Metadata-File (is CC0) describing geospatial data elaborated as part of the following project and research publications.

Project: "Governance processes and sustainability impacts of the extractive industries: Generating transformation knowledge in the biodiversity hotspot of Madagascar", Centre for Development and Environment, University of Bern

Donor: SNIS (Swiss Network for International Studies), Geneva.
Project duration: 2019 – 2023
Principal investigator: Prof.Dr. J.G. Zaehringer (Julie.zaehringer@wyssacademy.org)

Research Publications as part of which the listed metadata/datasets have been developed and applied:

- Eckert, S., Schmid, L.V., Messerli, P., Zaehringer, J.G.(2023): Spatio-Temporal Assessment of Deforestation and Forest Degradation Indicate Spillover Effects Triggered by Ambatovy's Mining Activities and Conservation Efforts. Remote Sensing Applications: Society and Environment. In preparation for submission.
- Zaehringer et al. (2023): The large-scale extractive industries in Madagascar: perceived social-ecological impacts of operational and exploratory foreign mining investments. Current Research in Environmental Sustainability. In preparation for submission.

Table 1: Metadata describing the shared geospatial data.

Dataset description	Format	Geographic projection/Datum	Filename	License
Annual deforestation of Ambatovy Mine lease, CZ and surrounding area	Raster (geotiff)	UTM39S/WGS84	SNIS_annual_deforestation_AmbatovyMineLease.tif	CC-BY-NC
Annual deforestation of Ankerana and surrounding area	Raster (geotiff)	UTM39S/WGS84	SNIS_annual_deforestation_Ankerana.tif	CC-BY-NC
Annual forest degradation of Ambatovy Mine lease, CZ and surrounding area	Raster (geotiff)	UTM39S/WGS84	SNIS_annual_degradation_AmbatovyMineLease.tif	CC-BY-NC
Annual forest degradation of Ankerana and surrounding area	Raster (geotiff)	UTM39S/WGS84	SNIS_annual_degradation_Ankerana.tif	CC-BY-NC

Perimeter of mine footprint	Shapefile	UTM39S/WGS84	MineFootprint_utm39s.shp (together with: .CPG, .dbf, .prj, .sbn, .sbx, .shx, .shp.xml)	CC-BY-NC
Perimeter of conservation zone CZ	Shapefile	UTM39S/WGS84	Conservation_utm39s.shp (together with: .CPG, .dbf, .prj, .sbn, .sbx, .shx, .shp.xml)	CC-BY-NC
Perimeter of mine lease	Shapefile	UTM39S/WGS84	MineLease_utm39s.shp (together with: .CPG, .dbf, .prj, .sbn, .sbx, .shx, .shp.xml)	CC-BY-NC
Perimeter of Ankerana conservation zone	Shapefile	UTM39S/WGS84	Ankerana_utm39s.shp (together with: .CPG, .dbf, .prj, .sbn, .sbx, .shx, .shp.xml)	CC-BY-NC
Perimeter of mine lease buffer	Shapefile	UTM39S/WGS84	MineLease_buffer_utm39s.shp (together with: .CPG, .dbf, .prj, .sbn, .sbx, .shx, .shp.xml)	CC-BY-NC
Perimeter of Ankerana buffer	Shapefile	UTM39S/WGS84	Ankerana_buffer_utm39s.shp (together with: .CPG, .dbf, .prj, .sbn, .sbx, .shx, .shp.xml)	CC-BY-NC
Hydrological stream network derived from ALOS AV3D digital surface model product (Tile: S019E048)	Shapefile	UTM39S/WGS84	streams150smooth.shp (together with: .CPG, .dbf, .prj, .sbn, .sbx, .shx, .shp.xml)	CC-BY-NC
Tailing dam breach modelled maximum wave depth (meter) and Scenario dataset: full breaches of 4 dam walls out of 9)	Raster (geotiff)	UTM39S/WGS84	maxwd49dV4.tif; maindam5_breach20_10m_zero.tif	CC-BY-NC
Annual urbanization between 2001 – 2019 in Moramanga region (around Ambatovy mine)	Raster (geotiff)	WGS84	Moramanga_urbanization_2001_2019.tif	CC-BY-NC
Annual urbanization between 2001 – 2019 in Taolagnaro region (around QMM/Rio Tinto mine)	Raster (geotiff)	WGS84	Taolagnaro_urbanization_2001_2019.tif	CC-BY-NC

Table 2: Symbology coding of raster datasets (see Table 1)

Datasets	Values	Label
Annual deforestation	0 – 4; 5 – 18; 20 - 21	No meaning; Years 2005 – 2020; Multiple consecutive disturbance

| Annual degradation | $1 - 15$ | Years 2006 - 2020 |
| Annual urbanization | $1 - 19$ | Years $2001 - 2019$ |