
Subject: landscan data

Posted by [matthias.demuzere](#) on Sun, 15 Jan 2006 15:45:22 GMT

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Dear all,

Is there anyone that has experience in reading the Landscan data in IDL? The LandScanTM Dataset comprises a worldwide population database compiled on a 30" X 30" latitude/longitude grid. The LandScan Dataset files are available in an ESRI raster binary format.

Now I have all the data, but I really don't succeed in reading in this dataset. The data includes also a header file with the following information:

```
ncols      43200
nrows      20880
xllcorner  -180
yllcorner  -90
cellsize   0.0083333333333333
NODATA_value -9999
byteorder  LSBFIRST
```

and a .prj file with following contents:

Projection GEOGRAPHIC

Datum WGS84

Zunits NO

Units DD

Spheroid WGS84

Xshift 0.0000000000

Yshift 0.0000000000

Parameters

Is their anybody who could help me with this problem?

Thanks,
Matthias

Subject: Re: landscan data

Posted by [Ben Panter](#) on Tue, 17 Jan 2006 11:18:48 GMT

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matthias.demuzere@geo.kuleuven.be wrote:

> Thanks for the reply David.

>

> I tried again to read in the whole dataset with 43200x20880 fields on

> another PC, but that didn't work either. So I probably have to look to

> see if I can expand my memory capacity....

Wow!

That's one big array. I have a 2Gb Linux machine here, and can't get a 43200x20880 float array to fit in memory. I can do it with an integer array, however it's not possible to do much with it afterwards.

You might want to go down the problem-splitting route after all.

cheers, and best of luck,

Ben

--

Ben Panter, Garching, Germany.

Email false, <http://www.benpanter.co.uk>

or you could try ben at ^^^^^^^^^^^^^^^

Subject: Re: landscan data

Posted by [Paolo Grigis](#) on Tue, 17 Jan 2006 13:09:27 GMT

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matthias.demuzere@geo.kuleuven.be wrote:

> Thanks for the reply David.

>

> I tried again to read in the whole dataset with 43200x20880 fields on

> another PC, but that didn't work either. So I probably have to look to

> see if I can expand my memory capacity....

The problem with the 32-bit versions of IDL is that no matter how much *memory* you have in the system, you cannot allocate more than 2GB for *one* array (the reason is likely due to the fact that internal array indexing is done with a long signed integer, ranging up to $2^{31}-1$).

So the maximal numbers of *elements* in one array is approximately $2^{31}/\text{size}$, where size is the byte-size of your data type (1 for byte, 2 for int, 4 for longs etc.).

Possible solutions: break up the array in smaller chunks or switch to 64-bit IDL versions.

Ciao,
Paolo

>
> Cheers,
> Matthias
>
