

Climate change and poverty of small-scale agricultural producers: towards a future research agenda – supplementary data

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Campbell et al. (submitted) undertook a review of the climate-poverty literature from 2002-2018 with a focus on small-scale agricultural producers. Peer-reviewed literature searches through the Web of Science Platform was conducted and yielded close to 400 journal articles (see the full list below). To identify articles, the search terms used are shown in Table 1, but this was followed by manual checking that articles covered all three elements: climate change, agriculture/food security and poverty. The full versions of each of the selected papers were then searched for specific terms in order to understand the focus of the literature. The search terms used are shown in Table 2.

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Table 1. Search codes used for the Web of Science search (TI refers to a search of the Title; * indicates that the root of multiple words can be searched, e.g. climat* will include climate and climatic)

Topic covered	Search terms	Comments
Climate change	TI=(“climat*” OR “change” OR “variabili*” OR “resilience” OR “pathways” OR “shocks” OR “surge” OR “sea level rise” OR “storm” OR “storms” OR “flood” OR “floods” OR “drought*” OR “extreme” OR “extremes” OR “warm*” OR “salinity” OR “natural disasters” OR “*adaptation” OR “hurricane*” OR “typhoon*” OR “cyclon*” OR “landslide*” OR “heat wave*” OR “hailstorm*” OR “tornado*” OR “thunderstorm*” OR “blizzard*” OR “avalanche*”)	<ul style="list-style-type: none"> • Several terms linked to ‘change’ that are used in the climate change literature were used, e.g. ‘resilience’, ‘pathways’ • Terms related to extremes events were included
Poverty	AND TI=(“poverty” OR “welfare” OR “vulnerab*” OR “livelihood*” OR “poor” OR “income*” OR “household*”)	<ul style="list-style-type: none"> • Various terms linked to poverty analyses were used.
Agriculture and food security	AND TI=(“rural” OR “agricultur*” OR “crop*” OR “livestock” OR “aquac*” OR “fish*” OR “farm*” OR “food” OR “developing” OR “Latin America” OR “South America” OR “Bolivia” OR “Paraguay” OR “Peru” OR “Colombia” OR “Ecuador” OR “Central America” OR “Caribbean” OR “Guatemala” OR “Haiti” OR “Honduras” OR “El Salvador” OR “Nicaragua” OR “Africa” OR “Southern Africa” OR “Zimbabwe” OR “Mozambique” OR “Malawi” OR “East Africa” OR “Kenya” OR “Madagascar” OR “Central Africa” OR “Congo” OR “Burundi” OR “Chad” OR “Central Africa Republic” OR “Cameroon” OR “West Africa” OR “Sahel” OR “Liberia” OR “Guinea” OR “Guinea-Bissau” OR “Togo” OR “Sierra Leone” OR “North Africa” OR “Middle East” OR “MENA” OR “Afghanistan” OR “Syria” OR “Yemen” OR “Egypt” OR “Morocco” OR “South Asia” OR “Bangladesh” OR “Bhutan” OR “India” OR “Nepal” OR “Pakistan” OR “South East Asia” OR “Timor Leste” OR “Philippines” OR “Lao” OR “Mongolia” OR “Cambodia” OR “Pacific” OR “Micronesia” OR “Papua New Guinea” OR “Fiji” OR “Tuvalu” OR “Samoa”.	<ul style="list-style-type: none"> • Terms linked to agriculture and food systems were used. • We also used geographical terms as papers from those regions often included an agricultural component, but did not have explicit reference to agriculture in the title. To get a widespread geographical coverage, country names were used (see methods in main paper)

Table 2. Search codes for different themes used when searching each article, using [QDA miner](#) software (* indicates that the root of multiple words can be searched, e.g. price* will include price and prices).

Thematic topics	Code title	Search codes	Note
Methods used in the climate-poverty papers	Qualitative	Qualitative	
	Quantitative	Quantitative	
	Household survey	Households_survey or household_survey or household_analysis or households_analysis or household_questionnaire or households_questionnaire or longitudinal_survey or panel_data or cross_sectional or time_series or macro_data or interview or interviews or questionnaire*	
	GCM	GCM or downscaling or downscaling or SSP or RCP or SRES or global_climate_model or climat*_scenario*	
	Household model	Household_model or household_models or households_model or household_models or integrated_assessment or integrated_assessments or partial_equilibrium or general_equilibrium or CGE or econometric or econometrics or systems_dynamics or agent_based or mixed_method or mixed_methods or comparative_analysis or regression or regressions or principal_component_analysis or principal_components_analysis or factor_analysis or correlation or correlations or causality or causalities or IMPACT_model or IMPACT_models or PARS	
	Vulnerability analysis	Vulnerability_analysis or vulnerability_assessment* or vulnerability_index	
Climate impacts – extreme events	Extreme event	Extreme_event or extreme_events	
	Natural disasters	Natural_disaster or natural_disasters	

	Floods and storms	Flood or floods or storm or storms	
	Salinity	Salinity or saline or salt_water_intrusion	
	Drought	Drought or droughts	
	Heat	Heat or heatwave or heat_wave or heat_waves	
	Cyclones	Cyclone or cyclones or hurricane or hurricanes or tornado or tornados or typhoon or typhoons	
	Inundation	inundation	This term is problematic as it applies to either floods or sea level rise
Climate impacts – gradual climate change	Climate change	Climate_change or global_warming	
	Sea level rise	Sea_level_rise	
	Temperature increase	Temperature_increase or increasing_temperature	
	Declining rainfall	Declining_rainfall or lower_rainfall or reduced_rainfall	
	Seasonal shifts	Seasonal_shift or shift_in_season or start_of_season or length_of_season	
	Unreliable weather	Unreliable_weather or unreliable_season or strange_weather or strange_season or rainfall_variability	
Agricultural production – Crops	Crop	Crop or crops or grain or grains	
	Maize	Maize or corn	
	Wheat	Wheat	
	Rice	Rice or paddy	
	Quinoa	Quinoa	
	Temperate crops	Barley or oats or rye	
	Root crops	Potato or potatoes or sweet_potato or sweet_potatoes or cassava or yam or taro	
	Small grains	Sorghum or millet or millets or tef or teff	
	Legumes	Bean or pulse or cowpea or chickpea or groundnut or lentil or pigeonpea	

	Banana	Banana or bananas or plantain	
	Agroforestry	agroforestry or tree_crop or fruit_tree	
	Vegetable	Vegetables or vegetable or fruit or fruits	
Agricultural production - Livestock	Livestock	Livestock or pasture or forage or grazing or animal_feed or animal_feeds or hay or silage or monogastric or monogastrics or large_ruminants or small_reminants or cattle or cows or buffalo or goats or sheep or pigs or chickens or poultry	
	Meat	Meat or mutton or bovine or pork or beef or lamb	
	Milk	Milk or cheese or yogurt or dairy	
	Eggs	Egg or eggs	
Agricultural production - Fish	Fish	Fish or fisheries or aquaculture or aquatic or fish_food or shrimp or shrimps or sea_food or crustaceans	
Agricultural production - Pests and disease	Pests and disease	Insects or pests or plant_diseases or crop_diseases or animal_disease or weed* or natural_enemies or fungal or bacterial or viral or pathogens or locust	
Food system	Food system	Food_system or food_systems or value_chain or value_chains or production_to_consumption or supply_chain or supply_chains or trade_regimes or trade_regime or food_processing or food_storage	
	Food security	Food_security	
	Food security AND access	Food_security AND access	
	Food security AND availability	Food_security AND availability	
	Food security AND utilisation	Food_security AND utilisation or Food_security AND utilization	
	Food security And stability	Food_security AND stability	
	Food price	food_price*	
	Food price spike	food_price*_volatility or food_spike* or food_price*_spike*	
	Nutrition	Nutrition or malnutrition or undernutrition or nutritional or	

Nutrition and health		nutritious or diet or diets or protein or calories or micronutrient or food_quality or food_qualities or food_diversity or adequate_food	
	Health	Health	
	Medical condition	Obesity or anaemia or anemia or diabetes	
Gender and social inclusion	Gender	Gender or female or women or grandmother or maternal	“Sex” excluded as it did not add much and gave many problems, e.g., “sussex”. Manually deleted problematic search results, e.g., “female trees”.
	Children	Boy or boys or girl or girls or child or children	
	Youth	Youth or young	Manually deleted problematic search results, e.g., “young trees”.
	Marginalised populations	Marginalised_group* or marginal_group* or ethnic_group* or disadvantaged_group* or ethnic or ethnicity or tribes or tribe or caste or castes	
	Indigenous populations and indigenous knowledge	traditional_communities or traditional_community or indigenous_people or aboriginal or indigenous	
	Inequality	Inequality or inequity or equity or equality or unequal or disparity or fairness	Manually deleted problematic search results, e.g., “equal weighting”
Poverty-related foci	Poverty	Poverty or poverty_trap or poverty_traps or poverty_spiral	
	Vulnerability	Vulnerability or vulnerabilities	
	Adaptive	Adaptive or capacity or capacities	

	Exposure	Exposure	
	Productivity	Productivity or yield or production or productivities or yields or productions	
	Assets	Distress_sales or household_asset or households_asset or household_assets or households_assets or livelihood_asset or livelihood_assets or livelihoods_asset or livelihoods_assets or equipment	
	Resilience	Resilience	
	Inequality	Gini or unequal_income or unequal_wealth or wealth_distribution or income_distribution or wealth_inequality or income_inequality or income_equality or wealth_equality or income_disparity or wealth_disparity or income_equity or wealth_equity or income_inequity or wealth_inequity	
	Off-farm income	Non-farm_income* or off-farm_income* or leave_agriculture	
	Agricultural options	Agricultural_innovation or agricultural_technolog* or production_systems or improved_technolog* or improved_crop or improved_livestock or improved_soil or irrigation_development or irrigation_system* or irrigation_technolog* or irrigation_infrastructure or adapting_irrigation or irrigation_management or water_resources_management or drought-adapted or drought-tolerant or drought_adapted or drought_tolerant or drought_resistant or drought_resistant or heat_resistant or heat_resistant or salt_resistant or salt_resistant or ecological_farming or heat_tolerant or heat-tolerant or salt_tolerant or salt-tolerant or saline_tolerant or saline-tolerant or flood_toleran* or flood-tolerant or hardy_breeds or disease_management or pest_management or pest_control or	

		disease_control or Pest_resistan* or disease_resistan* or insecticides or weed_killer	
Approaches to development and adaptation	Adaptation planning	Adaptation_planning	
	Maladaptation	Ex-post_adaptation or anticipatory_adaptation or noregrets_adaptation or maladaptation	
	Incremental adaptation	Incremental_adaptation or Incremental_adaptations	
	Systemic adaptation	Systemic_adaptation or Systemic_adaptations	
	Transformational adaptation	Transformational_adaptation or Transformational_adaptations	
	Hanging in, stepping up, stepping out	Hanging_in or stepping_up or stepping_out or hang_in or step_up or step_out or stepped_up or stepped_out	
Migration and evacuation	Migration	Migration	
	Evacuation	Evacuation	
Climate risk management and safety nets	Climate risk management	Climate_risk_management or climate_change_risk_management or flood_risk_management or drought_risk_management or Climate_risk_mitigation or early_warning_system or cyclone_warning or hurricane_warning	
	Climate information services	Climate_information_services or climate_information_and_services or climate-informed_advisories or climate_agro-advisories or seasonal_advisor* or seasonal_forecast* or seasonal_outlook* or weather_advisori* or weather_forcast* or weather_outlook	
	Safety nets	Safety_net or safety_nets or productive_social_safety	
	Insurance	Insurance	Ex. index-based insurance, weather-based insurance, flood

			insurance, crop insurance
Reconstruction and recovery	Reconstruction and recovery	Reconstruction or recovery	
Finance for development and adaptation	Climate finance	Climate_finance or blended_finance or green_climate_fund or development_finance or development_assistance or development_aid	
	Private sector	Value_chain_development or private_sector* or value_chain* or business or supply_chain*	