File and folder structure for the SWAT course

This is description of the folder and file structure for the "How do I use satellite and global reanalysis data for hydrological simulations in SWAT?" workshop in Montevideo between 7 - 11 August 2017, jointly organised by the University of Sydney, IRI (Columbia University) and INIA, Uruguay.

THE UNIVERSITY OF SYDNEY

International Research Institute for Climate and Society
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Instituto Nacional de Investigación Agropecuaria
URUGUAY

Folders

Main folder	subfolder	Content
Background_documents		A few useful pdf documents, such as the SWAT-CUP manual and the HydroPSO vignette
Documents		All the main documents related to the workshop
CourseAugust2017		A folder with several subfolders related to a specific course taught at IMFIA (UdelaR) in August 2017
	DailySummarySlide	Powerpoint slides presented at the beginning of each day in course, summarising the day and the learning of the past day.
	RscriptsDuringCourse	Specific Rscripts related to the activities during the different days of the course
	Willem's older Teaching Documents	A document from teaching at the University of Sydney which discusses the implementation of land use scenarios in SWAT
Original data		Folder with all the input data related to the course. There are several subfolders related to the different subcomponents. These have been reorganised, so paths in R scripts need to be checked carefully
	Metadata	Description of the metadata of the data files
	ParameterFiles	SWAT-CUP and HydroPSO example parameter files
	weather	All Uruguayan weather data
functions		R scripts and functions related to the different activities described in the documents throughout the course. Some of the scripts might seem unrelated as they are related to the hydroPSO application which we did not get to during the course and is unfinished
MODIS		Folder with downloaded MODIS ET data for the Cotter and Santa Lucia catchments
	Cotter	MODIS ET (16A2) data for the Cotter catchment associated with the centres of the ARCSWAT subbasins

	SantaLucia	MODIS ET (16A2) data for the Santa Lucia catchment associated with the centres of the ARCSWAT subbasins

Files in the main (root) folder

File	**Description**
AA_README.docx	This file
AA_README_Flowdiagram.pdf	A flow diagram of how all the documents in the course are related to each other.

Files in the Documents folder

File	**Description**
A_UruguayIntroductionToR.pdf	An introduction into R focussing on hydrological model (GR4J) calibration using hydromad
B_RainfallRunoffCalibrationWithET.pdf	An example of how to use the MODIS16A2 evapotranspiration to calibrate a rainfall runoff model (GR4J)
C_Basic_SWAT-CUP_CourseNotes.pdf	Notes on how to setup SWAT-CUP to calibrate an ARCSWAT or QSWAT model using the SUFI2 and PSO routines
C1_WaterbalanceCheckSWATInput.pdf	An example of how to check the water balance of the SWAT input data to do a "sanity" check on the hydrological inputs.
C2_MultipleVariables_SWAT-CUP_CourseNotes.pdf	Examples of how to implement multi-objective calibration using multiple flow stations, MODIS ET data, or nutrient data in SWAT-CUP with the Santa Lucia catchment as an example
D_CreatingSWATCUPobservedData_simplified.pdf	An ancillary document with examples of how to create SWAT-CUP input files for multi-objective calibration with different input data sets using R
E_ExtractingETCalibrationSWATCUP.pdf	An ancillary document with examples of how to extract simulated ET data from SWAT and how to check the calibration of the model using observed and modelled data
F_SettingUp_hydroPSO.pdf	A document with a very basic outline how to set up hydroPSO to calibrate SWAT. This file is incomplete
ExtractMODIS_SLucia.pdf	An example file of how to extract the MODIS16A2 ET data using the package MODIStools in R
G_DownloadingAndManagingChirps.pdf	A document outlining how to download CHIRPS data using different methods ranging from manually from the website to automated through scripting

H_BasicRainfallAnalysisINUMET.PDF	Methodology to analyse and compare different rainfall stations in an area, in this case from INUMET in Uruguay
H1_BasicRainfallAnalysisCHIRPS.PDF	Methodology to analyse and compare different CHIRPS data grid locations, in this case for a catchment in Uruguay
H2_ComparativeAnalysisChirpsInumet.pdf	A preliminary document to do a comparative analysis in time and space between CHIRPS and station data for a comparison catchment in Uruguay.