Sharing Experiences on the Implementation of OpenStreetMap for Humanitarian Purposes in the Education Sector through Events

Introduction

OpenStreetMap can be a very useful environment for education in schools, being relevant in geography, mathematics, ecology, community planning, government and information technology (IT). Some teachers use existing OpenStreetMap data in class projects, while others contribute new data to OpenStreetMap.

Students develop their STEM skills, especially the ITC technologies and crowdsourcing collaboration online. At the same time, the students learn:

- to be volunteers, to donate time and knowledge for the benefit of others in need
- to prepare a public presentation and promotion to define the school
- communication skills in an international working environment;
- to demonstrate responsibility, through positive action, regarding cultural heritage, cultural diversity and the local community;
- interdisciplinary competences in a cooperative project.
- to extend the geographical and cultural horizons of students and teachers.

This brochure shares experiences applied in an Erasmus+ project context as good practices to guide teachers that want to introduce OSM in their classes. We chose to show five activities that were organized as events, some with physical presence and some online. The content includes organisational suggestions and also handouts for students and other materials that were used during the event.

- **All .pdf or images in this brochure and much more can be found on the wiki pages of the project**
  https://wiki.openstreetmap.org/wiki/EuYoutH_OSM

- **Observe the links at each activity**

Hoping you will find the information useful and relevant, we wish you very interesting educational experiences using OpenStreetMap.

Content

1.1 Mapathon with Doctors without Borders - Saarbrücken

In Saarbrücken, Germany, our students participated in a Mapathon, organised by OpenSaar e. V. in cooperation with Doctors without Borders. Our students were scheduled as helpers, as they had knowledge of Tasking Manager, Java OpenStreetMap Editor (JOSM) and to map with it in the Democratic Republic of Congo.

What do you need to know if you want to run a mapathon? You can find very good instructions here at Missing Maps [1]. We have adapted the checklist [2] for German readers.

In order to be able to roughly estimate the number of participants, the students put an online registration on the internet so that interested people could also register.

The students were again especially prepared with the "How do I work with the Tasking Manager". - see below -

A "Handout" was prepared for the participants of the Mapathon. - see below -

The participants were introduced to the activities with a joint presentation by Médecins Sans Frontières and euYoutH_OSM. - see below -

The event was [featured](#) [3] on local television and in the local press.

For more information please check the [German wiki page](#) [4].

Links:

[1] https://www.missingmaps.org/host/

[2] https://wiki.openstreetmap.org/wiki/EuYoutH_OSM/Saarburg#Checkliste_f.C3.BCr_Mapathon

[3] https://www.volksfreund.de/region/konz-saarburg-hochwald/berufsschueler-helfen-medizinern_aid-39464803

[4] https://wiki.openstreetmap.org/wiki/EuYoutH_OSM/Saarburg

Appendix

- Joint Presentation Doctors Without Borders and euYoutH_OSM - Introduction of the Region in the Democratic Republic of the Congo - What and how to map?
- How do I work with the HOT - Tasking Manager
- Handout - Mapping
- JOSM-Editor

1.2 Outdoor activity Collecting Data -
example: Fire hydrants and meeting points - using Field papers

After the presentation and the students' discussions with the SRPCBA [1] (the Civil Protection in Terceira) representatives, the information emerged that hydrants and meeting points in disaster situations are quite important. From there, the group decided to create a task to check the existing hydrants in the city of Angra do Heroísmo, in OpenstreetMap and, if necessary, map, complement and document the data.

After the visit to SRPCBA, using Overpass Turbo [2] , a web-based data collection tool for OpenStreetMap, the students made a query for Angra do Heroísmo, using "hydrants" as an example.
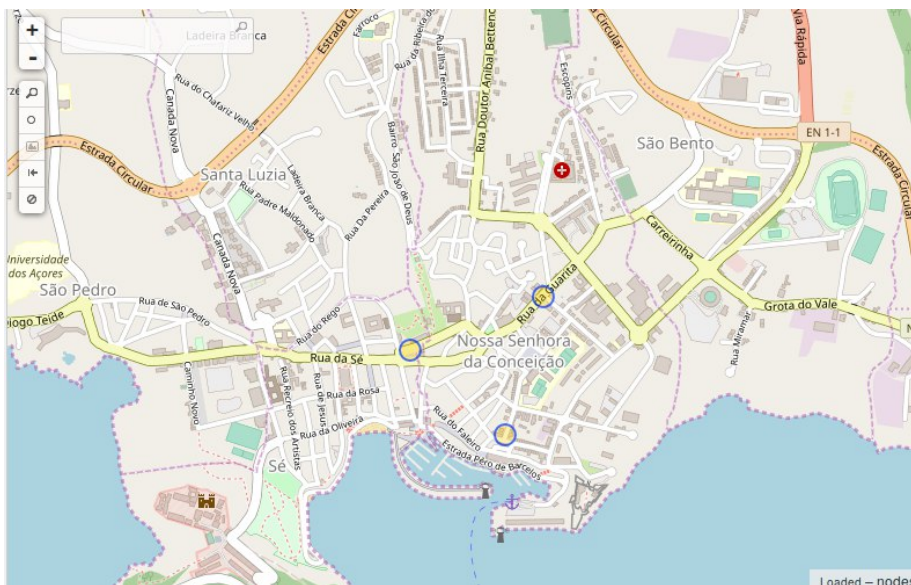
As can be seen, only 3 hydrants are recorded in OpenStreetMap at the time of the query.

With the help of the "Field Papers" [3] website, Angra do Heroísmo was divided into a total of 12 areas.
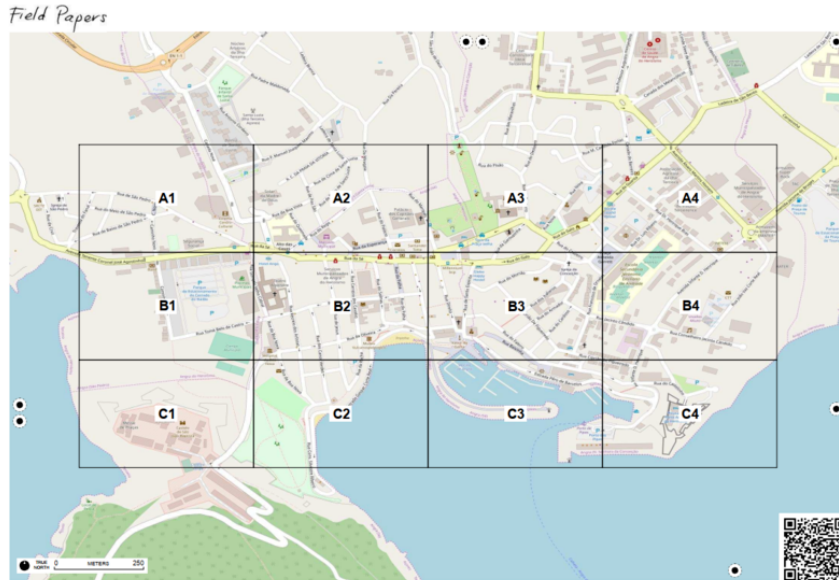
In each area, multinational teams of students and teachers used the OSMTracker [4] or Go Map! [5] to map the locations of the fire hydrants.
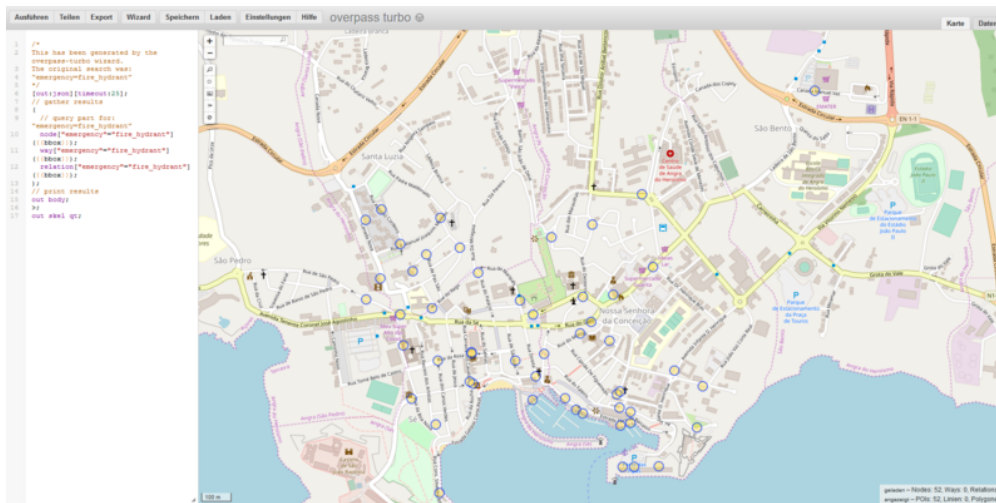
After the locations were collected with OSMTracker or GoMap!, the data were imported (here exemplarily for area B3) into JOSM [6].
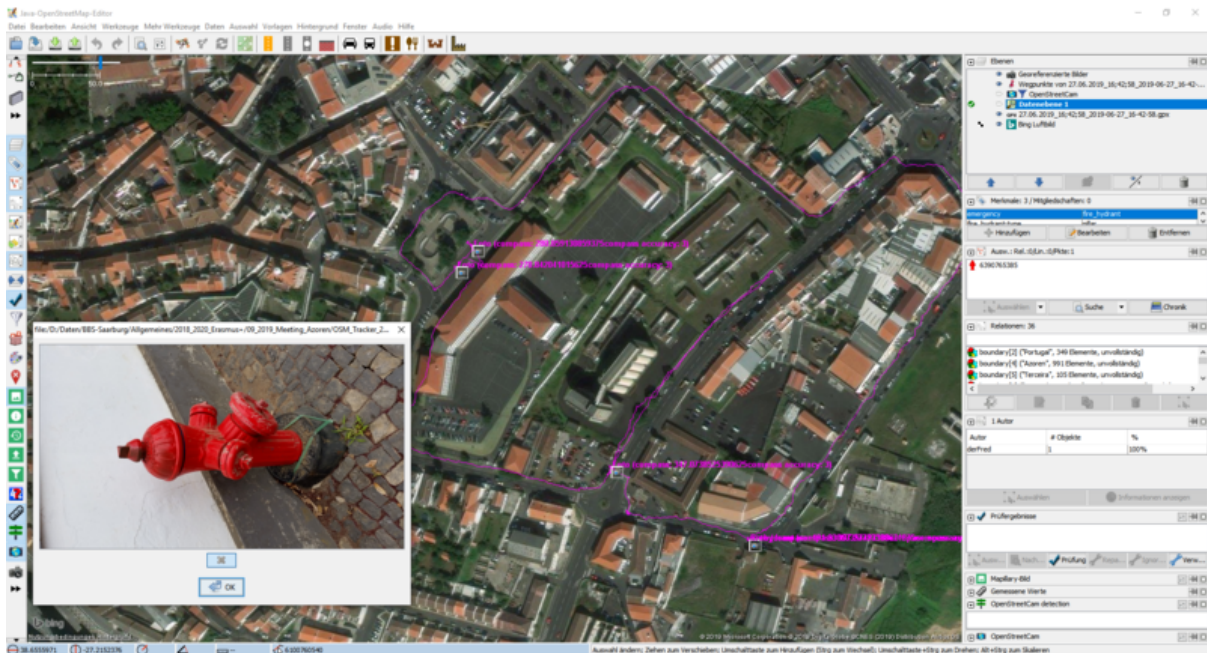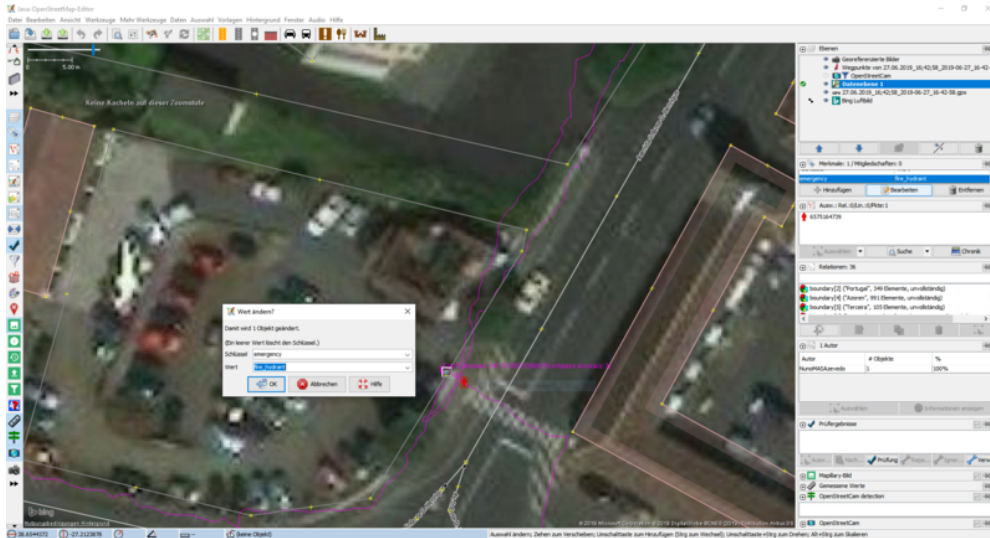
Labeling in JOSM

After all the data is entered, and after further consultation in Overpass Turbo (http://overpass-turbo.eu), the new OSM map will look as follows, with a total of 50 hydrants.

OSM after mapping

Angra do Heroísmo - Fire Hydrants

Students documented the location of the hydrants with MyOSMatic [7].

Other outdoor activities such as collecting images with **Mapillary** in Portmarnock [8], **OpenStreeCam** (now KartaView) in Terceira [9], mapping with drones in Terceira [10] or mapping the zoo in Heidelberg [11] you can find on our wiki pages.

Links:
[1] https://bit.ly/353CzO7
[2] http://overpass-turbo.eu
[3] http://fieldpapers.org/
[4] https://wiki.openstreetmap.org/wiki/OSMTracker_(Android)
[5] https://wiki.openstreetmap.org/wiki/Go_Map!
[6] https://josm.openstreetmap.de/
[7] https://maposmatic.osm-baustelle.de/
[8] https://bit.ly/3g6N8Xd
[9] https://bit.ly/3ggzsri
[10] https://bit.ly/357Hhe2
[11] https://bit.ly/3pQnmdb

1.3 Continuous work during the whole project on the map of Terceira - mapping all buildings, roads and street names

We mapped in Terceira taking in consideration the real possibility of an earthquake disaster on the island. Taking advice from the Civil Protection in Angra do Heroísmo, we mapped the residential buildings, adding house numbers and street names, fire hydrants and assembly points. http://taches.francophonelibre.org/project/316 [1]
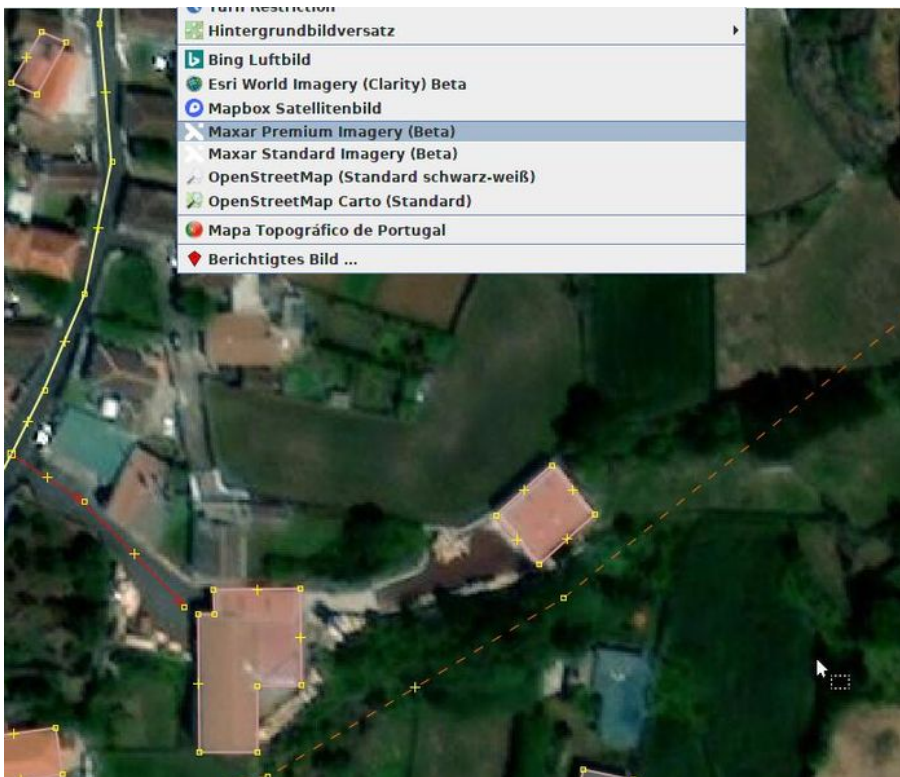
After visiting **Civil Protection** in Angra do Heroísmo, everyone became aware of the importance of mapping houses and streets in preparation for a **possible earthquake** in Terceira.

In order to keep the whole task manageable, we divided the island into **small squares** in the **Tasking Manager** [2]
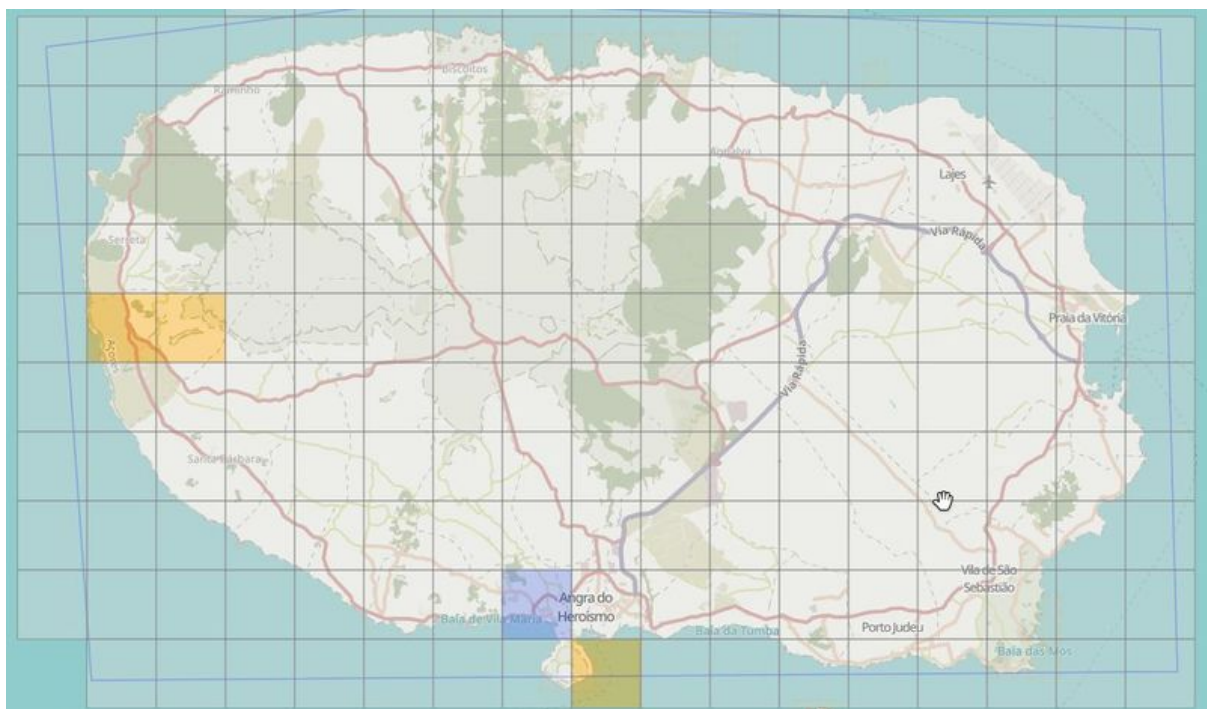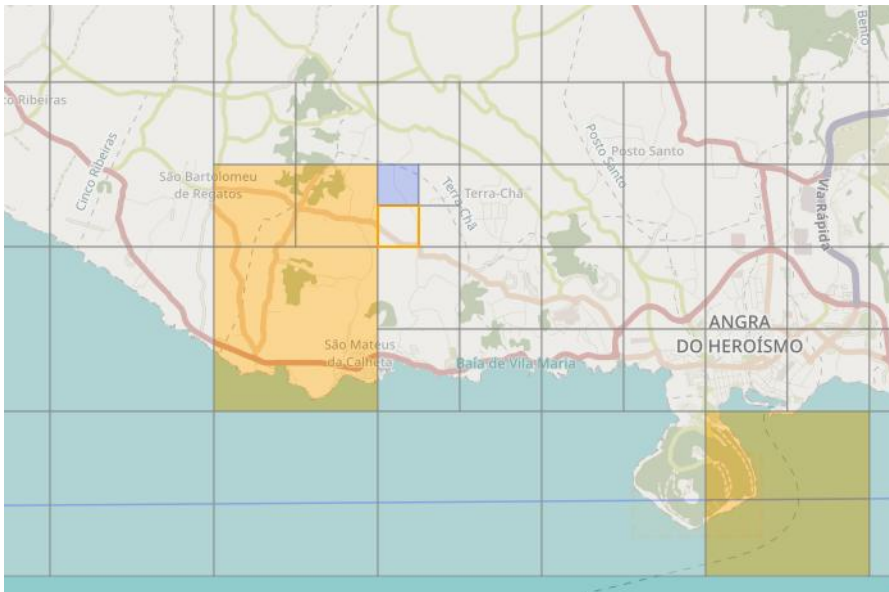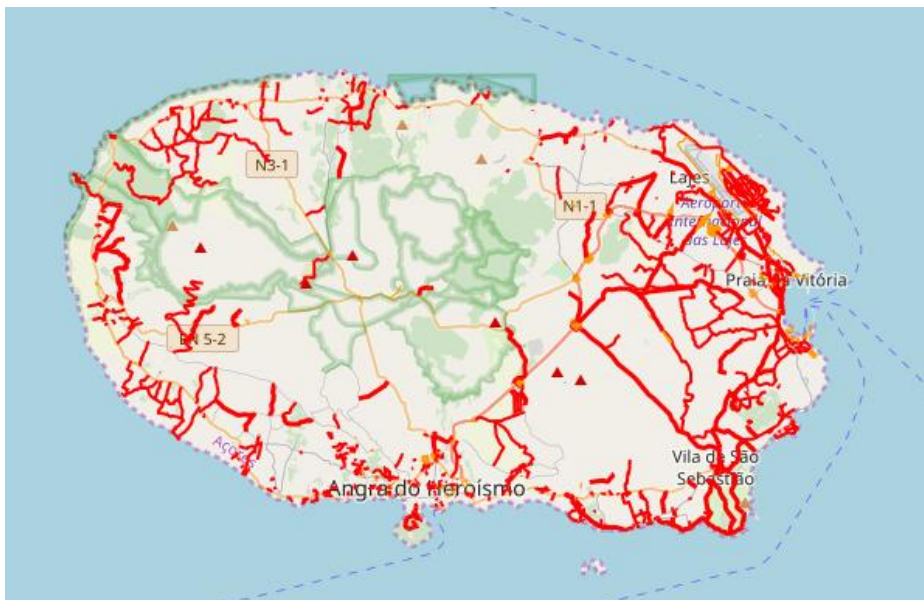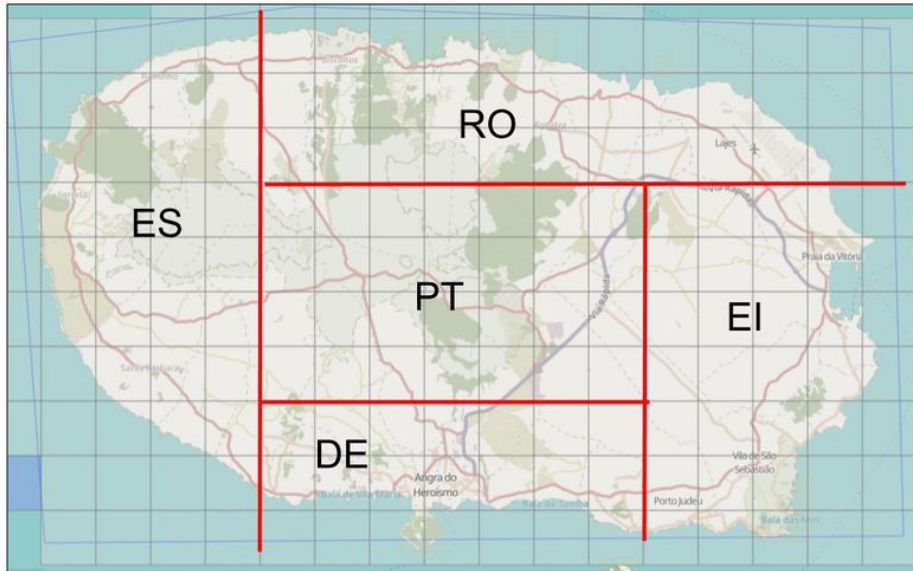
If a task was is to big, it can be splitted.

To know the location of roads and buildings, we used satellite images by Maxar Premium Imagery (Beta)**.**

We shared the work between our partners.

The Portuguese team also has the task of determining the street name [3] on site and entering it in OpenStreetMap. Therefore we used the qa tool by Simon Poole.

Erasmus+ **Eu**ropean **Y**out**H**umanitarian **O**pen**S**treet**M**ap

With the end of the project, it can be seen that all houses and streets on the have been mapped. Furthermore, as you can see in the picture below, about 95 % of the entries in the database have also been checked.

Links:

[1] http://taches.francophonelibre.org/project/316

[2] https://wiki.openstreetmap.org/wiki/Tasking_Manager

[3] http://qa.poole.ch/?zoom=7&lat=39.15&lon=-27.78

2.1 Participation Erasmusdays 2020

Between October 15 and 17, 2020 students and teachers of EuYoutH_OSM - European Youth Humanitarian OpenStreetMap, participated in the event #ErasmusDyas2020.

The #Erasmusdays is a European initiative to promote the Erasmus+ Programme worldwide and to give visibility to the activities organised by the beneficiaries of this programme.

The Jerónimo Emiliano de Andrade Secondary School participated in the event #ErasmusDays2020 with the realization of activities in the scope of the projects currently being developed at the school. The students of the PROFIJ (Youth Training and Integration Programme) Hotel Technician course participated in an online pre disaster mapping activity of Terceira island, together with their colleagues and teachers from Germany, Spain and Romania. After an initial briefing, in which instructions on the mapping tasks to be performed were given and the Remote Mapping Guide created for this event was analysed, the students and teachers once again contributed to bonding countries and helping in the mapping task in open data systems, done by all and for all.

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Our mapping activity was featured [1] in WeeklyOSM #535, and was published in nine different languages.

Mapping activity was also tracked [2] using the "OSM Changesets" tool which identifies the activity carried out on the map in the last 30 days. This image is a small example of the sustainability of the work on the OSM database.

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Links:
[1] https://wiki.openstreetmap.org/wiki/File:WeeklyOSM535_erasmusdays.JPG
[2] https://wiki.openstreetmap.org/wiki/File:OSMChangesetsTERCEIRA.png

Appendix
- ErasmusDays2020 - RemoteMappingGuide

2.2 Participation OSM Geography Awareness Week

The project presented at the OSM Geographie Awarness Week our mapping activity in Terceira and students worked on it to complete the data.
https://osmgeoweek.org/events/ [1]

We - as a group - continued our tasks in Terceira
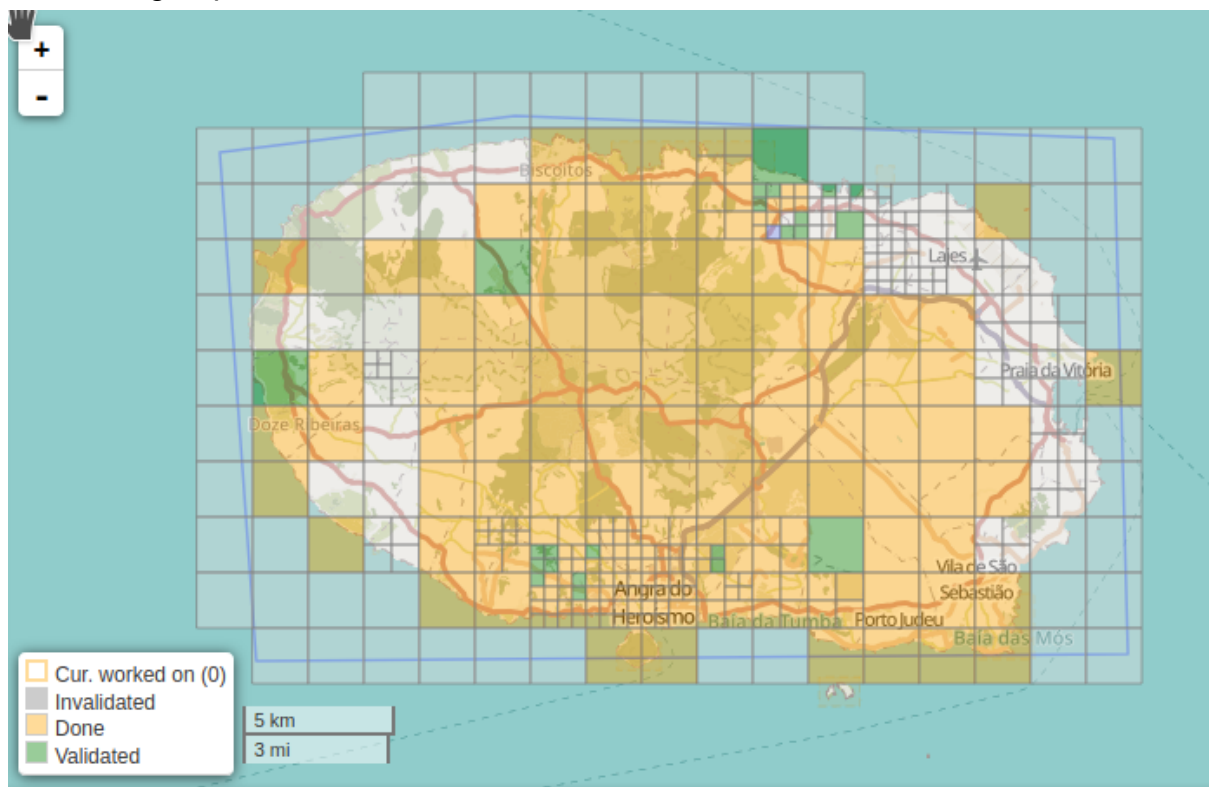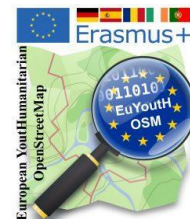
During a whole week, all our students had the opportunity to participate - whenever they had time - in the mapping activity.

As there were no fixed dates and students were free to choose the working time, students could book an appointment with a teacher.

At each appointment a teacher was present at our BBB-Videoconference offered by OpenSaar e.V.

Links:
[1] https://osmgeoweek.org/events/

Appendix
- OSM Geography Awareness Week 2020 - Participation Guide

2.3.1 Erasmus+ "virtual mobility/activity" with UN - Mapper -
Romania Host 2021-02-22 until 2021-02-24

Global peace needs global contribution. The contribution of everybody is important for peace. Therefore, we decided to conduct two virtual mobilities with UN Mappers. [1]

United Nations helps countries torn by conflict create conditions for lasting peace. Peacekeeping, peacebuilding and conflict prevention activities are the main objectives of our mapping activities. There is enormous potential for new technologies to improve the effectiveness of UN peacekeeping missions, as they respond to an ever-growing list of tasks in increasingly complex field environments.

On 15th February we met with two italian UN Mappers (Michael Montani and Rachele Amerini) to prepare the next Erasmus "virtual "activity, which should happen 22nd until 24th February. We decided that we'll be mapping an area in Central African Republic to help humanitarian teams in the field.
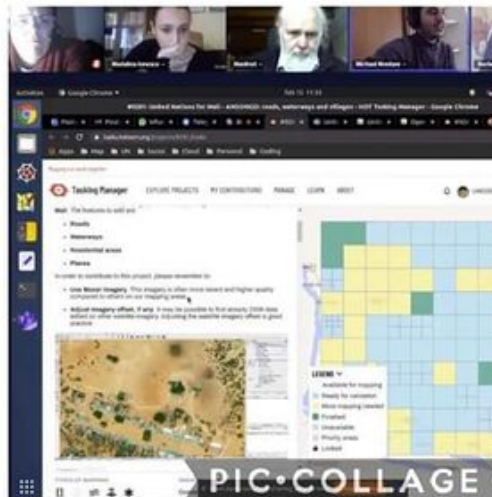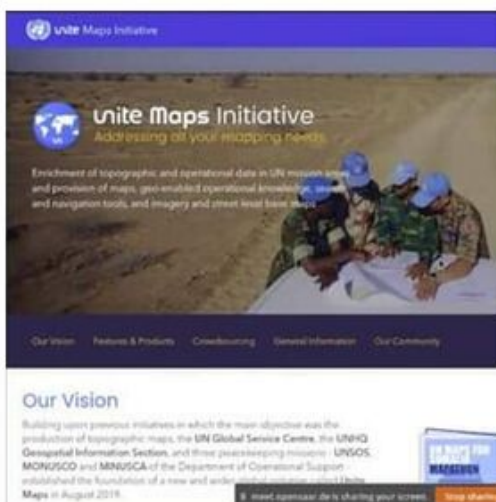
[Watch](watch) [2] a 10 minute video of the UN Mappers explaining their work to the steering committee of our project.
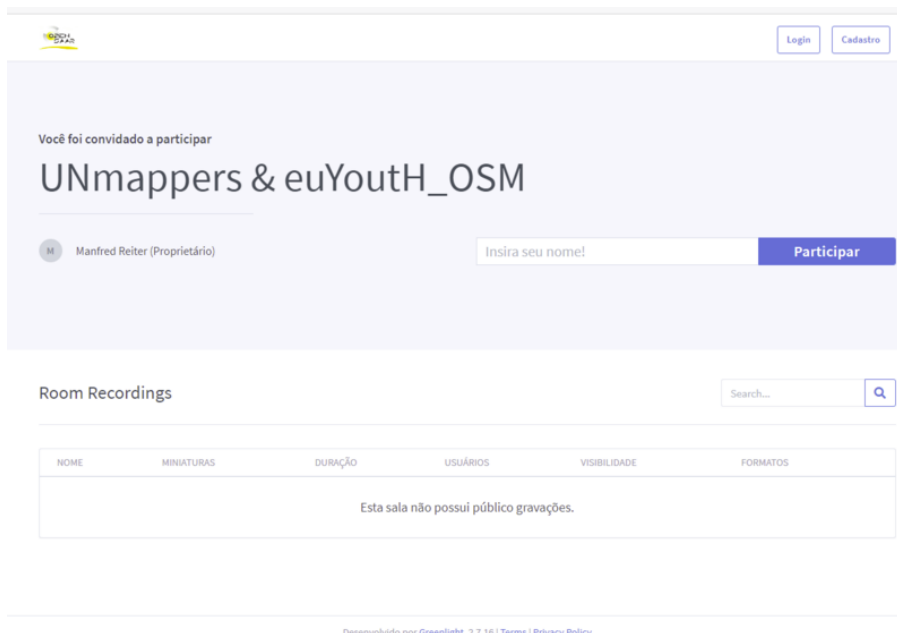
The whole event took place at our BigBlueButton video conference channel, offered by OpenSaar e.V.

All the students we had worked with so far were no longer students of the respective schools. Therefore, new students had to be introduced to humanitarian mapping with new training materials. In doing so, we tried to take local conditions into account.

- The students first had to familiarise themselves with the term "mapathon" and the important tools JOSM and Tasking Manager. They had to record their findings, which they worked out with the help of the OpenStreetMap Wiki, in a worksheet.

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	Tools to know: JOSM, Tasking Manager, … mapathon Erasmus+ euYoutH_OSM and UN mappers © CC BY	UN Mappers

To map we use **JOSM**. We start JOSM via the **Tasking manager**

Wiki is our friend.
OpenStreetMap has its own Wiki.
https://wiki.openstreetmap.org/wiki/Main_Page
10/15 minutes - **break out rooms**

The empty worksheet [3] you can find in our wiki and in the appendix.

Questions: **What is JOSM? -** Powerful or not? Where is its homepage?

JOSM (Java OpenStreetMap Editor) is a desktop application for editing OpenStreetMap.
It is the most powerful out of available editors.
Its homepage is located at josm.openstreetmap.de.

Questions: **What is a Tasking manager?** Why volunteers use it? What's the purpose of this tool?

The Tasking Manager is the tool for coordination of volunteers and organization of groups to map on OpenStreetMap.
The purpose of the tool is to divide up a mapping job into smaller tasks that can be completed rapidly.
This approach facilitates the distribution of tasks to the various mappers.

Questions: **What is a mapathon?**

A Mapathon is a coordinated mapping event.

1/1

● The next step for the students was to sharpen their eye for the mea[...] symbols in OpenStreetMap. They had to discover eight different markings on the map (as they are not directly visible in the OSM legend) and name them.

What we see on the map?
How objects are saved in the OSM database?

mapathon Erasmus+ euYoutH_OSM and
UN mappers   © CC BY

UN Mappers

Map of Assié Koumassi – Cote d'Ivoire
https://www.openstreetmap.org/#map=13/6.7602/-4.2740

1. Road outside the village
2. Road inside the village
3. Buildings
4. Village border
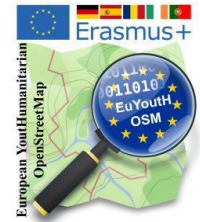5. Cemetery
6. Hospital
7. School
8. Place name

1. For each symbol in the table (below), find the point in the map at the top left and enter the corresponding **number** in the map on the right. Use the link above to get more details from the map if necessary.

Number	Map	2. Write what you see on the map. Write here what you see on the map.	3. We discover with JOSM how it is represented in OSM. How it is in the database? We check it with JOSM. We call it a "tag". [1]
1		Road outside the village	highway=teritary
2		Road inside the village	highway=residential

[1] https://wiki.openstreetmap.org/wiki/Tags

1/2

● In a second step, the students could then use JOSM to discover the "tags" that cause the corresponding marking on the map.

The complete template and solution can be found in the appendix of this brochure and on our wiki page.

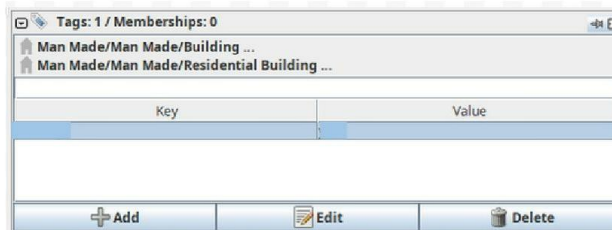This **cheat sheet** was filled by the students before the mapathon.

Useful tags for our mapathon
SOLUTION

mapathon Erasmus+ euYoutH_OSM and
UN mappers   © CC BY

Tags: 1 / Memberships: 0
Man Made/Man Made/Building ...
Man Made/Man Made/Residential Building ...

Key	Value

Add   Edit   Delete

EXAMPLES
we found in "our JOSM-Task" in Santa Barbara, Terceira

OSM-Wiki is your friend
https://wiki.openstreetmap.org/

Object	Key	Value	Link to our OSM Wiki
Place of residence	landuse	residential	https://wiki.openstreetmap.org/wiki/Tag:landuse%3Dresidential
	place	village	https://wiki.openstreetmap.org/wiki/Key:place#Populated_settlements.2C_urban_and_rural
building	building	yes	https://wiki.openstreetmap.org/wiki/Key:building#Values
waterway	waterway	stream	https://wiki.openstreetmap.org/wiki/Key:waterway
road	highway	residential	https://wiki.openstreetmap.org/wiki/Highways#Classification
~~powerline~~	power	line	https://wiki.openstreetmap.org/wiki/Power_lines#keys_and_values

1/1

The complete template and solution can be found in the appendix of this brochure and on our wiki page as usual.

Mapping JOSM/Tasking Manager
we map in Terceira
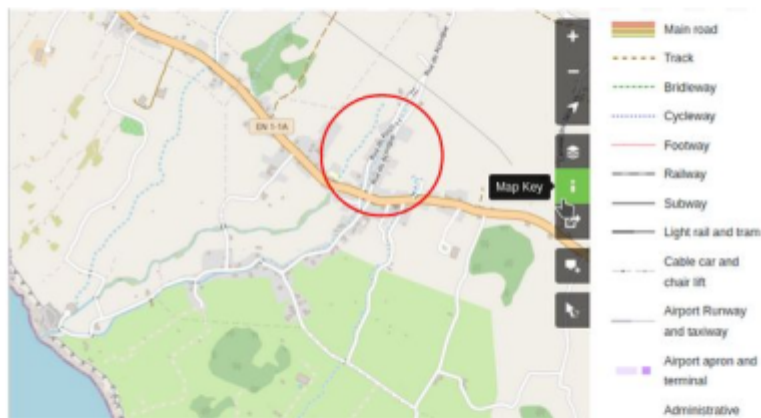
mapathon Erasmus+ euYoutH_OSM and
UN mappers   © CC BY

We check the region where we have in mind to map

We will map our first building in Santa Barbara, Terceira
   1. we open the following link:
      https://www.openstreetmap.org/#map=16/38.6949/-27.3336

The map shows a lot more as we saw until now.
Therefore - as every map - OSM offers a "legend". For end uses they call it "Map key".
.
You find the "legend", clicking on the "i". When you click on it it changes the colour to green.

You know meanwhile, - OSM-wiki is our friend -
therefore some links to map features.

all features	https://wiki.openstreetmap.org/wiki/Map_features
landuse	https://wiki.openstreetmap.org/wiki/Map_features#Landuse
rural - agricultural landuse	https://wiki.openstreetmap.org/wiki/Map_features#Common_Landuse_Key_Values_-_Rural_and_agricultural_land

We "draw" our first building.

Step by step:

We look at the region

We open the region via Tasking Manager in JOSM

We check what is done in the region

We check new tags, which are useful for our mapping with UN mappers.

and then ... we draw with the Building_tool a building.

The material and the links ;-)	Region to map opened in JOSM via Tasking Manager
Teaching material:	

All explanatory materials - forms and completed solutions were offered to the students on our wiki page.

Teaching material:

- 📄 - Mapping, JOSM and Tasking Manager

. Collection of tags for our mapathon:

- 📄 Useful tags for our mapathon, discovered in Santa Barbara

.

.

The Link in OpenStreetMap:

- OSM - Portugal - Terceira - Santa Barbara

Very helpful were also the direct links to the tasks to be performed in the Tasking Manager, so that the students were guided to the mapping tasks by a simple click.

This helps to avoid error-prone communication.

In any case, difficulties are always to be expected with beginners if
1. already mapped objects in JOSM are not congruent with the satellite images and
2. the very first upload to JOSM requires the autenthication with OAuht.

For this reason, we have uploaded two step-by-step solutions as worksheets in the wiki, which can be used by students in case they have never dealt with the topic before.

	Adjust_imagery_offset	First_upload

These files are also in the appendix and on the wiki page.

Links:

[1] https://wiki.openstreetmap.org/wiki/Unite_Maps_Initiative/UN_Mappers

[2] https://youtu.be/0z1tsdtMzSM

[3] https://wiki.openstreetmap.org/wiki/EuYoutH_OSM#Tools_to_know,_Using_the_OSM-Wiki
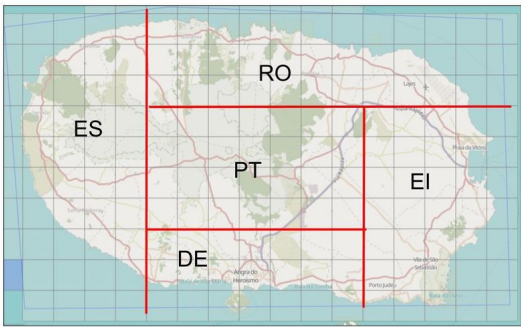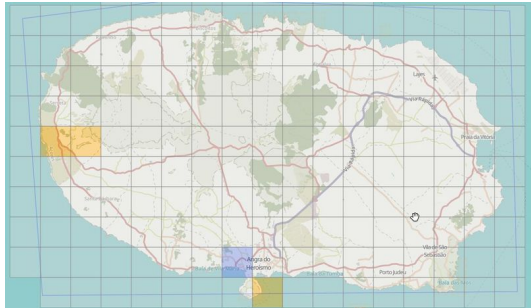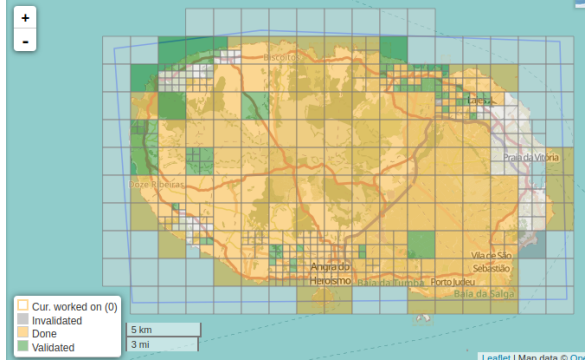
Appendix

- Tools to know for mapping OSM - JOSM - Tasking Manager
- Solution Tools_to_know_for_mapping_OSM - JOSM - Tasking Manager
- What we see on the map? - How objects are saved in the OSM Database?
- Solution What we see on the map? - How objects are saved in the OSM Database?
- Useful tags for our mapathon
- Useful tags for our mapathon - Solution
- Mapping - JOSM/Tasking Manager - we map in Terceira
- Adjust imagery offset
- JOSM - First Upload Authentification

2.3.2 Erasmus+ "virtual mobility/activity" with UN - Mappers
Portugal Host 2021-03-22 until 2021-03-24

This mobility also started with a large number of new students. Since the island of Terceira was not yet completely covered either, we started our preparatory exercises with a mapathon on the island.

Roads and Buildings - our task for Monday [1]	
We shared Terceira between the partners	
how we started	
Before March 22	

Result - After March 22	
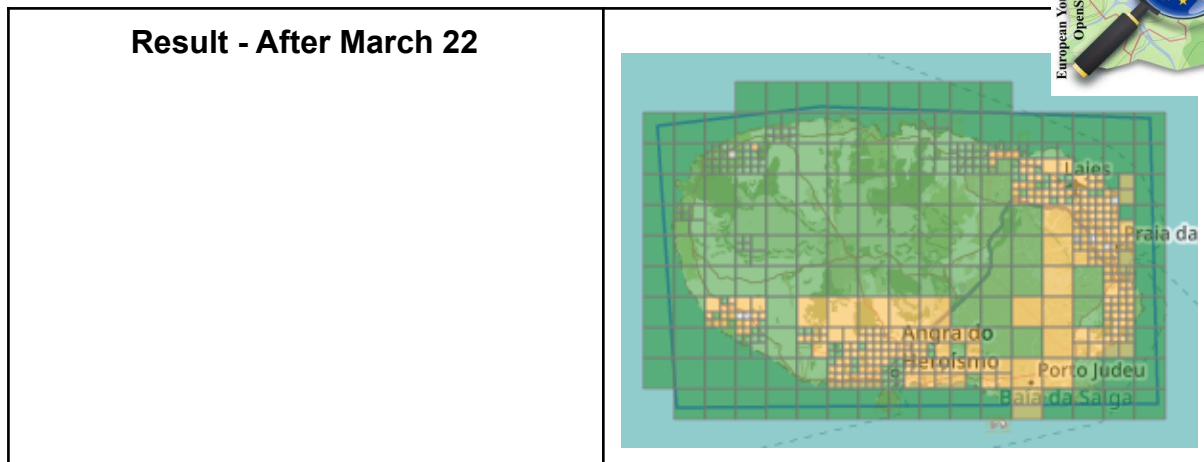
Michael Montani and **Rachele Amerini** from UN Mappers prepared the Tuesday and Wednesday for our Erasmus "virtual mobility", which happend 23nd until 24th March and we worked/mapped for Minusma [2], Multidimensional Integrated Stabilization Mission in Mali.

To give the students a feeling for the distances Romania, Azores, Mali we started the second collaboration with UN Mappers with a short virtual flight [3] via OpenStreetMap.

- 23rd until 24th
  - Something about the region
    - Virtual Erasmus+ mobility from (Râmnicu Vâlcea, Vâlcea, Romania) via Portugal (Angra do Heroísmo, Terceira, Azores, Portugal) to Mali (Ansongo, Ansongo Cercle, Gao ⬀ ⬇)
    - We map in the **region of Gao** ⬀
    - Something about **recent history** ⬀
  - Something about the mapping area
    - Situated in the south of the provice of Gao
    - We map south of the city of **Ansongo** ⬀
    - Near border to Burkina Faso and Niger ⬀
  - Something about the UN Peacekeeping mission in that region
    - UN MINUSMA **Website** ⬀
    - UN MINUSMA on **Twitter** ⬀
    - UN MINUSMA on **Instagram** ⬀

To further prepare students for "the country and its people" and the activities of the Blue Helmets in Mali, the following links have been added to our wiki page:

Mapping region [4]
Recent history [5]
Mapping area Ansongo [6]
Link directly to OSM [7]

and the peacekeeping mission UN MINUSMA
Website [8]
Twitter [9]
Instagram [10]

Since mapping with the help of satellite images in desert-like areas of the earth (here Maili) makes different demands on the mappers than in Central Europe due to different or missing vegetation, UN mappers prepared a corresponding video for our students.

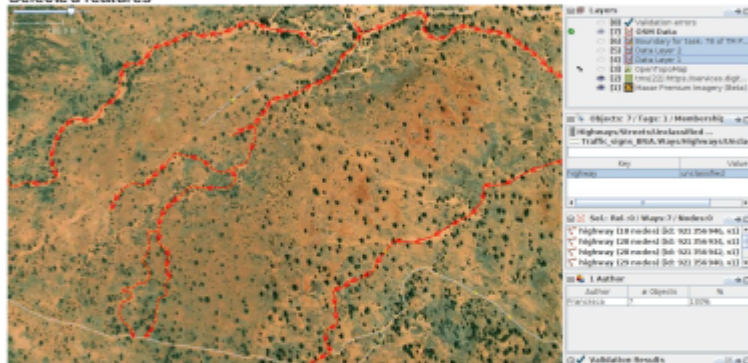The task in which we mapped was - as usual - linked [11] from our wiki page.

Mapping from satellite images in desert areas

mapathon Erasmus+ euYouH_OSM and UN_mappers ® CC BY

Issue #1

https://tasks.hotosm.org/projects/10563/tasks/?search=78
Selected features
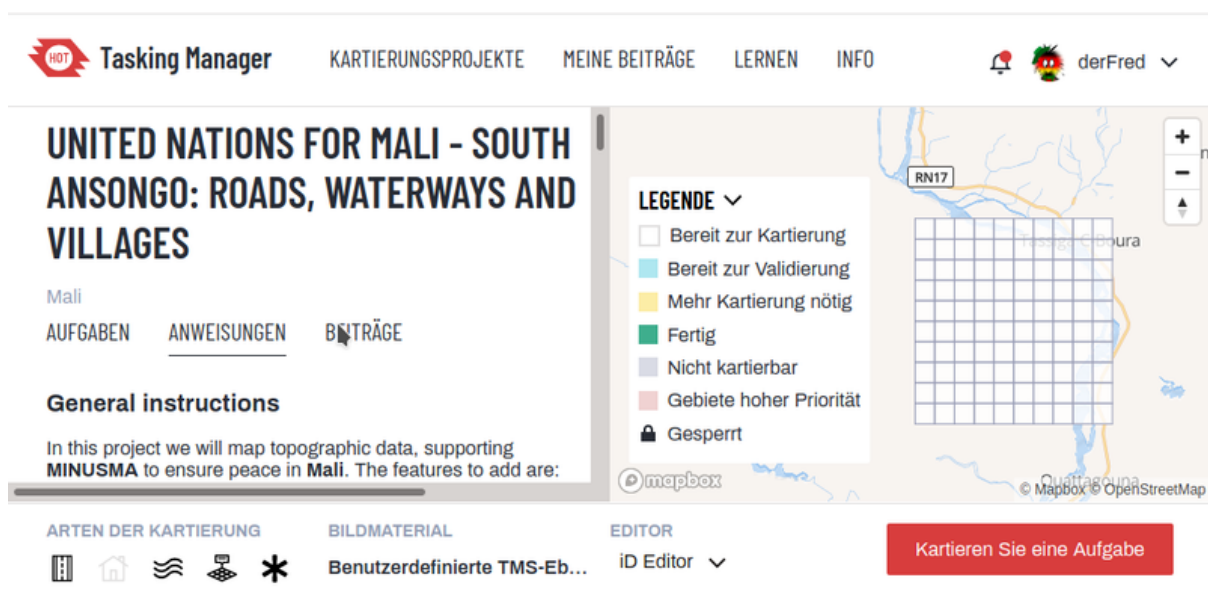
without the OSM features, in order to see the imagery better

After the first mapping day, we discussed the mapping problems with the students and produced a handout for the coming day so that the errors identified could be cleaned up and avoided in the future.

As always, you will find these instructions both in this brochure in the appendix and of course on our Wiki page.

Links:

[1] http://taches.francophonelibre.org/project/316

[2] https://minusma.unmissions.org/en

[3] https://www.youtube.com/watch?v=GFOeuSnKyng

[4] https://en.wikipedia.org/wiki/Gao

[5] https://en.wikipedia.org/wiki/Gao#Recent_history

[6] https://en.wikipedia.org/wiki/Ansongo

[7] https://www.openstreetmap.org/?mlat=15.2935&mlon=0.5026#map=10/15.2935/0.5026

[8] https://minusma.unmissions.org/

[9] https://twitter.com/UN_MINUSMA

[10] https://www.instagram.com/un_minusma/

[11] https://tasks.hotosm.org/projects/10563/

Appendix

- Mapping from satellite images in desert areas

Appendix

Mapathon with Doctors without Borders - Saarbrücken

- Joint Presentation Doctors Without Borders and euYoutH_OSM - Introduction of the Region - What and howto map? (24)
- How do I work with the HOT - Tasking Manager (3)
- Handout - Mapping Buildings and Places (1)
- JOSM-Editor (1)

All .pdf or images in this brochure and much more can be found on the wiki pages of the project https://wiki.openstreetmap.org/wiki/EuYoutH_OSM

©Barbara Sigge

MISSING MAPS MAPATHON VON ÄRZTE OHNE GRENZEN

MEDECINS SANS FRONTIERES
ÄRZTE OHNE GRENZEN e.V.

HERZLICH WILLKOMMEN

**zum Mapathon
am 29. Mai 2019**

**Saarbrücken
- ehemalige französische Botschaft**

VORBEREITUNG - registrieren & Editor

Während wir auf die Ankunft weiterer Teilnehmer warten,

könnt ihr schon einmal Folgendes tun

- **(1) Registriert euch bei www.openstreetmap.org.**

  Folgt dem Link in der E-Mail, die ihr daraufhin bekommt.

- **(2) Editor installieren**

  * https://josm.openstreetmap.de/
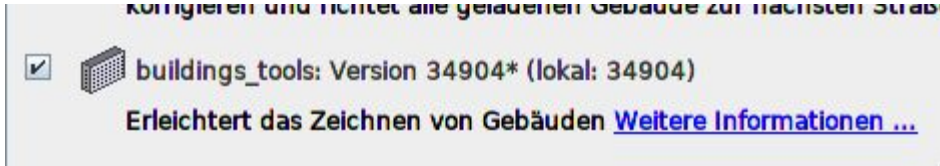
  * josm-tested.jar herunterladen

  Leonie, Max, Jonas & Dennis helfen ;-)

VORBEREITUNG (1) - JOSM Fernsteuerung

- Fernsteuerung einschalten

  * Bearbeiten - Einstellungen -

  * Fernsteuerung

  * Fernsteuerung aktiviern

  * OK

VORBEREITUNG (2) - JOSM Building Tool

- Plugin Building Tool

    * Bearbeiten - Einstellungen

    * verfügbare Erweiterungen

    *

    Korrigieren und richtet alle geladenen Gebäude zur nächsten Straße

    ☑ buildings_tools: Version 34904* (lokal: 34904)

    Erleichtert das Zeichnen von Gebäuden Weitere Informationen ...

    * OK
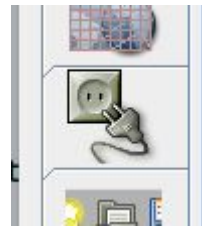
WAS IST MAPPEN?

Missing Maps: nothing less than a human genome project for cities

A huge number of the world's most vulnerable human settlements have remained unmapped ... until now. Enter an unprecedented plan to map the world's forgotten places

(The Guardian)

Gründer von Missing Maps:

WARUM MAPPEN?

Ziel eines Mapathons ist es, digitale Karten zu erstellen von bisher nicht kartographierten Regionen!

Dank dieser Karten können HelferInnen Menschen in Not erreichen.

Medical supplies + logistics

Infectious diseases e.g. Ebola

Vaccination campaigns

Waterborne diseases e.g. cholera

Malnutrition

Earthquakes

Hurricanes

Flooding

WARUM MAPPEN?

Viele Karten mit denen NGOs arbeiten müssen, **sind extrem ungenau**.

In der Gegend, die ihr auf dem Bild seht, leben ca. 80.000 Menschen …
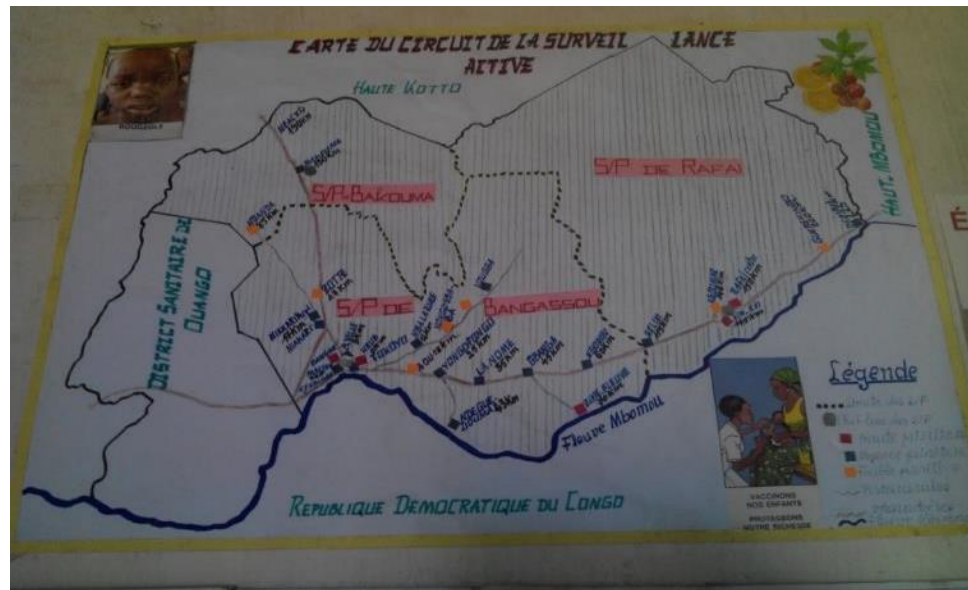
… ihren genauen Standpunkt in einer Notsituation zu bestimmen, ist mit dieser Karte nahezu unmöglich.

MAPPEN HILFT!

Das Vorgehen:

Die Karte zeigt eine Handelsstadt mit 120.000 Einwohnern

…
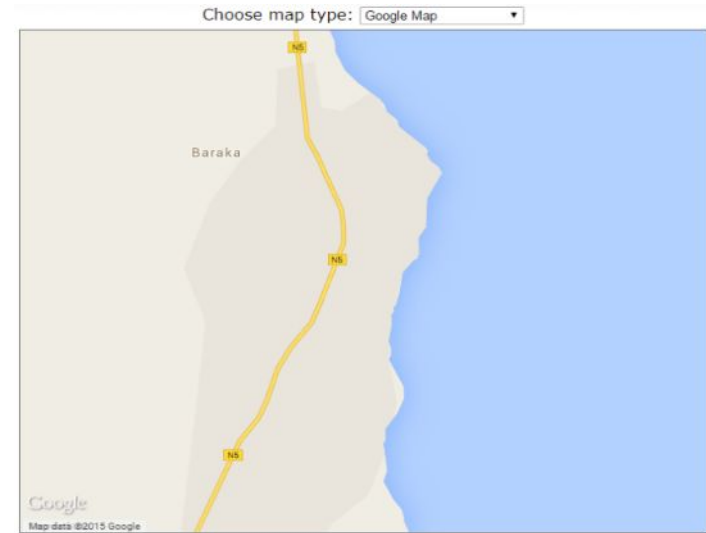
nachdem 70 Freiwillige einen Abend gemappt haben.
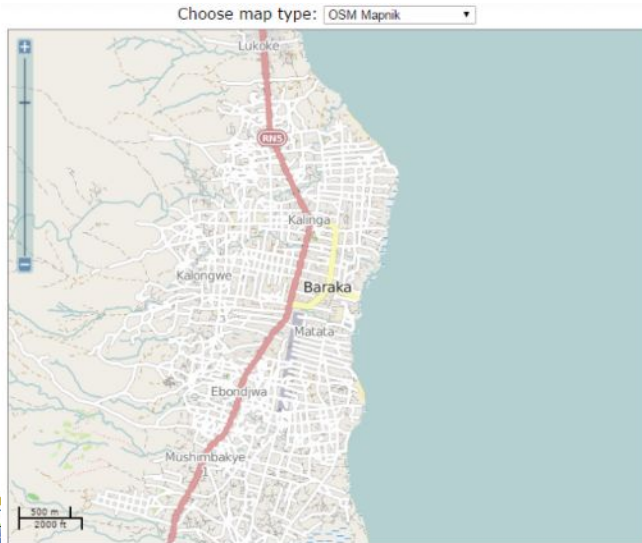
Demokratische Republik Kongo
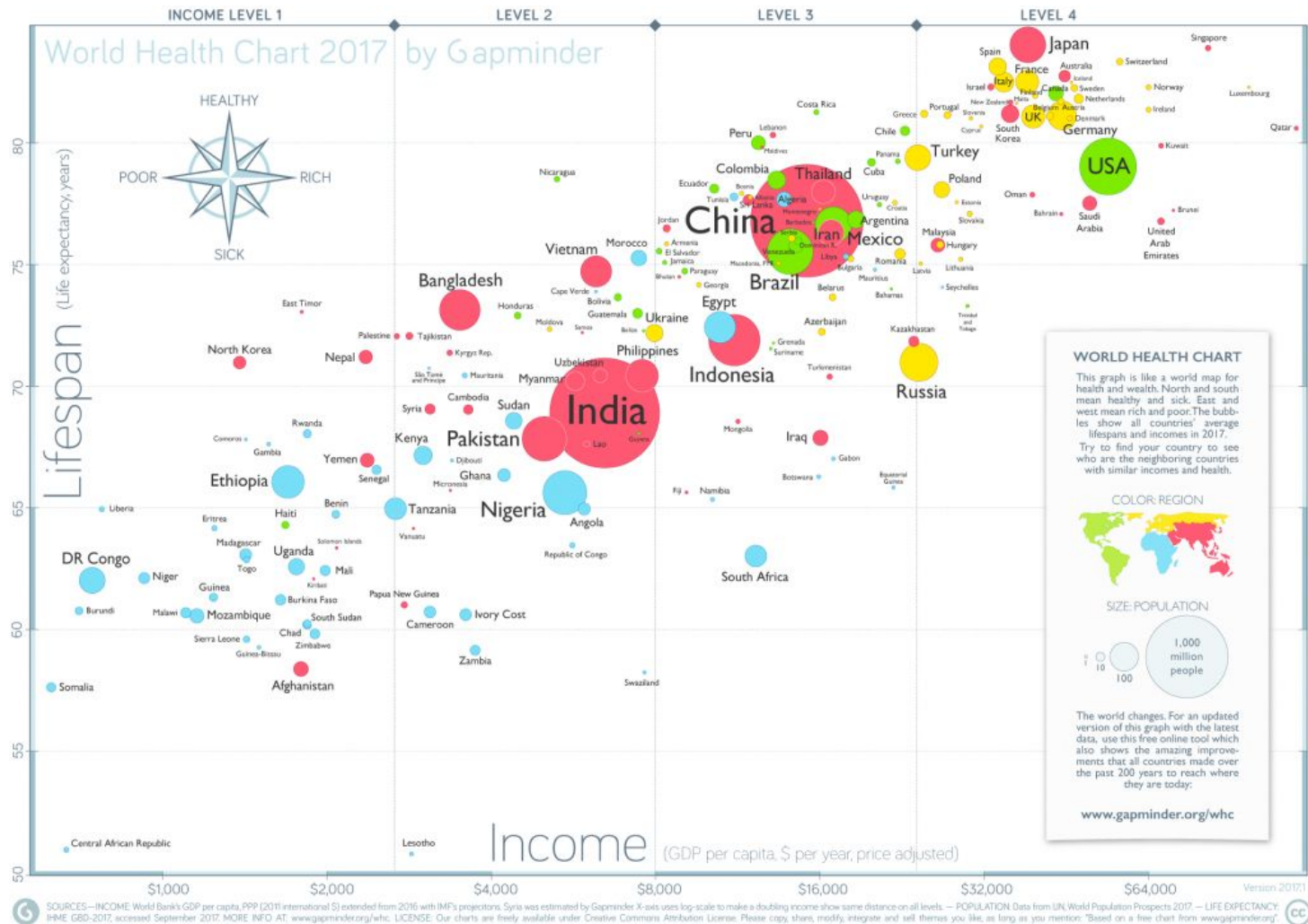
Demokratische Republik Kongo

Demokratische Republik Kongo

Demokratische Republik Kongo

13

Demokratische Republik Kongo

Demokratische Republik Kongo

Demokratische Republik Kongo

Demokratische Republik Kongo

LETZTE TIPPS

- Nutzt **Chrome** oder **Mozilla** zum Mappen.

- Mappt nur die **Gebäude** und **Dörfer**, nicht die Straßen:

  - Ein Dorf definiert sich durch mehr als vier Gebäude.

  - Mehr als vier Gebäude bilden ein Dorf.

  - Wenn ihr euch bei dem Grenzverlauf eines Dorfes nicht sicher seid, zoomt ein Stück heraus.

  - Solltet ihr euch bei irgendetwas nicht sicher sein – fragt und diskutiert mit anderen Mappern.

Gebäude: building=yes
Dorf: landuse=residential

LETZTE TIPPS

- Um ein **Dorf** zu umschließen, müssen Start- und Endpunkt der Grenzlinie genau aufeinanderliegen.

- Die Linien, die ihr zieht, können Straßen, Gebäude u.ä. kreuzen. Sie sollten jedoch **keine Punkte mit einem anderen Objekt, gemeinsam haben.**

- Wenn ein Dorf (landuse=residental) über euer ausgewähltes Quadrat hinaus geht, zieht die Linie nur ein wenig darüber hinaus. Der Mapper des anliegenden Quadrats nimmt die Linie auf und kann es vervollständigen und auch den Tag vergeben

Los geht's

- **JOSM starten**

- **Chrome oder Mozilla öffnen**

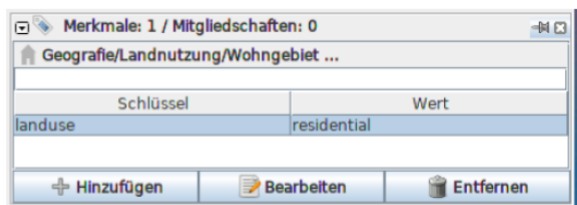- **https://tasks.hotosm.org/**

- **Projekt 5912**

„TM" - Häuser

1. **Kachel auswählen**
2. **Kartografieren beginnen - Klick**
3. **JOSM Editor starten - Klick**
4. **zu JOSM wechseln**
5. **Hintergrundbild** $\longrightarrow$ **DitgitalGlobe Premium**

6. **Gebäude zeichnen**

7. **hoch laden**

8. **fertig**

Dörfer

Dorf mappen
1. **Umriss zeichnen**
2. **Umriss anfassen**
3. **Tag vergeben**

Schlüssel	Wert
landuse	residential

Merkmale: 1 / Mitgliedschaften: 0

Geografie/Landnutzung/Wohngebiet ...

Hinzufügen   Bearbeiten   Entfernen
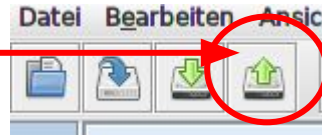
4. **hochladen**
5. **fertig**

HILFE BEIM LESEN VON SATELITENBILDERN

- **Links:**

  https://docs.google.com/presentation/d/1N_3G3EwYQjtJ_5c9Frb
  PMY7W7QjlLqGeZvDID8tH4Kw/edit#slide=id.g359154f142_0_7

  https://wiki.openstreetmap.org/wiki/User:Bgirardot/West_Africa
  n_HOT_Mapping_Tips#Surface_Mines

©Francois Dumont/MSF

VIELEN DANK UND VIEL SPASS!

Ärzte ohne Grenzen

Am Köllnischen Park 1

10179 Berlin

www.aerzte-ohne-grenzen.de

030 7001300

office@berlin.msf.org

How do I work with the HOT - Tasking Manager?
(Results of online training with a "Student named Max")

1. Start **JOSM**
2. Open https://tasks.hotosm.org/
3. Click **Start Mapping**
4. Your screen should now look like this:
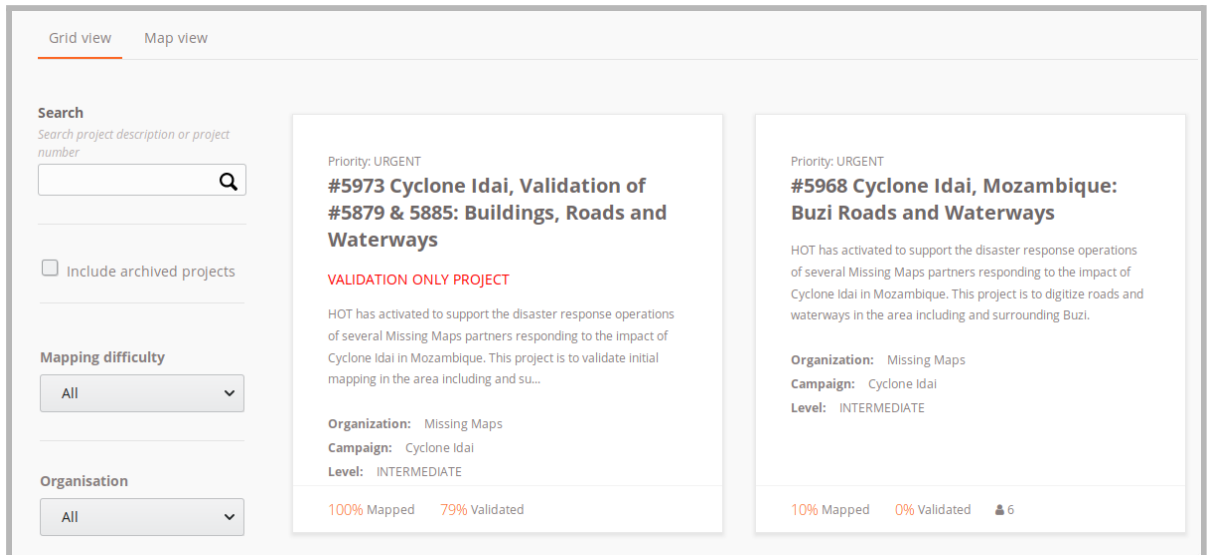
5. **Teacher:** Now you see two tasks = two tasks ... you can scroll, then you find more.
   But now we take the number #5968 - Do you have an idea why this one and not the 5973?
   Student: The #5973 is 100% mapped and the #5968 only 10% **Teacher:** Very good!

6. So please click on #5968 (This fits for Max, because he is already an intermediate mapper. ;-))
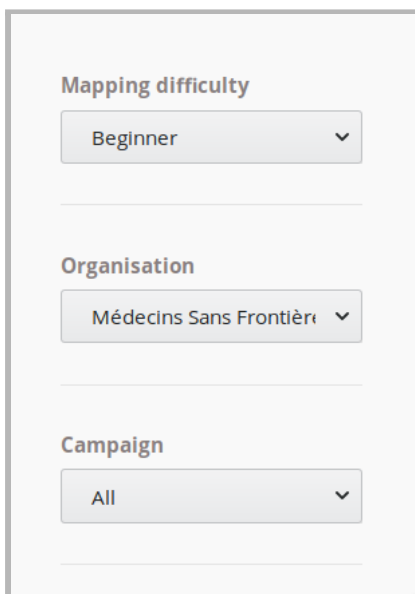
Note: - when selecting a task you should make sure that there are different levels (BEGINNER, INTERMEDIATE, etc.)

You can even choose what you want to map. See the pull-down menus on the left.

7. Now scroll down ... and what do you see there?
8. **Student says:** "The map where you can see in which area exactly in this area was mapped and what not yet".
9. **Teacher:** Very well spotted, Max! - we know that from the other Tasking Manager. OK?
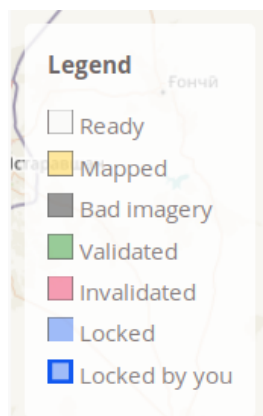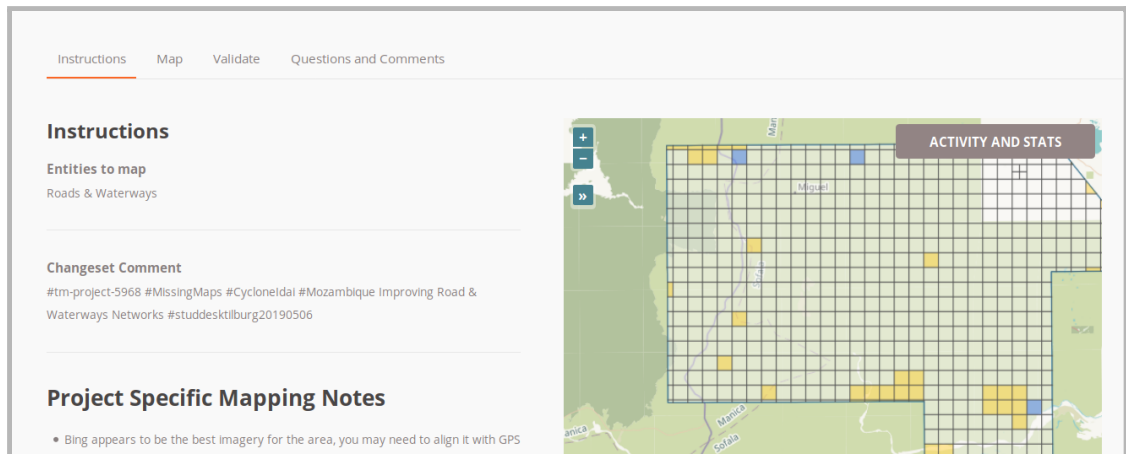
Note. The colours of the tiles are exactly the same as we already know them from http://taches.francophonelibre.org/.
Ready
Mapped
Bad picture
Validate
unaudited
locked
locked by you

10. Now we choose - exactly as we already know it, but first read the instructions on the left (what to map!). Namely what? Exactly - roads and waterways
11. https://wiki.openstreetmap.org/wiki/DE:Highways und https://wiki.openstreetmap.org/wiki/DE:Waterways
12. So select a box now ... and get started;-)
13. Aha - you can't get started, on the left you see: Login ;-) ... please have a look at the top right ;-)

On the left we still see the **instructions** what exactly is to be mapped.
If you actually take the #5968, then there is something about "pictures, roads and waterways".
You can find the translation of this text in the appendix. ;-)

For every other task there are different texts.
These texts can easily be translated with deepl.com.

Student: - Hello, are these streets?
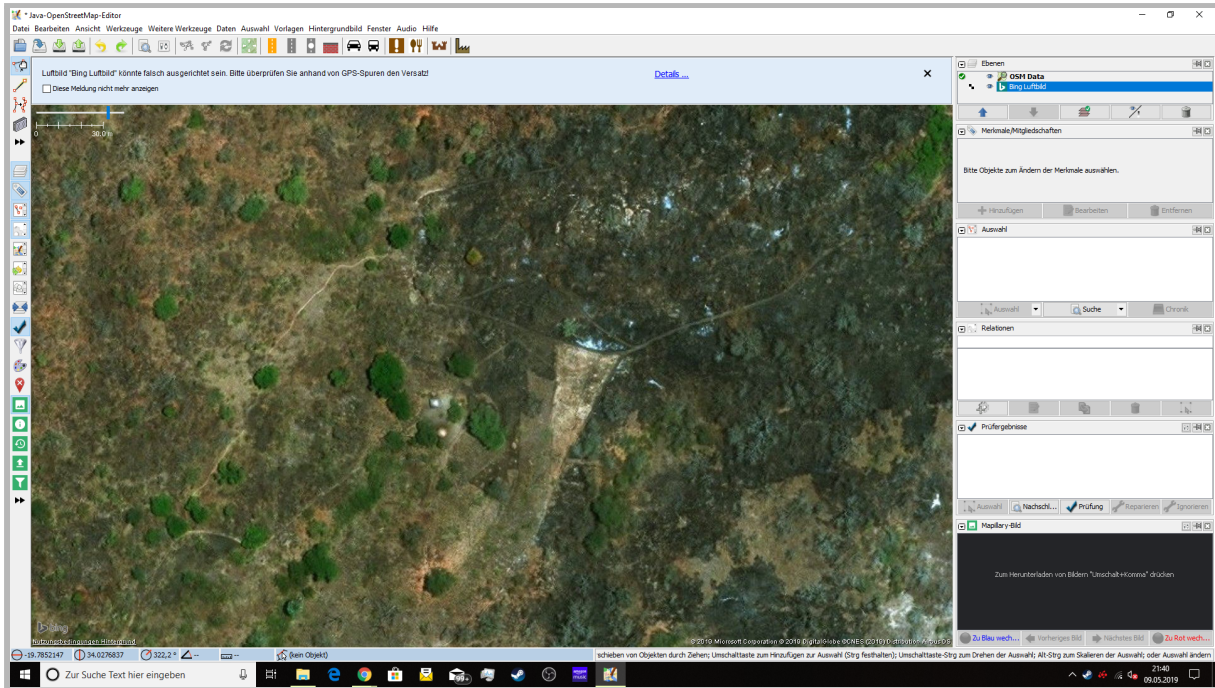
Teacher: Yes, these are streets ... clearly and you give them the tag "highway=unclassified"
Remember, this is Africa. Roads sometimes look different. :) You see houses there too!

Student: Okay thanks and if they just stop or you can't see the way anymore then I just do the points until you can see the streets or?
and the houses I should also draw them because there was nothing about it in the instructions.
If you see houses that aren't mapped yet, put them in.

Teacher: exactly, unless you see another street nearby, then connect - because people won't just go to one place - or drive and then don't go on to the next street. ;-)

14. upload and finish JOSM - with **#5968 - Cyclone Idai, Mozambique: Buzi Roads and Waterways**. Exactly this marking we find again in OSM ;-)

15. on the Tasking-Manager page ... now still ... **STOP Mapping**, so that the area is released again for other mappers. ;-)
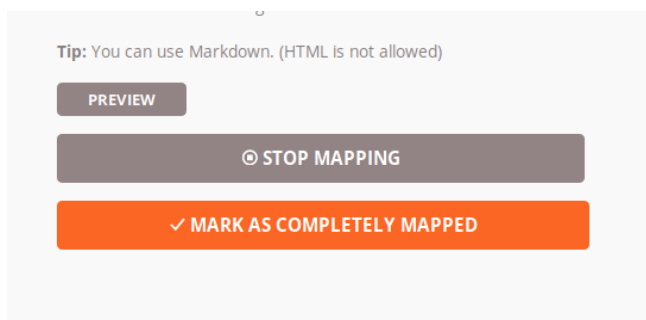
AND TOMORROW EXPERIENCE the WHOLE again .... OK?
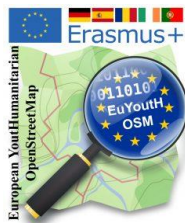
Anleitung zur Benutzung von JOSM anlässlich
des Mapathons von „Ärzte ohne Grenzen" und „OpenSaar e.V."
begleitet von Schüler*innen des Erasmus+ Projektes **euYoutH_OSM**
der GSS-BBS Saarburg

„Häuser" mit Plugin und „Dörfer" mit Vergabe von TAGs

„TM" - Häuser

1. **Kachel auswählen**
2. **Kartografieren beginnen - Klick**
3. **JOSM Editor starten - Klick**
4. **zu JOSM wechseln**
5. **Hintergrundbild** ⟶ **DitgitalGlobe Premium**

6. **Gebäude zeichnen**
7. **hoch laden**

8. **fertig**

Dörfer

Dorf mappen
1. **Umriss zeichnen**
2. **Umriss anfassen**
3. **Tag vergeben**

Merkmale: 1 / Mitgliedschaften: 0	
Geografie/Landnutzung/Wohngebiet ...	
Schlüssel	Wert
landuse	residential
Hinzufügen	Bearbeiten	Entfernen
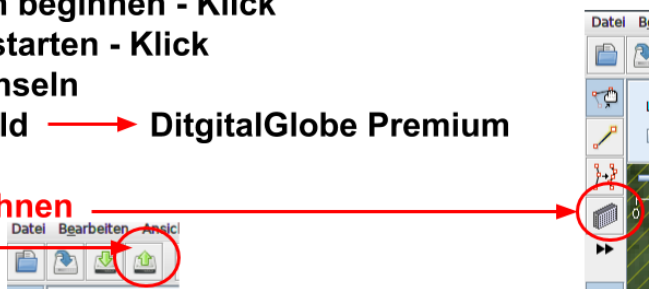
4. **hochladen**
5. **fertig**
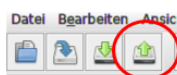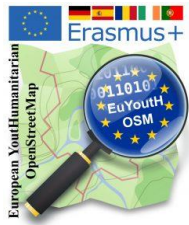
Anleitung zur Benutzung von JOSM anlässlich
des Mapathons von „Ärzte ohne Grenzen" und „OpenSaar e.V."
begleitet von Schüler*innen des Erasmus+ Projektes **euYoutH_OSM**
der GSS-BBS Saarburg

JOSM - der Editor

Appendix

Participation Erasmusdays 2020

- ErasmusDays2020 - RemoteMappingGuide (4)

All .pdf or images in this brochure and much more can be found on the wiki pages of the project https://wiki.openstreetmap.org/wiki/EuYoutH_OSM

Erasmus Days 2020 - Remote Mapping

1. Start **JOSM**
2. Open in your Browser our tasking Manager:
   http://taches.francophonelibre.org/project/316
   Your screen should now look like this:
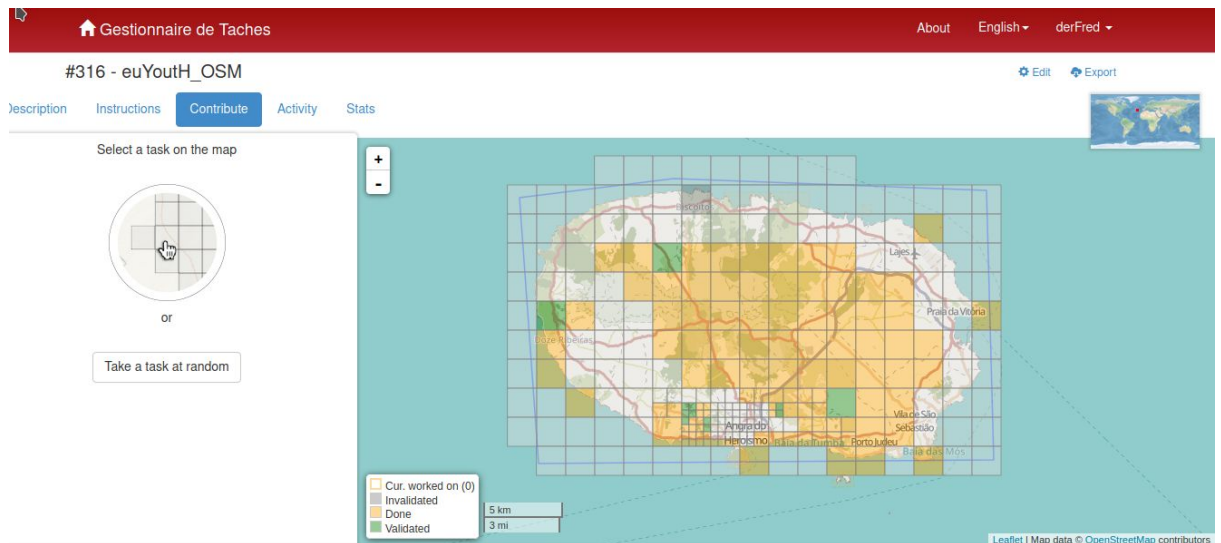
3. Depending from your country
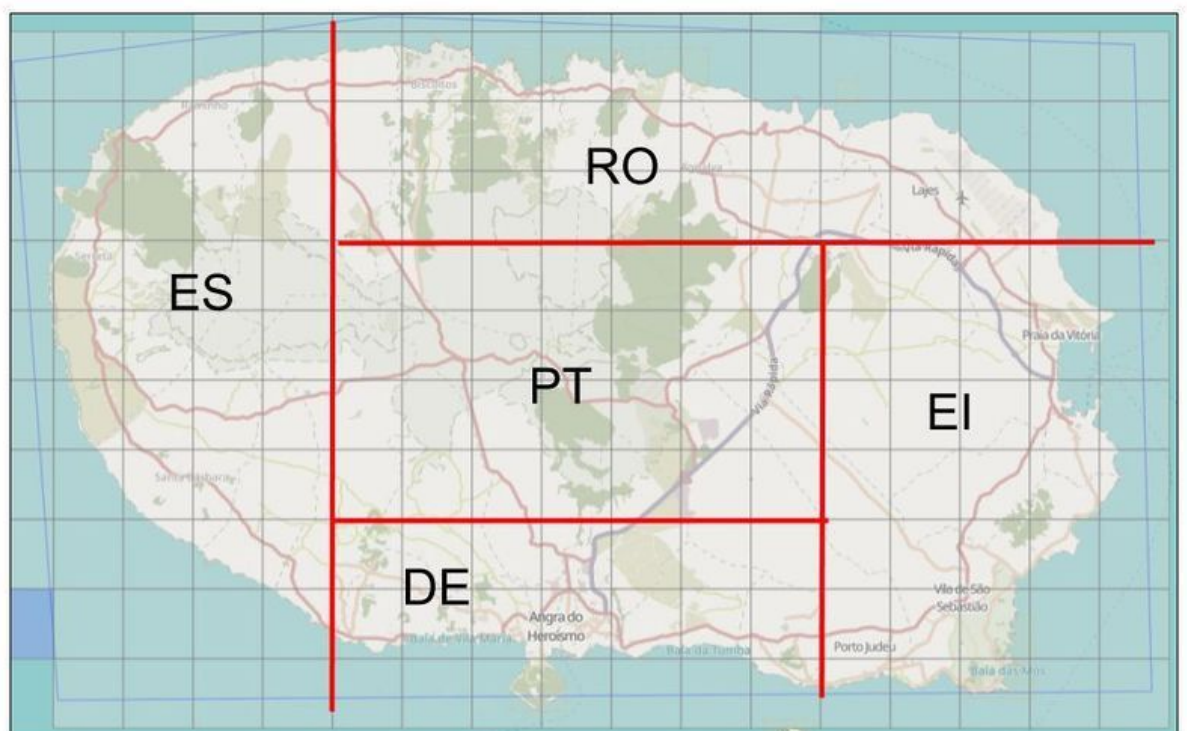
4. please click on one of the squares (the blue one is selected)
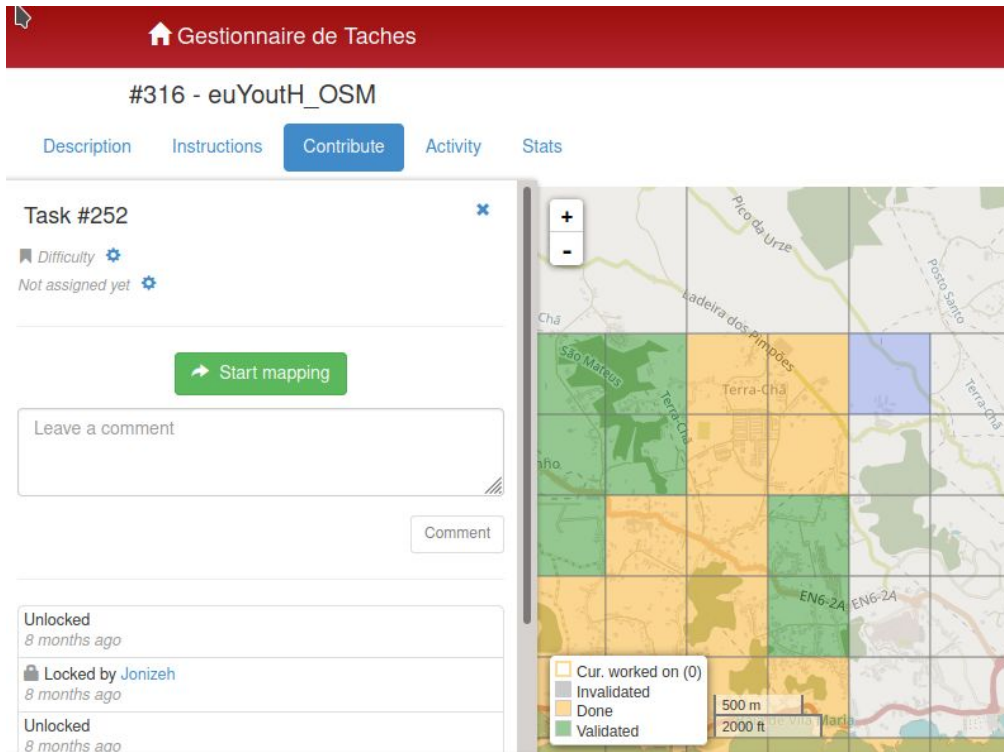
5. Click **Start mapping**
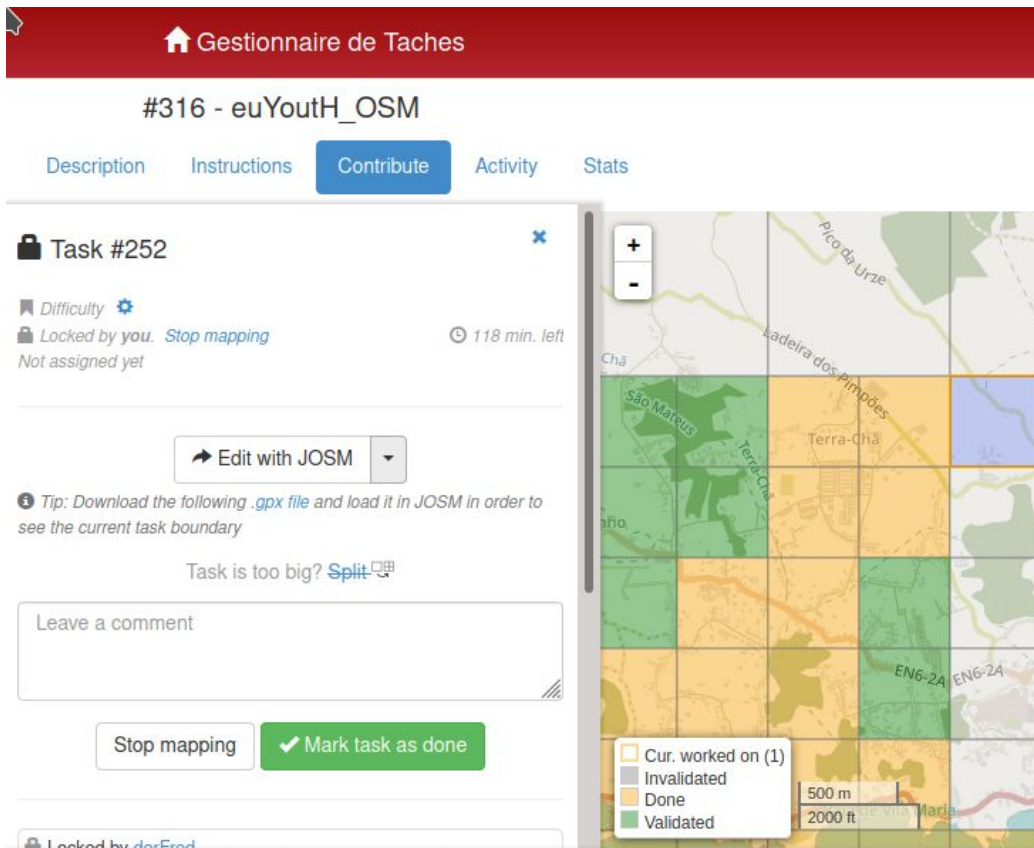
6. Open **Edit with JOSM**
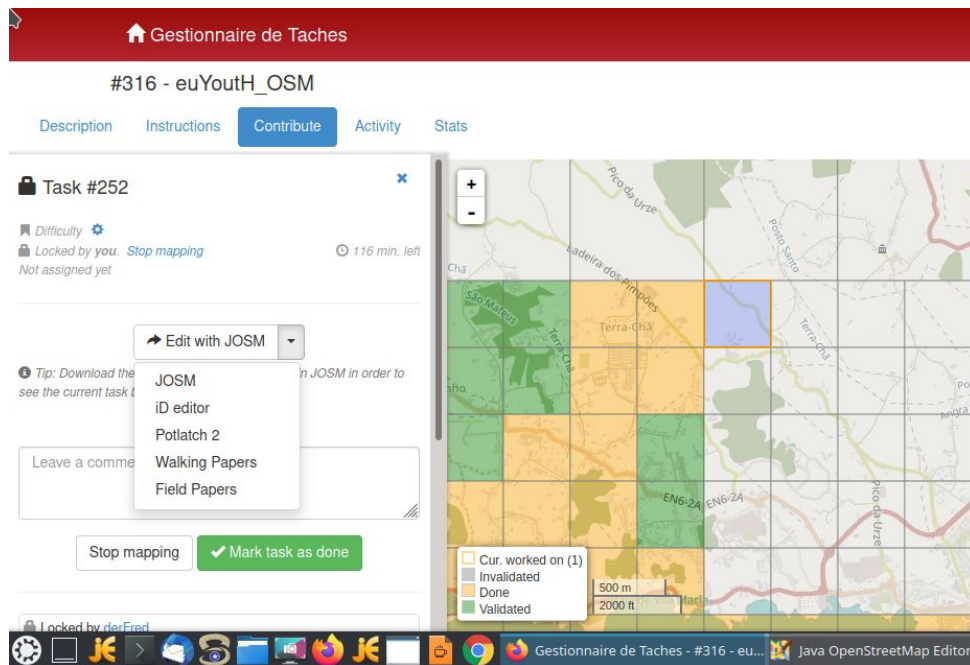
7. Move your mouse to JOSM and click it
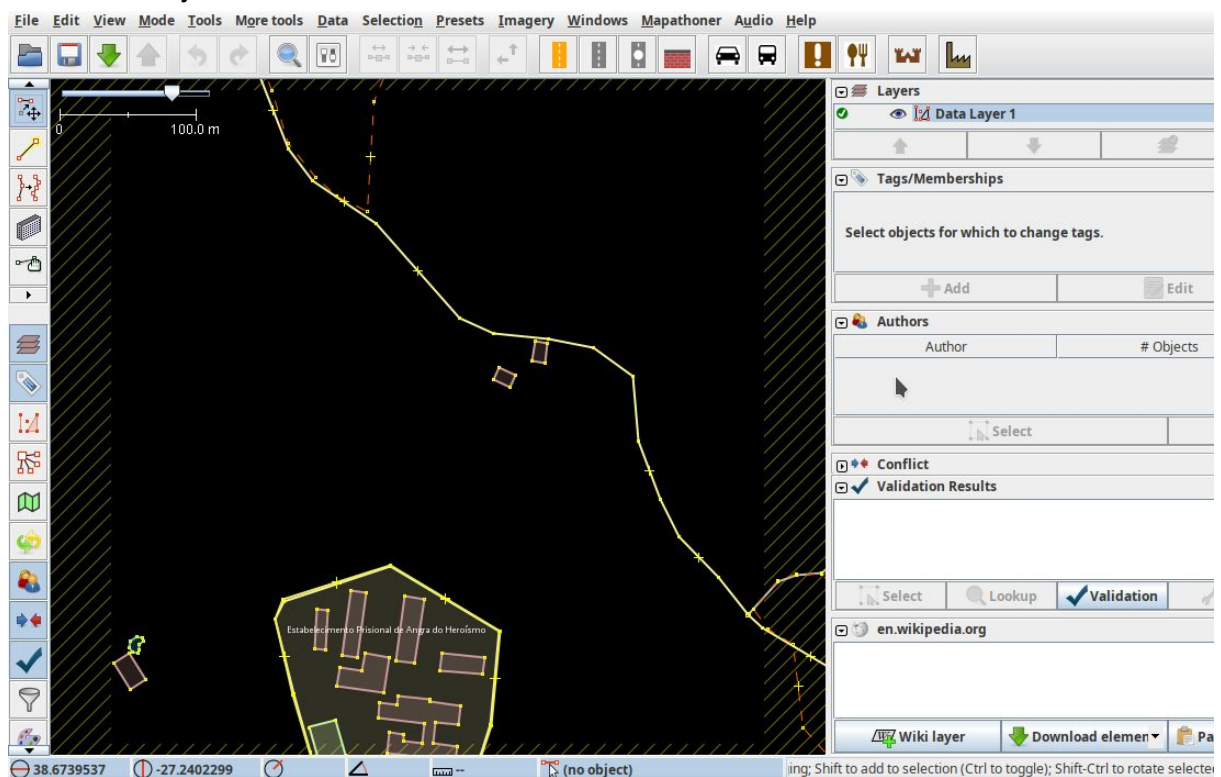
8. In JOSM the selected Square is **automatically opened**

9. Now choose - Imagery
   and select - **Bing aerial imagery** *or* **Maxar Standard Imagery** …
   the one which looks best to you
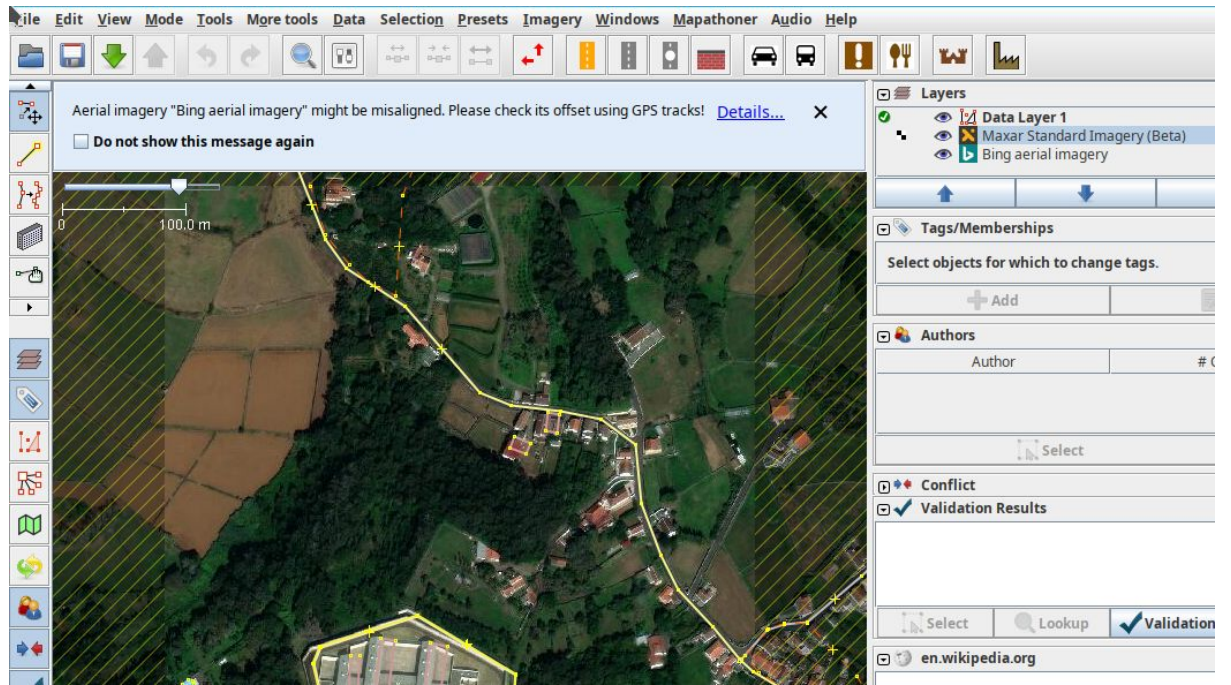
10. Then start mapping buildings or roads

Appendix

Participation OSM Geography Awareness Week

- OSM Geography Awareness Week 2020 - Participation Guide (4)

OSM Geography Awareness Week 2020

1. What do I need to participate?

 1.1.   JOSM

  1.1.1.   The plugins "Buildings" and "Terracer" **should be** installed in JOSM

  1.1.2.   Remote control in JOSM - **must** be enabled

 1.2.   **http://taches.francophonelibre.org/project/316**

2. How do I proceed?

 2.1.   Start JOSM and
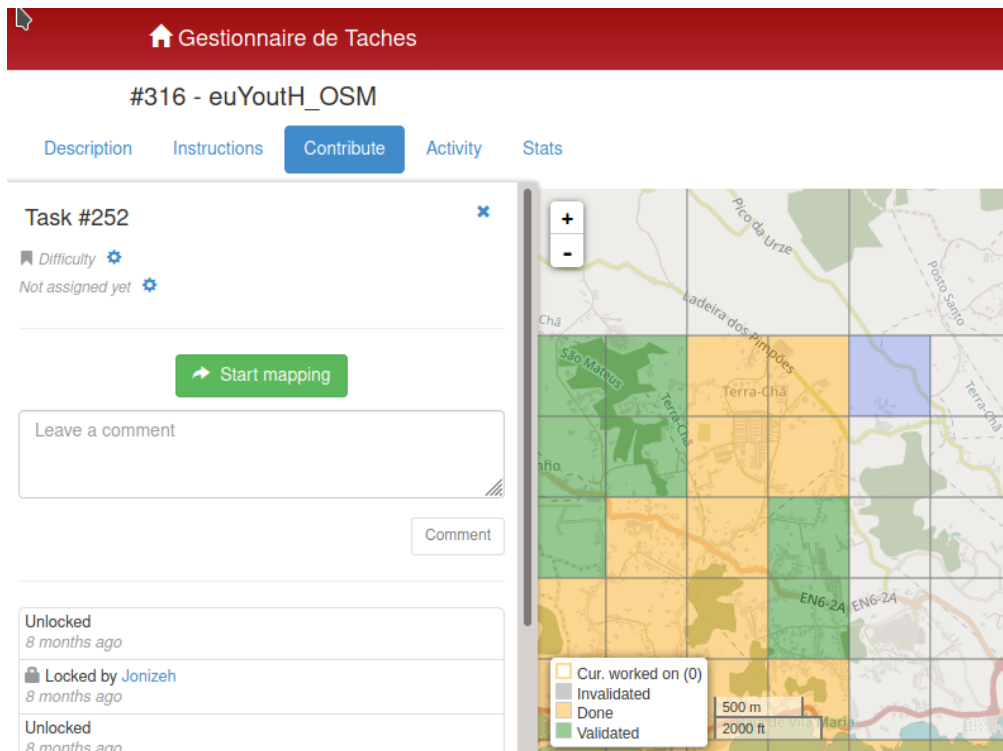
 2.2.   Start your browser and

 2.3.   Open the link above to project 316

Your screen should now more or less look like this:
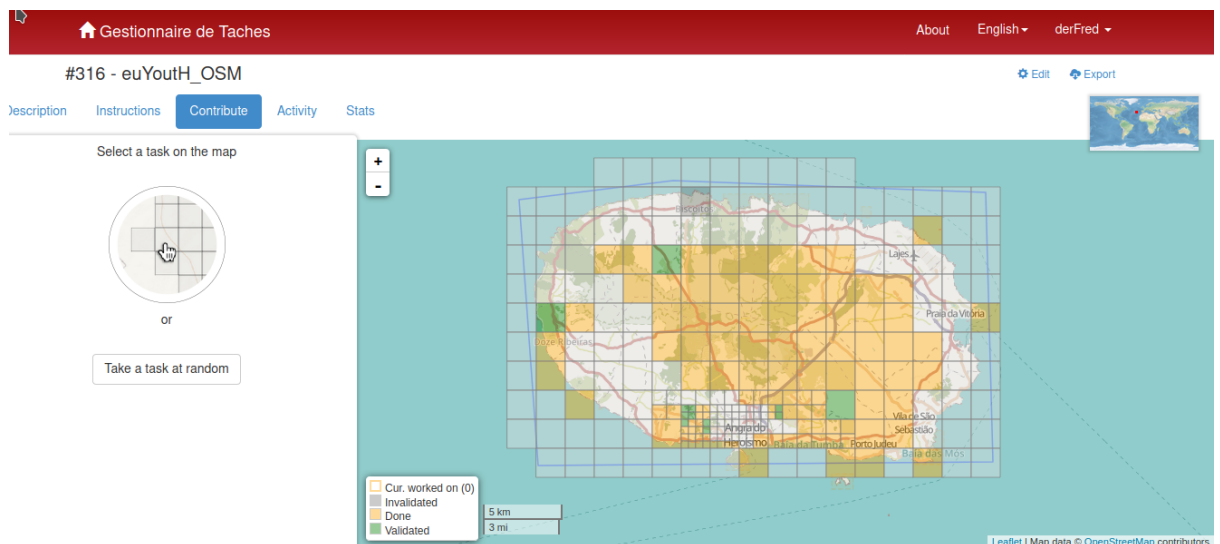
1. please click on one of the squares (on the picture the blue one is selected)

2. Now click **Start mapping**

3. Open **Edit with JOSM**

4. Move your mouse to JOSM and click it - the selected Square will be **automatically opened** in JOSM (because you enabled Remote control in JOSM ;-))

5. Switch to JOSM and see the the selected Square is **automatically opened**
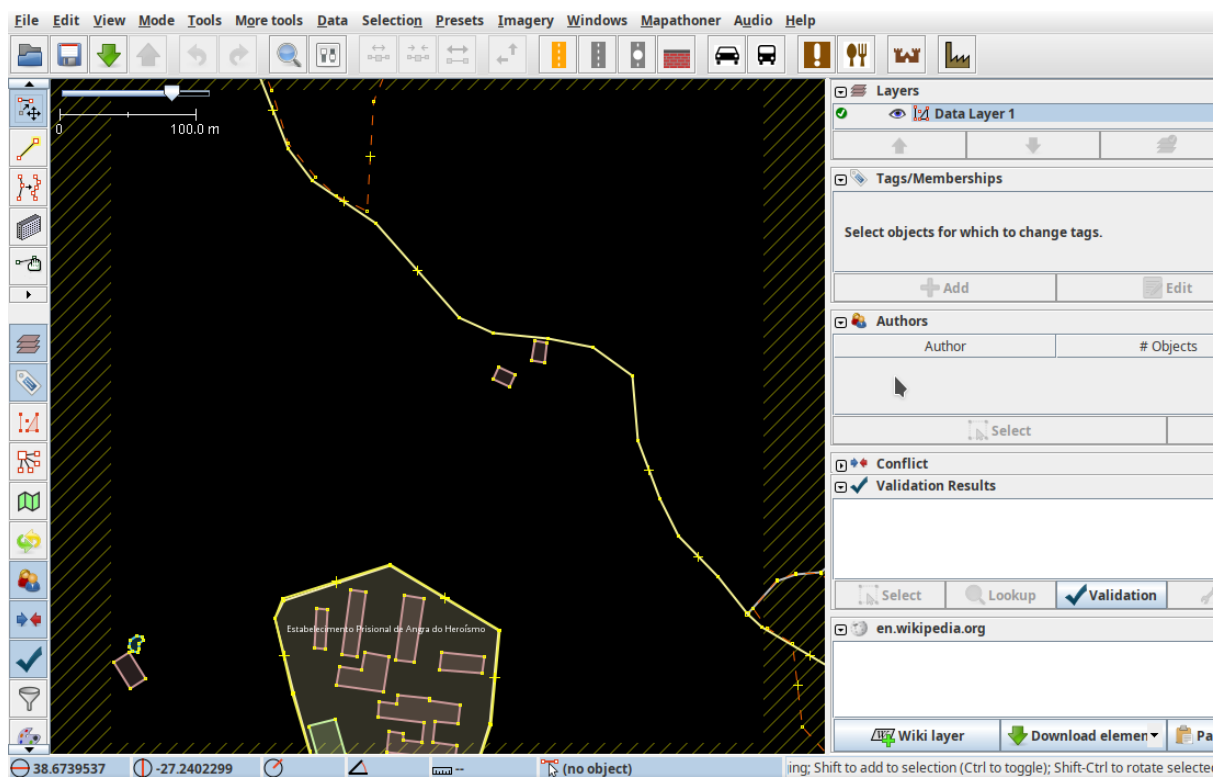
6. Now open open Imagery in the Menu and select - **Bing aerial imagery**
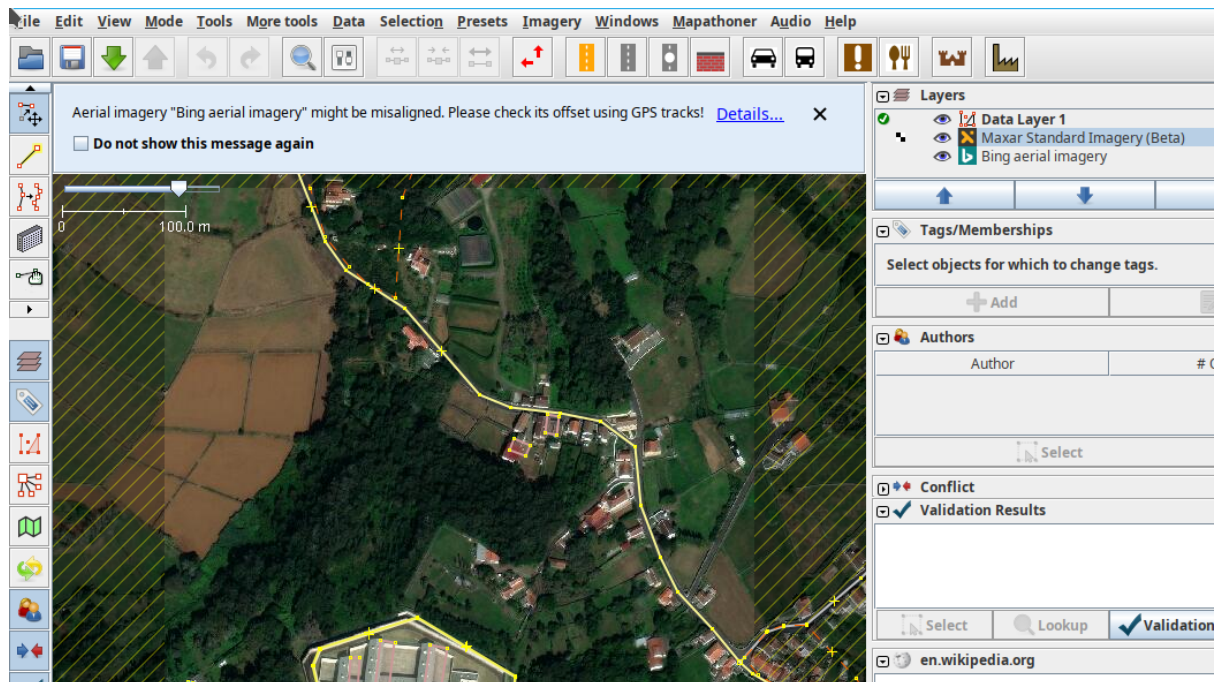
7. You find unmapped **buildings** or **roads** - happy mapping ;-)

8. to finish switch back to your Browser dan click on **Stop mapping**
    OR even better **;-) Mark as done**
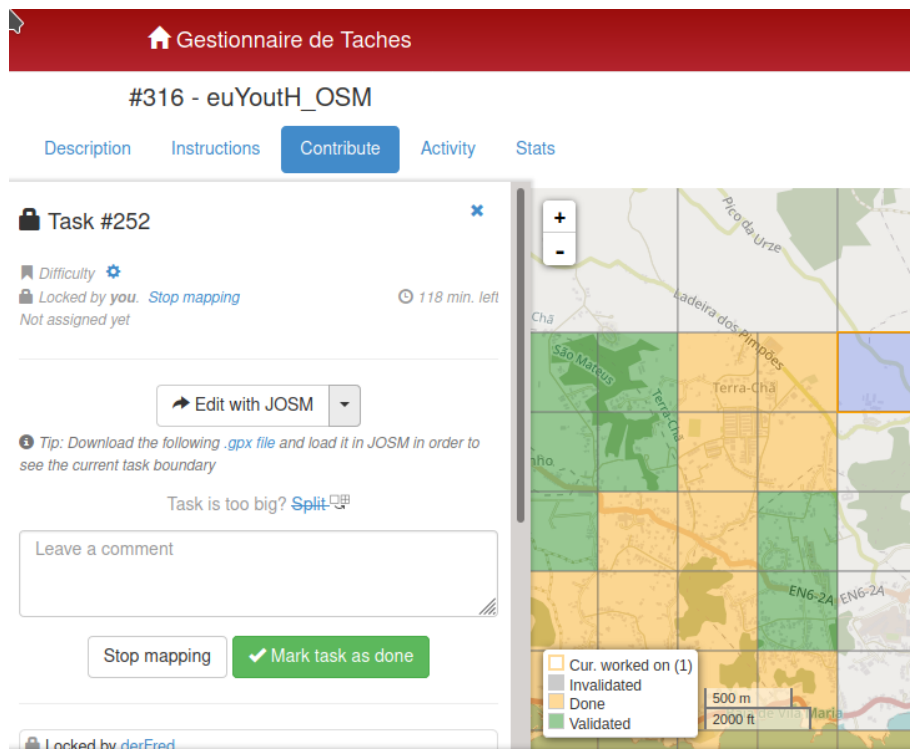
Any question - just go to our BigBlueButton your teachers are waiting for you ;-)
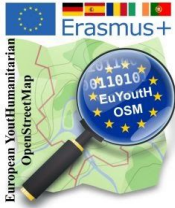
Appendix

Erasmus+ "virtual mobility/activity" with UN - Mapper

- Romania Host 2021-02-22 until 2021-02-24

- Tools to know for mapping OSM - JOSM - Tasking Manager (1)
- Solution Tools_to_know_for_mapping_OSM - JOSM - Tasking Manager (1)
- What we see on the map? - How objects are saved in the OSM Database? (3)
- Solution What we see on the map? - How objects are saved in the OSM Database? (3)
- Useful tags for our mapathon (1)
- Useful tags for our mapathon - Solution (1)
- Mapping - JOSM/Tasking Manager - we map in Terceira (5)
- Adjust imagery offset (2)
- JOSM - First Upload Authentification (2)

All .pdf or images in this brochure and much more can be found on the wiki pages of the project https://wiki.openstreetmap.org/wiki/EuYoutH_OSM

To map we use **JOSM**. We start JOSM via the **Tasking manager**

Wiki is our friend.
OpenStreetMap has its own Wiki.
https://wiki.openstreetmap.org/wiki/Main_Page
10/15 minutes - **break out rooms**

Questions: **What is JOSM? -** Powerful or not? Where is its homepage?

Questions: **What is a Tasking manager?** Why volunteers use it? What's the purpose of this tool?

Questions: **What is a mapathon?**

Wiki is our friend.
OpenStreetMap has its own Wiki.
https://wiki.openstreetmap.org/wiki/Main_Page
10/15 minutes - **break out rooms**

Questions: **What is JOSM? -** Powerful or not? Where is its homepage?

JOSM (Java OpenStreetMap Editor) is a desktop application for editing OpenStreetMap.
It is the most powerful out of available editors.
Its homepage is located at josm.openstreetmap.de.

Questions: **What is a Tasking manager?** Why volunteers use it? What's the purpose of this tool?

The Tasking Manager is the tool for coordination of volunteers and organization of groups to map on OpenStreetMap.
The purpose of the tool is to divide up a mapping job into smaller tasks that can be completed rapidly.
This approach facilitates the distribution of tasks to the various mappers.

Questions: **What is a mapathon?**

A Mapathon is a coordinated mapping event.

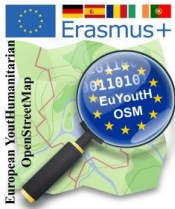|	What we see on the map? How objects are saved in the OSM database? mapathon Erasmus+ euYoutH_OSM and UN mappers © CC BY	

Map of Assié Koumassi - Cote d'Ivoire
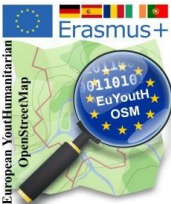https://www.openstreetmap.org/#map=13/6.7602/-4.2740
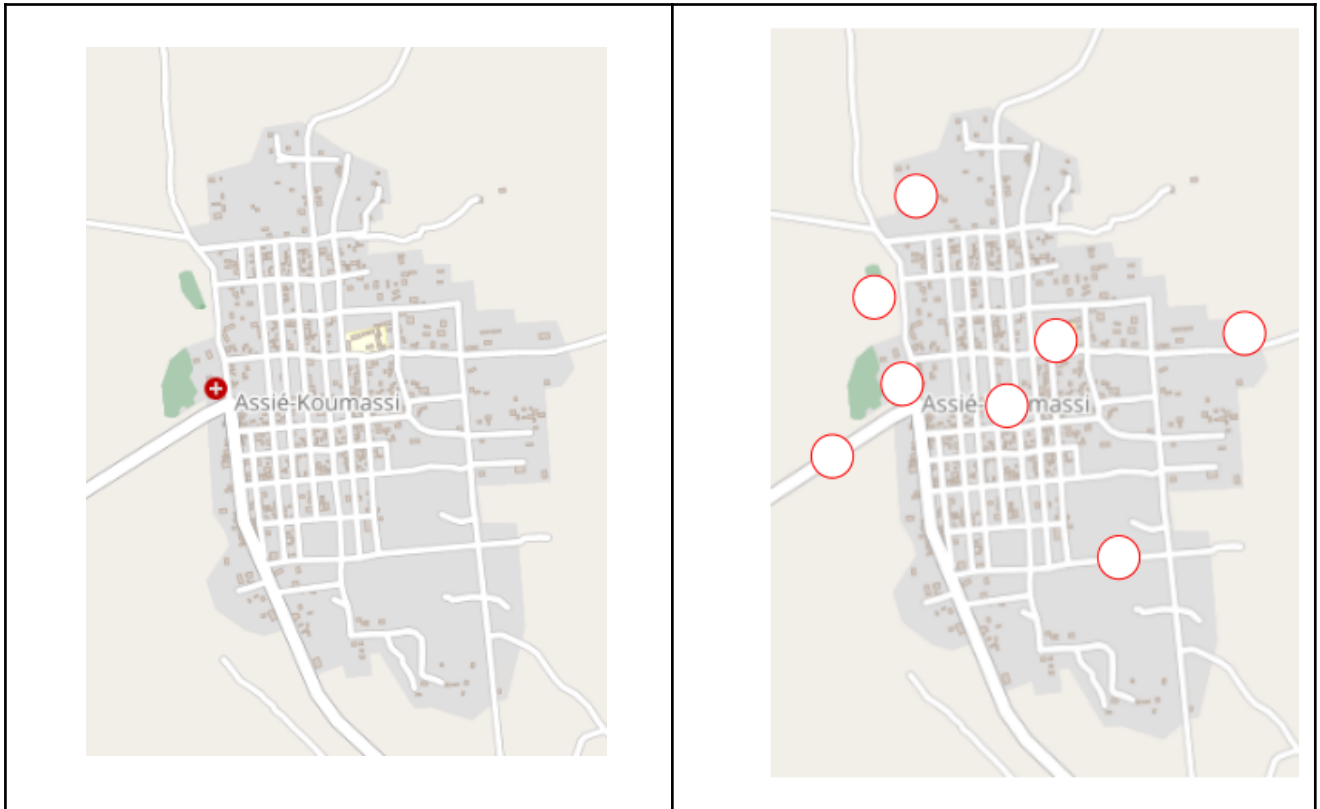
1. For each symbol in the table (below), find the **point** in the map at the top left and enter the corresponding **number** in the map on the right. Use the link above to get more details from the map if necessary.

2. Write what you see on the map	**3.** We **discover** with **JOSM** how it is represented in OSM

Number	Map	Write here what you see on the map. 👇👇👇👇👇👇👇👇	How is it in the database? We check it with JOSM. We call it a "tag". [1]
1			
2			

---

[1] https://wiki.openstreetmap.org/wiki/Tags

What we see on the map?
How objects are saved in the OSM database?

mapathon Erasmus+ euYoutH_OSM and
UN mappers   © CC BY
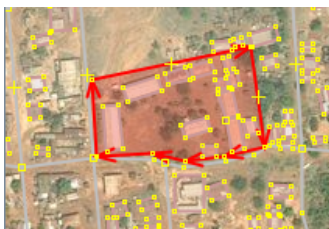
3			
4			
5			
6			
7			
8		VERY DIFFICULT ;-)	

4. Technical expressions

	technical expression in OSM	How many of the 8 objects?	name the objects
Objects can be a **single point.**		2	
Objects can be a **line.**		2	
Object can be a **polygon**.		4	

School found in **JOSM** - The combination of Key and Value is called a **tag**.

Key	Value
amenity	school

Facilities/Education/School …

Add | Edit | Delete

1. Why a polygon on the map is "painted" as a grave_yard and the other polygon is a building? _____.
2. What makes a single line in the database on the map a river or a road? _____.
3. How a node, way or an area is represented on a map is defined by the _____.
4. A _____ consists always of a _____ and a _____.

	What we see on the map? How objects are saved in the OSM database? mapathon [Erasmus+ euYoutH_OSM](#) and [UN mappers](#) © CC BY	

Exercise / homework:
- **Find the eight tags using JOSM and enter the key and value in the table.**
- Write in the form: **Key = Value**

How to:
1. **Launch** your preferred browser like Firefox or Chrome e. g.
2. **Start** JOSM
3. **Configure (if you did it not before)** JOSM due to activate the remote control in jsom using Edit/Preferences/Remote Control -> Enable remote control
4. **Don't close JOSM. Switch back** to your Browser. **Open** Assié Koumassi in OpenStreetMap (see the link above 😉) and open JOSM directly from your Browser

5.

Map of Assié Koumassi - Cote d'Ivoire
https://www.openstreetmap.org/#map=13/6.7602/-4.2740

1. For each symbol in the table (below), find the **point** in the map at the top left and enter the corresponding **number** in the map on the right. Use the link above to get more details from the map if necessary.

2. Write what you see on the map   3. We **discover** with **JOSM** how it is represented in OSM

Number	Map	Write here what you see on the map. 👇👇👇👇👇👇👇👇	How it is in the database? We check it with JOSM. We call it a "tag". [1]
1		**Road outside the village**	**highway=teritary**
2		**Road inside the village**	**highway=residential**

---

[1] https://wiki.openstreetmap.org/wiki/Tags

3		**Buildings**	**building=yes**
4		**Village border**	**landuse=residential**
5		**Cemetery**	**amenity=grave_yard**
6		**Hospital**	**amenity=hospital ; name=....**
7		**School**	**amenity=school ; name=Ecole Privée Tchiambie**
8		**Place name**	**place=village ; name=...**

4. Technical expressions

	technical expression in OSM	How many of the 8 objects?	name the objects
Object can be a **single point**.	**node**	2	**Hospital, Village name**
Object can be a **line**.	**way**	2	**2 roads**
Object can be a **ploygon**.	**area**	4	**school, village, cemetery, building**

School found in **JOSM** - The combination of Key and Value is called a **tag**.
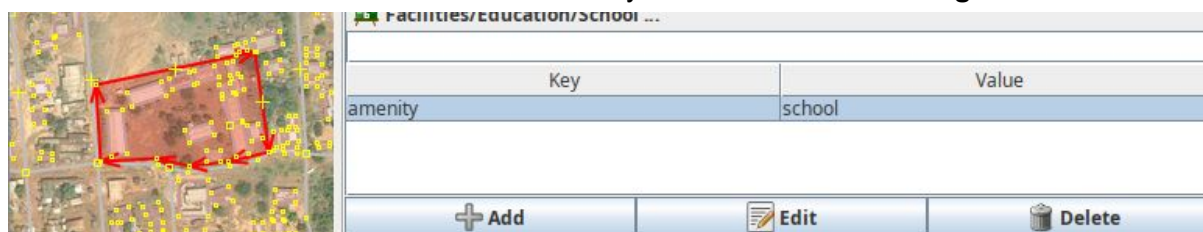
1. Why a polygon on the map is "painted" as a grave_yard and the other polygon is a building? **Because of the different tags.**
2. What makes a single line in the database on the map a river or a road? **The tag.**
3. How a node, way or an area is represented on a map is defined by the **tags**.
4. A   **tag**   consists always of a   **key**   and a   **value**   .

EXAMPLES
we found in "our JOSM-Task" in Santa Barbara, Terceira

OSM-Wiki is your friend
https://wiki.openstreetmap.org/

Object	Key	Value	Link to our OSM Wiki
Place of residence			https://wiki.openstreetmap.org/wiki/Tag:landuse%3Dresidential
			https://wiki.openstreetmap.org/wiki/Key:place#Populated_settlements.2C_urban_and_rural
building			https://wiki.openstreetmap.org/wiki/Key:building#Values
waterway			https://wiki.openstreetmap.org/wiki/Key:waterway
road			https://wiki.openstreetmap.org/wiki/Highways#Classification
~~powerline~~			https://wiki.openstreetmap.org/wiki/Power_lines#keys_and_values

Useful tags for our mapathon
SOLUTION

mapathon [Erasmus+ euYoutH_OSM](#) and
[UN mappers](#)

Tags: 1 / Memberships: 0

🏠 Man Made/Man Made/Building ...
🏠 Man Made/Man Made/Residential Building ...

Key	Value

➕ Add   📝 Edit   🗑 Delete

EXAMPLES
we found in "our JOSM-Task" in Santa Barbara, Terceira

OSM-Wiki is your friend
https://wiki.openstreetmap.org/

Object	Key	Value	Link to our OSM Wiki
Place of residence	**landuse**	**residential**	https://wiki.openstreetmap.org/wiki/Tag:landuse%3Dresidential
	place	**village**	https://wiki.openstreetmap.org/wiki/Key:place#Populated_settlements.2C_urban_and_rural
building	**building**	**yes**	https://wiki.openstreetmap.org/wiki/Key:building#Values
waterway	**waterway**	**stream**	https://wiki.openstreetmap.org/wiki/Key:waterway
road	**highway**	**residential**	https://wiki.openstreetmap.org/wiki/Highways#Classification
~~powerline~~	**power**	**line**	https://wiki.openstreetmap.org/wiki/Power_lines#keys_and_values

	Mapping JOSM/Tasking Manager we map in Terceira mapathon Erasmus+ euYoutH_OSM and UN mappers © CC BY	

We check the region where we have in mind to map

We will map our first building in Santa Barbara, Terceira
1. we open the following link:
   https://www.openstreetmap.org/#map=16/38.6949/-27.3336

The map shows a lot more as we saw until now.
Therefore - as every map - OSM offers a "legend". For end uses they call it "Map key".
.
You find the "legend", clicking on the "i". When you click on it it changes the colour to green.

You know meanwhile, - OSM-wiki is our friend -
therefore some links to map features.

all features	https://wiki.openstreetmap.org/wiki/Map_features
landuse	https://wiki.openstreetmap.org/wiki/Map_features#Landuse
rural - agricultural landuse	https://wiki.openstreetmap.org/wiki/Map_features#Common_Landuse_Key_Values_-_Rural_and_agricultural_land

We open the OSM data in JOSM via the Tasking Manager

1. We start **JOSM**
2. We open in a browser the tasking manager:
   http://taches.francophonelibre.org/project/316 #316 is the Project
3. We must login with OpenStreetMap

4. We click on **Contribute** and click a task to select it (see the one in light blue)
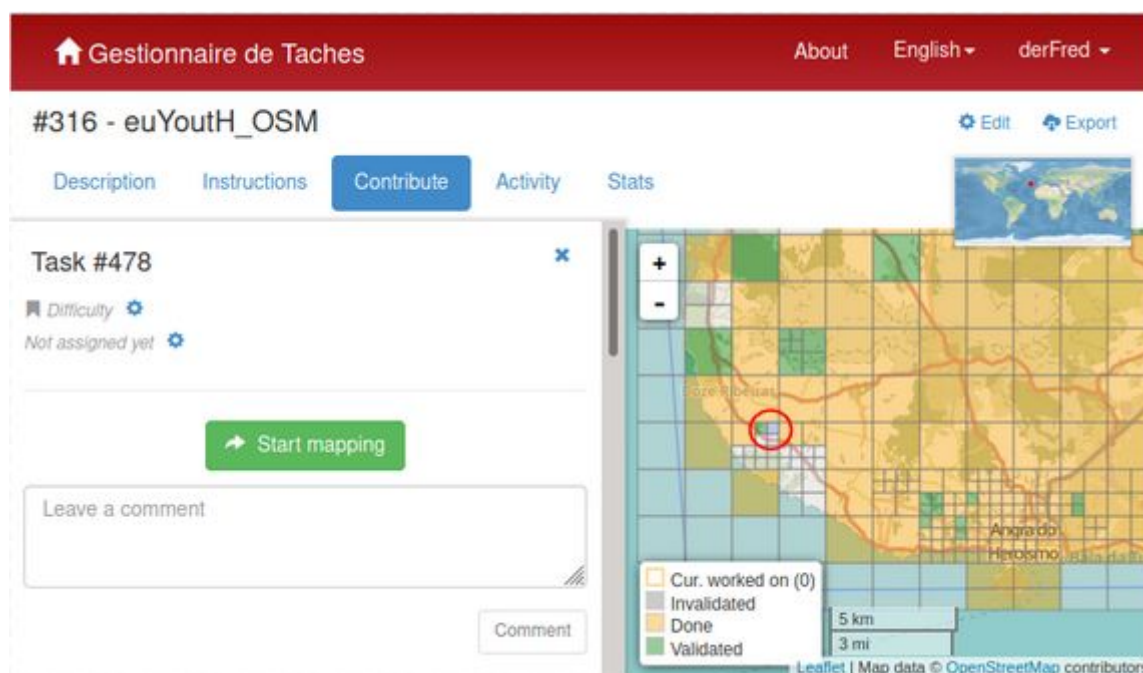
- see in our mapping activity in Terceira it is **task #478** in the project #316

please observe:
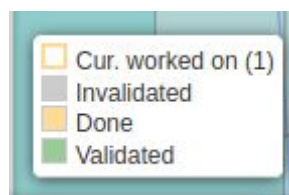
5. Now we click **Start Mapping**
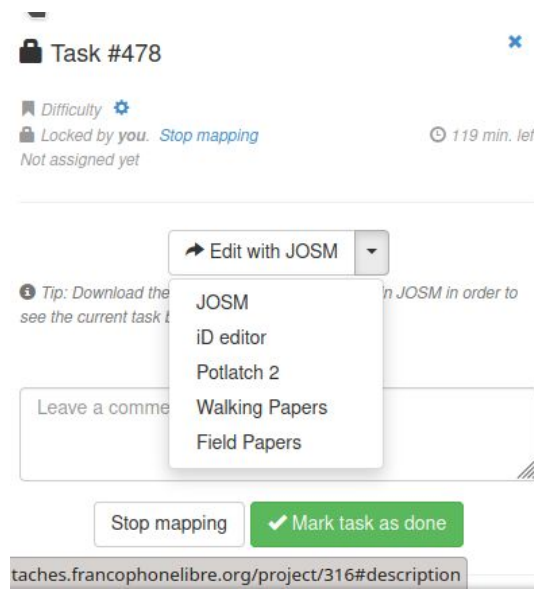
6. and we move the cursor to **JOSM**, click on it …. and … here the OSM data appear in JOSM
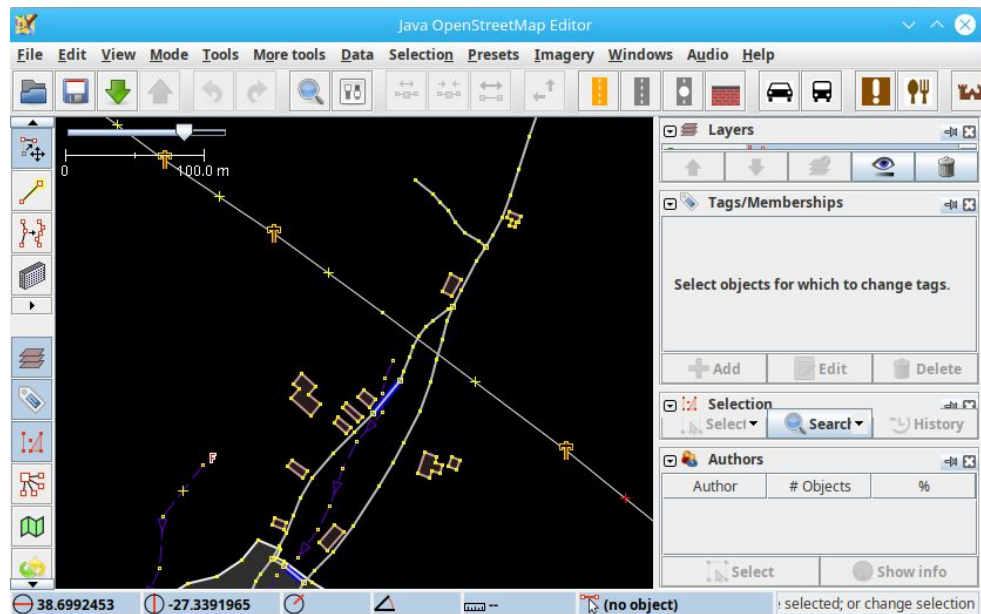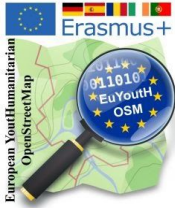
7. We select a **building by clicking on it**, and we see
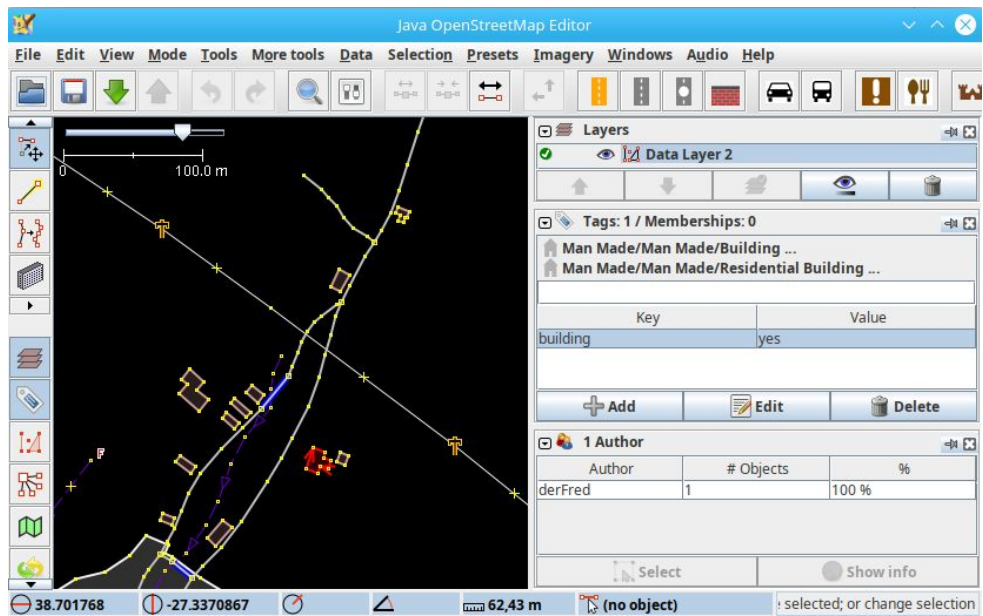
the tag and

who did it
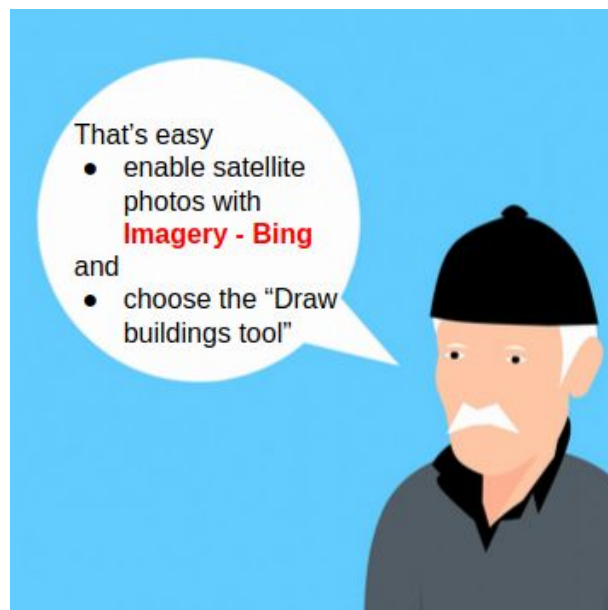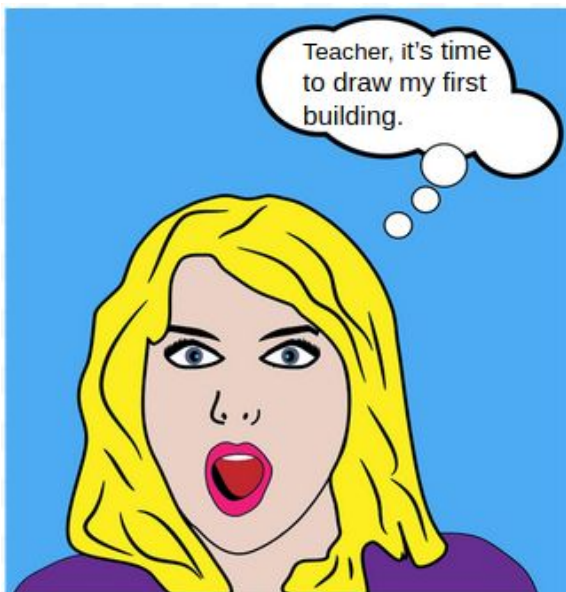
- Imagery
- Bing

  switched on
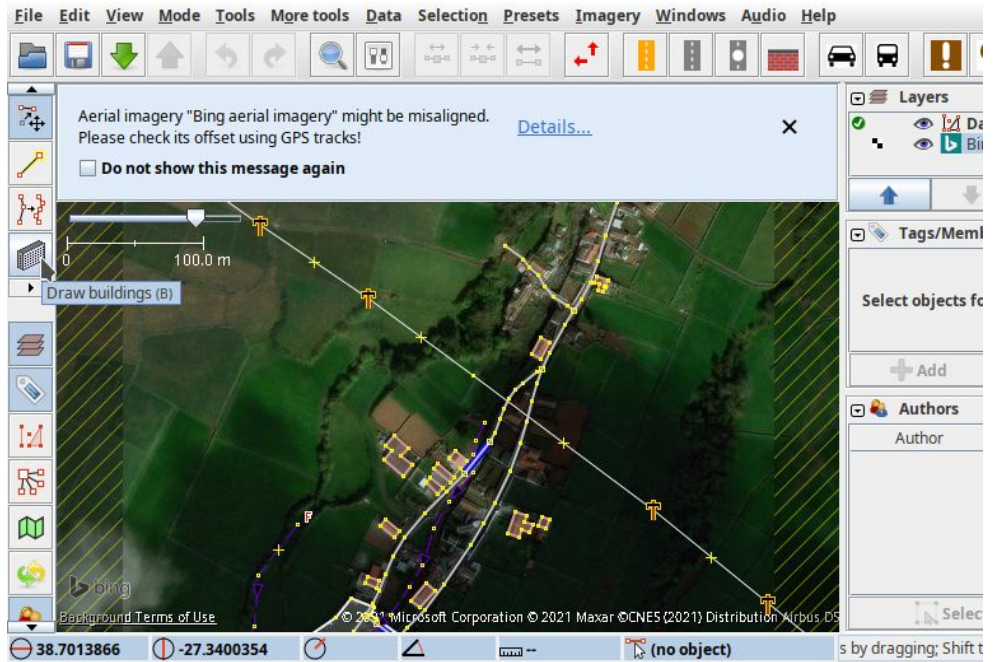
we scroll with the mouse wheel closer

and we click on the

"Building tool"
and draw a building

The tag with the key and the value is done automaticalley by the "Building tool"

Upload to database
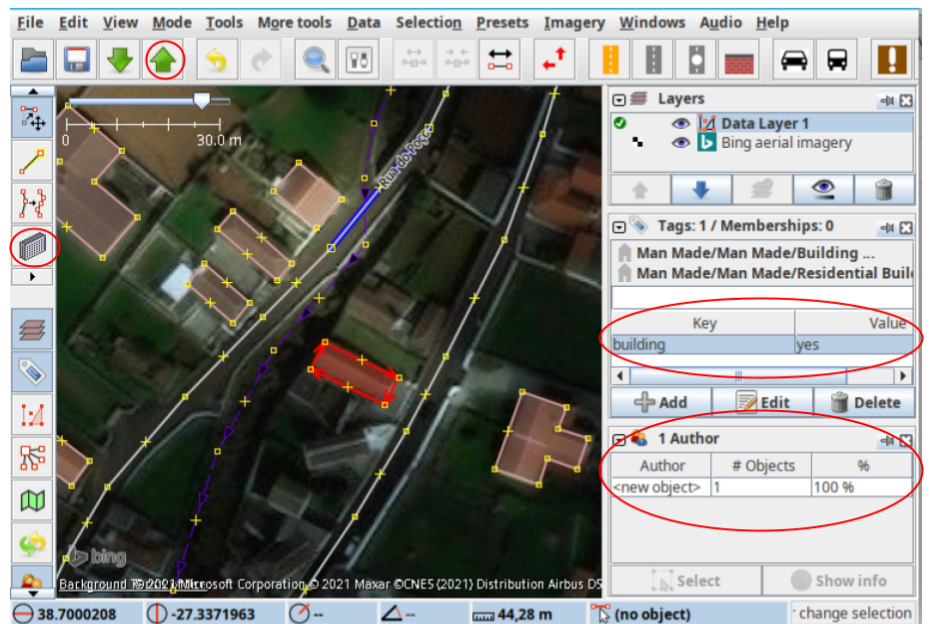
The Information the author appears directly. The building now exists an the map as well.

When using aerial images (e.g. Bing) for mapping, it can happen that existing objects are inaccurately placed or distorted (see the following image). The real location of objects can best be traced with your own GPS data. Since this data is not always available, **the map must be adapted to the existing objects.**
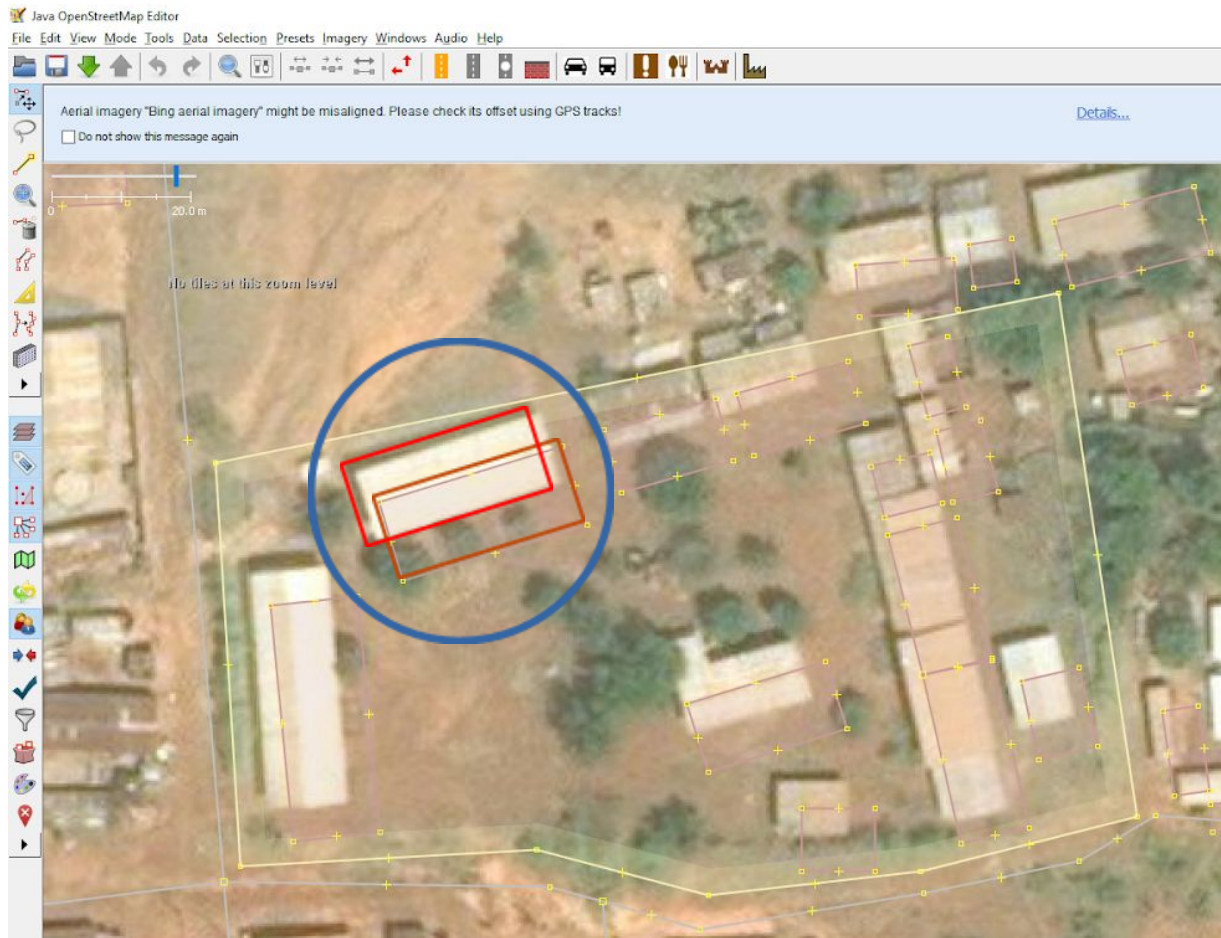
Further information and explanations: https://wiki.openstreetmap.org/wiki/Using_Imagery

Instructions for correcting the offset:

Step 1: Open JOSM with the appropriate data (e.g. from browser via remote control).

Step 2: Blend aerial photographs such as those used by Microsoft Bing (JOSM → Imagery/Bing arial imagery).

Step 3: Visually check for possible displacement. Sometimes the following message appears:

Step 4: If there is an offset, correct it before you start mapping.
Click on the following button in JOSM:
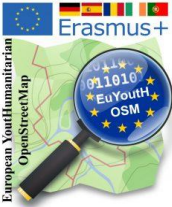
This window appears:
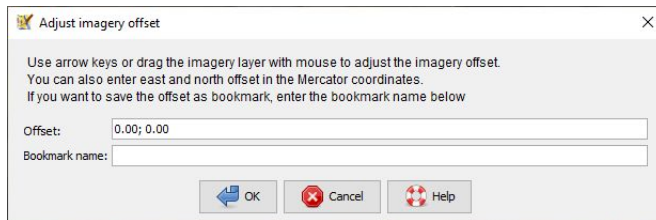
Move the aerial view with the left mouse button to fit the objects and close the window with [OK].
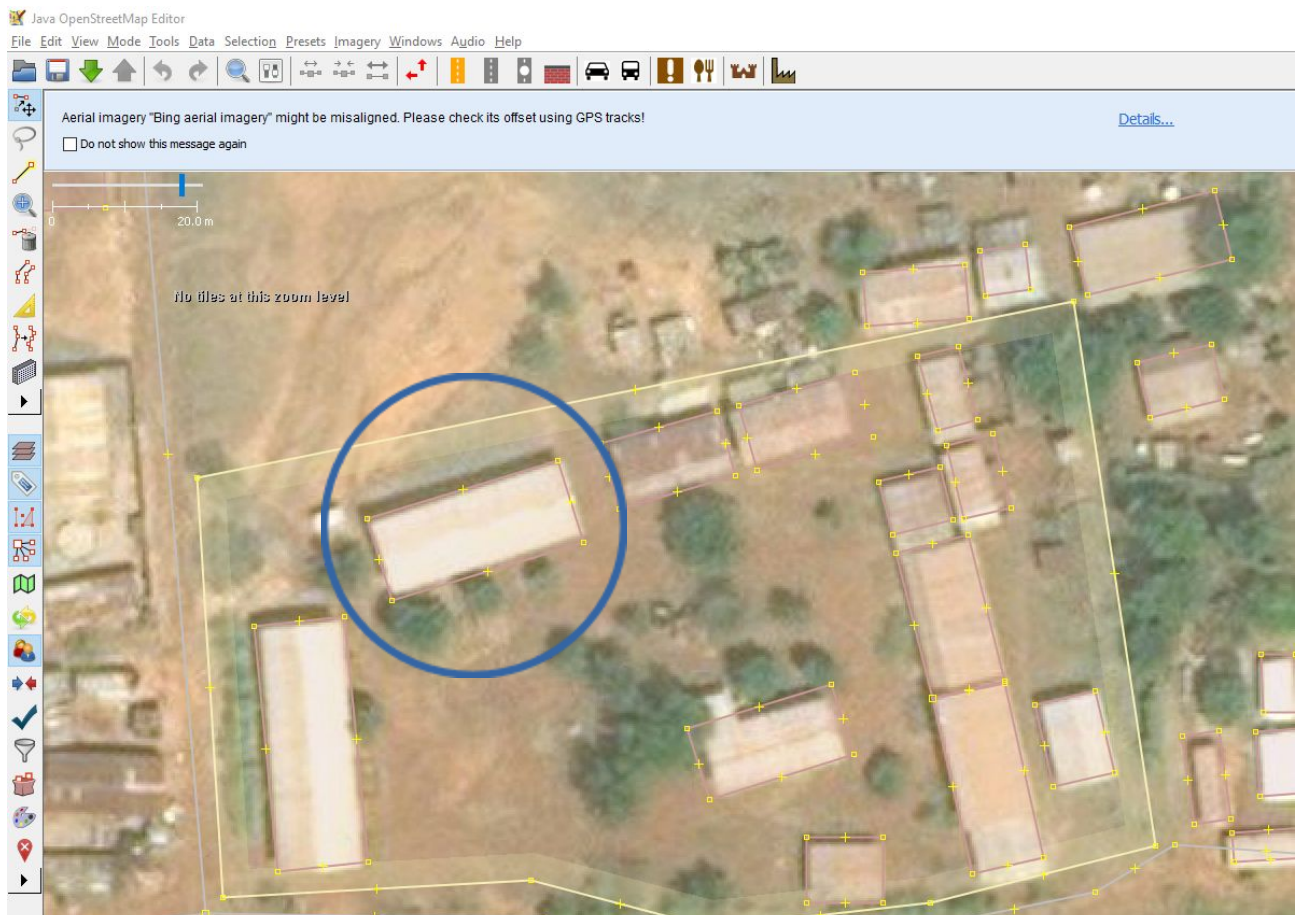
Now you can start mapping. Have fun.

1. Locals **explain** the main buttons
   - Building_tools
   - Upload
   - Imagery
   - windows
        Tags/Memberships
        Authors
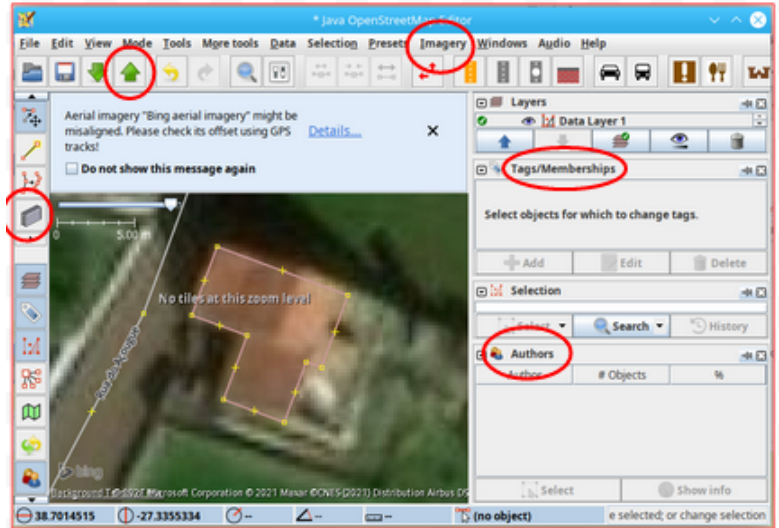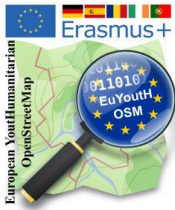
2. Try to upload

   Explain
   Changeset comment
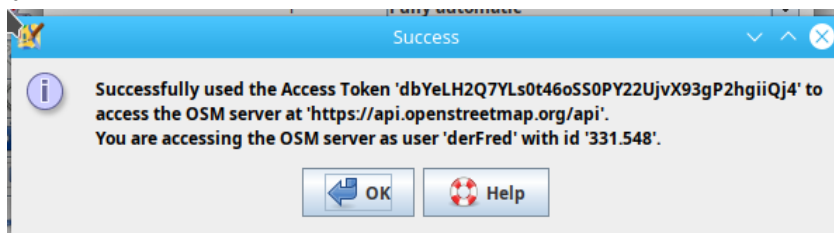
   Explain
   Data Source

3. When uploading for the **first time**, you must authenticate the upload so that it is known who uploaded the data.

4. No you can **Test the Access**.

5. It it works fine, you should get this message. Otherwise talk to your teacher and he/she will try to connect you with the "Semi automatic" feature.

6. Congratulations, your upload is now working. Reminder: Steps 4. and 5. are only necessary if JOSM has not yet been used.
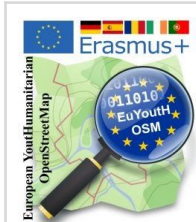
Erasmus+ **Eu**ropean **Y**out**H**umanitarian **O**pen**S**treet**M**ap

Appendix

Erasmus+ "virtual mobility/activity" with UN - Mappers

Portugal Host 2021-03-22 until 2021-03-24

- Mapping from satellite images in desert areas (6)

All .pdf or images in this brochure and much more can be found on the wiki pages of the project https://wiki.openstreetmap.org/wiki/EuYoutH_OSM

Issue #1

https://tasks.hotosm.org/projects/10563/tasks/?search=78
Selected features

without the OSM features, in order to see the imagery better

Solution:
There is a misinterpretation of the map features: the selected ways are not unclassified highways but intermittent streams. You can understand the difference between highways and waterways as streams have a more complex and natural flow direction, while highways tend to be more linear and simple. Also, around waterways there could be some more vegetation, or shady areas given by the water which digs the ground. In this example, waterways do not connect to the unclassified road at the bottom of the picture, as they are flowing to the NE.

Issue#2

https://tasks.hotosm.org/projects/10563/tasks/?search=90
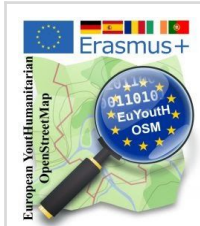

Solution :
It lacks a tag to clarify how the waterway and the highway interact. ford=yes in this example, as the roads are passable when there is no or low water.

Issue #3
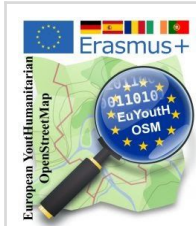
https://tasks.hotosm.org/projects/10563/tasks/?search=90

Solution:
The highway should not be connected to the place and continue down to the South.
The residential area needs to be updated as it is does not include all the buildings.

Issue #4

https://tasks.hotosm.org/projects/10563/tasks/?search=90

Solution:
The residential area is not closed and is also connected to a path whereas it should not
The place is at the intersection of two road whereas it should not be connected to any other feature, but to be a standalone node at the middle of the residential area polygon. As a general rule, landuse and network like features (highways, waterways) should not be connected.

Issue #5

https://tasks.hotosm.org/projects/10563/tasks/?search=90

Solution:
The path is connected to the river while it seems there is no path there