Geo-wiki.org: How community remote sensing can help to improve global land cover

Steffen Fritz (1),
Ian McCallum (1), Christoph Perger (2), Schill Christian (3), Florian Kraxner (1)
and Michael Obersteiner(1)
(1) International Insitute for Applied Systems Analysis, (2) Fachhochschule Wiener Neustadt, (3) FELIS,

Project

Geo-Wiki

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Help To Improve Global Land Cover!

The Geo-Wiki Project is a global network of volunteers who wish to help improve the quality of global land cover maps. Since large differences occur between existing global land cover maps, current ecosystem and land-use science lacks crucial accurate data (e.g. to determine the potential of additional agricultural land available to grow crops in Africa). Volunteers are asked to review hotspot maps of global land cover disagreement and determine, based on what they actually see in Google Earth and their local knowledge, if the land cover maps are correct or incorrect. Their input is recorded in a database, along with uploaded photos, to be used in the future for the creation of a new and improved global land cover map.

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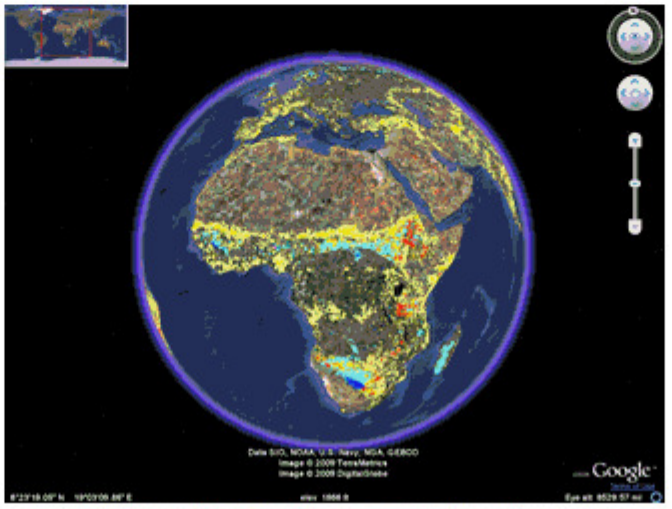

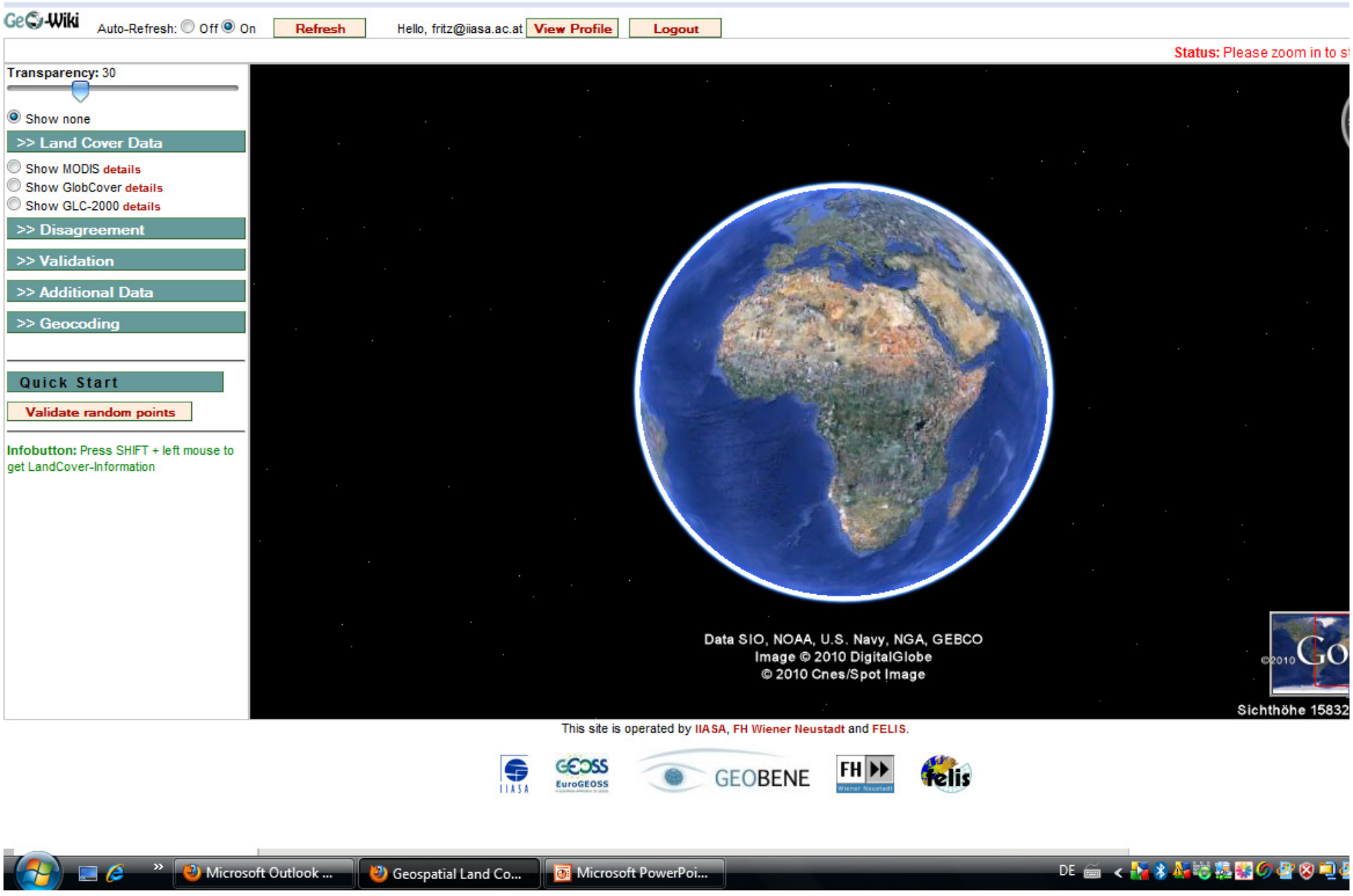
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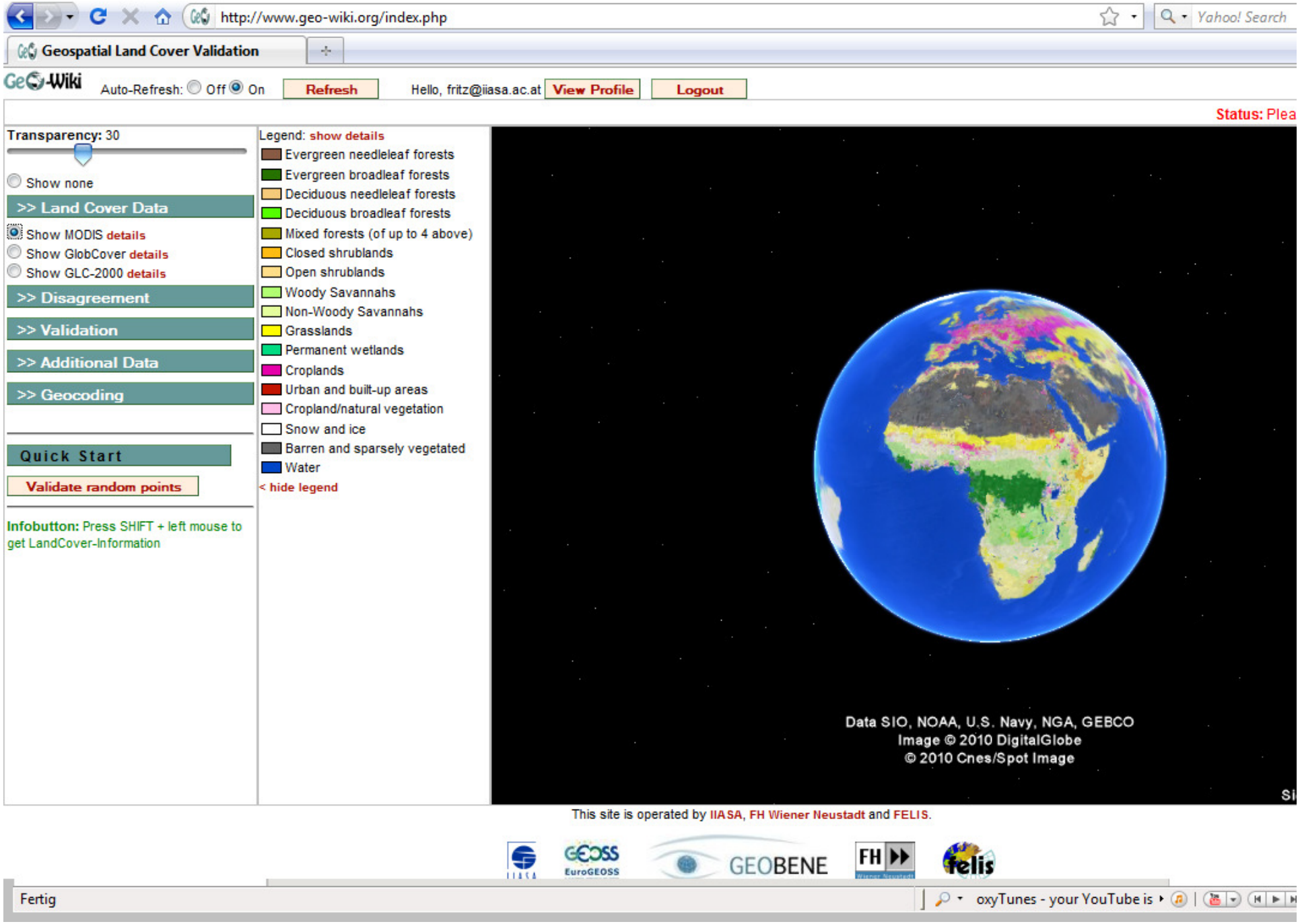
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Legend: show details
Evergreen needleleaf forests
Evergreen broadleaf forests
Deciduous needleleaf forests
Deciduous broadleaf forests
Mixed forests (of up to 4 above)
Closed shrublands
Open shrublands
Woody Savannahs
Non-Woody Savannahs
Grasslands
Permanent wetlands
Croplands
Urban and built-up areas
Cropland/natural vegetation
Snow and ice
Barren and sparsely vegetated
Water
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Legend: show details

- Post-flooding or Irrigated croplands
- Rainfed croplands
- Mosaic Cropland/grass or shrub or forest
- Mosaic grass or shrub or forest/Cropland
- Closed-open broadleaved evergreen/semi-deciduous forest
- Closed broadleaved deciduous forest
- Open broadleaved deciduous forest
- Closed needleleaved evergreen forest
- Open needl. decid. or everg. forest
- Closed-open mixed broadleaved-needleleaved forest
- Mosaic Forest or shrub/Grassland
- Mosaic Grassland/Forest or shrub
- Closed to open shrubland
- Closed to open grassland
- Sparse vegetation
- Closed-open broadleaved forest regularly flooded
- Closed broadleaved forest permantent flooded
- Closed to open vegetation regularly flooded
- Artificial areas
- Bare areas
- Water bodies
- Permanent snow and ice

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Show Combined Disagreement Map

Cropland Disagreement Maps:
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Show GlobCover - MODIS
Show MODIS - GLC-2000

Forest Disagreement Maps:
Show GlobCover - GLC-2000
Show GlobCover - MODIS
Show MODIS - GLC-2000

Ramankutty maps:
Show Ramankutty pasture
Show Ramankutty cropland

IFPR maps:
Show IFPR cropland

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Legend:
- Cropland disagreement
- High cropland disagreement
- Forest disagreement
- High forest disagreement
- Forest and cropland disagreement
- Forest and high cropland disagreement
- High forest and cropland disagreement
- High forest and high cropland disagreement

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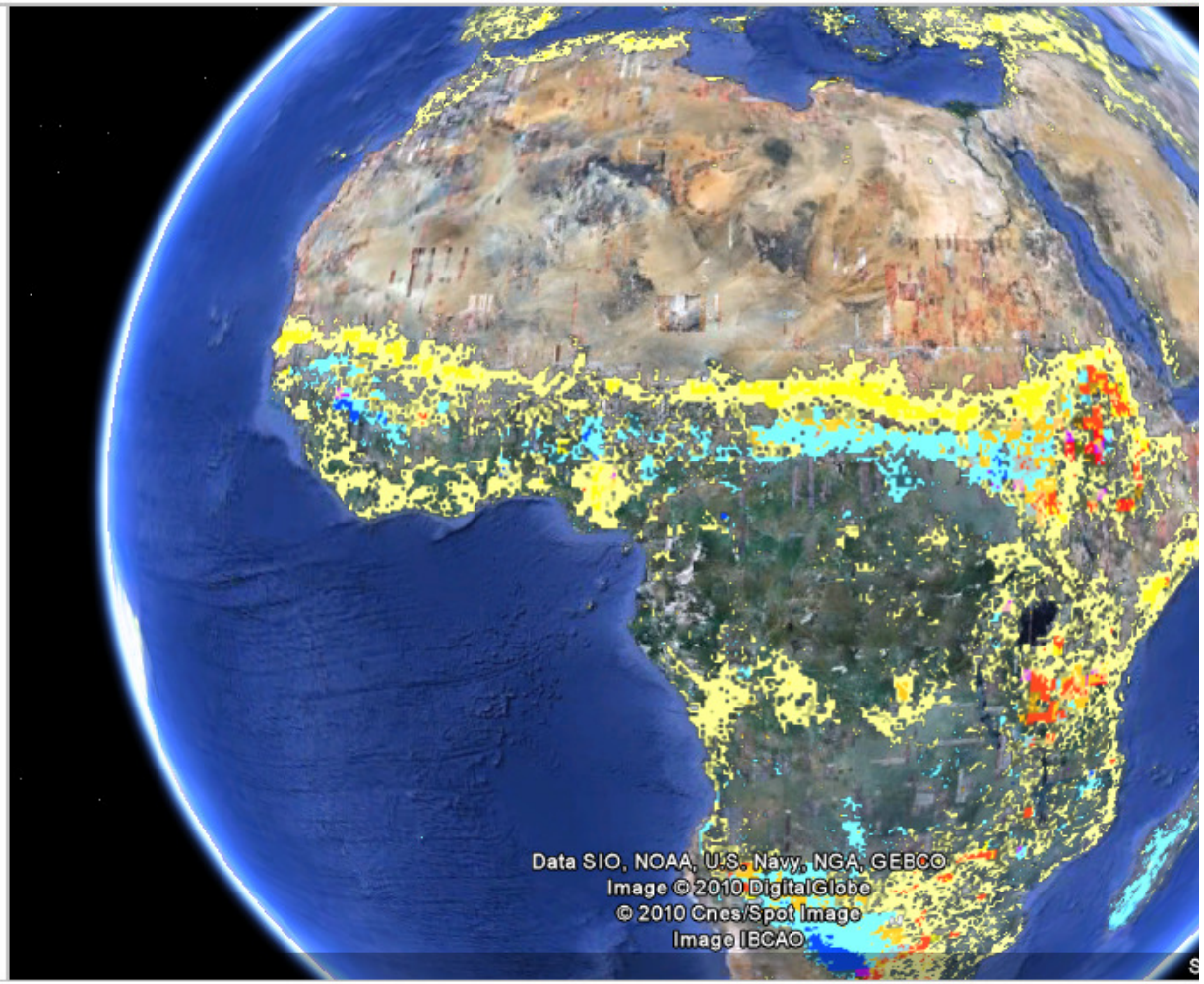

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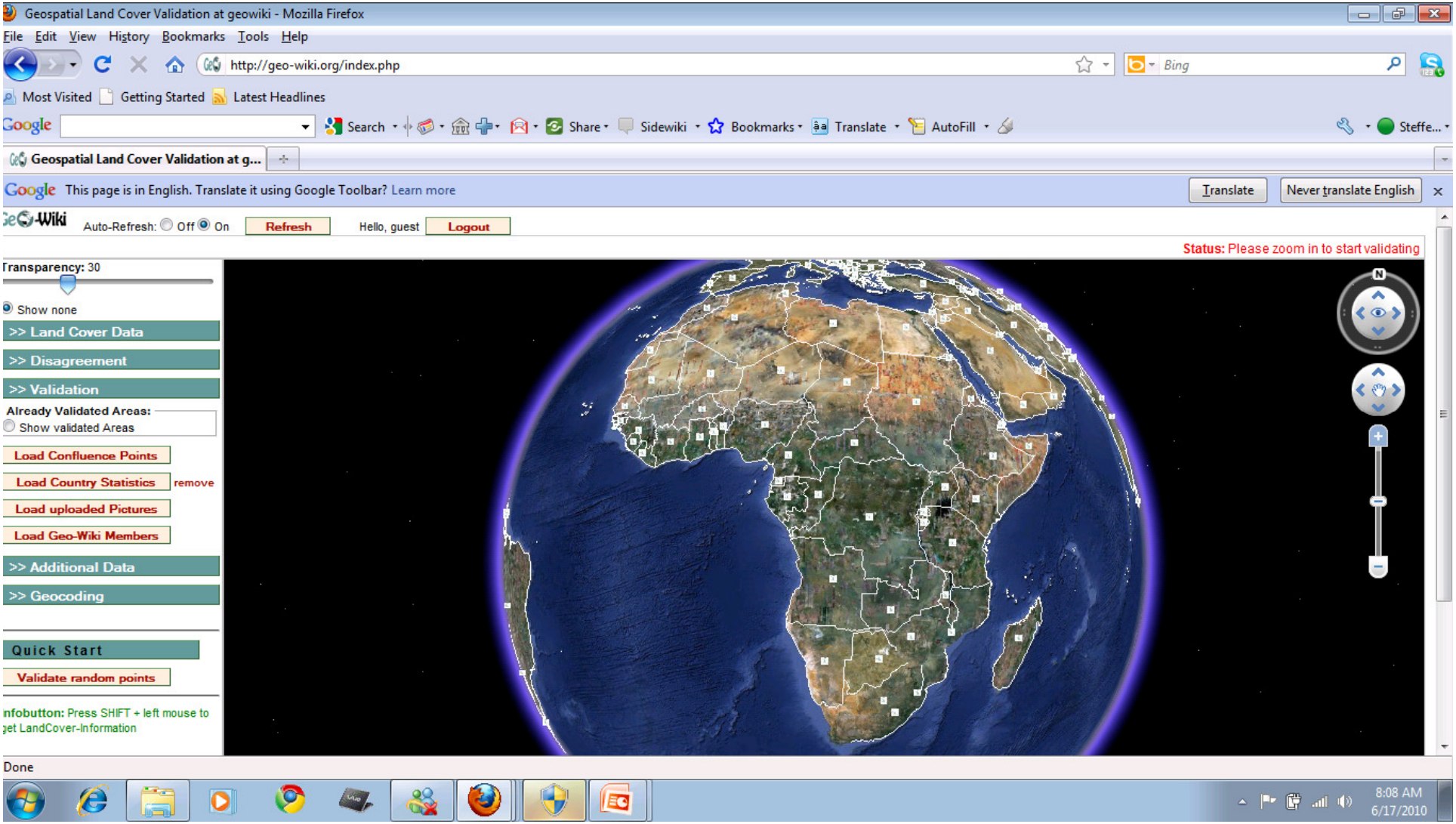
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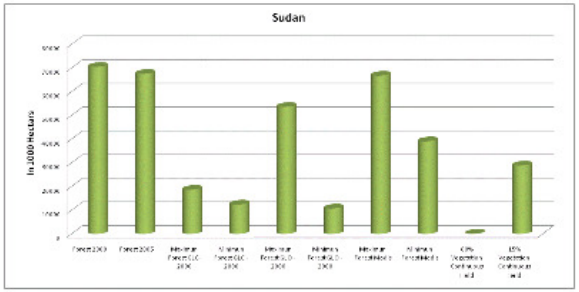
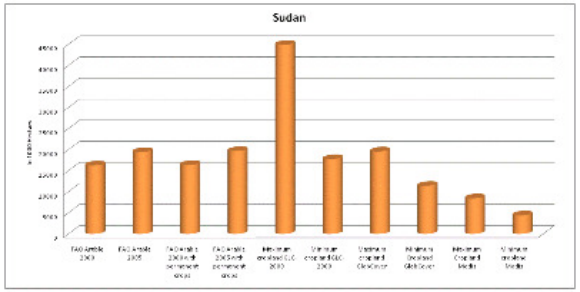
Country Statistics Sudan

Forest Statistics



Cropland Land Statistics



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Continent: Africa

Region: Northern Africa

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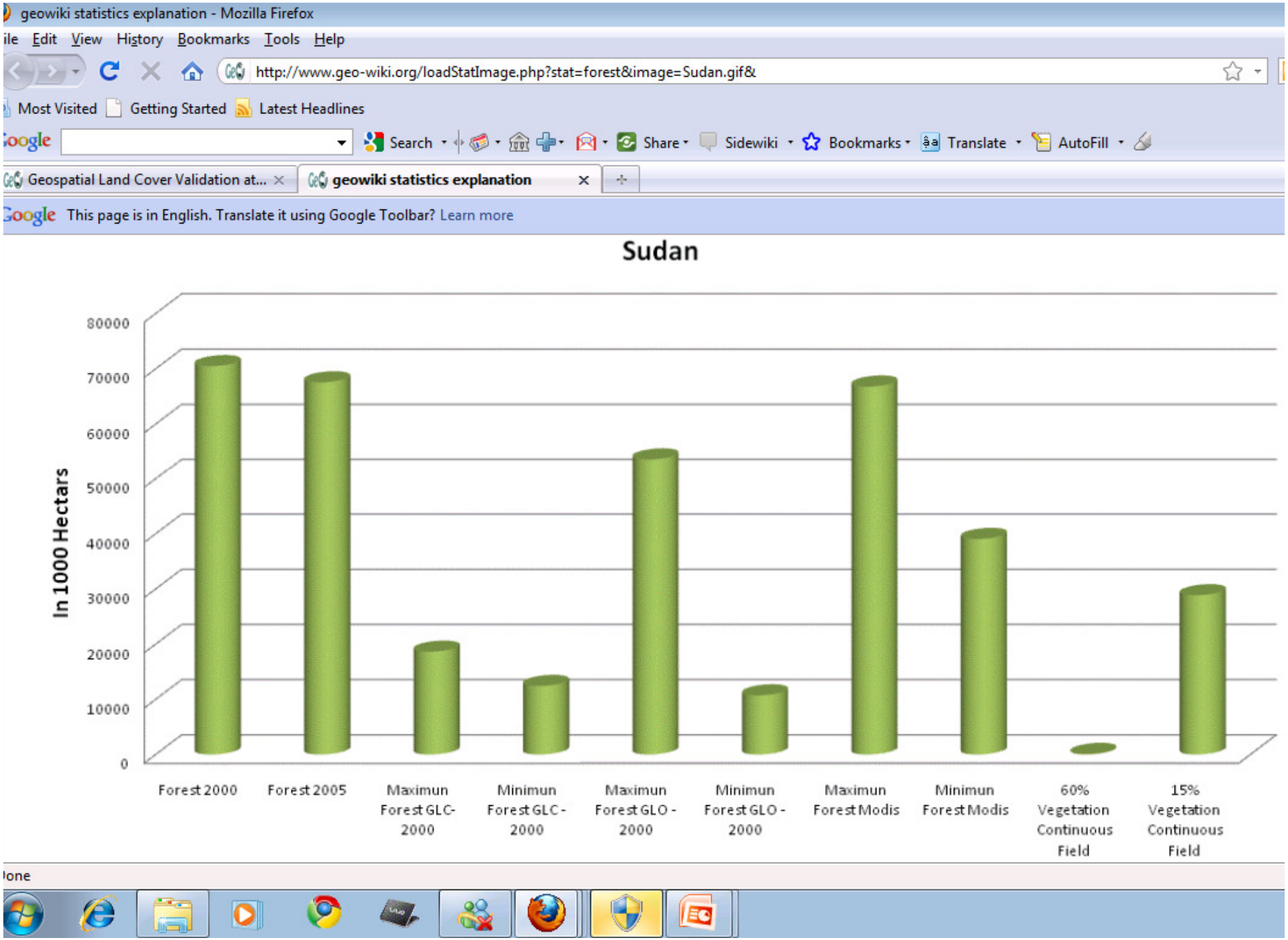
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60% Vegetation Continuous Field
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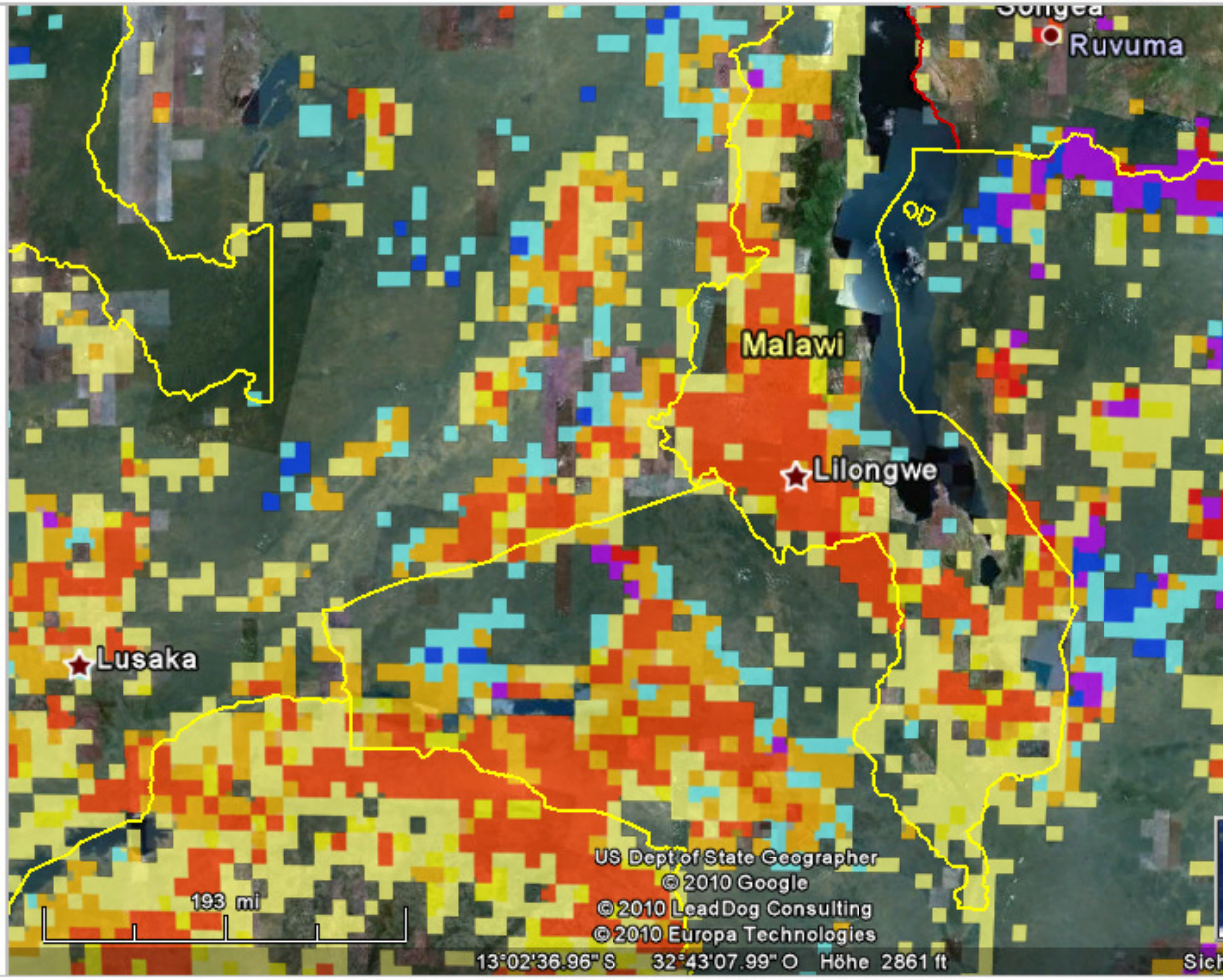

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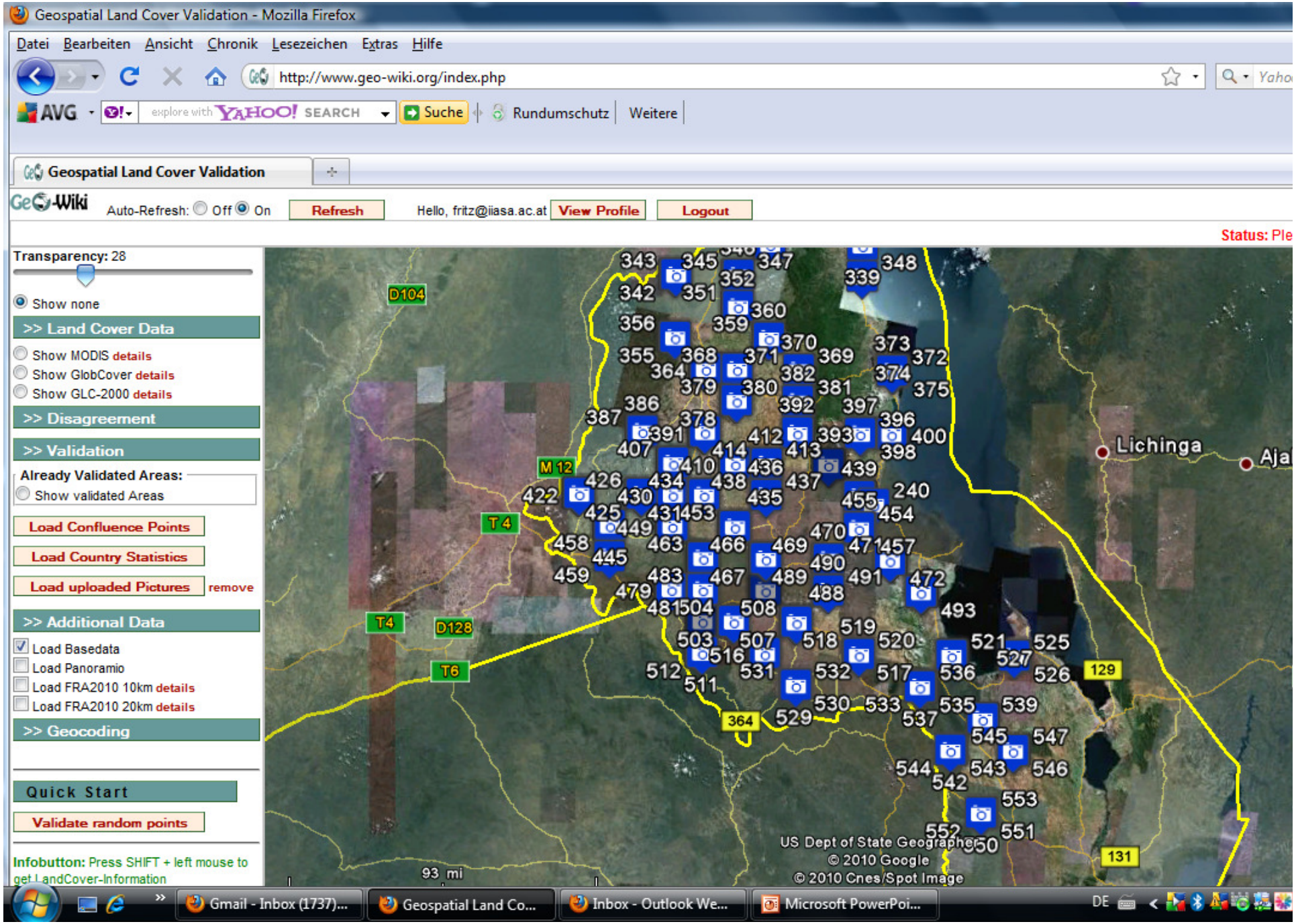
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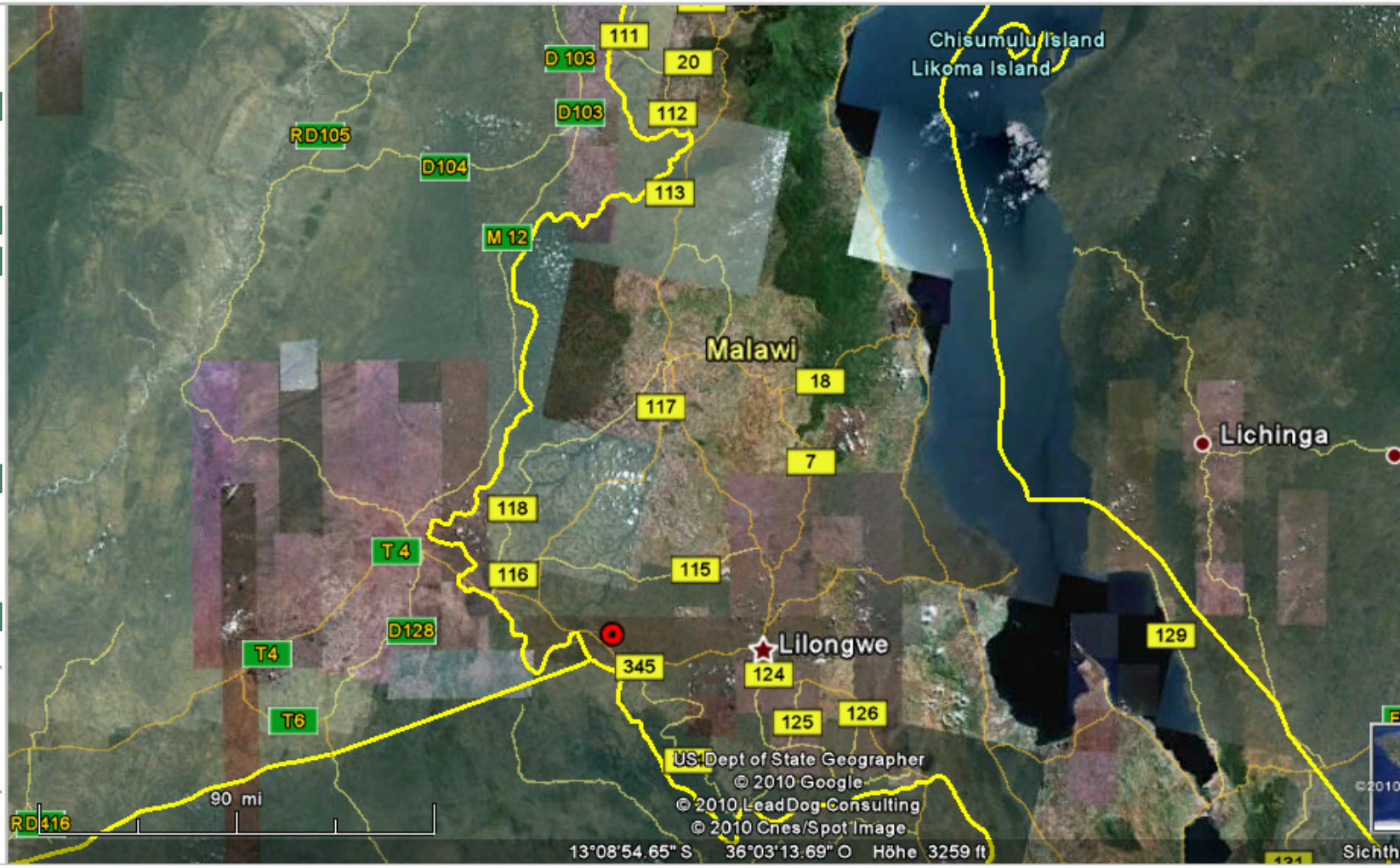

MODIS:	Non-Woody Savannahs
GlobCover:	Closed to open shrubland
GLC-2000:	Cultivated and managed areas

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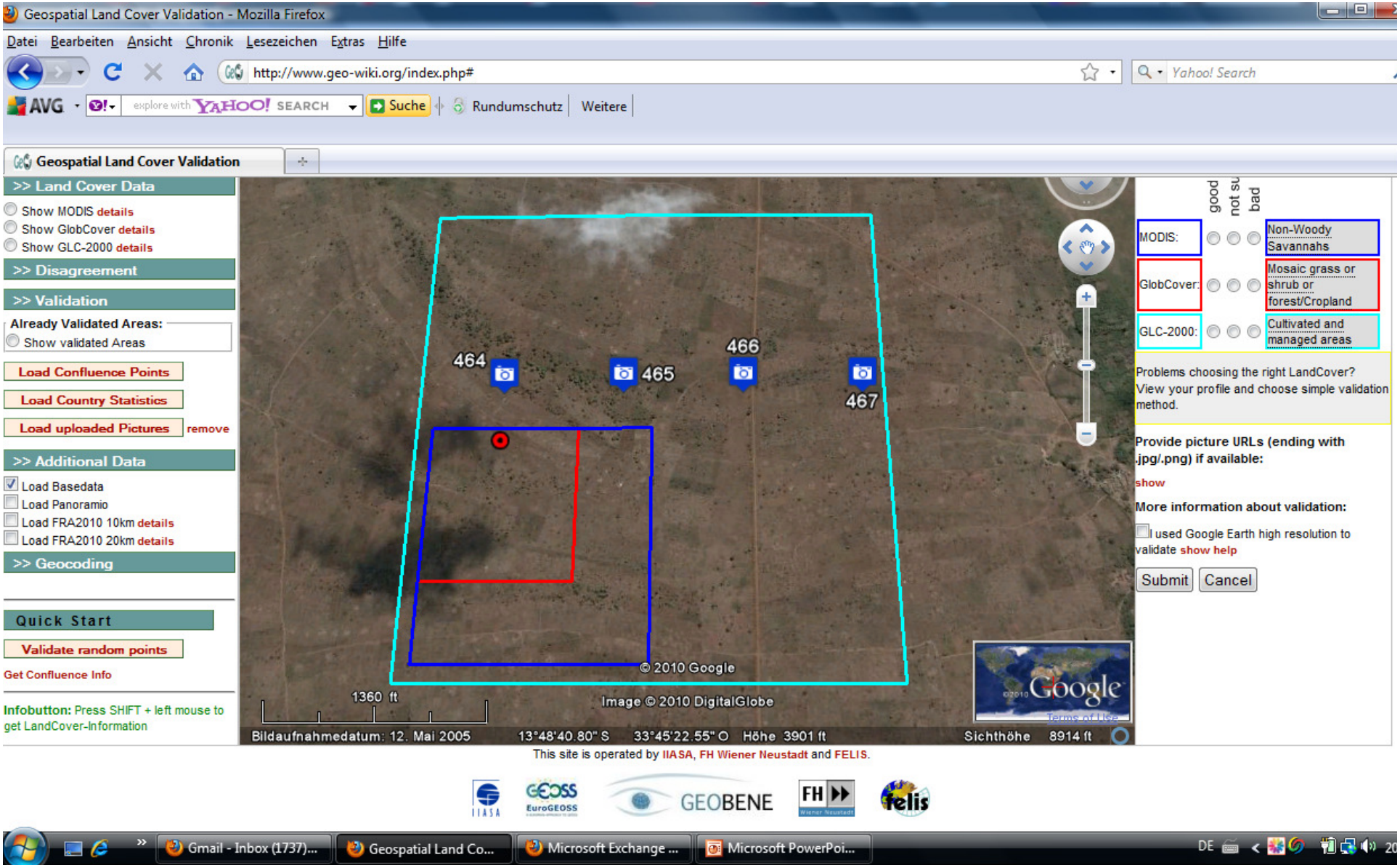
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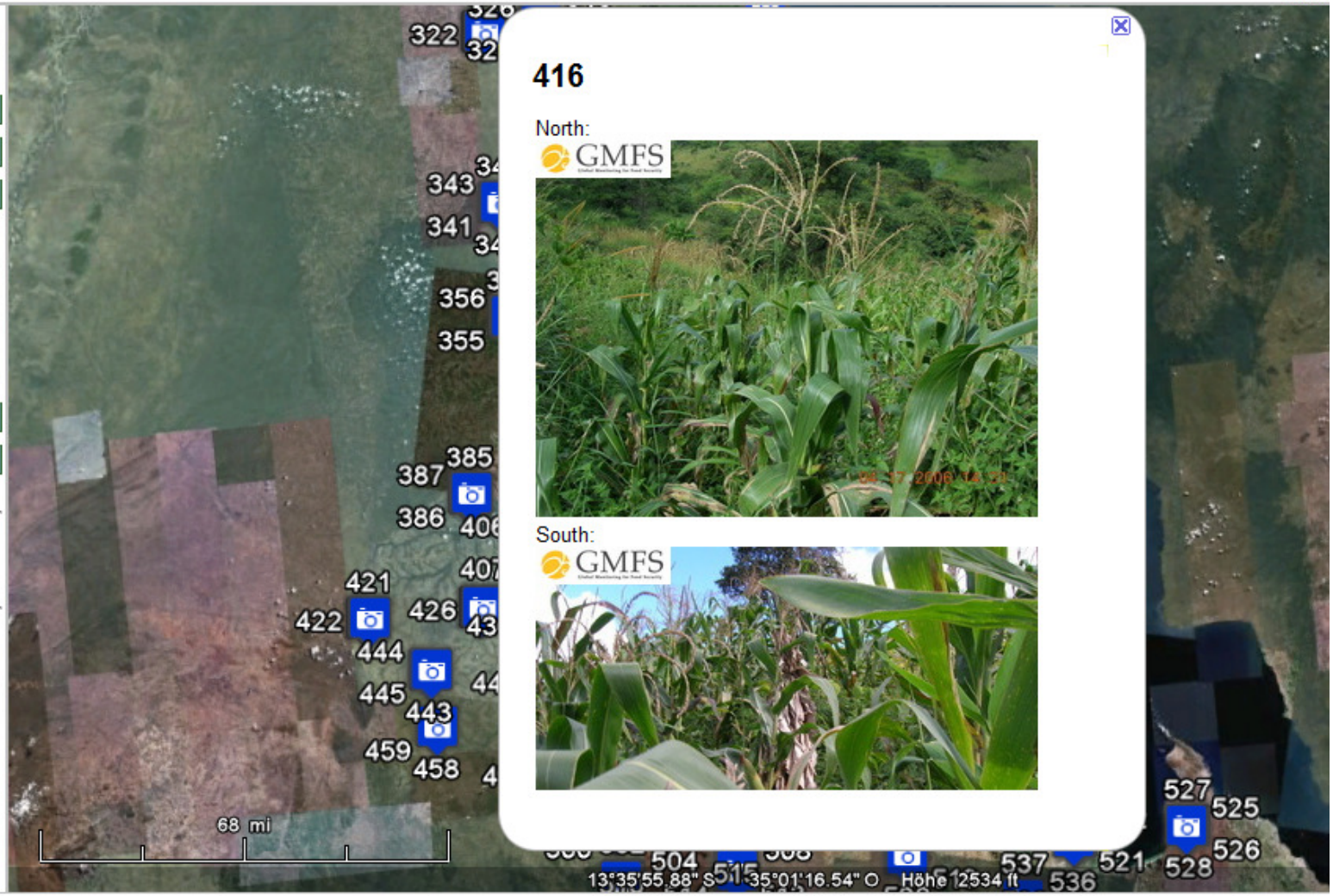

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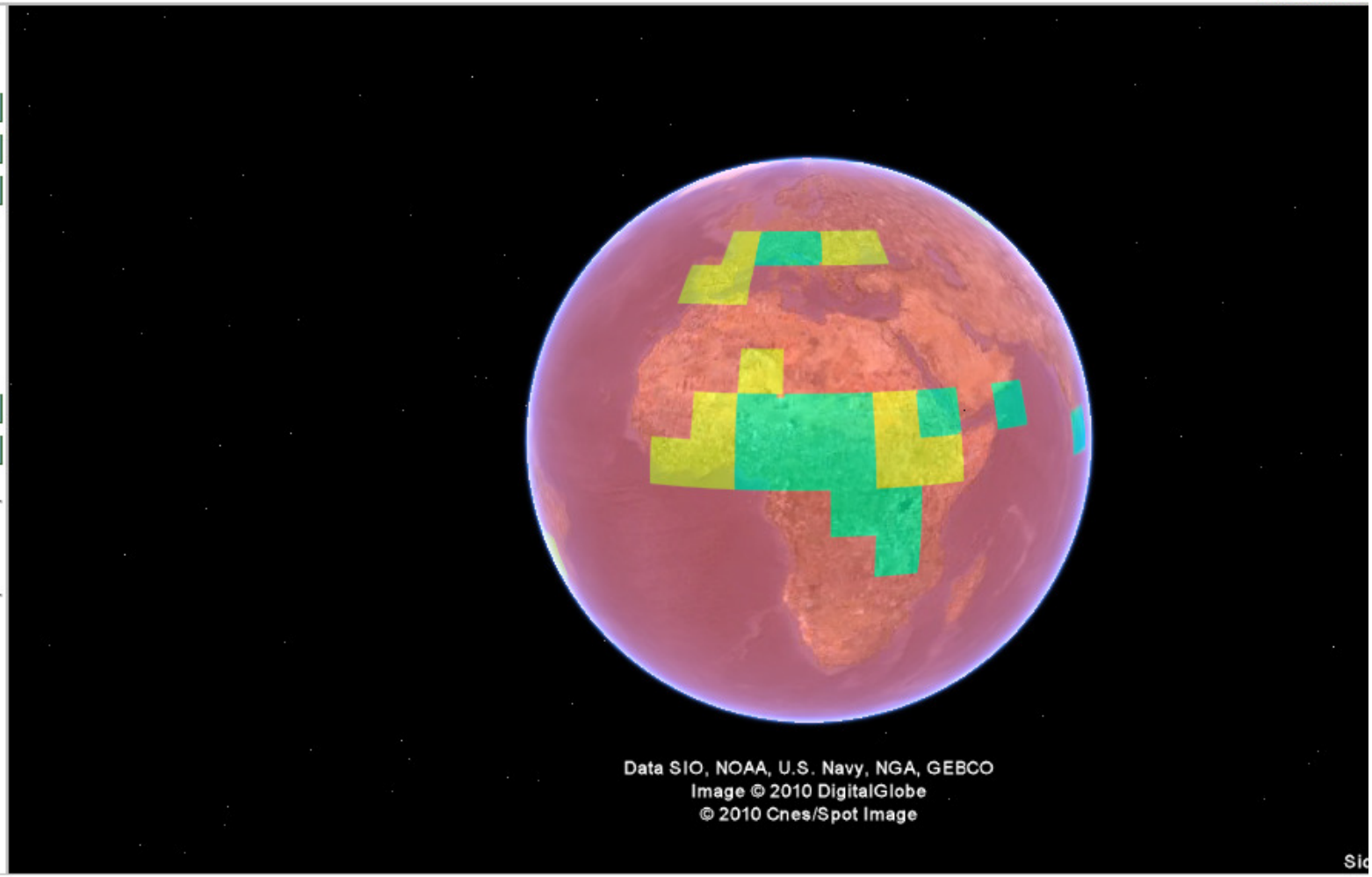

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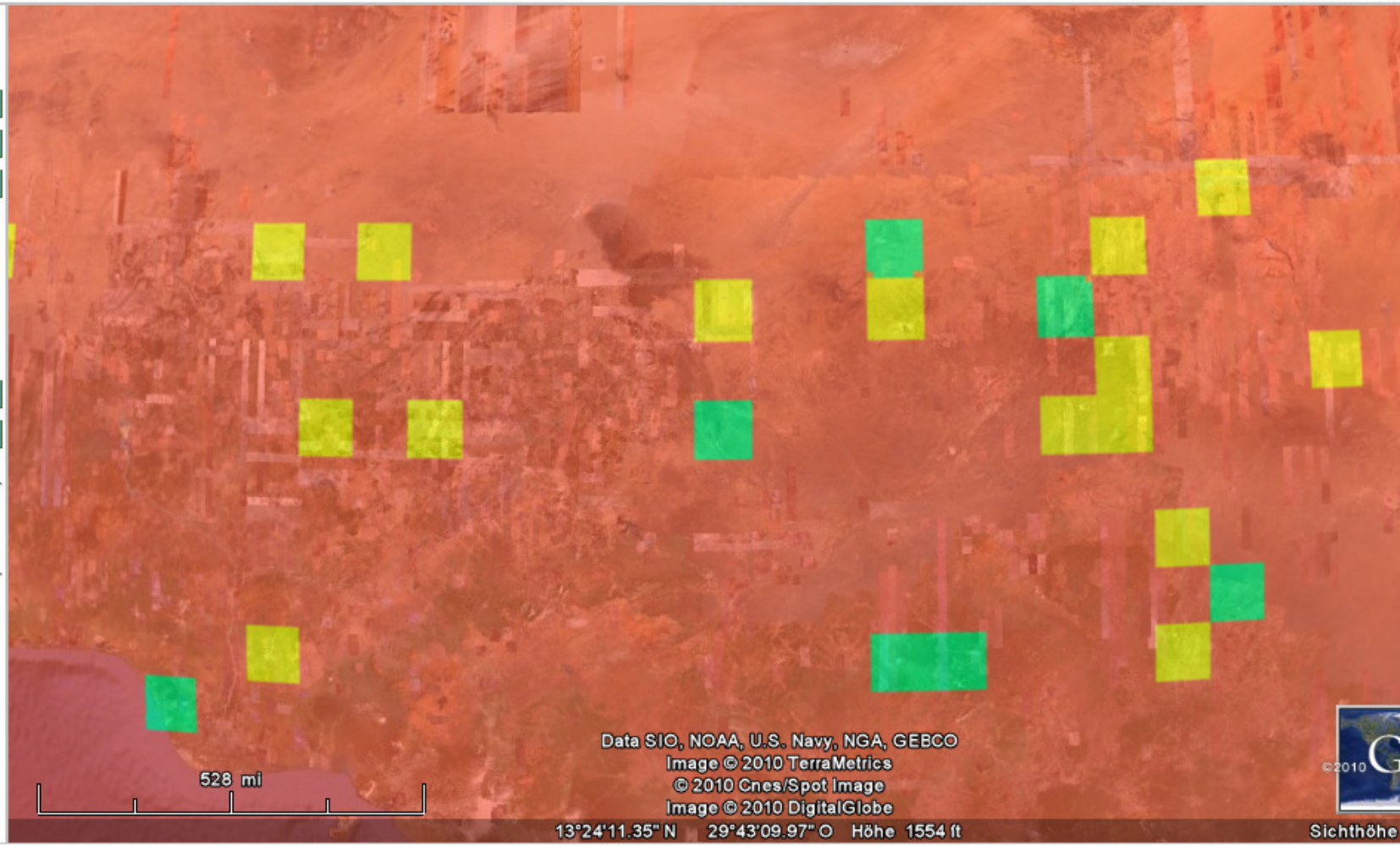

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Conclusions

- Community remote sensing can help to gather important information on land cover – big potential for the future
- Community remote sensing can link with social networks such as facebook
- Tools such as Geo-wiki.org can help to engage the wilder public
- Issues of data quality need to be addressed
- Issues of land cover change need to be addressed

Thank you!

- Contact

- Steffen Fritz: fritz@iiasa.ac.at