

Package: watercostaccra (via r-universe)

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Title Household Water Costs and Coping Strategies, Accra 2023

Version 0.0.0.9000

Description A household survey on water costs and coping strategies (116 households) and a water point survey (49 water points, with E. coli and total coliform test results) were conducted in October and November 2023 in two low-income communities in metropolitan Accra, Ghana. These are Korle Gonno, a larger, well-planned coastal area with over 35 household water vendors, and Abuja, a small, densely packed, extralegal settlement with 15 water vendor and bathhouse businesses.

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households	<i>households: Household survey data</i>
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Description

A survey of 116 households was conducted in two low-income communities in metropolitan Accra. These are Korle Gonno, a larger, well-planned coastal area with over 35 household water vendors, and Abuja, a small, densely packed, extralegal settlement with 15 water vendor and bathhouse businesses.

Usage

households

Format

- A tibble with 116 rows and 89 variables
- id** identification number
- community** the communities surveyed, options including 1 kg: Korle Gonno and 2 abuja: Abuja
- housing_type** housing type, options includin 1 block_unit: unit in a row of apartments made of cement blocks, 2 wood_unit: unit in a row of apartments made of wood, 3 house, 4 compound_house: single-story L- or C-shaped house with a multiple units around a shared courtyard, 5 multistory_apt: multi-story apartment building, 6 wood_shack: wooden shack, 7 no_structure, and 8 other
- respondent_relationship_to_hh** respondent’s relationship to the household head (respondent identified), options including 1 self, 2 child, 3 spouse, and 4 other_relative
- gender** gender (self-identified) of respondent, options including 1 female and 2 male
- tenure** tenure status, options including 1 rented: renter, 2 owned: homeowner, or 3 no_payment: living without payment)
- years_in_community** number of years respondent has lived in community
- adult_count** number of adults in household including respondent. Household is described as those "eating from the same pot"
- child_count** number of children under 18 in household. Household is described as those "eating from the same pot"

- rooms_in_hh** number of rooms used for sleeping. Household is described as those "eating from the same pot"
- business_ownership** household or respondent owns a business, options including 1 respondent-owned and 2 household-owned
- business_location** location type of the business, options including 1 home_based, 2 outside_home: fixed location outside home, or 3 mobile: mobile location.
- business_category** type of business, options including 1 food, 2 shop, 3 salon, 4 vented_water, 5 tailoring, and 6 other_services.
- business_water_use** respondent's business uses water beyond typical needs of household (true or false)
- business_water_source** primary source of water for business use (packaged water, piped to home, piped to neighbor's home, piped to compound, commercial or public tap, borehole, dug well, spring water, delivered water)
- primary_dw_source** primary source of drinking water (packaged water, piped to home, piped to neighbor's home, piped to compound, commercial or public tap, borehole, dug well, spring water, delivered water)
- dw_reason_convenience** respondent names convenience as a reason for using the drinking water source (true or false)
- dw_reason_affordable** respondent names affordability as a reason for using the drinking water source (true or false)
- dw_reason_available** respondent names availability as a reason for using the drinking water source (true or false)
- dw_reason_cold** respondent names temperature (cold water) as a reason for using the drinking water source (true or false)
- dw_reason_clean** respondent names cleanliness as a reason for using the drinking water source (true or false)
- dw_reason_taste** respondent names taste as a reason for using the drinking water source (true or false)
- dw_reason_habit_or_cultural_norm** respondent names habit or cultural norm as a reason for using the drinking water source (true or false)
- dw_reason_trustworthy** respondent names trustworthiness as a reason for using the drinking water source (true or false)
- dw_reason_health** respondent names health as a reason for using the drinking water source (true or false)
- dw_reason_other** respondent names another reason for using the drinking water source (true or false)
- package_type_preference** respondent typically purchases individual, options including 1 individual: sachets/packets/bottles, 2 bag: multipacks of these, or 3 both
- package_size_reason_storage_space** respondent names storage space in the home as a reason for purchasing the preferred package type (true or false)
- package_size_reason_cost_effective** respondent names cost effectiveness as a reason for purchasing the preferred package type (true or false)

- package_size_reason_temperature** respondent names temperature at the time of purchase as a reason for purchasing the preferred package type (true or false)
- package_size_reason_available_money** respondent names availability of money as a reason for purchasing the preferred package type (true or false)
- package_size_reason_convenience** respondent names convenience as a reason for purchasing the preferred package type (true or false)
- package_size_reason_size** respondent names the size needed for the respondent or household as a reason for purchasing the preferred package type (true or false)
- package_size_reason_avoid_wasting_water** respondent names avoiding wasting water by purchasing only when needed as a reason for purchasing the preferred package type (true or false)
- dw_treatment** treatment methods of water before drinking, options including 1no_treatment, 2boil, 3boil;settle, 4 filter, and 5settle
- primary_water_source** primary water source for non-drinking water, options including 1packaged water, 2piped_to_home, 3piped to neighbor's home, 4piped to compound, 5commercial or public tap, 6borehole, 7dug well, 8spring water, and 9 delivered water)
- primary_source_reason_proximity** respondent names proximity to home as a reason for using the primary source of non-drinking water (true or false)
- primary_source_reason_convenience** respondent names convenience as a reason for using the primary source of non-drinking water (true or false)
- primary_source_reason_affordable** respondent names affordability as a reason for using the primary source of non-drinking water (true or false)
- primary_source_reason_availability** respondent names availability as a reason for using the primary source of non-drinking water (true or false)
- primary_source_reason_cleanliness** respondent names cleanliness as a reason for using the primary source of non-drinking water (true or false)
- primary_source_reason_other** respondent names another reason for using the primary source of non-drinking water (true or false)
- other_non_dw_source_use** respondent uses at least one source besides primary non-drinking water source (true or false)
- other_non_dw_sources_packaged** respondent uses packaged water as an additional source of non-drinking water (true or false)
- other_non_dw_sources_piped_to_home** respondent uses water piped to home as an additional source of non-drinking water (true or false)
- other_non_dw_sources_piped_to_neighbor** respondent uses water piped to a neighbor's home as an additional source of non-drinking water (true or false)
- other_non_dw_sources_commercial_tap** respondent uses a commercial or public tap as an additional source of non-drinking water (true or false)
- other_non_dw_sources_piped_to_compound** respondent uses water piped to the compound as an additional source of non-drinking water (true or false)
- other_non_dw_sources_borehole** respondent uses a borehole as an additional source of non-drinking water (true or false)

- other_non_dw_sources_dug_well** respondent uses a dug well as an additional source of non-drinking water (true or false)
- other_non_dw_sources_spring_water** respondent uses spring water as an additional source of non-drinking water (true or false)
- other_non_dw_sources_delivered_water** respondent uses delivered water as an additional source of non-drinking water (true or false)
- other_non_dw_sources_other** respondent uses another source as an additional source of non-drinking water (true or false)
- secondary_source_reason_availability** respondent uses a secondary source of non-drinking water because the primary source is not available (true or false)
- secondary_source_reason_unclean** respondent uses a secondary source of non-drinking water because the primary source is not clean (true or false)
- secondary_source_reason_crowding** respondent uses a secondary source of non-drinking water because the primary source is crowded (true or false)
- secondary_source_reason_shower** respondent uses a secondary source of non-drinking water because shower stalls are available (true or false)
- secondary_source_reason_convenient_location** respondent uses a secondary source of non-drinking water because of its convenient location (true or false)
- tap_payment_mode** respondent's mechanism for paying for piped water (all respondents use piped water as a primary or secondary source). Options include 1 pay_to_fetch: paying to fetch, 2 shares_bill: sharing or paying the whole bill, or 3 both (at different taps).
- daily_hh_water_cost_for_pay_to_fetch** daily estimated cost of drinking water for respondent's household
- daily_hh_water_cost_phhm_for_pay_to_fetch** daily estimated cost of drinking water for respondent's household per household member
- past_struggle_to_find_water** respondent has struggled to find water before (defined as extreme difficulty in accessing water) (true or false)
- time_of_last_struggle_to_find_water** respondent's last time of struggle to find water, options including 1 last_3_days, 2 last_7_days, 3 last_30_days, 4 last_year, and 5 over_year_ago.
- weekdays_struggle_to_find_water** days in a week the respondent typically struggles to find or pay for water
- past_struggle_primary_reason** primary reason for past struggles to find water, options including 1 availability: availability, 2 cost, and 3 distance: distance to nearest source.
- tap_closure_knowledge_known** respondent's knowledge about tap closures: usually known (true or false)
- tap_closure_knowledge_sometimes** respondent's knowledge about tap closures: sometimes known (true or false)
- tap_closure_knowledge_expected_pattern** respondent's knowledge about tap closures: expected due to patterns in closures (true or false)
- tap_closure_knowledge_unknown** respondent's knowledge about tap closures: not known (true or false)
- tap_closure_knowledge_no_answer** respondent's knowledge about tap closures: no answer (true or false)

- coping_mechanism_spend_more** respondent copes with water shortage by spending more on the same amount of water (true or false)
- coping_mechanism_purchase_more_to_store_at_home** respondent copes with water shortage by purchasing extra water to store at home (true or false)
- coping_mechanism_use_other_source** respondent copes with water shortage by using another source (true or false)
- coping_mechanism_sachet_to_cook** respondent copes with water shortage by using packaged water for cooking (true or false)
- coping_mechanism_skipped_cooking** respondent copes with water shortage by skipping cooking (true or false)
- coping_mechanism_sachet_to_bathe** respondent copes with water shortage by using packaged water for bathing (true or false)
- coping_mechanism_skipped_bathing** respondent copes with water shortage by skipping bathing (true or false)
- coping_mechanism_closed_business** respondent copes with water shortage by closing the business (true or false)
- coping_mechanism_skipped_laundry** respondent copes with water shortage by skipping laundry (true or false)
- water_storage_drinking_water** respondent typically stores drinking water at home (true or false)
- water_storage_non_drinking_water** respondent typically stores non-drinking water at home (true or false)
- water_storage_none** respondent typically does not store water at home (true or false)
- storage_containers_plastic_jug** respondent stores non-drinking water in plastic jugs (jerry cans or Kufuor gallons) (true or false)
- storage_containers_uncovered_barrels** respondent stores non-drinking water in uncovered barrels (true or false)
- storage_containers_covered_barrels** respondent stores non-drinking water in covered barrels (true or false)
- storage_containers_other_covered** respondent stores non-drinking water in other covered containers (true or false)
- storage_containers_other_uncovered** respondent stores non-drinking water in other uncovered containers (true or false)
- estimated_non_dw_storage_capacity** estimated capacity of storage for non-drinking water (liters)
- estimated_stored_non_dw** estimated actual storage of non-drinking water (liters)

waterpoints

waterpoints: Water point survey data

Description

A water point survey was conducted in two low-income communities in metropolitan Accra. These are Korle Gonno, a larger, well-planned coastal area with over 35 household water vendors, and Abuja, a small, densely packed, extralegal settlement with 15 water vendor and bathhouse businesses.

Usage

```
waterpoints
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Format

A tibble with 49 rows and 30 variables

id identification number

community the communities surveyed, options including 1 kg: Korle Gonno and 2 abuja: Abuja

type water point type, options including 1 piped_water, 2 borehole, 3 public_bath, and 4 natural_spring.

available_services services available at water point, options including (bathing, public sale of water, toilet, or combination of these)

location location of the water point, options including 1 within_a_compound or 2 on_the_street: outside compound adjacent to street.

year_established year established

year_established_unknown year of establishment is unknown to the respondent (TRUE, otherwise NA)

owner owner, options including 1 household_head, 2 household_member, 3 community_member: community member outside household, and 4 multiple_community_members: multiple community members outside household

owner_na owner question not applicable (TRUE, otherwise NA)

constructor type of constructor, options including 1 government or 2 community_member.

managers type of typical manager(s) of water point, options including household head or member(s), employee(s), self managed by customers, or combination of these)

estimated_storage_capacity_liters estimated storage capacity in liters

average_visits_per_customer average number of daily visits per customer

respondent_would_use_to_prepare_rice respondent would use this water to prepare rice, based on its quality (true or false)

perception_of_quality respondent's perception of water quality, options including 1 acceptable, 2 high, and 3 low.

tap_closure_days_per_week typical number of tap closures per week

- price_25_liter_jug** current price of 25-liter jug of water (cedis)
- price_20_liter_bucket** current price of 20-liter bucket of water (cedis)
- price_30_liter_basin** current price of 30-liter basin of water (cedis)
- avg_price_per_liter_cedis** average price per liter, calculated by averaging price per liter of known prices (cedis)
- tap_closure_changes** typical dynamics of water point management during closure (increasing prices, water point likely to close due to low storage, bathing customers have less water than when taps are flowing)
- flexible_pricing** manager adjusts price depending on amount of water needed or familiarity or need of customer (true or false)
- price_increase** price of any volume of water has increased in the last year (true or false)
- CBT_sample_source** source of sample for compartment bag test (CBT) supplied by Aquagenx (<https://www.aquagenx.com/cbt-ectc/>), options including 1 indirect_from_tap_(traveled_through_hose), 2 other_storage_(traveled_through_hose_or_poured_through_container), 3 storage_tank, and 4 tap.
- coli_mpn** results of E. Coli most probable number (MPN) test per 100 mL sample
- coli_mpn_ci** results of E. Coli most probable number (MPN) test per 100 mL sample - upper 95% confidence interval (CI)
- coli_mpn_health_risk** results of E. Coli most probable number (MPN) test per 100 mL sample - descriptive health risk, options including options including 1safe, 2possibly_safe, 3 possibly_unsafe and 4unsafe.
- tc_mpn** results of Total Coliforms (TC) most probable number (MPN) test per 100 mL sample
- tc_mpn_ci** results of Total Coliforms (TC) most probable number (MPN) test per 100 mL sample - upper 95% confidence interval (CI)
- tc_mpn_health_risk** results of Total Coliforms (TC) most probable number (MPN) test per 100 mL sample - descriptive health risk, options including 1safe, 2possibly_safe, 3 possibly_unsafe and 4unsafe.

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