

Figure S1. Box plot of ESD at 0.25° based on ETC analysis on four land cover types

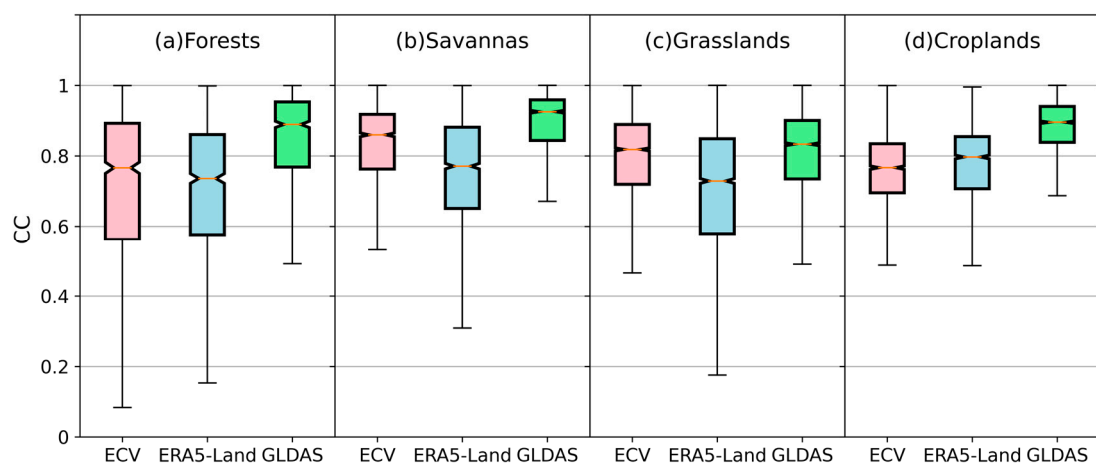


Figure S2. Box plot of CC at 0.25° based on ETC analysis on four land cover types

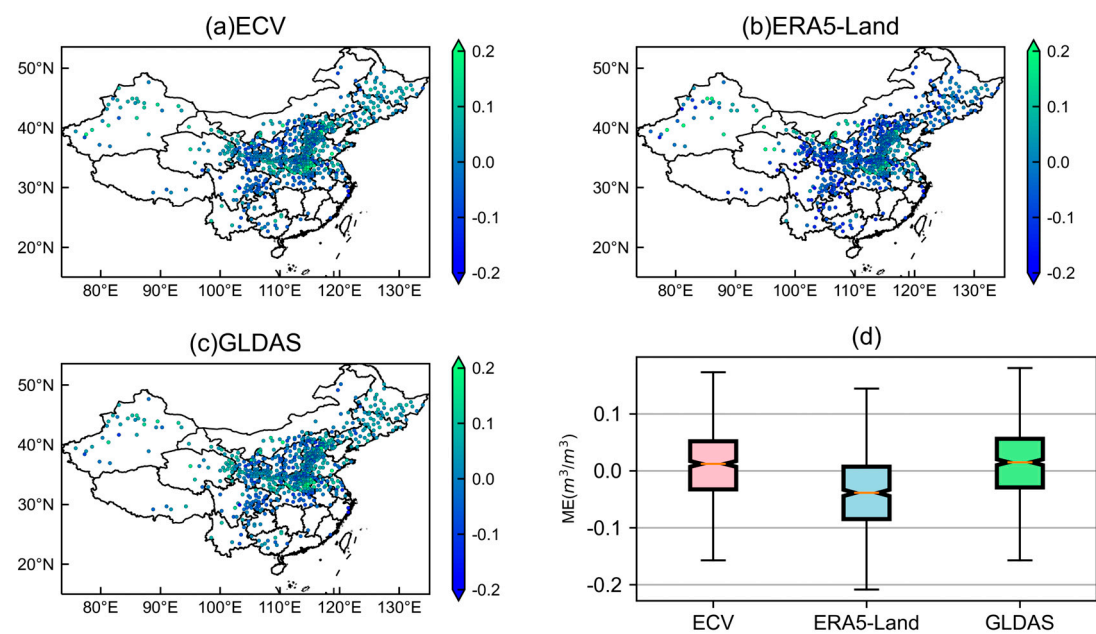


Figure S3. Spatial distribution of (a) ECV, (b) ERA5-Land, (c) GLDAS and box plot (d) of ME verified in-situ observations on 0.25°

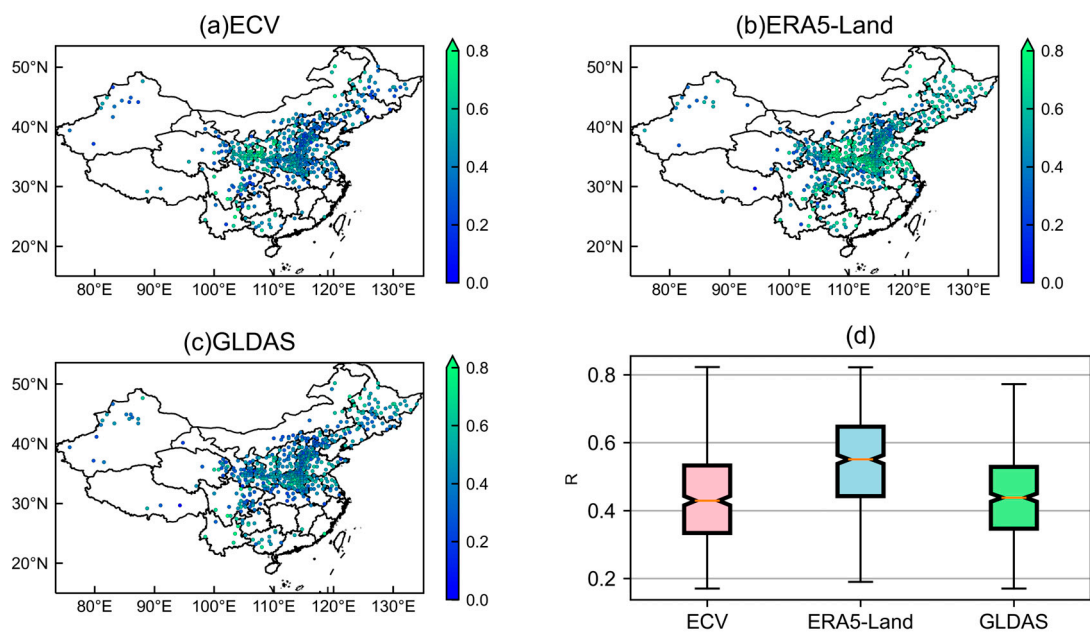


Figure S4. Spatial distribution of (a) ECV, (b) ERA5-Land, (c) GLDAS and box plot (d) of R verified in-situ observations on 0.25°

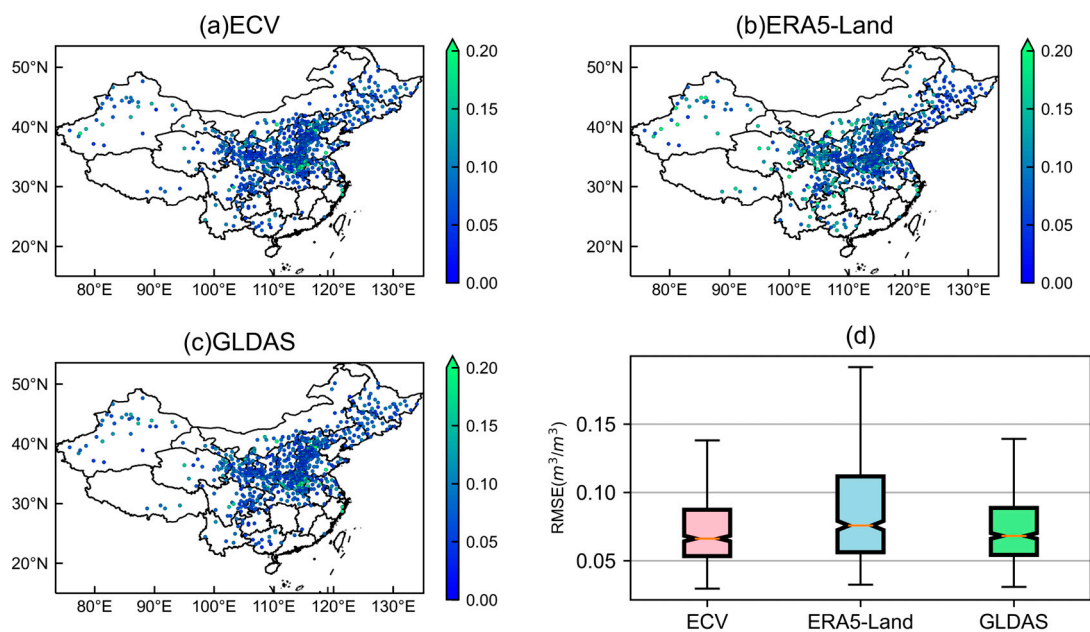


Figure S5. Spatial distribution of (a) ECV, (b) ERA5-Land, (c) GLDAS and box plot (d) of RMSE verified in-situ observations on 0.25°

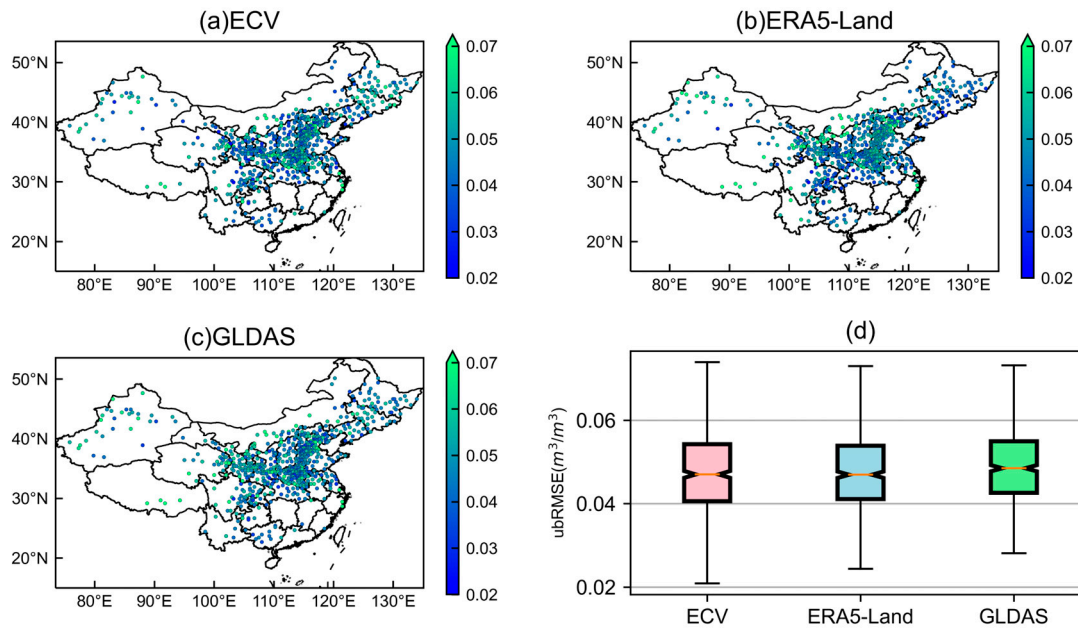


Figure S6. Spatial distribution of (a) ECV, (b) ERA5-Land, (c) GLDAS and box plot (d) of ubRMSE verified in-situ observations on 0.25°

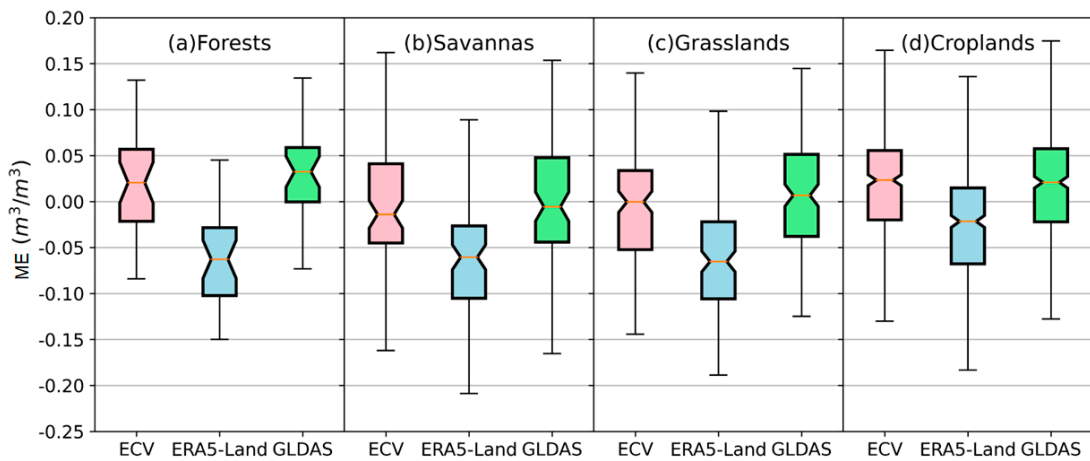


Figure S7. Box plots of ME against in-situ observations on different land cover types on 0.25°

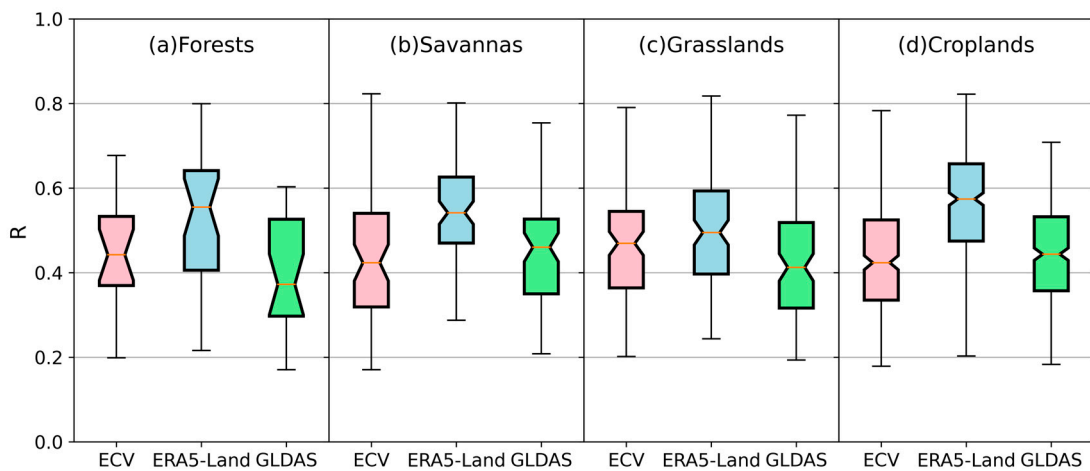


Figure S8. Box plots of R against in-situ observations on different land cover types on 0.25°

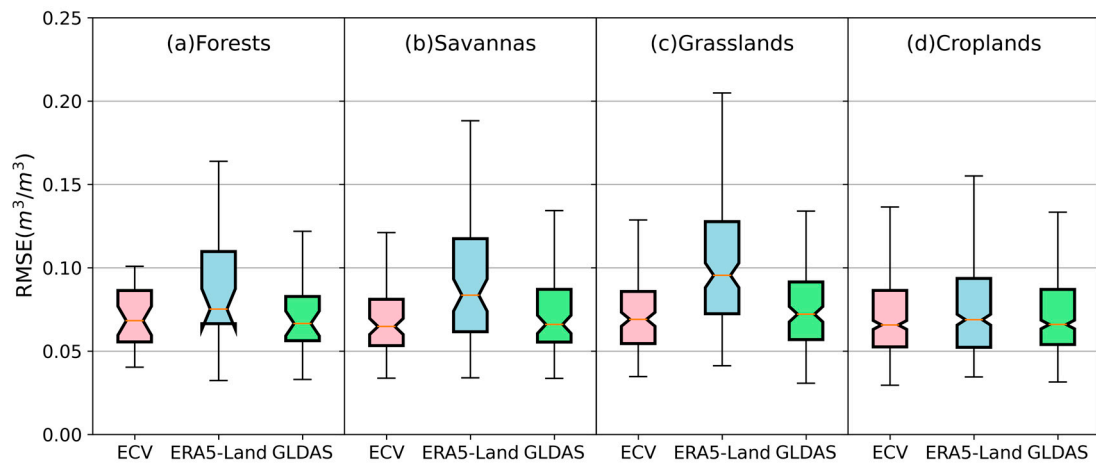


Figure S9. Box plots of RMSE against in-situ observations on different land cover types on 0.25°

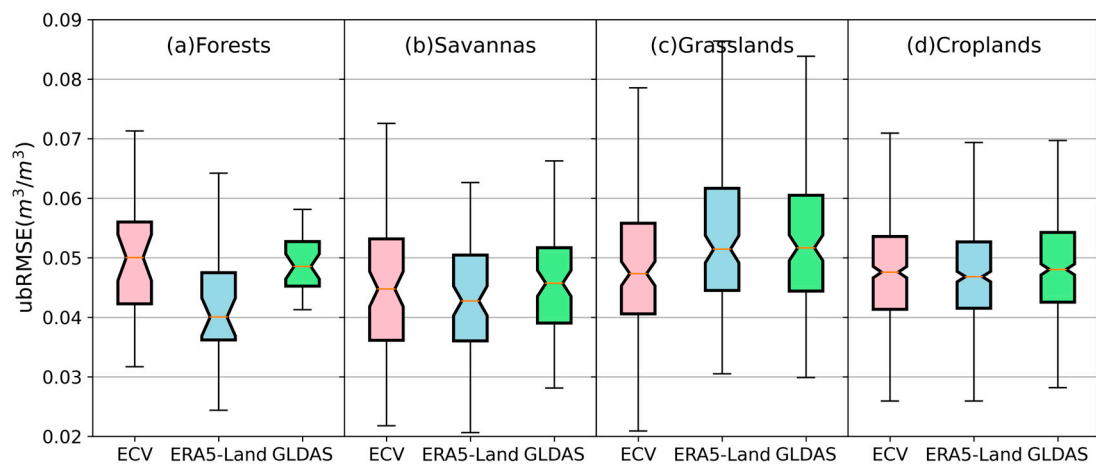


Figure S10. Box plots of ubRMSE against in-situ observations on different land cover types on 0.25°