INDEKS KEANEKARAGAMAN HAYATI

PT PMP

JANUARI – SEPTEMBER 2020

DEPARTEMEN KONSERVASI

PT PUTERA MANUNGGAL PERKASA

MEMBER OF AUSTINDO NUSANTARA JAYA TBK

2020

DEPARTEMEN KONSERVASI

PT PUTERA MANUNGGAL PERKASA

Tanggal 3 Oktober 2020

Dibuat Oleh	Disetujui Oleh
Robby Binsar Butarbutar Conservation Database Staff	**Nardiyono** Head of Conservation

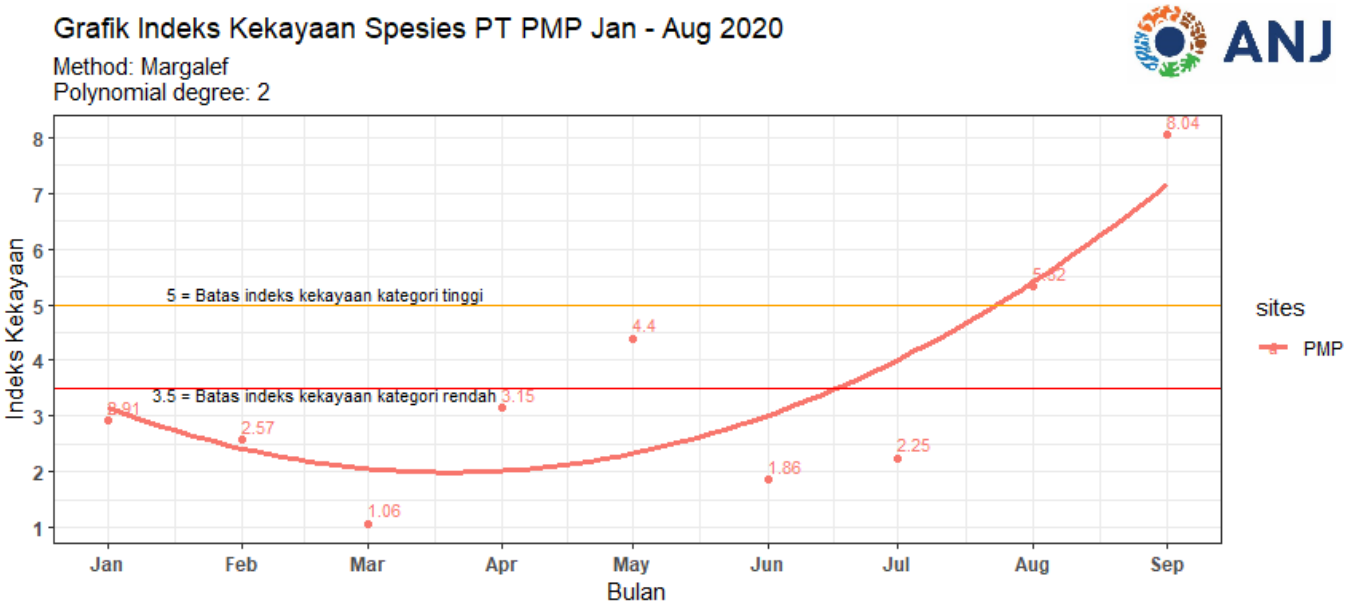
A. Species Richness Index

The number of different taxa, provides an instantly comprehensible expression of diversity. While the number of taxa within a sample is easy to ascertain, as a term, it makes little sense: some taxa may not have been seen, or there may not be a fixed number of taxa (e.g. in an open system; Peet 1974). As an alternative, richness (R) can be used for the concept of taxa number (McIntosh 1967). Richness refers to the variety of taxa/species/types present in an assemblage or community (Bobrowsky and Ball 1989) as "the number of species present in a collection containing a specified number of individuals" (Hurlbert 1971).

It is not always possible to ensure that all sample sizes are equal and the number of different taxa increases with sample size and sampling effort (Magurran 1988). Then, rarefaction (S^) is the number of taxa expected if all samples were of a standard size n (i.e. taxa per fixed number of individuals).

Species Richness index Jan-August 2020

date	sites	richness_index
2020-01-01	PMP	2.911639
2020-02-01	PMP	2.569492
2020-03-01	PMP	1.063490
2020-04-01	PMP	3.146580
2020-05-01	PMP	4.398521
2020-06-01	PMP	1.857897
2020-07-01	PMP	2.250131
2020-08-01	PMP	5.320494
2020-09-01	PMP	8.037400



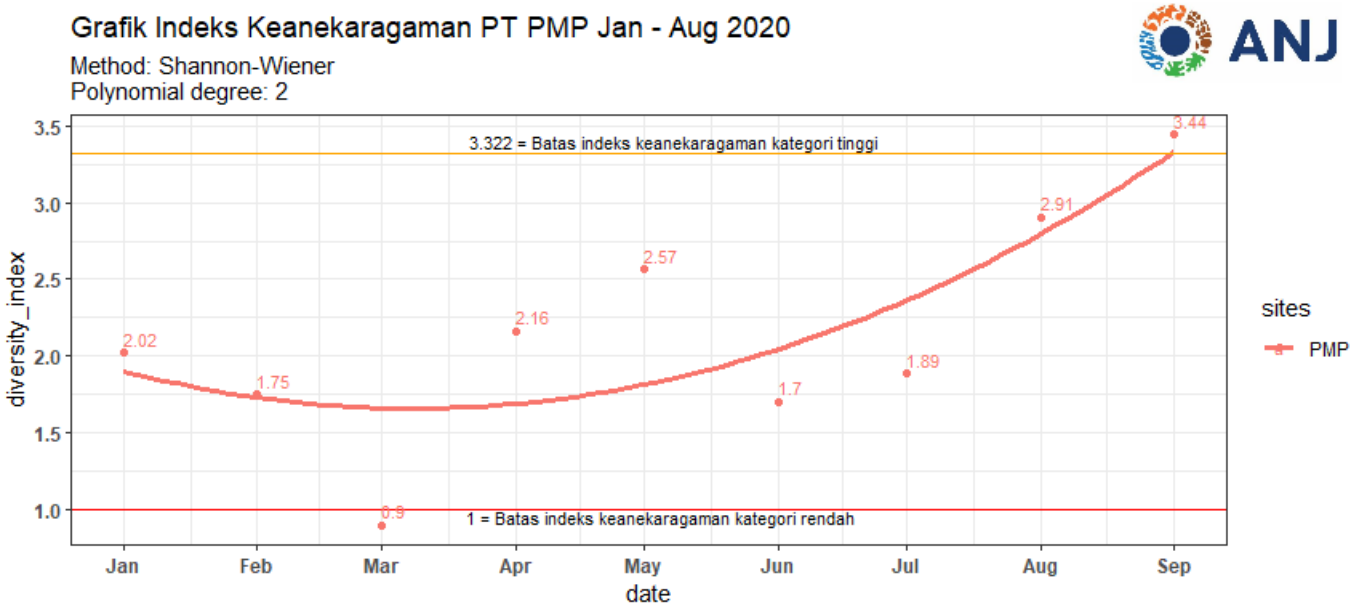
B. Diversity Index

Diversity measurement assumes that all individuals in a specific taxa are equivalent and that all types are equally different from each other (Peet 1974). A measure of diversity can be achieved by using indices built on the relative abundance of taxa. These indices (sometimes referred to as non-parametric indices) benefit from not making assumptions about the underlying distribution of taxa abundance: they only take relative abundances of the species that are present and species richness into account. Peet (1974) refers to them as indices of heterogeneity (H).

Diversity indices focus on one aspect of the taxa abundance and emphasize either richness (weighting towards uncommon taxa) or dominance (weighting towards abundant taxa; Magurran 1988).

Diversity index Jan- Aug 2020

date	sites	diversity_index
2020-01-01	PMP	2.0237753
2020-02-01	PMP	1.7478681
2020-03-01	PMP	0.8961481
2020-04-01	PMP	2.1625568
2020-05-01	PMP	2.5673845
2020-06-01	PMP	1.7007947
2020-07-01	PMP	1.8862906
2020-08-01	PMP	2.9062735
2020-09-01	PMP	3.4411080



C. Evenness Index

Evenness (E) is a measure of how evenly individuals are distributed across the sample.

Evenness index Jan-Aug 2020

date	sites	evenness_index
2020-01-01	PMP	0.8789144
2020-02-01	PMP	0.9755038
2020-03-01	PMP	0.5568081
2020-04-01	PMP	0.9018562
2020-05-01	PMP	0.9061741
2020-06-01	PMP	0.7386458
2020-07-01	PMP	0.8584879
2020-08-01	PMP	0.9028846
2020-09-01	PMP	0.9266302