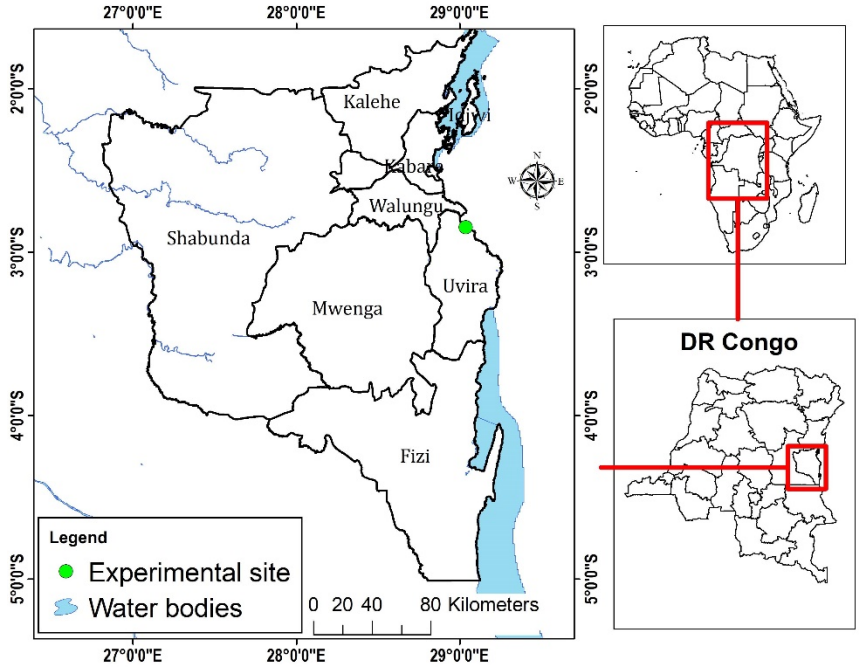
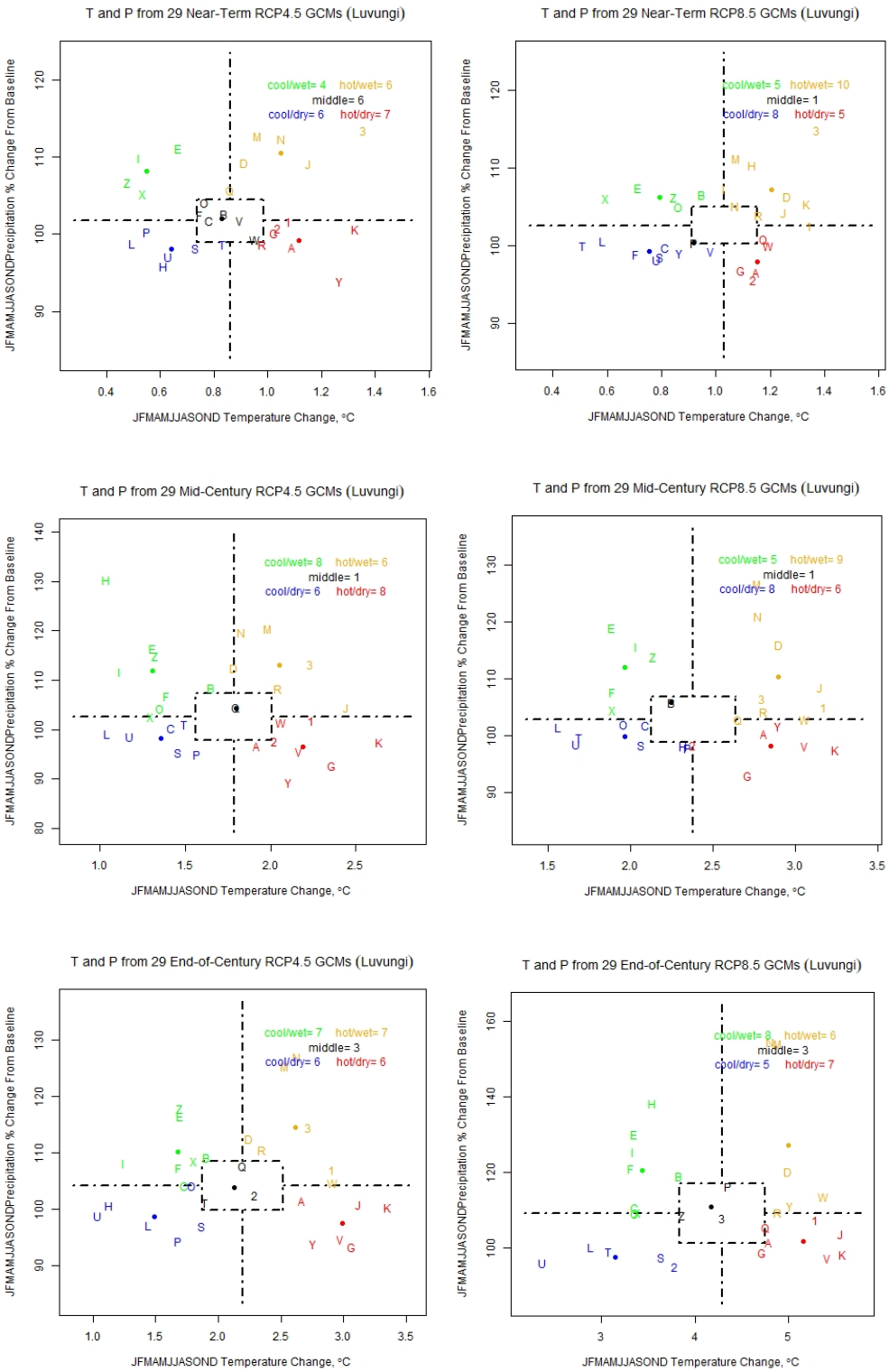
Supplementary data



Supplementary Figure S1. Location of the experimental site, Ruzizi plain, eastern D.R. Congo



Supplementary Figure S2. Temperature-precipitation change scatter plots for selection of appropriate GCMs.

Supplementary Table S1. Summary of 29 CMIP5 GCMs that form the ensemble of climate projections that was used

GCM code	GCM	Institution	Horizontal resolution	2x [CO_2] Eq. climate Sens. (°C)
A	ACCESS1-0	Commonwealth Scientific and Industrial Research Organization (CSIRO) and Bureau of Meteorology (BOM), Australia	1.25° × 1.875°	3.8
B	BCC-CSM1-1	Beijing Climate Center, China Meteorological Administration	~2.8° × 2.8°	2.8
C	BNU-ESM	College of Global Change and Earth Systems Science, Beijing Normal University (BNU)	~2.8° × 2.8°	4.1
D	CanESM2	Canadian Centre for Climate Modelling & Analysis	~2.8° × 2.8°	3.7
E	CCSM4	US National Center for Atmospheric Research (NCAR)	~0.9° × 1.25°	2.9
F	CESM1-BGC	US National Science Foundation (NSF), US Department of Energy (DOE), and the US National Centre for Atmospheric Research (NCAR)	~0.9° × 1.25°	n.a.
G	CSIRO-Mk3-6-0	Queensland Climate Change Centre of Excellence and Commonwealth Scientific and Industrial Research Organization (CSIRO)	~1.9° × 1.875°	4.1
H	GFDL-ESM2G	NOAA/Geophysical Fluid Dynamic Laboratory (GFDL)	~2.0° × 2.5°	2.4
I	GFDL-ESM2M	NOAA/Geophysical Fluid Dynamic Laboratory (GFDL)	~2.0° × 2.5°	2.4
J	HadGEM2-CC	UK Meteorological Office - Hadley Centre	1.25° × 1.875°	n.a.
K	HadGEM2-ES	UK Meteorological Office - Hadley Centre	1.25° × 1.875°	4.6
L	INM-CM4	Russian Institute for Numerical Mathematics (INM)	1.5° × 2°	2.1
M	IPSL-CM5A-LR	Institute Pierre Simon Laplace (IPSL)	~1.9° × 3.75°	4.1
N	IPSL-CM5A-MR	Institute Pierre Simon Laplace (IPSL)	~1.3° × 2.5°	n.a.
O	MIROC5	University of Tokyo, Japanese National Institute for Environmental Studies (NIES), and Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	~1.4° × ~1.4°	2.7
P	MIROC-ESM	University of Tokyo, Japanese National Institute for Environmental Studies (NIES), and Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	~2.8° × ~2.8°	4.7

Q	MPI-ESM-LR	Max Planck Institute (MPI) for Meteorology (low resolution)	~1.9° × 1.875°	3.6
R	MPI-ESM-MR	Max Planck Institute (MPI) for Meteorology (mixed resolution)	~1.9° × 1.875°	n.a.
S	MRI-CGCM3	Japanese Meteorological Research Institute (MRI)	~1.1° × 1.125°	2.6
T	NorESM1-M	Norwegian Climate Centre	~1.9° × 2.5°	2.8
U	FGOALS-g2	Chinese Academy of Sciences	~2.8° × 2.8°	n.a.
V	CMCC-CM	Euro-Mediterranean Center on Climate Change	~0.75° × 0.75°	n.a.
W	CMCC-CMS	Euro-Mediterranean Center on Climate Change	~1.9° × 1.875°	n.a.
X	CNRM-CM5	France National Centre for Meteorological Research	~1.4° × 1.4°	3.3
Y	HadGEM2-AO	UK Meteorological Office - Hadley Centre	1.25° × 1.875°	n.a.
Z	IPSL-CM5B-LR	Institute Pierre Simon Laplace (IPSL)	~1.9° × 3.75°	2.6
1	GFDL-CM3	NOAA/Geophysical Fluid Dynamic Laboratory (GFDL)	2.0° × 2.5°	4
2	GISS-E2-R	National Aeronautics and Space Association Goddard Institute for Space Studies (NASA GISS)	2° × 2.5°	2.1
3	GISS-E2-H	National Aeronautics and Space Association Goddard Institute for Space Studies (NASA GISS)	2° × 2.5°	2.3

Source: Rosenzweig and Hillel, 2015; Ruane et al. 2017