



Assessment of Fecal Exposure Pathways in Low-Income Urban Settings

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 - London School of Hygiene and Tropical Hygiene
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 - Water Research Institute of CSIR
 - TREND Group
 - International Water Management Institute

Background and Objective

- Decades of aid programs and investments, very few examples of non-networked sanitation solutions in low-income urban settings capable of reducing diarrheal disease burden
- Rapid growth of low-income urban neighbourhoods without concurrent expansion in infrastructure networks
- Current WHO recommended strategy QMRA(Quantitative Microbial Risk Assessment) is as reliable as the data it is based on
- Sparse information on the magnitude of fecal contamination and frequency of behaviors
- Thus, it is important to address the scarcity of data available to policy makers and implementers



Project Phases

- 4 year project made up of 2 phases
- Phase 1:
 - 15 months (July,2011- October, 2012) first of its kind interdisciplinary(behavioral and environmental sampling) exposure assessment in Accra
 - (October,2012 – June, 2013) Data analysis and development of rapid assessment tools
- Phase 2: (July 2013- June 2014)-Extend and validate results of phase 1 and apply rapid assessment tool and typologies in a new context

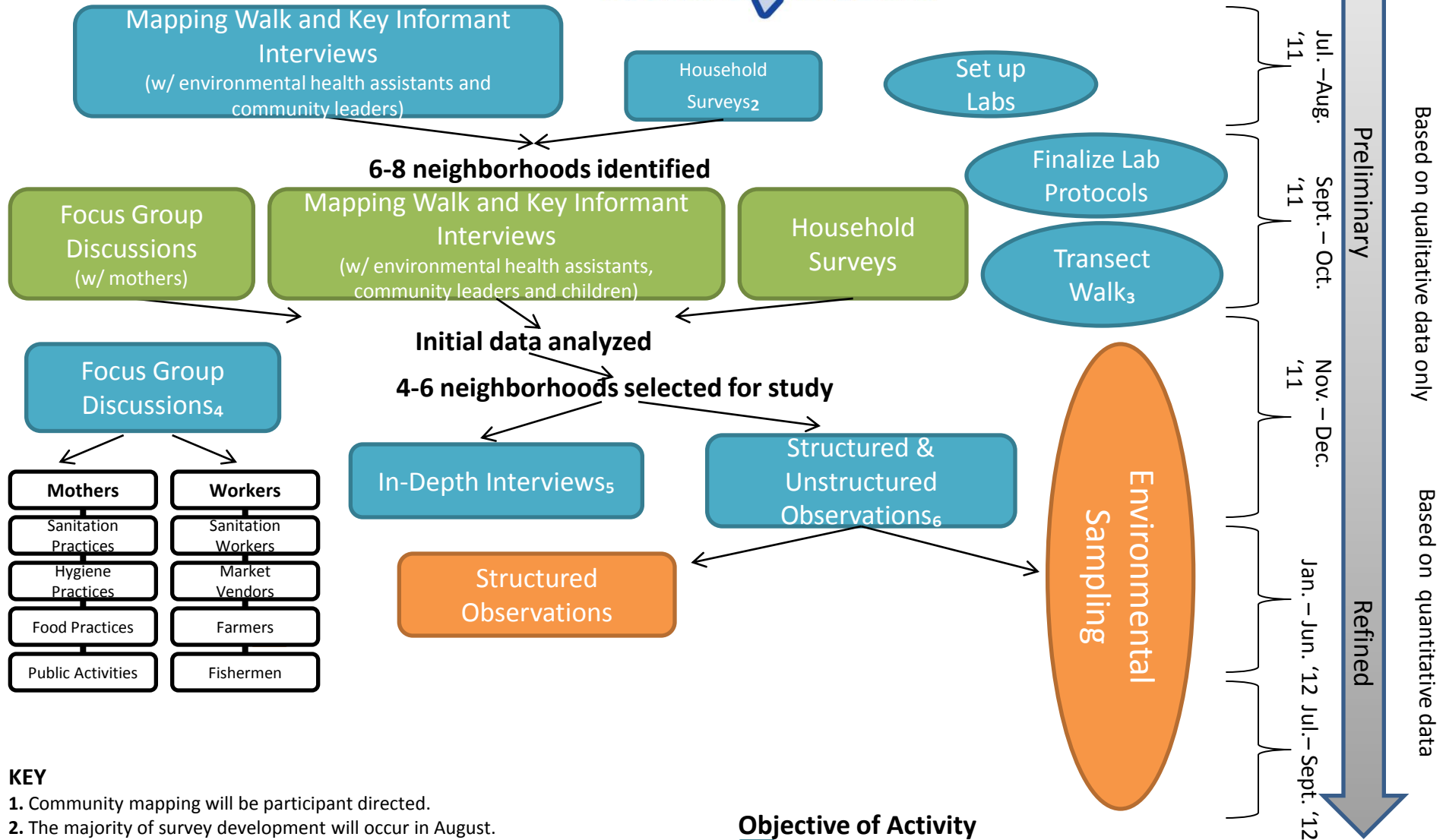


SaniPath Data Flow Chart



QMRA Program

Timeline

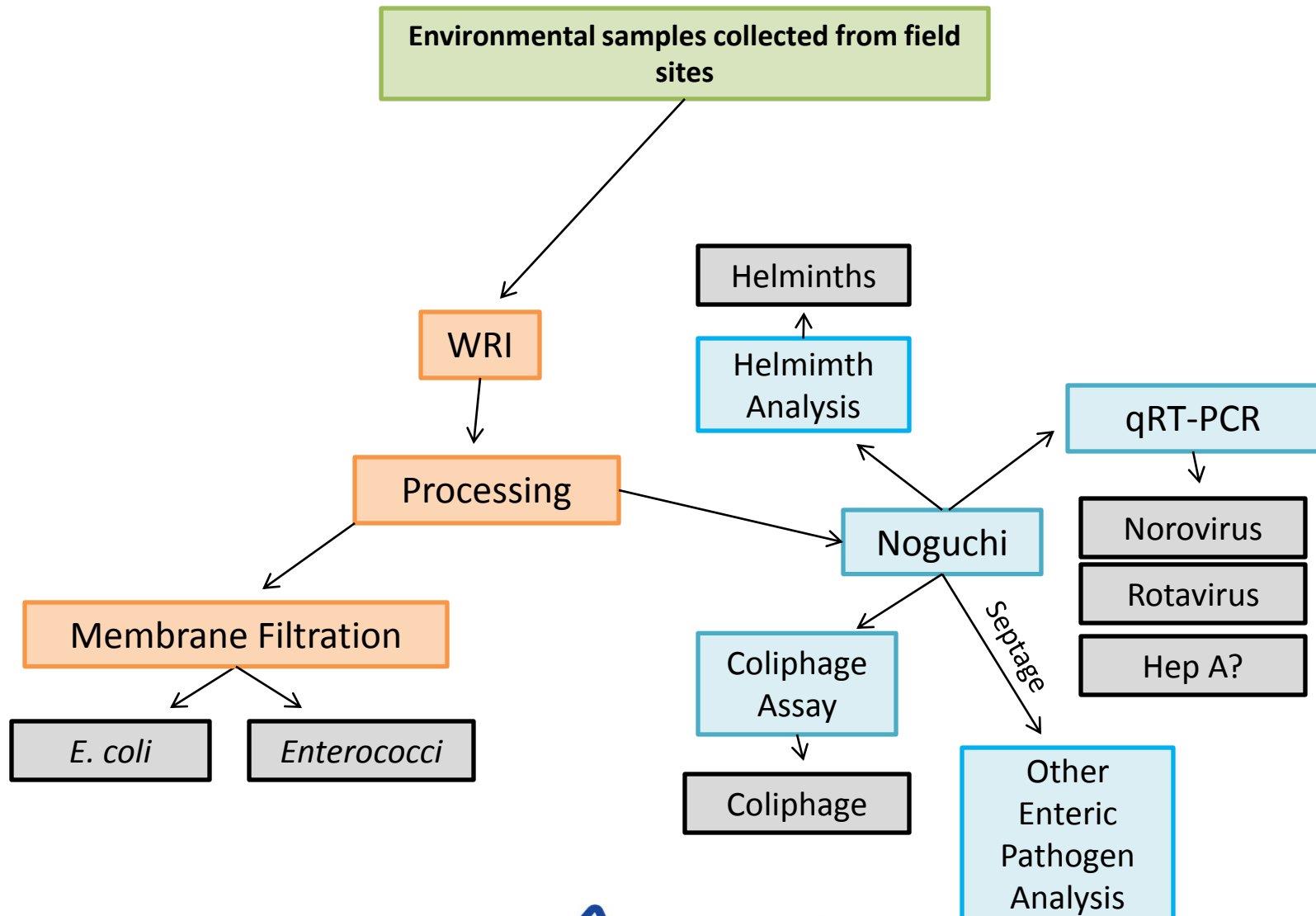


- KEY**
- Community mapping will be participant directed.
 - The majority of survey development will occur in August.
 - Transect walks are for environmental sampling purposes.
 - Focus group discussions at this stage will be conducted on topic areas identified in Jul. – Oct. 2011. Potential participants and topic are listed.
 - There will be some fluidity between focus group discussions and in-depth interviews.
 - Decisions on additional data needed to strengthen the QMRA will be made on a rolling basis.

- Objective of Activity**
- Developing Instruments/Sampling Sites
 - Neighborhood Selection
 - Main Data Collection
 - Microbiological Data
 - Human Subjects Data

Mothers	Workers
Sanitation Practices	Sanitation Workers
Hygiene Practices	Market Vendors
Food Practices	Farmers
Public Activities	Fishermen

Environmental Sampling Plan



Sub- Studies

- Wide range of exposures in both public and private domains during different seasons
 - Beaches
 - Drinking Water- taps, boreholes, wells, tanker trucks
 - Flood prone neighbourhoods
 - Urban Agriculture (Wastewater irrigation)
 - Markets- produce items, ready to eat foods
 - Schools
 - Open Drains- “flying toilets”
 - Public latrines
 - Open defecation areas
 - Households



Expected Outcomes

- Large set of information that will compare different activities and fecal exposure pathways within and across neighborhoods and the risk of different pathogens to residents of Accra
- Results will be summarized into policy briefs and advocacy tools targeted at government, community based organizations and NGOs
- Development of a set of cost-effective rapid assessment tools to characterize risks associated with inadequate sanitation in low-income neighbourhoods
- Capacity building for environmental health in Ghana

