
Subject: Re: How to extract pixel values from a GeoTIFF using an Esri Shapefile
Posted by [David Fanning](#) on Thu, 23 Dec 2010 21:34:49 GMT
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Paul Magdon writes:

```
> ;Convert SHP to ROI object
> myroi = OBJ_NEW( 'IDLanROI', (*ent.vertices)[0,*] ,(*ent.vertices)
> [1,*] )
>
> ;Apply ComputMask method
> maskResult = myroi -> ComputeMask(DIMENSIONS = [s[0],
> s[1]],MASK_RULE=2)
>
> ; Here starts the problem; I have a 5000x5000 raster (img) and the
> image coordinate system start with [0,0] but the myroi coordinates are
> much higher (eg 227984.00 ; 991472.00) Thus everything is masked.
> ;There is a keyword LOCATION for ComputeMask but I am not sure how to
> use it and where to get the right values for it
```

I have to admit I have never done this before. (Although I would like to try if you could make the image and shape file available to me.) But, it seems to me that when you create the ROI, you will have to give the ROI the range of the image to make this work.

```
mapCoord -> GetProperty, XRANGE=xr, YRANGE=yr
myroi = OBJ_NEW( 'IDLanROI', (*ent.vertices)[0,*] , $
  (*ent.vertices)[1,*], ROI_XRANGE=xr, $
  ROI_YRANGE=yr )
```

That way, the ROI and the image are mapped to the same coordinate system.

I'm curious to know if that works. :-)

Cheers,

David

P.S. The next book I am thinking of writing is a small book about map projections in IDL. The more examples I have like this, the better. I have to write this book before I forget everything I've learned in the past four years. :-)

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: How to extract pixel values from a GeoTIFF using an Esri Shapefile
Posted by [Paul Magdon](#) on Sat, 25 Dec 2010 13:32:18 GMT

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On 23 Dez., 22:34, David Fanning <n...@dfanning.com> wrote:

```
> Paul Magdon writes:
>> ;Convert SHP to ROI object
>> myroi = OBJ_NEW( 'IDLanROI',( *ent.vertices)[0,*] ,(*ent.vertices)
>> [1,*] )
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>> use it and where to get the right values for it
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> I have to admit I have never done this before. (Although
> I would like to try if you could make the image and
> shape file available to me.) But, it seems to me
> that when you create the ROI, you will have to give
> the ROI the range of the image to make this work.
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> mapCoord -> GetProperty, XRANGE=xr, YRANGE=yr
> myroi = OBJ_NEW( 'IDLanROI',( *ent.vertices)[0,*] ,$
>   (*ent.vertices)[1,*], ROI_XRANGE=xr, $
>   ROI_YRANGE=yr )
>
> That way, the ROI and the image are mapped to the same
> coordinate system.
>
> I'm curious to know if that works. :-)
```

>
> Cheers,
>
> David
>
> P.S. The next book I am thinking of writing is a small
> book about map projections in IDL. The more examples I

> have like this, the better. I have to write this book
> before I forget everything I've learned in the past four
> years. :-)
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> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
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> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Dear David,
sorry for my late reply but as we have Christmas there are other
duties as well :) . By the way: merry Christmas!
I tried your suggestion to use ROI_XRANGE and got the following Error:
% Keyword ROI_XRANGE not allowed in call to: OBJ_NEW
As far as I understand the IDL documentation ROI_XRANGE can not be
set for an IDLanROI object.
Today I will try to use the LOCATION keyword or find an other option
to transfer the UTM coordinates into proper pixel coordinates.
I will send you a shp + corresponding raster as soon as possible.
Cheers,
Paul

Subject: Re: How to extract pixel values from a GeoTIFF using an Esri Shapefile
Posted by [David Fanning](#) on Sat, 25 Dec 2010 15:34:06 GMT
[View Forum Message](#) <> [Reply to Message](#)

Paul Magdon writes:

> I tried your suggestion to use ROI_XRANGE and got the following Error:
> % Keyword ROI_XRANGE not allowed in call to: OBJ_NEW
> As far as I understand the IDL documentation ROI_XRANGE can not be
> set for an IDLanROI object.

Ah, right, I didn't notice that. Sorry. :-)

OK, then I suppose you have to convert the pixel
locations into the same units as the ROI (probably
lat/lon). If your image coordinates are in projected
XY space, then you put them into lat/lon space with
Map_Proj_Inverse. Map_Proj_Forward goes the other way.

I tend to *always* work in projection XY space, so
I would probably convert the shape file to these
coordinates before I stored them in the ROI.

Anyway, if you send me the files, I'll write up an example for you, although I can't promise to be quick about it, unfortunately. Too much going on here, and money is running out faster than my fingers can type. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Subject: Re: How to extract pixel values from a GeoTIFF using an Esri Shapefile
Posted by [Paul Magdon](#) on Sat, 01 Jan 2011 18:24:38 GMT

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On Dec 25 2010, 4:34 pm, David Fanning <n...@dfanning.com> wrote:

> Paul Magdon writes:

>> I tried your suggestion to use ROI_XRANGE and got the following Error:

>> % Keyword ROI_XRANGE not allowed in call to: OBJ_NEW

>> As far as I understand the IDL documentation ROI_XRANGE can not be

>> set for an IDLanROI object.

>

> Ah, right, I didn't notice that. Sorry. :-)

>

> OK, then I suppose you have to convert the pixel

> locations into the same units as the ROI (probably

> lat/lon). If your image coordinates are in projected

> XY space, then you put them into lat/lon space with

> Map_Proj_Inverse. Map_Proj_Forward goes the other way.

>

> I tend to *always* work in projection XY space, so

> I would probably convert the shape file to these

> coordinates before I stored them in the ROI.

>

> Anyway, if you send me the files, I'll write up an

> example for you, although I can't promise to be

> quick about it, unfortunately. Too much going on

> here, and money is running out faster than my

> fingers can type. :-)

>

> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi,
In my case both the shape and the raster are in UTM projection which
is already a Cartesian projection. So why should I convert them into a
lat/long projection?
@David: I send send you the example files or is there an option to
'post' them here?
Cheers Paul

Subject: Re: How to extract pixel values from a GeoTIFF using an Esri Shapefile
Posted by [David Fanning](#) on Sat, 01 Jan 2011 18:32:56 GMT
[View Forum Message](#) <> [Reply to Message](#)

Paul Magdon writes:

> In my case both the shape and the raster are in UTM projection which
> is already a Cartesian projection. So why should I convert them into a
> lat/long projection?

Right. Stay away from lat/lon projections if you want
things to make sense. :-)

> @David: I send send you the example files or is there an option to
> 'post' them here?

You can just send them to me or put them in a place
where I can pick them up. I am reluctant to publish
my e-mail on a newsgroup, since my spam will increase
10-fold. But my name is David and I live at the same
place as Coyote. :-)

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: How to extract pixel values from a GeoTIFF using an Esri Shapefile
Posted by [Paul Magdon](#) on Mon, 03 Jan 2011 12:30:44 GMT
[View Forum Message](#) <> [Reply to Message](#)

On 1 Jan., 19:32, David Fanning <n...@dfanning.com> wrote:

> Paul Magdon writes:
>> In my case both the shape and the raster are in UTM projection which
>> is already a Cartesian projection. So why should I convert them into a
>> lat/long projection?
>
> Right. Stay away from lat/lon projections if you want
> things to make sense. :-)
>
>> @David: I send send you the example files or is there an option to
>> 'post' them here?
>
> You can just send them to me or put them in a place
> where I can pick them up. I am reluctant to publish
> my e-mail on a newsgroup, since my spam will increase
> 10-fold. But my name is David and I live at the same
> place as Coyote. :-)
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi David,
did you received my mail with the test dataset? I don't want to
stress you it's just that I am not sure if I used the right E-mail
adress :)
Cheers
Paul
