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

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by Robin Pfaff

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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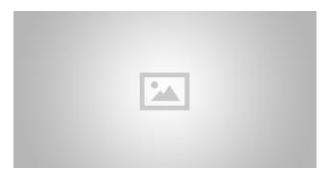


Figure 1: Example Picture 1

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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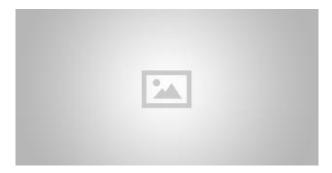


Figure 2: Example Picture on the left

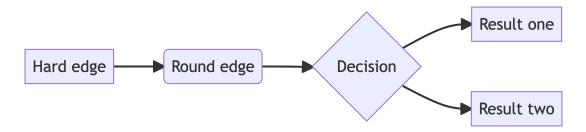
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Figure @ref(fig-my-diagram)



2 Literature review

2.1 RSPO

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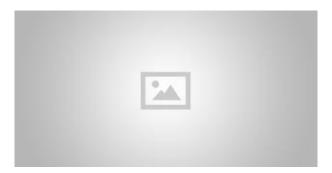


Figure 3: Example Picture 2

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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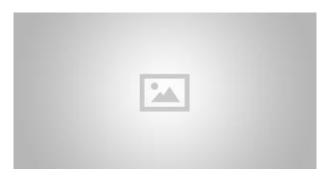


Figure 4: Example Picture on the left

2.2 Deforestation

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2.3 Infrastructure

Phasellus a nisi lacus. Nullam congue ultrices ex, sed lacinia massa mattis sit amet. Nam fermentum, turpis ut congue viverra, nisl nunc ultricies mauris, nec consequat turpis metus eget ligula. Aliquam erat volutpat. Vivamus tempus nisl in est ultrices varius. Nunc nec purus dolor. Sed a ullamcorper ex. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas.

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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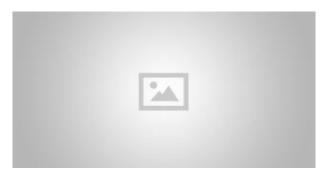


Figure 5: Example Picture 2

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
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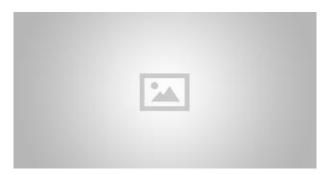


Figure 6: Example Picture 4

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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) occured 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 occured yearly on forest fire areas?
- 2. How much new oil palm plantation area occured yearly on non-forest deforested areas?
- 3. How much new oil palm plantation area occured yearly on deforested areas?
- 4. How much new oil palm plantation area occured in protected ares?
- 5. How much new oil palm plantation areo occured on non-forest area? (compared to year 2000 forest cover)
- 6. How much new oil palm plantation area occured on previos cropland (and other way around)?
- 7. How much forest area was ganied 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 occured in forest covered area (2020 compared to 2000)?
- 2. How much new build up area occured in non-forest covered area (2020 compared to 2000)?
- 3. How much new build up area occured in forest fire area (2020 compared to 2000)?
- 4. How much new oil palm plantation area occured within 1, 2, 5, 10, and 20 km of newly buld up areas?
- 5. How much forest area was lost to forest fires within 1, 2, 5, 10, and 20 km of newly buld 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 buld up areas?
- 7. How much forest area was lost to cropland areas within 1, 2, 5, 10, and 20 km of newly buld up areas?

4.0.0.5 RSPO

???

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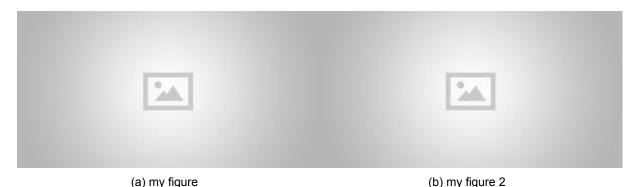


Figure 7: Multiple pictures!

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).

6 References

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Annex

annex blabla