

IWMI Global Map of Irrigated Area, 1999.

Version β -release



The Remote Sensing and GIS group at IWMI has released the Beta version of a map of the irrigated area of the world.

It has been produced using 20 years of data, at 10 day intervals, with 10 km pixel resolution (AVHRR), combined with: global 1km Spot Vegetation data (monthly); JERS 1 radar data (at 100m pixel scale), covering the main forest areas of South America and Central Africa; plus GeoCover 2000 data (nominally 15m, re-sampled to 150m). 628 unique land cover classes have been identified, and various innovative procedures and techniques have been used to classify them. Ground-truth data obtained in India, SE Asia, Africa and South America has been used to refine the classes. The Beta release map shows 53 irrigated classes, derived from the 628 classes in the master file.

This Beta release is being disseminated to obtain feedback on the spatial accuracy and definition of irrigated areas. At the moment, we present only the spatial distribution of irrigated areas. Every irrigated area pixel has different degree (% area) irrigated. In order to establish this, we are currently working on a "sub-pixel decomposition technique" which will precisely establish what percentage of a pixel is irrigated. The study will establish the precise areas irrigated season by season for the entire globe, taking each irrigated area class at a time. We have 2 unique methods under evaluation and are currently working to establish precise areas in version 1.0

In the meantime, we would like your reactions on what we have mapped so far. Can you;

- (i) tell us where there should be irrigated area that is not shown on the map?
- (ii) identify places where the map shows irrigated area, but to your knowledge, none exists?
- (iii) note where there are specific areas, where you can identify irrigated area and its crop pattern in your locality? and
- (iv) say if the class groupings make sense to you, and whether you agree with them in locations that you know well? If they are incorrect, what do you think they should be?

Please note, the emphasis on “version- β ” is to attract serious scientific comment, discussion and feedback. Our goal is to have a comprehensive release of products, documents, statistics, and maps before the end of May 2005.

The version 1.0 release will have: (a) perfected digital and hard-copy maps (e.g., irrigated areas of the world, rainfed agriculture, other land use/land cover), (b) characteristics of irrigated area classes (e.g., providing crop calendars, magnitude of biomass over time and space, spectral signature of each class and how they vary from month to month), (c) detailed documentation (d) online access to data and knowledge (products), and (e) animations of how irrigated areas have changed over last 20 years. So, we will have numerous irrigated area map products including IWMI estimates of irrigated area in USGS modified Anderson classification system.

However, “version- β ” is made simple by presenting only 2 products: (1) a 53-class global map of irrigated area (of which class 1-19 the pure irrigated, class 20-32 are rainfed with supplemental irrigation, and class 33 to 53 are other land use/land cover with some irrigation), (2) a 628-class disaggregated generic IWMI irrigated and land use/land cover (acronym: GMILA or global map of irrigated and land use/land cover area) map of the world. For those seeking great detail, at global scale, this 628-class map is the map to use. This is also the map that will be used to refine any classes in improving from “version- β ” to version 1.0. This is the base map from which we will do all aggregation of classes (such as the 53 class map).

There are many ways you can make comments and evaluations and four main suggested ways are:

- (a) **non-RS/GIS software package users:** download the 53-class digital map in .jpeg or .tiff format from [IWMIDSP](#) ([CTRL + click to follow link](#)), look at the map and tell us what you think. Please note this has limited scope for comments since you may not see all the details;
- (b) **RS/GIS software package users:** download the 53-class digital map in .img (ERDAS Imagine format). Here you can zoom to any level and make comments;
- (c) **significant contributor:** We appreciate it greatly if you can share your knowledge of areas in the World you are most familiar with. Just stop by RS/GIS lab., or have an email discussion with Chandrashekhar Biradar (c.biradar@cgiar.org), Prasad Thenkabail (p.thenkabail@cgiar.org), or Hugh

Turrall (h.turrall@cgiar.org) and provide your comments. Chandru will put all your comments into a separate database and will address at once, and

- (d) **major contributor:** if you have site specific ground truth data on irrigated and non-irrigated areas, we hope you can share the data with us. We would appreciate a geo-reference, approximate area and annual cropping pattern, as well as a digital photo, if available. We will give you due acknowledgements in the final products.

We are very excited about this project and we hope you share that with us. Thanks

Best regards

Prasad Thenkabail, Chandrashekhar Biradar, Mitch Schull and Hugh Turrall

Online link to Erdas imagine format images, posters and presentations...

Data download...

53-class Global map of irrigated area

<http://www.iwmidsp.org/iwmi/SearchData/preview.asp?xPath=/dsp2/rs-gis-data/Global/02-gmila-iwmi-generic-classes-53-beta/ReadMe/>

628-class disaggregated generic-IWMI irrigated and land use/land cover (GMILA or global map of irrigated and land use/land cover area)

<http://www.iwmidsp.org/iwmi/SearchData/preview.asp?xPath=/dsp2/rs-gis-data/Global/02-gmila-iwmi-generic-classes-628-beta/ReadMe/>

Posters...

High resolution 53-class Global map of irrigated area

http://www.iwmidsp.org/iwmi/info/posters_display.asp?postersPATH=\\dsp\Share\web-materials\posters\JPG

Medium resolution 53-class Global map of irrigated area

<http://www.iwmidsp.org/dsp/web-materials/posters/JPG/poster-15-iwmi-IRRIGATED-53classes-medium-res-5415x2835.jpg>

Low resolution 53-class Global map of irrigated area

<http://www.iwmidsp.org/dsp/web-materials/posters/JPG/poster-16-iwmi-IRRIGATED-53classes-low-res-2707x1417.jpg>

Presentations...

Concept

<http://www.iwmidsp.org/iwmi/info/presentation.asp>

Maps http://www.iwmidsp.org/iwmi/info/posters_display.asp?postersPATH=\\dsp\Share\web-materials\posters\PPT



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