

Difficulties in Spatial Analyses of Wide-Scale Geographies



Basic Freshwater Condition Analyses

- Length of river
- Area of waterbody surfaces
- Volume of water

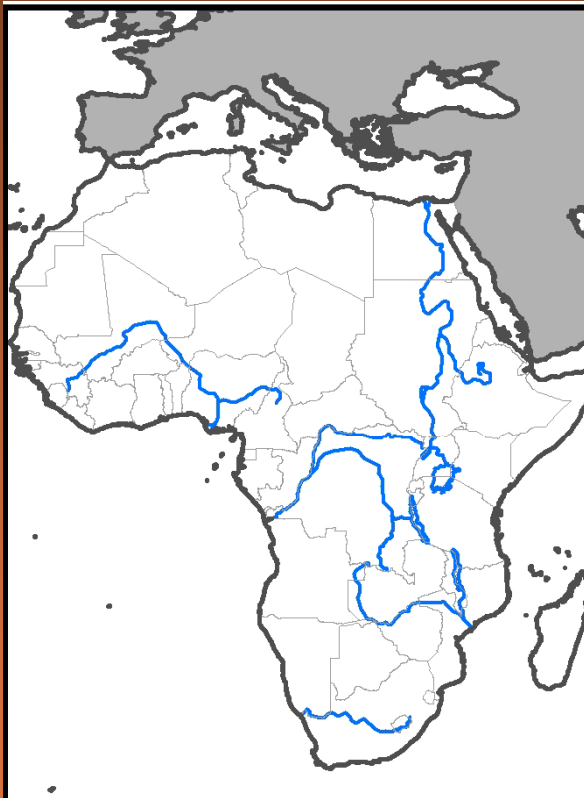
Currently, we are unable to perform these most basic analyses at a wide scale with much accuracy or precision because the data are not adequate.



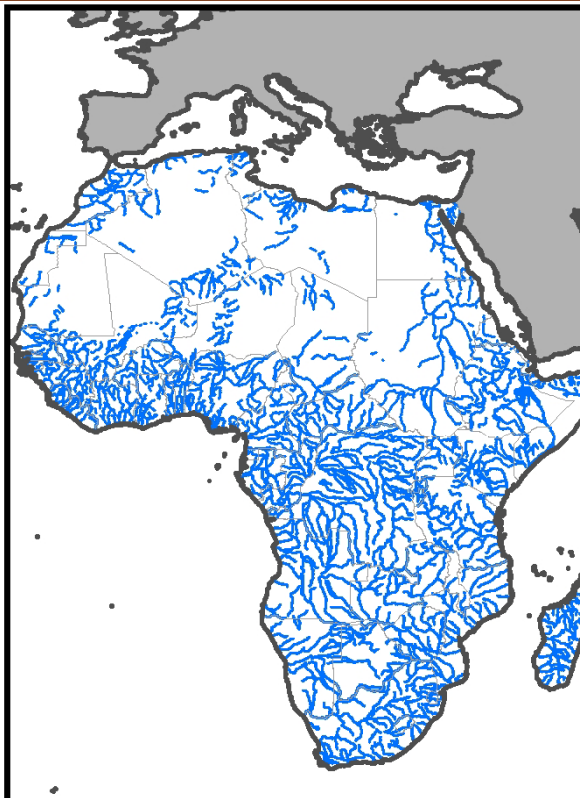
Problems in Spatial Analyses of Wide-Scale Geographies

- Scale and scale differences of input data
- Lack of data
- Quality of data (i.e. human error, inadequate technology)
- Varied methodologies used to fill different portions of data set

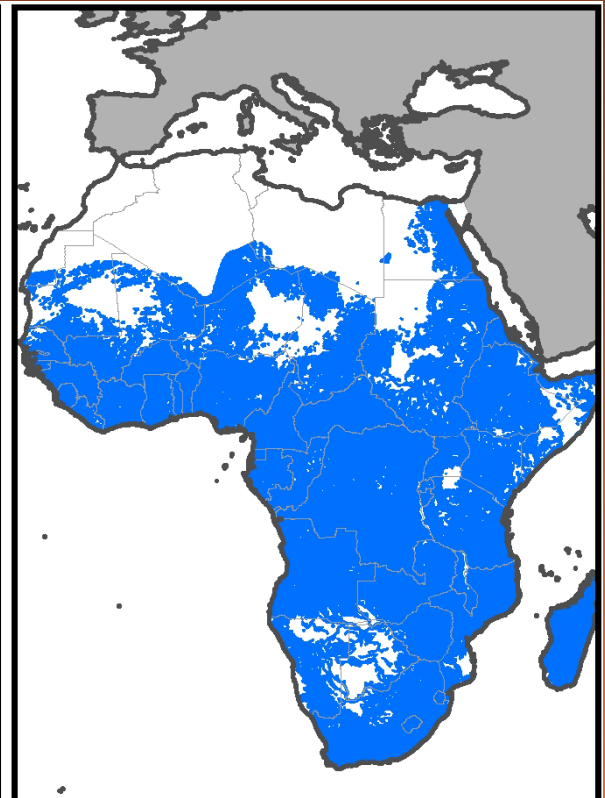
Problems of Existing Global Datasets



ESRI Rivers

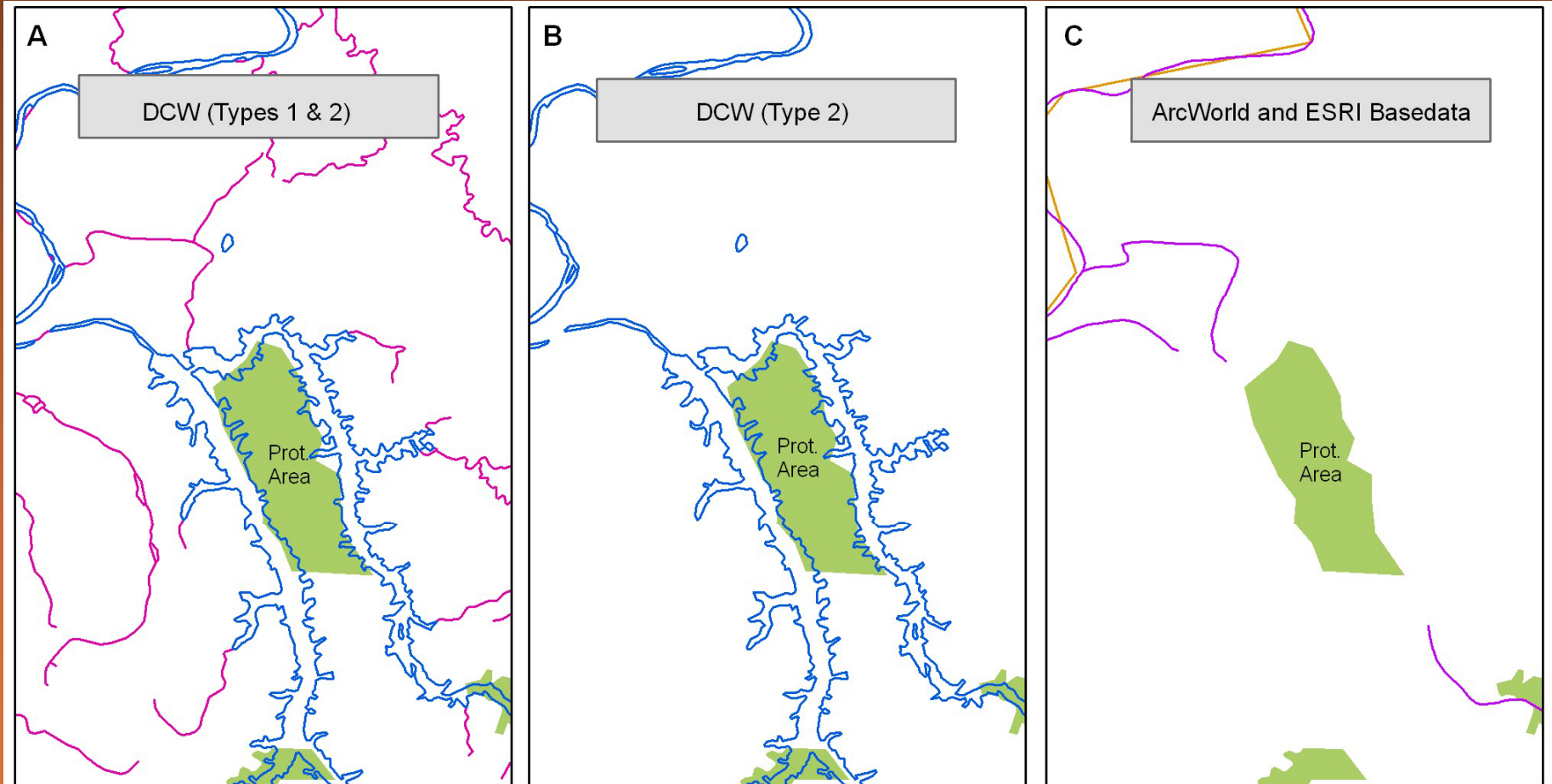


ArcWorld 1:3M

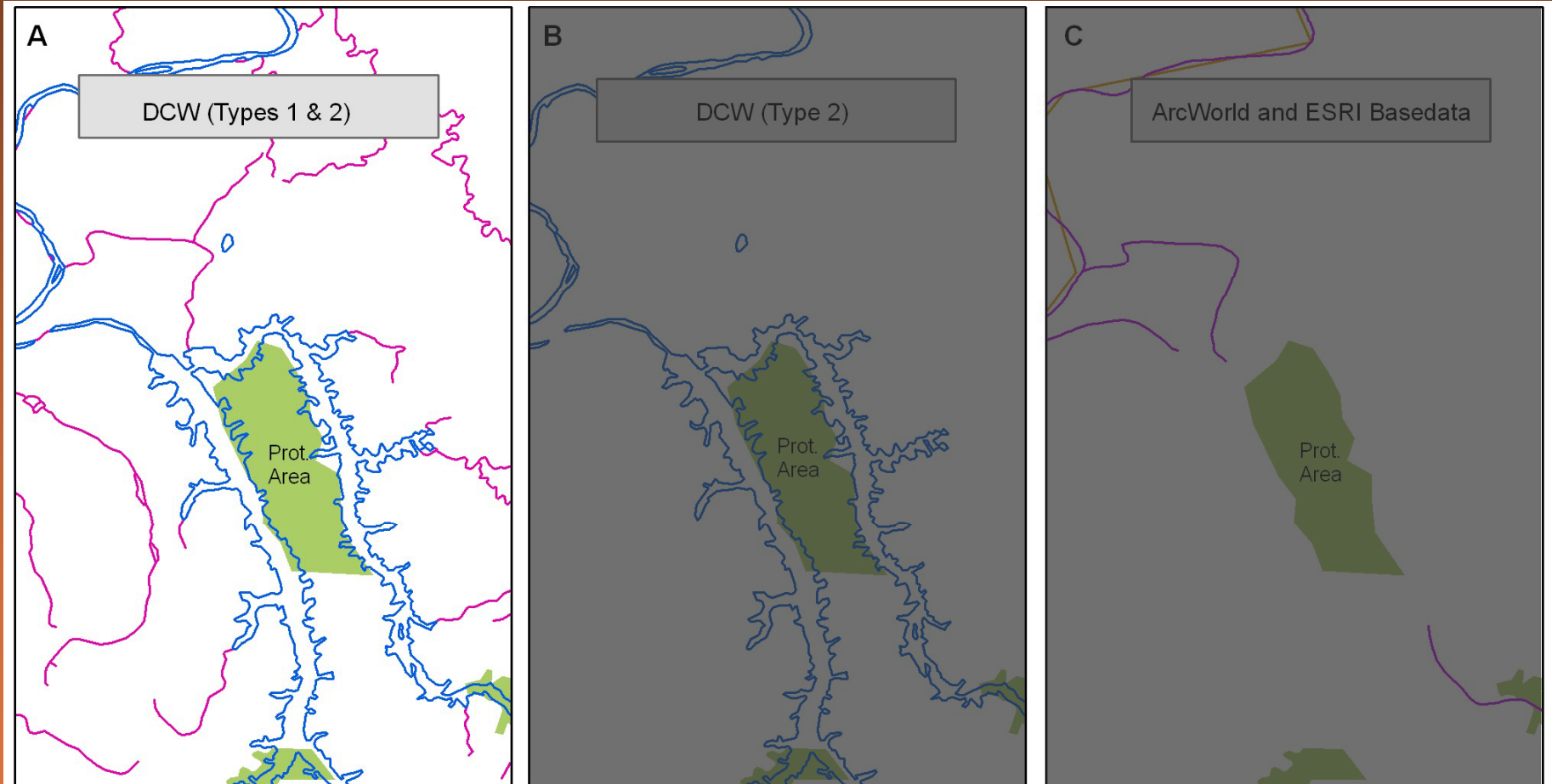


Digital Chart of the World

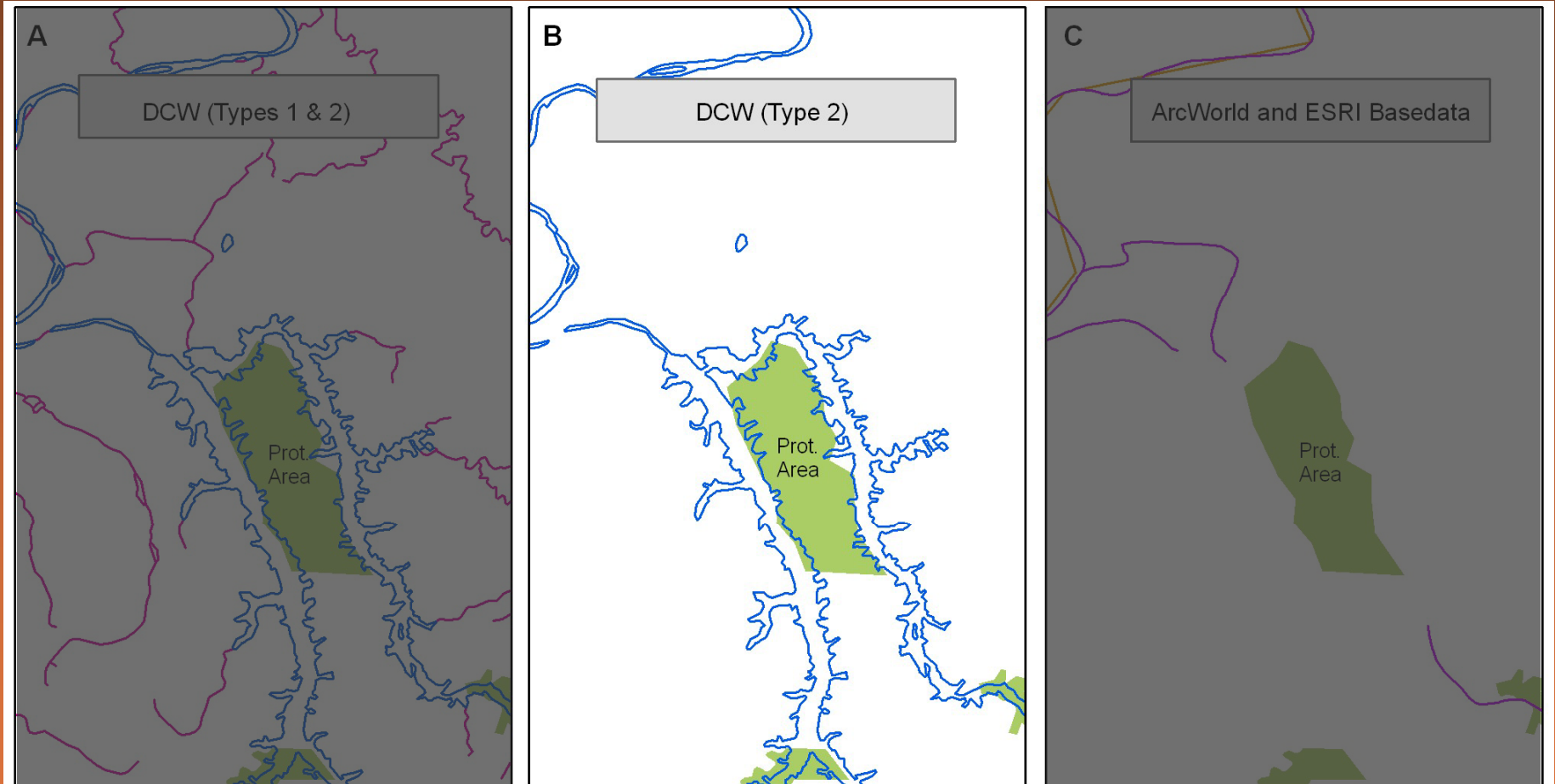
Problems of Measuring Freshwater Conservation with Traditional Methods



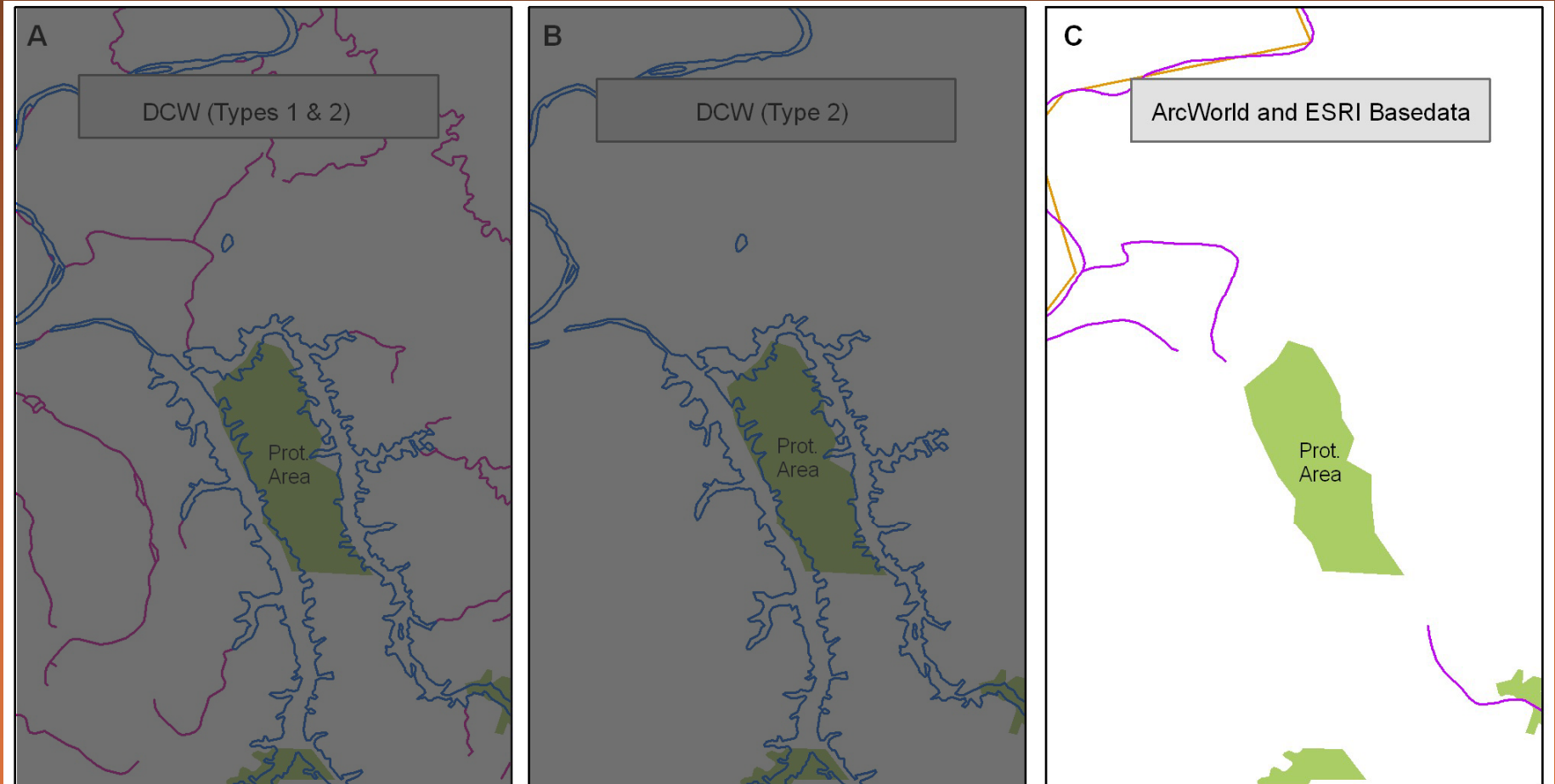
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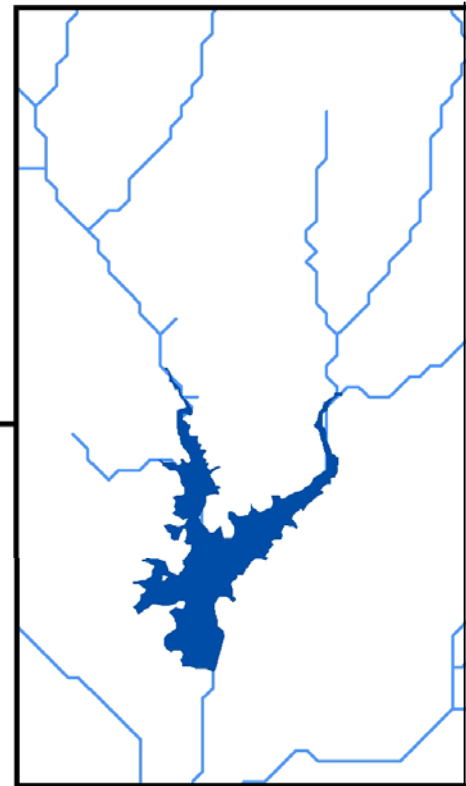
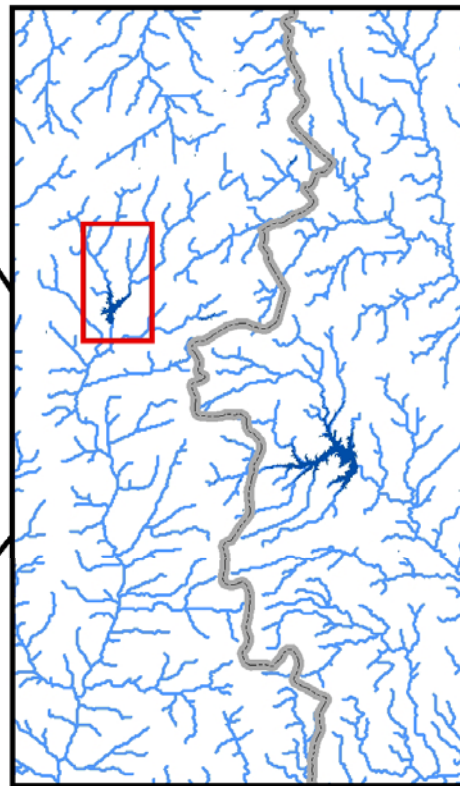
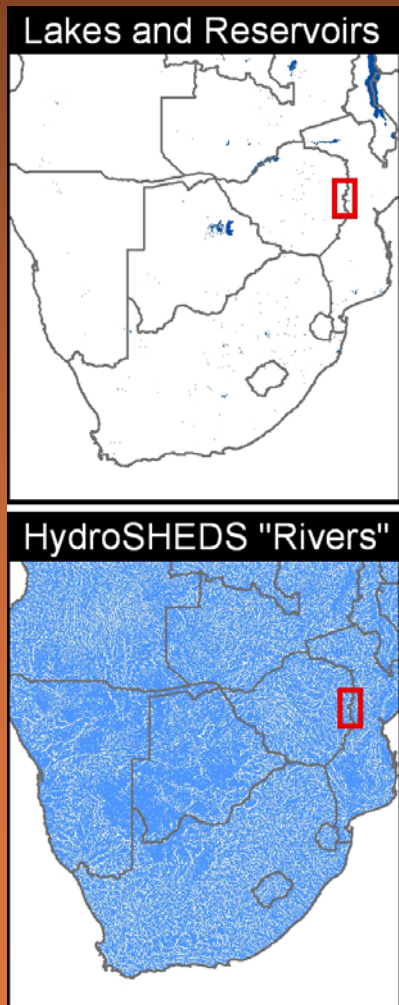


Problems of Measuring Freshwater Conservation with Traditional Methods



Improvement of Data

- HydroSHEDS (Lehner, et al.)
- Global Lakes and Wetlands Database (Lehner et al.)



0 Kilometers 100

0 Kilometers 15



Short Term:

- HydroSHEDS (Lehner, et al.)
- Global Lakes and Wetlands Database (GLWD) (Lehner, et al.)

Long Term:

- Continued improvement of the WDPA
- New technologies for data development
- Increased organizational capacity and skills