <- function (lengths, widths, labels, disk=0.5, max.length,
    center=NULL, main=NULL, fill.col=NULL, plot.outline=TRUE,
    label.offset=0.15, xlim=c(-1.2, 1.2), ylim=c(-1.2, 1.2), uin=NULL,
    tol=0.04, cex=1, bty="n", lty=1,
    label.col='black', label.font=3, label.cex=NULL, ...) {

    if (is.data.frame(lengths)) {
        lengths <- as.numeric(lengths)
    }
    n.petals <- length(lengths)
    if (missing(widths)) {
        widths <- rep(1, n.petals)
    }
    if (missing(max.length)) {
        max.length <- max(lengths)
    }
    if (missing(labels)) {
        labels <- names(lengths)
    }
    if (missing(label.cex)) {
        label.cex <- 0.7 * cex
    }

    # determine radius of each petal
```

```
if (disk < 0 || 1 < disk) {
  error("disk radius must be between 0 and 1")
}
radii <- disk + (1-disk) * lengths/max.length

# define inner function for drawing circles
# (from original windrose function)
circles <- function(rad, sector=c(0, 2 * pi), lty=2,
    col="white", border=NA, fill=FALSE) {
    values <- seq(sector[1], sector[2], by=(sector[2] - sector[1])/360)
    x <- rad * cos(values)
    y <- rad * sin(values)
    if (fill) {
        polygon(x, y, xpd=FALSE, lty=lty, col=col, border=border)
    }
    lines(x, y, col=1, lty=lty)
}

# lots of low-level positional details
# (from original windrose function)
op <- par(mar=c(1, 1, 2, 1))
mai <- par("mai")
on.exit(par(op))
midx <- 0.5 * (xlim[2] + xlim[1])
xlim <- midx + (1 + tol) * 0.5 * c(-1, 1) * (xlim[2] - xlim[1])
midy <- 0.5 * (ylim[2] + ylim[1])
ylim <- midy + (1 + tol) * 0.5 * c(-1, 1) * (ylim[2] - ylim[1])
oldpin <- par("pin") - c(mai[2] + mai[4], mai[1] + mai[3])
xuin <- oxuin <- oldpin[1]/diff(xlim)
yuin <- oyuin <- oldpin[2]/diff(ylim)
if (is.null(uin)) {
    if (yuin > xuin) {
        xuin <- yuin
    } else {
        yuin <- xuin
    }
} else {
    if (length(uin) == 1)
        uin <- uin * c(1, 1)
    if (any(c(xuin, yuin) < uin))
        stop("uin is too large to fit plot in")
    xuin <- uin[1]
    yuin <- uin[2]
}
```

```
    xlim <- midx + oxuin/xuin * c(-1, 1) * diff(xlim) * 0.5
    ylim <- midy + oyuin/yuin * c(-1, 1) * diff(ylim) * 0.5

    # generate breaks (petal boundaries) based on the widths
    breaks <- (2*pi*c(0, cumsum(widths))/sum(widths))[-(n.petals+1)]
    breaks <- c(breaks, 2 * pi)
    plot(c(-1.2, 1.2), c(-1.2, 1.2), xlab="", ylab="", main="",
        xaxt="n", yaxt="n", pch=" ", xlim=xlim, ylim=ylim,
        bty=bty, ...)
    title(main=main, ...)

    # plot full petal outlines
    if (plot.outline) {
        # note: go to n.petals not n.breaks because we the last break is
        # the same as the first
        for (i in 1:n.petals) {
            lines(c(0, cos(breaks[i])), c(0, sin(breaks[i])), lty=lty)
        }
        circles(1, lty=lty)
    }
    # plot the petals themselves
    if (is.null(fill.col)) {
        fill.col <- rainbow(n.petals)
    }
    fill.col <- rep(fill.col, length.out=n.petals)
    for (i in 1:n.petals) {
        w1 <- breaks[i]
        w2 <- breaks[i + 1]
        rad <- radii[i]
        xx <- rad * c(0, cos(w1), cos(w2), 0)
        yy <- rad * c(0, sin(w1), sin(w2), 0)
        polygon(xx, yy, xpd=FALSE, col=fill.col[i], border=fill.col[i])
        lines(xx[1:2], yy[1:2])
        lines(xx[3:4], yy[3:4])
        circles(rad=rad, sector=c(w1, w2), fill=TRUE,
            lty=1, col=fill.col[i], border=fill.col[i])
    }
    # plot petal labels, if given
    if (!is.null(labels)) {
        if (plot.outline) {
            height <- label.offset + rep(1, n.petals)
        } else {
            height <- label.offset + radii
        }
```

```
        mids <- breaks[1:n.petals] + diff(breaks)/2
        for (i in 1:n.petals) {
            text(height[i] * cos(mids[i]), height[i] * sin(mids[i]),
                 labels=labels[i], cex=label.cex,
                 font=label.font, col=label.col)
        }
    }

    # add disk, if desired, with optional text in the middle
    if (0 < disk) {
        circles(disk, fill=TRUE, lty=1)
    }
    if (!is.null(center)) {
        text(0, 0, labels=center, font=2, cex=2.2*cex)
    }
    invisible(NULL)
}
# wrapper function to generate an aster plot to serve as a legend
aster.legend <- function(labels, ...) {
    aster(lengths=rep(1, length(labels)), labels=labels,
        plot.outline=FALSE, bty="o", ...)
    text(x=par("usr")[1]+0.25, y=par("usr")[4]-0.1, labels="Legend", font=4)
}
read.csv("XX.csv")->data;
weights1<-as.numeric(data[16,3:6]);
weights2<-as.numeric(data[17,3:6]);
weights3<-as.numeric(data[18,3:6]);
weights4<-as.numeric(data[19,3:6]);
scores1<-as.numeric(data[1,3:6]);
scores2<-as.numeric(data[2,3:6]);
scores3<-as.numeric(data[3,3:6]);
scores4<-as.numeric(data[4,3:6]);
scores5<-as.numeric(data[5,3:6]);
scores6<-as.numeric(data[6,3:6]);
scores7<-as.numeric(data[7,3:6]);
scores8<-as.numeric(data[8,3:6]);
scores9<-as.numeric(data[9,3:6]);
scores10<-as.numeric(data[10,3:6]);
scores11<-as.numeric(data[11,3:6]);
scores12<-as.numeric(data[12,3:6]);
scores13<-as.numeric(data[13,3:6]);
scores14<-as.numeric(data[14,3:6]);
scores15<-as.numeric(data[15,3:6]);
```

```
aster(lengths=scores1, max.length=1, widths=weights1, disk=0.5,
main=data[1,2],center=data[1,11]);
```

Appendix A2: Translation Module for Climate Change Vulnerability Index

The CCVI includes four sections. Section A is equivalent to the weighting scheme in SIVVA, and is defined as exposure to climate change in the form of temperature and precipitation changes. The temperature ranges presented are very similar to those used in the SIVVA projections, but the CCVI uses the Hamon AET:PET Moisture Metric, whereas SIVVA employs predicted changes in mean annual and seasonal precipitation. This section was ignored because the same weighting scheme was applied to all species in the SIVVA translation, which we justify by noting that exposure for species within the state of Florida does not vary widely with respect to temperature or precipitation (see Suppl. Figs. 1-3). Section D was not filled out for the 15 species in Dubois et al. (2011), and was also ignored, however, SIVVA includes an analog for all four criteria in Section D (SIVVA criteria #s 30, 13, 27, and 6, respectively). Section B contains 4 criteria, and section D contains 16 criteria. Supplemental Table A1 names the corresponding criteria in SIVVA. In all cases, CCVI scores ranging from +3 to -3 ("Greatly increase" to "Decrease"), corresponded to SIVVA scores of 1 to 6, respectively. Values of zero in the CCVI were translated to a zero in SIVVA if there was not enough information to assess the criteria, or translated to a SIVVA score of three if the effect was "Neutral". In several instances, multiple CCVI criteria corresponded to a single SIVVA analogue, in which case the mean value was translated into a SIVVA score. Two CCVI criteria were omitted, including "restriction to ice, ice edge or snow-covered habitats" (left blank for all 15 species in Dubois et al. (2011)), and "restriction to uncommon geological features or derivatives". This latter category was omitted because we believed that dependence on interspecific interactions (SIVVA #10) and colonization potential (#18) adequately addressed similar concerns.

Table A.2. Analogs for criteria in the Climate Change Vulnerability Index (CCVI) and the Standardized Index of Vulnerability and Value (SIVVA). Designations for the CCVI correspond to those used in the document (http://www.natureserve.org/prodServices/climatechange/ccvi.jsp), and SIVVA Analogue designations correspond to numbers given in Table 1.

CCVI Criteria	SIVVA Analogue
B1	1
B2a	3
B2b	3
B3	7
C1	7
C2ai	4
C2aii	4
C2bi	5
C2bii	5
C2c	12
C2d	N/A
C3	N/A
C4a	10
C4b	10
C4c	18
C4d	18
C4e	10
C5a	15
C5b	15
C6	14

Figure A.2. Plot of vulnerability and adaptive capacity scaled from zero to 1 (y-axis) for each of 15 species previously assessed using the CCVI (Dubois et al. 2011), with the SIVVA translation of quantitative CCVI scores. Species are sorted along the x-axis from highest to lowest risk according to the CCVI. While the position along the y-axis varies in magnitude because the CCVI has an extremely high amount of maximum attributable risk (see Methods), the positions of species relative to each other and the order from highest to lowest risk is maintained, and there is a significant correlation in rank order according to Kendall's tau ($P < 0.001$).