



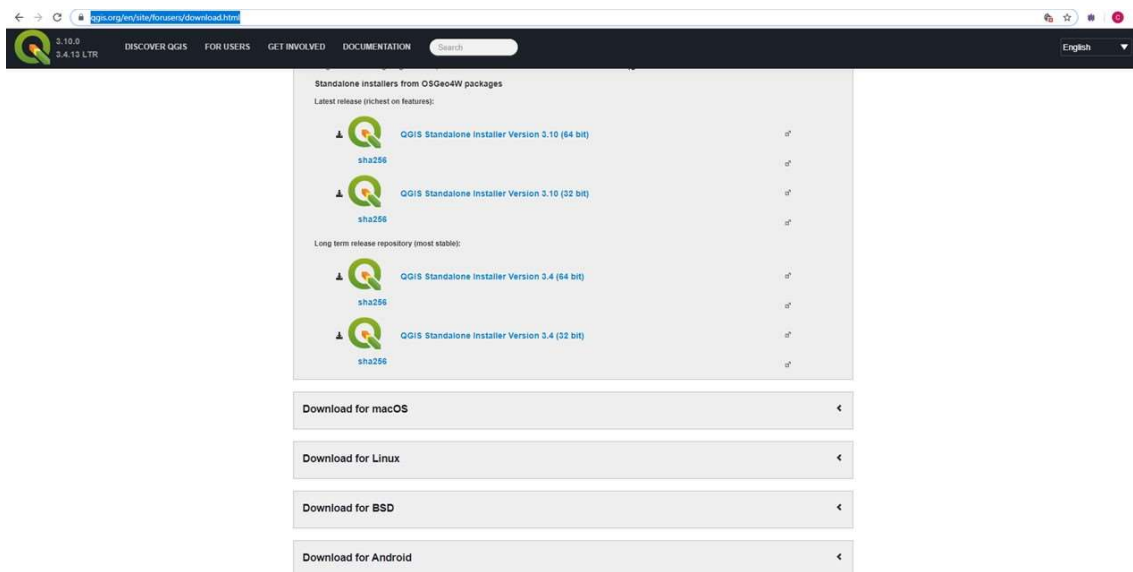
**Food and Agriculture
Organization of the
United Nations**



Software installation Guide for QGIS, ILWIS, R and R Studio

A) Installing QGIS

Step 1: Go to the site <https://qgis.org/en/site/forusers/download.html> and download the latest release depending on the computer OS. For example, for Windows 64 bit, download QGIS Standalone Installer Version 3.10 (64 bit).



Step 2: Launch the installer

Step 3: The software (QGIS Desktop with GRASS) is available in a QGIS folder

B) Installing ILWIS

Step 1: Go to the site <https://www.itc.nl/ilwis/download/ilwis33/> and download ILWIS3.3Academic.exe (19.3 MB) and ILWIS 3.31 Update (for ILWIS 3.3 only)

Step 2) Install ILWIS3.3Academic.exe (19.3 MB) first and do not start the software yet.

Step 3) Install ILWIS 3.31 Update (for ILWIS 3.3 only). During installation, it will request to locate ILWIS 3.3. Navigate to C:\Program Files (x86)\ILWIS 3.3 Academic and scroll down to choose the blue colored file Ilwis30.exe. Complete the installation

Step 4) Launch the software (whose icon should now be on the desktop).

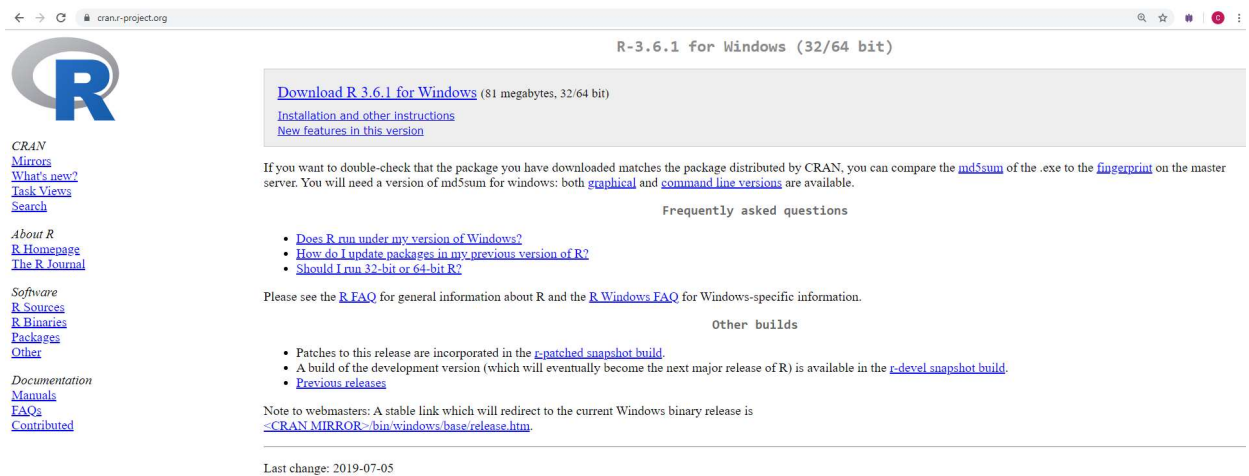
The screenshot shows the ILWIS 3.3 download page. The page has a header with the University of Twente and ITC logos. A left sidebar contains a search bar and a 'Download' section with links for 'ILWIS 3.3', 'ILWIS 3.31 Update', and 'Geodetic tools'. The main content area is titled 'ILWIS 3.31 Update' and contains the following sections:

- ILWIS 3.31 Update**: A paragraph explaining that ILWIS 3.31 is a service pack on ILWIS 3.3, adding new functionality and fixing bugs. Below this is a link: [ILWIS 3.31 update \(for ILWIS 3.3 only\)](#).
- ILWIS 3.3 Installation**: A section titled 'Single file download and installation' with instructions on how to download and install the ILWIS 3.3 self-extracting executable. Below this is a link: [ILWIS3.3Academic.exe \(19.3 MB\)](#).
- Multiple part download and installation**: A section explaining how to download 15 files in case of an unstable internet connection. Below this is a list of files:
 - [data1and2.exe \(1.07 MB\)](#)
 - [data3.cab \(1.44 MB\)](#)
 - [data4.cab \(1.44 MB\)](#)
 - [data5.cab \(1.44 MB\)](#)
 - [data6.cab \(1.44 MB\)](#)
 - [data7.cab \(1.44 MB\)](#)

A vertical 'FEEDBACK' button is located on the right side of the page.

C) Installing R

Step 1: Go to the site <https://cran.r-project.org/> and download the installer suitable for your operating system. For Windows, choosing Download R for Windows takes you to another site from which you choose *Install R for the first time*. Another window for download opens.



The screenshot shows the CRAN website for R 3.6.1 for Windows (32/64 bit). The page layout includes a sidebar on the left with links for CRAN, Mirrors, What's new?, Task Views, Search, About R, R Homepage, The R Journal, Software, R Sources, R Binaries, Packages, Other, Documentation, Manuals, FAQs, and Contributed. The main content area features a large 'R' logo, a download link for R 3.6.1 for Windows (81 megabytes, 32/64 bit), and links for installation and other instructions, and new features in this version. Below this, there is a section for frequently asked questions with links to 'Does R run under my version of Windows?', 'How do I update packages in my previous version of R?', and 'Should I run 32-bit or 64-bit R?'. A note mentions that patches to this release are incorporated in the 'r-patched snapshot build' and that a build of the development version is available in the 'r-devel snapshot build'. A footer note states that a stable link will redirect to the current Windows binary release is `~CRAN.MIRROR~/bin/windows/base/release.htm`. The last change is noted as 2019-07-05.

Step 2: Install the window installer, choose the language (preferably English), bit rate for your computer, and choose *No (Accept default)* for the start-up options.

D) Installing RStudio

Step 1: Go to the site <https://www.rstudio.com/>, click download Rstudio, the preferred version (like Free RStudio Desktop) and download.

Step 2. Launch the installer and install the software

E) Installing R package

Step 1: Start RStudio and click the Packages Icon in the bottom right corner, then click *Install*. A window for install Packages pops.

Step 2: If connected to internet, type the name of the package to install (for example sp)

Step 3: Click *Install* button and the package will be installed and ready for use

