

Instruction Manual Exposome Maps platform

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1. Purpose of the Exposome Maps platform

The Exposome Maps platform has been developed to provide access to the exposure maps that have been developed and collated as part of the Exposome-NL and EXPANSE projects. The exposure maps contain geospatially resolved data on several environmental exposures, including various air pollutants, physical-chemical stressors, built environment. In section 2 we provide a complete overview of the exposure maps that are currently available through the platform. The available data can be accessed through two routes:

- 1) The exposure maps can be visualized on a map, which can be zoomed in on a geographic region of interest.
- 2) The exposure maps can be linked to (a list of) geographical coordinates. This is of interest to stakeholders that would like to link the available exposure data to their own data, such as epidemiological studies for which residential information is available.

2. Where can I find the platform

The Exposome Maps platform is located here: <https://exposome.dataplatform.nl/>

3. What can I find on the platform

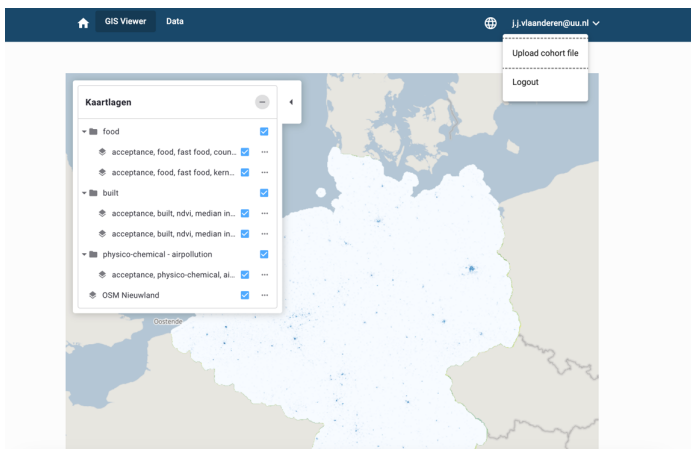
The exposures that are available on the platform can be found [here](#),

4. What can I do on the platform

On the “Data” tab of the platform one tile per exposure surfaces provides a description of the information that is available (meta-data). By toggling to the “Map” the exposure surface is shown on a map

On the “GIS Viewer” tab each of the exposure maps can be selected to be represented on the map.

After login one can link coordinates (from a cohort) to exposome data via the “Upload cohort file” option (see image below). The procedure for uploading cohort files to the platform are describe below.



5. How can I link the exposome data on the platform to my cohort data

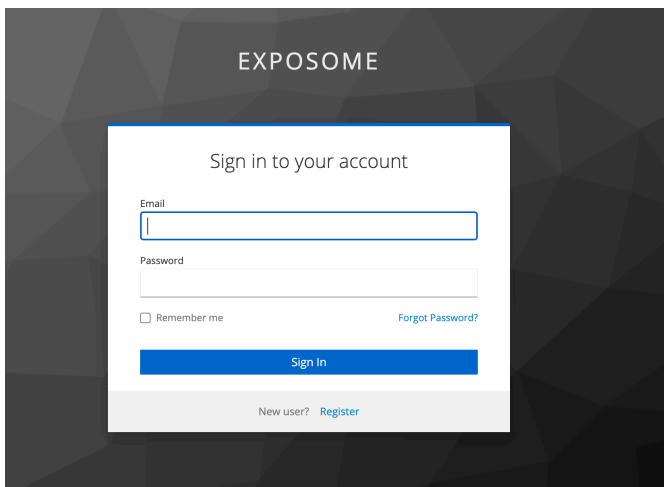
To make use of the Exposome Surfaces that are available in the Exposome-NL data platform, the first step is to read the “Exposome surface data access and publication policy”.

Next step is to request access to link the exposome data to your cohort. This process is started by filling in the form “Data Request Exposome Surface”.

6. Now that I have access, how do I technically link the exposure data to my cohort

1. Overview of the steps that are needed to link your cohort to the Exposome Maps

1) Create an account on the exposome platform:



The image shows a screenshot of the EXPOSOME login interface. At the top, the word "EXPOSOME" is displayed in white capital letters on a dark background. Below this, a white rectangular box contains the login form. The form is titled "Sign in to your account". It includes an "Email" input field, a "Password" input field, a "Remember me" checkbox, and a "Forgot Password?" link. A prominent blue "Sign In" button is located below the password field. At the bottom of the white box, there is a link for "New user? Register".

To create an account click the “login” button and follow instructions for a New User.

2) Translate address information into coordinates in the correct projection

The Surfaces on the Exposome Maps platform adhere to the INSPIRE¹ specification on geographical grid systems allowing a harmonised and interoperable geographic localisation of our surfaces by using the Equal Area Grid, a multipurpose Pan-European standard for spatial analysis or reporting. It consists of a two-dimensional grid based on the ETRS89 Lambert Azimuthal Equal Area projected coordinate reference system. The Geodetic Datum is the European Terrestrial Reference System 1989. The Lambert Azimuthal Equal Area (LAEA) projection is centered at 10°E, 52°N. Coordinates are based on a false Easting of 4321000 meters, and a false Northing of 3210000 meters. (EPSG: 3035, <http://spatialreference.org/ref/epsg/etrs89-etrs-laea/>)

3) Request procedure access to Exposome maps.

The request procedure for access to the Exposome maps is described in the “ Exposome Surface Data Access and Publication policy” document, which can be found [here](#). The “Data request Exposome Surfaces” form can be found [here](#).

4) Secure transfer of cohort coordinates

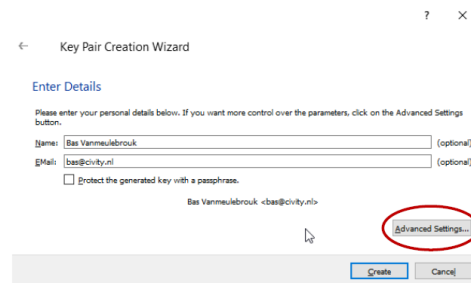
This is described in section 2 of this document.

¹ <https://inspire.ec.europa.eu/>
Version 1.0 November 2023

2. Instructions to securely upload your cohort coordinates to the Exposome Maps and receive linked exposures

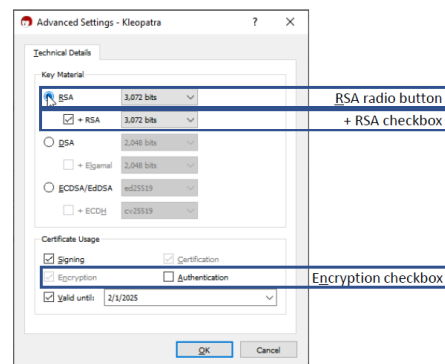
Generate your public key using Kleopatra (1)

- Select File / New Key Pair
- Select “Create a personal OpenPGP key pair”
- Enter your name and email
- Do not protect the key with a passphrase
- Click “Advanced Settings”



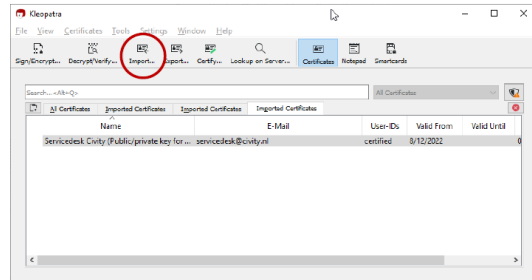
Generate your public key using Kleopatra (2) – advanced settings

- Select the RSA radio button
 - The + RSA checkbox must be checked
 - The Encryption checkbox must be checked
- Click “OK”
- Click “Create”
- Click “Finish”
- Right click the generated key
- Select “Export”
- Save the file using the .asc extension



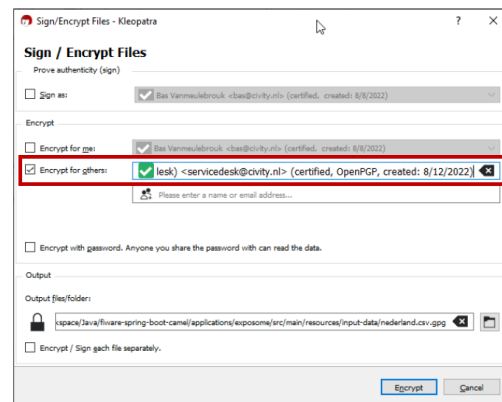
Encrypt cohort file to upload using Kleopatra (1)

- Install Kleopatra on your PC
- Download the Exposome public key
 - How do we want to make this public key available?
- Import the Exposome public key
 - Click “Import” button
 - Select the file
- Certify the key
 - Right click the imported key
 - Select “Certify”



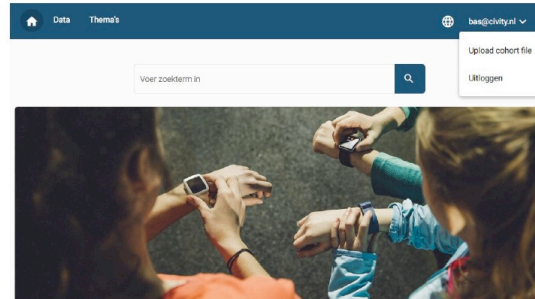
Encrypt cohort file to upload using Kleopatra (2)

- Click “Sign/encrypt”
- Select your cohort file
 - Uncheck “Sign as”
 - Uncheck “Encrypt for me”
 - Check “Encrypt for others”
- Select the servicedesk@civility.nl public key
- Click “Encrypt”



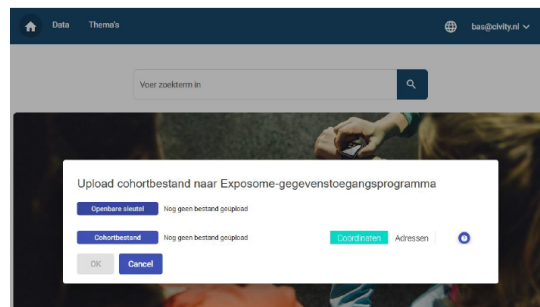
Upload cohort file and public key (1)

- Upload both the .asc file with your public key and the encrypted .csv.gpg cohort file to the Exposome data access program
 - Go to <https://acc-exposome.dataplatform.nl>
 - Login
 - Select “Upload cohort file”



Upload cohort file and public key (2)

- Select your public key
- Select the encrypted cohort file
- Click “OK”
- You will receive emails
 - Upon successful import of your public key;
 - Report with the number of records in your cohort file and the country which will be used to process your cohort file;
 - The result;
 - In case of an error in processing your public key and/or cohort file



Decrypt result file using Kleopatra

- Save the result .csv.gpg file you received via email
- Select Decrypt/Verify
- Navigate to the file you saved

