

Project for the intercomparison of land data assimilation systemsRolf Reichle[†]; Jean-Francois Mahfouf[†] NASA/GSFC, USALeading author: rolf.reichle@nasa.gov

The past decade has seen a tremendous amount of research and development in the area of land data assimilation systems (LDAS). Many different algorithmic approaches have been developed, but few attempts were made to compare the various methods. The Project for the Intercomparison of Land Data Assimilation Systems (PILDAS) is a community effort organized through the GEWEX/GLASS panel that provides a framework for comparing and assessing land surface data assimilation systems. Initially, PILDAS will focus on land assimilation systems that are intended for use in weather and seasonal forecasting at operational centers and research institutions. In the first experiment described here, PILDAS-1, assimilation systems will be tested in "off-line" mode (i.e., the land model is not coupled to the atmospheric model). PILDAS-1 will focus on the assimilation of synthetic observations of surface soil moisture in preparation for the use of such data from the SMOS and SMAP satellites. Given the complexity of the experiment, it is appropriate to use synthetic observations in the first intercomparison exercise. Synthetic experiments allow unequivocal skill assessment because the "truth" is perfectly known. This poster describes the status and plans for PILDAS-1 and extends an open invitation for participation by interested researchers.