Creating a Geological Map in ArcMap

Generalized Geology of Southeast Asia (geo3bl)

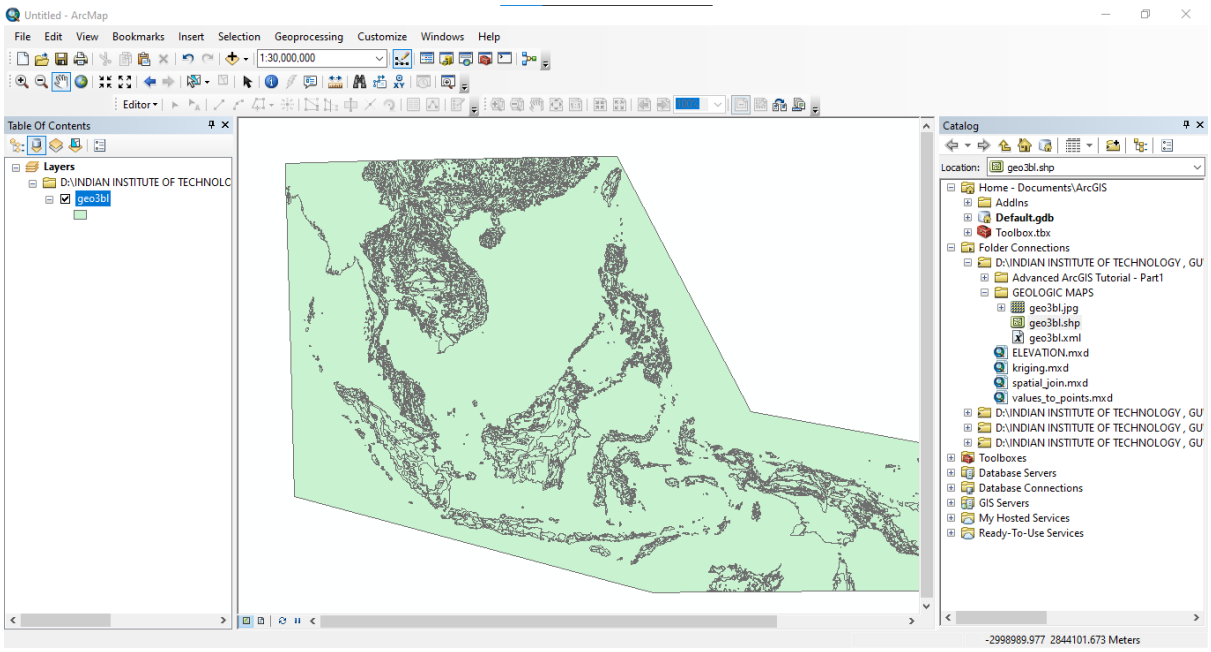
Shapefile: geo3bl.zip

geo3bl.xml *Original FGDC Metadata*	View	47.4 KB
geo3bl.dbf		270.56 KB
geo3bl.jpg		26.15 KB
geo3bl.prj		456 Bytes
geo3bl.shp		4.86 MB
geo3bl.shx		40.15 KB

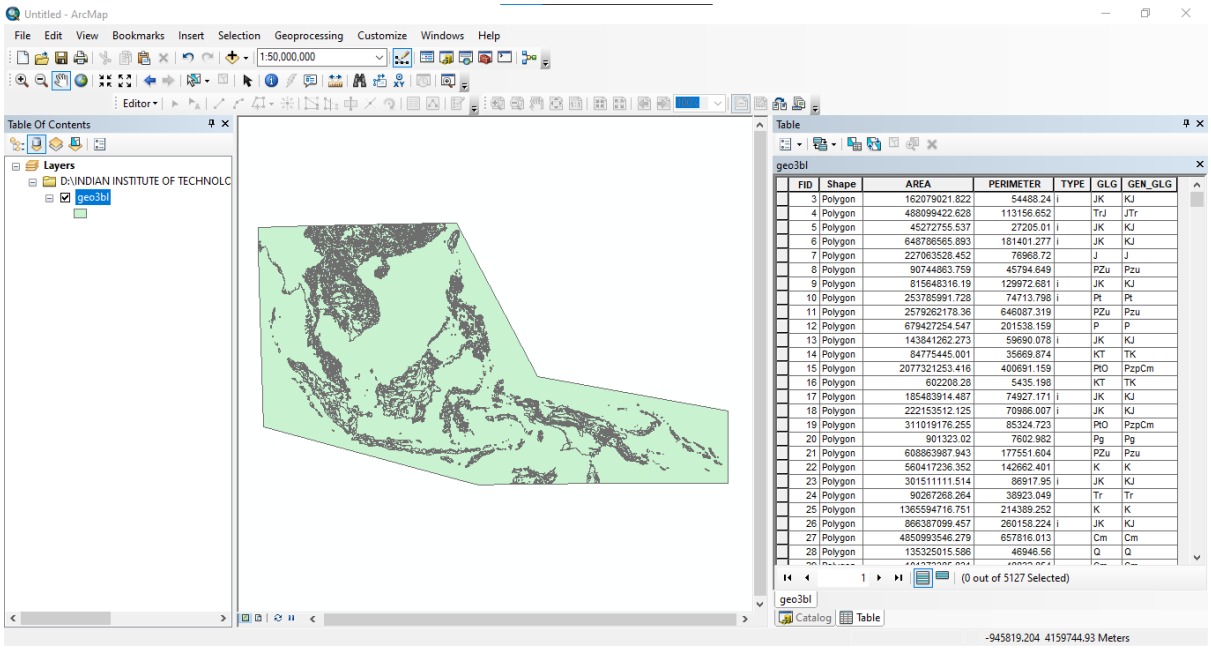
Related External Resources

Type: Related Primary Publication

Maps Showing Geology, Oil and Gas Fields, and Geologic Provinces of the Asia Pacific Region	https://doi.org/10.3133/ofr97470F



Check some metadata to understand what kind of a data set that we're dealing with



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	KT	TK
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	KT	TK
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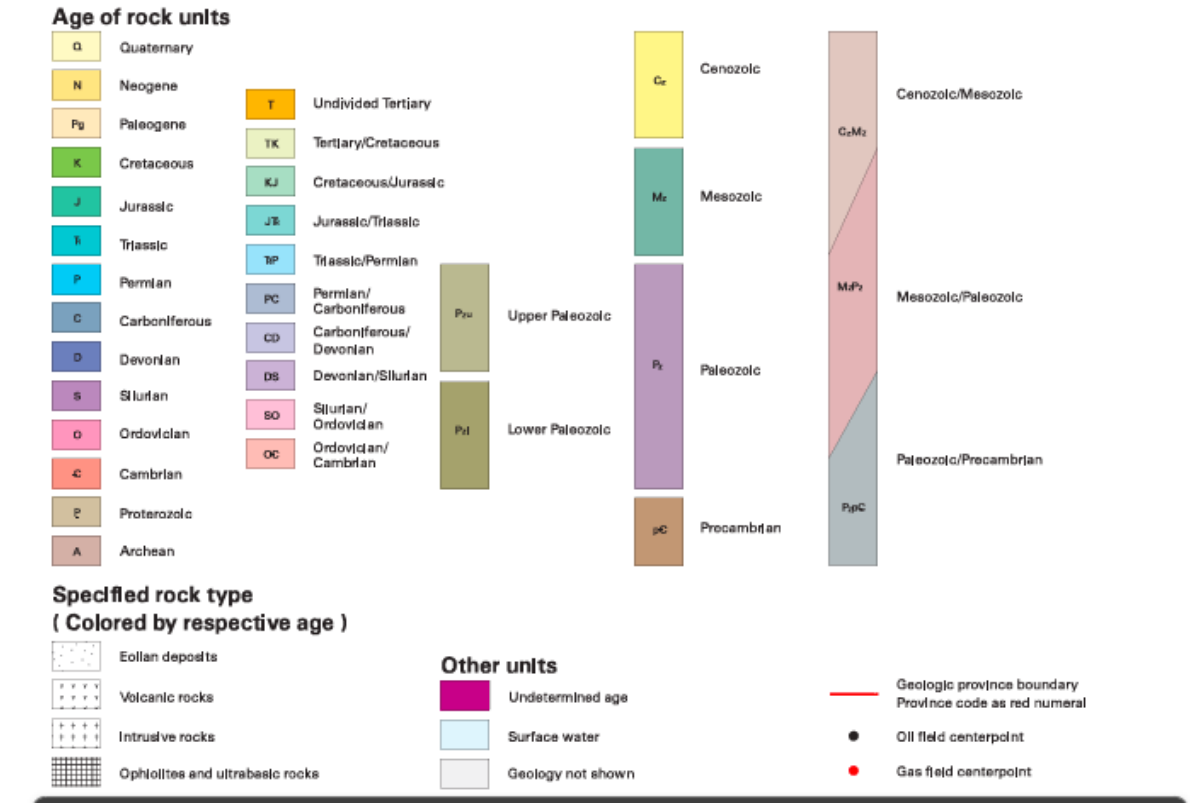
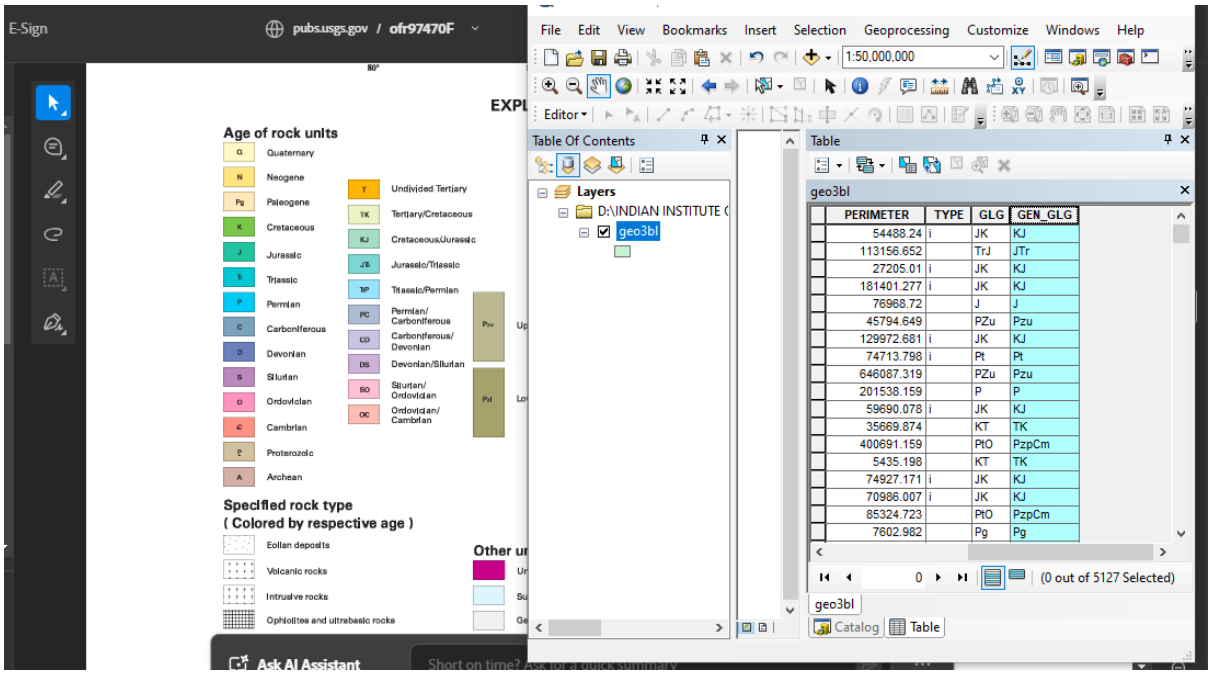
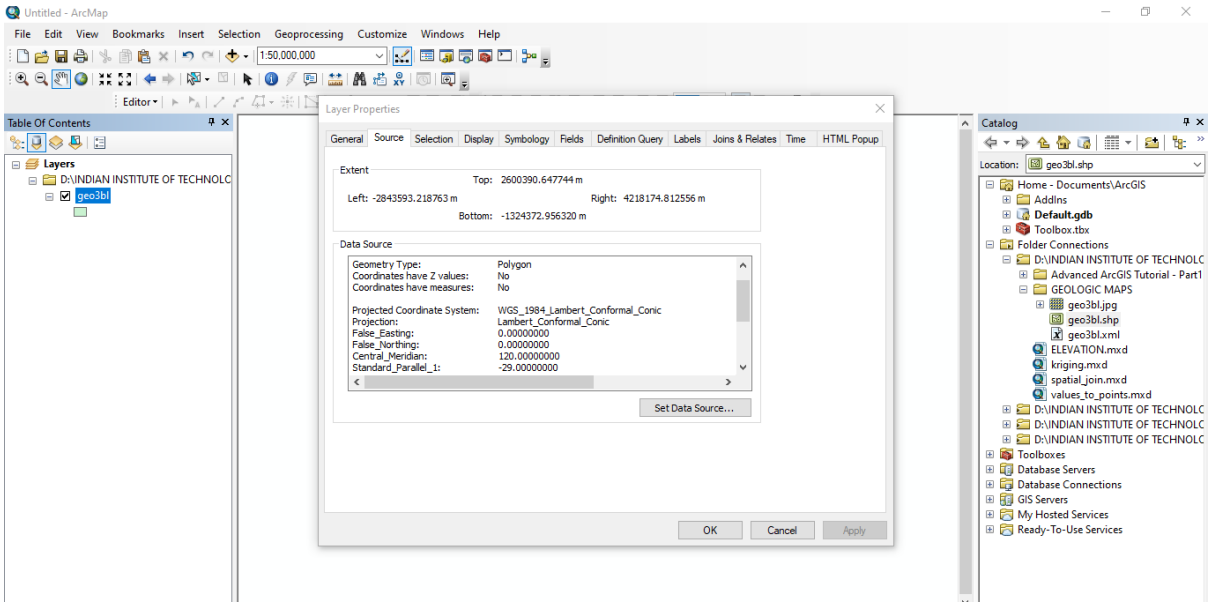
	Pg	Pg
	PZu	Pzu
	K	K
i	JK	KJ
	Tr	Tr
	K	K
i	JK	KJ
	Cm	Cm
	Q	Q

Different types of rock units that are belonging to different geological ages





properties of this particular shapefile layer and check what sort of a coordinate reference system they're actually using so we can head over to this Source tab

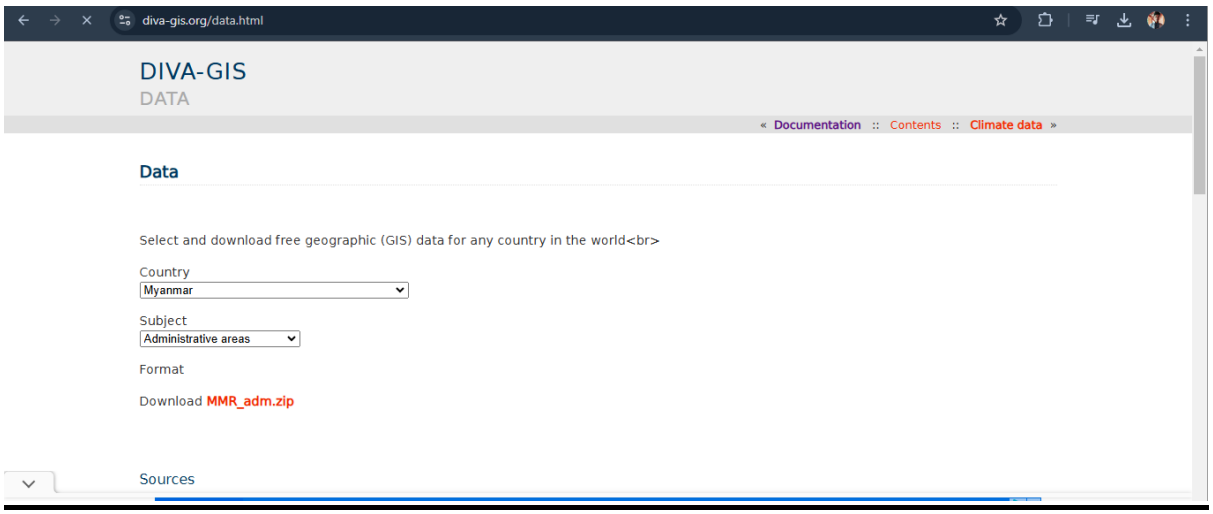


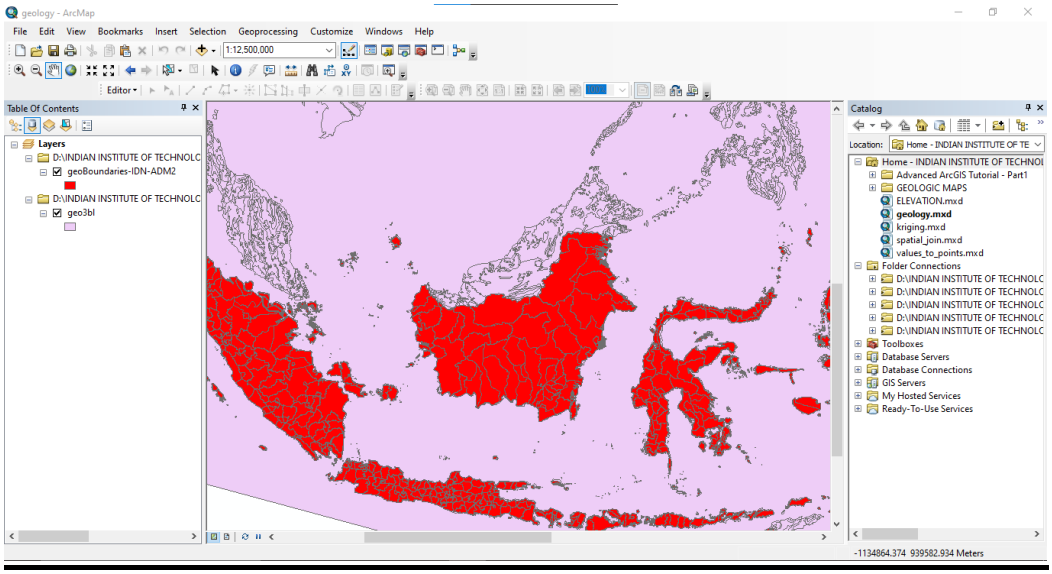
When using arcgis is that whenever you drag and drop a certain particular shape file layer the the coordinate reference system of the data frame automatically takes the coordinate reference system of the very first layer that you dragged and dropped now how can you be sure of that if you head to these layers and right click and go to properties if you head over to this coordinate system tab you will see that now the the coordinate reference system of the entire data frame has been changed to match the coordinate reference system of the shapefile that you dragged and dropped as the very first shapefile layer.

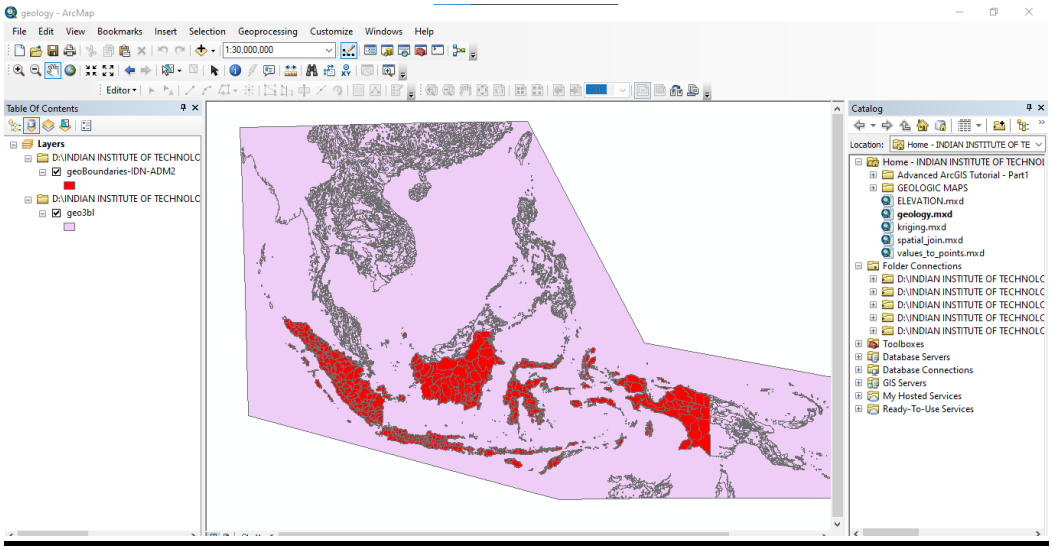
Objective would be to use an administrative boundary of a particular country and try to clip this data set

Generalized Geology of Southeast Asia

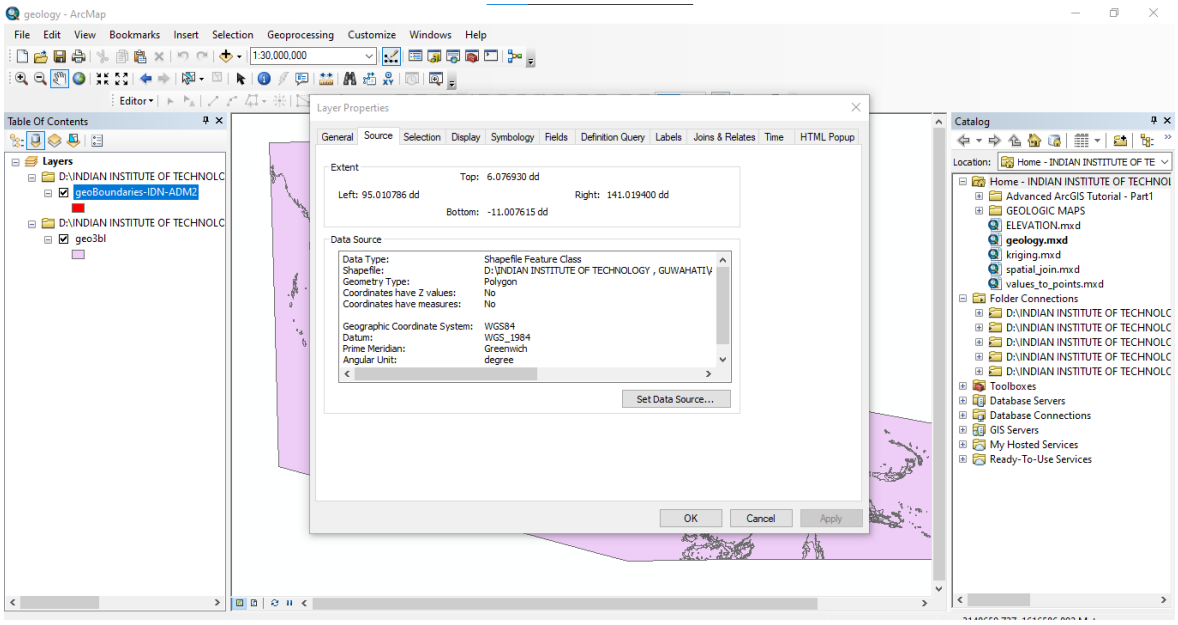
(https://www.geoboundaries.org/countryDownloads.html)

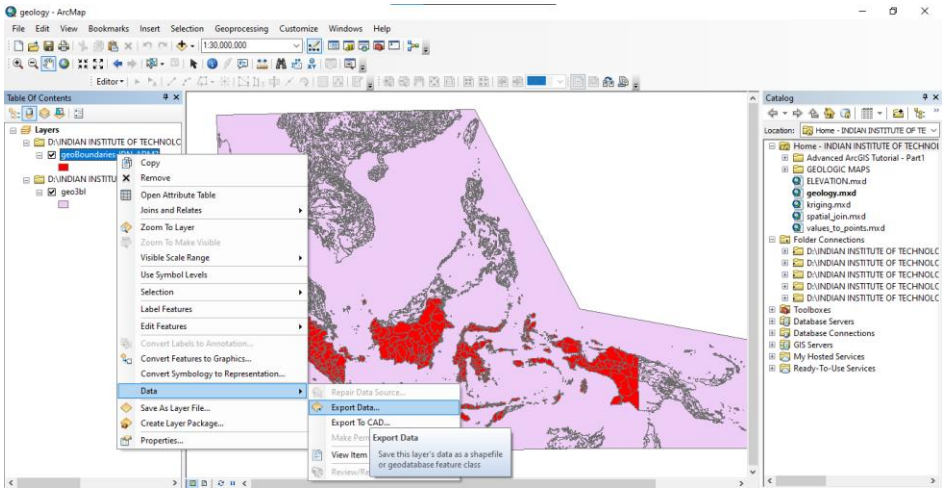






Wgs – 1984 , Geographic Coordinate System

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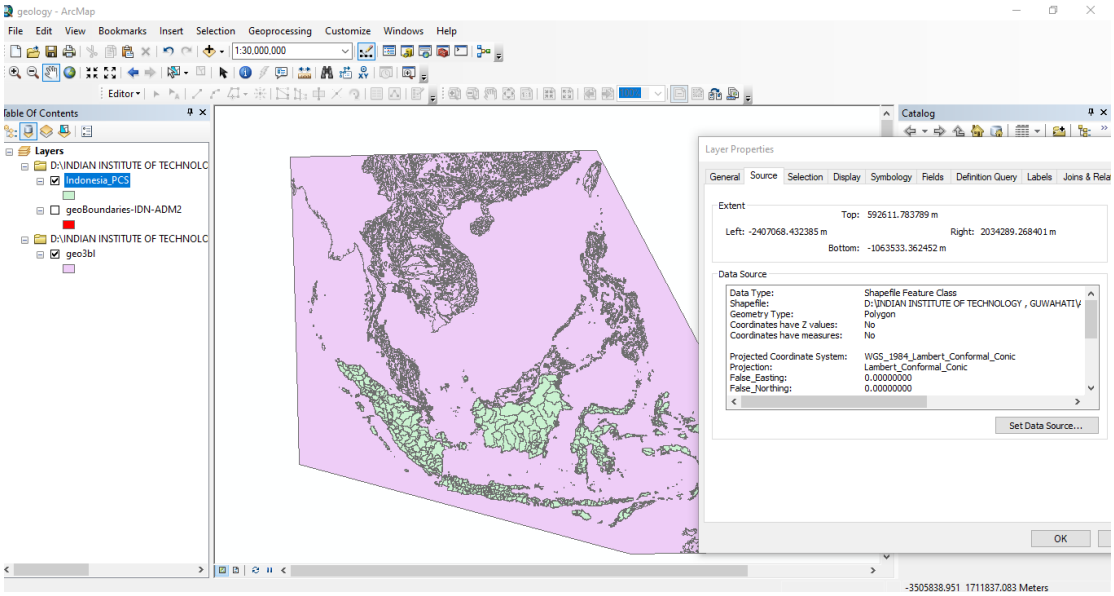
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Right: 2034289.268401 m
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Geometry Type: Polygon
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Coordinates have measures: No
Projected Coordinate System: WGS_1984_Lambert_Conformal_Conic
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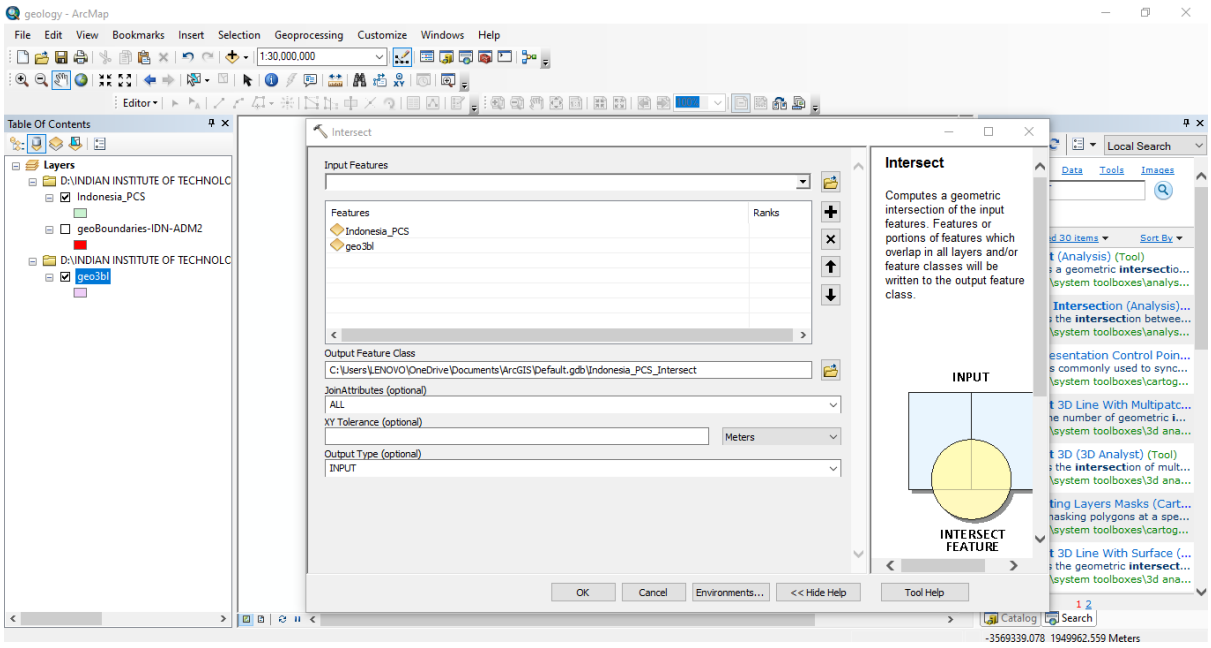
Intersect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Intersect
Computes a geometric intersection of the input features. Features or portions of features which overlap in all layers and/or feature classes will be written to the output feature class.
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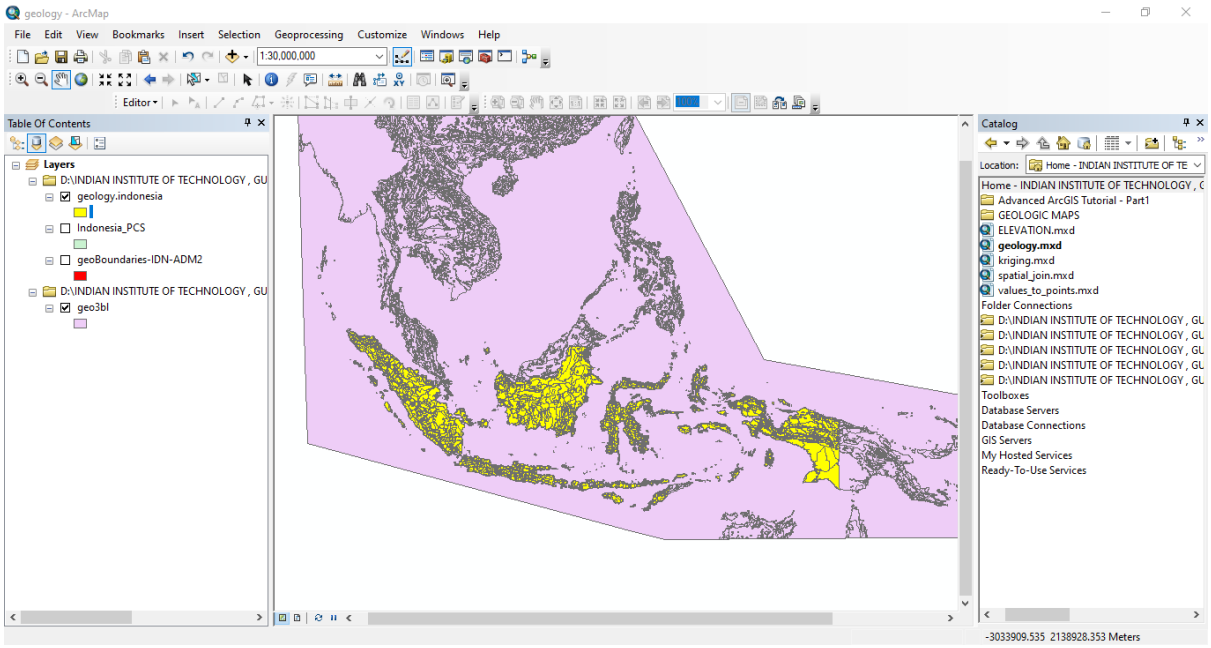
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Ready-To-Use Services
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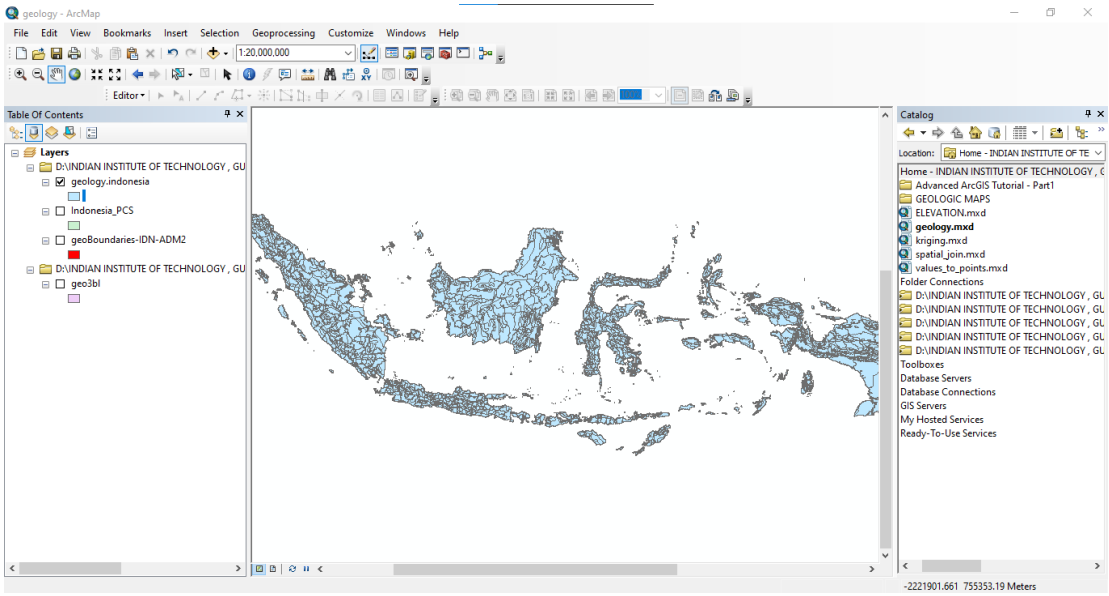
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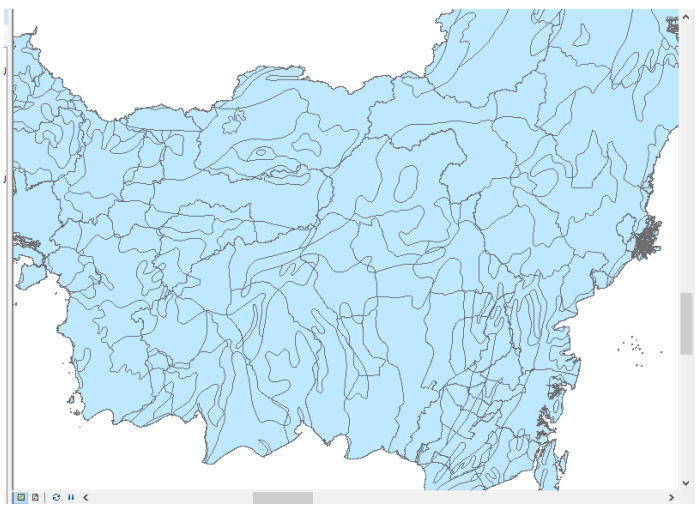
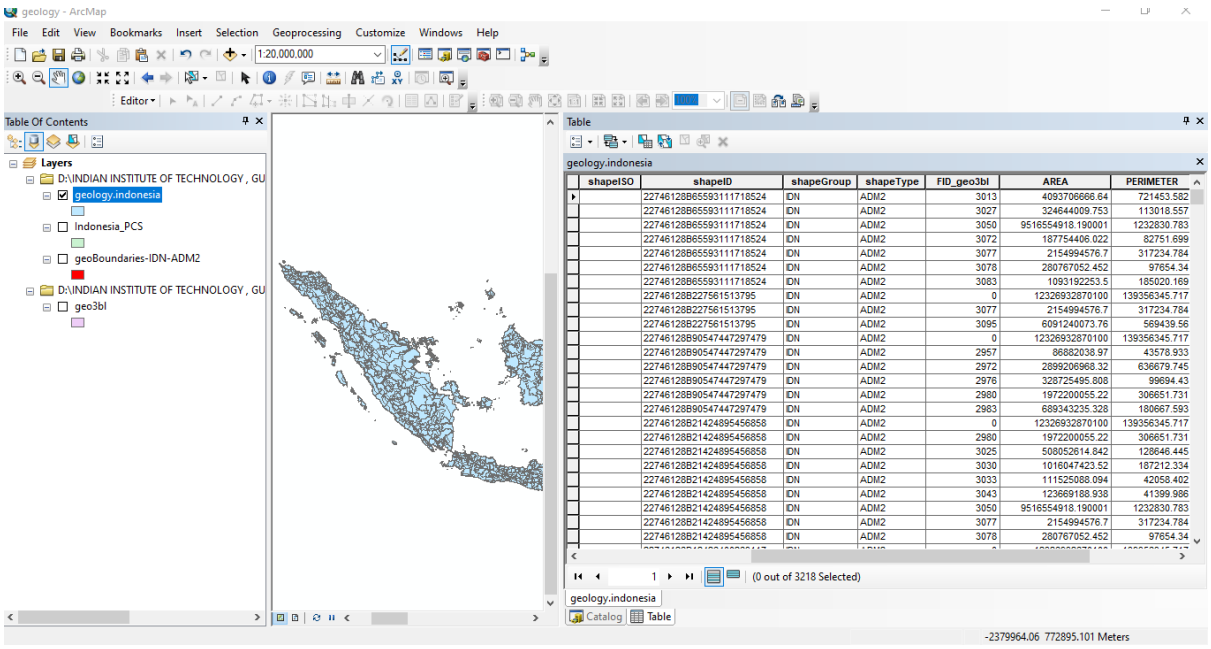
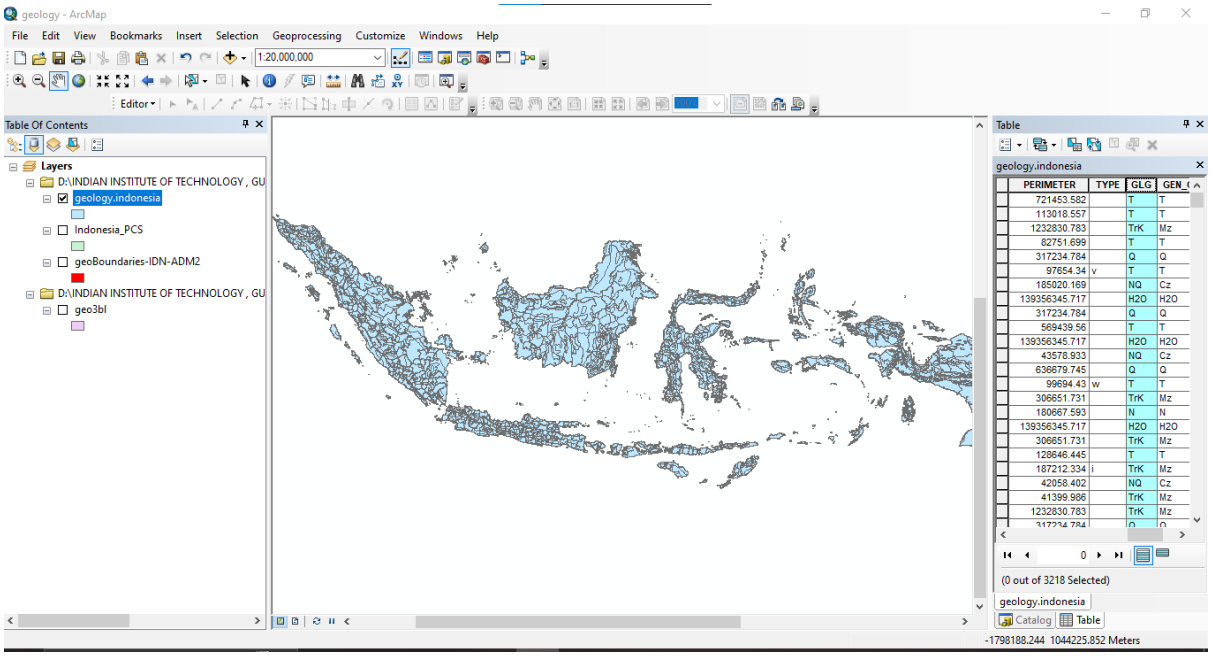
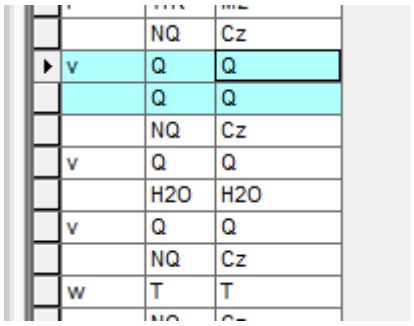




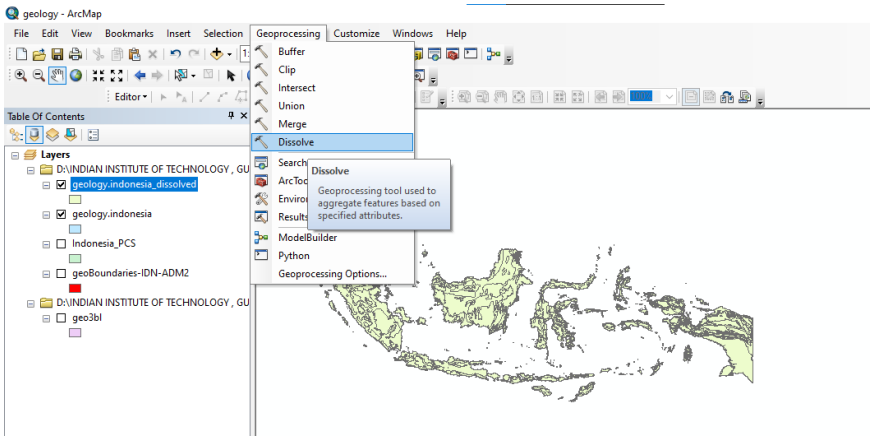


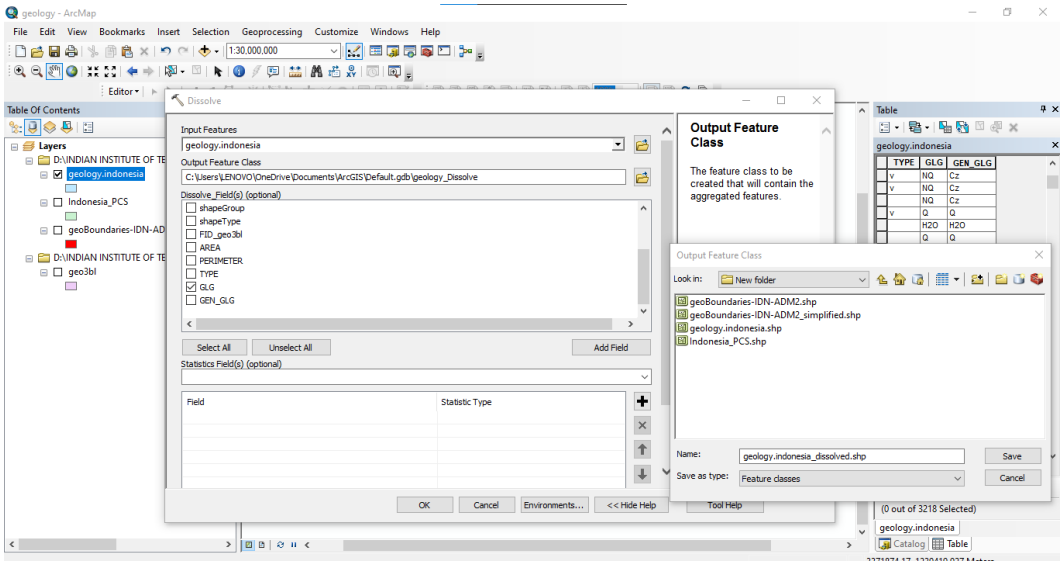


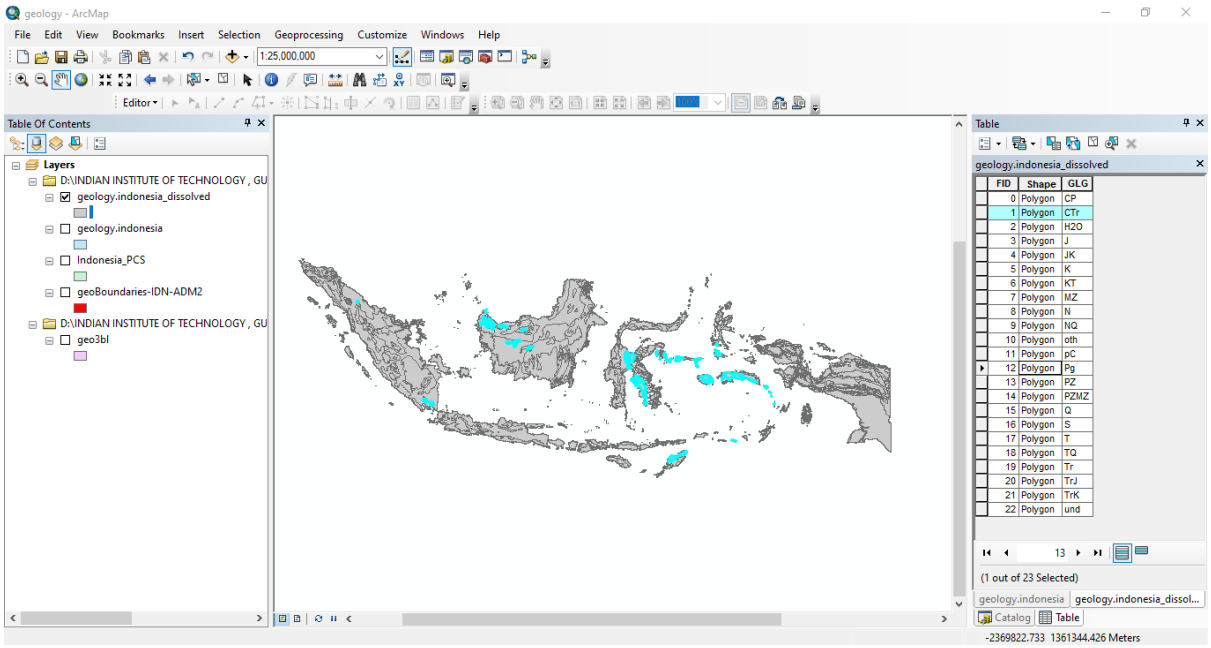
		NQ	Cz
▶	v	Q	Q
		Q	Q
		NQ	Cz
	v	Q	Q
		H2O	H2O
	v	Q	Q
		NQ	Cz
	w	T	T

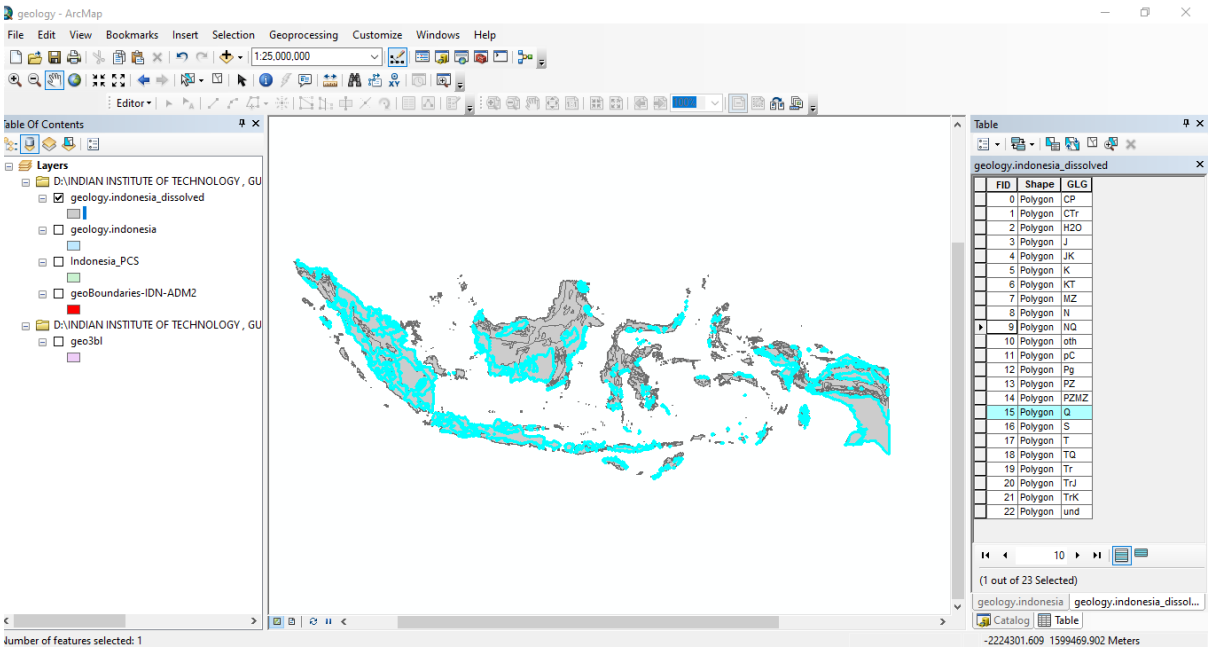
One more step just to make sure that we group all of these common geological uh notations as one single feature so that means we are going to actually group all these ends together.

Dissolve the Data

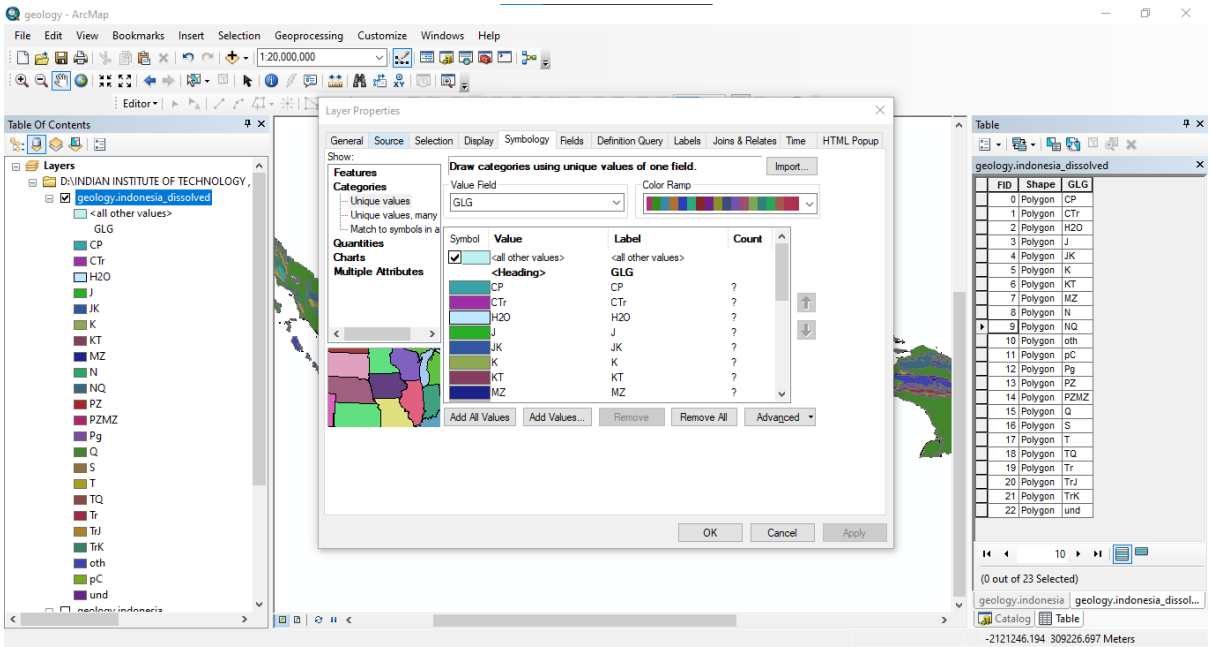


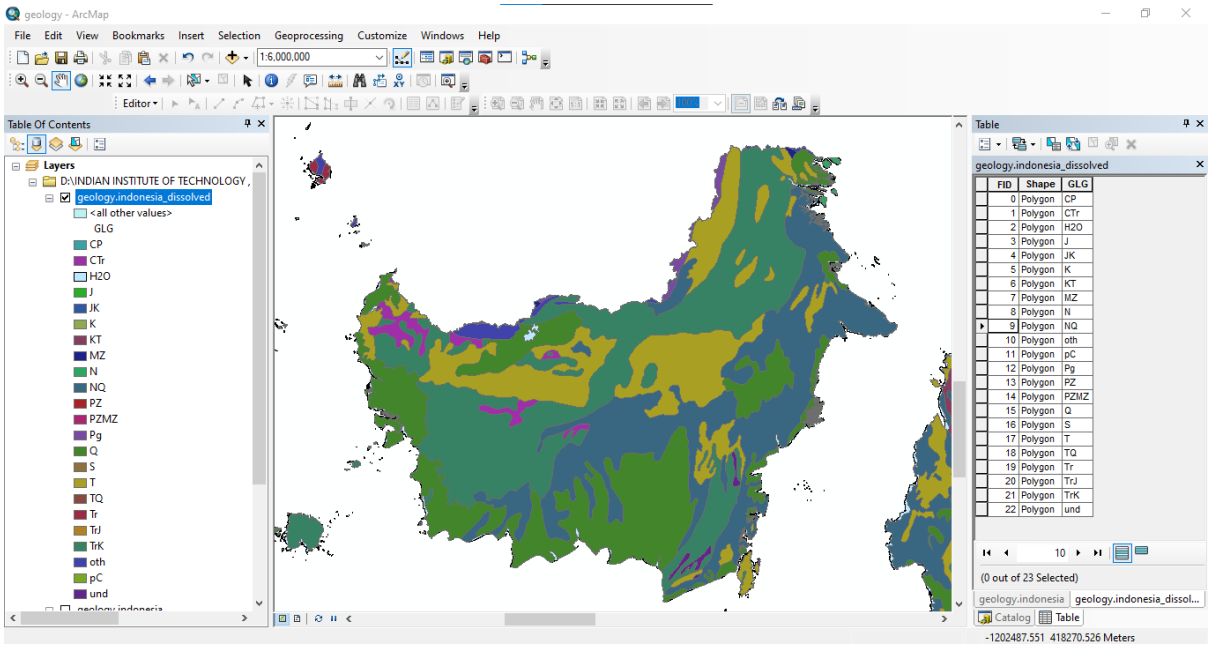


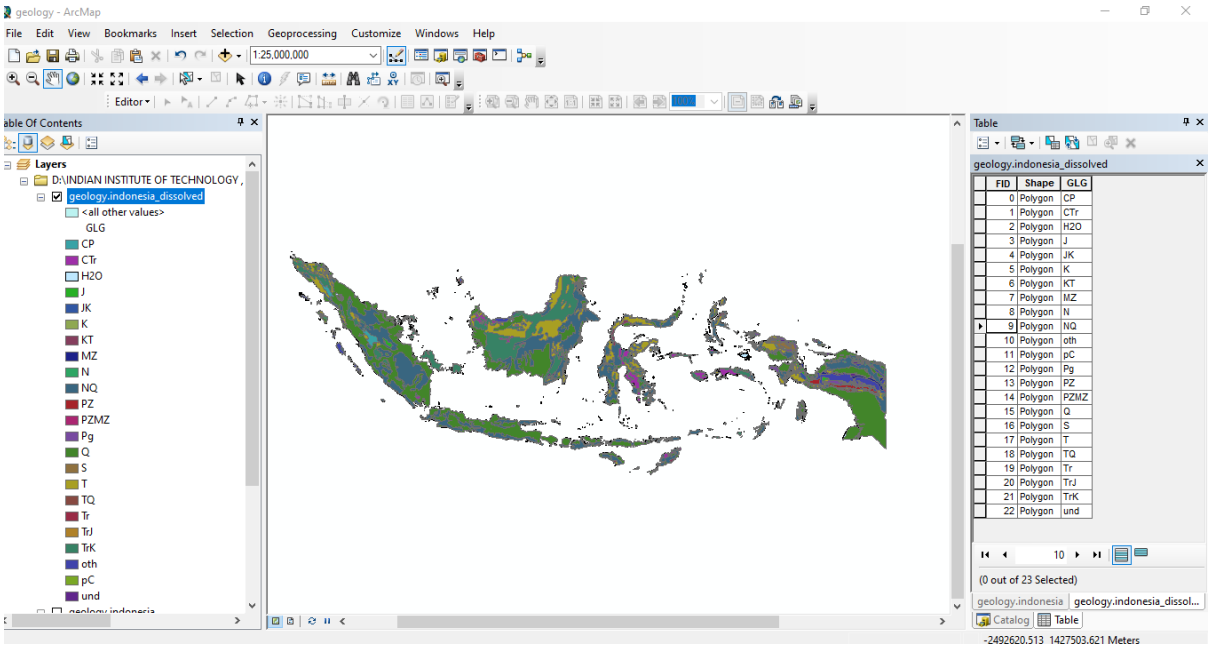




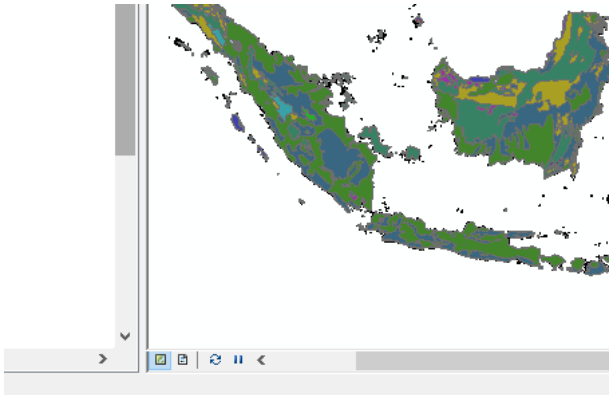
Most of the data preparation work is done

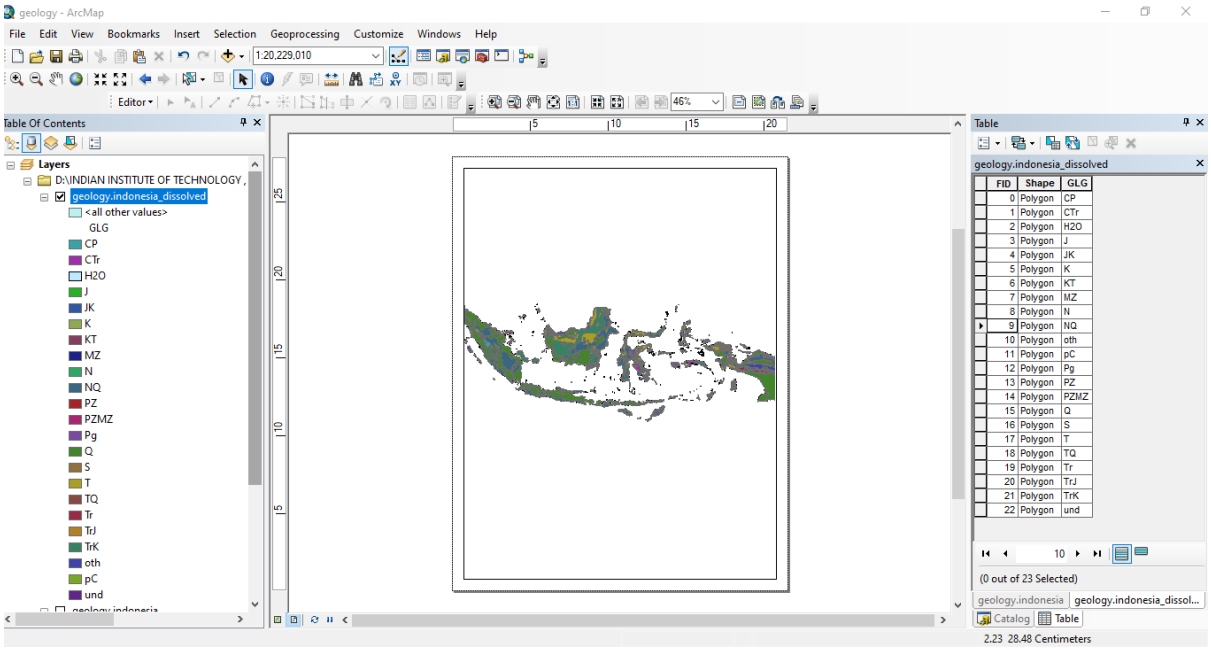






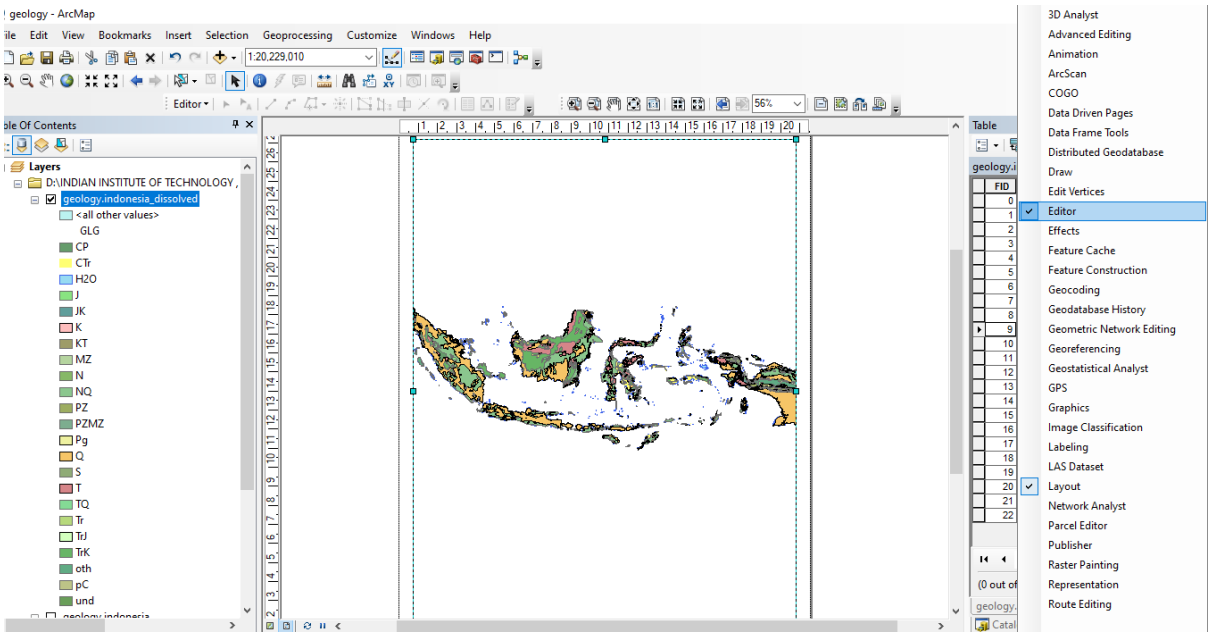
We have two buttons right next to each other the one that we are currently working on is this is called a data View and there's another one called layout view

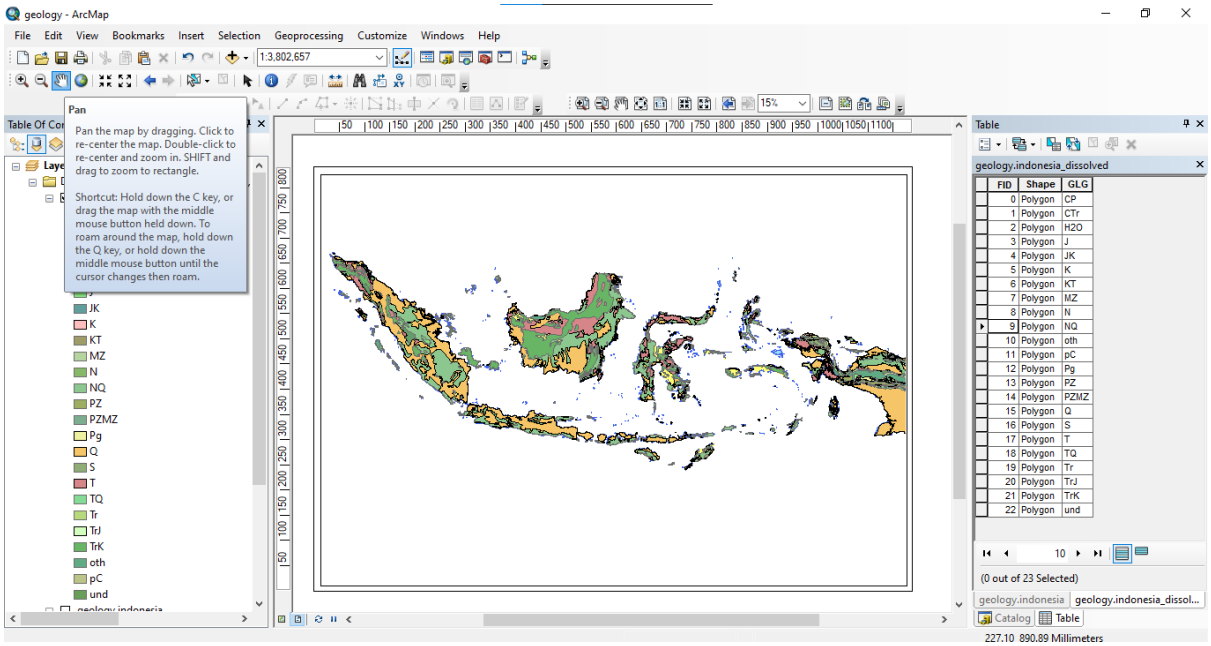




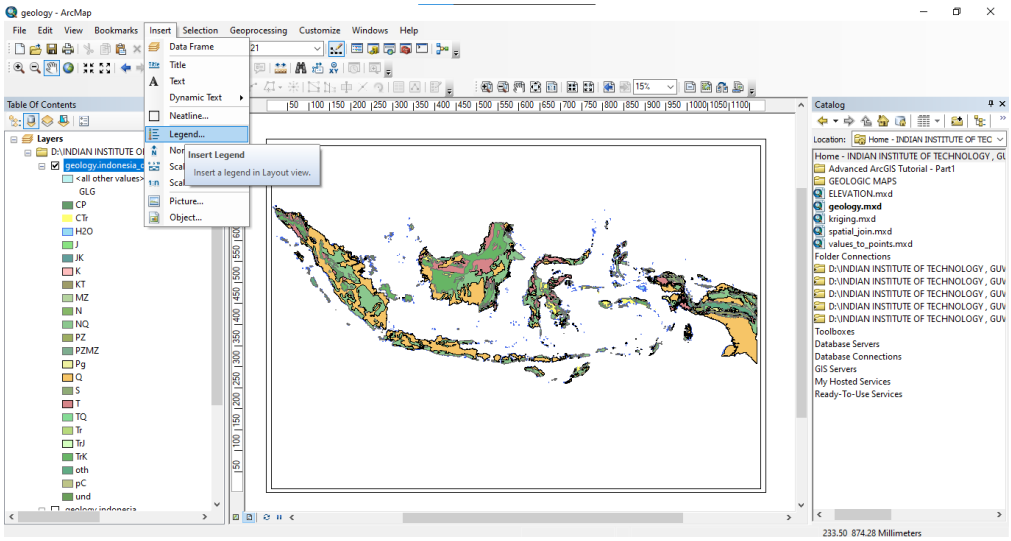
Map that's presented within with a landscape view would be much better suited compared to a map that's presented with a portrait view well there are certain countries that would actually fit in quite nicely for with the portrait view for example country a country like Chile or Vietnam which kind of stretches vertically compared to a country like Indonesia which really has a spread to to West and East

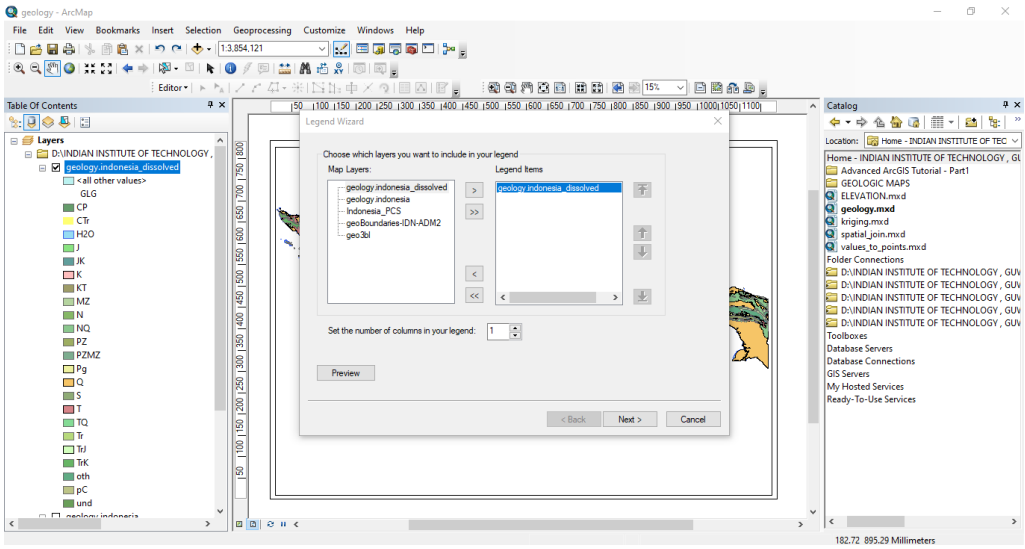
So, to change the orientation what we can do is we can actually go to this layout panel.

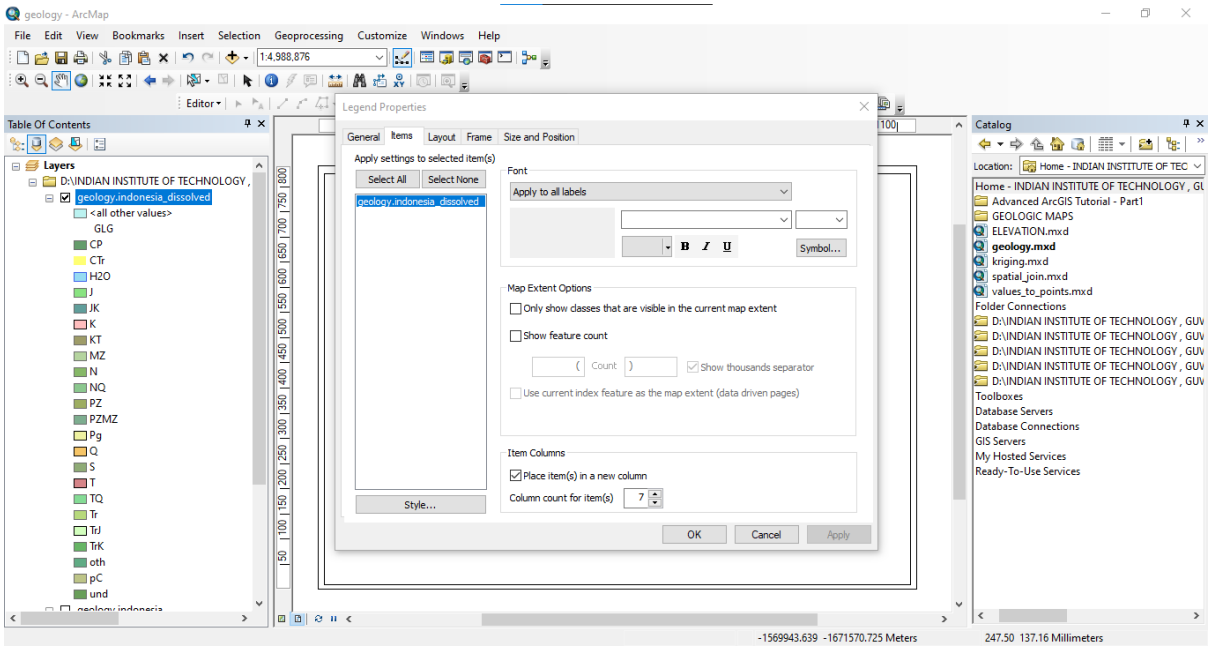




Import a legend



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Symbol...
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Show feature count
Count
Show thousands separator
Use current index feature as the map extent (data driven pages)
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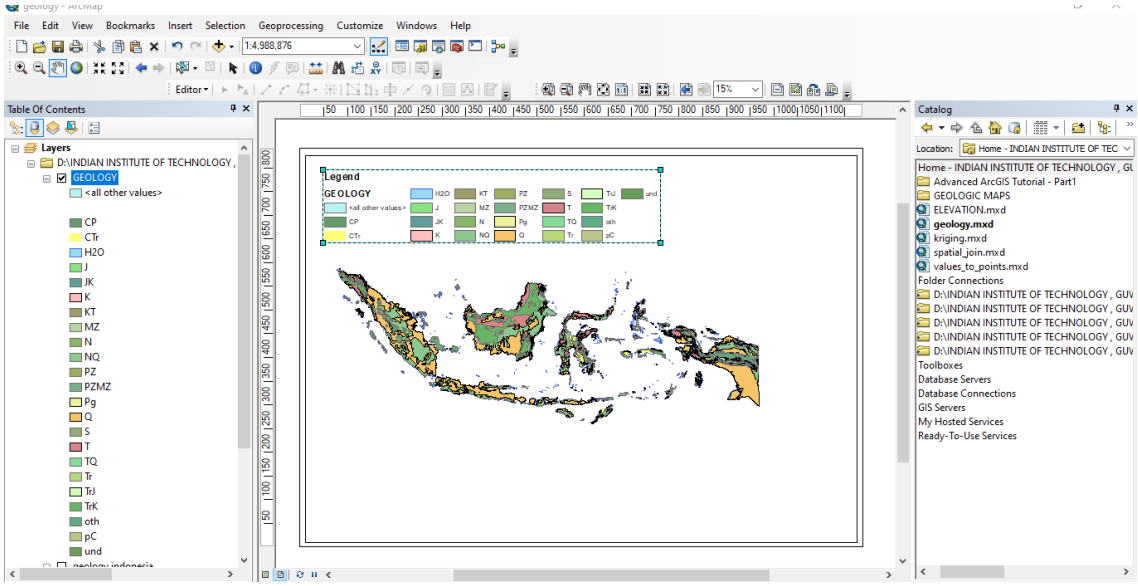
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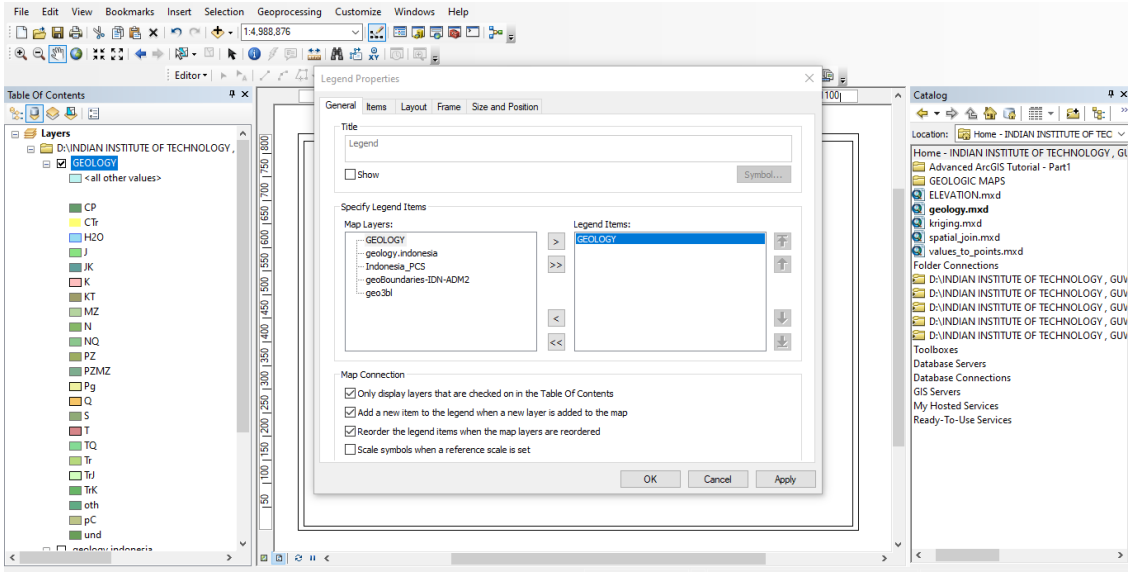
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Only display layers that are checked on in the Table Of Contents
Add a new item to the legend when a new layer is added to the map
Reorder the legend items when the map layers are reordered
Scale symbols when a reference scale is set
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Advanced ArcGIS Tutorial - Part1
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geology.mxd
kriging.mxd
spatial_join.mxd
values_to_points.mxd
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Database Connections
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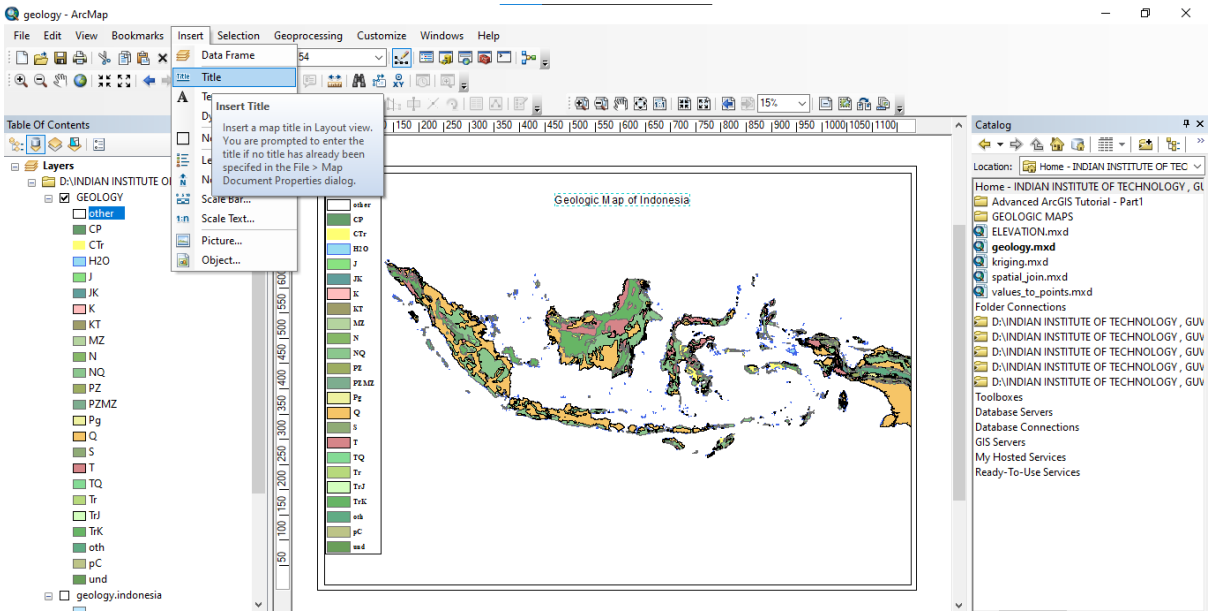
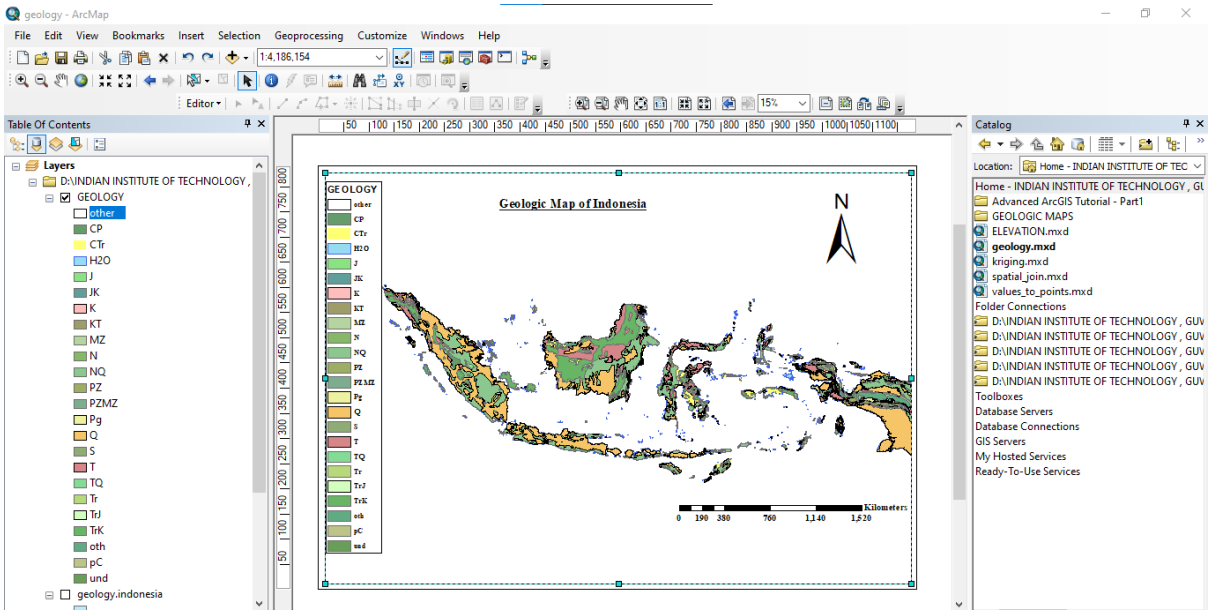
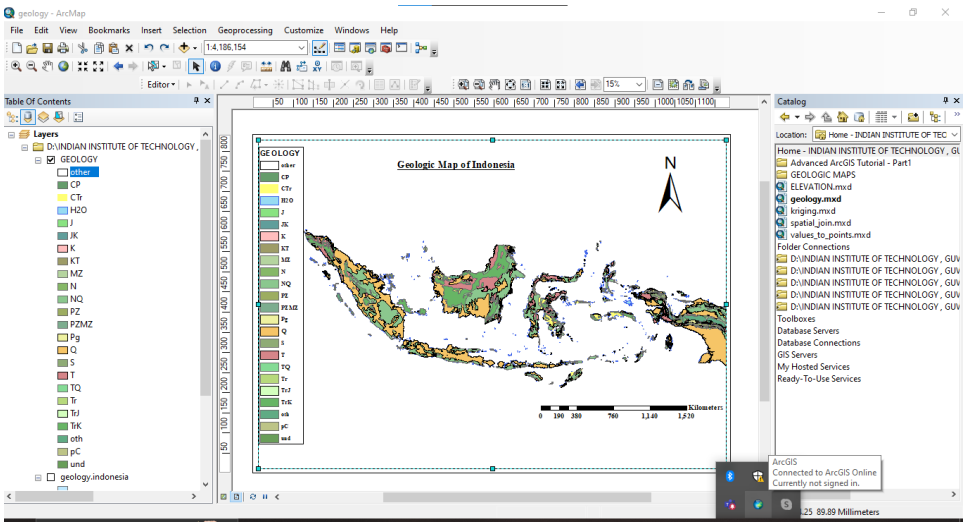
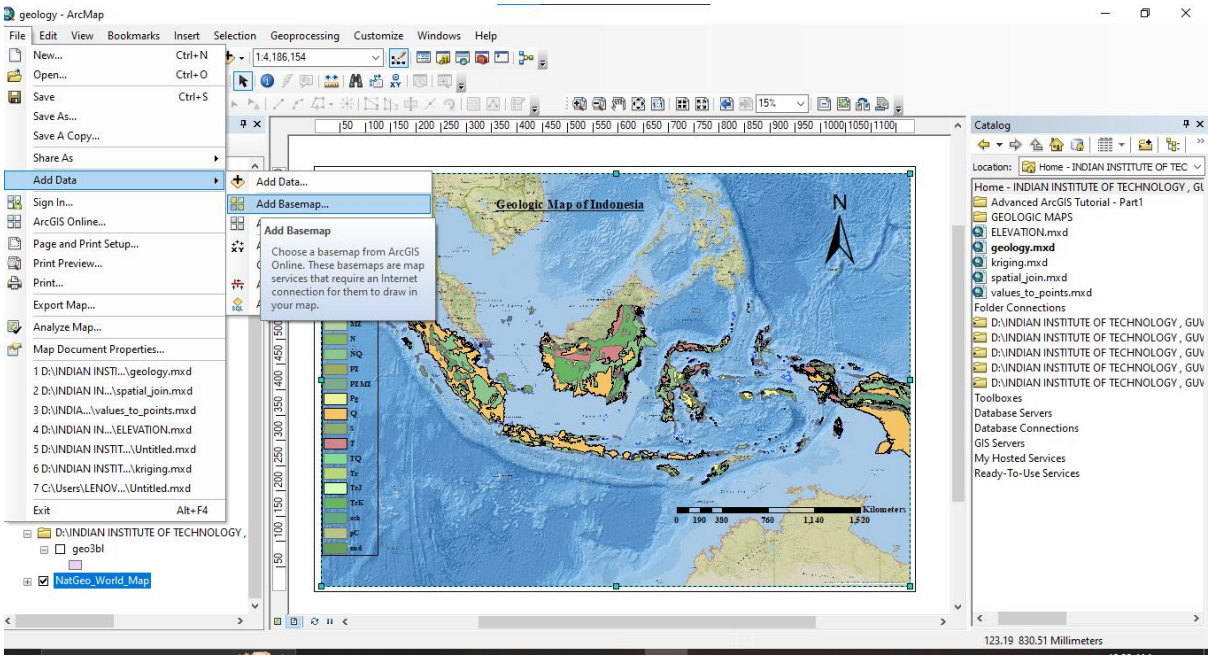
Ready-To-Use Services





Add a base map to our map




geology - ArcMap
File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help
New... Ctrl+N
Open... Ctrl+O
Save Ctrl+S
Save As...
Save A Copy...
Share As
Add Data
Sign In...
ArcGIS Online...
Page and Print Setup...
Print Preview...
Print...
Export Map...
Analyze Map...
Map Document Properties...
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5 D:\INDIAN INSTIT...\Untitled.mxd
6 D:\INDIAN INSTIT...\kriging.mxd
7 C:\Users\LENOV...\Untitled.mxd
Exit Alt+F4
Add Data...
Add Basemap...
Add Basemap
Choose a basemap from ArcGIS Online. These basemaps are map services that require an Internet connection for them to draw in your map.
Geologic Map of Indonesia
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Kilometers
0 190 380 760 1,140 1,520
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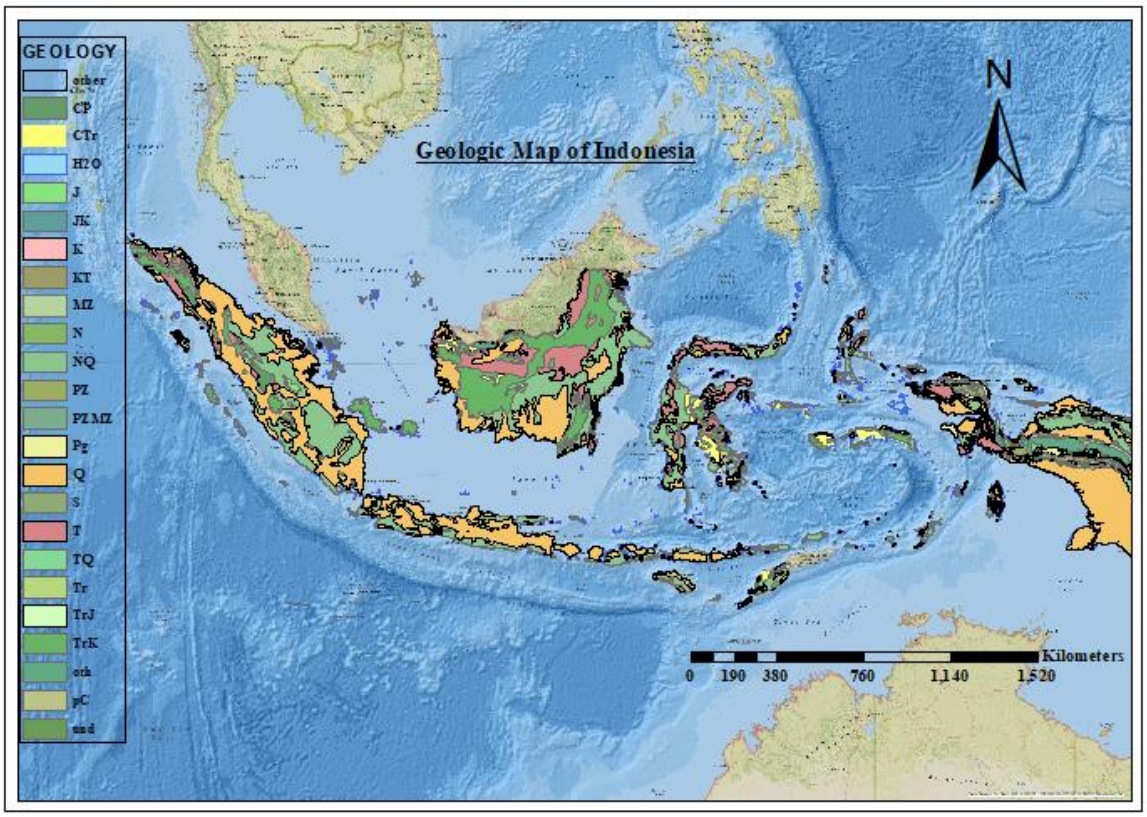
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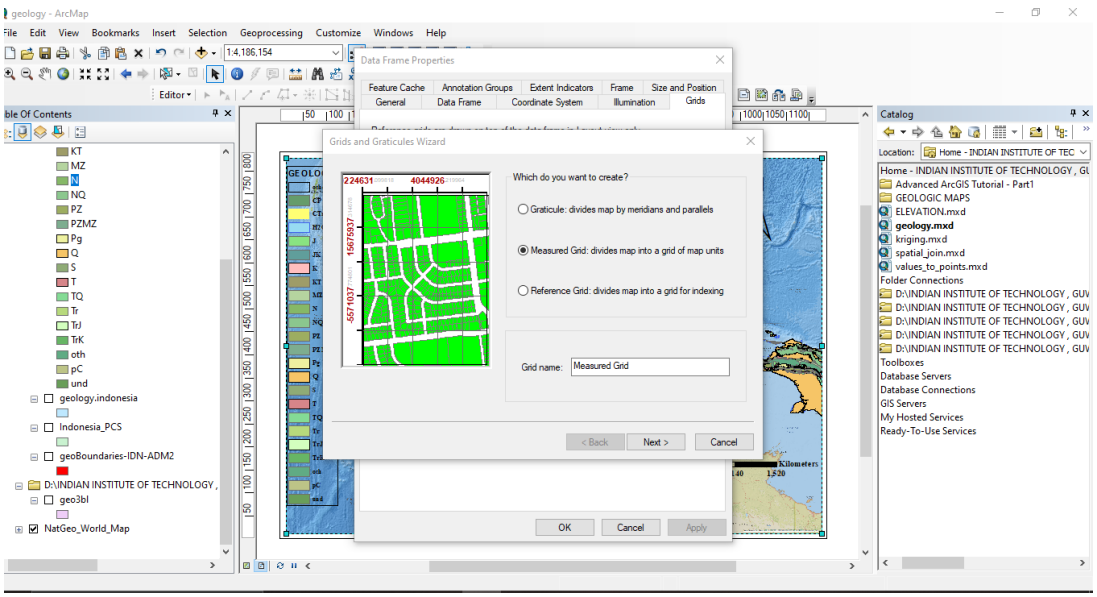
geology - ArcMap
File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help
Data Frame Properties
Feature Cache Annotation Groups Extent Indicators Frame Size and Position
General Data Frame Coordinate System Illumination Grids
Grids and Graticules Wizard
Which do you want to create?
Graticule: divides map by meridians and parallels
Measured Grid: divides map into a grid of map units
Reference Grid: divides map into a grid for indexing
Grid name: Measured Grid
< Back Next > Cancel
OK Cancel Apply
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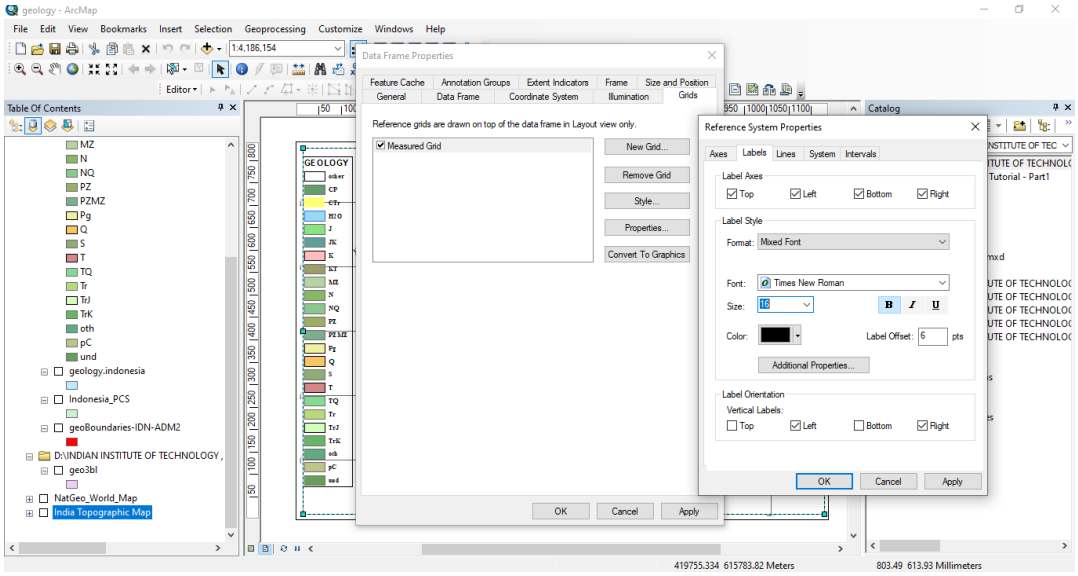
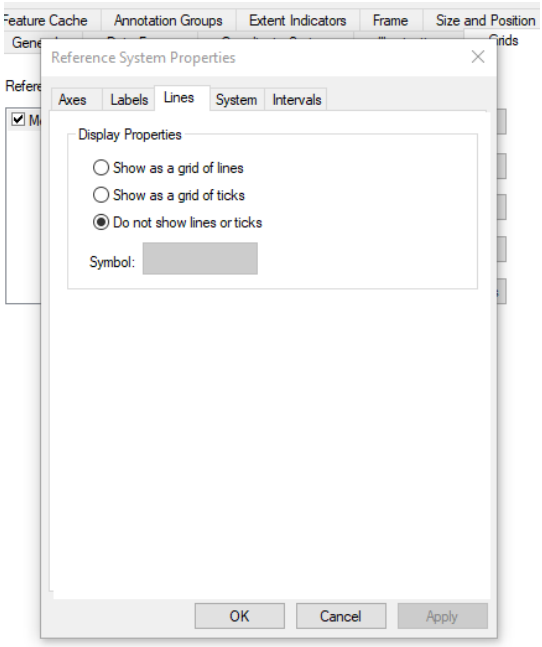
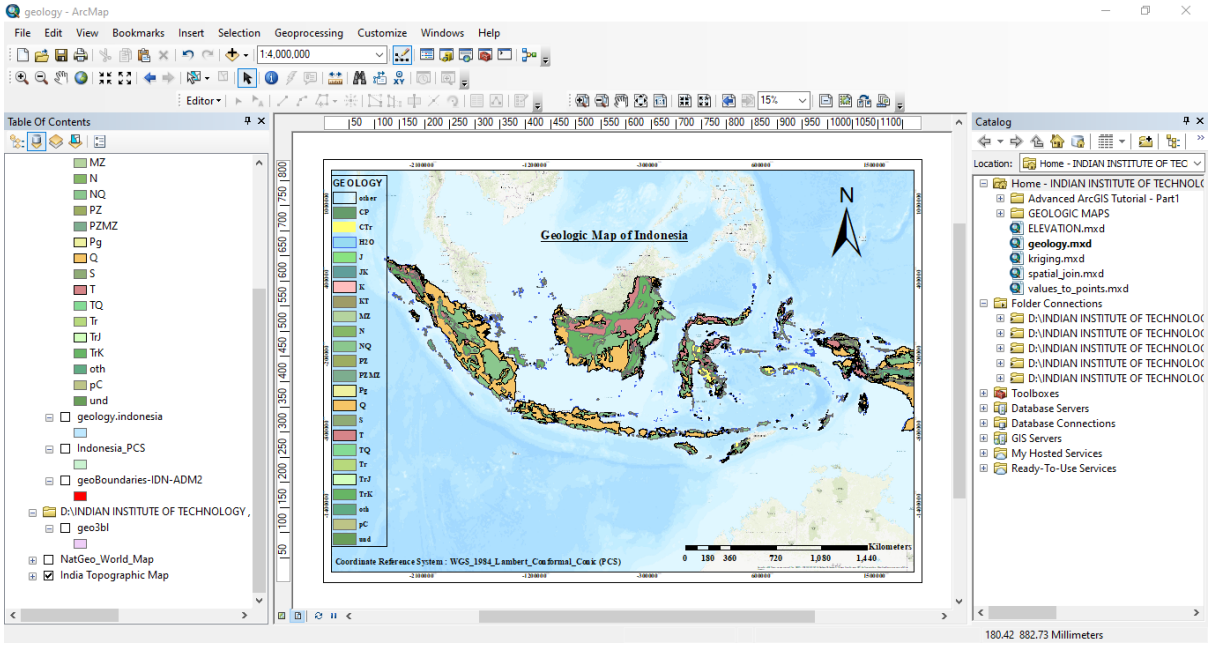

geology - ArcMap
Data Frame Properties
Reference grids are drawn on top of the data frame in Layout view only.
Measured Grid
New Grid...
Remove Grid
Style...
Properties...
Convert To Graphics
Reference System Properties
Axes Labels Lines System Intervals
Label Axes
Top Left Bottom Right
Label Style
Format: Mixed Font
Font: Times New Roman
Size: 18
Color:
Label Offset: 6 pts
Additional Properties...
Label Orientation
Vertical Labels:
Top Left Bottom Right
OK Cancel Apply
Table Of Contents
Catalog
419755.334 615783.82 Meters
803.49 613.93 Millimeters


Feature Cache Annotation Groups Extent Indicators Frame Size and Position
Reference System Properties
Axes Labels Lines System Intervals
Display Properties
Show as a grid of lines
Show as a grid of ticks
Do not show lines or ticks
Symbol:
OK Cancel Apply


geology - ArcMap
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geo3bl
NatGeo_World_Map
India Topographic Map
Geologic Map of Indonesia
GEOLOGY
N
Coordinate Reference System : WGS_1984_Lambert_Conformal_Conic (PCS)
Kilometers
0 180 360 720 1,080 1,440
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