

Changing the coordinate system of a layer in ArcMap

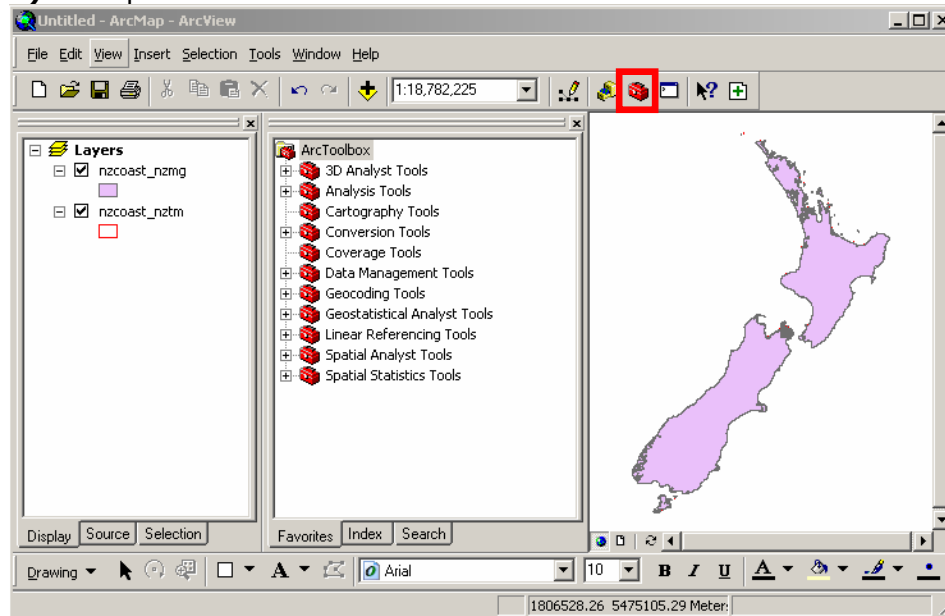
INTRODUCTION

In this example two New Zealand coast line layers have been added to ArcMap; nzcoast_nztm is projected in NZGD2000 (NZTM) and nzcoast_nzmg in New Zealand Map Grid (NZMG). Since nzcoast_nztm was opened first, the Data Frame (overall) coordinate system has been set to NZTM. We now want to convert nzcoast_nzmg to NZTM.

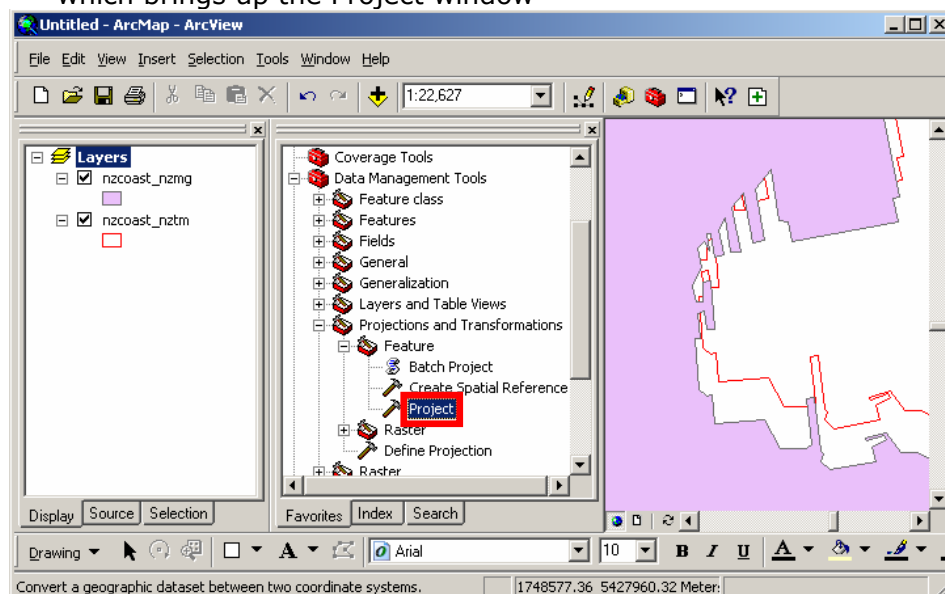
Note: This same process can be used to transform from NZTM to NZMG (take note at step 7).

PROCESS

1) Open ArcToolbox.

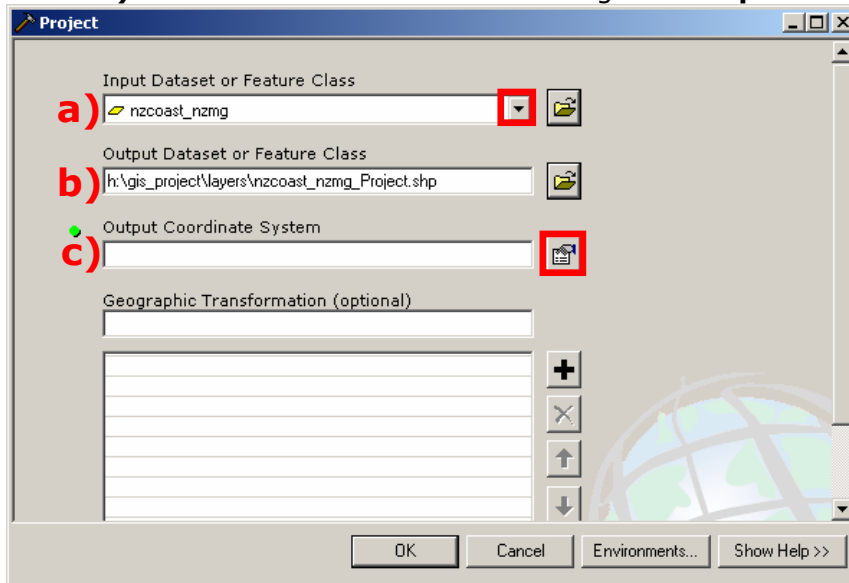


2) Zooming in on the Data Frame shows the difference between the two projections. From ArcToolbox, select: **Data Management Tools>Projections and Transformations>Feature>Project,** which brings up the Project window

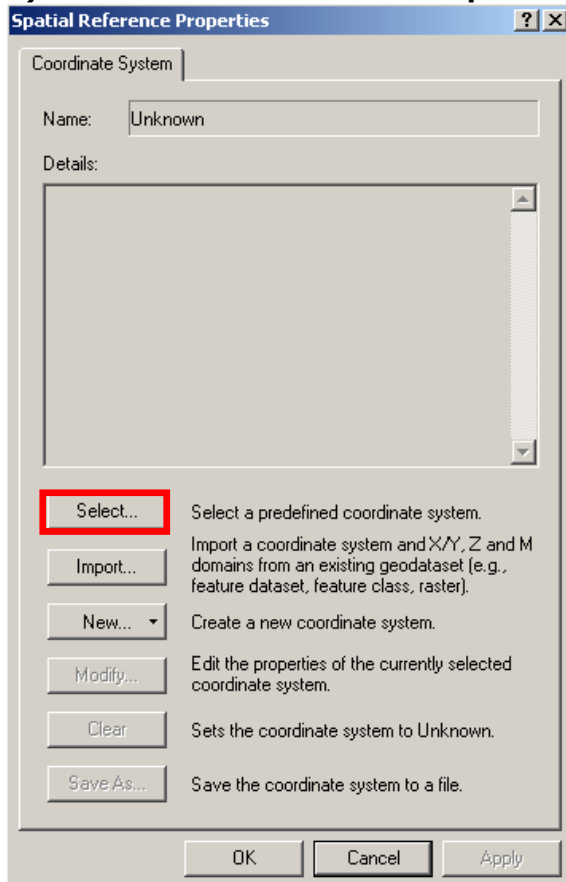


Changing the coordinate system of a layer in ArcMap

- 3) a) Choose the **Input Dataset or Feature Class**.
b) The **Output Dataset or Feature Class** should automatically have been filled in after step a). Change the output pathname if you want to store it elsewhere.
c) Now click on the icon to the right of **Output Coordinate System**

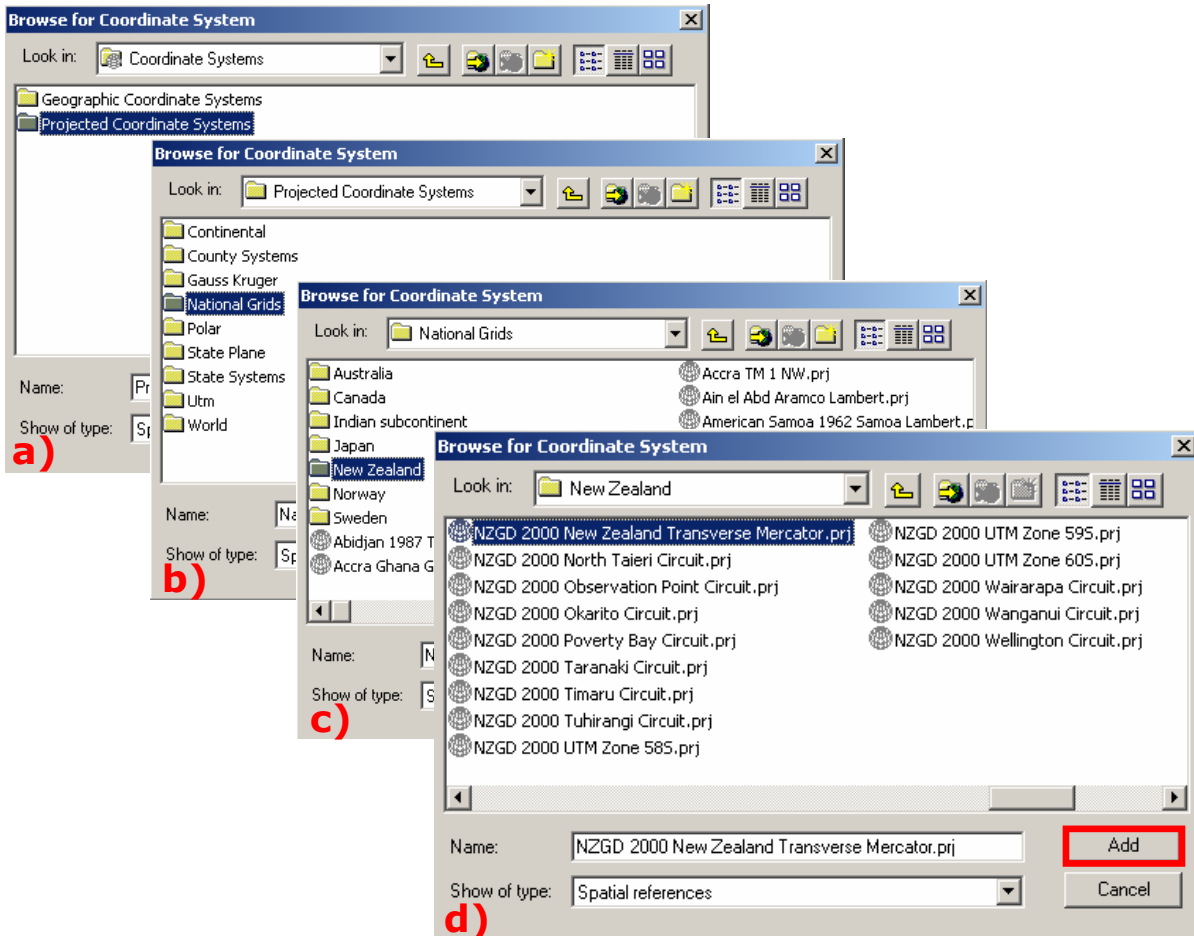


- 4) Choose **Select** from the **Spatial Reference Properties**

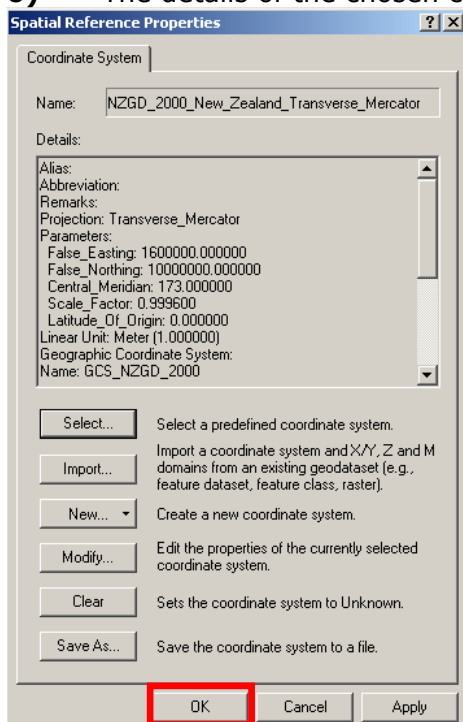


Changing the coordinate system of a layer in ArcMap

- 5) a) Open the **Projected Coordinate Systems** folder
b) Open the **National Grids** folder
c) Open the **New Zealand** folder
d) Choose **NZGD 2000 New Zealand Transverse Mercator.prj**
Then click **Add**.

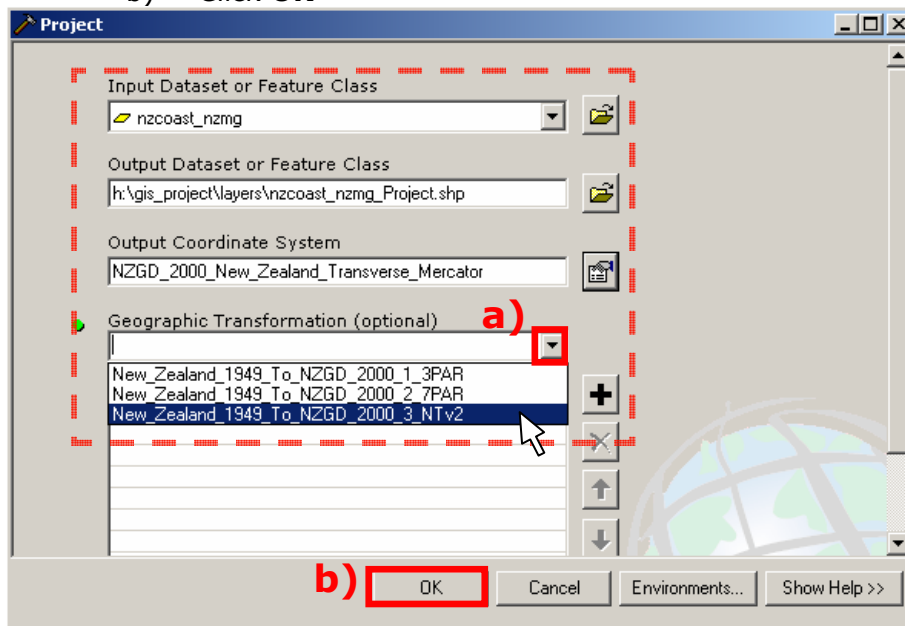


- 6) The details of the chosen coordinate system are now displayed. Click **OK**.

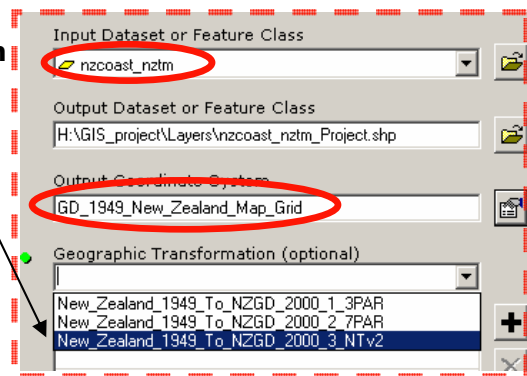


Changing the coordinate system of a layer in ArcMap

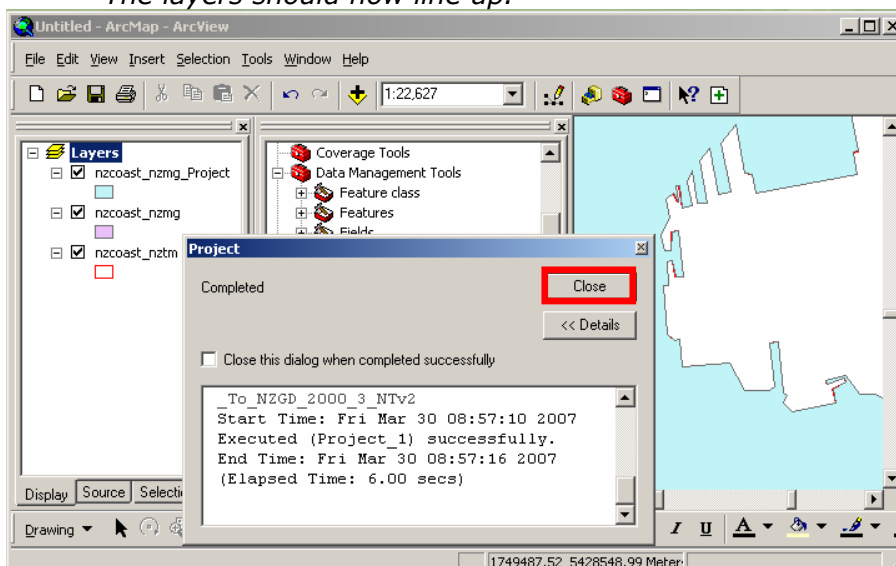
- 7) a) Choose the **Geographic Transformation**. Note: **Always use NTv2**, which is the most accurate transformation algorithm.
b) Click **OK**



NOTE: Use the same **Geographic Transformation** when converting from **NZTM** to **NZMG**

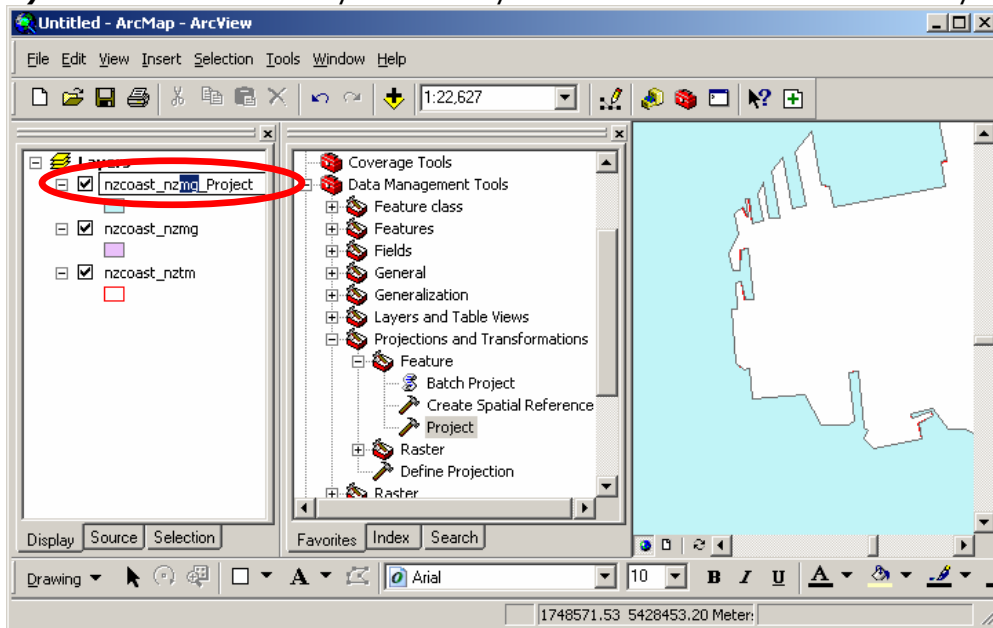


- 8) The Project window will now show the transformation running.
Close the Project window when the transformation has finished.
The layers should now line up.

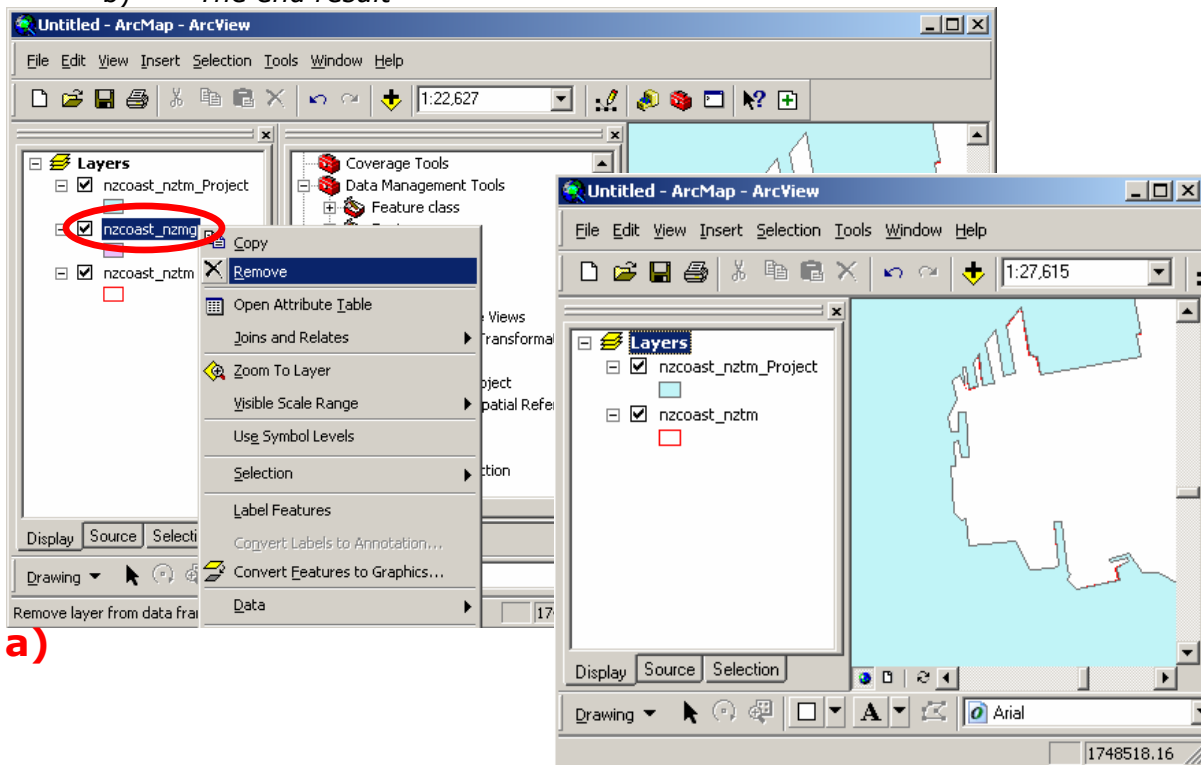


Changing the coordinate system of a layer in ArcMap

- 9) Rename the newly created layer to reflect the new coordinate system if necessary.



- 10) a) Remove the original NZMG (e.g. nzcoast_nzmg) layer (Right-click on layer and **Remove**)
b) *The end result*



a)

b)