Diversity Measures Region 1 dan 2
January - September 2020

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Conservation Data Assistant

10/30/2020

Contents

Load packages

```
library(ggplot2)
library(dplyr)
library(plotly)
library(hrbrthemes)
library(openxlsx)
library(knitr)
library(png)
library(grid)
library(cowplot)
library(magick)
```

```
subjek <- "Region 1 dan 2"
range_x <- "Jan - Sep 2020"
filedata <- "C:/Users/robby/Documents/My R/Konservasi_ANJ/Diversity_measures/indeks_kehati/data_jml_spe
```

A. Species Richness Index
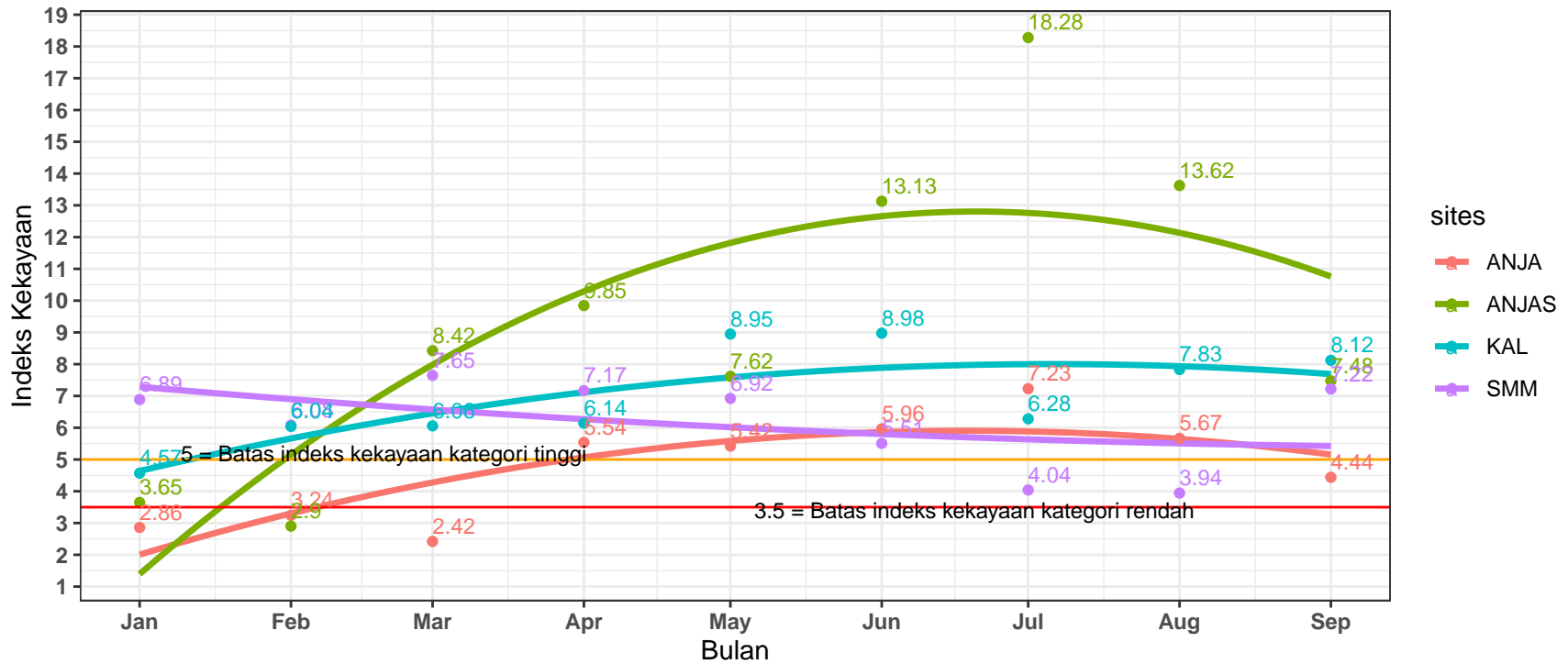
Table 1: Species Richness index Jan-Sep 2020

	date	sites	richness_index
1	2020-01-01	ANJA	2.859997
2	2020-01-01	ANJAS	3.648859
3	2020-01-01	SMM	6.887420
4	2020-01-01	KAL	4.568487
8	2020-02-01	ANJA	3.244053
9	2020-02-01	ANJAS	2.903512
10	2020-02-01	SMM	6.080884
11	2020-02-01	KAL	6.041760
15	2020-03-01	ANJA	2.421834
16	2020-03-01	ANJAS	8.424115
17	2020-03-01	SMM	7.647399
18	2020-03-01	KAL	6.058599
22	2020-04-01	ANJA	5.537706
23	2020-04-01	ANJAS	9.845815
24	2020-04-01	SMM	7.166537
25	2020-04-01	KAL	6.140196
28	2020-05-01	ANJA	5.421421
29	2020-05-01	ANJAS	7.616776
30	2020-05-01	SMM	6.921845
31	2020-05-01	KAL	8.947091
35	2020-06-01	ANJA	5.963262
36	2020-06-01	ANJAS	13.127674
37	2020-06-01	SMM	5.505840
38	2020-06-01	KAL	8.975126
42	2020-07-01	ANJA	7.229948
43	2020-07-01	ANJAS	18.277799
44	2020-07-01	SMM	4.040245
45	2020-07-01	KAL	6.279533
49	2020-08-01	ANJA	5.666283
50	2020-08-01	ANJAS	13.623705
51	2020-08-01	SMM	3.943581
52	2020-08-01	KAL	7.832002
56	2020-09-01	ANJA	4.439219
57	2020-09-01	ANJAS	7.476621
58	2020-09-01	SMM	7.219523
59	2020-09-01	KAL	8.120507

Grafik Indeks Kekayaan Spesies Region 1 dan 2 Jan – Sep 2020

Method: Margalef
Polynomial degree: 2

ANJ

Indeks Kekayaan

19
18   18.28
17
16
15
14
13   13.13   13.62
12
11
10   9.85
9   8.42   8.95 8.98   7.83 8.12
8 6.89 .65 7.17 7.62   7.23   7.48
7   6.04 6.06 6.92   7.22
6   6.14 5.42 5.96 6.28 5.67
5 4.575 = Batas indeks kekayaan kategori tinggi 5.54 5.51 4.44
4 3.65   4.04 3.94
3 2.86 3.24 2.42   3.5 = Batas indeks kekayaan kategori rendah
2   2.9
1

Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep

Bulan

sites

ANJA
ANJAS
KAL
SMM

3

B. Diversity Index

Table 2: Diversity index Jan- Sep 2020

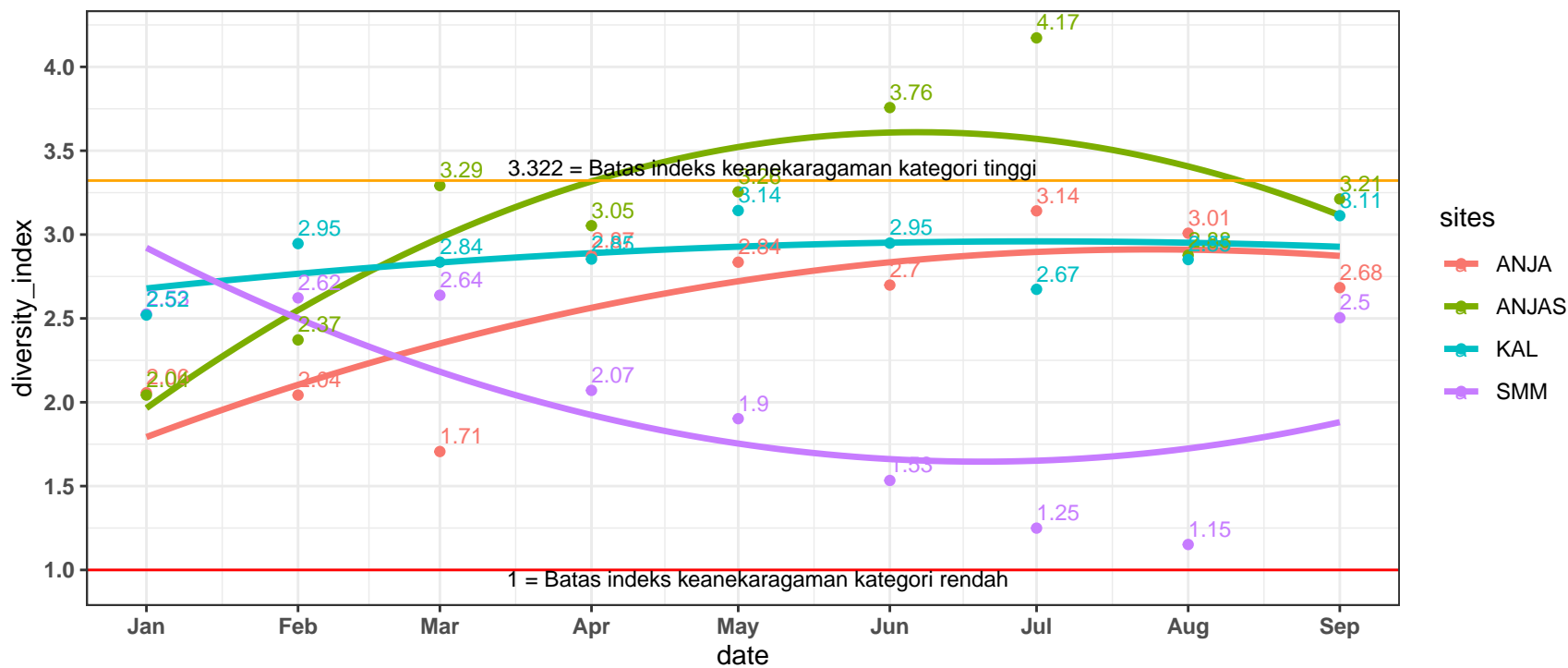|	date	sites	diversity_index
1	2020-01-01	ANJA	2.056750
2	2020-01-01	ANJAS	2.042709
3	2020-01-01	SMM	2.526439
4	2020-01-01	KAL	2.520057
8	2020-02-01	ANJA	2.042700
9	2020-02-01	ANJAS	2.371758
10	2020-02-01	SMM	2.622455
11	2020-02-01	KAL	2.945956
15	2020-03-01	ANJA	1.706057
16	2020-03-01	ANJAS	3.292038
17	2020-03-01	SMM	2.638273
18	2020-03-01	KAL	2.835589
22	2020-04-01	ANJA	2.873193
23	2020-04-01	ANJAS	3.053017
24	2020-04-01	SMM	2.070748
25	2020-04-01	KAL	2.853717
28	2020-05-01	ANJA	2.835416
29	2020-05-01	ANJAS	3.255055
30	2020-05-01	SMM	1.902032
31	2020-05-01	KAL	3.143209
35	2020-06-01	ANJA	2.698825
36	2020-06-01	ANJAS	3.757302
37	2020-06-01	SMM	1.533637
38	2020-06-01	KAL	2.949090
42	2020-07-01	ANJA	3.141243
43	2020-07-01	ANJAS	4.172806
44	2020-07-01	SMM	1.249361
45	2020-07-01	KAL	2.673424
49	2020-08-01	ANJA	3.007921
50	2020-08-01	ANJAS	2.876771
51	2020-08-01	SMM	1.151666
52	2020-08-01	KAL	2.850866
56	2020-09-01	ANJA	2.683375
57	2020-09-01	ANJAS	3.212240
58	2020-09-01	SMM	2.504092
59	2020-09-01	KAL	3.112856

Grafik Indeks Keanekaragaman Region 1 dan 2 Jan – Sep 2020
Method: Shannon–Wiener
Polynomial degree: 2

C. Evenness Index

Table 3: Evenness index Jan-Sep 2020

	date	sites	evenness_index
1	2020-01-01	ANJA	0.8577313
2	2020-01-01	ANJAS	0.7367515
3	2020-01-01	SMM	0.6717108
4	2020-01-01	KAL	0.7734752
8	2020-02-01	ANJA	0.7740264
9	2020-02-01	ANJAS	0.8987141
10	2020-02-01	SMM	0.7318100
11	2020-02-01	KAL	0.8220846
15	2020-03-01	ANJA	0.8204400
16	2020-03-01	ANJAS	0.8985895
17	2020-03-01	SMM	0.6779021
18	2020-03-01	KAL	0.7795248
22	2020-04-01	ANJA	0.8532641
23	2020-04-01	ANJAS	0.7804188
24	2020-04-01	SMM	0.5293291
25	2020-04-01	KAL	0.7845084
28	2020-05-01	ANJA	0.8603023
29	2020-05-01	ANJAS	0.9083404
30	2020-05-01	SMM	0.4913285
31	2020-05-01	KAL	0.7843642
35	2020-06-01	ANJA	0.7787163
36	2020-06-01	ANJAS	0.9000847
37	2020-06-01	SMM	0.4157461
38	2020-06-01	KAL	0.7262976
42	2020-07-01	ANJA	0.8907890
43	2020-07-01	ANJAS	0.9121463
44	2020-07-01	SMM	0.3673298
45	2020-07-01	KAL	0.7199062
49	2020-08-01	ANJA	0.8843712
50	2020-08-01	ANJAS	0.6546374
51	2020-08-01	SMM	0.3386060
52	2020-08-01	KAL	0.7215110
56	2020-09-01	ANJA	0.8558061
57	2020-09-01	ANJAS	0.8830691
58	2020-09-01	SMM	0.6503886
59	2020-09-01	KAL	0.7878169

Grafik Indeks Kemerataan Region 1 dan 2 Jan – Sep 2020

Method: Shannon–Wiener
Polynomial degree: 2