



## Collaborators

- Helen Keller International
  - Rolf Klemm (PI)
  - Stella Nordhagen *currently with GAIN*
  - Mohammed Lamine Fofana
- Johns Hopkins Bloomberg School of Public Health
  - Peter Winch
- Julius Nyerere University, Kankan Guinea (UJNK)
  - · Sadio Diallo
  - · Alpha Oumar Barry
- 18 Students / Recent Graduates









# What is artisanal gold mining?



Informal sites



Boreholes, 12-20 m, up to 40 m, deep



Extraction by hand



Hand washing







Earn what you find



## Methods

- 18 mining sites + associated villages/camps
- · Phase I
  - Site visits, observations, stakeholder consultation

#### Phase II

- Cross-sectional survey, in two waves (n=613)
- In-depth interviews: Single miners (15), mothers of young children (25), food vendors (20)
- Observations with mothers of young children (25)
- Quarterly market surveys (7-8 markets)
- stakeholder consultation

#### Phase III

• In-depth interviews: mothers of young children (20), food vendors (20)



#### FOOD SYSTEM

#### FOOD ENVIRONMENT

#### External Domain



#### Personal domain



#### AVAILABILITY

Presence of food sources or products



#### PRICES

Monetary value of food products



#### VENDOR AND PRODUCT PROPERTIES

Vendor properties (typology, opening hours, services) and product properties (food quality, composition, safety, level of processing, shelf-life, packaging)



#### MARKETING AND REGULATION

Promotional information, branding, advertising, sponsorship, labelling, policies



#### ACCESSIBILITY

Physical distance, time, space and place, individual activity spaces, daily mobility, mode of transport



#### **AFFORDABILITY**

Purchasing power



#### CONVENIENCE

Relative time and effort of preparing, cooking and consuming food product, time allocation



#### DESIRABILITY

Preferences, acceptability, tastes, desires, attitudes, culture, knowledge and skills



AND

CONSUMPTION

NUTRITION OUTCOMES



PRODUCTION,

STORAGE,

TRANSFORMATION.

TRANSPORTATION

# Availability & Accessibility











# Prices & Affordability

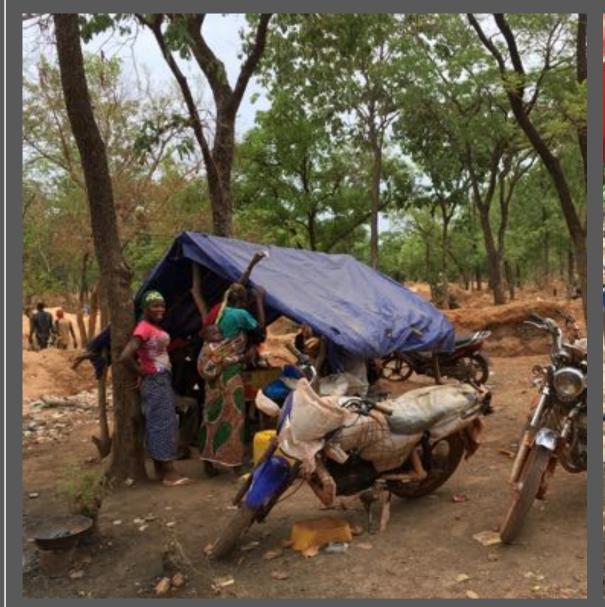




... sometimes you can spend the entire day without finding anything, and if you don't find anything, you can't eat."



Food Properties & Vendor Properties

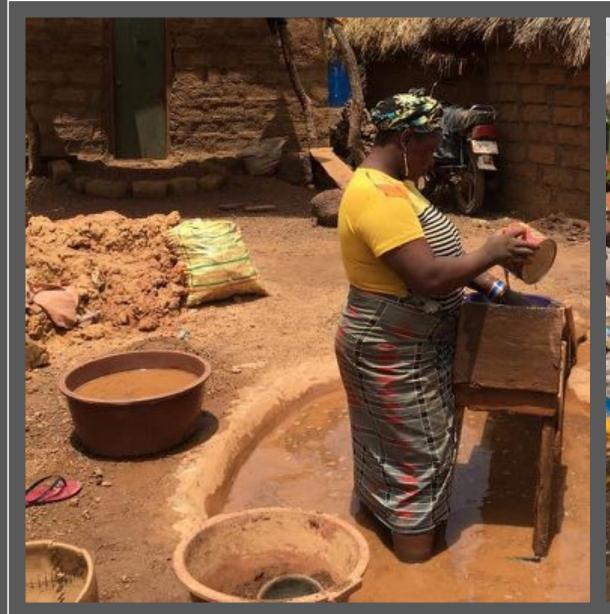








Desirability & Convenience





"The vendor I trust, it's because she's clean. It's not that I like her, it's the cleanliness."





### Concluding remarks

- Food environments in artisanal mining communities are dynamic; reflect interplay of consumer needs and vendor responses
- They are generally not conducive to good nutrition for either adults or children
- Need to design and test programmatic & regulatory strategies to improve these food environments











# Thank you.

This research has been funded by the Drivers of Food Choice (DFC) Competitive Grants Program, which is funded by the UK Government's Department for International Development and the Bill & Melinda Gates Foundation, and managed by the University of South Carolina, Arnold School of Public Health, USA; however, the views expressed do not necessarily reflect the UK Government's official policies.