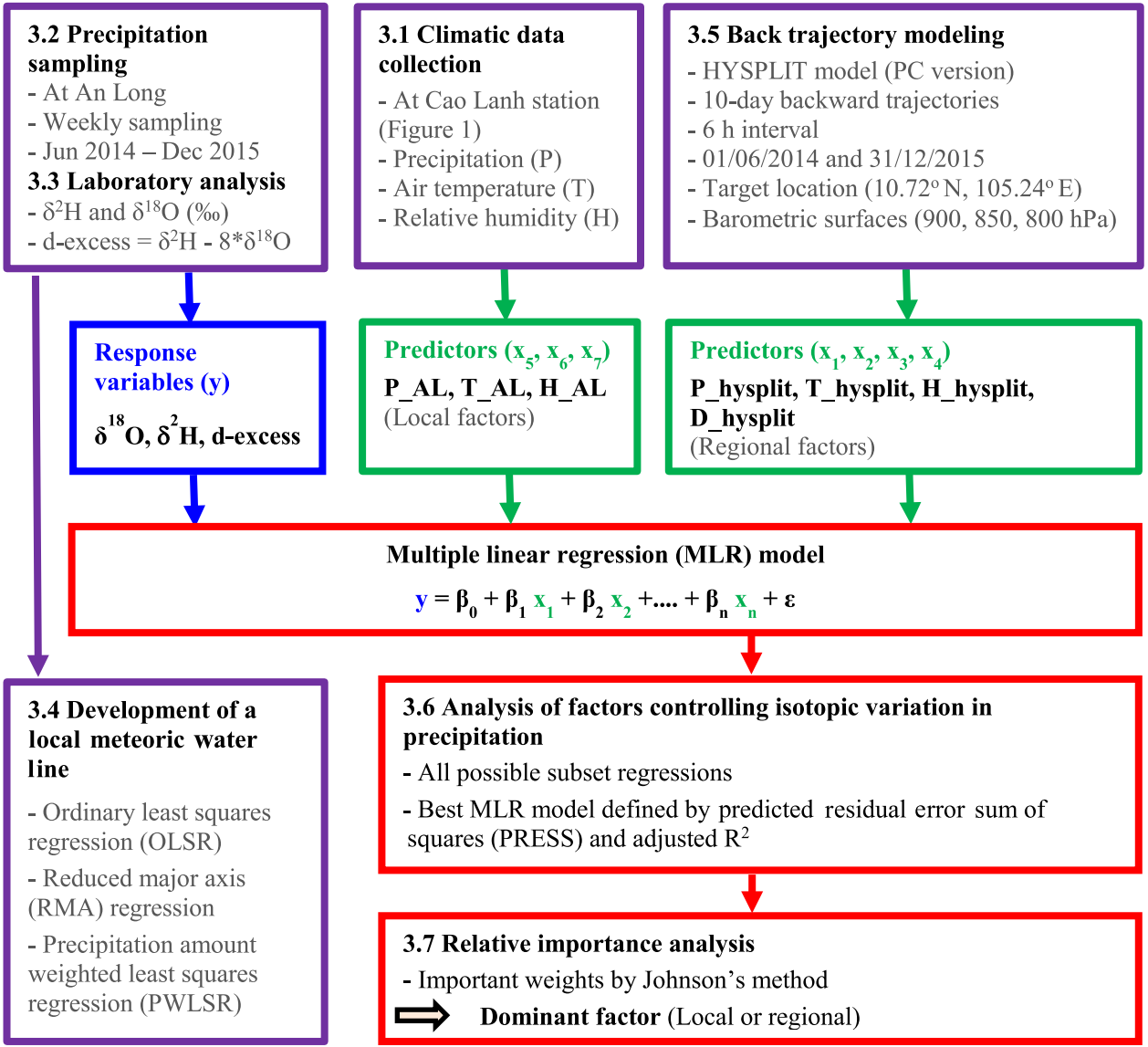
3.2 Precipitation sampling
- At An Long
- Weekly sampling
- Jun 2014 – Dec 2015
3.3 Laboratory analysis
- δ2H and δ18O (‰)
- d-excess = δ2H - 8*δ18O
3.1 Climatic data collection
- At Cao Lanh station (Figure 1)
- Precipitation (P)
- Air temperature (T)
- Relative humidity (H)
3.5 Back trajectory modeling
- HYSPLIT model (PC version)
- 10-day backward trajectories
- 6 h interval
- 01/06/2014 and 31/12/2015
- Target location (10.72o N, 105.24o E)
- Barometric surfaces (900, 850, 800 hPa)
Response variables (y)
δ18O, δ2H, d-excess
Predictors (x5, x6, x7)
P_AL, T_AL, H_AL
(Local factors)
Predictors (x1, x2, x3, x4)
P_hysplit, T_hysplit, H_hysplit, D_hysplit
(Regional factors)
Multiple linear regression (MLR) model
y = β0 + β1 x1 + β2 x2 +.... + βn xn + ε
3.4 Development of a local meteoric water line
- Ordinary least squares regression (OLSR)
- Reduced major axis (RMA) regression
- Precipitation amount weighted least squares regression (PWLSR)
3.6 Analysis of factors controlling isotopic variation in precipitation
- All possible subset regressions
- Best MLR model defined by predicted residual error sum of squares (PRESS) and adjusted R2
3.7 Relative importance analysis
- Important weights by Johnson's method
Dominant factor (Local or regional)