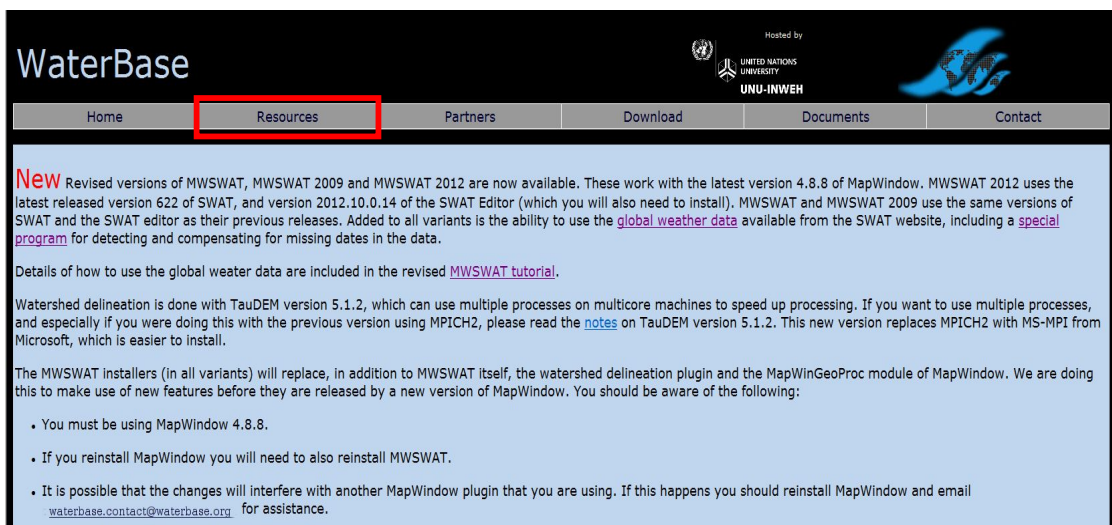


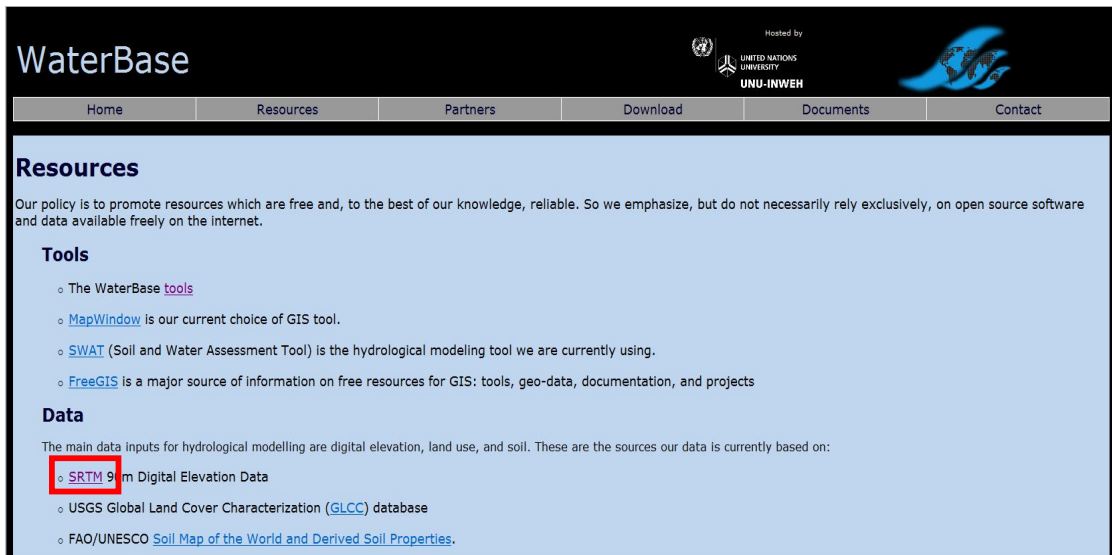
# WaterBase 활용매뉴얼

## ① 수치지형모델(DEM) - 공간해상도 90m

- 해외사업 대상국가 전국도를 대상으로 지형분석을 수행하기 위해 약 90m의 공간해상도(1화소 = 90m) 가지는 DEM 자료를 취득
  - 고해상도 DEM 사용시 좀 더 정확한 분석이 가능하나, 지형 분석시 많은 연산 시간이 소요되어 사용성이 떨어짐
- WaterBase에 링크된 CGIAR-CSI<sup>1)</sup> 홈페이지 접속(<http://srtm.csi.cgiar.org/>)



The screenshot shows the WaterBase website interface. The 'Resources' menu item is highlighted with a red box. The main content area contains a 'New' announcement about revised versions of MWSWAT (2009 and 2012) and details on how to use global weather data. It also lists installation requirements for MapWindow 4.8.8 and provides contact information for assistance.



The screenshot shows the 'Resources' page on the WaterBase website. The 'Resources' menu item is highlighted in the navigation bar. The page content includes a policy statement, a list of tools (MapWindow, SWAT, FreeGIS), and a list of data sources (SRTM 90m Digital Elevation Data, USGS GLCC database, FAO/UNESCO Soil Map). The 'SRTM 90m Digital Elevation Data' link is highlighted with a red box.

1) CGIAR-CSI : 지속적인 농업분야 개발을 위해 전세계의 GIS(Geographic Information Systems) 및 RS(Remote Sensing) 자료를 제공하기 위한 목적으로 CGIAR(the Consultative Group on International Agricultural Research) 국제연구센터에서 설립

- 전세계를 일정격자로 구분하고 Index를 지정하여 격자단위로 다운로드 받을 수 있도록 제공중
- 격자별 Index는 메인 홈페이지 하단에서 구글어스를 다운로드하여 프로그램을 설치하고 SRTM KML 파일을 열면 쉽게 확인 가능

The CGIAR Consortium for Spatial Information (CGIAR-CSI)  
Applying GeoSpatial Science for a Sustainable Future...

**SRTM 90m Digital Elevation Data**

Resampled SRTM data to 250m resolutions for the entire globe are available <https://hc.box.net/shared/tydaheour> (Password: ThanksCSI)

**UPDATE - VERSION 4:** THE SRTM DATA NOW AVAILABLE FROM THIS SITE HAS BEEN UPGRADED TO VERSION 4. THIS LATEST VERSION REPRESENTS A SIGNIFICANT IMPROVEMENT FROM PREVIOUS VERSIONS, USING NEW INTERPOLATION ALGORITHMS AND BETTER AUXILIARY DEMs. WE ARE CONFIDENT THIS IS NOW THE HIGHEST QUALITY SRTM DATASET AVAILABLE.

The CGIAR-CSI GeoPortal is able to provide SRTM 90m Digital Elevation Data for the entire world. The SRTM digital elevation data, produced by NASA originally, is a major breakthrough in digital mapping of the world, and provides a major advance in the accessibility of high quality elevation data for large portions of the tropics and other areas of the developing world. The SRTM digital elevation data provided on this site has been processed to fill data voids, and to facilitate its ease of use by a wide group of potential users. This data is provided in an effort to promote the use of geospatial science and applications for sustainable development and resource conservation in the developing world. Digital elevation models (DEM) for the entire globe, covering all of the countries of the world, are available for download on this site. The SRTM 90m DEMs have a resolution of 90m at the equator, and are provided in mosaic 5 deg x 5 deg files for easy download and use. All are produced from a seamless dataset to allow easy mosaicing. These are available in both ArcInfo ASCII and GeoTiff format to facilitate their ease of use in a variety of image processing and GIS applications. Data can be downloaded using a browser or accessed directly from the ftp site. If you find this digital elevation data useful please let us know at [csi@cgiar.org](mailto:csi@cgiar.org).

The NASA Shuttle Radar Topographic Mission (SRTM) The SRTM data is available as 3 arc second (approx. 90m) product, contains "no-data" holes where water or the Dr. Andy Jarvis and Edward Guavara of the CIAT Ag points, and the re-interpolation of these derived contours into a seamless near-global coverage (up to 60 degree GS and Remote Sensing software applications in add...

**Download SRTM KML file click here**  
**Download Google-Earth click here**

**MIRROR DOWNLOAD SITE:** Dr. Mark Muller (1 by 1 degree) files for users who have difficulty with the 5x5 degree tiles as well as 2D and 3D visualisation of the data.

**MIRROR DOWNLOAD SITE:** The SRTM V4 data is as of now available at a mirror site at the Joint Research Center in the Institute for Environmental Research. We would like to thank the colleagues in the Land Management and Natural Hazards Unit and the Global Environmental Monitoring unit for their support to provide this data.

**Google Link:** <http://www.ambiotek.com/topoview>

**Download SRTM KML file click here**  
**Download Google-Earth click here**

Google Earth

파일(F) 편집(E) 보기(V) 도구(T) 추가(A) 도움말(H)

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- SRTM4.1 SRTM based Topographic data

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- 바다
- 날씨
- 갤러리
- 지구촌 바로알기
- 자세히

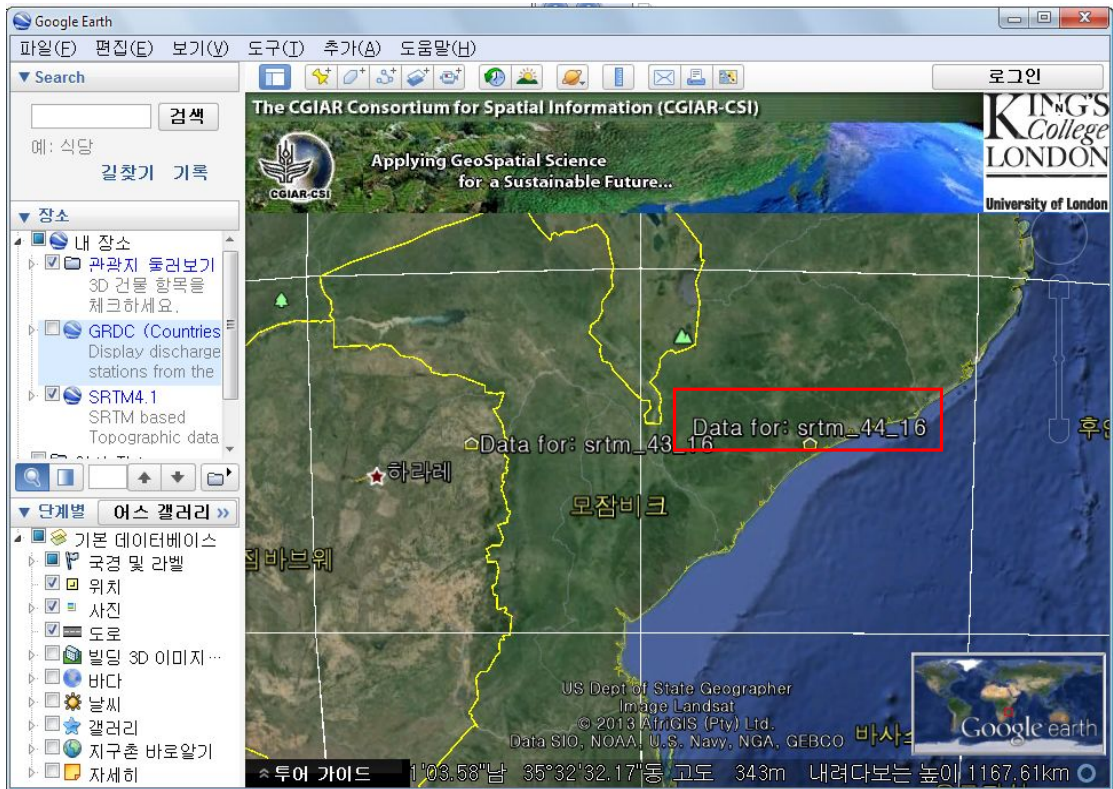
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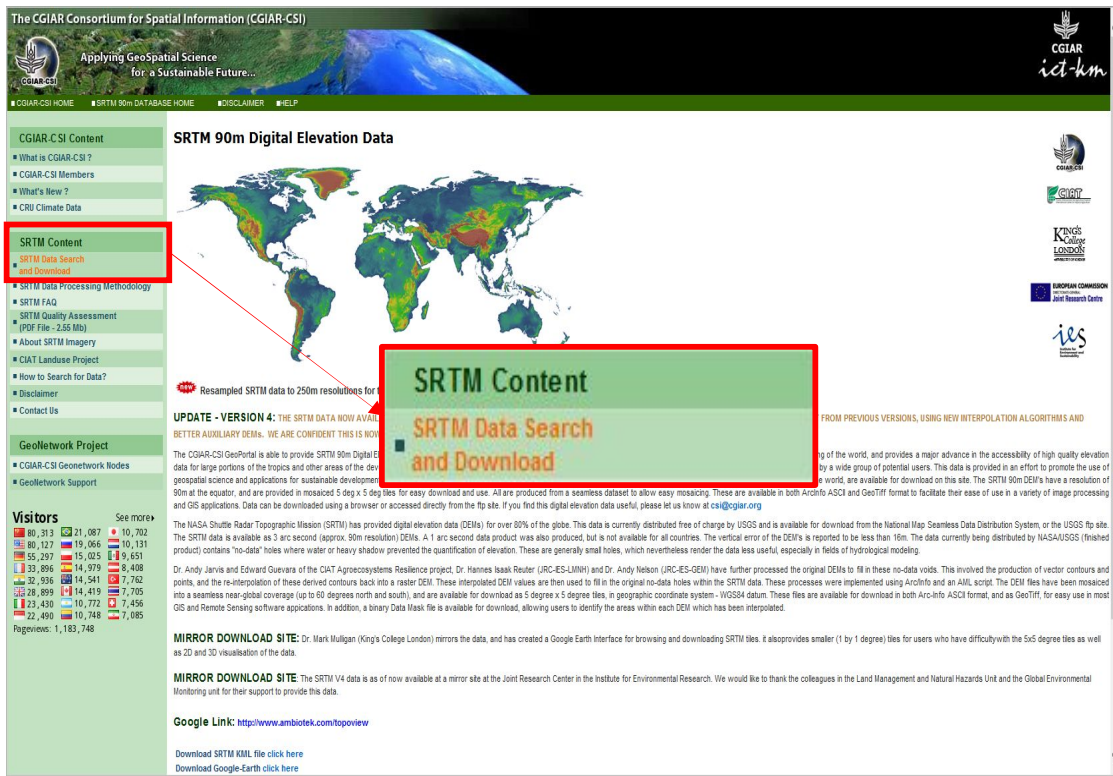
US Dept of State Geographer  
Image Landsat  
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Google earth

투어 가이드 '25.86°남 29°46'37.29"동 교도=-1037m 내려다보는 높이 9622.26km



- 좌측 메뉴에서 SRTM Content내에 SRTM Data Search and Download 클릭



- SRTM Data Selection Options에서 ① Select Server는 CGIAR-CSI를 선택하고, Data Selection method는 Multiple Selection 설정

- 하단의 지도에서 ② 해당국가의 DEM 격자를 클릭 후 ③ Click here to Begin Search 클릭

- 자료 확인 후 Data Download(FTP or HTTP) 클릭하여 저장

Description	Location	Image
Product : SRTM 90m DEM version 4 Data File Name : srtm_44_13.zip Mask File Name : srtm_mk_44_13.zip Latitude min: 5 S max: 0 S Longitude min: 35 E max: 40 E Center point : Latitude 2.50 S Longitude 37.50 E		

CSI Server : [Data Download \(FTP\)](#) [Data Download \(HTTP\)](#) [Data Mask Download \(FTP\)](#) [Data Mask Download \(HTTP\)](#) [^TOP^](#)

### 알면 유용한 Tip

○ 대상국가의 격자 Index 확인 후 FTP서버로 직접 접속하여 해당 Index 압축파일을 클릭하여 다운로드

- (FTP 접속 방법) 인터넷 주소창에 아래 주소 입력

ftp://srtm.csi.cgiar.org/SRTM\_v41/SRTM\_Data\_GeoTIFF/



## 2 토양도, 토지이용도, 하천유역도

○ 유역 및 유출분석을 위한 토양도, 토지이용도, 하천유역도 GIS 자료 취득

○ WaterBase 홈페이지 접속(<http://waterbase.org/>) 후 하단에 global data 클릭

and especially if you were doing this with the previous version using MPICH2, please read the [notes](#) on TauDEM version 5.1.2. This new version replaces MPICH2 with MS-MPI from Microsoft, which is easier to install.

The MWSWAT installers (in all variants) will replace, in addition to MWSWAT itself, the watershed delineation plugin and the MapWinGeoProc module of MapWindow. We are doing this to make use of new features before they are released by a new version of MapWindow. You should be aware of the following:

- You must be using MapWindow 4.8.8.
- If you reinstall MapWindow you will need to also reinstall MWSWAT.
- It is possible that the changes will interfere with another MapWindow plugin that you are using. If this happens you should reinstall MapWindow and email [waterbase.contact@waterbase.org](mailto:waterbase.contact@waterbase.org) for assistance.

**64-bit** Please install the 32-bit version of MapWindow: MWSWAT, MWSWAT 2009 and MWSWAT 2012 are currently incompatible with the 64-bit version. But note that the MWSWAT installers (all variants) install the 64-bit version of the TauDEM executables when installed on a 64-bit machine: they run faster than the 32-bit executables.

MWAGNPS will not run on a 64-bit machine.

### WaterBase

The WaterBase project is an ongoing project of the United Nations University hosted by UNU-INWEH. Its aim is to advance the practice of Integrated Water Resources Management (IWRM) in developing countries.

Predictive modelling and decision support for water management in developing countries are plagued with a number of related problems: lack of money, lack of expertise, inadequate training capacity, dependence on experts from other countries. At the same time water resources are under increasing pressure, and aquatic ecosystems are being damaged by people who lack the resources to explore the consequences of decisions before they are made.

The WaterBase project aims to provide

- A set of **tools** for modelling and decision support. Current tools are:
  - The MapWindow/SWAT interface tools [MWSWAT](#), [MWSWAT 2009](#), and [MWSWAT 2012](#)
  - The SWAT visualisation tools [SWATPlot](#) and [SWATGraph](#)
  - The MapWindow/AGNPS interface tool [MWAGNPS](#)
- A collection of IWRM **resources**: data, web sites, tools, literature, training material, etc. There is already a collection of [global data](#) available; elevation maps, soil, landuse, river basins, and weather.
- A community of **partners** who can provide advice, support, contribute to tools and resources.

*This web site is currently under development: it will grow as our partners and resources grow.*

- Landuse Maps에서 대륙별로 토지이용도 클릭 후 저장
- Soil Maps에서 대륙별로 토양도 클릭 후 저장

### Landuse Maps

Landuse maps for most of the world are available from WaterBase. They come in the form of zip files containing 1 or more tiles for each continent. They come in two resolutions, the originals at approximately 400 meters (at the equator) and the resampled at 800 meters. The first are a little more accurate but they take some time to load and manipulate in MapWindow. You may prefer to use the resampled ones at least while you are learning or experimenting.

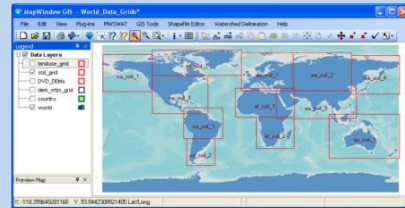
- [Africa \(original\)](#) [Africa \(resampled\)](#)
- [Australia/Pacific \(original\)](#) [Australia/Pacific \(resampled\)](#)
- [Europe/Asia \(original\)](#) [Europe/Asia \(resampled\)](#)
- [North America \(original\)](#) [North America \(resampled\)](#)
- [South America \(original\)](#) [South America \(resampled\)](#)



### Soil Maps

Soil maps for most of the world are available from WaterBase. They come in the form of zip files containing 1 or more tiles for each continent.

- [Africa](#)
- [Australia/Pacific](#)
- [Europe/Asia](#)
- [North America](#)
- [South America](#)



### Weather Data

- Global River Basins에서 대륙별로 하천 유역도 클릭 후 저장

### Global River Basins

Shape files for river basins across the world are available from WaterBase, divided into continents:

- [Africa](#)
- [Asia](#)
- [Australasia](#)
- [Europe](#)
- [North America](#)
- [South America](#)