

Examples and definitions for the Drivers of Tropical Forest Loss crowdsourcing campaign

International Institute for Applied Systems Analysis (IIASA)
December 9th, 2020

Drivers of tropical forest loss: Definitions

Step 1 – Please select the predominant tree loss driver visible **inside the tree loss pixels** in the **blue box**

- **Subsistence agriculture:** Relatively small fields (typically less than a quarter of the blue box), sometimes without defined borders. Includes agroforestry (combined trees and annual crops) in small fields, shifting cultivation (e.g., abandoned or burnt fields, fallow, bushes). Also includes mixed systems, where small crop fields, small scale pastures and cattle, small patches of palms might be seen, e.g., in some countries in Africa. Time-series helps for identification.
- **Commercial agriculture:** Uniform/monoculture, large fields (typically larger than one quarter of the blue box), but sometimes they can be several small fields together or close by, all with the same land use. Includes permanent (tree-crops/fruit trees) or annual crops, e.g., citrus plantations, olive trees, vineyards, cereals, soybean, sugar cane, banana and cacao plantations. It also includes commercial aquaculture. Excludes oil palm plantations.
- **Commercial oil palm and other palms:** Includes oil palm and other palms such as coconut plantations in large sized fields or several small fields together.
- **Pasture:** Managed grasslands typically with signs of cattle around. May include sparse trees. Ponds of water with roads leading to or criss-crossing trails may be signs of pasture. No obvious agricultural management visible.
- **Managed forest/forestry:** Includes logging, timber plantations, managed forest and replanted forest. This class also includes rubber plantations.
- **Roads/trails/buildings:** Includes any built-up areas and infrastructure, as well as big and small roads or trails that may show human impact or urban expansion.
- **Mining and crude oil extraction:** Includes open mining, small regular oil extraction platforms and dams.
- **Wildfire:** A large (typically larger than the blue box) burnt area with irregular borders.
- **Other natural disturbances/no tree loss driver:** Drought, windthrow (trees uprooted by wind), flooding or no visible tree loss driver.

Step 2 – Please select **all other** tree loss drivers visible **inside the tree loss pixels** in the **blue box**

- **Agriculture/pasture:** Includes the categories commercial and subsistence agriculture, pasture but also commercial oil palm and other palm plantations
- **Managed forest/forestry:** Includes logging, timber plantations, managed forest and replanted forest. This class also includes rubber plantations.
- **Roads/trails/buildings:** Includes the categories roads/trails/buildings and mining and crude oil extraction
- **Natural disturbances:** Includes the categories wildfire and other natural disturbances
- **No other tree loss driver:** Select this if you think there are no, or no other, tree loss drivers visible

Step 3 – Can you see roads, trails or buildings in the **blue box?** (Yes/No)

Road/trails/buildings, Ghana



- STEP 1:**
Please select the **predominant** tree loss driver visible inside the **tree loss pixels** in the **blue box**
- Subsistence agriculture
 - Commercial agriculture
 - Commercial oil palm or other palm plantations
 - Pasture
 - Managed forest/forestry
 - Roads/trails/buildings**
 - Mining and crude oil extraction
 - Wildfire (disturbance)
 - Other natural disturbances/No tree-loss driver

- STEP 2:**
Please select **all other** tree loss drivers visible inside the **tree loss pixels** in the **blue box**
- Agriculture/Pasture
 - Managed forest/forestry
 - Roads/trails/buildings
 - Natural disturbances
 - No other tree loss driver visible**

- STEP 3:**
Can you see roads, trails or buildings in the **blue box**

Yes No

Comment:

Submit Skip

STEP 1:

Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box



Subsistence agriculture

Commercial agriculture

Commercial oil palm or other palm plantations

Pasture

Managed forest/forestry

Roads/trails/buildings

Mining and crude oil extraction

Wildfire (disturbance)

Other natural disturbances/No tree-loss driver

STEP 2:

Please select all other tree loss drivers visible inside the tree loss pixels in the blue box

Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

No other tree loss driver visible

STEP 3:

Can you see roads, trails or buildings in the blue box

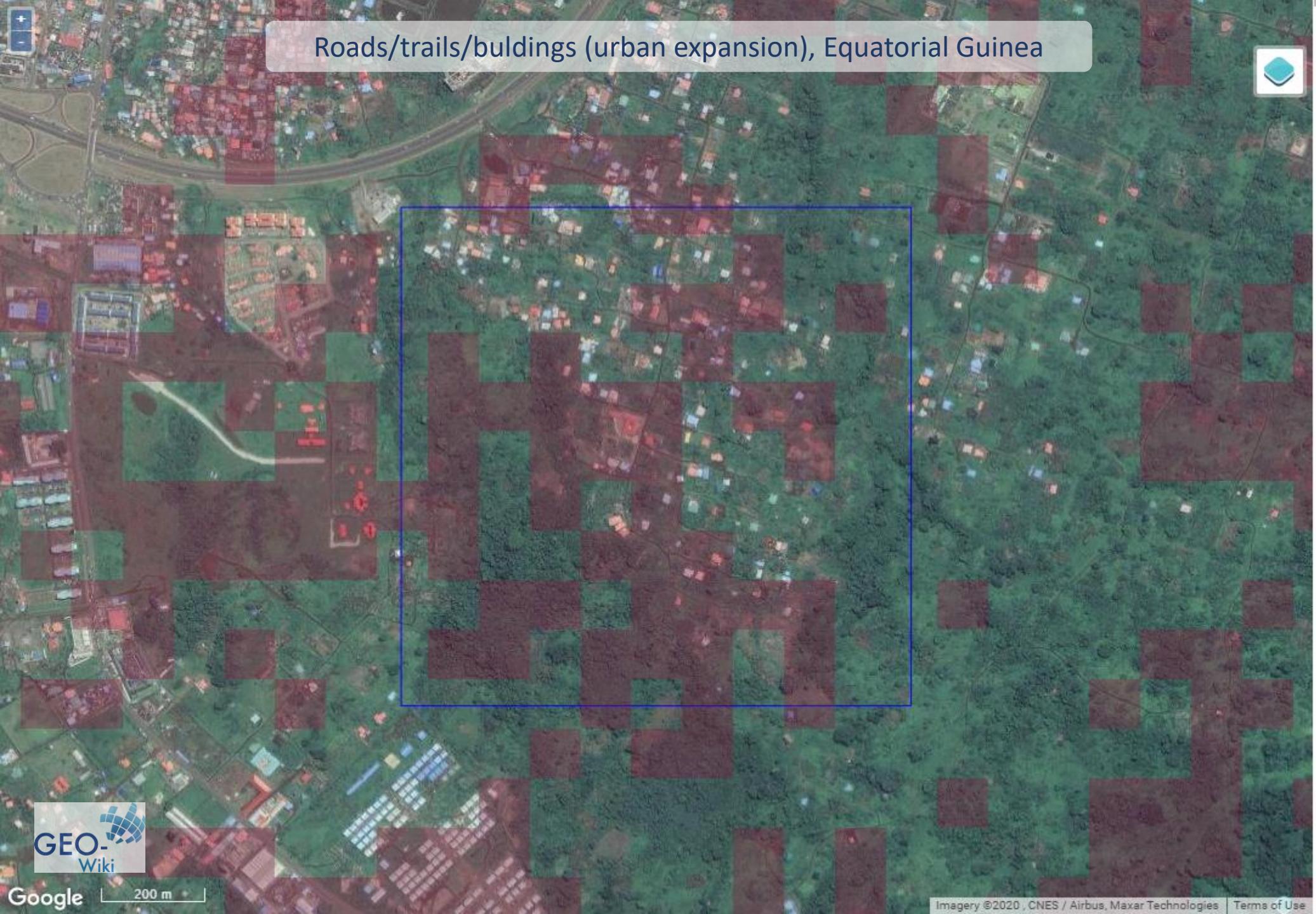
Yes

No

Comment:

Submit

Skip



200 m

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-

STEP 1:
Please select the **predominant** tree loss driver visible inside the **tree loss pixels** in the **blue box**

- Subsistence agriculture
- Commercial agriculture
- Commercial oil palm or other palm plantations
- Pasture
- Managed forest/forestry
- Roads/trails/buildings
- Mining and crude oil extraction
- Wildfire (disturbance)
- Other natural disturbances/No tree-loss driver

STEP 2:
Please select **all other** tree loss drivers visible inside the **tree loss pixels** in the **blue box**

- Agriculture/Pasture
- Managed forest/forestry
- Roads/trails/buildings
- Natural disturbances
- No other tree loss driver visible

STEP 3:
Can you see roads, trails or buildings in the **blue box**

Yes No

Comment:

Submit **Skip**



Managed forest (plantation), some pasture and trails, Brazil



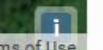
- STEP 1:**
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 - Wildfire (disturbance)
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- Please select all other tree loss drivers visible inside the tree loss pixels in the blue box
- Agriculture/Pasture
 - Managed forest/forestry
 - Roads/trails/buildings
 - Natural disturbances
 - No other tree loss driver visible

- STEP 3:**
- Can you see roads, trails or buildings in the blue box
- Yes
 - No

Comment:

Submit Skip



Submit

Skip

Comment:

STEP 1:
Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

Subsistence agriculture

Commercial agriculture

Commercial oil palm or other palm plantations

Pasture

Managed forest/forestry

Roads/trails/buildings

Mining and crude oil extraction

Wildfire (disturbance)

Other natural disturbances/No tree-loss driver

STEP 2:
Please select all other tree loss drivers visible inside the tree loss pixels in the blue box

Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

No other tree loss driver visible

STEP 3:
Can you see roads, trails or buildings in the blue box

Yes

No

+

-

Managed forest (plantation) + pasture, Brazil



STEP 1:

Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

Subsistence agriculture

Commercial agriculture

Commercial oil palm or other palm plantations

Pasture

Managed forest/forestry

Roads/trails/buildings

Mining and crude oil extraction

Wildfire (disturbance)

Other natural disturbances/No tree-loss driver

STEP 2:

Please select all other tree loss drivers visible inside the tree loss pixels in the blue box

Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

No other tree loss driver visible

STEP 3:

Can you see roads, trails or buildings in the blue box

Yes

No

Comment:

Submit

Skip

STEP 1:
Please select the predominant tree loss driver visible inside the **tree loss pixels** in the **blue box**

Subsistence agriculture
Commercial agriculture
Commercial oil palm or other palm plantations
Pasture
Managed forest/forestry
Roads/trails/buildings
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Other natural disturbances/No tree-loss driver

STEP 2:
Please select all other tree loss drivers visible inside the **tree loss pixels** in the **blue box**

Agriculture/Pasture
Managed forest/forestry
Roads/trails/buildings
Natural disturbances
No other tree loss driver visible

STEP 3:
Can you see roads, trails or buildings in the **blue box**

Yes	No
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Comment:

Submit  Skip 

Subsistence agriculture (shifting cultivation) with trails, Madagascar



Google Earth time-series show shifting cultivation



Subsistence agriculture, Ivory Coast



STEP 1:
Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

Subsistence agriculture

Commercial agriculture

Commercial oil palm or other palm plantations

Pasture

Managed forest/forestry

Roads/trails/buildings

Mining and crude oil extraction

Wildfire (disturbance)

Other natural disturbances/No tree-loss driver

STEP 2:

Please select all other tree loss drivers visible inside the tree loss pixels in the blue box

Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

No other tree loss driver visible

STEP 3:

Can you see roads, trails or buildings in the blue box

Yes

No

Comment:

Submit

Skip

Small fields with oil palm are part of mixed systems
(likely to be encountered in some countries in Africa)



Commercial agriculture (coffee plantation), Brazil

STEP 1:
Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

Subsistence agriculture

Commercial agriculture

Commercial oil palm or other palm plantations

Pasture

Managed forest/forestry

Roads/trails/buildings

Mining and crude oil extraction

Wildfire (disturbance)

Other natural disturbances/No tree-loss driver

STEP 2:
Please select all other tree loss drivers visible inside the tree loss pixels in the blue box

Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

No other tree loss driver visible

STEP 3:
Can you see roads, trails or buildings in the blue box

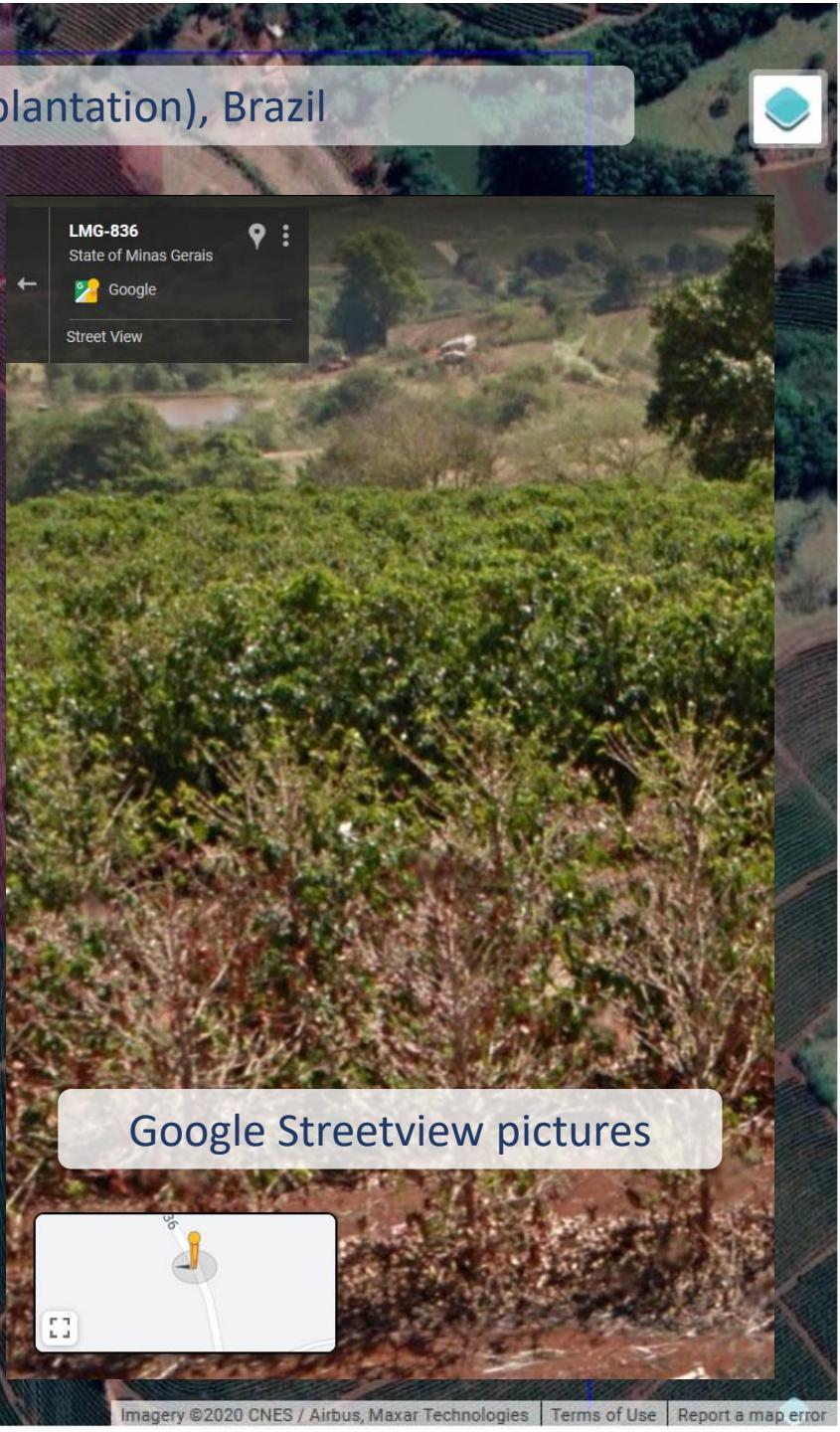
Yes **No**

Comment:

Submit **Skip**

Google Streetview pictures

An aerial photograph of a coffee plantation in Brazil, showing rows of coffee trees on a hillside. A blue rectangular box highlights a specific area in the center-left of the image.

A Google Street View interface showing a view of the coffee plantation. The interface includes a map overlay with coordinates (LMG-836, State of Minas Gerais), a location pin, and a three-dot menu icon. Below the map is a "Street View" button. The main view shows a dense green coffee plantation.

A close-up view from a Google Street View camera, showing a dense cluster of coffee plants growing on a hillside. The plants are green and appear healthy.

A small map icon with a location pin, indicating the exact location of the Street View camera.

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GEO-Wiki



Mining (gravel), Indonesia



STEP 1:
Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

- | |
|--|
| Subsistence agriculture |
| Commercial agriculture |
| Commercial oil palm or other palm plantations |
| Pasture |
| Managed forest/forestry |
| Roads/trails/buildings |
| Mining and crude oil extraction |
| Wildfire (disturbance) |
| Other natural disturbances/No tree-loss driver |

STEP 2:

Please select all other tree loss drivers visible inside the **tree loss pixels** in the **blue box**

- Agriculture/Pasture
 - Managed forest/forestry
 - Roads/trails/buildings
 - Natural disturbances
 - No other tree loss driver visible

STEP 3:

Can you see roads, trails or buildings in the blue box

Yes

No

Comment:



Google Earth show further details



Google

700 m



skip

Digitized by srujanika@gmail.com

Glossary | Report

Subsistence agriculture (terraces), Vietnam

Terrain and detailed view in Google Earth

STEP 1:
Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

Subsistence agriculture
Commercial agriculture
Commercial oil palm or other palm plantations
Pasture
Managed forest/forestry
Roads/trails/buildings
Mining and crude oil extraction
Wildfire (disturbance)
Other natural disturbances/No tree-loss driver

STEP 2:
Please select all other tree loss drivers visible inside the tree loss pixels in the blue box

Agriculture/Pasture
Managed forest/forestry
Roads/trails/buildings
Natural disturbances
No other tree loss driver visible

STEP 3:
Can you see roads, trails or buildings in the blue box

Yes	No
-----	----

Comment:

Submit **Skip**

GEO-Wiki

100 m

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Urban expansion and agriculture, Brazil



STEP 1:

- Please select the predominant tree loss driver visible inside the **tree loss pixels** in the **blue box**
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STEP 2:

- Please select all other tree loss drivers visible inside the **tree loss pixels** in the **blue box**
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 - Roads/trails/buildings
 - Natural disturbances
 - No other tree loss driver visible

STEP 3:

Can you see roads, trails or buildings in the **blue box**

Yes

No

Comment:

Submit



Skip

Pasture , Brazil

STEP 1:
Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

Subsistence agriculture

Commercial agriculture

Commercial oil palm or other palm plantations

Pasture

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Roads/trails/buildings

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Other natural disturbances/No tree-loss driver

STEP 2:
Please select all other tree loss drivers visible inside the tree loss pixels in the blue box

Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

No other tree loss driver visible

STEP 3:
Can you see roads, trails or buildings in the blue box

Yes **No**

Comment:
Sentinel

Submit **Skip**

GEO-Wiki

Google 100 m

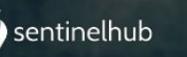
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Corrals and animals north of location

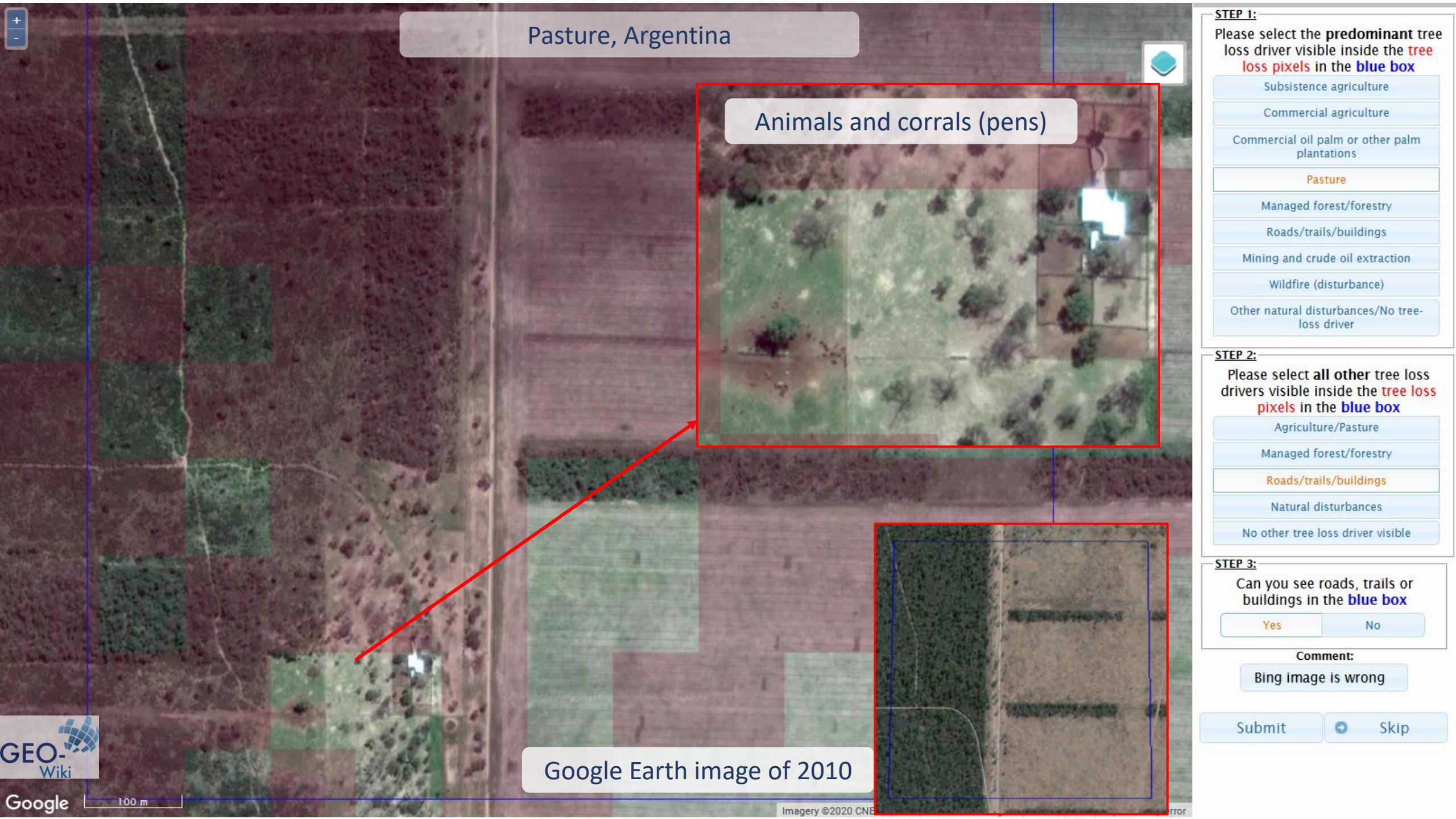
Use of the Sentinel time-series tool, recent images show that the forest has been cut and now the land is used as pastures



 sentinelhub

 sentinelhub

 sentinelhub



Pasture, Argentina



STEP 1:-

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Commercial agriculture

Commercial oil palm or other palm plantations

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Wildfire (disturbance)

Other natural disturbances/No tree-loss driver

STEP 2:

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Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

other tree loss driver visi

EP 3:

Can you see roads, trails or buildings in the blue box

Yes

No

Comment:

Google Earth image of 2010

Imagery ©2020 CNE

GEO-
NET

Google

Mining, Indonesia

STEP 1:
Please select the **predominant** tree loss driver visible inside the **tree loss pixels** in the **blue box**

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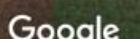
- Agriculture/Pasture
- Managed forest/forestry
- Roads/trails/buildings
- Natural disturbances
- No other tree loss driver visible

STEP 3:
Can you see roads, trails or buildings in the **blue box**

- Yes
- No

Comment:

Submit  **Skip** 


 100 m 

Commercial oil palm, Malaysia



- STEP 1:**
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 - Pasture
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 - Mining and crude oil extraction
 - Wildfire (disturbance)
 - Other natural disturbances/No tree-loss driver

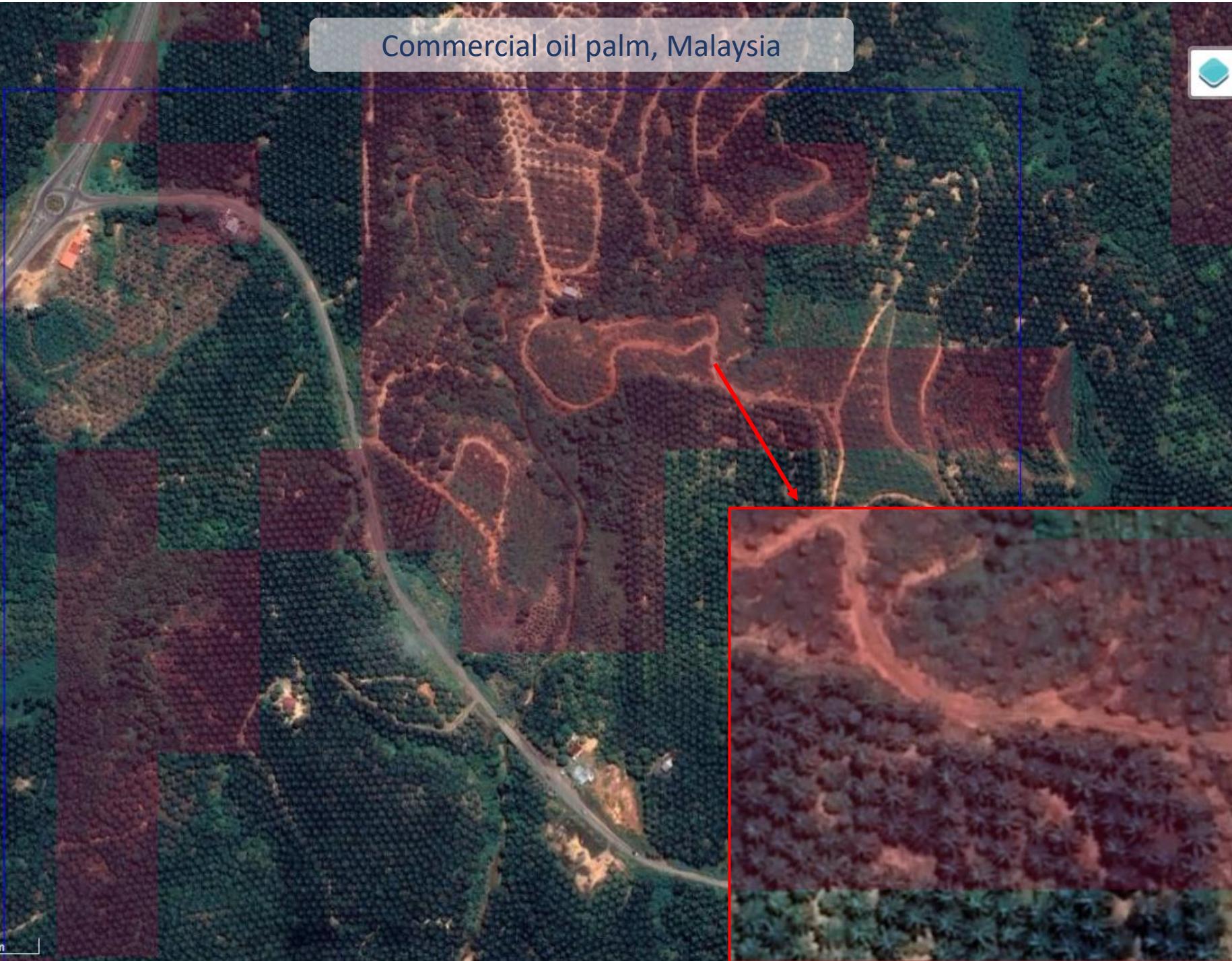
- STEP 2:**
Please select all other tree loss drivers visible inside the tree loss pixels in the blue box
- Agriculture/Pasture
 - Managed forest/forestry
 - Roads/trails/buildings
 - Natural disturbances
 - No other tree loss driver visible

- STEP 3:**
Can you see roads, trails or buildings in the blue box

Yes No

Comment:

Submit Skip



Commercial agriculture (fruit tree plantations), Brazil



- STEP 1:**
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 - No other tree loss driver visible

- STEP 3:**
Can you see roads, trails or buildings in the blue box

Yes No

Comment:

Submit Skip

+
-

Wildfire, Honduras

A satellite image showing a large area of land affected by a wildfire in Honduras. A blue rectangular box highlights a central, heavily smoke-filled area. A red rectangular box highlights a smaller, more defined area in the lower-left portion of the image, which appears to be a cleared or burnt area. A small red dot is placed near the center of the blue box.

Google Earth Sep 2015 Google Earth Jan 2016

GEO-Wiki

Google
Latitude: 14°7'00.5", Longitude: -87°10'29.1"
100 m

STEP 1:
Please select the predominant tree loss driver visible inside the tree loss pixels in the blue box

- Subsistence agriculture
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- Yes
- No

Comment: _____

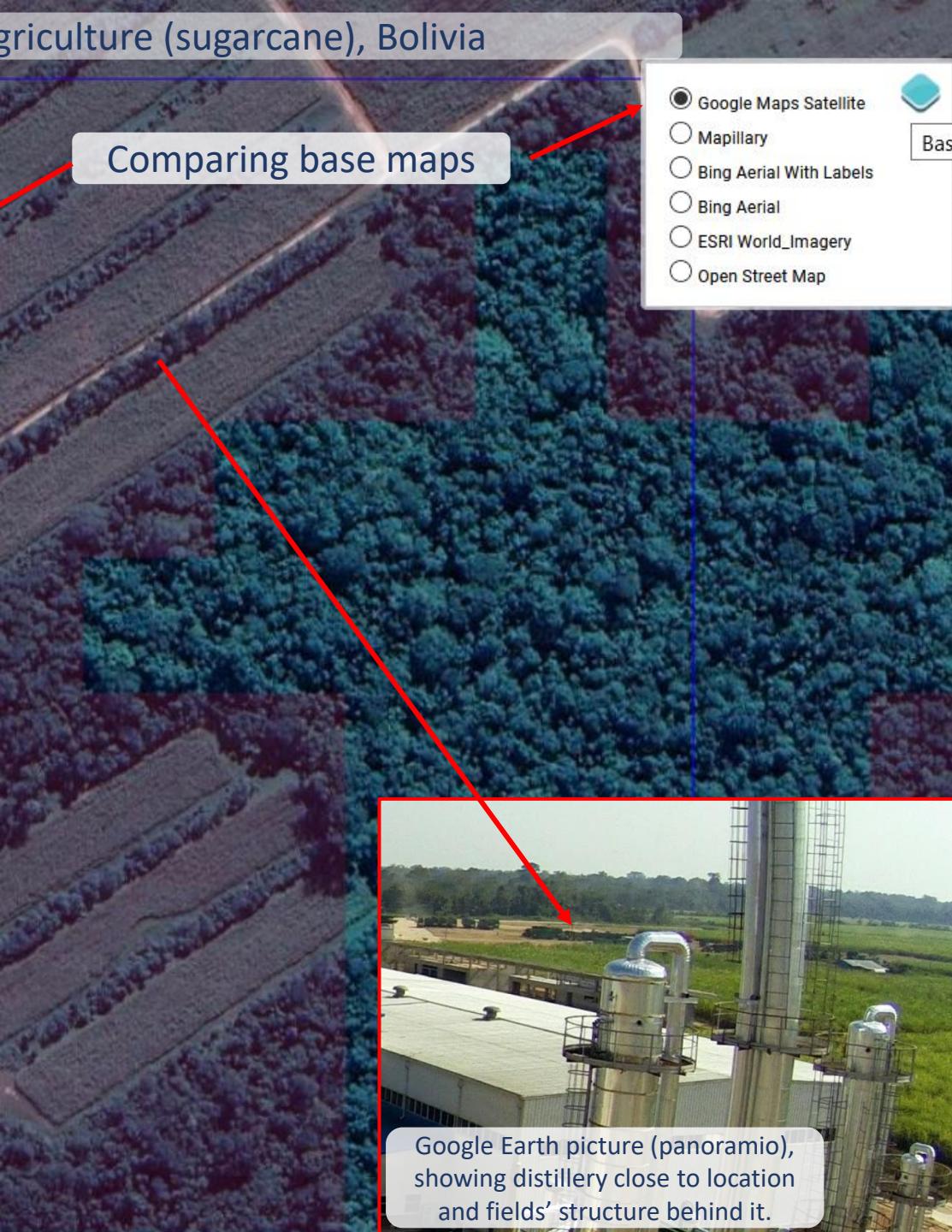
Submit Skip

Commercial agriculture (sugarcane), Bolivia



- Google Maps Satellite
 - Mapillary
 - Bing Aerial With Labels
 - Bing Aerial
 - ESRI World_Imagery
 - Open Street Map

Comparing base maps



- Google Maps Satellite
 - Mapillary
 - Bing Aerial With Labels
 - Bing Aerial
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 - Open Street Map

Base maps

STEP 1:

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Subsistence agriculture

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Commercial oil palm or other palm plantations

Pasture

Managed forest/forestry

Roads/trails/buildings

Mining and crude oil extraction

Wildfire (disturbance)

Other natural disturbances/No tree-loss driver

22

Please select all other tree loss drivers visible inside the **tree loss pixels in the **blue box****

Agriculture/Pasture

Managed forest/forestry

Roads/trails/buildings

Natural disturbances

No other tree loss driver visible

STEP 3

Can you see roads, trails or buildings in the blue box

Ye

No

Comment:

Google Earth picture (panoramio), showing distillery close to location and fields' structure behind it.

[Submit](#)



skip

Coal Mining, Indonesia

Pictures close by - Google Earth

Sentinel time-series

STEP 1:
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- Roads/trails/buildings
- Natural disturbances
- No other tree loss driver visible**

STEP 3:
Can you see roads, trails or buildings in the blue box

- Yes**
- No**

Comment: _____

Submit **+** **Skip**

GEO-Wiki

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