SMARTPHONE GPS SURVEY for land use management and soil protection

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Manual created by Hans Geisslhofer and Lisa Kathrin Polak for mapping in India, Uganda and Senegal and actually in use in projects of „Space2live" „Horizont 3000",and „Caritas".

Purpose of "Get Point" (Google Play)

It is a cost-free application for professionals and amateurs who need to record coordinates (GPS data) in aggregated manner (groups) and send results to Google Earth.

Once your phone has installed the app Get Point and you will start working with the app, it will use available satellite signals to locate your geographic position. Get Point only works on phones with Android

➡ **Installation of the application ;**

➡ **Download** "Get Point - GPS" from the "Google Play Store" (App Store

Look for the Google Play Store Icon on your phone, enter "Get Point GPS"

Get Point - GPS

Joubert Vasconcelos   Travel & Local

PEGI 3

Contains ads

ⓘ This app is compatible with all of your devices.
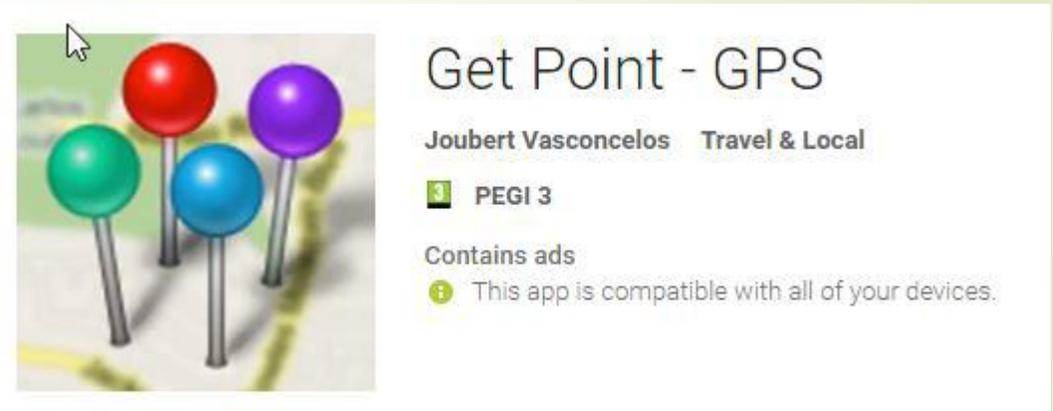
and press the button "install".

Then press "open". When opening the app for the first time, you normally will be asked, if the app can have **access to your location**, which means that GPS data collection and communication with satellites will be allowed. Click **"yes"** and accept.

First you only will see only this empty screen here:
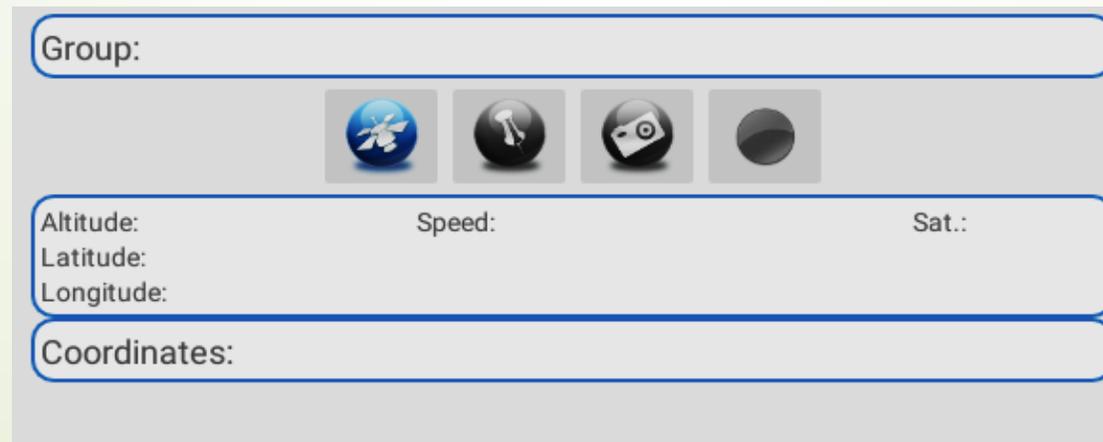
Before you start using the app, make sure that the **GPS location service for your phone is really turned on**. You can find these settings under security settings or privacy settings, where you can grant the app access to your location data.

## *Using the app Get Point – GPS for GPS data collection:*

Getting started:

Once you have opened the app, the app needs to search for satellites available in the sky, so it can connect to them and position itself on the world surface and the place you are standing on. Therefore you need to **push the button with the satellite image**
When it turns blue, it is activated. Now it can take up to **5 to 10 minutes**, until it finds and connects to the satellites circulating in the earth´s orbit and atmosphere.

When activating the app for the first time (through pressing the satellite button), it will ask you to first **create a new group**. You will find the following message:

> ⚠ Groups
>
> There is no group. Do you want to create one?
>
> NO   YES
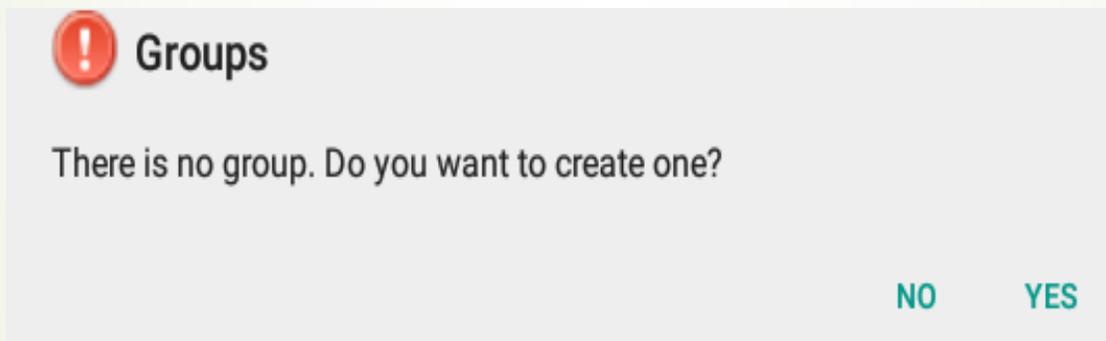
If the "New Group" window does not pop up by itself, please go to three dots on the right top, press them, then click the tab "Group" and then the tab "new group"
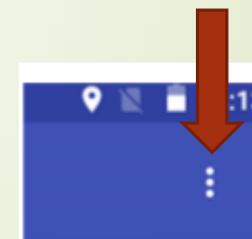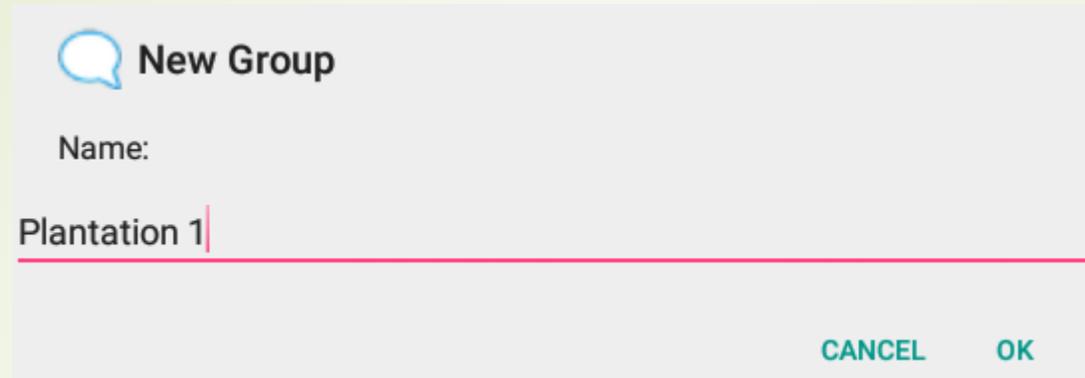
Press yes, and **enter a name as above and push ok** :

This is helpful, as you can structure the collected data and save several points in one group, if they belong to one and the same feature that you map (eg. a forest or a plantation).

At a later stage of the process, you will transfer them to the computer as one group named after the mapped feature, so you know immediately what the data is about. After having pressed "yes", a keyboard will pop up and you can write the name of the feature, eg "forest 1" and press "ok"

At least 4 satellites are needed, to calculate your position. You will see on the right top, the number of satellites available in the sky (here 21) and the number with which the device can already communicate the position (5). The more satellites the app can find, the more the positioning is exact (with 4 satellites about 15 meters, with 7 satellites about 10 meters, with 12 satellites about 5meters). At the bottom left you can read the estimated altitude, and the positioning in decimal degrees as latitude and longitude. If you now press the button with the pin this position will be saved as "point 1" in the device within the group "plantation 1"


Group: Plantation 1

Altitude: 7,59 m   Speed: 0,00 Km/h   Sat.: 5/21
Latitude: 48,19270722545729
Longitude: 16,33178865002548

Coordinates: Decimal degrees

To gather the maximum of information it is essential to write all the other information and observations in a notebook, which correspond to each group, number or date / time on the saved items/ features in the field. If you map a garden or cultivation, for example, please note what kind of crops are grown,

Saving data on your phone As soon as you have finished recording all the important accessible corner points (please refer to document "Mapping Example" for procedure) and features, you can open a "pull down" menu to save the groups (and their points) locally in your phone. Open the Main Menu at the top right (the three points displayed)


Now press "Generate KMZ / KML". KMZ/ KML is the data format, which will be needed for the programme Google Earth Pro
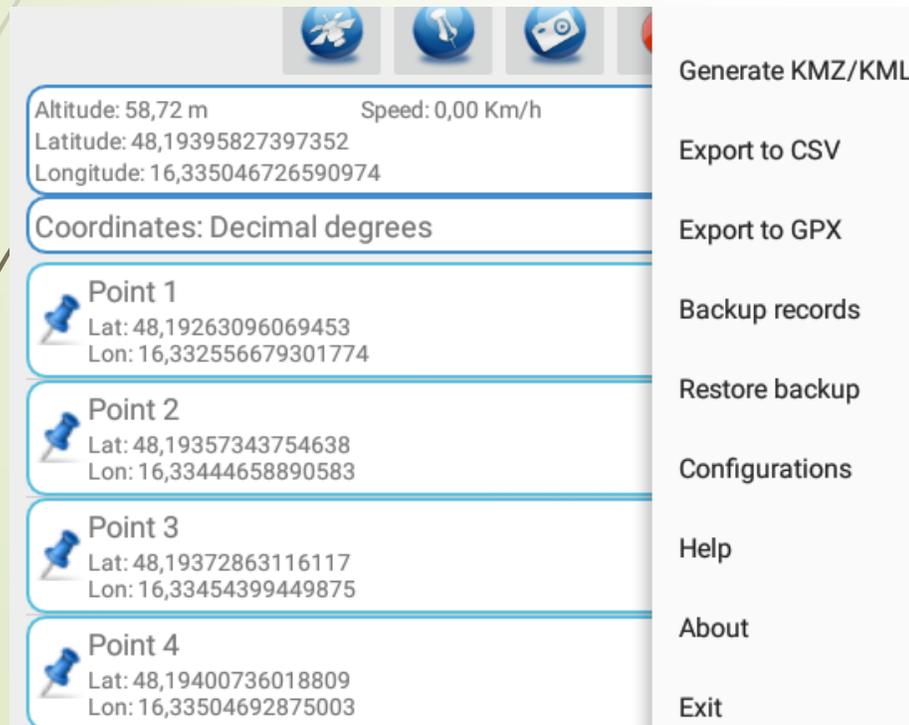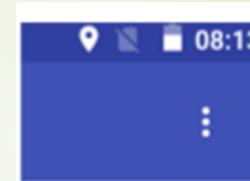
Altitude: 58,72 m   Speed: 0,00 Km/h
Latitude: 48,19395827397352
Longitude: 16,335046726590974

Coordinates: Decimal degrees

Point 1
Lat: 48,19263096069453
Lon: 16,332556679301774

Point 2
Lat: 48,19357343754638
Lon: 16,33444658890583

Point 3
Lat: 48,19372863116117
Lon: 16,33454399449875

Point 4
Lat: 48,19400736018809
Lon: 16,33504692875003

Generate KMZ/KML

Export to CSV

Export to GPX

Backup records

Restore backup

Configurations

Help

About

Exit

/storage/emulated/0

NEW FOLDER

Alarms

Android

Cardboard

DCIM

Download

Locus

MapIt

Movies

Music

Notifications

Pictures

Podcasts

CANCEL   OK

A new window will pop up. You are asked to create a new file (**New Folder**), you confirm with **OK**

New Folder Name

test parcelle

CANCEL   OK

To make sure that the coordinates are properly registered, confirm with "OK"

✔ Success

The KMZ/KML file was saved in memory card.

OK

Music

Notifications

osmdroid

Pictures

Podcasts

points

Ringtones

Screenshots

temp

test parcelle

UniversalImageLoader
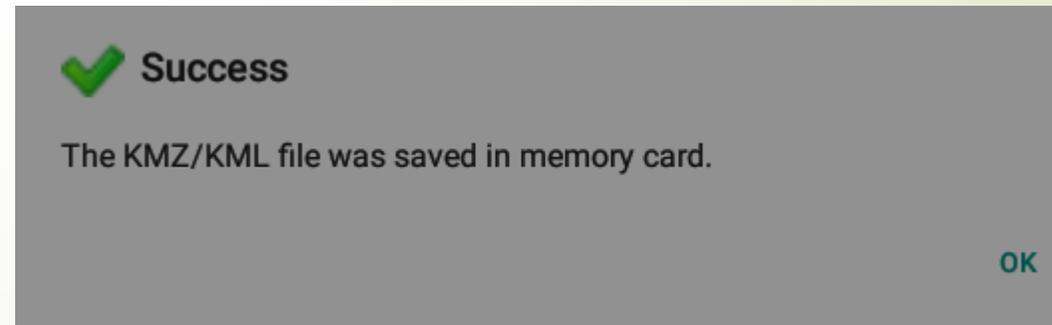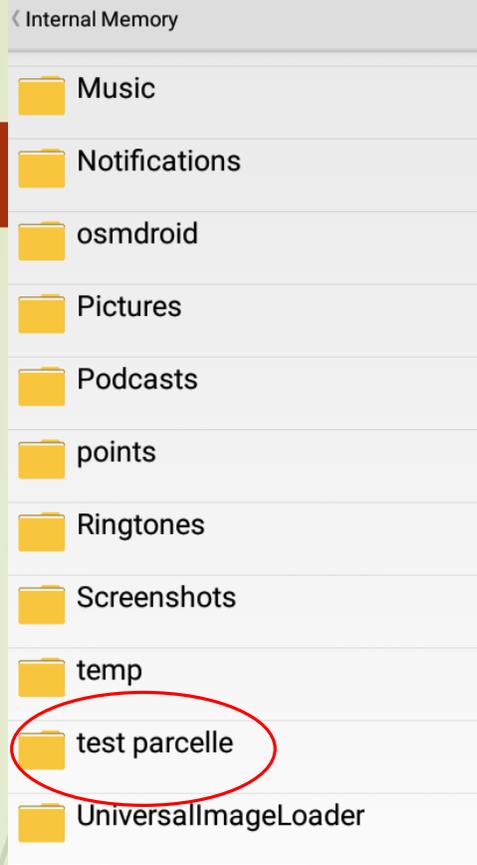
Now, as soon as you have an Internet network available (mobile or WiFI) you can send the points to any e-mail box you want or you send the files via bluetooth. You must first go to your data manager either in the internal memory or on the memory card (called File Manager, File Explorer, My Files >Device Storage) of your device. Here you can easily now find the folder you have created ("parcel test", "mapping" or the name of your village)

Plantation 1.kml

901 B

4,79 K

Copy

Delete

Move

Paste

A+B Rename

Send

Create shortcut

Cancel
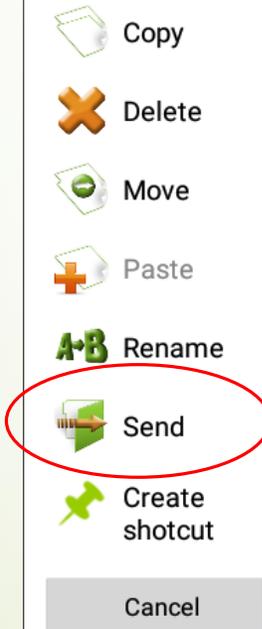
Now **press** the coordinates file (in KML), where you saved them) **very long**. And then press **SEND**. The mobile phone proposes to you to send the file(s) to your e-mail box or to send it via Bluetooth (with the latter option, select the device where it should be sent to and make sure your computer has turned on Bluetooth and can receive files). If you do not have an email address or your computer does not support Bluetooth (search for it in computer settings), you can also transfer the data via cable, if you connect your phone to the computer with the cable.

If you are sending it **per mail**, just enter the recipient and the object, and press the arrow or the button "send". And here, voila, are the coordinates already attached and sent immediately!

You can **open the mail on your computer and safe it locally** in a folder named after the village where you took the data. When you go to **Google Earth or Google Earth pro, they can be opened directly and you will "fly"** you to the exact position of your parcel
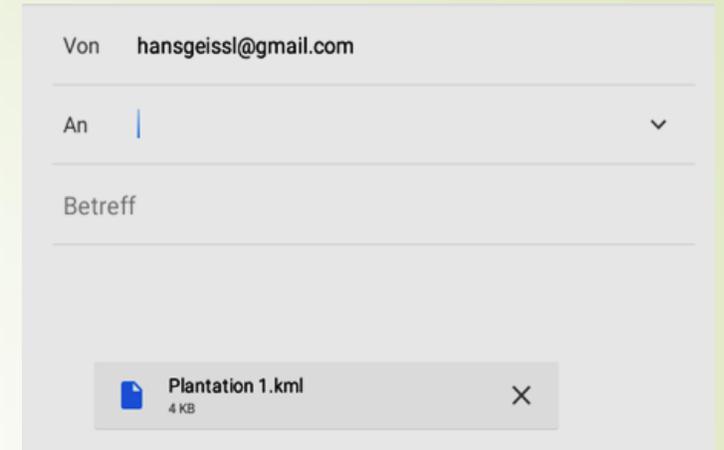
GPS points from village forest in actual „Horizont 3000" project in central Senegal