

Descriptive Analyses

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Report of some descriptive statistics on the final cleaned dataset (A3 + environmental covariates).

1 Description of dataset

1.1 What, where and when

In 2017, we collected all A3 forms available in 4 districts of the southern province of Champasak in Laos: Moonlapamok, Pathoomphone, Sanasomboon and Sukhuma. A3 forms record all suspected malaria cases passively detected that got tested for malaria by RDT and/or microscopy.

A total of 64503 A3 forms were collected. Individuals reported coming from 507 villages (4.2 % missing) in 8 districts (0 % missing). Most individuals lived in districts where A3 form was collected but some lived in other districts:

##					
##	Champasak	Khong	Moonlapamok	Paksxong	Pathoomphone
##	958	578	15741	2	24316
##	Phongthong	Sanasomboon	Sukhuma	<NA>	
##	3	14158	8747	0	

Figure 1 shows a time distribution of A3 forms ranging from 2013 – 09 – 25 to 2016 – 12 – 29, pretty constant over a 3 year period from October 2013 to October 2016. Figure 2 shows that this true across the 4 districts of data collection.

1.2 Description of variables

There are two types of variables available in this dataset:

- Variables that were collected in the A3 form: date, district, village, age, gender, occupation, RDT result, microscopy result and treatment taken.
- Environmental covariates that were extracted from raster layers via GPS coordinates of villages (matched via official list of villages in Champasak): altitude, temperature, precipitation, population, percent High-Biomass Vegetation (HBV) in 1km and percent High-Biomass Vegetation (HBV) in 10km.

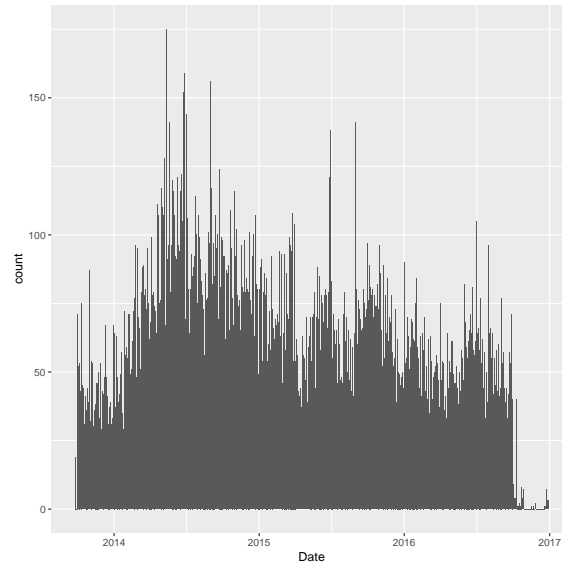


Figure 1: Histogram of A3 data collection times.

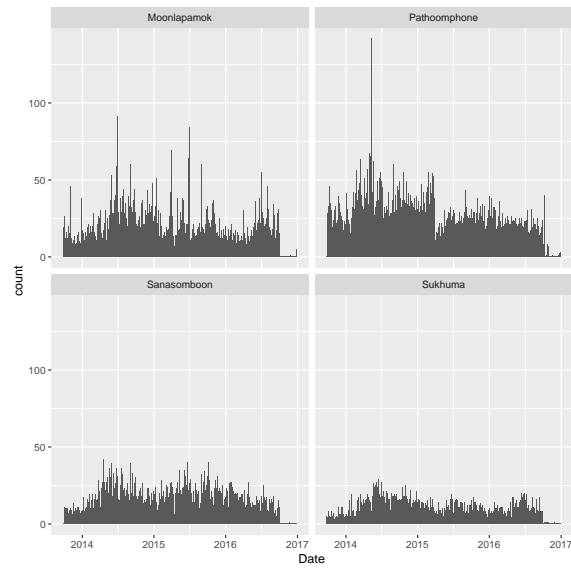


Figure 2: Histogram of A3 data collection times per district.

2 Descriptive statistics

2.1 Basic description

Variable	Description	Missing
Date	Date of the A3 interview, over 3 years from October 2013 to 2016	0.3 %
District	Reported district where living. 8 different districts of Champasak Province. 97.6 % come from the 4 districts where A3 forms were collected: MP, PT, SB and SK	0 %
Village	Reported village where living. 507 different villages of Champasak Province, 498 in MP, PT, SB or SK	4.2 %
Age	Reported age. Ranges from 0 to 98, with a mean of 28 and a median of 26 years	0 %
Is.Male	Reported gender. 71 % of males.	2.2 %
Occupation	Reported occupation. 23 different occupations. 67.2 % are farmers	8.7 %
RDT	RDT results. 16.9 % Pf, 19.4 % Pv and 1.8 % mix	29.5 %
Microscopy	Microscopy results. 7.9 % Pf, 10.7 % Pv and 1.6 % mix	75.7 %
Treatment	Treatment provided after malaria test. 14 different treatment combinations. 78 % received no treatment and 21.3 % received Coartem alone	0.1 %
GPS	GPS coordinates of villages matched with official list of villages in Champasak with GPS. Environmental covariates were extracted for all villages with GPS coordinates.	11.1 %

Table 1: Ballpark parameter estimates for the Ross-Macdonald model.

Environmental covariates that were extracted from raster layers via GPS coordinates of villages (matched via official list of villages in Champasak): altitude, temperature, precipitation, population, percent High-Biomass Vegetation (HBV) in 1km and percent High-Biomass Vegetation (HBV) in 10km.