

Building Technical Office of Gabley with the extSomaliland gvSIG extension



Terre Solidali

IRA SHOP

6.52













MAIN OBJECTIVES

... is easy to use and update regularly

... is able to provide a precise measurement of interesting targets

... is fully developed with OS technology to ensure future sustainability

Provide the local partner with a GIS product that ...

... can be highly customized and eventually translated in local languages

... can be replicated in other main similar neighboring environments

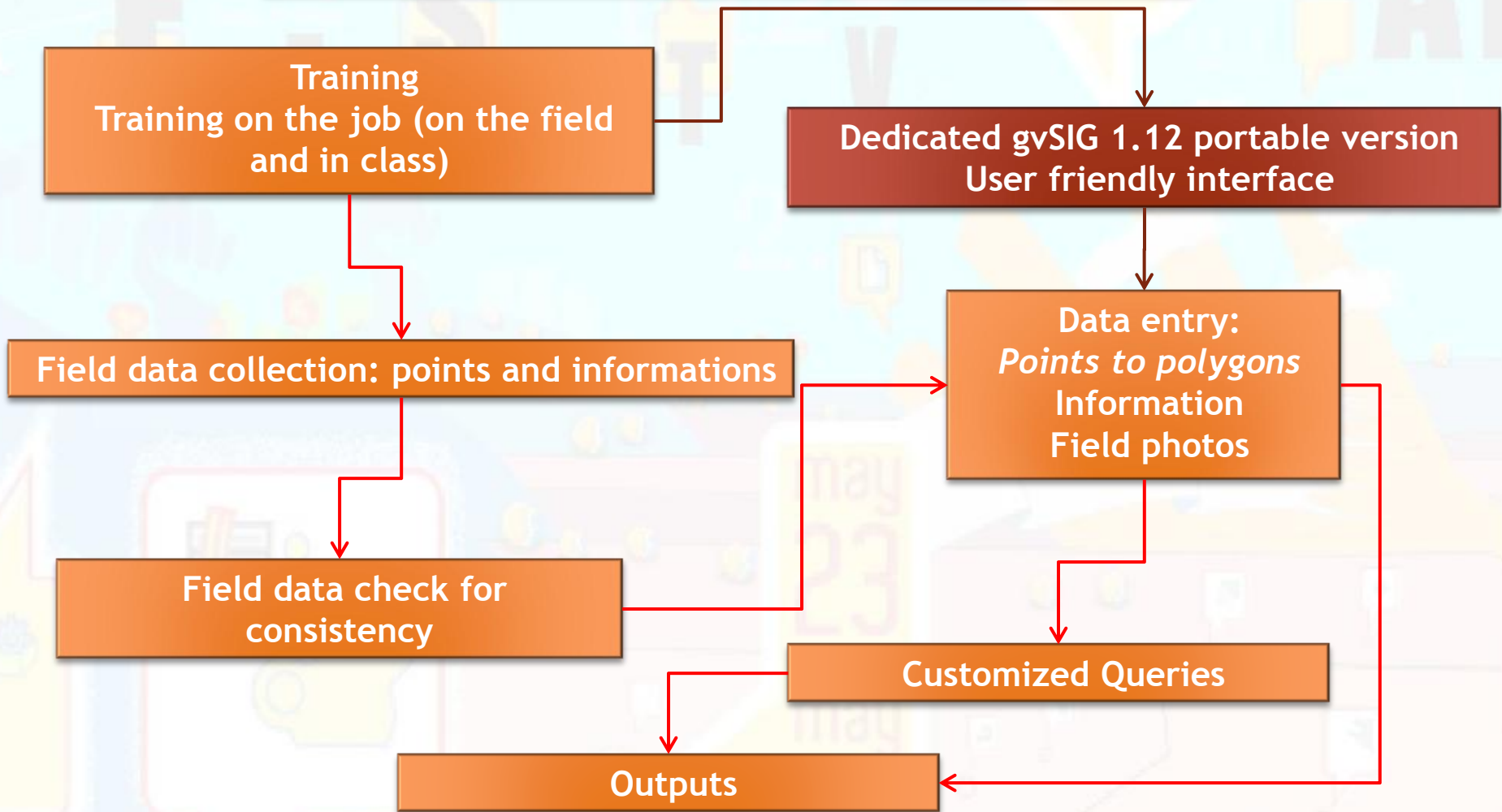
... can be linked with existing data/procedures



DOWLADA HOOSE
EE DEGMADA GABILEY



THE ACTIVITIES WORKFLOW







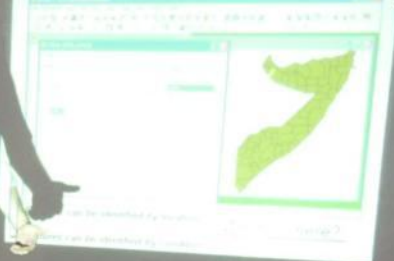


Geospatial Technologies

Why Use Geospatial Tech



How GIS works : QUERY





FIELD TRAINING













GPS FIELD DATA COLLECTION

High precision geometric data collection with differential GPS



Easy-to-fill field forms for information data collection

TS
Terre Solidaire

AUTOMATION OF MUNICIPAL FINANCE
AMF PHASE III
INSTITUTIONALISATION OF FINANCIAL & INFORMATION
MANAGEMENT TOOLS IN SOMALIA



Polygon ID (Office only) _____ Surveyor: G1 G2 Date ___/___/___

Plot no. _____ Built Not built City: *Gabiley* District: *Gabiley*

Building: *Private House* *Public Institution* *Commercial Activities*

Building description: only for Public Institution or Commercial Activities (hospital, university, hotel, shop, private school...) _____

Photo No. _____ Apartment floor _____ out of _____

Wall material: *Cement* *Brick* *Stone* *Wood* *Earth* *Other* _____

Roof material: *Iron* *Wood* *Cement* *Earth* *Other* _____

Name of the person interviewed _____

Telephone no. _____ Ownership: *Rent* *Owner* Since year: _____

Number of families living inside the house: one two

Number of persons living in the house – fam1

Total	Total Male	Total Female	Total <18	Male <18	Male <18 go to school	Female <18	Female <18 go to school

Number of persons living in the house – fam2 (if present)

Total	Total Male	Total Female	Total <18	Male <18	Male <18 go to school	Female <18	Female <18 go to school

Mains electricity	Piped water	Road Access	Improved Sanitation
YES <input type="checkbox"/> NOT <input type="checkbox"/>	YES <input type="checkbox"/> NOT <input type="checkbox"/>	YES <input type="checkbox"/> NOT <input type="checkbox"/>	YES <input type="checkbox"/> NOT <input type="checkbox"/>

Main activity of head of family: *Teacher* *Farmer* *Barber* *Tailor* *Watchman*

Broker *Manager* *Shop keeper* *Soldier* *Doctor* *Executive Director* *Secretary*

Carpenter *Midwife* *Principal* *Driver* *Sheppard* *Other* _____



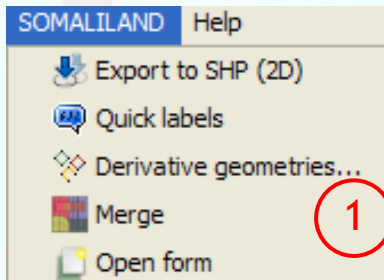




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DEDICATED EXTENSION : EXTSOMALILAND



This extension supports the user during the whole workflow from the loading of field collected points, data entry, labelling and merge procedure in order to have only one final vector layer



Note that all the implemented tools can be accessed in two ways:

1. By menu (SOMALILAND) or
2. By toolbar.

GPS collected points (3D)

GPS collected points (2D)

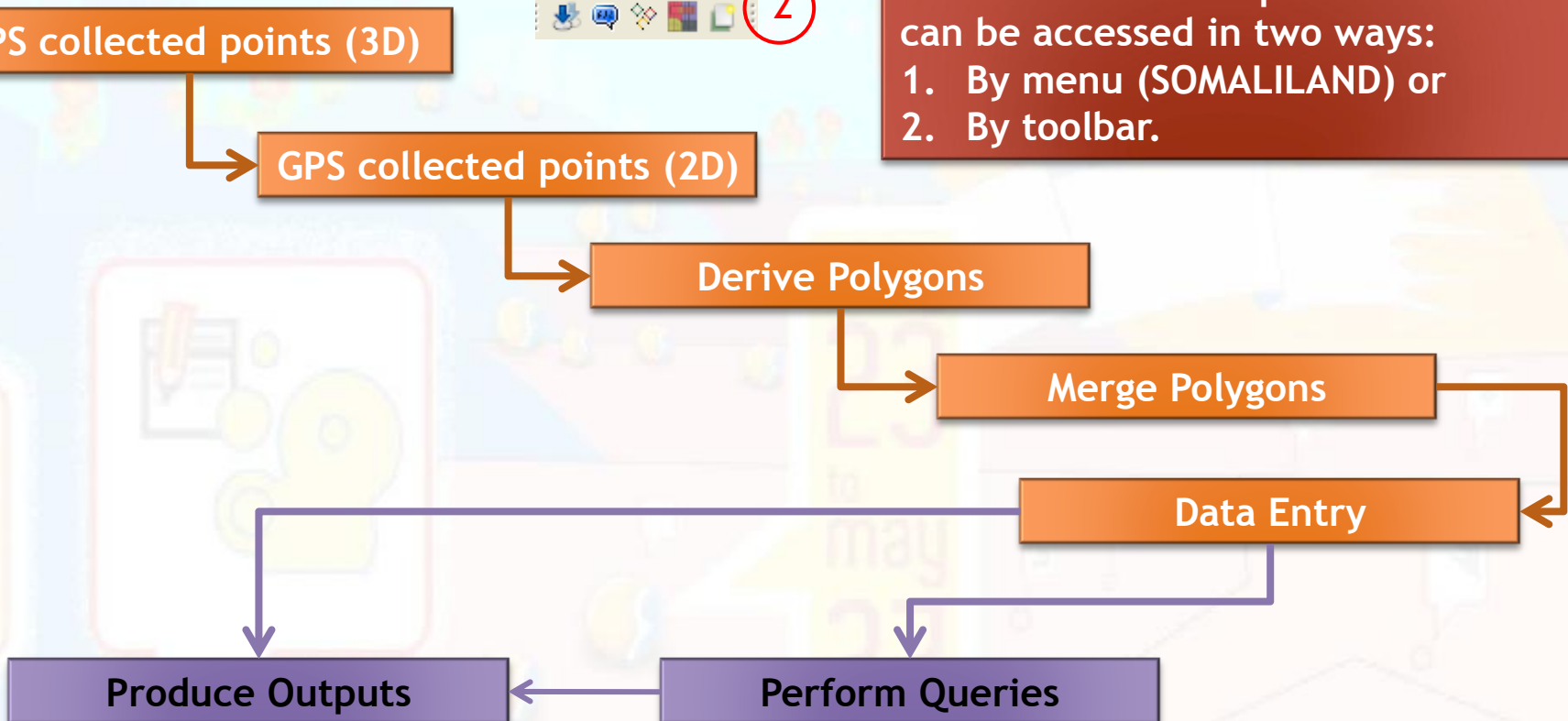
Derive Polygons

Merge Polygons

Data Entry

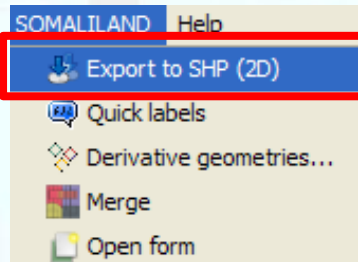
Produce Outputs

Perform Queries

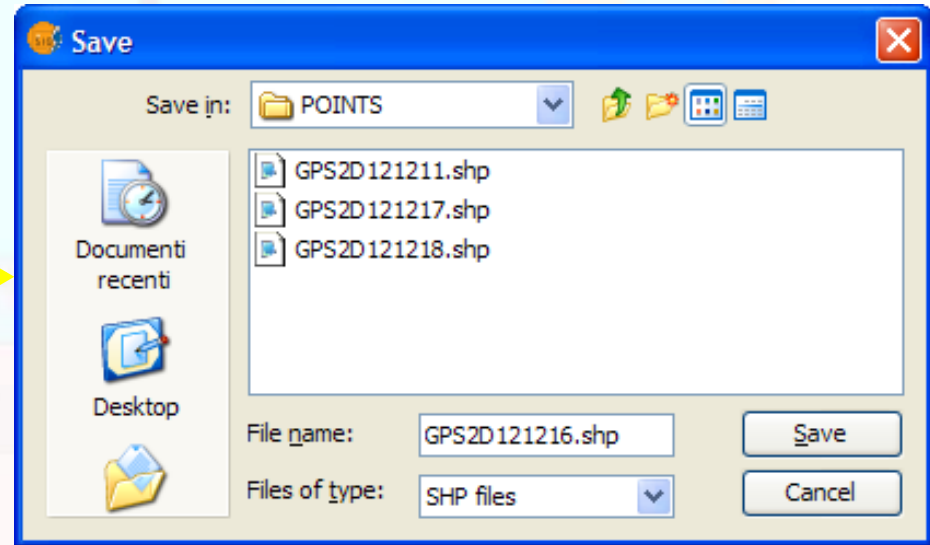
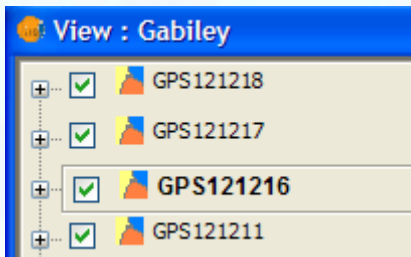




SOMALILAND EXTENSION : EXPORT TO SHP (2D)



This tool allows users to export the shapefiles imported from GPS receivers into the 2D format and make them suitable in order to derive polygons from field collected points

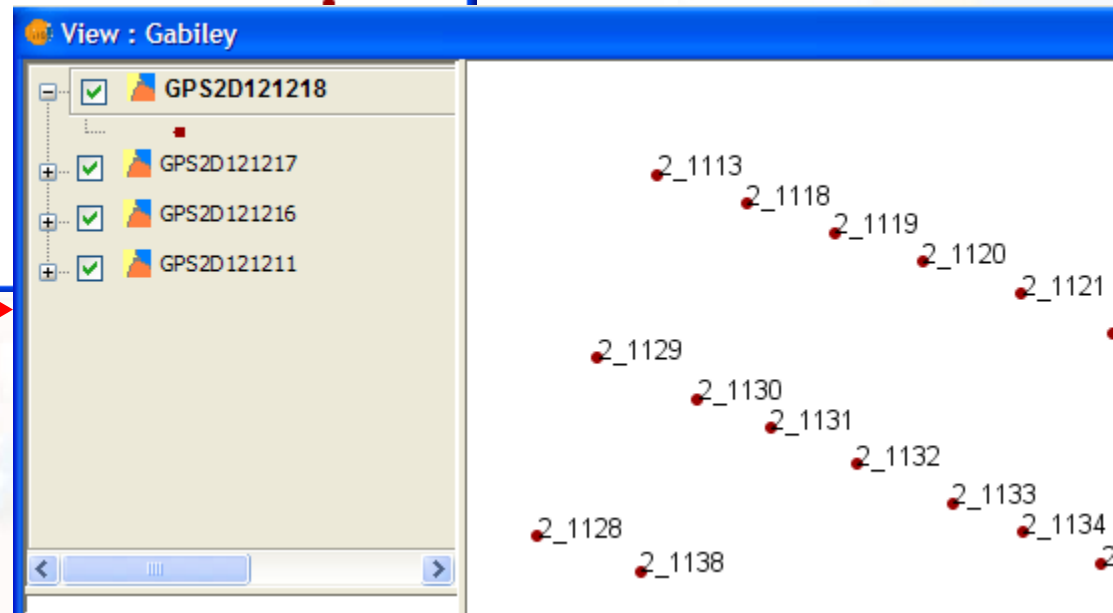
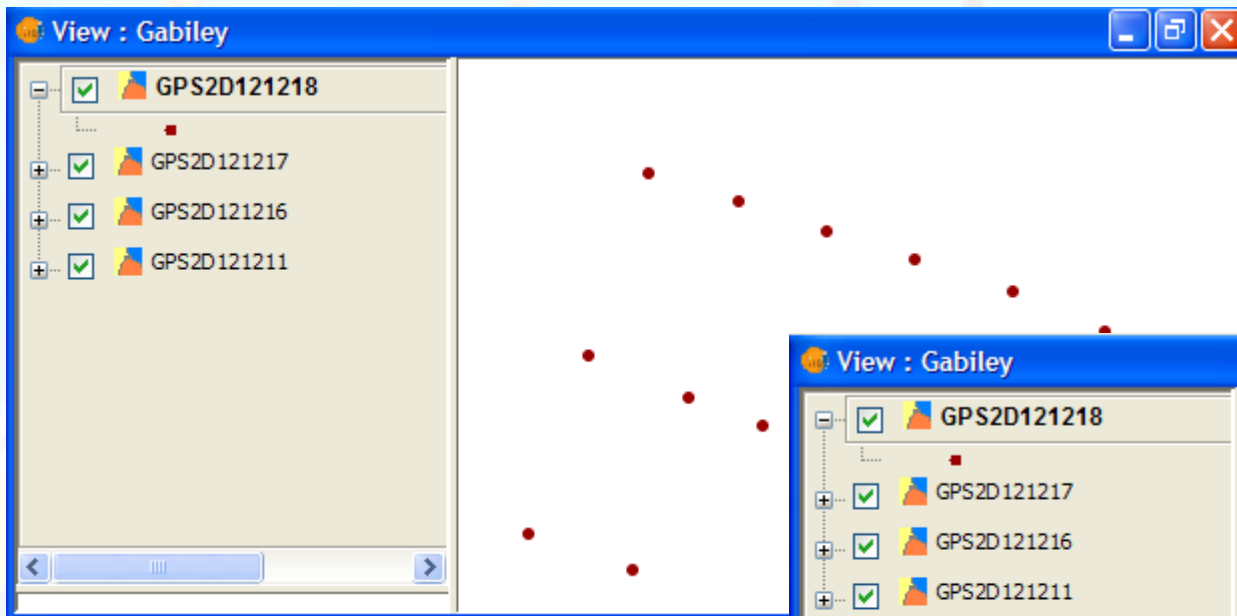
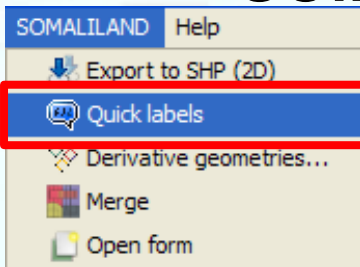


Since the very beginning of the procedure, it is very important to follow a strict rule on file naming. Points coming from the GPS will be named as collected GPS+date (example GPS130402.shp). The corresponding 2D shapefile will be GPS2D130402.shp



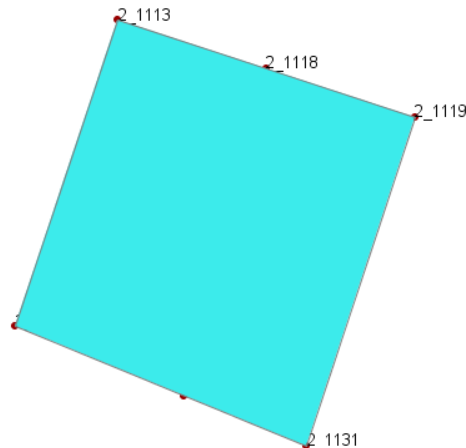
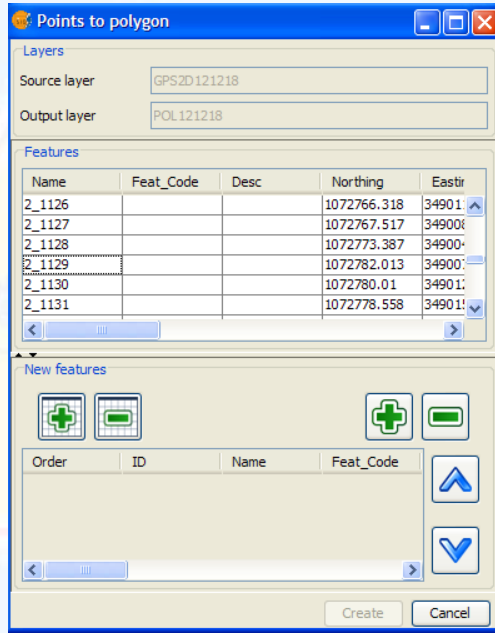
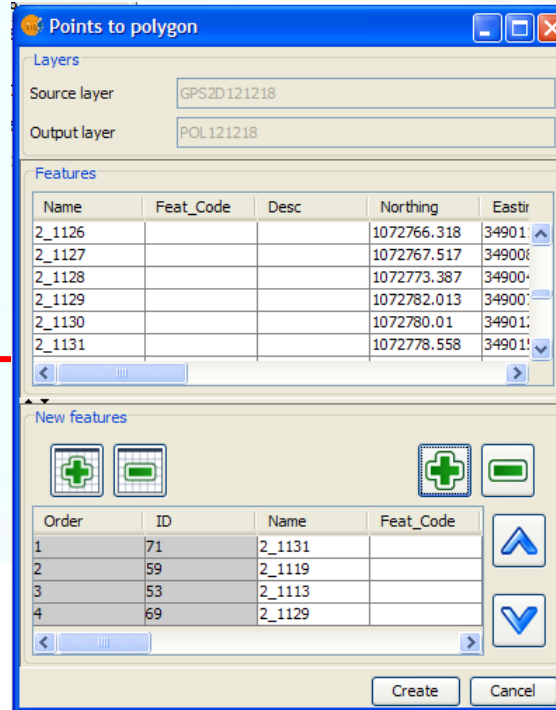
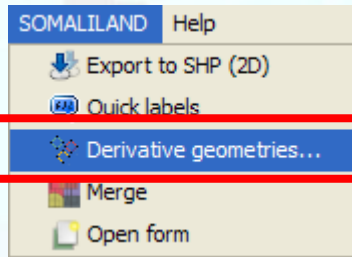
SOMALILAND EXTENSION : QUICK LABELS

This tool allows to automatically label a vector layer using the values contained in the first column of its attribute table. It can be applied both to polygons as to points layers.





SOMALILAND EXTENSION : DERIVATIVE GEOMETRIES



It is important to load points in the right order following the external perimeter. The derivative geometries window has to be closed only after having finished the full procedure of points to polygons conversion.



SOMALILAND EXTENSION : OPEN FORM

Building ID and area are automatically calculated.

Data entry is made easier through dropdown lists or checkbox

Building photo file can be selected and an automatic hyperlink is activated

NavTable standard tools are available also in this tool

Building Cadastre of Gabiley

Selected Select Always Zoom Fixed Scale

Building Cadastre of Gabiley

General info

Building ID: **GAB-A-03-25-05** Gross Floor Area [m²]: **122**

City: **GAB** Area: **A** Sector: **03** Block: **25** Unit: **05**

Surveyor: **G1** Date (dd/MM/yyyy): **03/01/2014**

Is it built? Old building code:

Photo absolute path: **D:\GEBILEY\PHOTOS\GAB-A-03-25-05.JPG**

Building features

Building type: **Commercial Activities** Building description:

Apartment floor: **0** Main electricity

Total floors: **0** Piped water

Wall material: **Brick** Road access

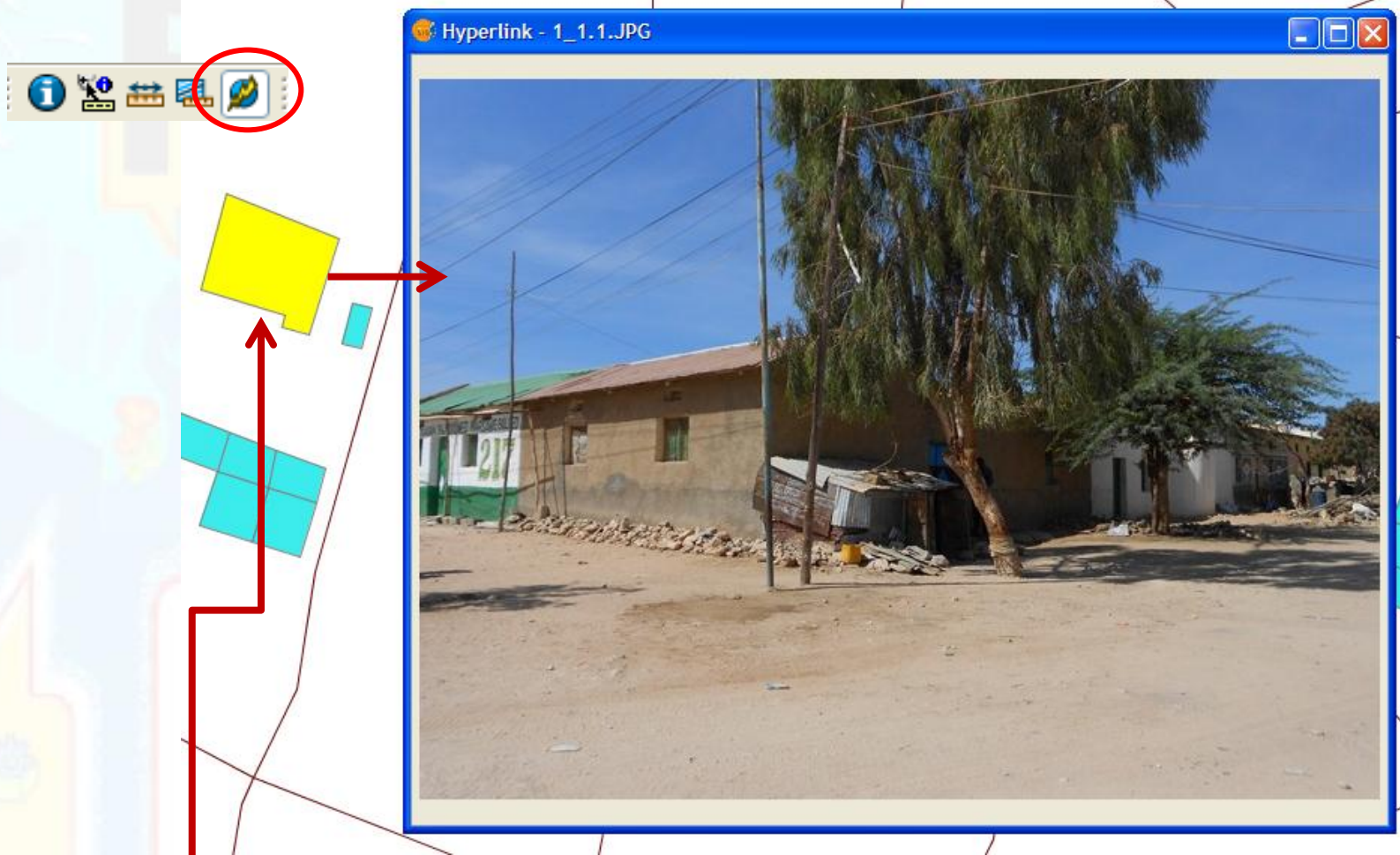
Roof material: **Earth** Improved sanitation

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Old code field to make possible the link to already existing information



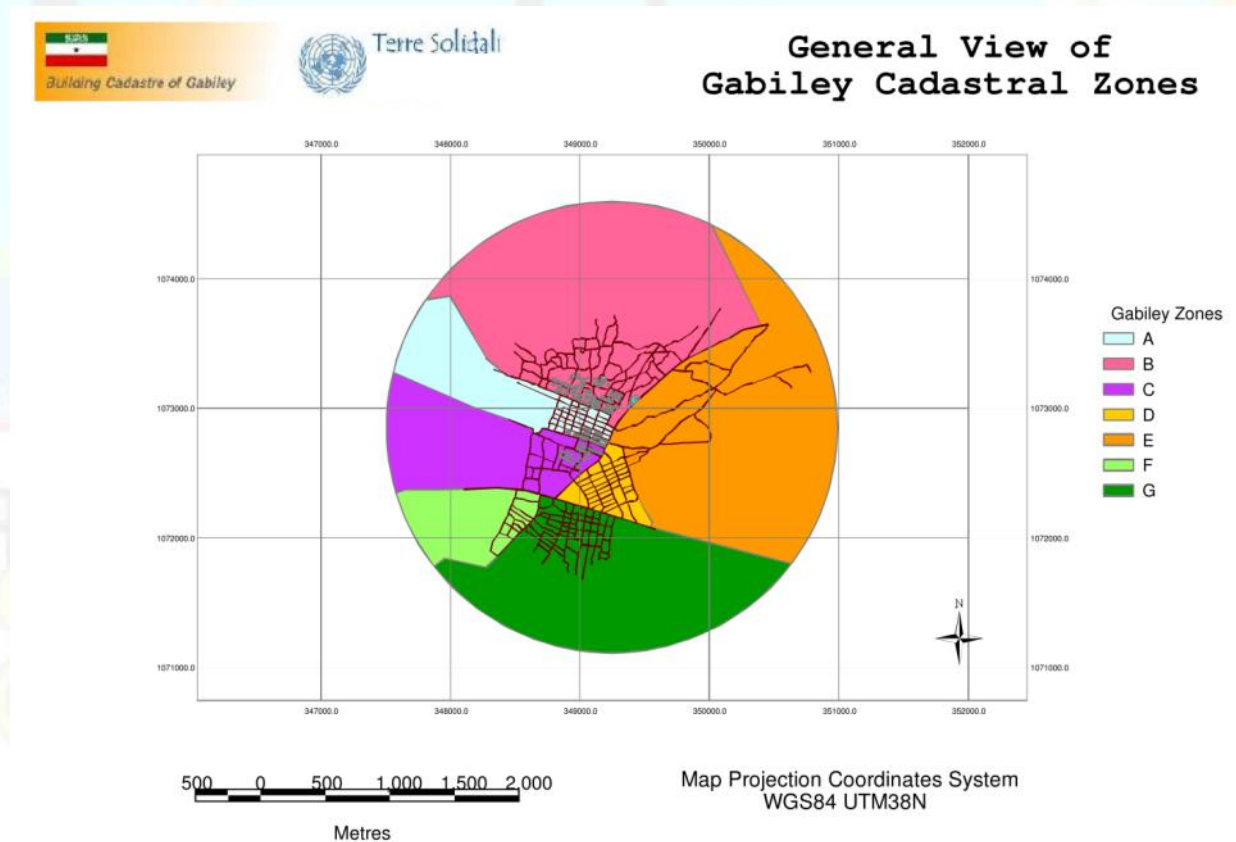
SOMALILAND EXTENSION : HYPERLINK



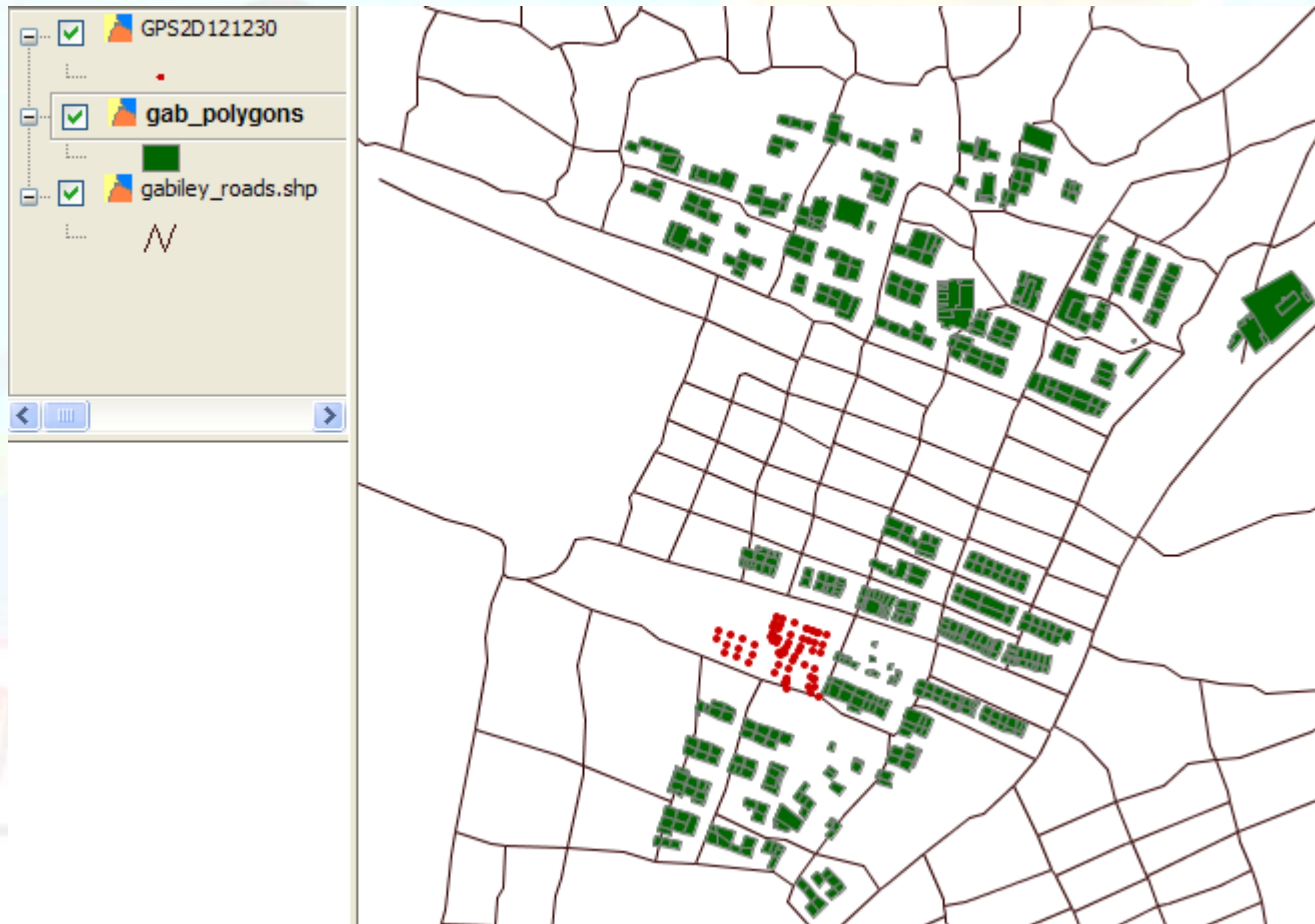
Photos of buildings are saved in a dedicated folder and automatic visualization is performed whenever click on a building

SOMALILAND EXTENSION : OUTPUTS

Production of Maps customized for subjects, size, scale and legend as well as spreadsheet tables (dbf or xls format)



RESULTS!



23 field survey days

Almost 800 polygons created ($\pm 15\%$ total)

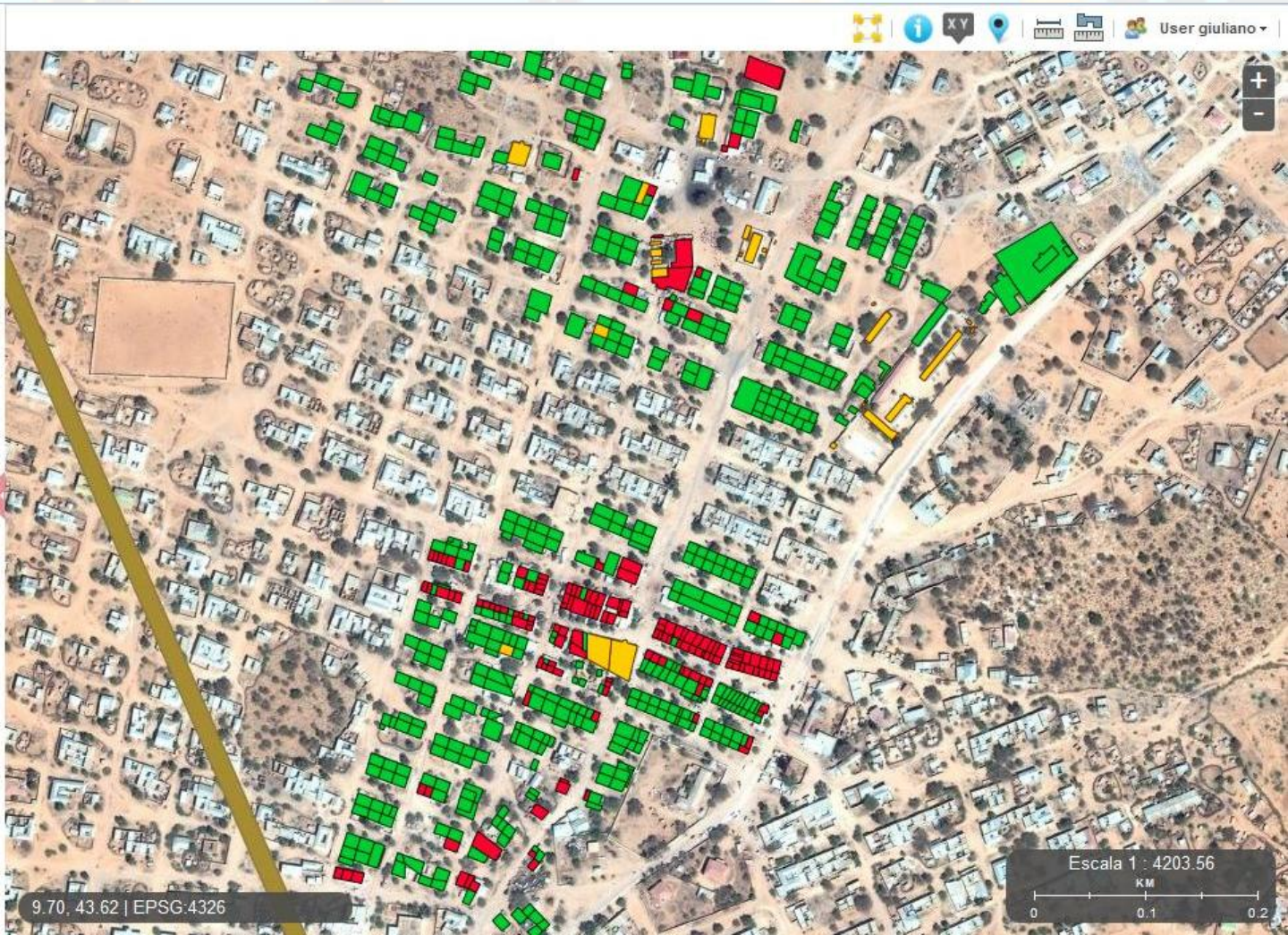


The future! WebGIS



TOC Legend

- Gabiley_Build_Type
- unknown
 - com
 - pub
 - pvt



Grazie...
Thank you and enjoy
with #GIS and #GPS 😊