Georeferenziazione immagini con QGIS

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Sistemi Informativi Geografici 069EC

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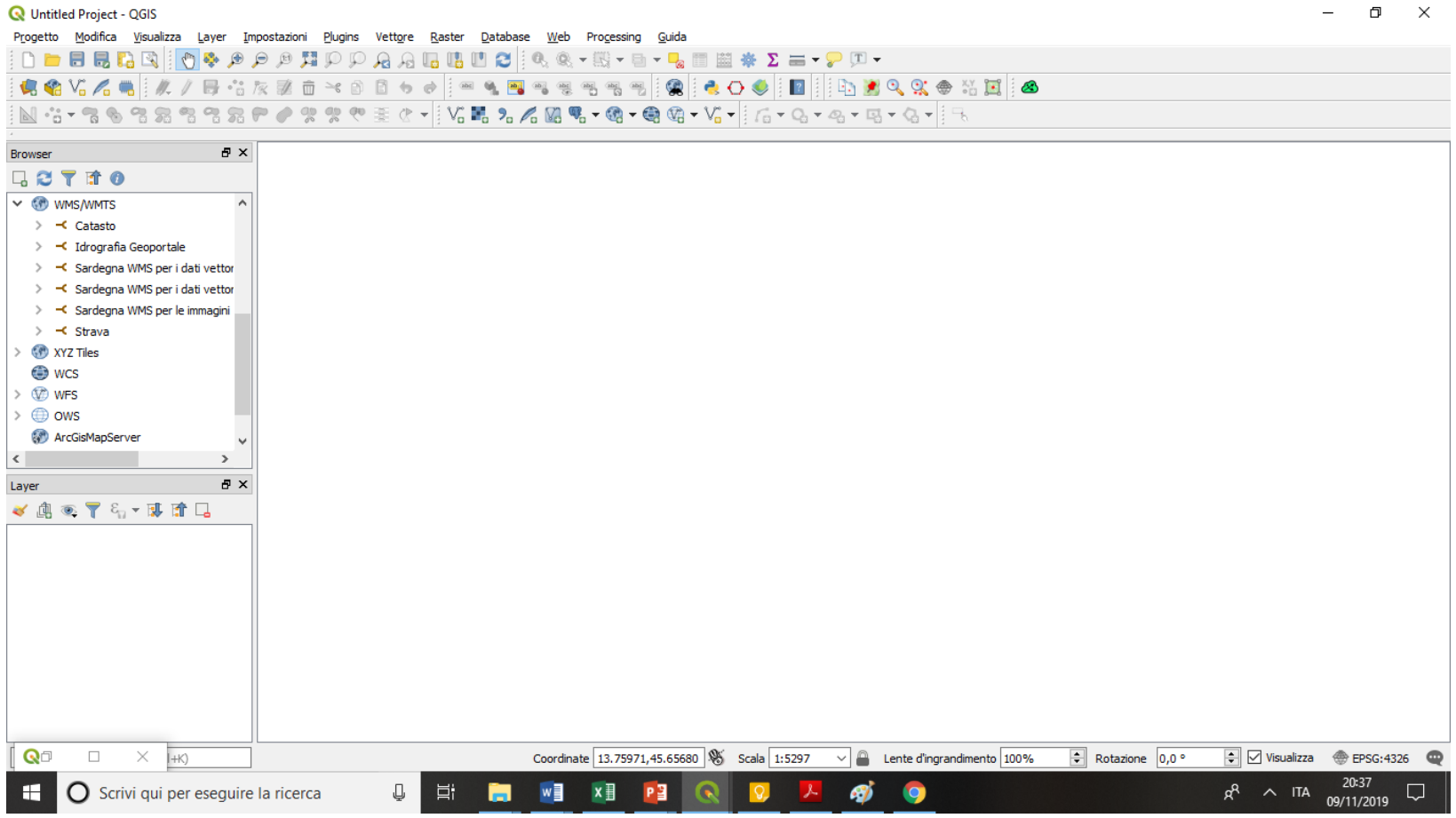
In questa lezione

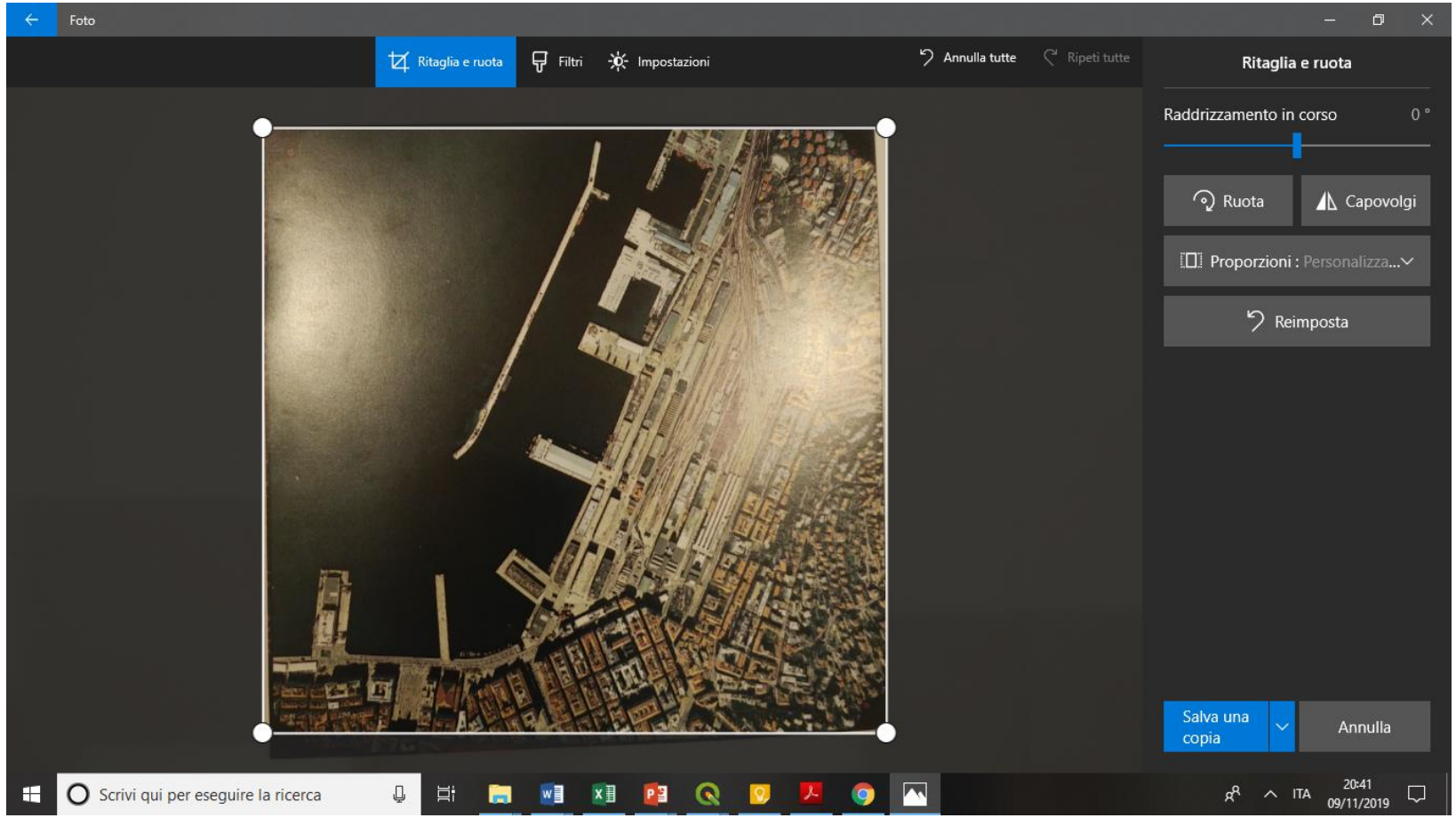
- Impararemo a georeferenziare un immagine acquisita da telerilevamento (o da scansione di immagini storiche)
- Passaggi:
  - Aprire un progetto in QGIS
  - Caricare una cartografia di sfondo (Google Earth)
  - Georeferenziare un’immagine


Untitled Project - QGIS
Progetto Modifica Visualizza Layer Impostazioni Plugins Vettore Raster Database Web Processing Guida
Browser
WMS/WMTS
Catasto
Idrografia Geoportale
Sardegna WMS per i dati vettor
Sardegna WMS per i dati vettor
Sardegna WMS per le immagini
Strava
XYZ Tiles
WCS
WFS
OWS
ArcGisMapServer
Layer
Coordinate 13.75971,45.65680
Scala 1:5297
Lente d'ingrandimento 100%
Rotazione 0,0 °
Visualizza
EPSG:4326
Scrivi qui per eseguire la ricerca
ITA
20:37
09/11/2019

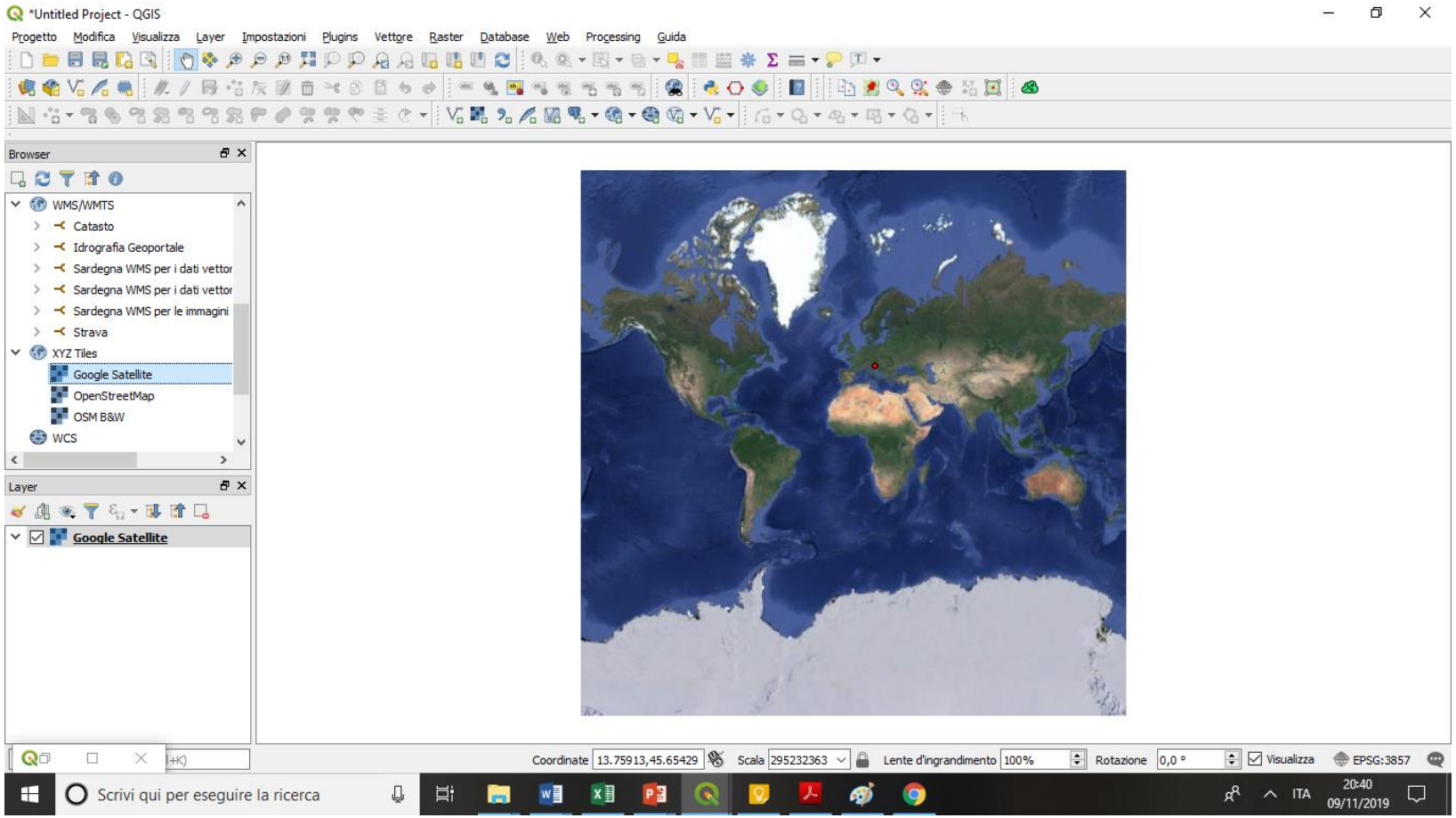
Acquisire l’immagine



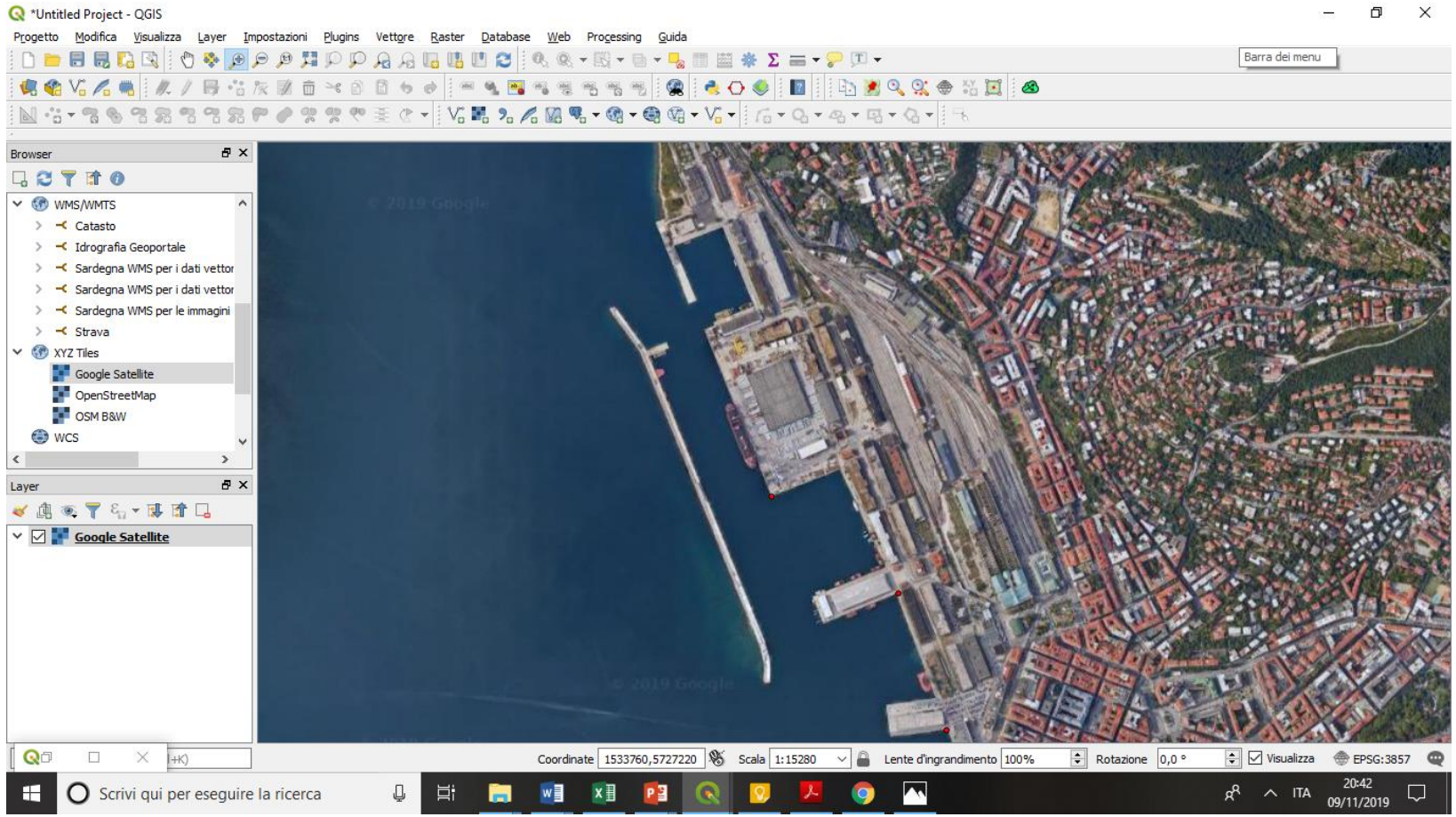
Ritagliare l’immagine secondo l’area di interesse



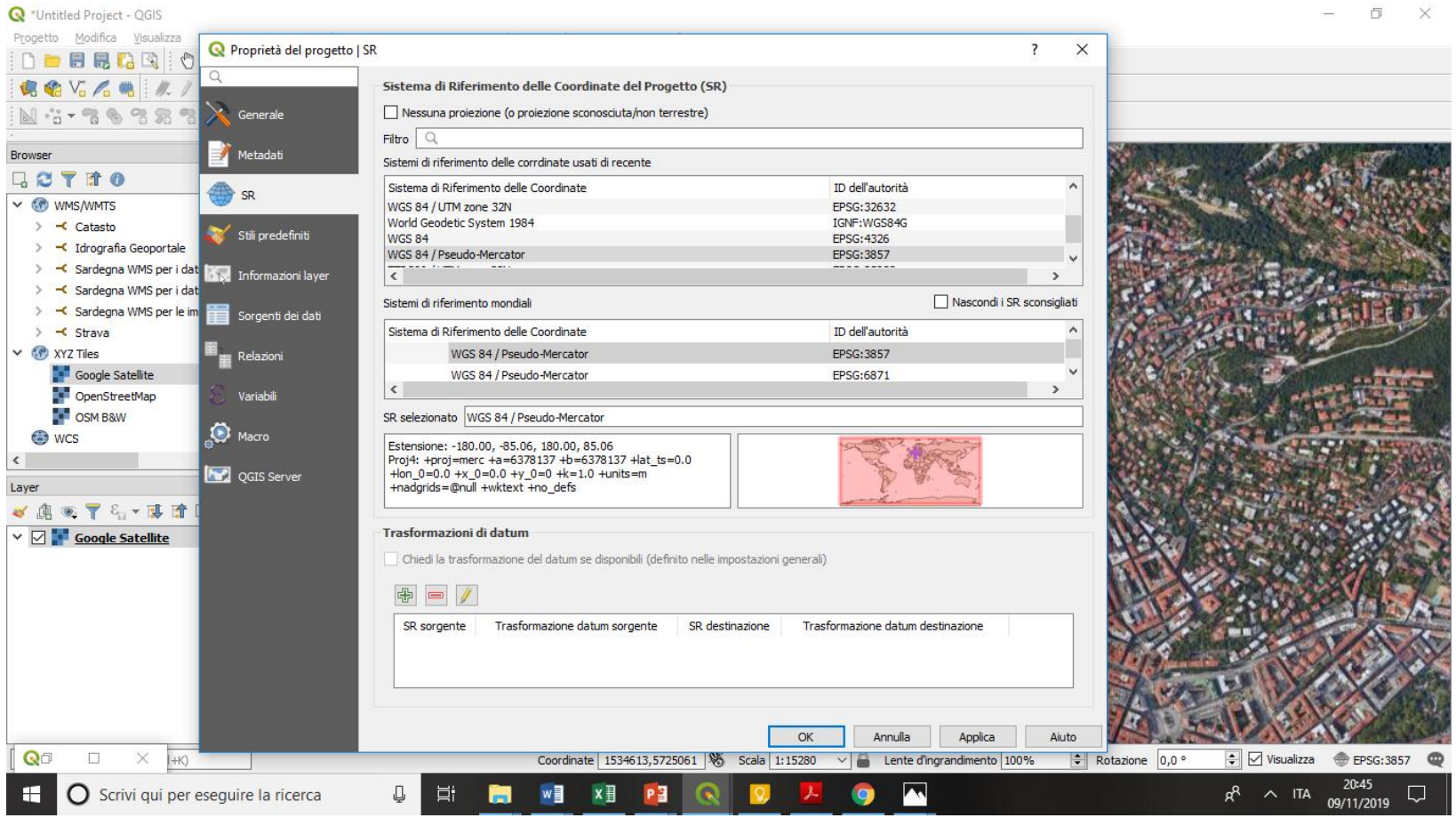
Caricare Google Satellite (o altro sfondo: XYZ Tiles)



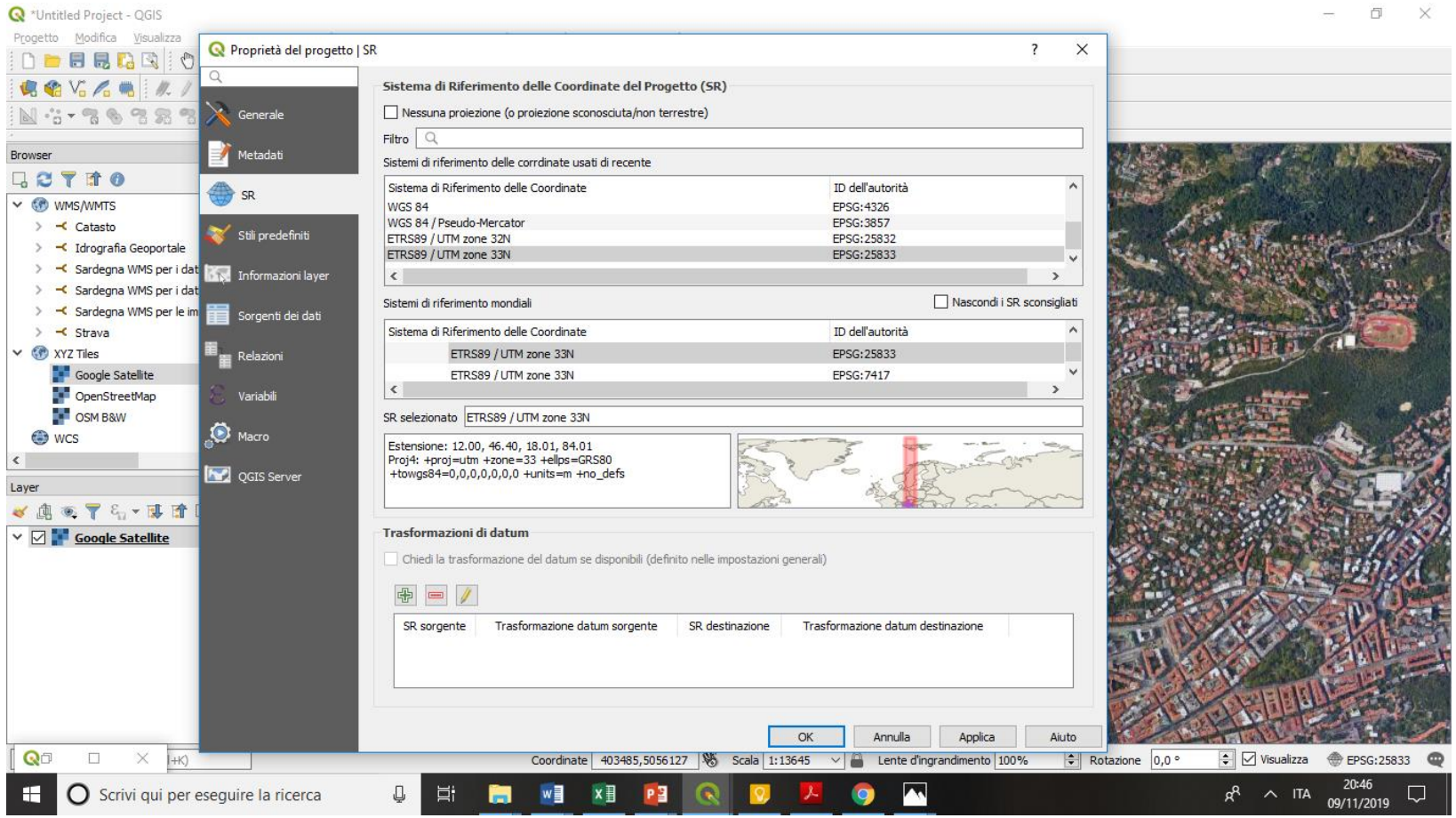
Zoom sull’area di interesse



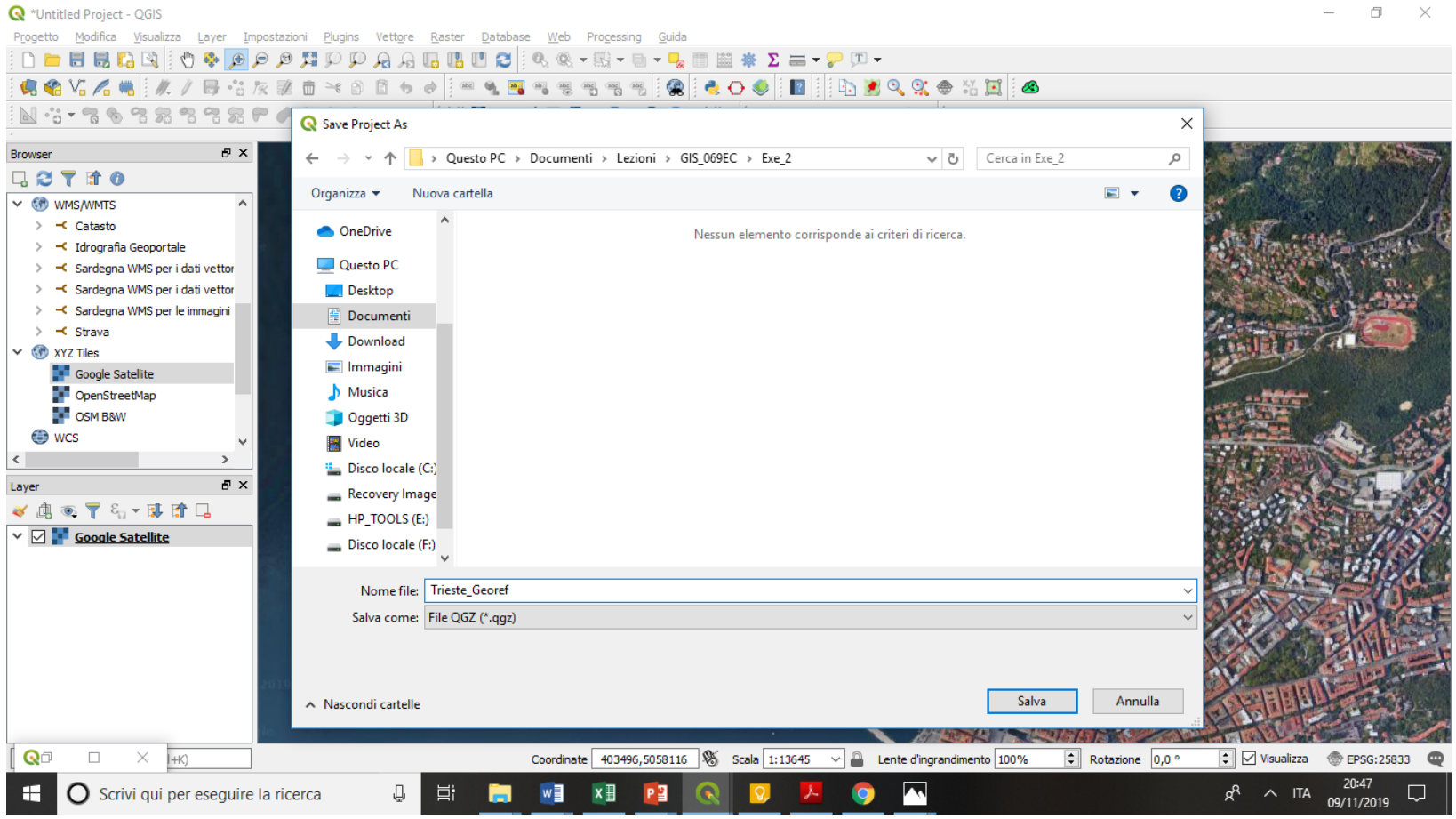
Modificare il sistema di riferimento
Da EPSG:3857 a EPSG:25833



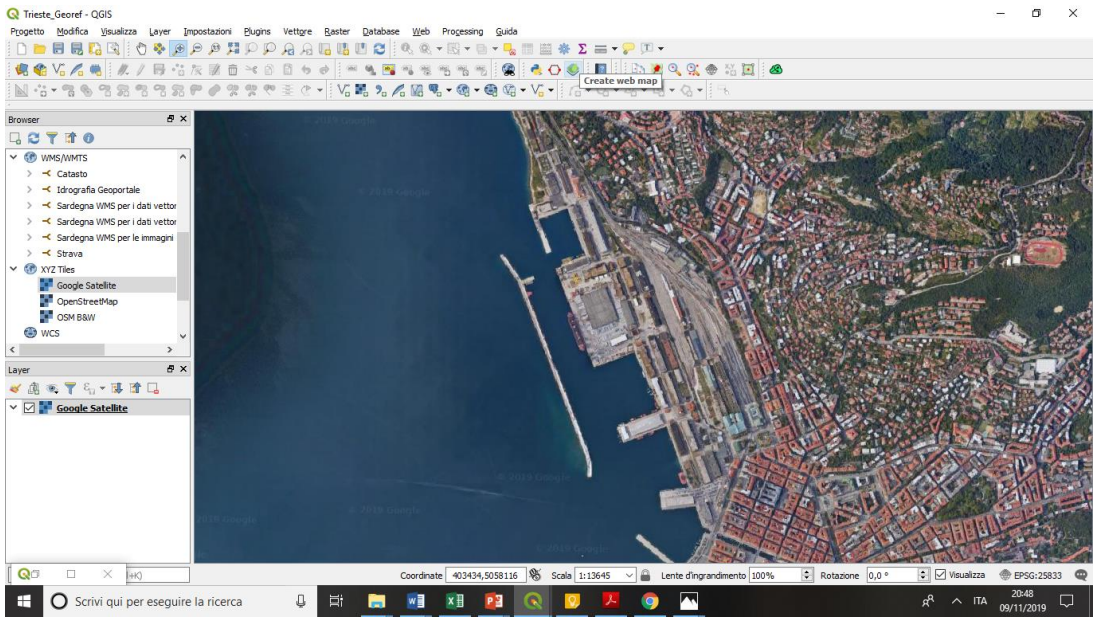
Modificare il sistema di riferimento
Da EPSG:3857 a EPSG:25833



Salvare il progetto (con nome)
E salvare spesso….

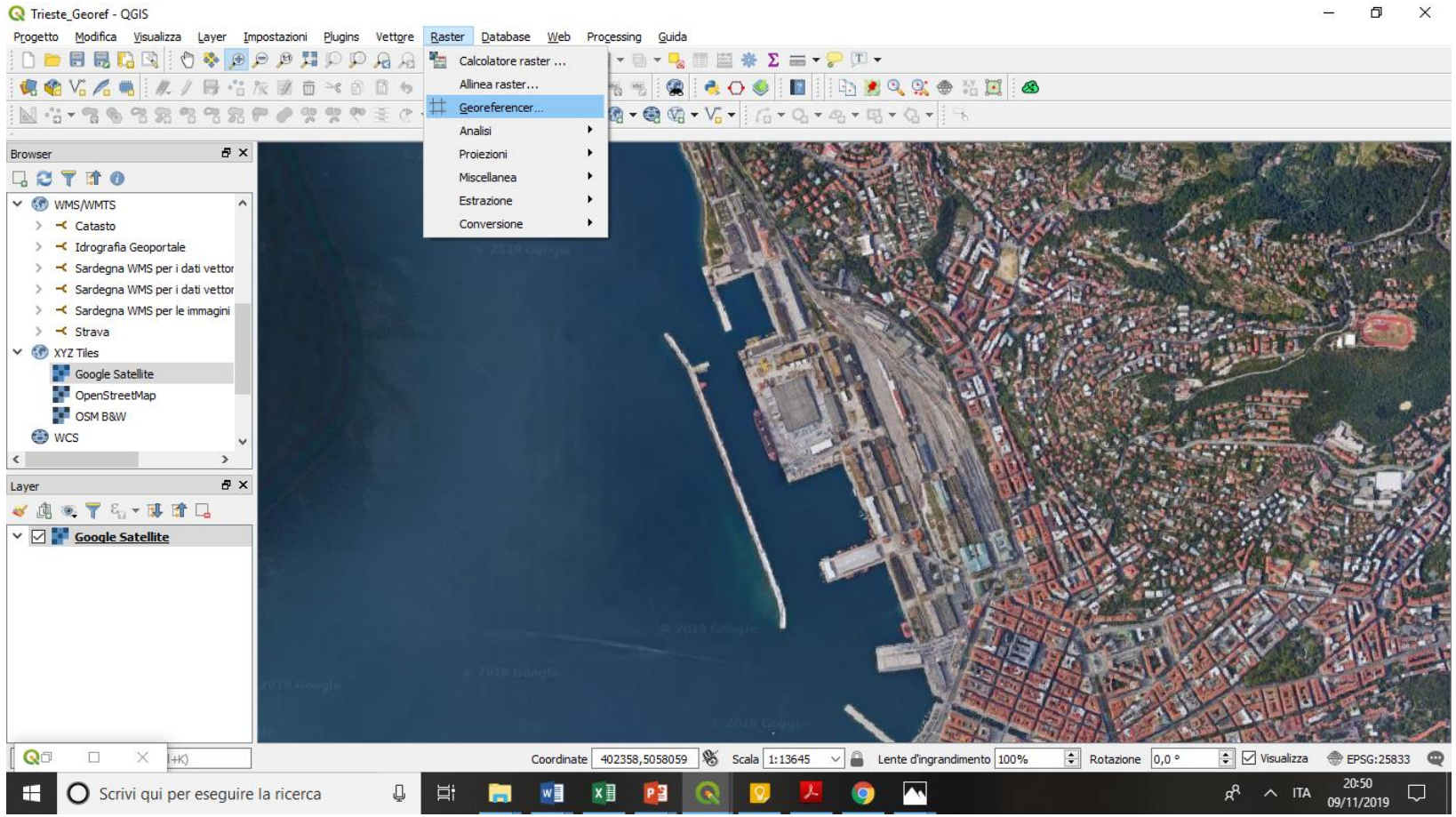


Studiare la carta caricata su QGIS e l’immagine da caricare
Cercare punti omologhi (GCP di coordinate note)

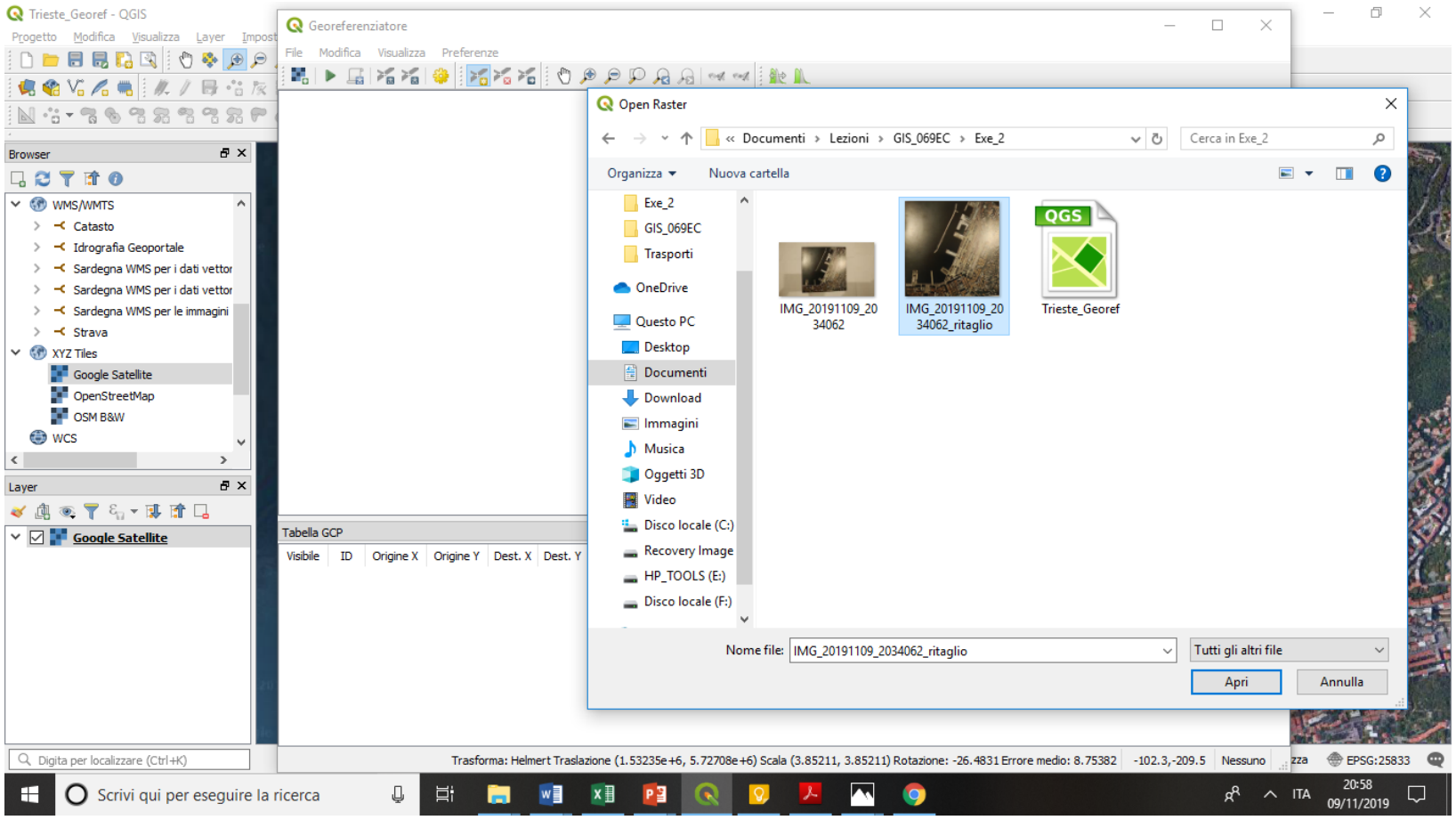


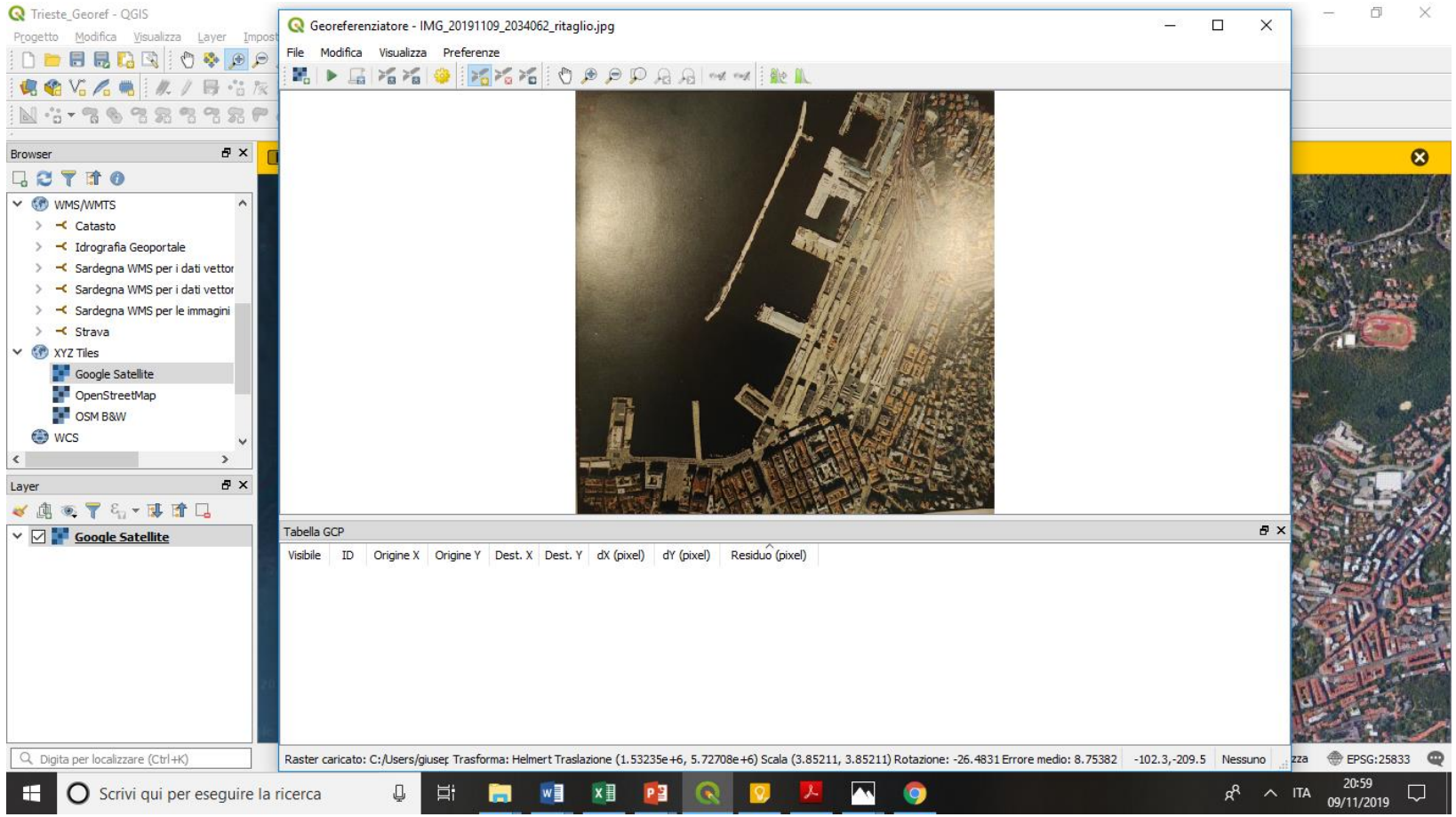


Avviare il Raster -> Georeferencer

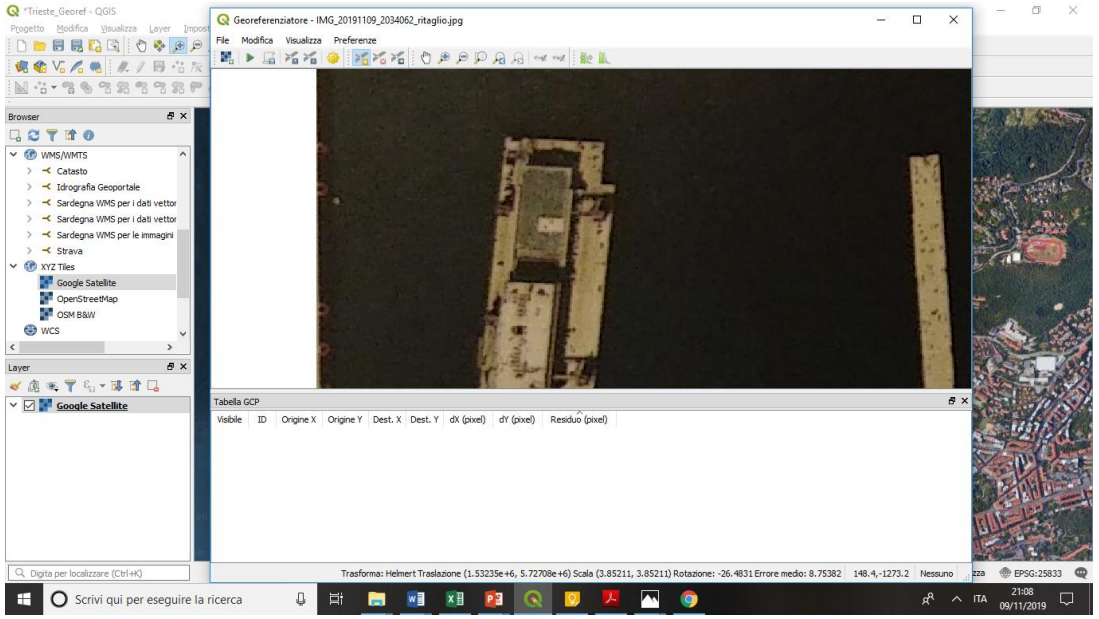


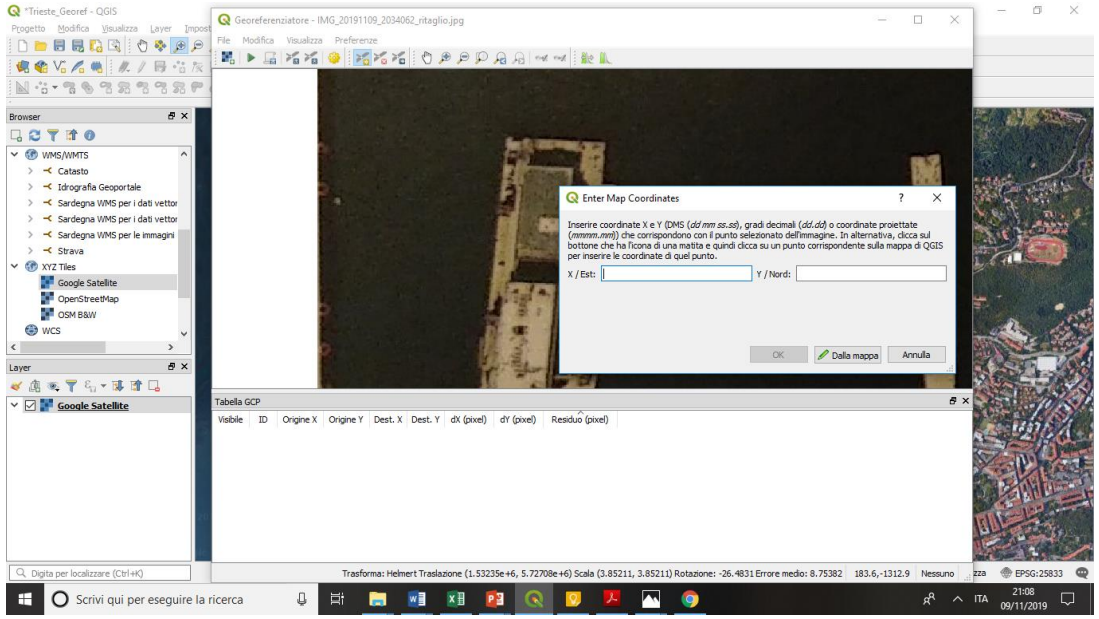
Selezionare File->Open Raster e selezionare immagine

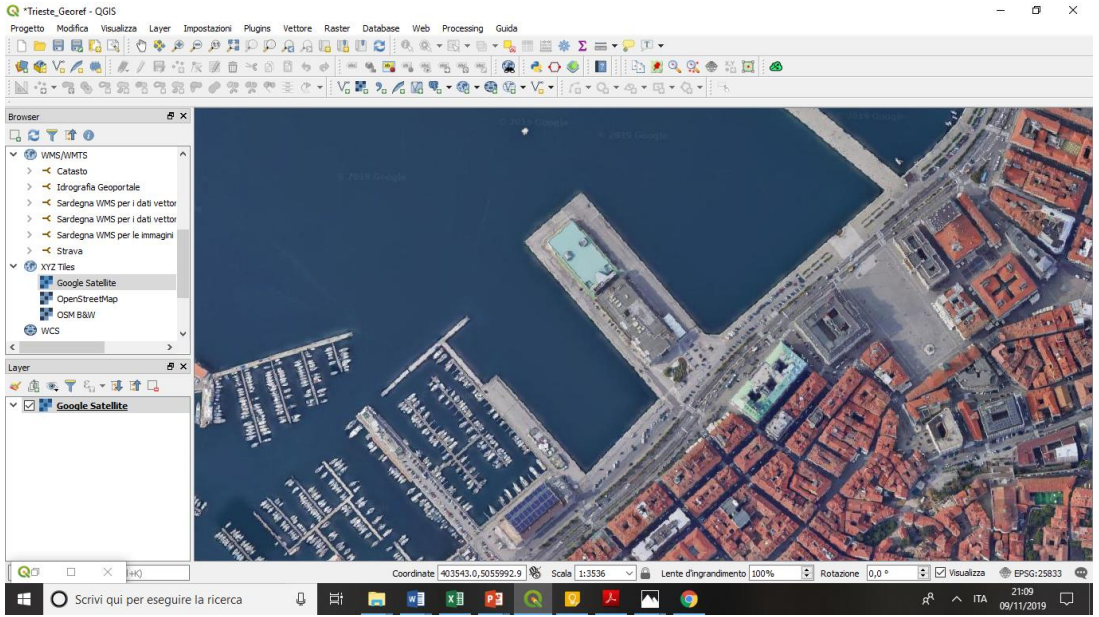


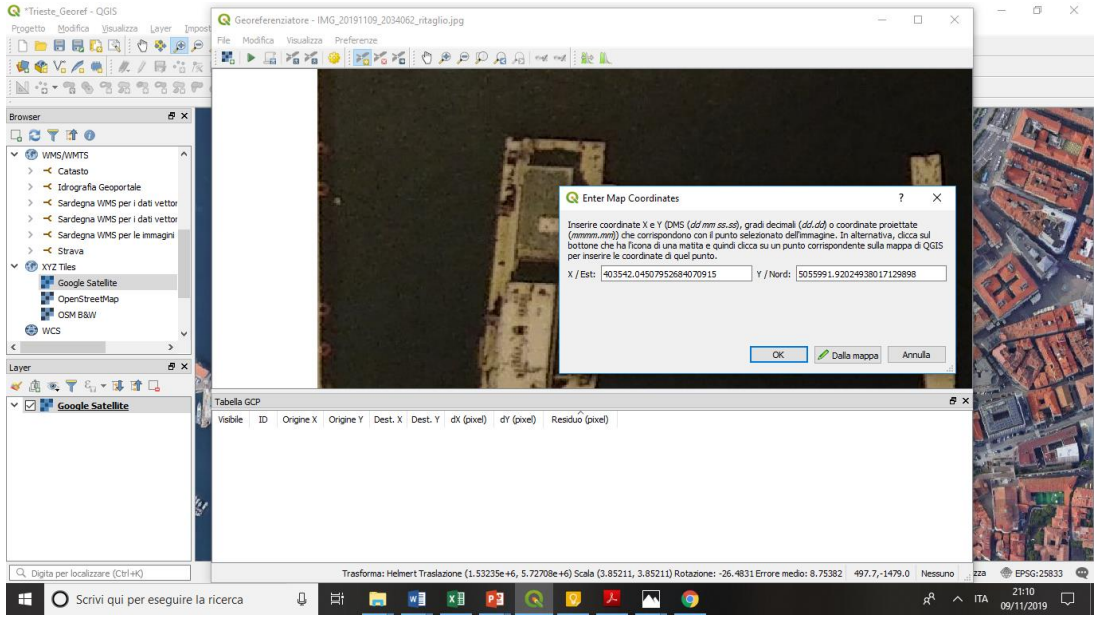

Trieste_Georef - QGIS
Progetto Modifica Visualizza Layer
Georeferenziatore - IMG_20191109_2034062_ritaglio.jpg
File Modifica Visualizza Preferenze
Browser
WMS/WMTS
Catasto
Idrografia Geoportale
Sardegna WMS per i dati vettor
Sardegna WMS per i dati vettor
Sardegna WMS per le immagini
Strava
XYZ Tiles
Google Satellite
OpenStreetMap
OSM B&W
WCS
Layer
Google Satellite
Tabella GCP
Visibile ID Origine X Origine Y Dest. X Dest. Y dX (pixel) dY (pixel) Residuo (pixel)
Digita per localizzare (Ctrl+K)
Raster caricato: C:/Users/giuse; Trasforma: Helmert Traslazione (1.53235e+6, 5.72708e+6) Scala (3.85211, 3.85211) Rotazione: -26.4831 Errore medio: 8.75382
-102.3,-209.5
Nessuno
EPSG:25833
Scrivi qui per eseguire la ricerca
ITA
20:59
09/11/2019

Trovare coppie di punti noti: 1

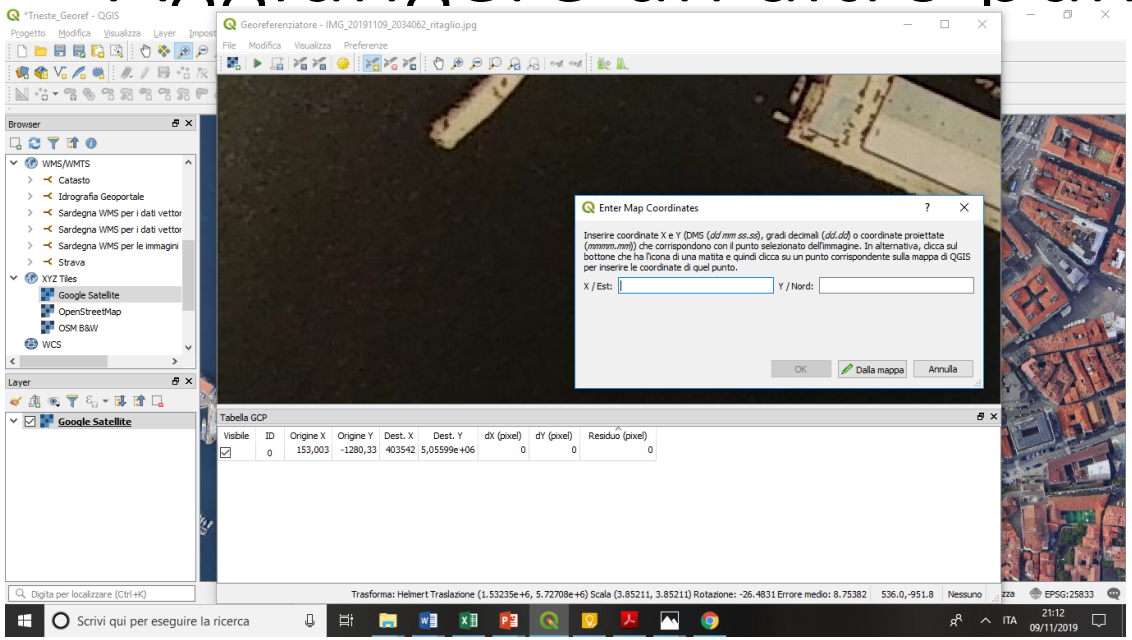


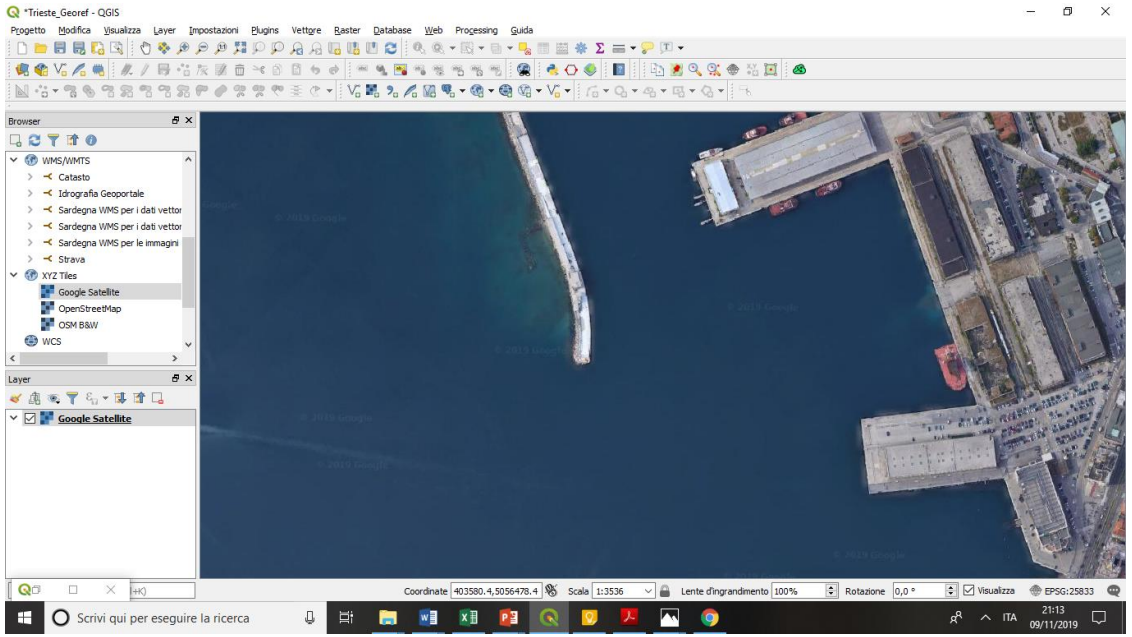


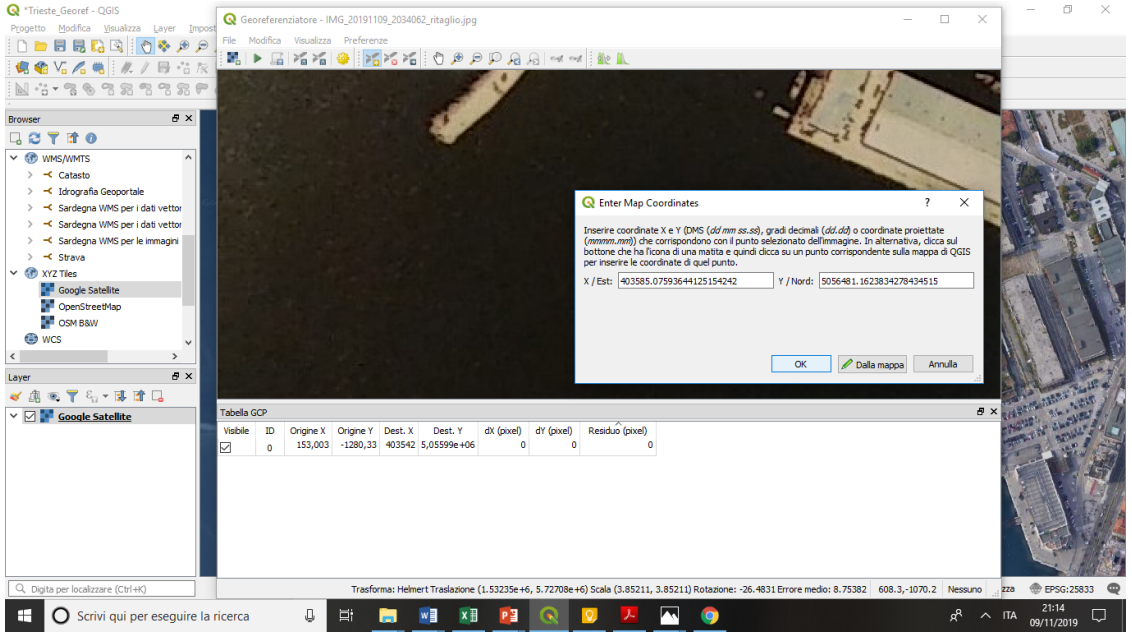


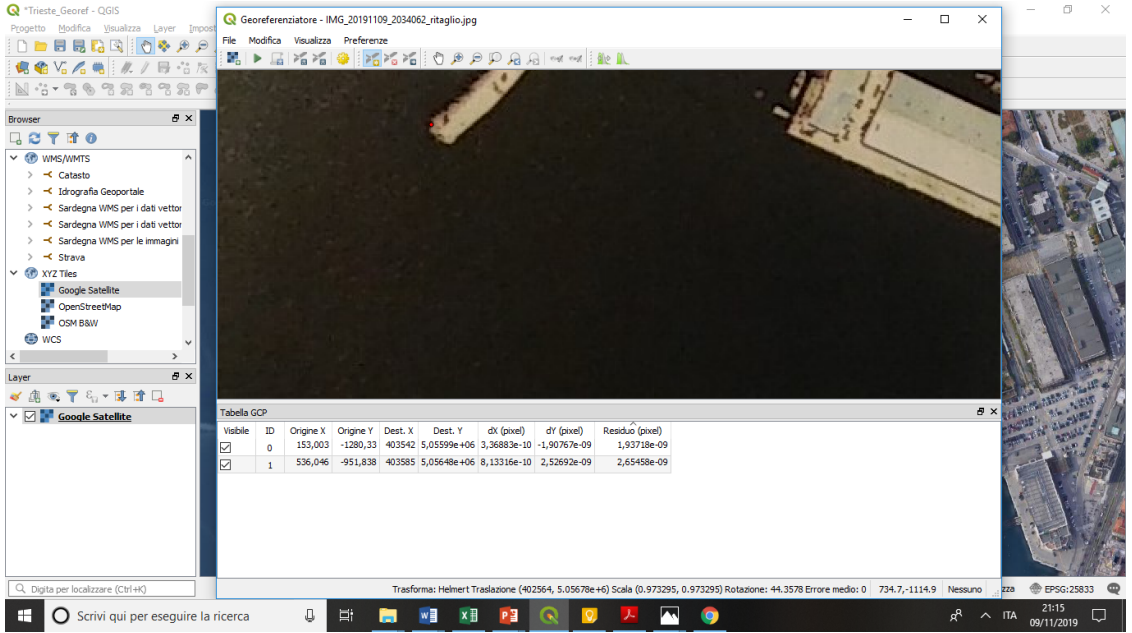


Aggiungere un altro punto

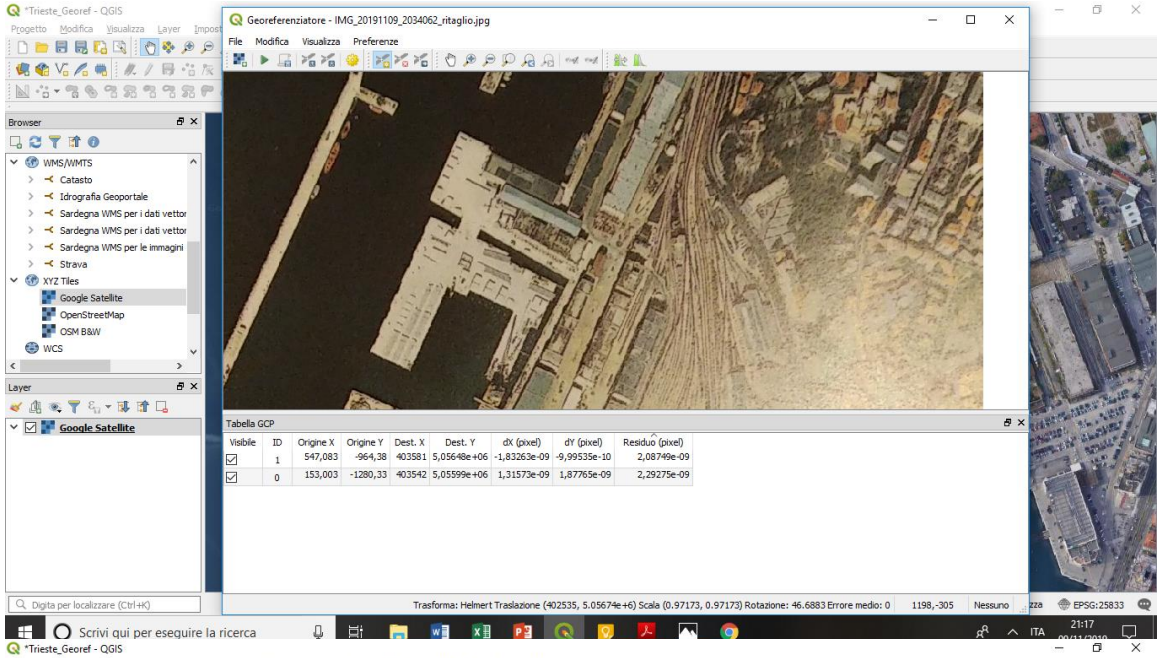


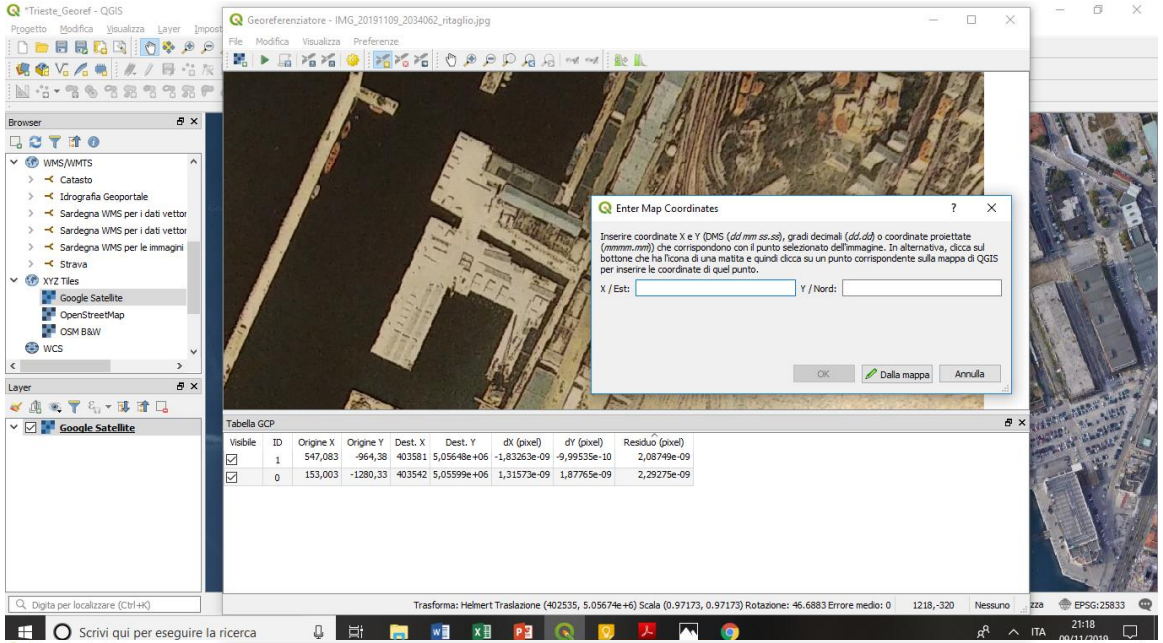


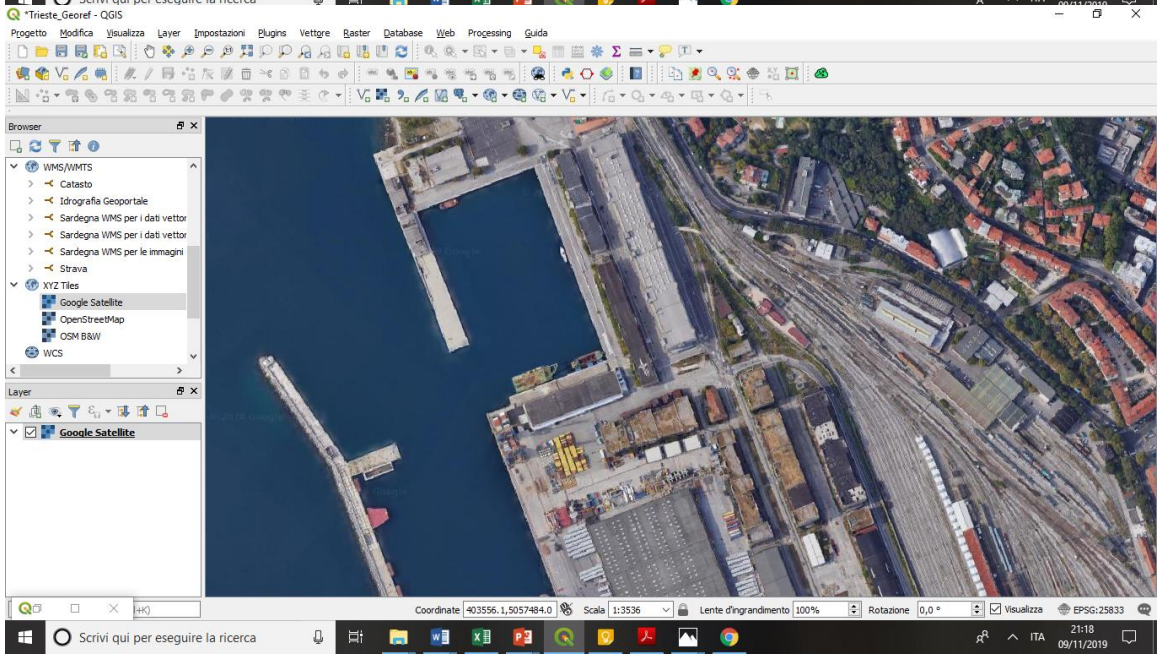


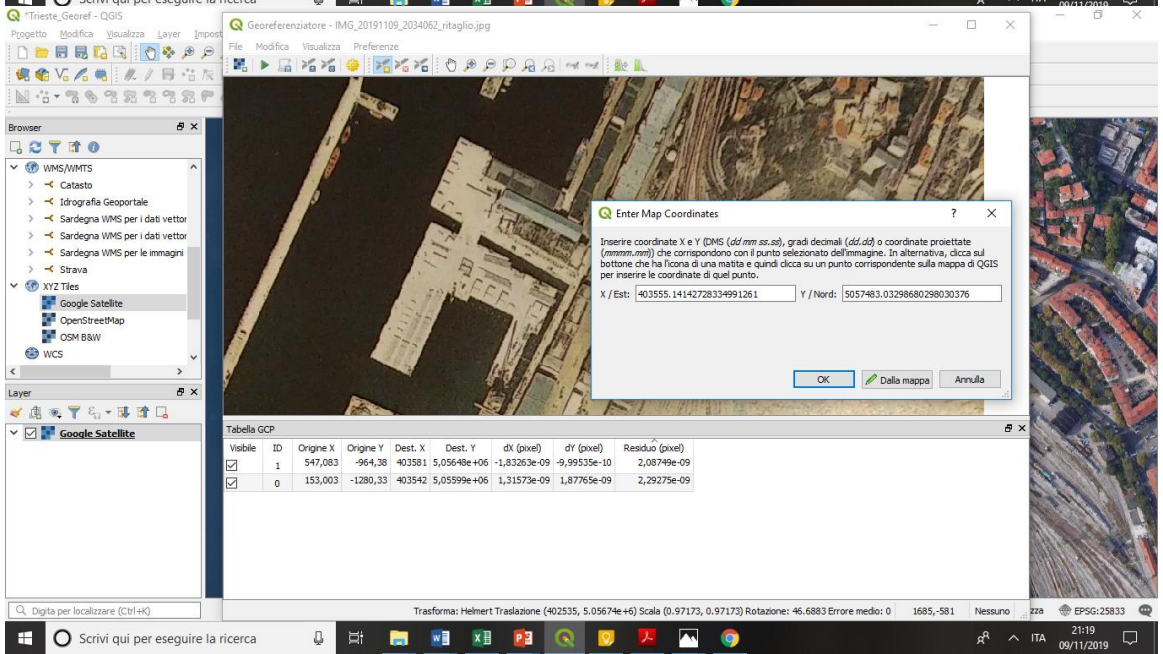


…e un terzo….

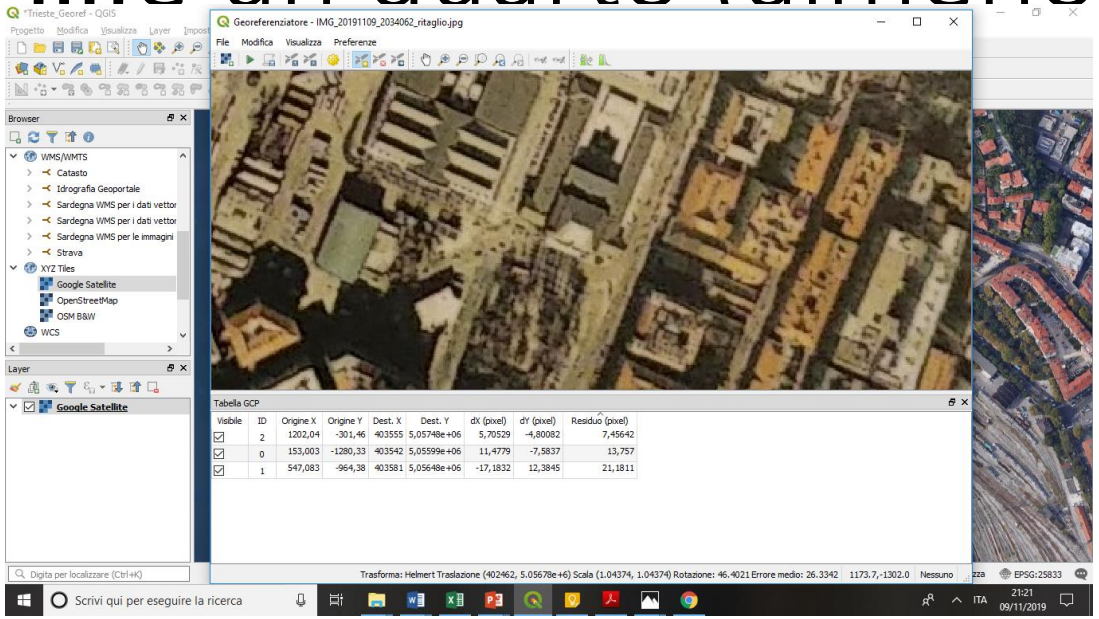

Georeferenziatore - IMG_20191109_2034062_ritaglio.jpg
Tabella GCP

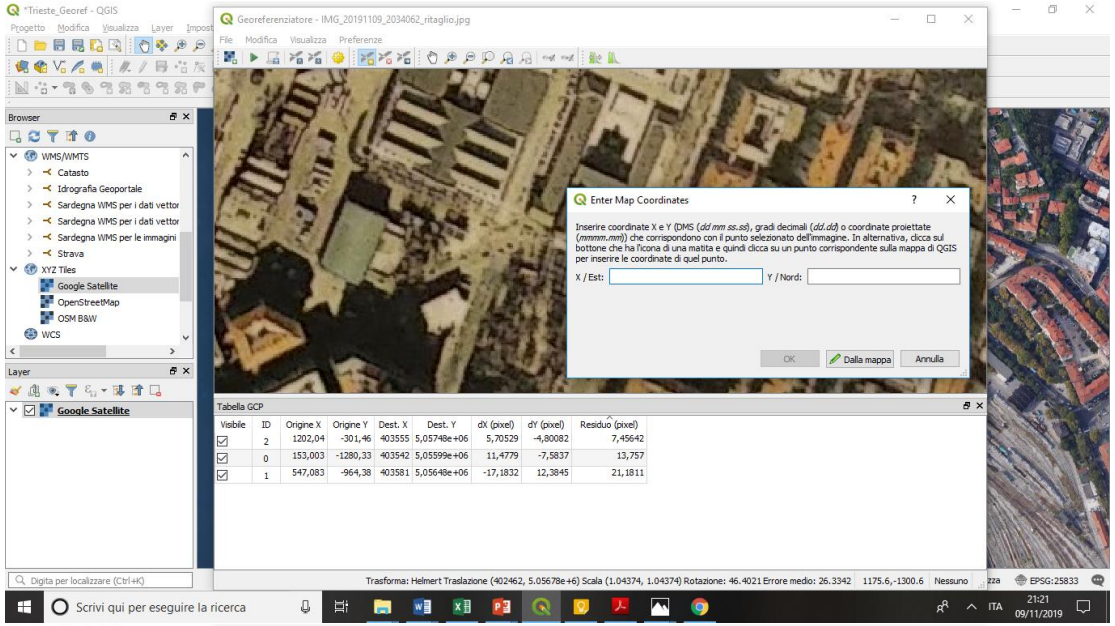

Georeferenziatore - IMG_20191109_2034062_ritaglio.jpg
Enter Map Coordinates
Tabella GCP

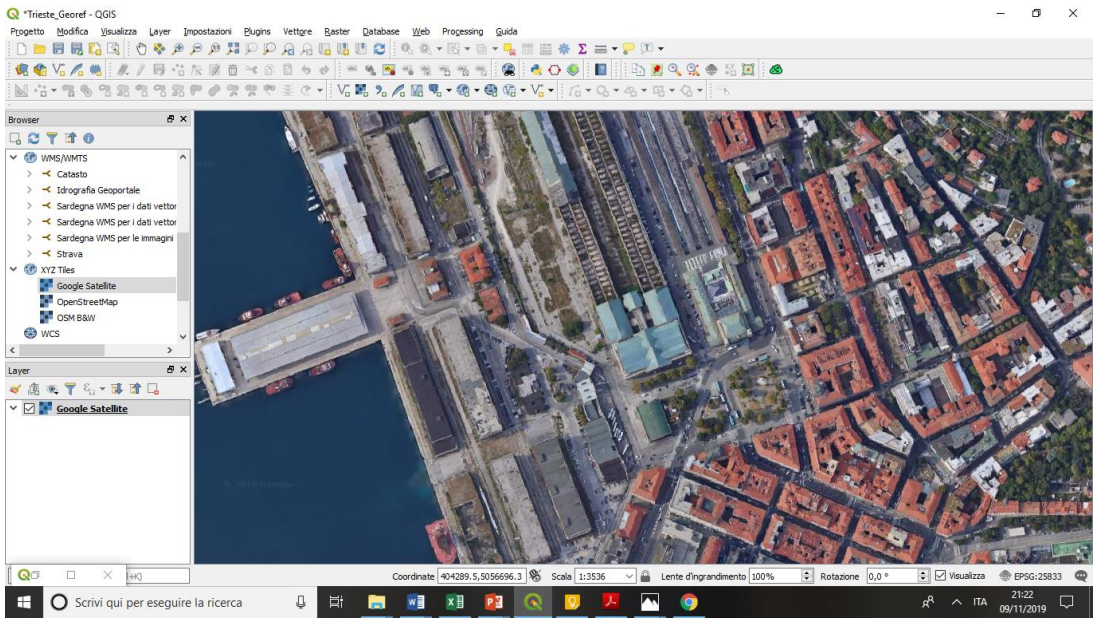


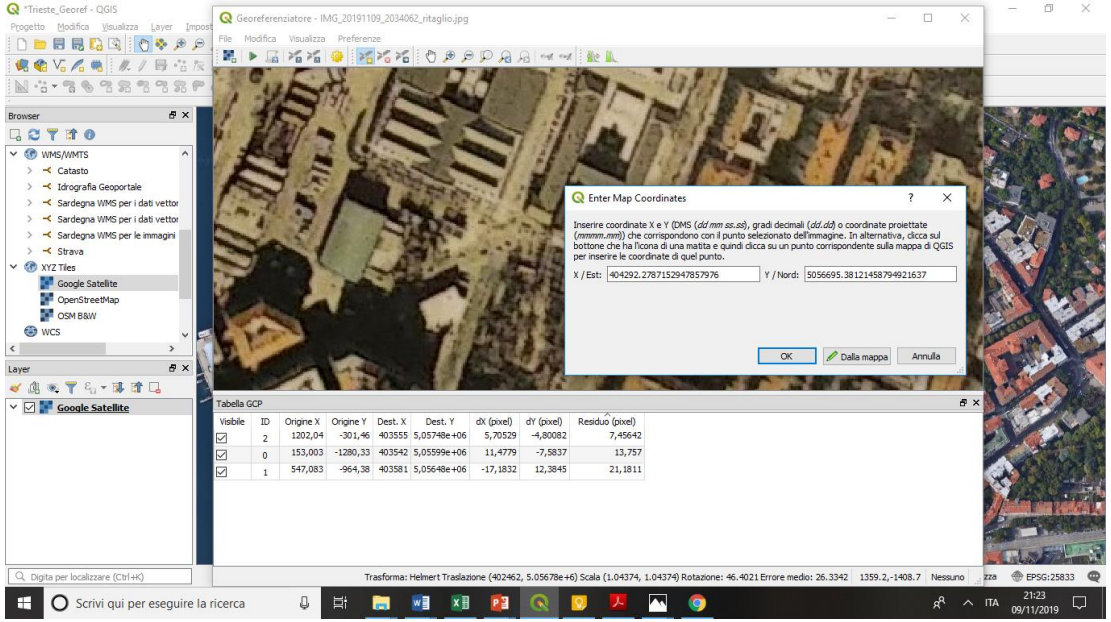

Georeferenziatore - IMG_20191109_2034062_ritaglio.jpg
Enter Map Coordinates
Tabella GCP

….e un quarto (almeno)

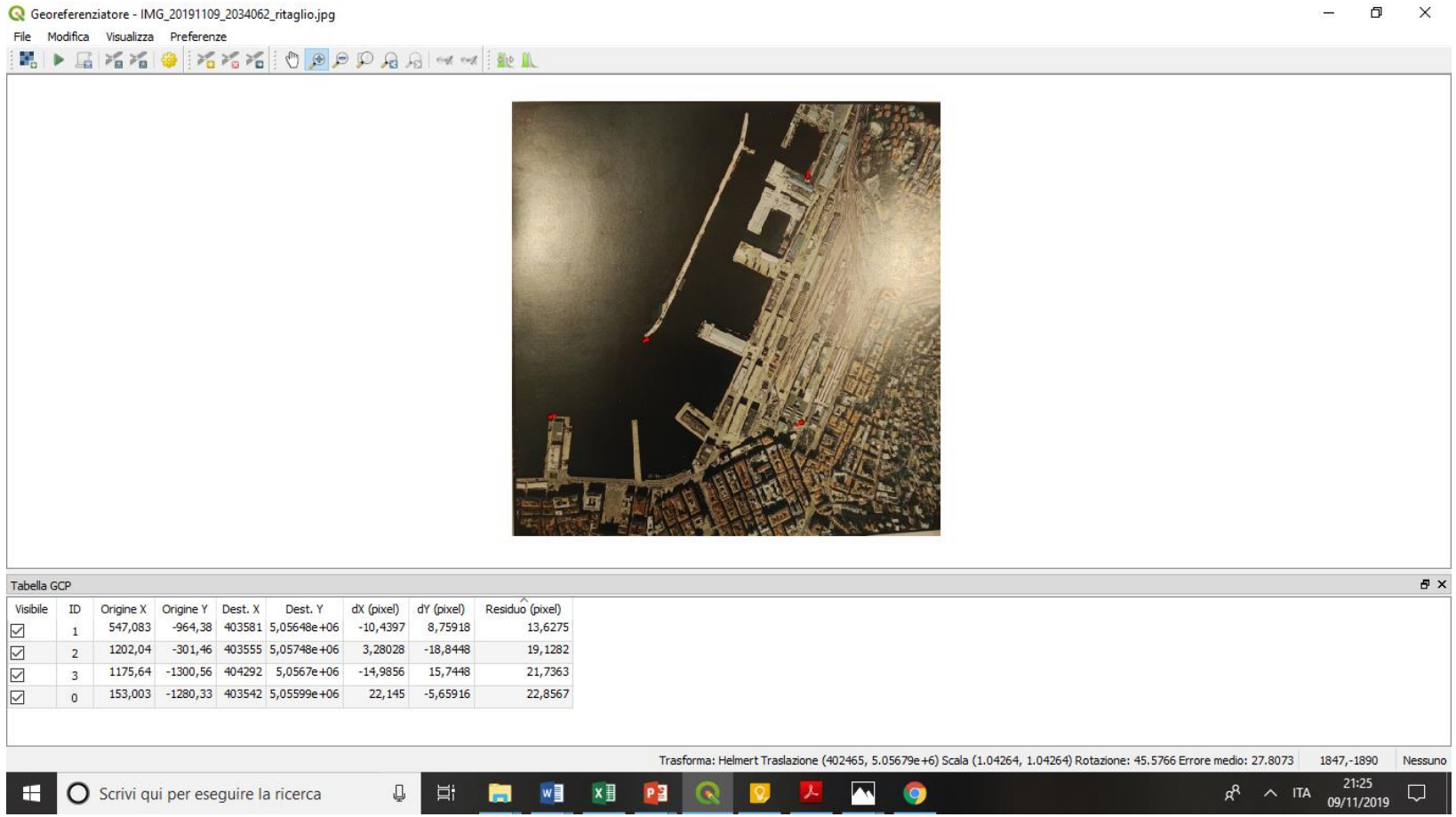




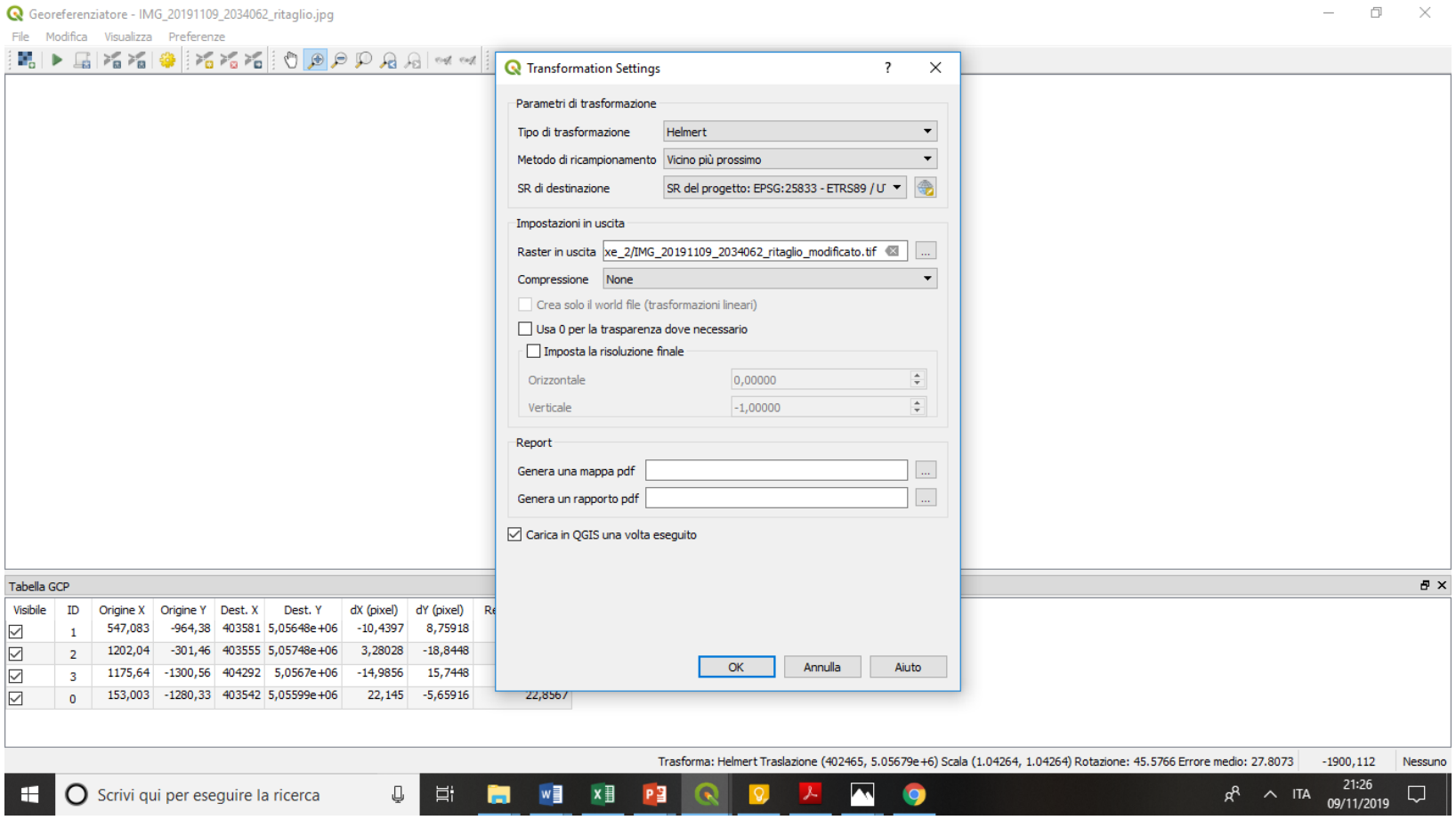




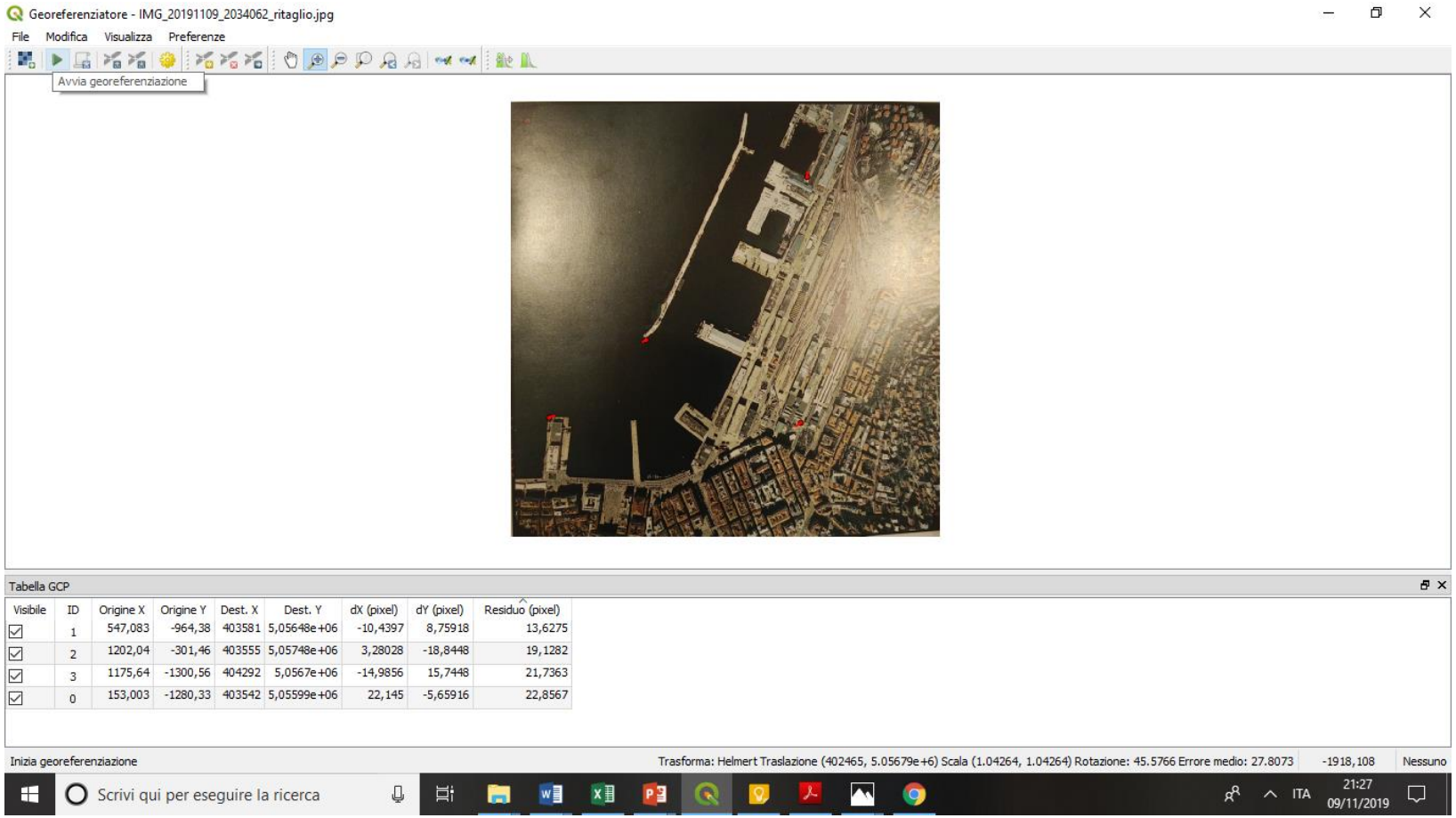
Almeno quattro punti per georeferenziare un’immagine



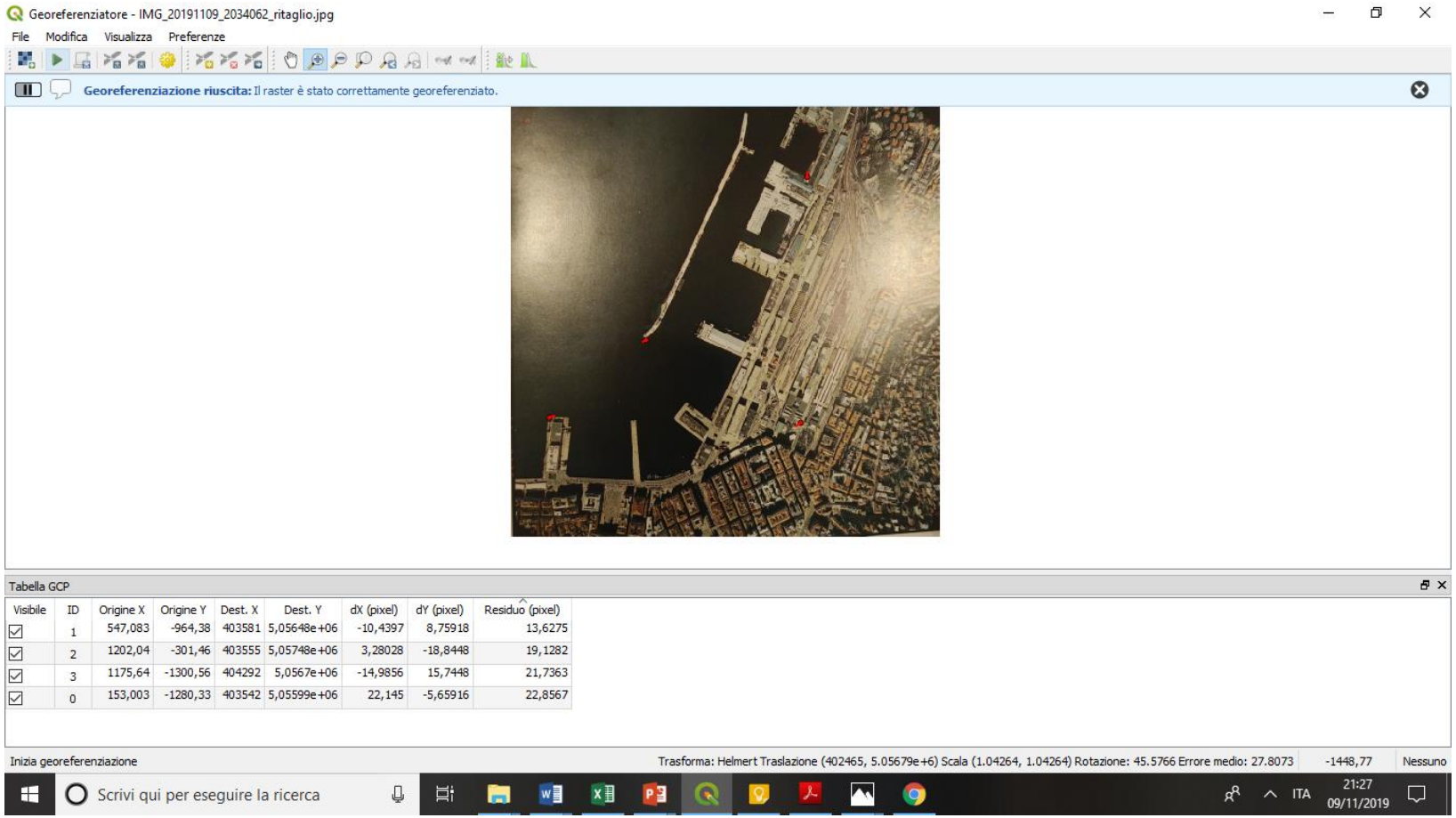
Preferenze -> Impostazioni di trasformazione



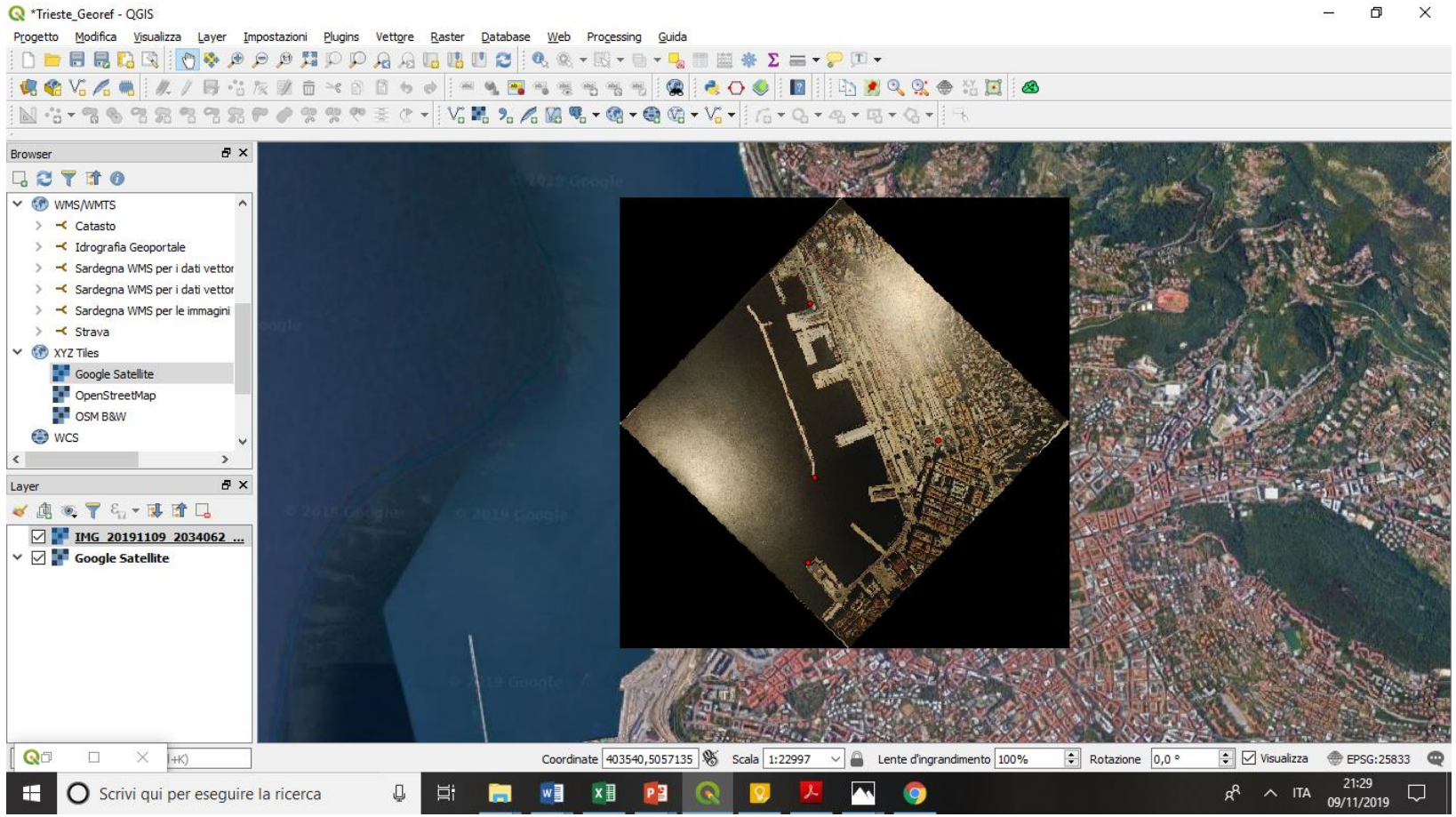
Avvia georeferenzatore



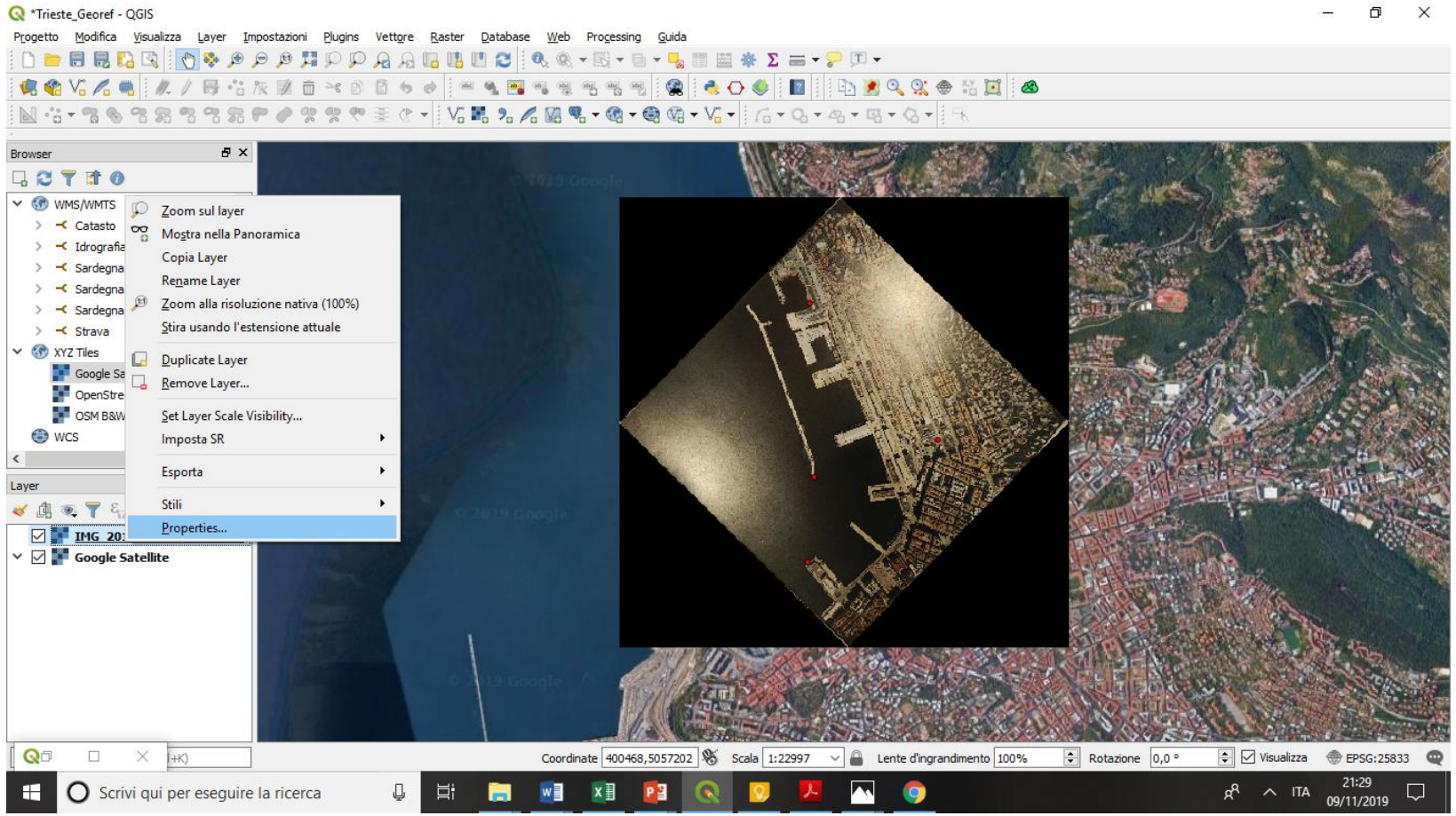
Georeferenziazione corretta!



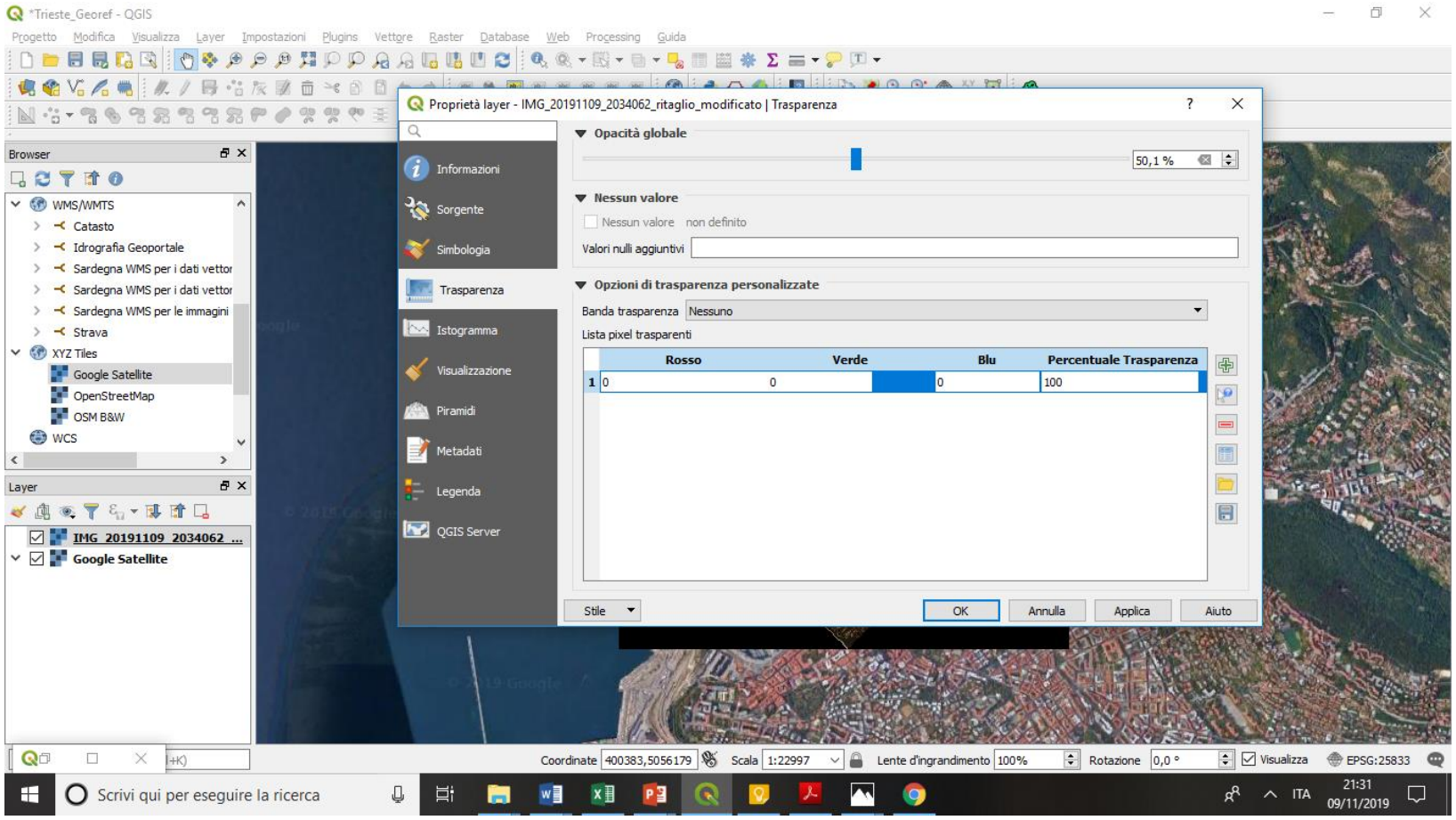
L’immagine è stata ruotata e ‘adattata’ allo sfondo georeferenziato



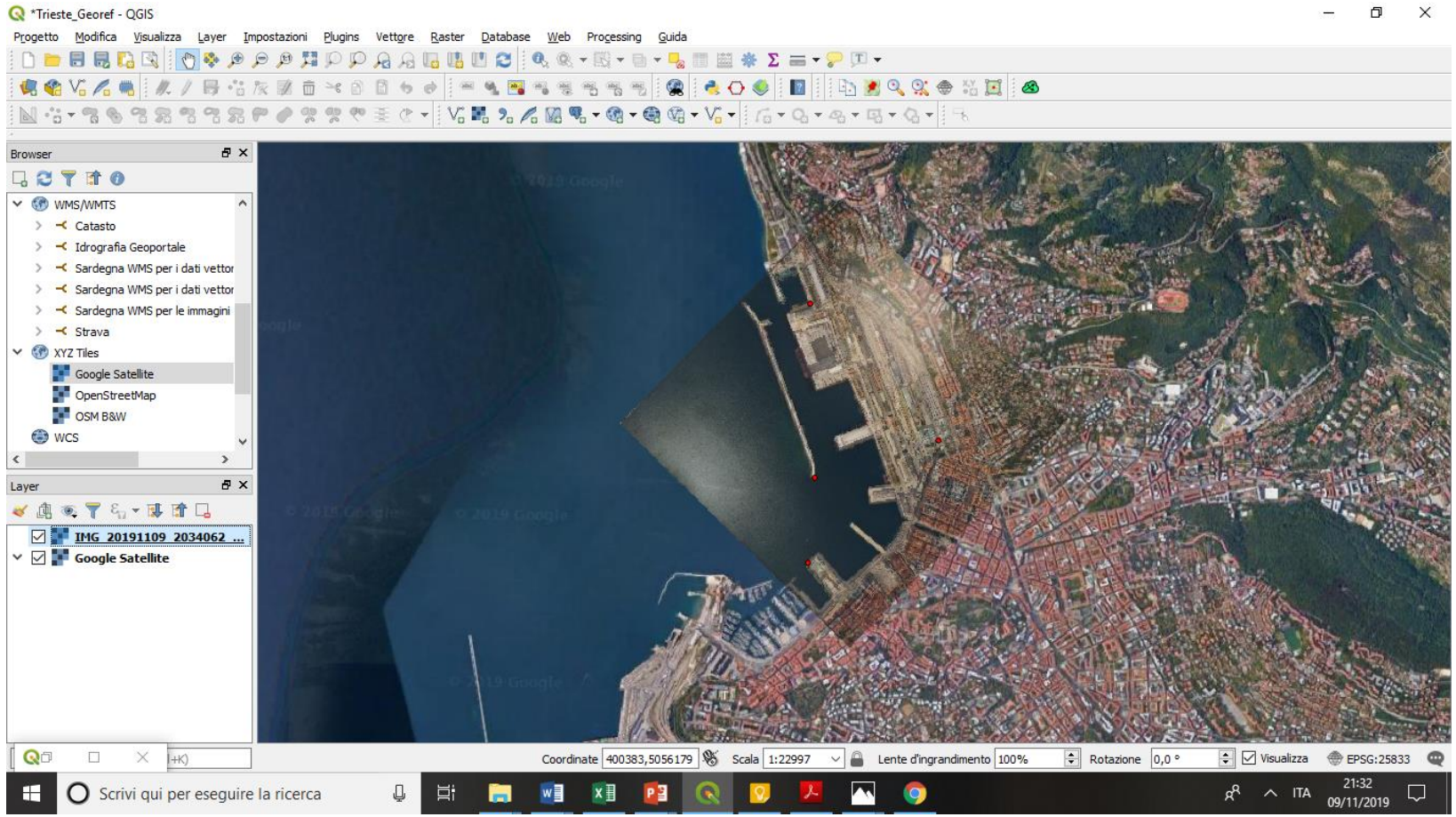
Eliminare i pixel neri e impostare la trasparenza



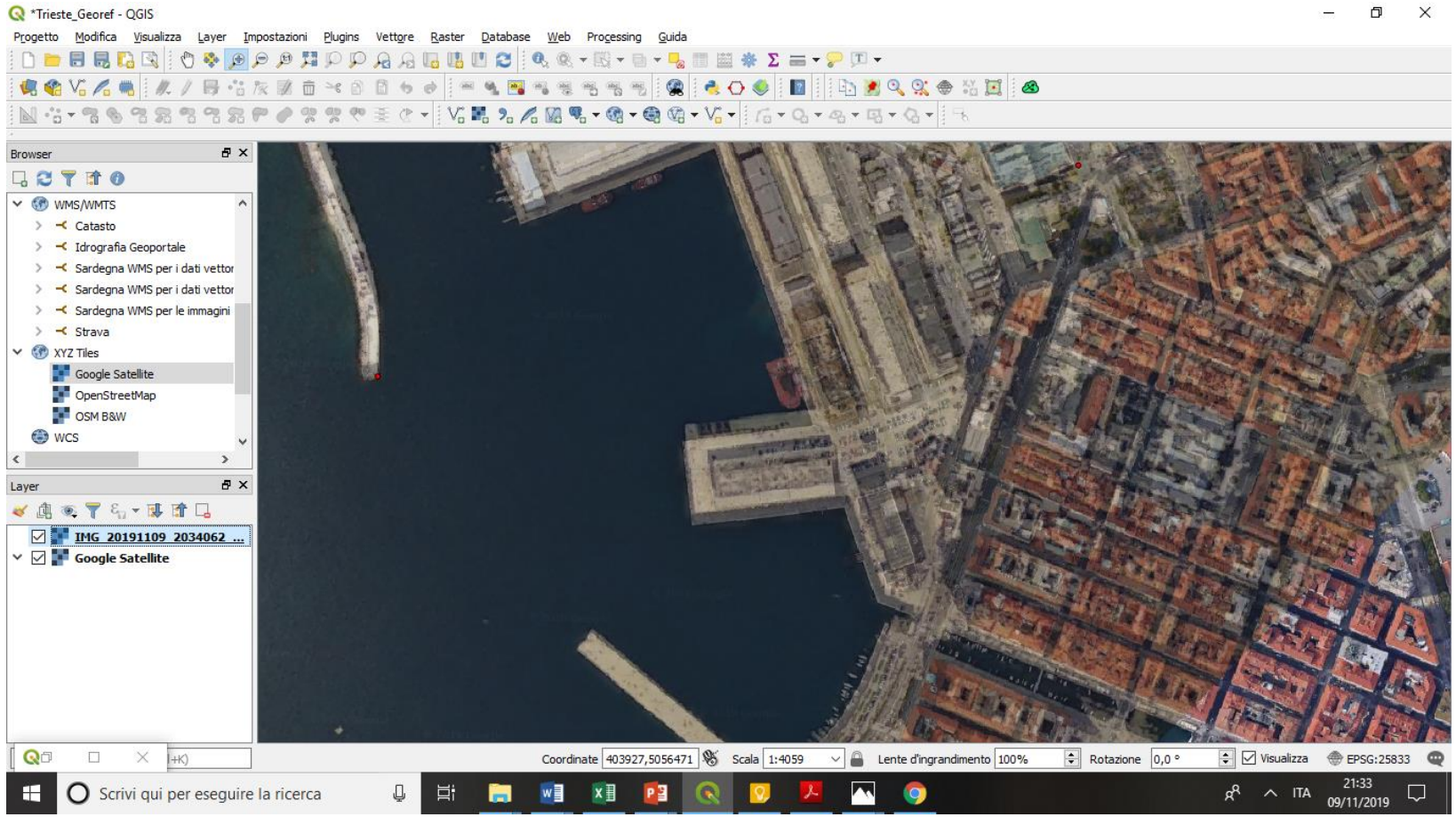
Impostare trasparenza del layer e dei pixel neri



L’immagine è stata sovrapposta e georeferenziata



Se si vuole perfezionare la georeferenziazione, aggiungere dei punti doppi e replicare l'operazione



Georeferenziazione dopo il raffittimento dei punti

