

ZURICH UNIVERSITY OF APPLIED SCIENCES
SCHOOL OF LIFE SCIENCES AND FACILITY MANAGEMENT
INSTITUTE OF NATURAL RESOURCE SCIENCES

**Quantification of deforestation on Borneo in the last 20 years based
on open source geodata**

Bachelor Thesis

HS23

by

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BSc Environmental engineering

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Alooideae, genetic diversity, in-silico, sequence alignment

Abstract

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1 Introduction

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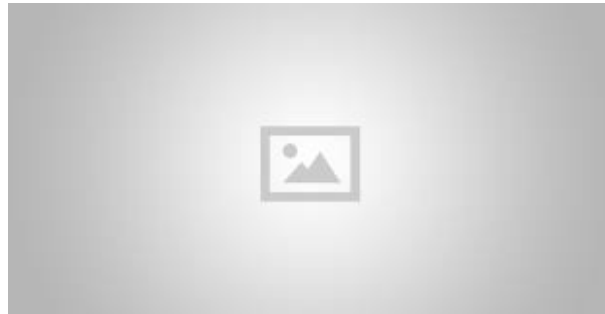


Figure 1: Example Picture 1

For more information, refer to the literature review(Chapman et al., 2020; Descals et al., 2021).

Table 1: My caption

Car	MPG	Cylinders
Mazda RX4	21	6
Mazda RX4 Wag	21	6
Datsun 710	22.8	4
Hornet 4 Drive	21.4	6

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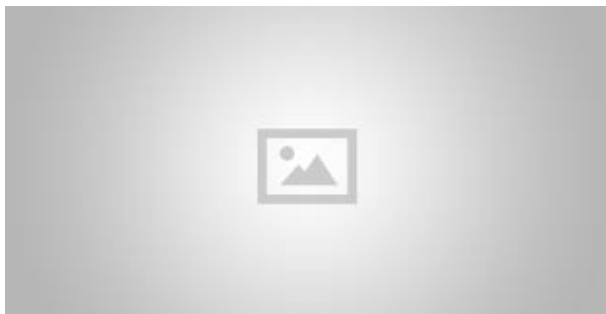


Figure 2: Example Picture on the left

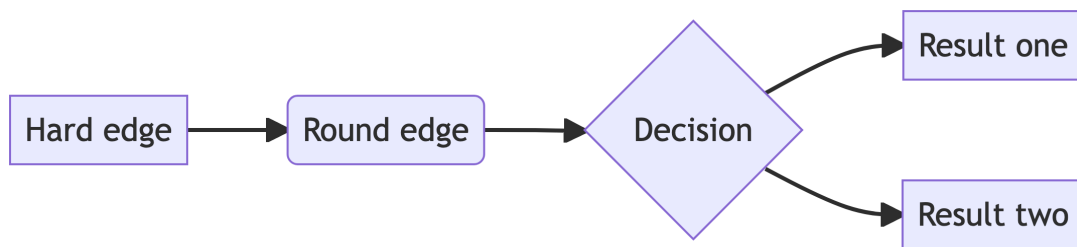
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2 Literature review

2.1 RSPO

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Figure 3: Example Picture 2

For more information, refer to the literature review (Chapman et al., 2020; Descals et al., 2021).

Table 2: mycaption

Car	MPG	Cylinders
Mazda RX4	21	6
Mazda RX4 Wag	21	6
Datsun 710	22.8	4
Hornet 4 Drive	21.4	6

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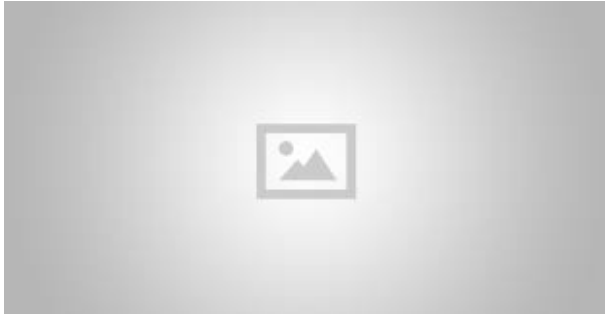


Figure 4: Example Picture on the left

2.2 Deforestation

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2.3 Infrastructure

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2.4 State of the art analysis

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2.5 oil palm (*latin name*)

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3 Method

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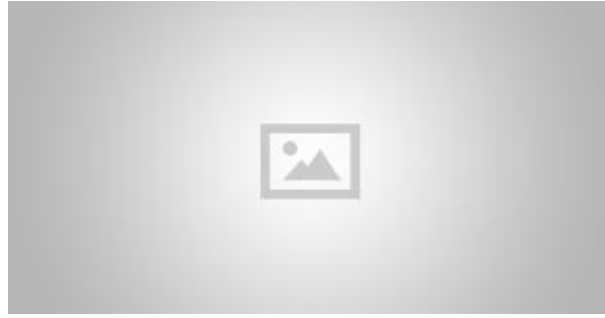


Figure 5: Example Picture 2

For more information, refer to the literature review (Chapman et al., 2020; Descals et al., 2021).

Table 3: mycaption

Car	MPG	Cylinders
Mazda RX4	21	6
Mazda RX4 Wag	21	6
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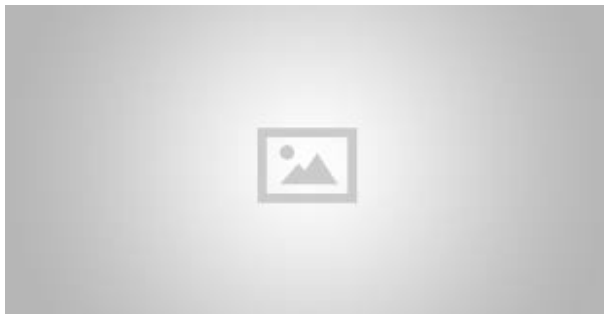


Figure 6: Example Picture 4

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4.0.0.2 General Forest loss

1. How much forest area was lost yearly and in total?
2. How much forest area was lost due to forest fires yearly and in total?
3. How much new build up areas was created on forest loss areas (2020 compared to 2000)?
4. How much new build up areas was created on forest-fire loss areas (2020 compared to 2000)?
5. How much forest gain (area) occurred on forest fire areas (2001 - 2012)?
6. How much forest was lost in protected areas yearly? → carry out all of them with primary forests as well

4.0.0.3 Oil Palm related

1. How much new oil palm plantation area occurred yearly on forest fire areas?
2. How much new oil palm plantation area occurred yearly on non-forest deforested areas?
3. How much new oil palm plantation area occurred yearly on deforested areas?
4. How much new oil palm plantation area occurred in protected areas?
5. How much new oil palm plantation area occurred on non-forest area? (compared to year 2000 forest cover)
6. How much new oil palm plantation area occurred on previous cropland (and other way around)?
7. How much forest area was gained on previous oil palm plantation area yearly (2000 - 2012)?
8. How much area was used for other crops prior to oil palm plantation, and which?
9. How much area was used for oil palm plantation prior to other crops, and which?

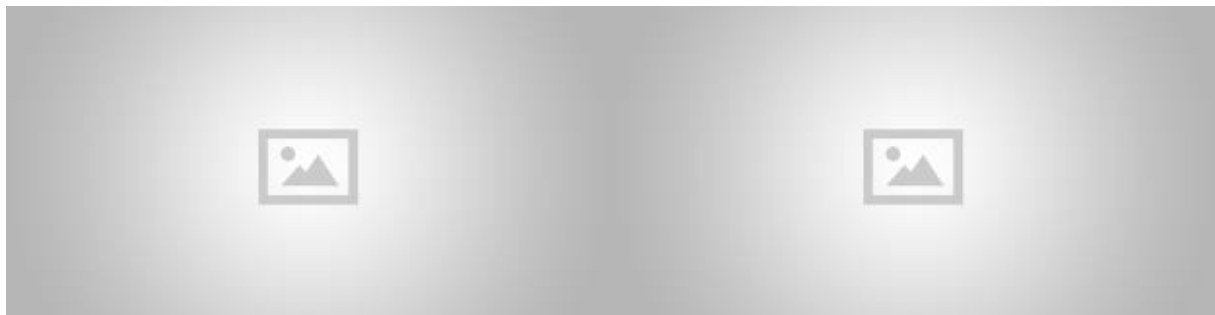
4.0.0.4 Build up areas

1. How much new build up area occurred in forest covered area (2020 compared to 2000)?
2. How much new build up area occurred in non-forest covered area (2020 compared to 2000)?
3. How much new build up area occurred in forest fire area (2020 compared to 2000)?
4. How much new oil palm plantation area occurred within 1, 2, 5, 10, and 20 km of newly build up areas?
5. How much forest area was lost to forest fires within 1, 2, 5, 10, and 20 km of newly build up areas?
6. How much forest area was lost to non-forest fires deforested areas within 1, 2, 5, 10, and 20 km of newly build up areas?
7. How much forest area was lost to cropland areas within 1, 2, 5, 10, and 20 km of newly build up areas?

4.0.0.5 RSPO

???

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(a) my figure

(b) my figure 2

Figure 7: Multiple pictures!

For more information, refer to the literature review (Chapman et al., 2020; Descals et al., 2021).

Table 4: mycaption

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5 Discussion

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In March 2020, the RSPO made the concession map available for download, with the exception of Indonesia. Although it states that Indonesian concessions will be available in the coming weeks, 3 years later, they remain incomplete (RSPO, 2020).

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Annex

annex blabla