Replication instructions for Burke, Dykema, Lobell, Miguel, and Satyanath (BDLMS), "Incorporating climate uncertainty into estimates of climate change impacts", *Review of Economics and Statistics*, forthcoming

August 2014

The replication data and code, once unzipped, are organized into three folders:

- A folder containing the data ("data", which contains subfolders) which are CSV files. These files can be imported to the program of your choice.
- A folder containing the replication code ("script"), with subfolders for the stata scripts and R scripts. This is used to run the analysis published in the paper.
- An output folder where the generated output is written ("output"). This folder is already populated with the output that will be generated by the scripts; this output will be overwritten (with the same files) if the user runs the scripts.

Table 1 results are in "Table1_data.xlsx"

To replicate Figure 1 and/or Figure A1, run the R script "MakeFig1_FigA1.R"

To replicate Figure 2, run the R script "MakeFig2.R"

To replicate the main results in Figures 3 and 4, do the following:

1. Run all of the .do files in the script/stata/ folder. These read in the data files from the seven papers we replicate and generate the bootstrap runs of the regressions (i.e. what we call the "regression uncertainty" in the paper). These are then output to the respective data sub-folders.
2. Run the DJO_projections.R script in the script/R/folder, which separately generates future growth projections for the DJO 2012 paper and outputs to the DJO data folder
3. Then run the "MakeFig3.R" and "MakeFig4.R" scripts in the script/R/ folder. These scripts combine the historical bootstrapped estimates with projected changes in temperature and precipitation over the region of interest, as described in the paper, and writes the figures to the output folder. The MakeFig3.R script also calculates the values in the final three columns of Table 2.

Replication files run on softwares "R", version 3.0.3 and "STATA" version 13.

If you use these data, please cite our paper. If your run into problems with replication, please email Marshall at marshall.burke@gmail.com.

Contents of folders with replication files are as follows:

1. "output"
- A. "Fig4subfigs"
  - i. BMSDL_uncertainty_plot
  - ii. DG_uncertainty_plot
  - iii. DJO_uncertainty_plot
  - iv. FHRS_uncertainty_plot
  - v. MNS_uncertainty_plot
  - vi. SHF_uncertainty_plot
  - vii. SL_uncertainty_plot

2. "script"
- **A. "R"**
  - i. djo_projections.R
  - ii. MakeFig1_FigA1.R
  - iii. MakeFig2.R
  - iv. MakeFig3.R
  - v. MakeFig4.R
- **B. "stata"**
  - i. BMSDL_uncertainty
  - ii. DG_uncertainty
  - iii. DJO_uncertainty
  - iv. FHRS_uncertainty
  - v. MNS_SHF_uncertainty
  - vi. SL_uncertainty

3. "data"
- **A. "additionalForFigures"**
  - i. clim_mod_chg_Afr
  - ii. clim_mod_chg_US
  - iii. modelnames
- **B. "BMSDL"**
  - i. BMSDL_climchg
  - ii. BMSDL_countries
  - iii. boot_BMSDL
  - iv. bootdata
  - v. climate_conflict
- **C. "DG"**
  - i. boot_dg
  - ii. bootsample
  - iii. DATA1
  - iv. DGclimchg
  - v. dg_data
- **D. "DJO"**
  - i. boot_djo
  - ii. climate_panel
  - iii. djo_dataset

iv. djo_dataset_param
v. djo_paramdata
vi. DJO_projections
vii. DJO_tempchg_popweight
viii. poor_countries

E. "FHRS"

i. boot_fhrs
ii. bootsample
iii. DATA1
iv. dataPanelNew
v. FHRS_climchg
vi. fhrs_data

F. "LitReview"

i. Data_for_Fig1
ii. Table1_data

G. "MNS_SHF"

i. boot_mns
ii. boot_shf
iii. bootdataall
iv. bootdatadry
v. censusData
vi. cityAndCountyData
vii. mns_full
vii. mns_sample
viii. MNS_SHF_climchg_prec
ix. MNS_SHF_climchg_temp
x. MNSdata
xi. SHF_uncertainty_plot

H. "SL"

i. africa_yield_clim
ii. boot_sl
iii. bootdata
iv. Rapp.history
v. SL_climchg