

AI Pipeline Summary

The geospatial analysis conducted utilizes various datasets to examine environmental changes and impacts in the designated area, focusing on the period from 2000 to 2024, with particular attention to the year 2017 when an intervention was implemented. Key aspects of this analysis include burned area, drought risk, forest cover, land cover dynamics, and vegetation health, providing insights into the ecological and environmental shifts in response to natural and anthropogenic influences.

The study employs the Terra and Aqua combined MCD64A1 Version 6.1 Burned Area dataset to assess fire occurrences. Prior to the 2017 intervention, significant burned areas were only recorded in 2004. Post-intervention, no significant fires have been detected up to 2024, indicating a potential reduction in fire occurrences possibly due to intervention efforts, although causality is not established by the dataset.

In terms of drought risk, the Palmer Drought Severity Index (PDSI) shows a significant improvement in conditions post-2017, with more frequent wet or slightly wet years, particularly in 2022 which was classified as very wet. While this improvement aligns with the intervention's focus on enhancing water management, direct causality is not confirmed.

Forest cover analysis using the HANSEN dataset shows a gradual decline in forest cover from 2000 to 2016, with stabilization observed post-2017. Despite a continued decrease in forest coverage, the rate of deforestation slowed significantly, suggesting the intervention contributed to mitigating forest loss. However, the intervention did not completely halt deforestation.

Land cover dynamics analyzed using the Dynamic World dataset reveal tree coverage as the dominant land cover type, with a minor decrease from 2016 to 2024. The analysis highlights slight fluctuations in other land cover classes, including an increase in built areas and water bodies. These findings underscore the importance of sustainable land management practices to balance development with ecological conservation.

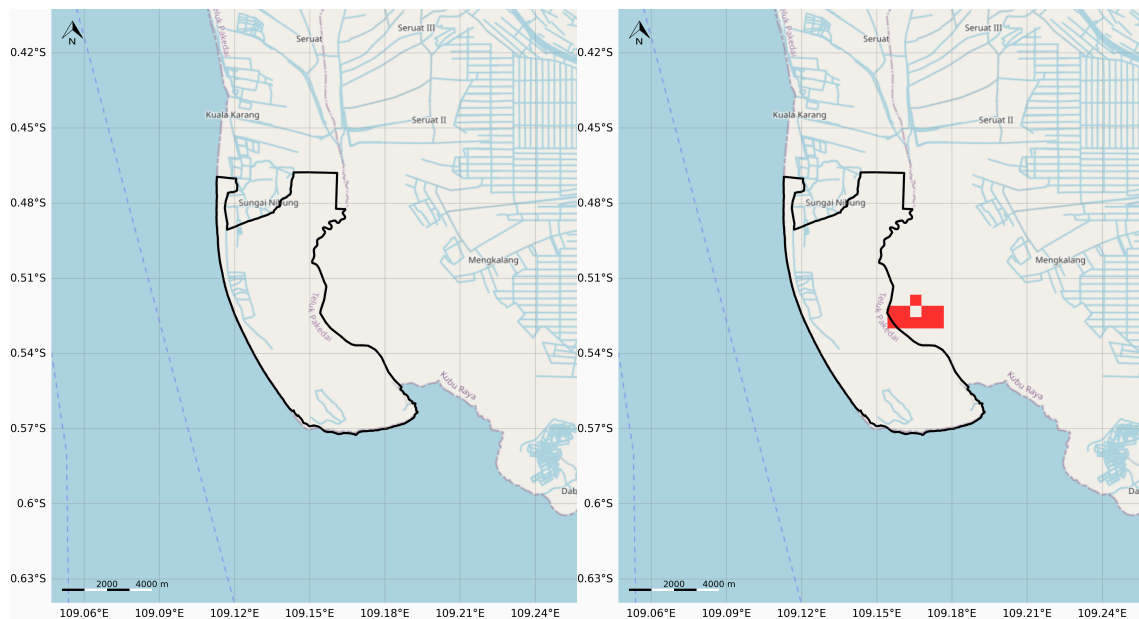
The analysis of vegetation health, assessed through the Normalized Difference Vegetation Index (NDVI), indicates a positive trend post-intervention. Dense vegetation coverage increased while sparse vegetation decreased, suggesting improved vegetation quality. Nonetheless, these changes could be influenced by various factors beyond the intervention, and further data is needed to fully understand these dynamics.

Overall, the analyses corroborate a trend of environmental stabilization and improvement following the 2017 intervention, particularly in terms of reduced fire occurrences, improved drought conditions, and slower deforestation rates. However, the complexity of ecological systems necessitates a cautious interpretation of causality, emphasizing the need for

comprehensive, multi-faceted approaches to environmental management.

Burned Area (MODIS)

Fire Risk Modis (2001 - 2024)



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Time Start	Time End	Burned Area %	Burned Area (ha)
<i>This table was added to the appendix because the length of table exceeds 15 rows</i>			

Buffered Aoi

Time Start	Time End	Burned Area %	Burned Area (ha)
<i>This table was added to the appendix because the length of table exceeds 15 rows</i>			

The analysis utilizes the Terra and Aqua combined MCD64A1 Version 6.1 Burned Area dataset, a monthly global product with a 500-meter spatial resolution. The dataset is designed to map burned areas using MODIS Surface Reflectance imagery. The analysis focused on the period from 2001 to 2024, assessing the burned area within a specified region of approximately 5,041 hectares. Data uncertainty was managed by excluding timeframes with more than 20% uncertainty, ensuring reliable results.

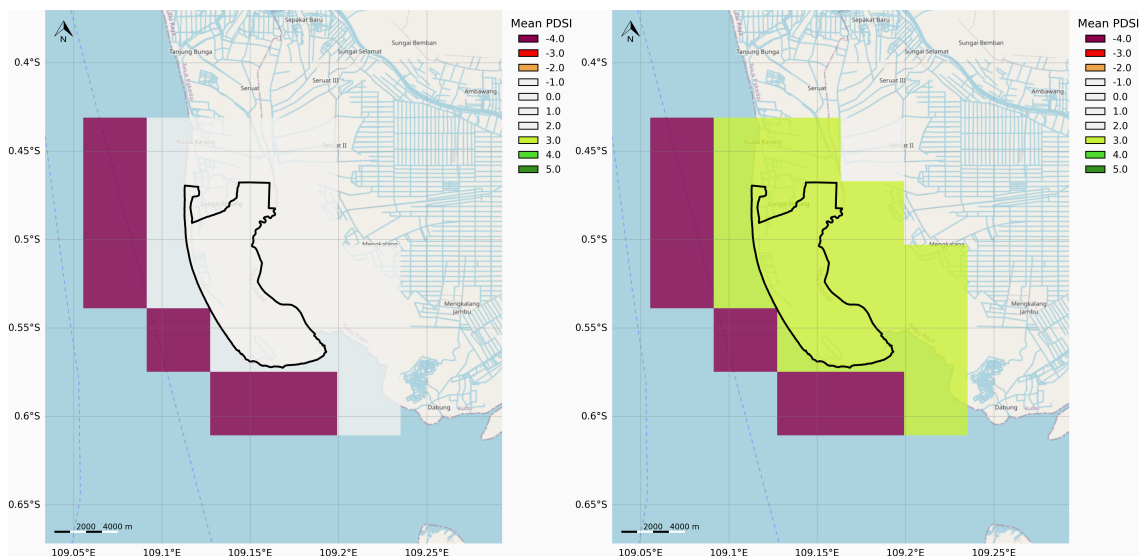
Prior to the intervention in 2017, the data shows that the only significant burned area occurred in 2004, with approximately 127.3 hectares (or 2.53% of the area) affected. The fire frequency during this pre-intervention period was low, with fires detected in only 4.17% of the analyzed years from 2001 to 2016. This indicates a relatively stable period with minimal fire activity within the specified area.

Following the intervention in 2017, the data indicates that no significant burned areas were detected from 2017 to 2024. This suggests a potential reduction in fire occurrences or a successful impact of the intervention measures implemented. However, it is important to note that the dataset does not account for fire duration or severity, and fire frequency does not necessarily equate to fire danger or predictive measures. Thus, while the absence of significant burned areas post-intervention is notable, the dataset does not provide causative explanations for this trend.

Overall, the analysis highlights a distinct difference in burned area occurrences before and after the intervention in 2017, with a marked decrease in detected fires in the subsequent years. This change might be associated with the intervention measures, although direct causation cannot be inferred from the available data. The findings emphasize the importance of considering additional factors such as climate conditions and human activities when interpreting fire risk and trends.

Drought Hazard (PDSI)

Drought Risk Pdsi (2000 - 2024)



Drought Risk Pdsi

Time Start	Time End	Mean PDSI
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The analysis focuses on evaluating drought risk based on the Palmer Drought Severity Index (PDSI) from 2000 to 2024, with a specific interest in assessing the impact of an intervention that started in 2017. The PDSI is utilized to determine the wetness or dryness of a region, which is crucial for planning and managing resources for agriculture, reforestation, and restoration projects.

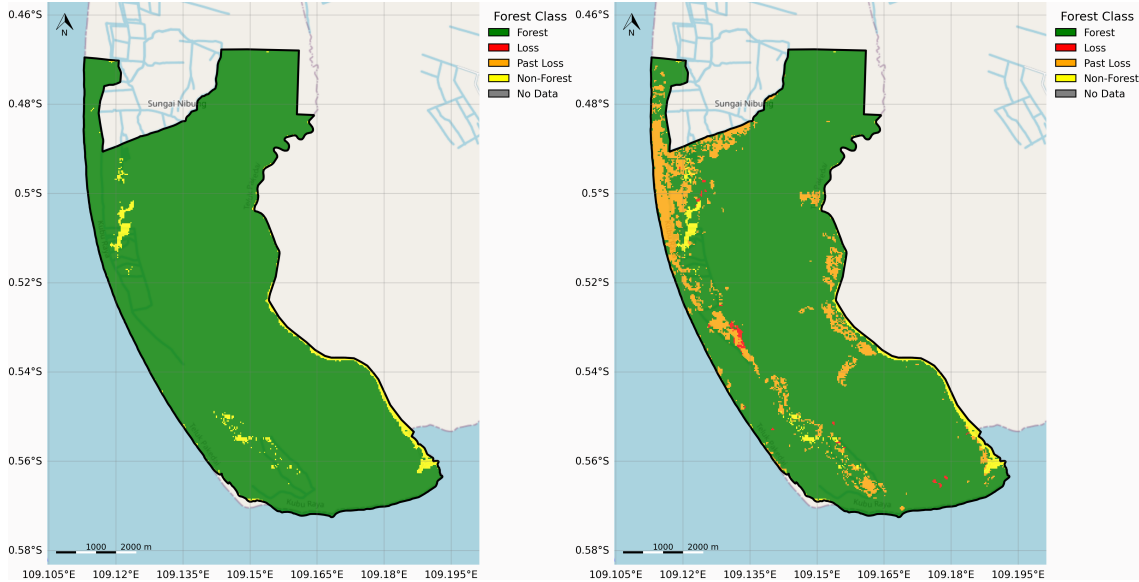
For the period before the intervention (2000-2016), the PDSI data indicates a mix of drought and wet conditions. The years 2002, 2003, 2004, 2006, 2011, 2014, and 2015 were characterized by mild drought, with negative PDSI values indicating unfavorable conditions for water-dependent projects. In contrast, the years 2007, 2010, and 2013 experienced moderate wet conditions, suggesting more favorable conditions for reforestation and ecosystem recovery projects.

After the intervention began in 2017, a noticeable shift towards more favorable conditions is observed. The years 2017, 2020, and 2021 were slightly wet, providing supportive conditions for nature-based solutions. Additionally, 2022 was classified as very wet, indicating highly favorable conditions for projects requiring consistent water availability. In 2024, the conditions were moderately wet, supporting reforestation and ecosystem recovery efforts.

The data suggests that post-intervention, the overall conditions have improved compared to the pre-intervention period, with more years classified as wet or slightly wet. This improvement can be associated with the intervention's focus on enhancing water management and ecosystem resilience, although the analysis does not establish causality between the intervention and the observed changes. The analysis excludes the years 1999 and 2024 due to data unavailability and uncertainty, respectively, focusing on the analyzed period from 2000 to 2023.

Forest Cover (HANSEN)

Forest Cover Hansen (2000 - 2023)



Forest Cover Hansen

Time Start	Time End	Forest	Loss	Past Loss	Non-Forest	No Data	Deforestation Rate
<i>This table was added to the appendix because the length of table exceeds 15 rows</i>							

The analysis of forest cover data from the HANSEN dataset over the period from 2000 to 2023 provides insights into the changes in forest cover before and after the intervention year of 2017. This analysis uses high-resolution satellite imagery from the Landsat series, which is processed using advanced algorithms to detect changes in forest cover globally.

Prior to the intervention in 2017, the data from 2000 to 2016 indicates a gradual decline in forest cover. Forest coverage decreased steadily from 97.7% in 2000 to 90.27% by 2016. During this period, the mean deforestation rate was calculated to be low, at approximately 0.4% per year, with a peak deforestation rate of 2.57% in 2015. This suggests that while the overall forest coverage was relatively high, there were years with significant forest loss, most notably in 2015.

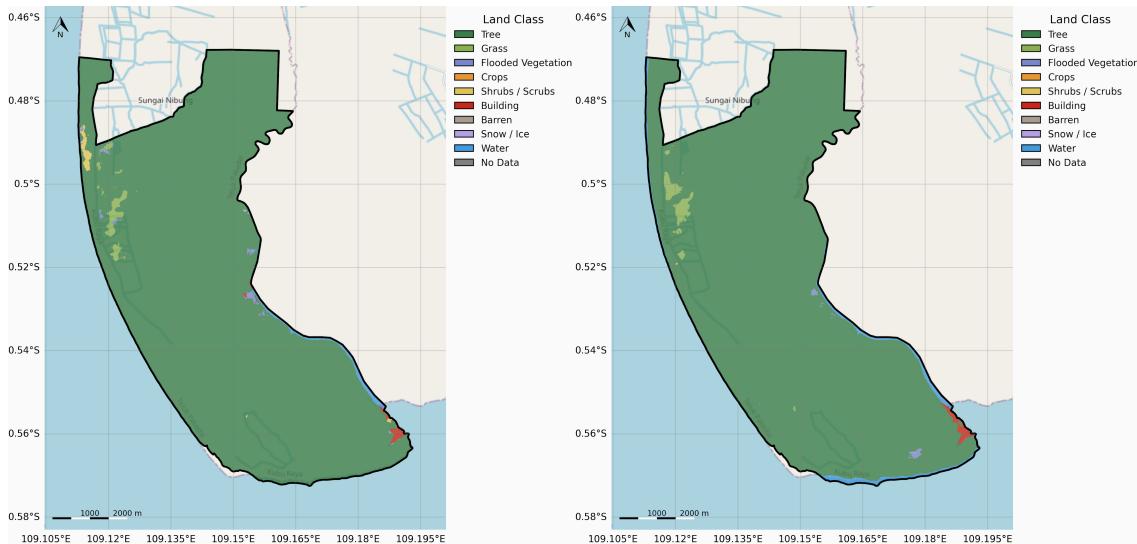
Following the intervention in 2017, the data from 2017 to 2023 shows a stabilization in the rate of deforestation. The forest coverage decreased from 90.08% in 2017 to 88.8% by 2023. The deforestation rates during this period remained low, with a slight annual

reduction in forest cover, averaging a rate of 0.4%. This indicates that the intervention possibly played a role in reducing the speed of deforestation, as the rates did not exceed 0.58% in the post-intervention years.

Overall, the intervention appears to have contributed to a reduction in the acceleration of forest loss, maintaining a relatively stable forest coverage percentage over the years following 2017. However, the forest cover continued to decrease, suggesting that while the intervention may have mitigated the rate of loss, it did not completely halt deforestation.

Land Cover (Dynamic World)

Land Cover Dynamic World (2016 - 2024)



Land Cover Dynamic World

Time Start	Time End	Tree	Grass	Flooded Vegetation	Crops	Shrubs / Scrubs	Building	Barren	Snow / Ice	Water	No Data
2016-01-01T00:00:00Z	2016-12-31T23:59:59Z	97.0	0.81	0.27	0.0	0.34	0.3	0.01	0.01	1.25	0
2017-01-01T00:00:00Z	2017-12-31T23:59:59Z	97.36	0.55	0.27	0.0	0.02	0.32	0.0	0.0	1.48	0

0:00:00Z	59:59Z											
2018-01-01T00:00:00Z	2018-12-31T23:59:59Z	96.99	0.52	0.55	0.0	0.02	0.37	0.0	0.0	1.56	0	
2019-01-01T00:00:00Z	2019-12-31T23:59:59Z	96.92	0.54	0.51	0.0	0.01	0.4	0.0	0.0	1.62	0	
2020-01-01T00:00:00Z	2020-12-31T23:59:59Z	96.98	0.62	0.28	0.0	0.04	0.38	0.0	0.0	1.7	0	
2021-01-01T00:00:00Z	2021-12-31T23:59:59Z	96.59	0.55	0.37	0.0	0.14	0.39	0.0	0.0	1.96	0	
2022-01-01T00:00:00Z	2022-12-31T23:59:59Z	96.39	0.37	0.4	0.0	0.36	0.38	0.0	0.0	2.1	0	
2023-01-01T00:00:00Z	2023-12-31T23:59:59Z	96.35	0.52	0.15	0.0	0.33	0.4	0.0	0.0	2.25	0	
2024-01-01T00:00:00Z	2024-12-31T23:59:59Z	96.19	0.93	0.18	0.0	0.01	0.38	0.0	0.0	2.31	0	

The analysis of land cover dynamics over the period from 2016 to 2024 using the Dynamic World dataset provides insights into changes in land use and cover in the designated area. The dataset used, developed through a state-of-the-art deep learning model, analyzes

land cover using a 10-meter spatial resolution. It categorizes land cover into nine classes, including Trees, Grass, Flooded Vegetation, Crops, Shrubs/Scrubs, Buildings, Barren land, Snow/Ice, and Water. The analysis benefits from near-real-time global land use data, offering a comprehensive view of land cover changes over time. Notably, the data excludes predictions covered by clouds to maintain accuracy.

The primary focus of the analysis was on the tree coverage, which has consistently been the dominant land cover type throughout the study period. The analysis reveals that the maximum tree coverage recorded during this period was 97.36% in 2017, with a minimum of 96.19% in 2024. The mean tree coverage over these years was 96.75%. This demonstrates a slight decrease in forest coverage, with an overall change of -0.81% from 2016 to 2024. Despite this decrease, tree cover remains the predominant land cover type in the analyzed area.

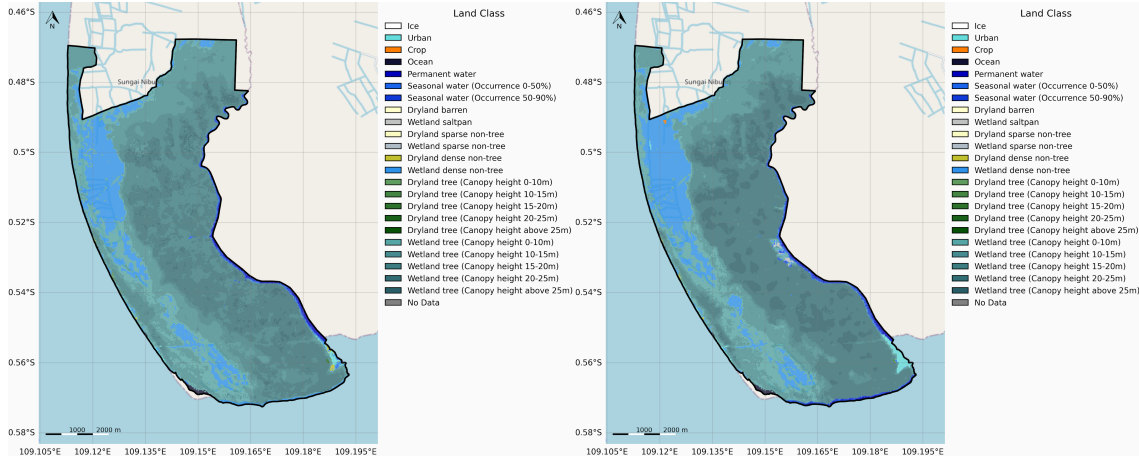
Other land cover types such as Grass, Flooded Vegetation, and Water also contribute to the landscape. Grass cover fluctuated slightly, ranging from 0.37% to 0.93%, with noticeable increases in 2016 and 2024. Flooded Vegetation showed minor variation, with a peak of 0.55% in 2018 and a low of 0.15% in 2023. Water bodies, on the other hand, exhibited a slight increase from 1.25% in 2016 to 2.31% in 2024.

The data also highlights the presence of built areas, noted as "Buildings," which increased subtly from 0.3% in 2016 to 0.38% in 2024. Other classes such as Crops, Barren land, and Snow/Ice were either not present or had negligible coverage throughout the analysis period.

The Dynamic World dataset, while providing valuable insights into land cover changes, has certain limitations. It tends to overestimate urban areas and might miss small spatial variations due to its methodology. The dataset's precision in classification is noted to be limited when compared with other products like ESA World Cover. However, its extensive coverage and near-real-time data collection make it a robust tool for broad land cover analysis.

Landcover (GLAD - 24 Classes)

Land Cover Glad 24 (2000 - 2020)



Land Cover Glad 24

Time Start	Time End	Ice	Urban	Crop	Ocean	Permanent water	Seasonal water (Occurrence 0-50%)	Seasonal water (Occurrence 50-90%)	Dryland barren	Wetland saltpan	Dryland sparse non-tree	Dryland dense non-tree	Wetland sparse non-tree	Wetland dense non-tree	Dryland tree (Canopy height 0-10m)	Dryland tree (Canopy height 10-15m)	Dryland tree (Canopy height 15-20m)	Dryland tree (Canopy height 20-25m)	Dryland tree (Canopy height above 25m)	Wetland tree (Canopy height 0-10m)	Wetland tree (Canopy height 10-15m)	Wetland tree (Canopy height 15-20m)	Wetland tree (Canopy height 20-25m)	Wetland tree (Canopy height above 25m)	No Data
2000-01-01	2000-12-31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001-01-01	2001-12-31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

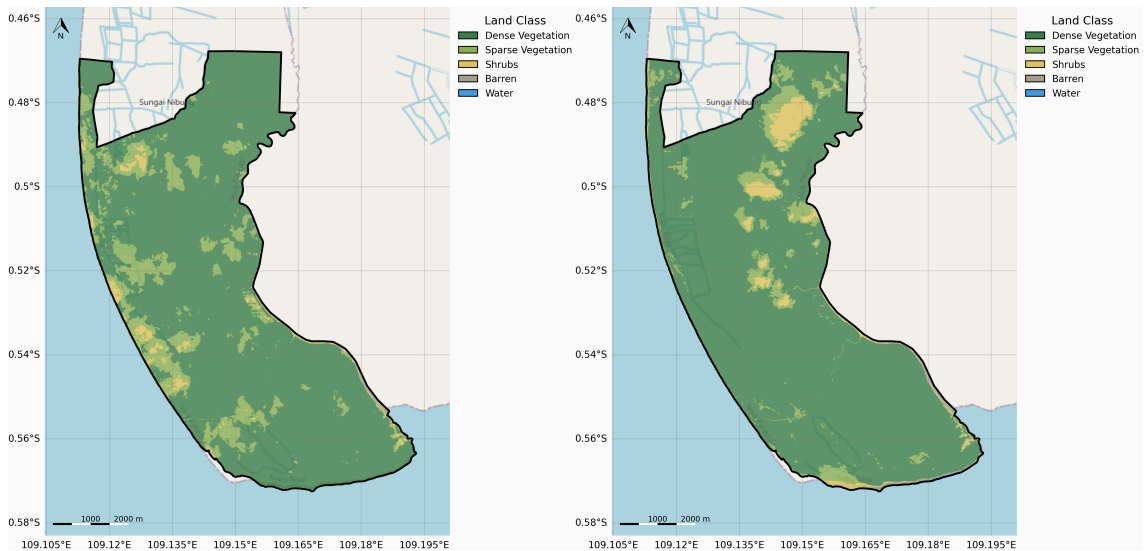
area where forest regeneration is detected encompasses 2,428.2 hectares, whereas forest degradation is observed over 604.98 hectares. Additionally, forest loss is documented in 154.71 hectares, and forest gain is identified in 98.55 hectares.

The data shows notable temporal changes in land cover classes. Urban areas exhibit a gradual increase, from 0.34% in 2000 to 0.74% in 2020, indicating urban expansion over the decades. Conversely, the area covered by 'Wetland tree (Canopy height 15-20m)' decreased significantly, especially after 2015, suggesting either deforestation or conversion to other land cover types like 'Wetland tree (Canopy height 20-25m)'.

While the analysis spans from 2000 to 2020, its implications for the years before and after the intervention period of 2017 are critical. Prior to 2017, the dataset shows relatively stable land cover dynamics with progressive changes in forest composition and expansion of urban areas. Post-2017, the data indicates a continued trend in urban growth and notable forest height transitions, suggesting ongoing ecological and anthropogenic influences in the region. These observed changes underline the importance of sustainable land management practices to balance urbanization with ecological conservation.

NDVI (Sentinel)

Ndvi Sentinel (2016-01 - 2024-10)



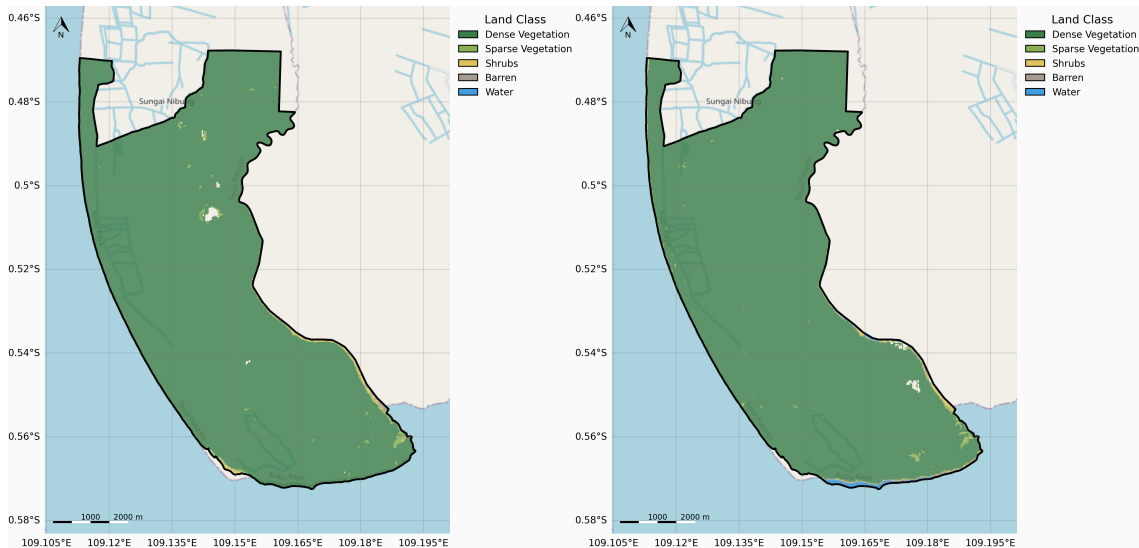
The geospatial analysis conducted using the Sentinel-2 dataset from the European Union's Copernicus program focuses on vegetation health through the Normalized Difference Vegetation Index (NDVI). This analysis covers the period from 2016 to 2024, with data processed into quarterly timeframes. It is crucial to note that the analysis omits certain periods due to data uncertainty: specifically, the first quarter of 2017 and the first quarter of 2022 were excluded from the evaluation.

The key metric of interest, NDVI, is a widely used indicator for assessing vegetation health. The data reveals that in the starting year of analysis, 2016, the percentage of dense vegetation ranged from 82.3% to 95.39%. This percentage saw a modest increase by the end of the analysis period in 2024, with dense vegetation covering between 85.44% and 96.41% of the area. Sparse vegetation, on the other hand, decreased from a range of 3.0% to 14.99% in 2016 to between 1.52% and 9.73% in 2024.

The analysis suggests an overall positive trend in vegetation health post-intervention. The percentage of dense vegetation increased, while sparse vegetation decreased, indicating a potential improvement in the area's vegetation quality. However, it is important to recognize that this analysis does not establish causality, and these changes may be influenced by a variety of factors, including seasonal variations, atmospheric conditions, and other environmental changes not accounted for in this dataset. Additional data and analyses would be necessary to comprehensively evaluate the specific impact of any intervention.

NDVI (Landsat)

Ndvi Landsat (1999-01 - 2024-10)



The analysis of vegetation coverage over the designated area, based on the Normalized Difference Vegetation Index (NDVI) from Landsat Collection 2, provides insights into the changes in vegetation between the periods before and after the intervention in 2017. The data spans from 1999 to 2024, with the timeframe divided into two segments: 1999-2016 and 2017-2024.

In the period from 1999 to 2016, the dense vegetation coverage exhibited a significant range, with minimum coverage starting at 21.53% and maximum coverage reaching 97.95%. Sparse vegetation during this time had a much smaller range, with minimum coverage at

0.29% and maximum coverage at 1.62%. These figures indicate a strong presence of dense vegetation in the area, although there were fluctuations that could be attributed to seasonality or other environmental factors.

Following the intervention in 2017, from 2017 to 2024, the range of dense vegetation coverage remained high, with a minimum coverage of 96.89% and maximum coverage slightly decreasing to 97.74%. Sparse vegetation coverage also showed a slight increase, with minimum coverage at 0.94% and maximum coverage at 1.22%.

The comparison between the two periods suggests a stabilization of dense vegetation coverage post-intervention, despite a slight reduction in maximum coverage. This stabilization might reflect the impact of external interventions aimed at maintaining or improving vegetative health. Meanwhile, the slight increase in sparse vegetation could indicate minor shifts in land use or natural processes affecting vegetation composition. However, due to the inherent limitations of NDVI, such as sensitivity to soil reflectance and saturation in dense vegetation, these observations should be contextualized with additional data sources for comprehensive understanding.

Appendix

Aoi

Time Start	Time End	Burned Area %	Burned Area (ha)
2001-01-01T00:00:00Z	2001-12-31T23:59:59Z	0.0	0.0
2002-01-01T00:00:00Z	2002-12-31T23:59:59Z	0.0	0.0
2003-01-01T00:00:00Z	2003-12-31T23:59:59Z	0.0	0.0
2004-01-01T00:00:00Z	2004-12-31T23:59:59Z	2.53	127.3
2005-01-01T00:00:00Z	2005-12-31T23:59:59Z	0.0	0.0
2006-01-01T00:00:00Z	2006-12-31T23:59:59Z	0.0	0.0
2007-01-01T00:00:00Z	2007-12-31T23:59:59Z	0.0	0.0
2008-01-01T00:00:00Z	2008-12-31T23:59:59Z	0.0	0.0
2009-01-01T00:00:00Z	2009-12-31T23:59:59Z	0.0	0.0
2010-01-01T00:00:00Z	2010-12-31T23:59:59Z	0.0	0.0
2011-01-01T00:00:00Z	2011-12-31T23:59:59Z	0.0	0.0
2012-01-01T00:00:00Z	2012-12-31T23:59:59Z	0.0	0.0
2013-01-01T00:00:00Z	2013-12-31T23:59:59Z	0.0	0.0
2014-01-01T00:00:00Z	2014-12-31T23:59:59Z	0.0	0.0
2015-01-01T00:00:00Z	2015-12-31T23:59:59Z	0.0	0.0
2016-01-01T00:00:00Z	2016-12-31T23:59:59Z	0.0	0.0

2017-01-01T00:00:00Z	2017-12-31T23:59:59Z	0.0	0.0
2018-01-01T00:00:00Z	2018-12-31T23:59:59Z	0.0	0.0
2019-01-01T00:00:00Z	2019-12-31T23:59:59Z	0.0	0.0
2020-01-01T00:00:00Z	2020-12-31T23:59:59Z	0.0	0.0
2021-01-01T00:00:00Z	2021-12-31T23:59:59Z	0.0	0.0
2022-01-01T00:00:00Z	2022-12-31T23:59:59Z	0.0	0.0
2023-01-01T00:00:00Z	2023-12-31T23:59:59Z	0.0	0.0
2024-01-01T00:00:00Z	2024-12-31T23:59:59Z	0.0	0.0

Buffered Aoi

Time Start	Time End	Burned Area %	Burned Area (ha)
2001-01-01T00:00:00Z	2001-12-31T23:59:59Z	0.0	0.0
2002-01-01T00:00:00Z	2002-12-31T23:59:59Z	0.08	25.11
2003-01-01T00:00:00Z	2003-12-31T23:59:59Z	0.0	0.0
2004-01-01T00:00:00Z	2004-12-31T23:59:59Z	0.48	150.63
2005-01-01T00:00:00Z	2005-12-31T23:59:59Z	0.0	0.0
2006-01-01T00:00:00Z	2006-12-31T23:59:59Z	0.32	100.42
2007-01-01T00:00:00Z	2007-12-31T23:59:59Z	0.0	0.0
2008-01-01T00:00:00Z	2008-12-31T23:59:59Z	0.0	0.0
2009-01-	2009-12-	0.0	0.0

01T00:00:00Z	31T23:59:59Z		
2010-01-01T00:00:00Z	2010-12-31T23:59:59Z	0.0	0.0
2011-01-01T00:00:00Z	2011-12-31T23:59:59Z	0.0	0.0
2012-01-01T00:00:00Z	2012-12-31T23:59:59Z	0.0	0.0
2013-01-01T00:00:00Z	2013-12-31T23:59:59Z	0.0	0.0
2014-01-01T00:00:00Z	2014-12-31T23:59:59Z	0.89	276.16
2015-01-01T00:00:00Z	2015-12-31T23:59:59Z	0.0	0.0
2016-01-01T00:00:00Z	2016-12-31T23:59:59Z	0.0	0.0
2017-01-01T00:00:00Z	2017-12-31T23:59:59Z	0.0	0.0
2018-01-01T00:00:00Z	2018-12-31T23:59:59Z	0.24	75.32
2019-01-01T00:00:00Z	2019-12-31T23:59:59Z	0.0	0.0
2020-01-01T00:00:00Z	2020-12-31T23:59:59Z	0.0	0.0
2021-01-01T00:00:00Z	2021-12-31T23:59:59Z	0.0	0.0
2022-01-01T00:00:00Z	2022-12-31T23:59:59Z	0.0	0.0
2023-01-01T00:00:00Z	2023-12-31T23:59:59Z	0.08	25.11
2024-01-01T00:00:00Z	2024-12-31T23:59:59Z	0.81	251.06

Drought Risk Pdsi

Time Start	Time End	Mean PDSI
2000-01-01T00:00:00Z	2000-12-31T23:59:59Z	1.21

2001-01-01T00:00:00Z	2001-12-31T23:59:59Z	0.63
2002-01-01T00:00:00Z	2002-12-31T23:59:59Z	-1.61
2003-01-01T00:00:00Z	2003-12-31T23:59:59Z	-1.34
2004-01-01T00:00:00Z	2004-12-31T23:59:59Z	-1.14
2005-01-01T00:00:00Z	2005-12-31T23:59:59Z	-0.88
2006-01-01T00:00:00Z	2006-12-31T23:59:59Z	-1.91
2007-01-01T00:00:00Z	2007-12-31T23:59:59Z	2.09
2008-01-01T00:00:00Z	2008-12-31T23:59:59Z	0.14
2009-01-01T00:00:00Z	2009-12-31T23:59:59Z	1.44
2010-01-01T00:00:00Z	2010-12-31T23:59:59Z	2.65
2011-01-01T00:00:00Z	2011-12-31T23:59:59Z	-1.77
2012-01-01T00:00:00Z	2012-12-31T23:59:59Z	1.54
2013-01-01T00:00:00Z	2013-12-31T23:59:59Z	2.74
2014-01-01T00:00:00Z	2014-12-31T23:59:59Z	-1.84
2015-01-01T00:00:00Z	2015-12-31T23:59:59Z	-1.71
2016-01-01T00:00:00Z	2016-12-31T23:59:59Z	3.87
2017-01-01T00:00:00Z	2017-12-31T23:59:59Z	1.88
2018-01-01T00:00:00Z	2018-12-31T23:59:59Z	0.93
2019-01-01T00:00:00Z	2019-12-31T23:59:59Z	-1.88
2020-01-01T00:00:00Z	2020-12-31T23:59:59Z	1.79
2021-01-01T00:00:00Z	2021-12-31T23:59:59Z	1.05
2022-01-01T00:00:00Z	2022-12-31T23:59:59Z	3.07
2023-01-01T00:00:00Z	2023-12-31T23:59:59Z	-0.47
2024-01-01T00:00:00Z	2024-12-31T23:59:59Z	2.21

Forest Cover Hansen

Time Start	Time End	Forest	Loss	Past Loss	Non-Forest	No Data	Deforestation Rate
2000-01-01T00:00:00Z	2000-12-31T23:59:59Z	97.7	0.0	0.0	2.3	0	0.0
2001-01-01T00:00:00Z	2001-12-31T23:59:59Z	97.66	0.04	0.0	2.3	0	0.04
2002-01-01T00:00:00Z	2002-12-31T23:59:59Z	97.5	0.16	0.04	2.3	0	0.16
2003-01-01T00:00:00Z	2003-12-31T23:59:59Z	97.39	0.11	0.2	2.3	0	0.12
2004-01-01T00:00:00Z	2004-12-31T23:59:59Z	95.89	1.5	0.32	2.3	0	1.54
2005-01-01T00:00:00Z	2005-12-31T23:59:59Z	95.19	0.7	1.81	2.3	0	0.73
2006-01-01T00:00:00Z	2006-12-31T23:59:59Z	95.05	0.14	2.51	2.3	0	0.15
2007-01-01T00:00:00Z	2007-12-31T23:59:59Z	94.96	0.09	2.65	2.3	0	0.09
2008-01-01T00:00:00Z	2008-12-31T23:59:59Z	94.92	0.04	2.74	2.3	0	0.05
2009-01-01T00:00:00Z	2009-12-31T23:59:59Z	94.87	0.05	2.78	2.3	0	0.05

01-01T00:00:00Z	31T23:59:59Z						
2010-01-01T00:00:00Z	2010-12-31T23:59:59Z	94.87	0.01	2.83	2.3	0	0.01
2011-01-01T00:00:00Z	2011-12-31T23:59:59Z	94.19	0.68	2.84	2.3	0	0.71
2012-01-01T00:00:00Z	2012-12-31T23:59:59Z	93.62	0.57	3.51	2.3	0	0.6
2013-01-01T00:00:00Z	2013-12-31T23:59:59Z	93.54	0.08	4.08	2.3	0	0.09
2014-01-01T00:00:00Z	2014-12-31T23:59:59Z	93.16	0.38	4.16	2.3	0	0.4
2015-01-01T00:00:00Z	2015-12-31T23:59:59Z	90.77	2.39	4.54	2.3	0	2.57
2016-01-01T00:00:00Z	2016-12-31T23:59:59Z	90.27	0.5	6.93	2.3	0	0.55
2017-01-01T00:00:00Z	2017-12-31T23:59:59Z	90.08	0.19	7.43	2.3	0	0.22
2018-01-01T00:00:00Z	2018-12-31T23:59:59Z	89.96	0.12	7.62	2.3	0	0.13
2019-01-01T00:00:00Z	2019-12-31T23:59:59Z	89.89	0.07	7.74	2.3	0	0.08
2020-01-01T00:00:00Z	2020-12-31T23:59:59Z	89.84	0.05	7.81	2.3	0	0.06
2021-01-01T00:00:00Z	2021-12-31T23:59:59Z	89.32	0.52	7.87	2.3	0	0.58

:00Z	59Z						
2022-01-01T00:00:00Z	2022-12-31T23:59:59Z	89.1	0.22	8.39	2.3	0	0.24
2023-01-01T00:00:00Z	2023-12-31T23:59:59Z	88.8	0.3	8.6	2.3	0	0.33