

MAP PROJECTION

A map projection is one of many methods used to represent the 3-dimensional surface of the earth or other round body on a 2-dimensional plane in cartography (mapmaking). This process is typically, but not necessarily, a mathematical procedure (some methods are graphically based).

CREATION OF A MAP PROJECTION

The creation of a map projection involves three steps in which information is lost in each step:

- Selection of a model for the shape of the earth or round body (choosing between a sphere and ellipsoid)
- Transform geographic coordinates (longitude and latitude) to plane coordinates (easting and northing).
- Reduce the scale (in manual cartography this step came second, in digital cartography it comes last)

Metric properties of maps

- Area
- Shape
- Direction
- Distance
- Scale