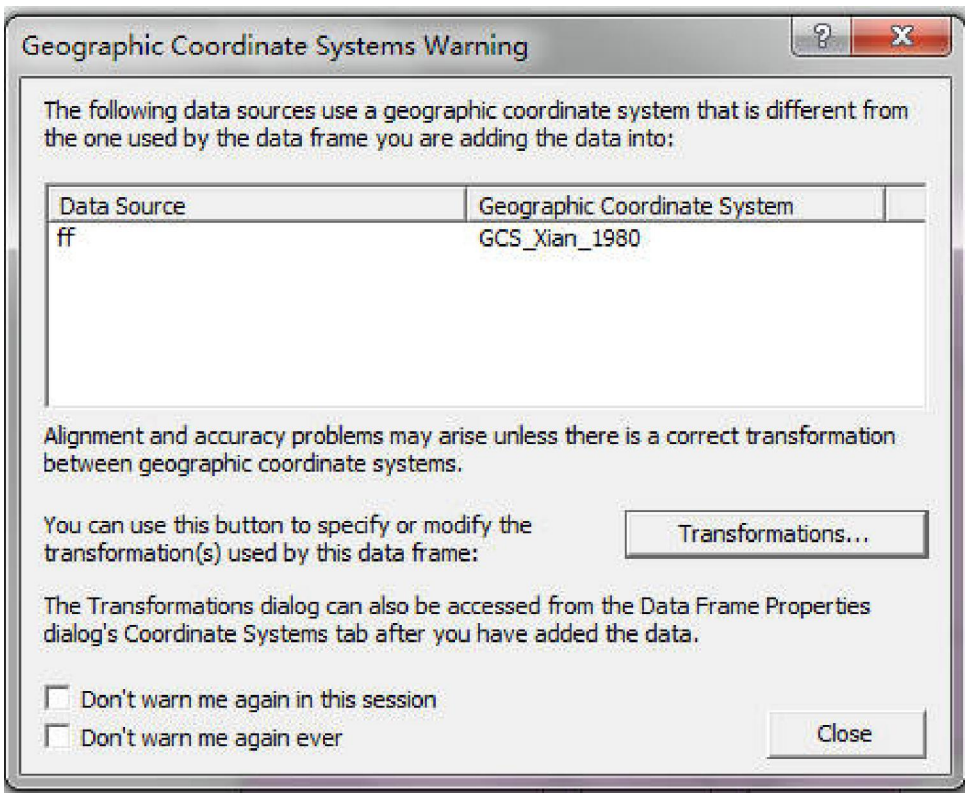
巧妙运用 arcmap 的动态投影实现对图层的投影变换

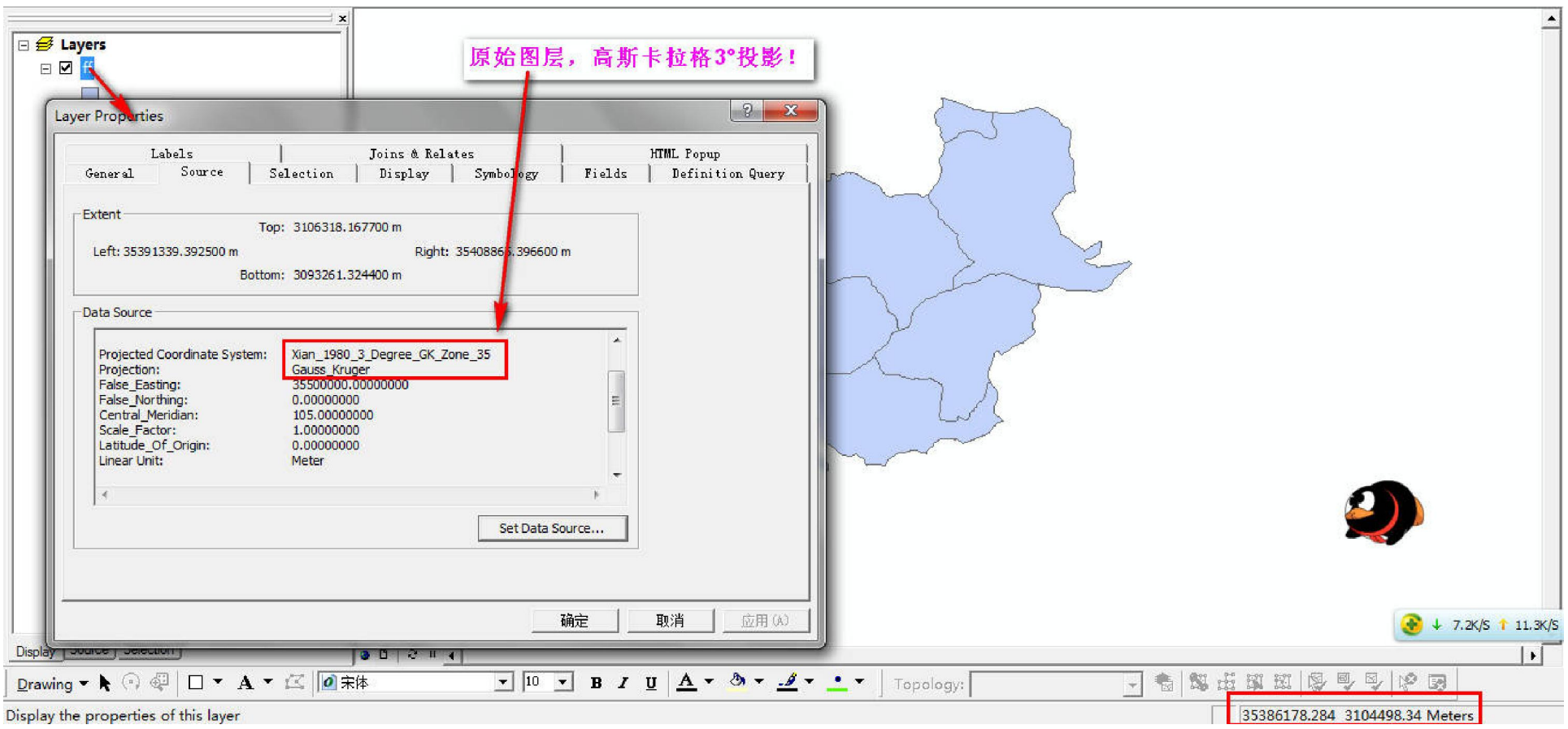
6/7/2011 9:40:00 PM 由 km_bzh 编辑

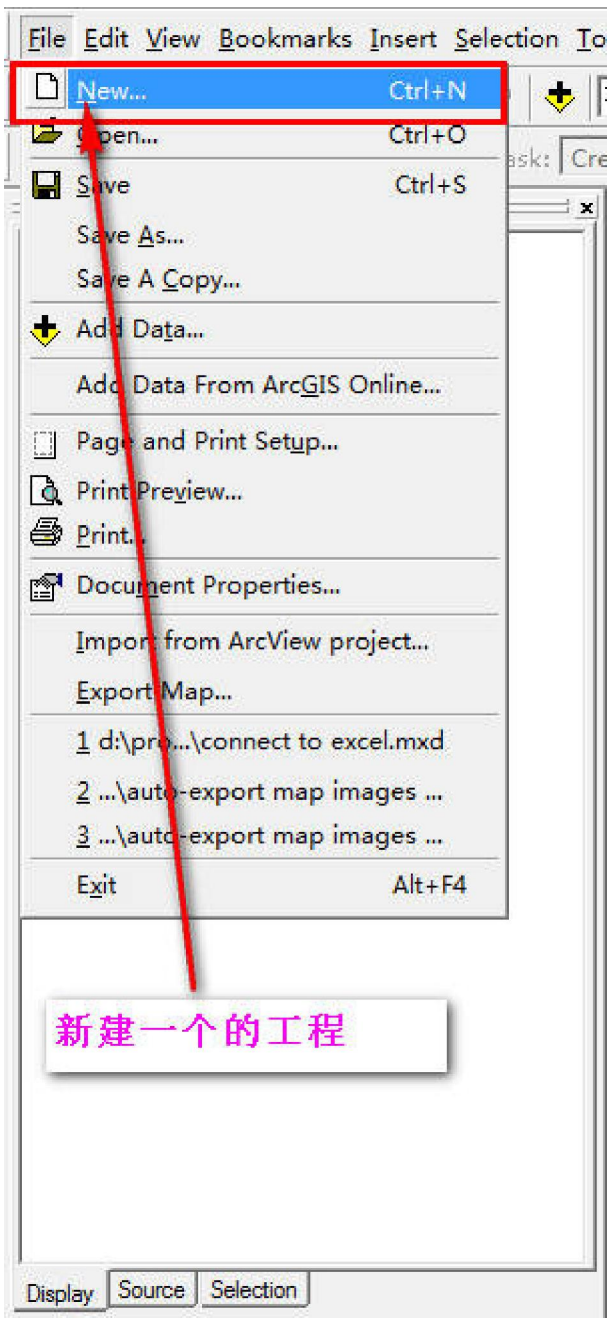
动态投影，我想大家并不陌生，当不同坐标加载到 arcmap 中是，会提示要坐标转换，其实这个就是在 arcmap 里面的一个动态投影的过程。



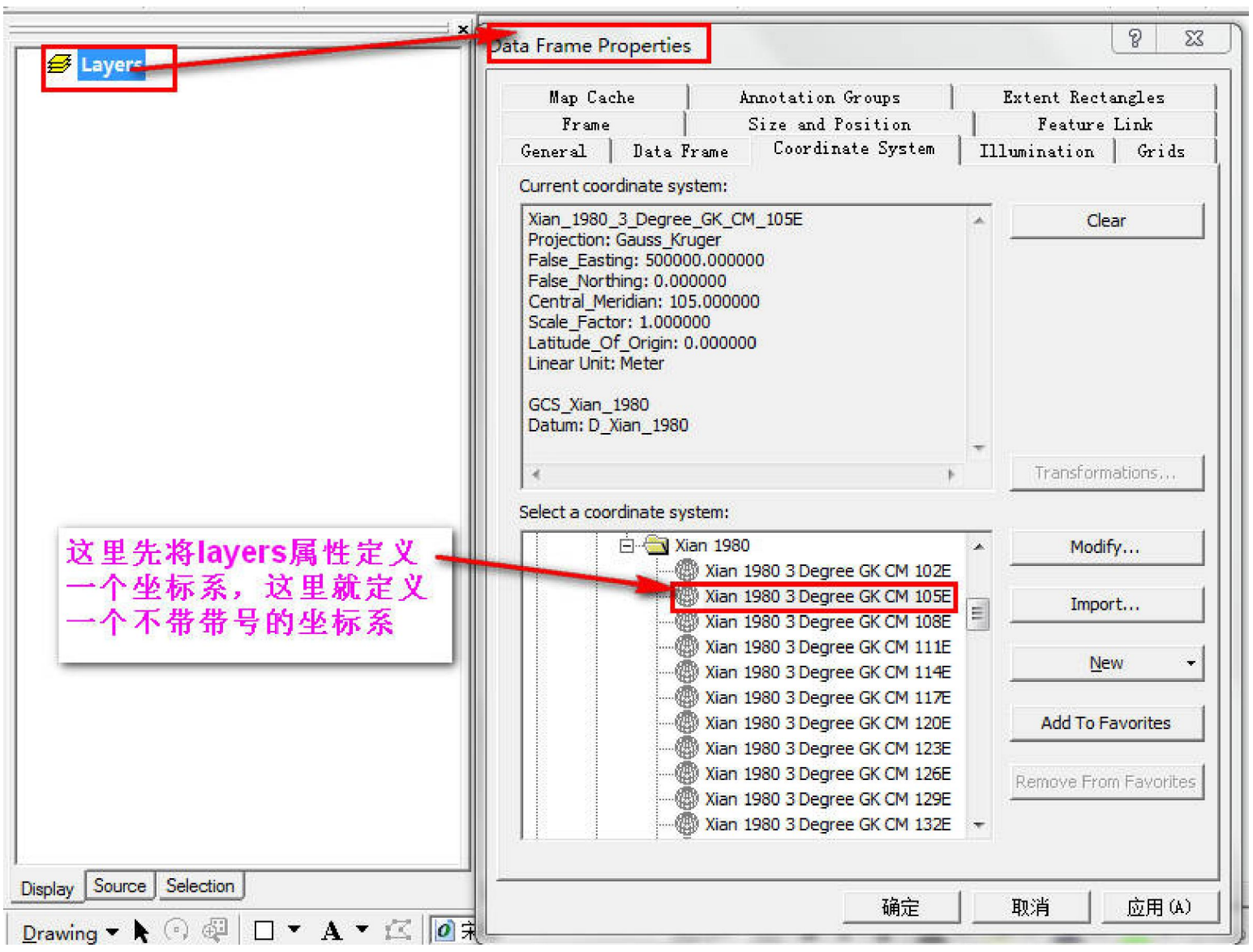
看下面一个例子吧！

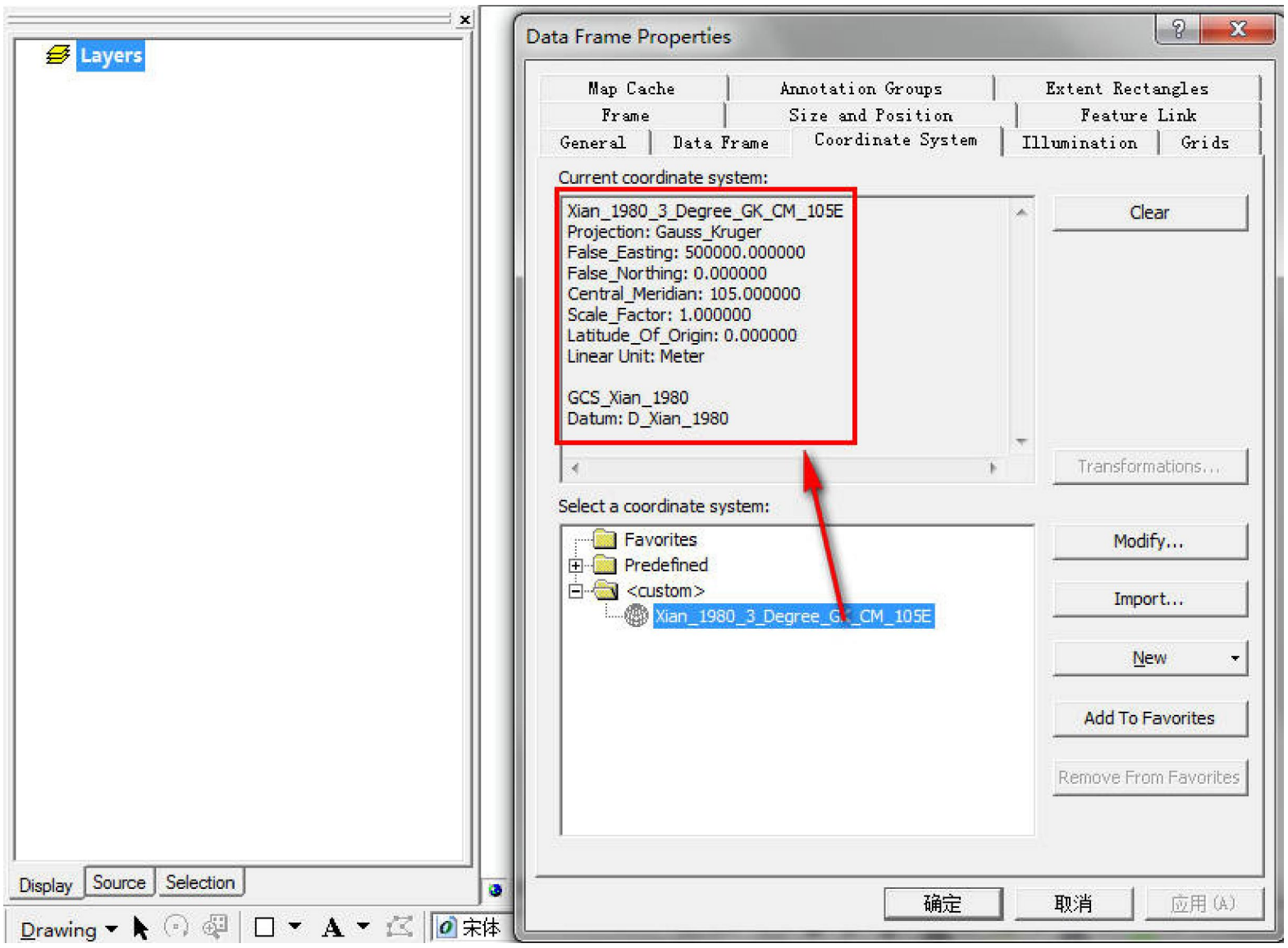
下面一个图层加载到 arcmap 里面，坐标如图所示，带带号的坐标

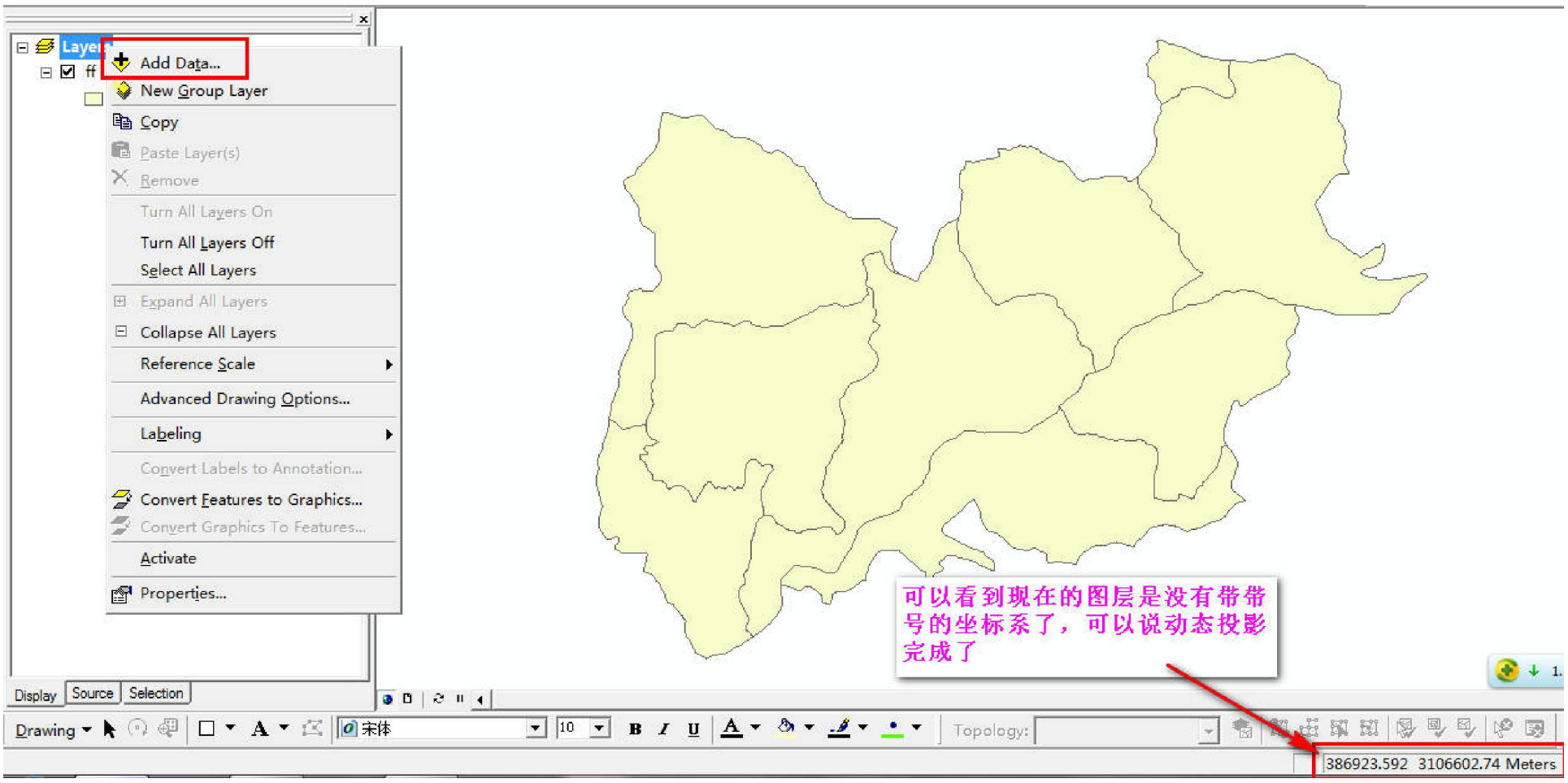


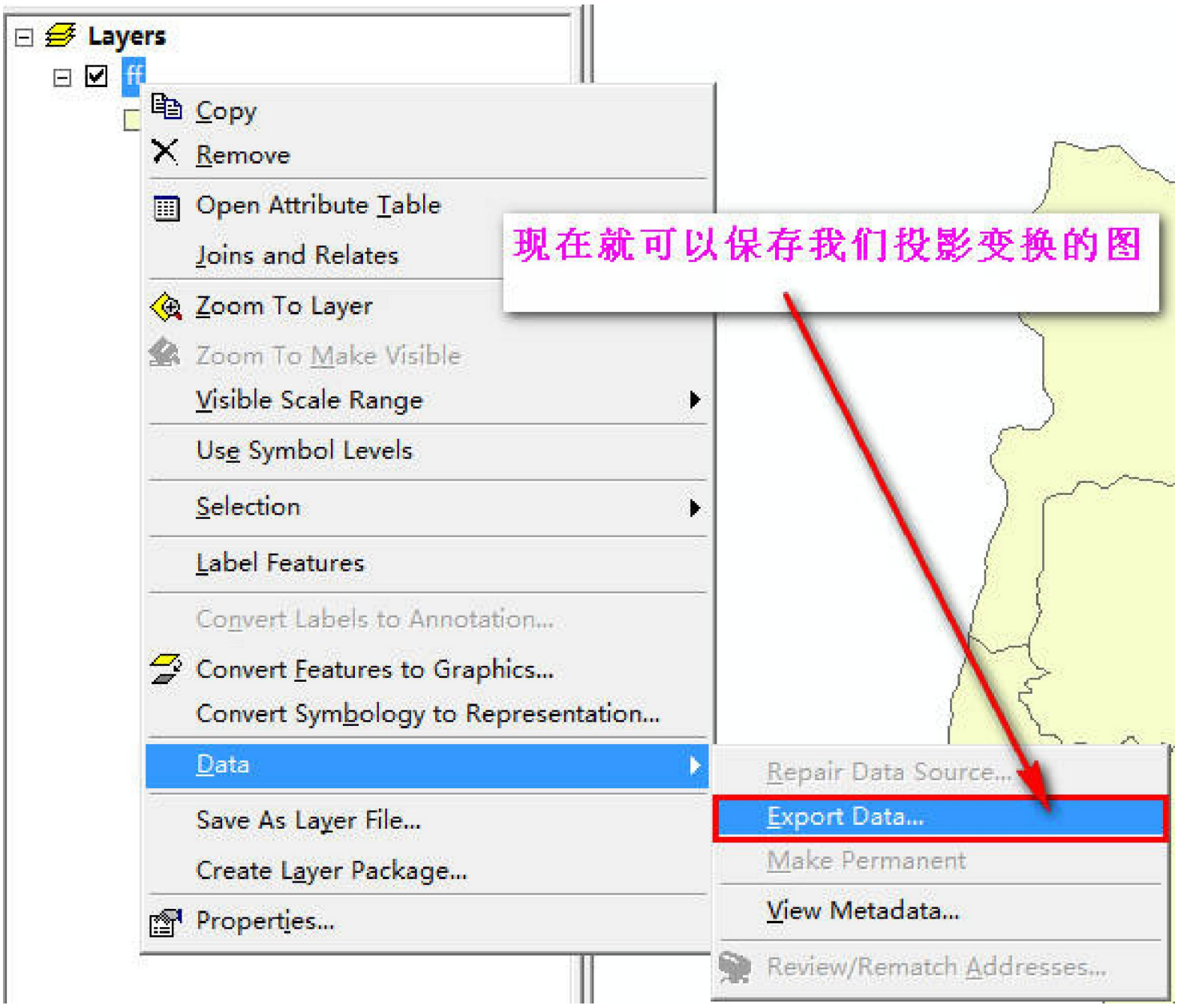


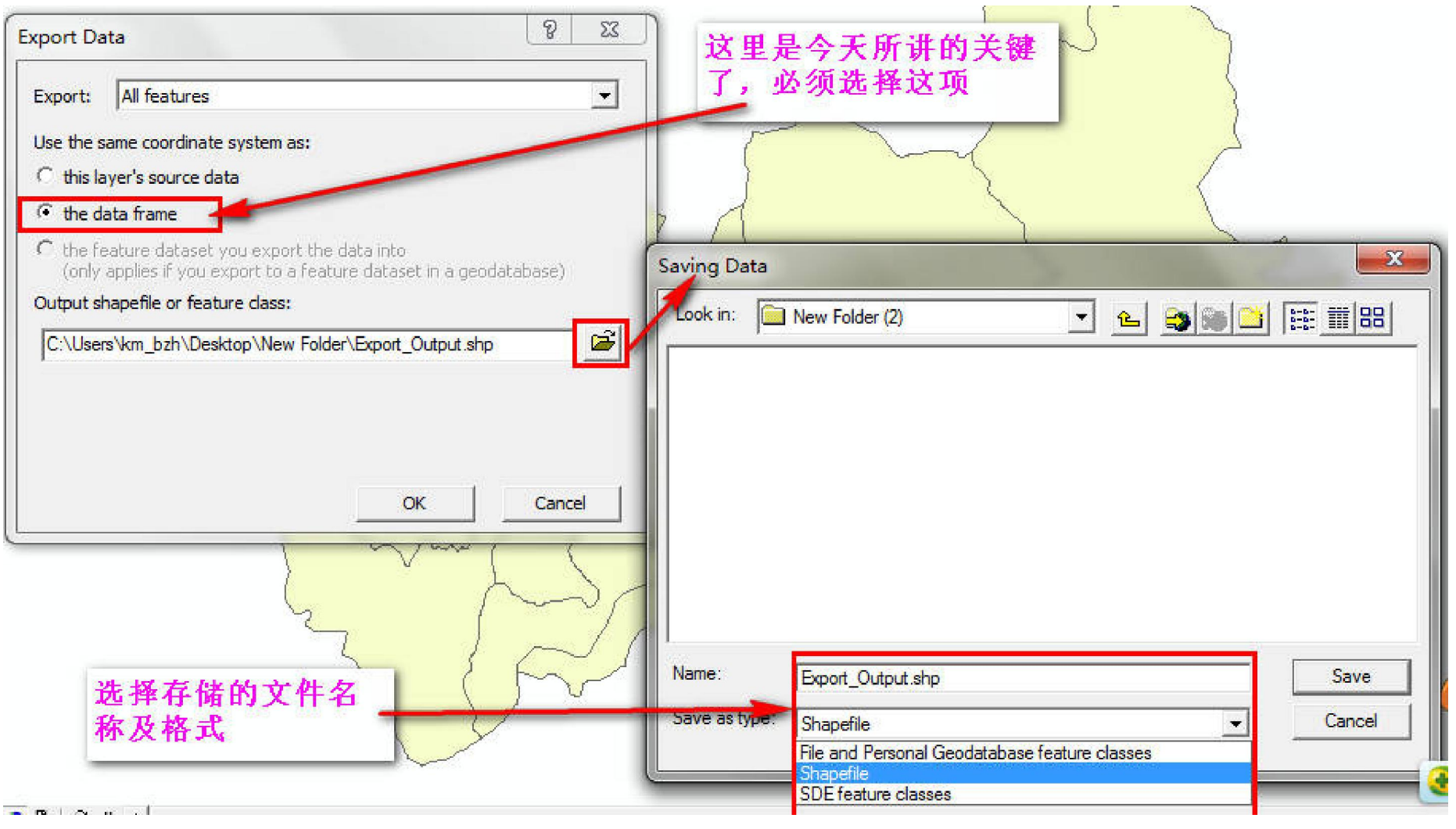
新建一个工程，然后定义 date frame 的坐标系，（一般 data frame 的坐标是和你第一个加载进来的图层的坐标系是一样的，以后加载进来的图层都会自动转到此坐标系下面。）也可以自己定义一个坐标系，下面讲的正是自定义一个坐标系。

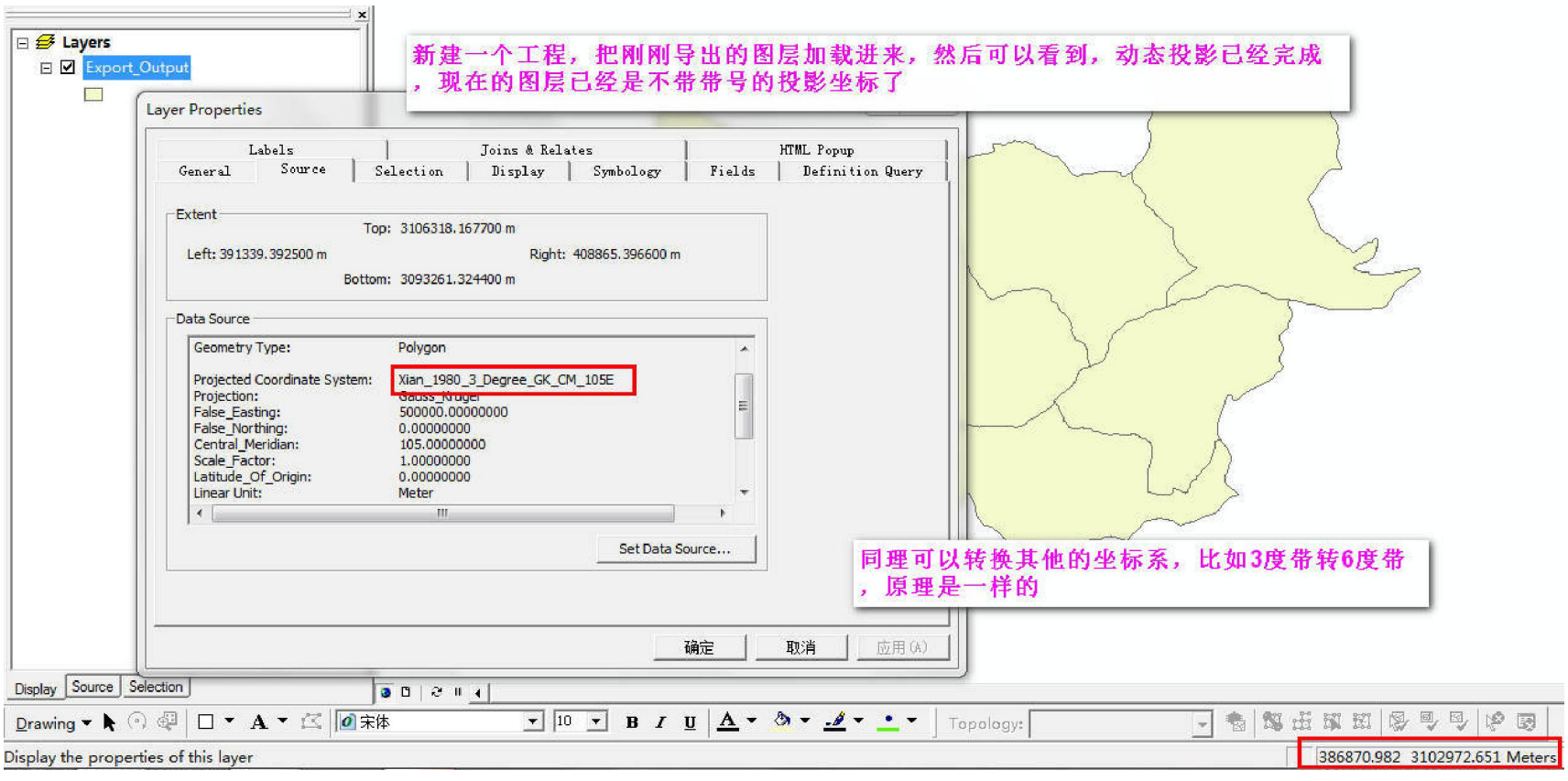



Layers
Display
Source
Selection
Drawing
宋体
Data Frame Properties
Map Cache
Annotation Groups
Extent Rectangles
Frame
Size and Position
Feature Link
General
Data Frame
Coordinate System
Illumination
Grids
Current coordinate system:
Xian_1980_3_Degree_GK_CM_105E
Projection: Gauss_Kruger
False_Easting: 500000.000000
False_Northing: 0.000000
Central_Meridian: 105.000000
Scale_Factor: 1.000000
Latitude_Of_Origin: 0.000000
Linear Unit: Meter
GCS_Xian_1980
Datum: D_Xian_1980
Clear
Transformations...
Select a coordinate system:
Favorites
Predefined
<custom>
Xian_1980_3_Degree_GK_CM_105E
Modify...
Import...
New
Add To Favorites
Remove From Favorites
确定
取消
应用 (A)

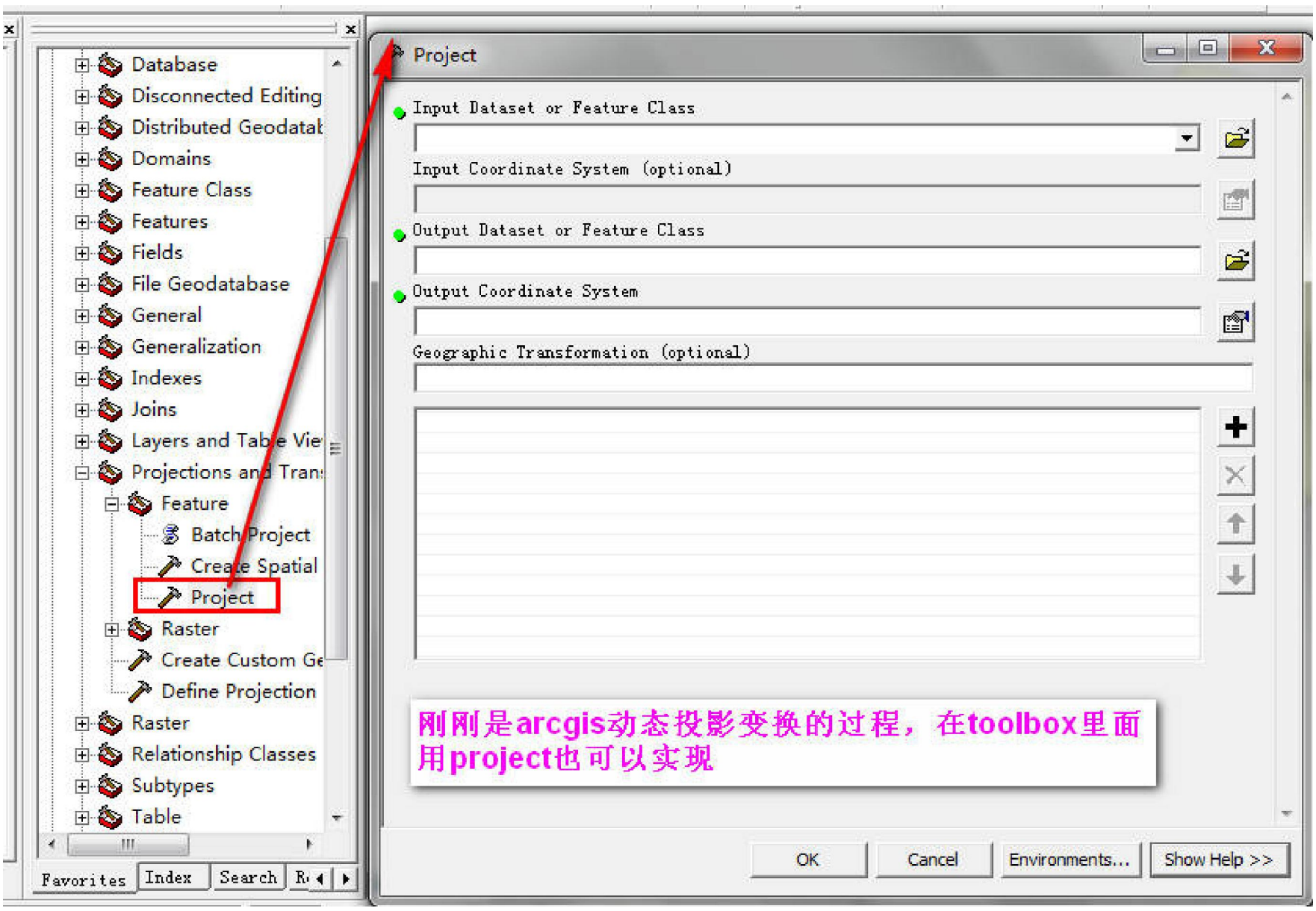

Add Data...
New Group Layer
Copy
Paste Layer(s)
Remove
Turn All Layers On
Turn All Layers Off
Select All Layers
Expand All Layers
Collapse All Layers
Reference Scale
Advanced Drawing Options...
Labeling
Convert Labels to Annotation...
Convert Features to Graphics...
Convert Graphics To Features...
Activate
Properties...
可以看到现在的图层是没有带带号的坐标系了，可以说动态投影完成了
Topology:
386923.592 3106602.74 Meters


Layers
ff
Copy
Remove
Open Attribute Table
Joins and Relates
Zoom To Layer
Zoom To Make Visible
Visible Scale Range
Use Symbol Levels
Selection
Label Features
Convert Labels to Annotation...
Convert Features to Graphics...
Convert Symbology to Representation...
Data
Save As Layer File...
Create Layer Package...
Properties...
Repair Data Source...
Export Data...
Make Permanent
View Metadata...
Review/Rematch Addresses...
现在就可以保存我们投影变换的图


Export Data
Export: All features
Use the same coordinate system as:
this layer's source data
the data frame
the feature dataset you export the data into
(only applies if you export to a feature dataset in a geodatabase)
Output shapefile or feature class:
C:\Users\km_bzh\Desktop\New Folder\Export_Output.shp
OK
Cancel
这里是今天所讲的关键了，必须选择这项
Saving Data
Look in: New Folder (2)
Name: Export_Output.shp
Save as type: Shapefile
File and Personal Geodatabase feature classes
Shapefile
SDE feature classes
Save
Cancel
选择存储的文件名称及格式

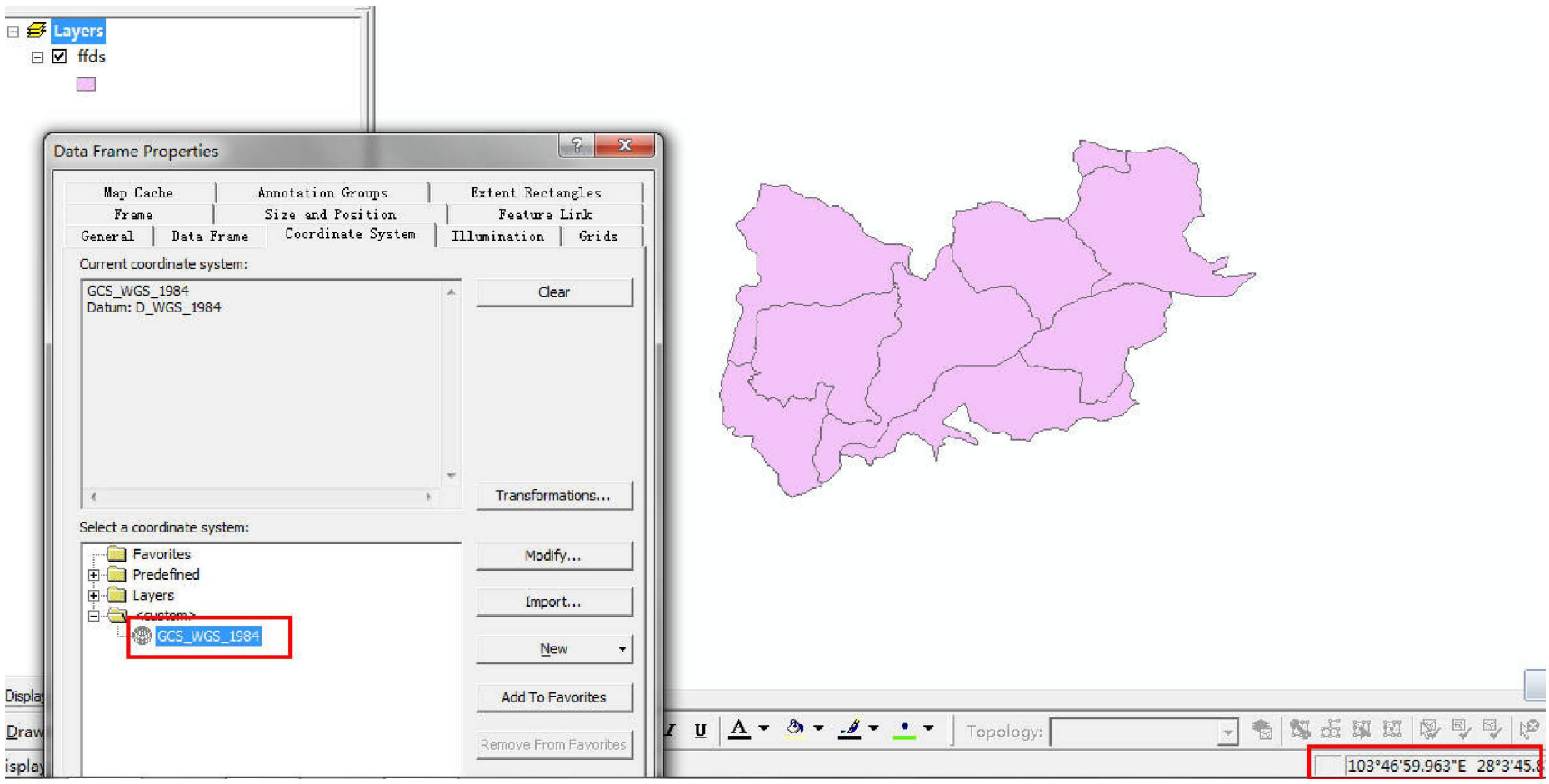


其实上述的动态投影，在 toolbox 里面也可以用 project 来实现



下面是使用动态投影，实现西安 80 转 wgs84 经纬度坐标，当然这个精度不高，如果要实现高精度，必须使用 7 参数来转换。如果是小比例尺，完全是可以满足精度要求。

如果不考虑很高的精度，还可以 54 转 80 等等。这里只是抛砖引玉了，可以自己试验一下。


Layers
ffds
Data Frame Properties
Map Cache
Annotation Groups
Extent Rectangles
Frame
Size and Position
Feature Link
General
Data Frame
Coordinate System
Illumination
Grids
Current coordinate system:
GCS_WGS_1984
Datum: D_WGS_1984
Clear
Transformations...
Select a coordinate system:
Favorites
Predefined
Layers
GCS_WGS_1984
Modify...
Import...
New
Add To Favorites
Remove From Favorites
Topology:
103°46'59.963"E 28°3'45.