How to convert to GeoTIFF for Shikisai products

- The Shikisai products can be converted to GeoTIFF, by the GDAL command and parameter according to image type. Please refer the following for example.

D

Appendix : Projection of SHIKISAI products

① Conversion of L2 IWPR (Chlorophyll-a concentration etc.)(1/4) (Sensor Hardware Coordinate)

How to convert to GeoTIFF format from the Shikisai L2 scene products.

1） Get the dataset name by GDALINFO

gdalinfo GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5

[Image file name.h5]

```
Driver: HDF5/Hierarchical Data Format Release 5
Files: GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5
Size is 512, 512
.
.
Subdatasets:
 SUBDATASET_1_NAME=HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Geometry_data/Latitude        a.
 SUBDATASET_1_DESC=[783x501] //Geometry_data/Latitude (32-bit floating-point)
 SUBDATASET_2_NAME=HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Geometry_data/Longitude       b.
 SUBDATASET_2_DESC=[783x501] //Geometry_data/Longitude (32-bit floating-point)
 .
 .
 SUBDATASET_8_NAME=HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Image_data/CDOM
 SUBDATASET_8_DESC=[7820x5000] //Image_data/CDOM (16-bit unsigned integer)
 SUBDATASET_9_NAME=HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Image_data/CHLA        c.
 SUBDATASET_9_DESC=[7820x5000] //Image_data/CHLA (16-bit unsigned integer)
 SUBDATASET_10_NAME=HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Image_data/QA_flag
 SUBDATASET_10_DESC=[7820x5000] //Image_data/QA_flag (16-bit unsigned integer)
 SUBDATASET_11_NAME=HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Image_data/TSM
 SUBDATASET_11_DESC=[7820x5000] //Image_data/TSM (16-bit unsigned integer)
```

2） Convert to VRT (GDAL Virtual Format), ASCII Gridded XYZ by GDAL_TRANSLATE

Create an ASCII Gridded XYZ files for latitude and longitude, and a VRT file for chlorophyll-a concentration(CHLA).

gdal_translate -of xyz HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Geometry_data/Latitude out_latitude.xyz

a. [Arbitrary file name.xyz]

gdal_translate -of xyz HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Geometry_data/Longitude out_longitude.xyz

b. [Arbitrary file name.xyz]

gdal_translate -of VRT –a_srs EPSG:4326 HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Image_data/CHLA out_CHLA.vrt

c. [Arbitrary file name.vrt]

D

① Conversion of L2 IWPR (Chlorophyll-a concentration etc.)(2/4) (Sensor Hardware Coordinate)

3) Edit the ASCII Gridded XYZ

a) Combine latitude and longitude files into one file using Excel etc.

longitude file
(ASCII Gridded XYZ)

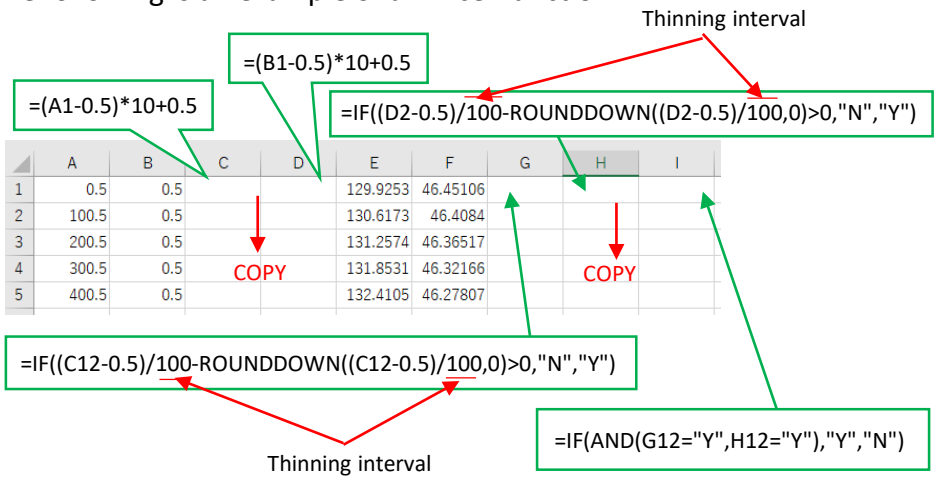
	A	B	C	D
1	0.5	0.5	118.0549	
2	1.5	0.5	118.1267	
3	2.5	0.5	118.1979	
4	3.5	0.5	118.2686	
5	4.5	0.5	118.3386	

latitude file
(ASCII Gridded XYZ)

	A	B	C	D
1	0.5	0.5	46.45106	
2	1.5	0.5	46.44683	
3	2.5	0.5	46.44259	
4	3.5	0.5	46.43835	
5	4.5	0.5	46.43409	

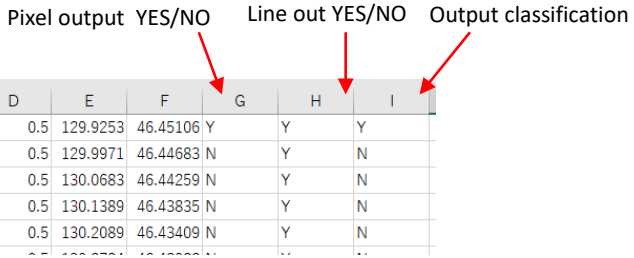
	A	B	C	D	E
1	0.5	0.5	118.0549	46.45106	
2	1.5	0.5	118.1267	46.44683	
3	2.5	0.5	118.1979	46.44259	
4	3.5	0.5	118.2686	46.43835	
5	4.5	0.5	118.3386	46.43409	

b) Create thinning data for GCP points.
The following is an example of an Excel function.



	A	B	C	D	E	F	G	H	I
1	0.5	0.5			129.9253	46.45106			
2	100.5	0.5			130.6173	46.4084			
3	200.5	0.5			131.2574	46.36517			
4	300.5	0.5			131.8531	46.32166			
5	400.5	0.5			132.4105	46.27807			

The following is an example of an Excel function.



	A	B	C	D	E	F	G	H	I
1	0.5	0.5	0.5	0.5	129.9253	46.45106	Y	Y	Y
2	1.5	0.5	10.5	0.5	129.9971	46.44683	N	Y	N
3	2.5	0.5	20.5	0.5	130.0683	46.44259	N	Y	N
4	3.5	0.5	30.5	0.5	130.1389	46.43835	N	Y	N
5	4.5	0.5	40.5	0.5	130.2089	46.43409	N	Y	N

Copy the filtered values from column C to column F on a separate sheet.

	A	B	C	D
1	0.5	0.5	129.9253	46.45106
2	100.5	0.5	130.6173	46.4084
3	200.5	0.5	131.2574	46.36517
4	300.5	0.5	131.8531	46.32166

Use the filter function to set the value in column I to "Y" only.

	A	B	C	D	E	F	G	H	I
1	0	0	0	0	129.92	46.451	Y	Y	Y
11	10.5	0.5	100.5	0.5	130.6173	46.4084	Y	Y	Y
21	20.5	0.5	200.5	0.5	131.2574	46.36517	Y	Y	Y
31	30.5	0.5	300.5	0.5	131.8531	46.32166	Y	Y	Y
41	40.5	0.5	400.5	0.5	132.4105	46.27807	Y	Y	Y

D

① Conversion of L2 IWPR (Chlorophyll-a concentration etc.)(3/4) (Sensor Hardware Coordinate)

3) Edit the ASCII Gridded XYZ

c) Create GCP list for VRT file

Add the following columns A, B, D, F, H, and J to the thinned out data of b) and save it as a CSV file.

	A	B	C	D	E	F	G	H	I	J
1	<GCP Id=""	Pixel=	0.5	Line=	0.5	X=	129.9253235	Y=	46.45106125	/>
2	<GCP Id=""	Pixel=	100.5	Line=	0.5	X=	130.6173401	Y=	46.40840149	/>
3	<GCP Id=""	Pixel=	200.5	Line=	0.5	X=	131.2574005	Y=	46.36516571	/>
4	<GCP Id=""	Pixel=	300.5	Line=	0.5	X=	131.8530731	Y=	46.32165527	/>
5	<GCP Id=""	Pixel=	400.5	Line=	0.5	X=	132.4105225	Y=	46.27806854	/>

Column A : <GCP Id=“”
Column B : Pixel=
Column D : Line=
Column F : X=
Column H : Y=
Column I : />

Open the GCP list saved as a csv file with a test editor such as Notepad.

```
"<GCP Id="""",Pixel=,0.5,Line=,0.5,X=,129.9253235,Y=,46.45106125,/>
"<GCP Id="""",Pixel=,100.5,Line=,0.5,X=,130.6173401,Y=,46.40840149,/>
"<GCP Id="""",Pixel=,200.5,Line=,0.5,X=,131.2574005,Y=,46.36516571,/>
"<GCP Id="""",Pixel=,300.5,Line=,0.5,X=,131.8530731,Y=,46.32165527,/>
"<GCP Id="""",Pixel=,400.5,Line=,0.5,X=,132.4105225,Y=,46.27806854,/>
"<GCP Id="""",Pixel=,500.5,Line=,0.5,X=,132.9347992,Y=,46.23453522,/>
"<GCP Id="""",Pixel=,600.5,Line=,0.5,X=,133.4301453,Y=,46.19113541,/>
```

Convert the following item with the “Replace” function.

* [“<] → [<]
* [“”“”“,] → [””□] □ : space
* [=,] → [=“]
* [,] → [”□]

The GCP list is complete.

```
<GCP Id="" Pixel="0.5" Line="0.5" X="129.9253235" Y="46.45106125" />
<GCP Id="" Pixel="100.5" Line="0.5" X="130.6173401" Y="46.40840149" />
<GCP Id="" Pixel="200.5" Line="0.5" X="131.2574005" Y="46.36516571" />
<GCP Id="" Pixel="300.5" Line="0.5" X="131.8530731" Y="46.32165527" />
<GCP Id="" Pixel="400.5" Line="0.5" X="132.4105225" Y="46.27806854" />
<GCP Id="" Pixel="500.5" Line="0.5" X="132.9347992" Y="46.23453522" />
<GCP Id="" Pixel="600.5" Line="0.5" X="133.4301453" Y="46.19113541" />
```

D

① Conversion of L2 IWPR (Chlorophyll-a concentration etc.)(4/4) (Sensor Hardware Coordinate)

4) Edit the VRT file

After add the geolocational data (Latitude and Longitude) to the CHLA VRT file, save by overwriting.

< before>

Insert here

```
<MDI key="Level_1_attributes_Operation_mode">OBD</MDI>
<MDI key="Level_1_attributes_Radiometric_calibration">Original</MDI>
<MDI key="Processing_attributes_Ancillary_data_information">etopo1_be
<MDI key="Processing_attributes_Contact_point">JAXA/Earth Observation
<MDI key="Processing_attributes_Input_files">GC1SG1_202010290136R0531
<MDI key="Processing_attributes_Processing_organization">JAXA/GCOM-C
<MDI key="Processing_attributes_Processing_result">Good</MDI>
<MDI key="Processing_attributes_Processing_UT">20201029 17:55:46</MDI
</Metadata>
<VRTRasterBand dataType="UInt16" band="1">
  <Metadata>
    <MDI key="Image_data_CHLA_Data_description">Chllorophyll-a concentr
    <MDI key="Image_data_CHLA_Dim0">Line grids</MDI>
    <MDI key="Image_data_CHLA_Dim1">Pixel grids</MDI>
    <MDI key="Image_data_CHLA_Error_DN">65535 </MDI>
    <MDI key="Image_data_CHLA_Mask_for_statistics">479 </MDI>
```

< after >

Add within the frame

Fixed value

1) b.

1) a.

Add <GCPList>, </GCPList> tag

3) c.

```
  <MDI key="Processing_attributes_Processing_result">Good</MDI>
  <MDI key="Processing_attributes_Processing_UT">20201029 17:55:46</MDI>
</Metadata>
<Metadata domain="GEOLOCATION">
    <MDI key="PIXEL_OFFSET">0</MDI>
    <MDI key="LINE_OFFSET">0</MDI>
    <MDI key="PIXEL_STEP">10</MDI>
    <MDI key="LINE_STEP">10</MDI>
    <MDI key="X_DATASET">HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Geometry_data/Longitude</MDI>
    <MDI key="X_BAND">1</MDI>
    <MDI key="Y_DATASET">HDF5:"GC1SG1_202010290136R05310_L2SG_IWPRQ_2000.h5"://Geometry_data/Latitude</MDI>
    <MDI key="Y_BAND">1</MDI>
</Metadata>
<GCPList>
  <GCP Id="" Pixel="0.5" Line="0.5" X="129.9253235" Y="46.45106125" />
  <GCP Id="" Pixel="100.5" Line="0.5" X="130.6173401" Y="46.40840149" />
  <GCP Id="" Pixel="200.5" Line="0.5" X="131.2574005" Y="46.36516571" />
                :
                :
<GCP Id="" Pixel="4900.5" Line="7800.5" X="142.4193878" Y="27.21240425" />
<GCP Id="" Pixel="5000.5" Line="7800.5" X="142.9401398" Y="27.10183144" />
</GCPList>
<VRTRasterBand dataType="UInt16" band="1">
  <Metadata>
    <MDI key="Image_data_CHLA_Data_description">Chllorophyll-a concentration (CHLA) = DN * Slope + Offset
    <MDI key="Image_data_CHLA_Dim0">Line grids</MDI>
    <MDI key="Image_data_CHLA_Dim1">Pixel grids</MDI>
```

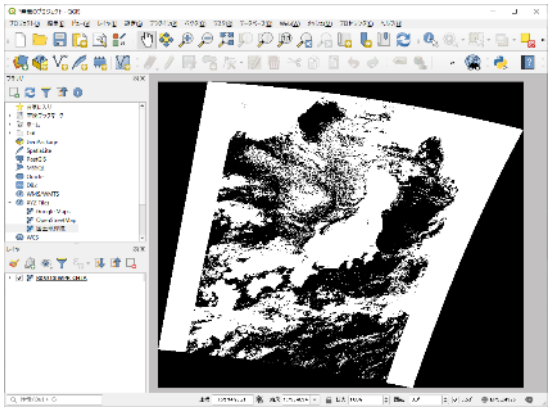
5) GeoTIFF conversion and reprojection by GDALWARP

By the GDALWARP command, The CHLA VRT file convert to GeoTIFF format and reproject to EPSG:4326(Geodetic system: WGS84, Ellipsoidal model: WGS84, Projected coordinate system: latitude and longitude).

```
gdalwarp –of Gtiff -t_srs EPSG:4326 –tps out_CHLA.vrt CHLA_output.tif
```

[the file name (edited by 3)).vrt] [Arbitrary file name.tif]

< example viewing by QGIS >



D

② Conversion of L2 SST (Sea surface Temperature) image by HDFView (1/3)) (Sensor Hardware Coordinate)

How to convert to GeoTIFF format from the image data(PNG) output by HDFView.

1） Get the dataset name by GDALINFO

Get the latitude and longitude data set name of the original data for PNG conversion image.

gdalinfo GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5

File name of original image

```
Driver: HDF5/Hierarchical Data Format Release 5
Files: GC1SG1_202006080125H04910_L2SG_SSTDQ_1002.h5
Size is 512, 512
 .
 .
Subdatasets:
 SUBDATASET_1_NAME=HDF5:"GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5"://Geometry_data/Latitude      a.
 SUBDATASET_1_DESC=[783x501] //Geometry_data/Latitude (32-bit floating-point)
 SUBDATASET_2_NAME=HDF5:"GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5"://Geometry_data/Longitude     b.
 SUBDATASET_2_DESC=[783x501] //Geometry_data/Longitude (32-bit floating-point)
 .
 .
 SUBDATASET_8_NAME=HDF5:"GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5"://Image_data/SST
 SUBDATASET_8_DESC=[7820x5000] //Image_data/SST (16-bit unsigned integer)
```

Create VRT files for latitude, longitude and SST image data (PNG) output by HDFView.

2） Convert to VRT (GDAL Virtual Format), ASCII Gridded XYZ by GDAL_TRANSLATE

Create an ASCII Gridded XYZ files for latitude and longitude, and a VRT file for SST image data (PNG) output by HDFView.

gdal_translate -of xyz HDF5:"GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5" ://Geometry_data/Latitude out_latitude.xyz

a.

[Arbitrary file name.xyz]

gdal_translate -of xyz HDF5:"GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5" ://Geometry_data/Longitude out_longitude.xyz

b.

[Arbitrary file name.xyz]

gdal_translate -of SST.png out_SST.vrt

[Arbitrary file name.vrt]

PNG image of the same size created by HDFView

D

② Conversion of L2 SST (Sea surface Temperature) image by HDFView (2/3)) (Sensor Hardware Coordinate)

3) Edit the ASCII Gridded XYZ

Create a GCP list for the VRT file from the latitude and longitude ASCII Gridded XYZ files created in 2). For the creation method, refer to ① 3).

<Example of GCP list>

```
<GCP Id="" Pixel="0.5" Line="0.5" X="129.9253235" Y="46.45106125" />
<GCP Id="" Pixel="100.5" Line="0.5" X="130.6173401" Y="46.40840149" />
<GCP Id="" Pixel="200.5" Line="0.5" X="131.2574005" Y="46.36516571" />
<GCP Id="" Pixel="300.5" Line="0.5" X="131.8530731" Y="46.32165527" />
<GCP Id="" Pixel="400.5" Line="0.5" X="132.4105225" Y="46.27806854" />
<GCP Id="" Pixel="500.5" Line="0.5" X="132.9347992" Y="46.23453522" />
<GCP Id="" Pixel="600.5" Line="0.5" X="133.4301453" Y="46.19113541" />
```

D

② Conversion of L2 SST (Sea surface Temperature) image by HDFView (3/3)) (Sensor Hardware Coordinate)

4） Edit the VRT file

After add the geolocational data (Latitude and Longitude) to the SST VRT file, save by overwriting.

< before>

Insert here

```
<VRTDataset rasterXSize="5000" rasterYSize="7820">
  <VRTRasterBand dataType="Byte" band="1">
    <ColorInterp>Red</ColorInterp>
    <SimpleSource>
      <SourceFilename relativeToVRT="1">SST.png</SourceFilename>
      <SourceBand>1</SourceBand>
      <SourceProperties RasterXSize="5000" RasterYSize="7820" DataType="Byte"
      <SrcRect xOff="0" yOff="0" xSize="5000" ySize="7820" />
      <DstRect xOff="0" yOff="0" xSize="5000" ySize="7820" />
    </SimpleSource>
</VRTRasterBand>
```

< after >

Add within the frame

Fixed value

1) b.

1) a.

Add <GCPList>, </GCPList> tag

3)

```
<VRTDataset rasterXSize="5000" rasterYSize="7820">
 <Metadata domain="GEOLOCATION">
     <MDI key="PIXEL_OFFSET">0</MDI>
     <MDI key="LINE_OFFSET">0</MDI>
     <MDI key="PIXEL_STEP">10</MDI>
     <MDI key="LINE_STEP">10</MDI>
     <MDI key="X_DATASET">HDF5:"GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5"://Geometry_data/Longitude</MDI>
     <MDI key="X_BAND">1</MDI>
     <MDI key="Y_DATASET">HDF5:"GC1SG1_202011050151J05810_L2SG_SSTDQ_2000.h5"://Geometry_data/Latitude</MDI>
     <MDI key="Y_BAND">1</MDI>
 </Metadata>
 <GCPList>
 <GCP Id="" Pixel="0.5" Line="0.5" X="126.234787" Y="46.45346451" />
 <GCP Id="" Pixel="100.5" Line="0.5" X="126.9268188" Y="46.41083527" />
 <GCP Id="" Pixel="200.5" Line="0.5" X="127.5668945" Y="46.36763" />
                :
 <GCP Id="" Pixel="4700.5" Line="7800.5" X="137.7949371" Y="27.40841484" />
 <GCP Id="" Pixel="4800.5" Line="7800.5" X="138.2464142" Y="27.31602097" />
 <GCP Id="" Pixel="4900.5" Line="7800.5" X="138.7298279" Y="27.21531105" />
 <GCP Id="" Pixel="5000.5" Line="7800.5" X="139.2505646" Y="27.10476685" />
 </GCPList>
  <VRTRasterBand dataType="Byte" band="1">
    <ColorInterp>Red</ColorInterp>
    <SimpleSource>
      <SourceFilename relativeToVRT="1">SST20201105.png</SourceFilename>
      <SourceBand>1</SourceBand>
```

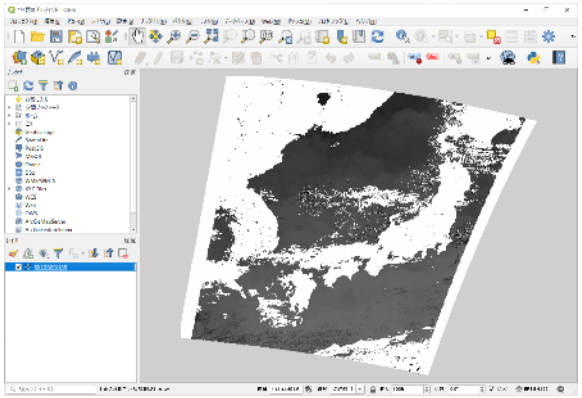
5） GeoTIFF conversion and reprojection by GDALWARP

By the GDALWARP command, The SST VRT file convert to GeoTIFF format and reproject to EPSG:4326(Geodetic system: WGS84, Ellipsoidal model: WGS84, Projected coordinate system: latitude and longitude).

gdalwarp –of Gtiff -t_srs EPSG:4326 –tps SST_png.vrt SST_png_output.tif

[the file name (edited by 4)).vrt]　[Arbitrary file name.tif]

< example viewing by QGIS >



D

③ Conversion of L3 NDVI (Normalized Difference Vegetation Index) (Equal Lat/Lon Coordinate (EQR))

How to convert to GeoTIFF format from the Shikisai L3 products.

1） Get the dataset name by GDALINFO

```
gdalinfo GC1SG1_20200401D01M_D0000_3MSG_NDVIF_1001.h5
```

The image file name

```
Driver: HDF5/Hierarchical Data Format Release 5
Files: GC1SG1_20200401D01M_D0000_3MSG_NDVIF_1001.h5
Size is 512, 512
 .
 .
Subdatasets:
 SUBDATASET_1_NAME=HDF5:"GC1SG1_20200401D01M_D0000_3MSG_NDVIF_1001.h5"://Image_data/NDVI_AVE
 SUBDATASET_1_DESC=[4320x8640] //Image_data/NDVI_AVE (16-bit unsigned integer)
 SUBDATASET_2_NAME=HDF5:"GC1SG1_20200401D01M_D0000_3MSG_NDVIF_1001.h5"://Image_data/NDVI_QA_flag
 SUBDATASET_2_DESC=[4320x8640] //Image_data/NDVI_QA_flag (8-bit unsigned character)
```

2） Convert to GeoTIFF format by GDAL_TRANSLATE

By the following command, select the target dataset file, and convert to GeoTIFF format.

Projection code of image file

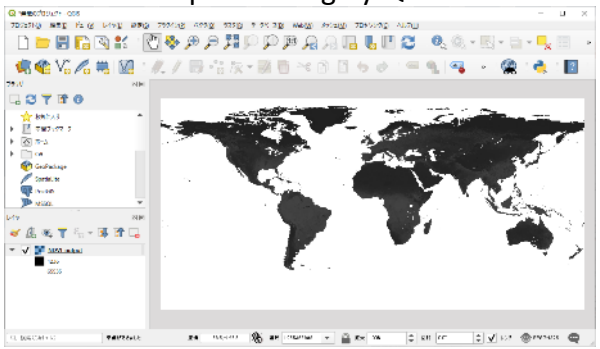
The range of input file (upper left (x, y), lower right (x, y)

```
gdal_translate -of Gtiff –a_srs EPSG:4326 –a_ullr -180 90 180 -90
HDF5:"GC1SG1_20200401D01M_D0000_3MSG_NDVIF_1001.h5"://Image_data/NDVI_AVE NDVI_output.tif
```

Input dataset file name

Output file name

< example viewing by QGIS >



Reference Information :

Conversion of L2 EVI (Enhanced Vegetation Index)(Equal Area Coordinate (EQA))

How to convert to GeoTIFF format from the Shikisai L2 tile products.

1） Get the dataset name by GDALINFO

gdalinfo GC1SG1_20201101D01M_T1131_L2SG_EVI_Q_2000.h5

Tile Number　　The image file name

```
Driver: HDF5/Hierarchical Data Format Release 5
Files : GC1SG1_20201101D01M_T1131_L2SG_EVI_Q_2000.h5
Size is 512, 512
・
Subdatasets:
SUBDATASET_1_NAME=HDF5:"GC1SG1_20201101D01M_T1131_L2SG_EVI_Q_2000.h5"://Image_data/EVI_AVE
 SUBDATASET_1_DESC=[4800x4800] //Image_data/EVI_AVE (16-bit unsigned integer)
 SUBDATASET_2_NAME=HDF5:"GC1SG1_20201101D01M_T1131_L2SG_EVI_Q_2000.h5"://Image_data/EVI_Date
 SUBDATASET_2_DESC=[4800x4800] //Image_data/EVI_Date (8-bit unsigned character)
```

2） Coordinate value calculation from tile number

Calculate the upper left and lower right coordinate values of the image from the tile number.

3） Convert to GeoTIFF format by GDAL_TRANSLATE

By the following command, select the target dataset file, set the parameters, and convert to GeoTIFF format.

crs of image file

gdal_translate -of Gtiff –a_srs ESRI:53008 –a_ullr 14455356.756965 -2223901.039533 15567307.276731 -3335851.559300

HDF5:"GC1SG1_20201101D01M_T1131_L2SG_EVI_Q_2000.h5"://Image_data/EVI_AVE EVI_output.tif

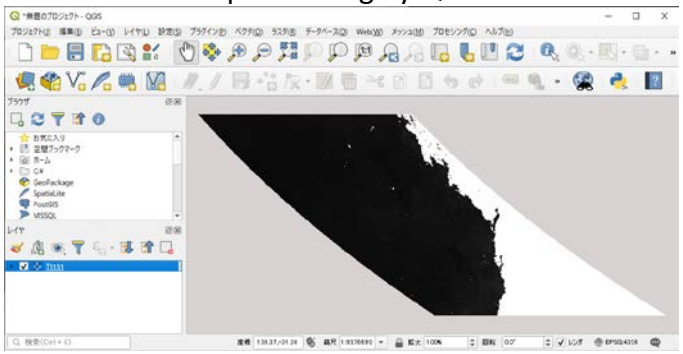
Input dataset file name　　Output file name

↑ The range of input file
(upper left (x, y), lower right (x, y)

Reproject to EPSG:4326

gdalwarp –of Gtiff -t_srs EPSG:4326 EVI_output.tif output2.tif

< example viewing by QGIS >



< Checking details >

Projection coordinate of SHIKISAI products

- 7 types projection are used. Projection coordinate system depend on each product kind. Granule ID (file name) defines projection coordinate. (21st char)

Level 2 product (tile, global) and Level 3 product

Byte	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
GID	G	C	1	S	G	1	_	Y	Y	Y	Y	M	M	D	D	m	t	t	t	_	g	A	A	A	A	_	L	L	x	x	_	K	K	K	K	r	_	a	p	p	p
Example	G	C	1	S	G	1	_	2	0	1	1	1	1	1	3	D	0	1	D	_	T	0	5	2	7	_	L	2	S	G	_	C	L	F	G	Q	_	1	0	0	1
Contents	Satellite (fix)			Sensor (fix)			_	Year				Month		Day		A/D ※4	Process time unit ※5			_	Mapping ※6	Area tile No. ※7				_	Level ※8		Type ※9		_	Product ID ※12				resolution ※13	_	algorithm ver. ※14	parameter ver. ※15		
								Observation start UT ※1																																	

17-19th char Stat. period

21st char Projection

36th char Resolution

- Projection Coordinate
  - Sensor Hardware Coordinate
    - Scene — PPPSS_L1xx_KKKmr / PPPSS_L2xx_KKKKr
  - Map Projection Coordinate
    - Equal Area Coordinate (EQA)
      - Tile — TAAAA_L2xx_KKKKr
      - Global EQA — AAAAA_L2xx_KKKKr
      - Golbal EQA (bin) — XAAAA_L3xx_KKKKr
    - Equal Lat/Lon Coordinate (EQR)
      - Global EQR (map) — DAAAA_L3xx_KKKKr
    - Polar Stereo (PS)
      - PS (North) — NAAAA_L3xx_KKKKr
      - PS (South) — SAAAA_L3xx_KKKKr

Product type / File Name (Granule ID : 21-36 char.)

Related topics: Granule ID https://shikisai.jaxa.jp/faq/faq0003.html