



HORIZON 2020

The EU Framework Programme for Research and Innovation

H2020-EO-1-2014

QF and rest UEB time series products

Deliverable D8.3



URBANFLUXES

URBAN ANTHROPOGENIC HEAT FLUX FROM EARTH
OBSERVATION SATELLITES

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DATE

31 December 2017

ISSUE

1.0

GRANT AGREEMENT

no 637519

DISSEMINATION LEVEL

PU

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1 INTRODUCTION

1.1 Purpose of the document

This document is a supplement to Deliverable D8.2, briefly describing the Q_F and rest UEB (Urban Energy Budget) time series products.

An application was created for the visualization of the fluxes time series. The application is using the Matlab Runtime Environment to run and creates interactive plots of the fluxes times series for the study areas in London, Basel and Heraklion.

The application installation procedure and instructions for use are given below.

1.2 Definitions and acronyms

Acronyms

UEB Urban Energy Budget

URBANFLUXES URBan ANthropogenic heat FLUX from Earth observation Satellites

2 APPLICATION INSTALLATION

Follow the steps to install the application

1. Unzip the .zip file
2. Install the Matlab Runtime Environment. To do so, run the **MatlabRuntime.exe** and follow the instructions on the screen
3. Double click the URBANFLUXESBaselFluxes.exe to run the application for Basel
4. Double click the URBANFLUXESHeraklionFluxes.exe to run the application for Heraklion
5. Double click the URBANFLUXESLondonFluxes.exe to run the application for London

Allow access to the network if the applications asks for permission. This is because the application is using flux data from the URBANFLUXES server.

3 VISUALIZE THE FLUXES

Once running the application, you will see a fraction cover map of the study area. Figure 1 shows the three maps for London, Basel and Heraklion. These maps are interactive. By clicking a pixel in the map, the time series of the various fluxes appear in a plot.

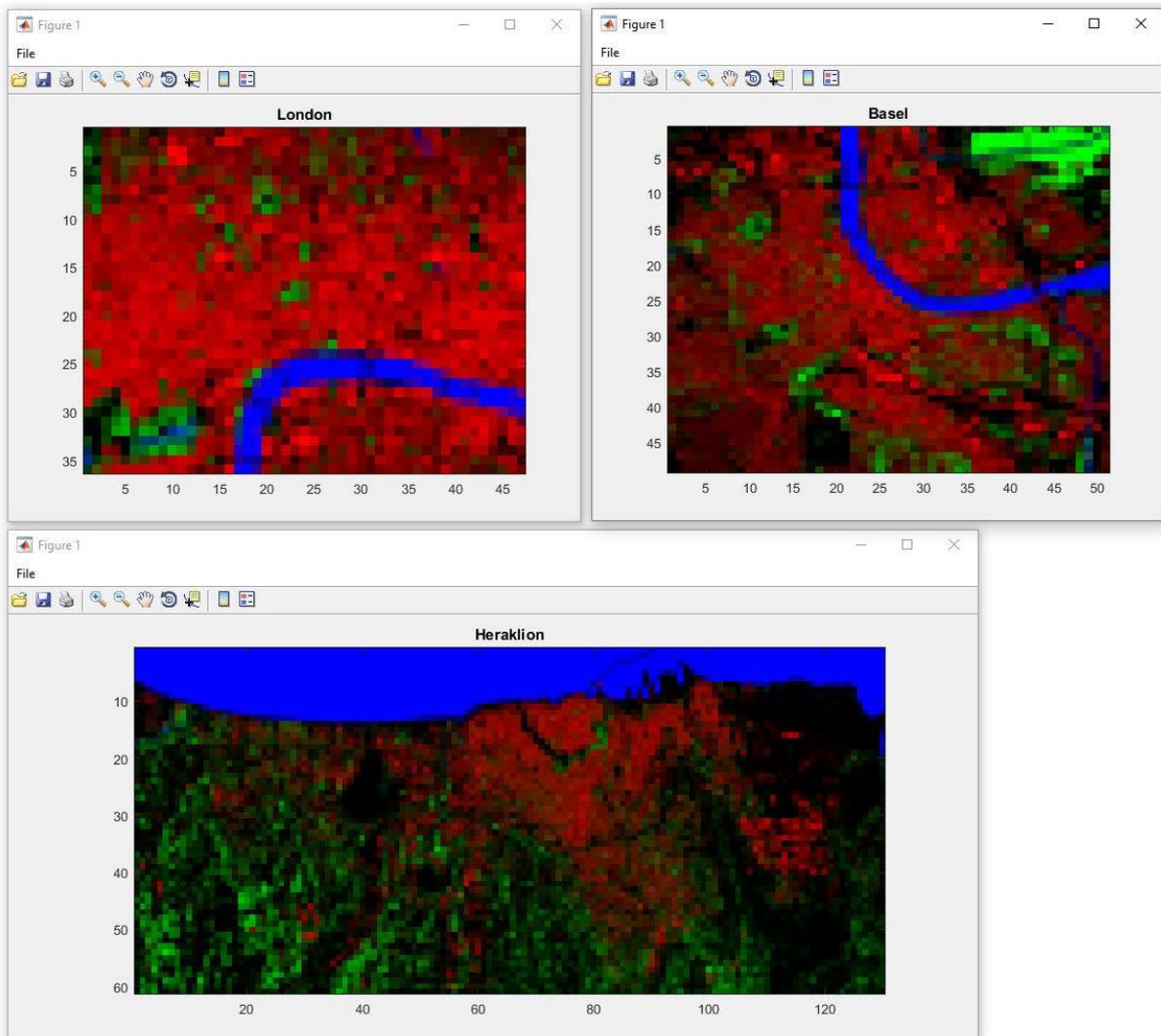


Figure 1. The interactive fraction maps of the three study areas. The RGB composition corresponds to building (R), evergreen vegetation (G) and water (B). The rest of fractions appear in black shades.

Figure 2 shows an example of fluxes time series for two areas in London, a vegetated area (top) and an area with large fraction of buildings (bottom).

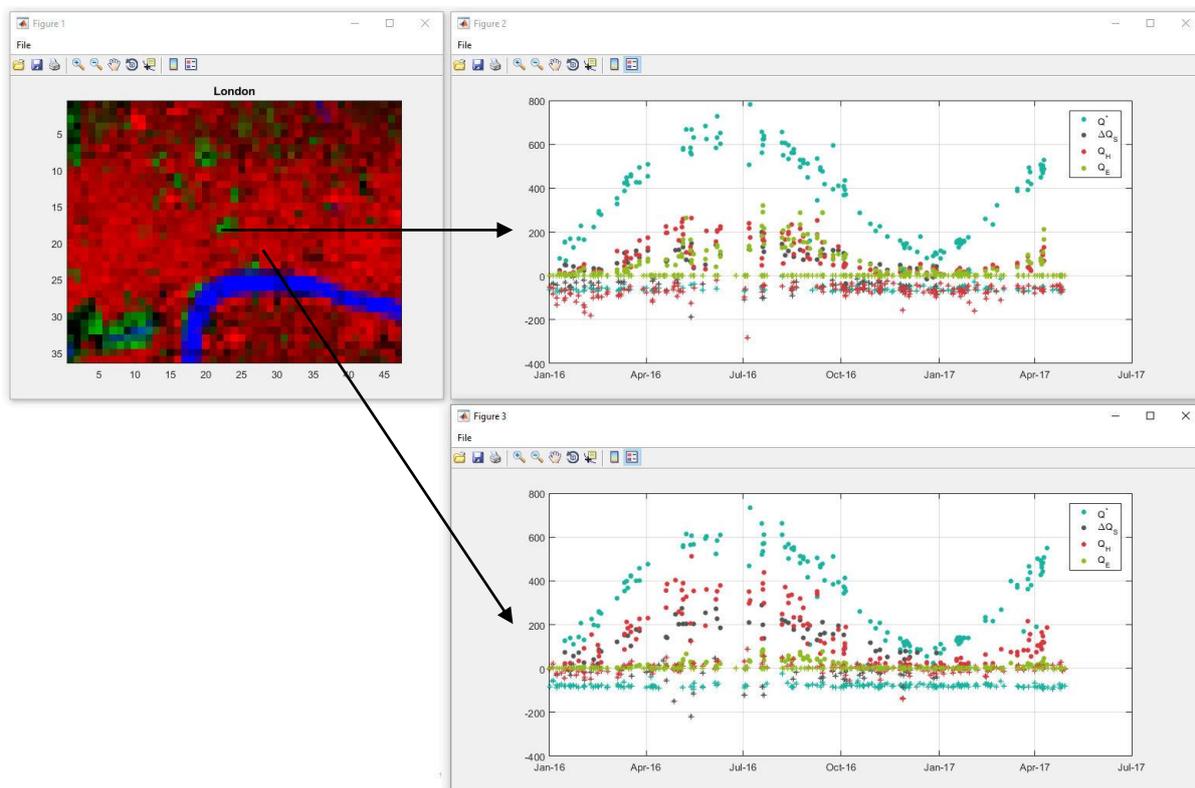


Figure 2. Example fluxes time series for two 100 m × 100 m pixels in the London study area. Daytime fluxes appear with circle (•) while nighttime fluxes appear with star (*).