East Africa Social Science Translation (EASST) Collaborative

2016 Request for Proposals

Release Date: 11 December 2015

The East Africa Social Science Translation (EASST) Collaborative invites pairs of researchers from East Africa and the CEGA faculty network to submit grant applications for the evaluation of innovative interventions in health, education, economic development, energy, and other sectors.

The ceiling for grant requests is USD $50,000 per project, inclusive of indirect costs. Up to $200,000 will be awarded in the current grant period. The deadline to submit an application is:

11:59 pm U.S. Pacific Time on Wednesday, 13 April 2016

OVERVIEW

In Spring 2016, EASST will award grants for the evaluation of innovative interventions in health, education, economic development, energy, and other sectors. A total of $200,000 in research funding will be awarded across all projects.

Research teams with two lead project investigators – one from CEGA and one from a research institution in East Africa – are invited to jointly develop a grant research proposal for consideration by EASST. Proposals will be peer reviewed by a panel of researchers. Research teams may request supplemental funding for an ongoing project. Successful projects will achieve two primary goals: (i) creating new knowledge that will improve the design of development programs in East Africa, and; (ii) enhancing East African researchers' skills and capacity to lead further evaluations.

Priority will be given to projects that are likely to result in co-authorship of at least one publication as a result of the funded research.

BACKGROUND

Launched in 2009, The East Africa Social Science Translation (EASST) Collaborative is a multi-institution research network with a mission to promote rigorous evaluation of social and economic development programs in East Africa. EASST offers competitive fellowships and grants to researchers in the region; it also facilitates collaboration between East African and U.S. researchers. Through these and other activities, EASST seeks to empower the "next generation" of social scientists to measure the impacts of development interventions, and then translate research findings into better public policies.

The EASST network is comprised of researchers at Makerere University, Addis Ababa University, the African Population and Health Research Center (APHRC), the University of Dar es Salaam, the National University of Rwanda, Twaweza, Ethiopian Economics Association (EEA), Ethiopian Development Research Institute (EDRI), United States International University (USIU), the Economic Policy Research Center (EPRC), and the University of California. The network is administered by the Center for Effective Global Action (CEGA) at UC Berkeley. Learn more about EASST at: http://www.easst-collaborative.org

APPLICATION GUIDELINES

Award Ceiling: $50,000 per project

Applications must demonstrate a rigorous research design, feasible implementation plan, strong commitment from implementing partners, and potential for scale-up. To apply for research funding, investigators must submit a research proposal narrative, not to exceed **five** (5) pages and must address each of the following eight sections (please do not leave any section blank):

1.	**Problem Statement** Clearly state the problem that motivates the proposed research, including quantitative evidence of the challenge to be addressed. How have you validated the importance of this constraint for development?
2.	**Scientific Contribution** What knowledge gap are you addressing, and how will it advance the field of research? Proposals must include a brief literature review and explain the project's unique scientific contribution.
3.	**Description of Treatment(s)** Describe the intervention that you will design and/or test, your theory of change, and the specific development program(s) or organization(s) that will benefit from the proposed research. Identify questions or gaps in current development practice that you seek to address through the study. Include available quantitative and qualitative data in support of your hypotheses, models and/or theories of change.
4.	**Target Population** Characterize and describe the population that the intervention seeks to impact. If a pilot-study, how does the target population compare to the recipients of a full-scale intervention? Do other populations face the same conditions as your target group, and could they potentially benefit from the innovation(s) evaluated here? How large is the population that could benefit if the intervention were scaled up?

5.	**Evaluation Design** If you are proposing to conduct a full evaluation—either as a standalone study, or through an add-on to an existing study—describe the evaluation design. What is your identification strategy? How will you identify the counterfactual? What are the units of analysis (e.g. individual, household, village, etc.)? What are the intermediate and final outcome indicators? How will these be measured? When will you time measurements, and how frequently? Describe your power calculations (effect size, take up/compliance, variance, clusters, observations per cluster, *rho*). We strongly encourage applicants to be very detailed in the presentation on power calculations. What is the minimum detectable effect size, and why do you believe this is an appropriate choice? Describe the data and assumptions used for these estimates.. What are the foreseeable threats to the internal validity of this study? (e.g. compliance, attrition, spillovers, etc.)
6.	**Policy Translation** Why is your study likely to result in take-up by development practitioners? Consider the cost-effectiveness of the intervention. Which other implementing organizations are likely to incorporate this intervention into their operations, if proven successful? How will other implementers become aware of the results of this evaluation? Outline a brief plan to reach key audiences, drawing on the EASST network, journalists, and/or the contacts of the investigators. How, if at all, will the "lessons learned" have relevance beyond this test case? Will the study help policymakers design better programs and policies? Will it shed light on strategies to overcome market failures and behavioral or social barriers to development?
7.	**Partners** The EASST Collaborative expects that all phases of the proposed research (from study design and field implementation, to data analysis and publication) will be carried out through equal partnership of the East African and CEGA principal investigators, and strong collaboration with any implementing partner(s). Please describe, in detail, the distinct roles of the EASST researcher(s), their CEGA counterpart(s), and any partnered implementing organization(s). Each PI should write a paragraph about what s/he expects to gain and accomplish from the collaboration and what kind of knowledge they intend to share with each other. Note that publications resulting from funded research must include co-authors from both EASST and CEGA. For junior researchers within the EASST network, capacity building must be part of the practice of the evaluation itself.
8.	**Other Funding Sources** If the proposed study is supported with other funds, describe how you will use funds from EASST, and explain how these new funds will complement or improve research activities that are already funded.

EVALUATION PROCESS

A two-level review process will be used by EASST to judge submissions. The first stage is a peer review carried out by CEGA peer referees, i.e. members of the CEGA staff who have not submitted a proposal. These reviewers will assess the eligibility of each proposal based on the grant requirements.

Next, members of the EASST Review Committee (including CEGA and East African faculty) will complete a second level of review. Committee members will read and score each proposal based on the specified criteria below, and will provide comments for each of the original applications. The Review Committee will discuss and make final decisions about the allocation of funding.

All proposals will be categorized as either: (1) funded--partially or fully; (2) revise and resubmit; (3) not approved.

EVALUATION CRITERIA

Proposals will be judged on their academic significance, innovativeness, methodology and viability. In addition, reviewers will assess the likelihood that the study will strengthen East African leadership in impact evaluation. East African researchers must benefit professionally from the collaboration (see the EASST co-authorship statement in the appendix).

The criteria for evaluation are given in the table below. For each criterion, reviewers will assign a score from 1 (very poor) to 5 (excellent) and will provide justification for the overall score.

Potential Knowledge Transfer	Is there evidence of a strong relationship between the EASST researchers(s) and CEGA affiliate(s)? Is the relationship likely to endure through the entire study? Are the roles of the co-PIs clearly articulated? Is there substantial evidence of capacity development for other local researchers and implementers, beyond that of the co-PIs? How will the CEGA co-PI's capacity for research dissemination or translation improve, as a result of the collaboration?
Significance and Innovation	Does the study answer new questions, or introduce novel methods, measures or interventions? Does the problem statement provide evidence of an important barrier, gap, or inefficiency that is not currently addressed through other interventions? What is the evidence suggesting that the proposed intervention(s) will improve target outcomes and will be appropriate for the setting and target population? Is the information that will be generated relevant to the implementing partner or another development policy-maker?
Methodology and Viability	Is the methodology rigorous? Is the statistical significance of the results methodologically sensitive? Are the indicators and sample size estimates appropriate, given the outcomes to be measured? Is the research design clear and well-articulated? Will outcomes be measurable within the proposed study period? What are potential challenges to the viability and validity of the study? Is there evidence of a strong relationship with the implementing partner?
Translation	Is the program relevant to the implementing institution or other institutions within the East Africa region? Can it be applied to existing programs or initiatives in the region? Is the strategy or intervention cost-effective (i.e. what is the potential unit of impact per dollar of intervention, and will this be measured accurately)? Is there a strategy for communicating results of the study to stakeholders? What roles will each of the co-PIs play in research dissemination?

BUDGET

Note that program budgets must clearly detail the amount of research funding to be provided to the East African institution, as well as the amount that will be sent to the university of the CEGA affiliate (for support of U.S. researcher and graduate student costs). CEGA faculty affiliates may not request salary or benefits through this program. Funding can, however, be used to cover graduate student costs. Budgets should be used to fund research costs but, in some cases, may be used to subsidize implementation of an intervention. It is the applicants' responsibility to create a budget that complies with their university or institution's policies. Overhead (indirect) charges for this grant program are fixed at 9% of direct costs. Requests justifying institutional indirect charges beyond 9% will result in delays and may not be guaranteed.

CONTEST TIMELINE

Friday, 11 December 2015	Release of Request for Applications
Wednesday, 13 April 2016	Deadline for co-PIs (East African researchers and CEGA affiliates) to submit a full Research Proposal
Friday, 13 May, 2016	Decision Letters Sent to Applicants

POST-AWARD

Once an application is approved, funds will be provided through a sub-award from the University of California, Berkeley to the host institution. All awards will require approval from your host institution. **Applicants are encouraged to submit their applications for institutional review before submitting to EASST**. To facilitate award processing, you should include your institutional approval in the proposal submission.

In addition, it is **strongly recommended** that applicants secure approval from host institution Institutional Review Boards (IRBs) for any human subjects protocols required for your research. UC Berkeley requires proof of IRB approval prior to processing any sub-awards.

GRANT INFORMATION AND ADMINISTRATION

1. **Funding**: EASST anticipates funding a total of $200,000 during this 2016 Call for Proposals, with a maximum of $50,000 per grant. The period of performance for grantees under this call is technically December 31, 2016, although extensions are anticipated. Funds may not be spent past that date without written approval.
2. **Eligibility**: Submissions must be made by at least one CEGA affiliated Principal Investigator and one East African Principal Investigator.
3. **Award Notices**: Applicants will be notified of grant award status on or about May, 2016.
4. **Grantee Requirements**:
    - Registration and Openness: Open and producible research practices are essential to ensure the reliability of scientific evidence generated by economists and other development scholars. Grant recipients are highly encouraged to adopt best methods, tools, and practices in research transparency as promoted through the Berkeley Initiative for Transparency in the Social Sciences (BITSS) at CEGA.
    - Reporting: Grantees must produce a final analysis report and publish the report on the OSF study page. Awardees must provide project status updates periodically (e.g. every six months) and provide a project description to be shared on the EASST website.

5. **Sub-awards**: Once an application is approved, funds will be provided through a sub-award from the University of California, Berkeley to the host institution. CEGA staff will work with UC Berkeley award office to disburse funds as quickly as possible, however, please note that the fund transfer process may take up to 12 months. Selected award recipients will be sent required documentation for fund disbursement and are asked to provide all necessary information as swiftly as possible to ensure timely fund disbursement.

6. **Other Terms and Conditions**: EASST reserves the right to negotiate with project investigators and/or their institutional representative. Any publications produced as a result of this grant shall include the language "Funding for this research was provided by the East Africa Social Science Translation Collaborative"
7. **Questions**: Questions relating to this announcement should be sent to EASST Program Associate Kuranda Morgan via e-mail at kmorgan@berkeley.edu.

INSTRUCTIONS

Carefully review the *Application Guidelines* in this document. An online system is used to submit applications. Please submit completed versions of all required documents by the submission deadline. No information and/or documents will be accepted after the closing date. All materials should be submitted using the online platform "Submittable" at: http://tinyurl.com/Submittable-EASST-2016-RGC

Note: If you are unable to access the online system, please email kmorgan@berkeley.edu to request an application in WORD or RTF.

Compile the following documents:

1. **Cover Sheet** (see Appendix 1): This document must be completed in its entirety;
2. **Budget** (see Appendix 2): This document must be completed in its entirety using the enclosed table (we strongly advise you to refer to budget under the *Research Proposal Example*, included below, when preparing your budget).
3. **Research Proposal**: This proposal narrative must not exceed five (5) pages in length and must address all eight items discussed in the *Application Guidelines*. The proposal should be written in Times font, Size 11 and may be single-spaced. We strongly advise you to refer to the *Research Proposal Example* (see Appendix 3), included below, when writing your statement.
4. Save all of the above items as a **SINGLE WORD** or **PDF** file. The filename should read "CEGAPI-name_EASSTPI-name"
5. **Submit** your application file online at **http://tinyurl.com/Submittable-EASST-2016-RGC**

The deadline for submission is:
11:59 pm U.S. Pacific time, Wednesday, 13 April 2016

Learn more about EASST at http://www.easst-collaborative.org

Appendix 1: EASST Cover Sheet Template

EAST AFRICAN PRINCIPAL INVESTIGATOR (NAME, TITLE, INSTITUTION)	**CEGA PRINCIPAL INVESTIGATOR**
CO-INVESTIGATOR(S)	
TITLE OF PROPOSAL	**COUNTRY**
INSTITUTIONAL CONTACT(S) *(if needed, list additional in Appendix)*	**OTHER CONTACT (Name, Email, Phone)**
TOTAL REQUESTED	
$	

GRANT PERIOD			
START DATE: (yyyy-mm-dd)		**END DATE:** (yyyy-mm-dd)	
U.S. UNIV. TO RECEIVE AWARD		**U.S. UNIV. AMOUNT REQUESTED**	$
EST AFR INST TO RECEIVE AWARD		**EAST AFR INST AMOUNT REQUESTED**	$
OTHER FUNDING *(for add-on requests)*			

Appendix 2: EASST Budget Template

Budget Line Items (in USD)	Year 1	Year 2	Year 3	Total Cost
CEGA Partner Award				
Personnel (PIs, RAs)	0.00	0.00	0.00	0.00
Co-PI time for data analysis (full-time GSR)				
Travel (PIs, Co-PIs/RA)	0.00	0.00	0.00	0.00
Flights, Accommodations, per diem,				
Materials and Supplies	0.00	0.00	0.00	0.00
Fringe Benefits	0.00	0.00	0.00	0.00
Fringe Benefits for CEGA Partner Institution				
Total CEGA Partner award	0.00	0.00	0.00	0.00

EASST Partner Sub-Award (Field Personnel, Travel, Survey Costs, etc)	Year 1	Year 2	Year 3	Total Cost
Personnel		**0.00**	**0.00**	**0.00**
EASST PI, Field Coordinator, Staff enumerators				
Travel	**0.00**	**0.00**	**0.00**	**0.00**
Travel for EASST PI, Field Coordinator, enumerator travel and per diem				
Materials and Supplies	**0.00**	**0.00**	**0.00**	**0.00**
Printing, survey instrument, office expenses				
Other Costs	**0.00**	**0.00**	**0.00**	**0.00**
Total Direct Costs	0	0	0	0
Indirect Costs (9% maximum request)	**0.00**	**0.00**	**0.00**	**0.00**
Total EASST Partner award				0.00
Total CEGA and EASST awards	0.00	0.00	0.00	0.00

Appendix 3: EASST Cover Sheet, Proposal and Budget Sample

EAST AFRICAN PRINCIPAL INVESTIGATOR (NAME, TITLE, INSTITUTION)	**CEGA PRINCIPAL INVESTIGATOR (NAME, TITLE, INSTITUTION)**
Adam Gold Senior Researcher University of Makerere	Ana Orange Professor of Economics University of California, Berkeley
CO-INVESTIGATOR(S)	
Michael Green PhD Candidate in Economics University of California, Berkeley	
TITLE OF PROPOSAL	**COUNTRY**
Wash Your Hands Uganda: An Evaluation	Uganda
INSTITUTIONAL CONTACT(S) ***(if needed, list additional in Appendix)***	**OTHER CONTACT (Name, Email, Phone)**
Makerere University P.O.BOX, 7841 Kampala-Uganda www.eprc.or.ug adamgold@makerere.edu	

TOTAL REQUESTED			
$45,350			
GRANT PERIOD			
START DATE: (yyyy-mm-dd)	2015/08/01	**END DATE:** (yyyy-mm-dd)	2017/01/31
U.S. UNIV. TO RECEIVE AWARD	UC Berkeley	**U.S. UNIV. AMOUNT REQUESTED**	$12,650
EST AFR INST TO RECEIVE AWARD	Makerere University	EAST AFR INST AMOUNT REQUESTED	$32,700
OTHER FUNDING			

1. Problem Statement

Hygiene is essential to the public health mission of reducing the transmission and consequences of disease. The two leading causes of childhood mortality worldwide are diarrheal disease and acute respiratory infections (Black et al. 2003), accounting for two-thirds of the deaths of children under age five (WHO 2002). Both of these categories of illness are closely associated with inadequate hygiene. In addition, chronic parasitic infections and diarrhea can lead to anemia, which further hinders children's development (Curtis and Cairncross 2003). The provision of safe water and sanitation, and improved hygienic behaviors more generally, has the potential to alleviate the proximate causes of these illnesses and thereby improve health (Esrey et al. 1991, Galiani et al. 2005).

Medical evidence suggests that the hands are the main transmitters of diarrhea and respiratory infections. As such, they constitute disease vectors carrying respiratory microorganisms and fecal material into the domestic environment of the susceptible child (Hendley et al. 1973, WHO 2003). Health experts recommend handwashing with soap as a critical action in protecting public health because it is a mainstay in infection control (Luby et al. 2001). Yet, rates of handwashing with soap at critical times remain low throughout the world, even when both soap and water are available (Scott et al. 2003). In a sample of developing countries, the observed rates of handwashing with soap range between 0 and 34 percent after defecation and 3 and 37 percent after cleaning up a child (World Bank 2005).

2. Contribution to Literature

Previous studies in the literature of randomized handwashing promotion campaigns typically find that handwashing does reduce diarrhea in children under five years old, but those campaigns usually require intensive and controlled interventions. For example, Ejemot et al. reviewed 14 randomized trials, concluding that handwashing programs resulted in a 39 percent reduction in diarrhea episodes in children residing in institutions in high-income countries and a 32 percent reduction in such episodes in children living in communities in low- or middle-income countries. The authors suggest that the significant reduction is comparable to the effect of providing clean water in low-income areas. However, the community or institutional interventions studied required a high cost of monitoring and implementing and hence these authors (Ejemot et al. (2009)) conclude that larger scale and less demanding pilots should be performed in developing countries. Luby et al. also show that handwashing with soap reduces the incidence of acute respiratory tract infections, as well diarrhea, as a result of implementing an intensive and small-scale community-level intervention. Others have studied school-level interventions. Bowen et al. evaluated a school program in China, in which 87 Chinese schools were randomized to a handwashing program that included training for teachers, in-class sessions, handwashing at school, and a pack for the children's families that included soap; or to an expanded intervention (handwashing program, soap for school sinks, and peer hygiene monitors). They found that the expanded intervention significantly reduced syndrome-specific absence incidence (due to stomachache and headache).

To the best of our knowledge, the studies that so far have found handwashing programs to have significant effects on child health have focused on interventions that impose controlled conditions in small populations over short time periods. These studies are akin to efficacy trials in drug development, which evaluate the impact of a specific intervention under ideal conditions. This style of intense promotion can cause important behavior changes that we would not necessarily expect under non-study conditions, where interaction with handwashing promoters is less frequent. Thus, although

intensive handwashing interventions have proven effective in reducing diarrhea and acute lower respiratory infections (ALRI), it has not been proven that similar results could be obtained if those interventions were implemented at scale. This research, however, will study the effectiveness of a national handwashing campaign to learn the impacts of large-scale handwashing interventions in a real-world context on a wide range of health indicators. Furthermore, we will also be the first to study other intermediate outcomes, such as the campaigns' effectiveness and behavior change, which provide important insights on the full theoretical causal chain of disease transmission and ill health.

3. Description of treatment

In response to the preventable threats posed by poor sanitation and hygiene, the NGO Water Now is launching a large-scale handwashing project to improve child health and welfare outcomes of rural households in Uganda. The Wash Your Hands Uganda Project borrows from commercial and social marketing to promote better hygiene. Communication campaigns and messages developed for this project are designed and strategically delivered across multiple integrated channels and in various settings in order to "surround" target audiences with handwashing promotion. Formative research conducted during 2013 with mothers and caregivers reveals that soap was not available for handwashing in most households in Uganda, that there was a common belief that washing hands with water was sufficient, and that people did not know the critical times to wash hands with soap.

This study will assess the effect of two components that are delivered at different administrative levels: i) a mass media communications campaign treatment at province level, and ii) a community treatment at the district level. The activities included under each component of the project are as follows:

- *Province-Level Intervention: Mass Media Communication Campaign*

A mass media plus direct consumer contact communication campaign will be implemented at the provincial level. The campaign will emphasize the importance of the availability and use of soap for handwashing, and the need to wash hands with soap immediately before cooking or eating and after fecal contact (going to the bathroom and changing a baby). The main communication channel is broadcast radio, with radio spots being aired 5 times per day, during a two-month period, 4 times per year. The campaign also includes print materials such as posters with reminders of key junctures in which to wash hands with soap, comic books, and brochures. Additionally, promotional events such as street parades, games, and local theater performances were conducted in public spaces.

- *District-Level Intervention: Community Treatment*

The community intervention is conducted at the district level, and includes, in addition to the mass-media communication campaign, a package of activities implemented at the community and school level. The mass-media communication campaign will have the same messages and frequencies described in the province-level treatment. The community treatment includes handwashing education sessions with groups of mothers, caregivers, and children. During these handwashing sessions, community-based agents will demonstrate how to properly wash hands with soap, explain the critical junctures in which we must wash our hands with soap, and provide information on the extent to which improved handwashing behavior impacts infant health and welfare. The specialists in charge of conducting the handwashing promotional sessions include schoolteachers, health promoters, and local leaders who will be trained as part of the community

treatment to play a mediating role in influencing mothers', caregivers', and children's handwashing behavior. Additionally, handwashing behavior will be introduced as part of the school curricula. The activities will include designating a place in the classroom for soap, performing regular handwashing practices in groups each day, weekly handwashing promotion classes, and other children's activities such as singing songs and drawing posters. This school component of the community intervention aims to transmit the handwashing message to households of children attending the treated schools by including handwashing education in their formal studies.

4. Target Population

The Wash Your Hands Uganda project is a national intervention implemented in a total of approximately 800 districts randomly selected (in 104 provinces). The project's primary target audience consists of mothers of reproductive age (15 to 49 years), caregivers of children under five years old, and children up to 12 years old. The project's main objective is to improve handwashing behavior among the target audience in order to better the health of children under five. Children under five are the most susceptible to serious consequences from diarrhea and respiratory infection. These infections are usually transferred from dirty hands to food or water sources, or by direct contact with the mouth. Diarrheal disease and respiratory infection among children under five can be prevented by their mothers/caregivers washing their hands with soap at critical times, such as before feeding a child, cooking, or eating, and after using the toilet or changing a child.

5. Evaluation Design

Research Questions

The objective of this study is to assess the impact of the Wash Your Hands Project on handwashing behavior and a set of development outcomes. In particular, the study aims to respond the following research questions:

i) What is the effect of handwashing promotion on handwashing *knowledge* and *believes*, and *accessibility* to soap?

ii) What is the effect of handwashing promotion on handwashing *behavior*?

iii) What is the effect of handwashing promotion on *children's health and nutrition*?

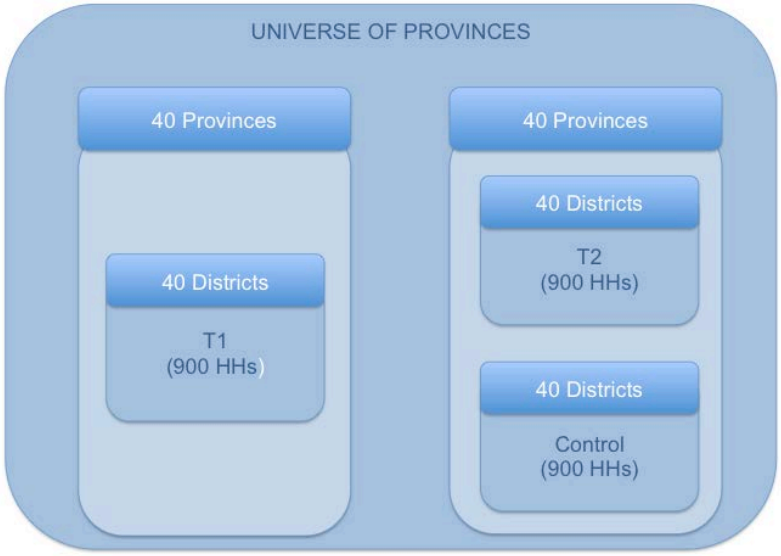
By assessing the effect of the two project treatments independently, the study will also assess which component is more effective at increasing handwashing behavior, and improving children's health and nutrition.

Identification Strategy

Estimating the causal relationship between the treatment and the outcomes of interest requires the construction of an accurate counterfactual that accounts for external factors besides the intervention. To assess the causal impact of each of the project components on a set of relevant variables, we will conduct a controlled randomized trial comprising of two treatments: the province-level treatment (T1) and the district-level intervention (T2). The randomization process, by which a random selection of communities receives the treatment and the remaining serve as controls, generates an appropriate counterfactual for the purposes of the impact evaluation.

The study areas will be districts with populations ranging from 1,500 to 100,000 inhabitants. From the universe of Ugandan provinces, 80 provinces will be randomly selected, with 40 assigned to a first group and 40 to a second. From the first group of 40 provinces, 40 districts will be randomly assigned to receive the mass media province-level treatment (T1). From the second group of provinces, 80 districts will be randomly selected, with 40 randomly assigned to receive the district-level community treatment (T2) and the other 40 randomly assigned to serve as control group (C). Thus, we will assess the impact of the two project components—treatments—on a wide range of outcomes. Figure 1 below shows the experiment's tentative design.

Figure 1



Data and Outcomes of Interest

Data will be collected on a wide range of variables, mainly from household surveys. Two rounds of surveys will be conducted; one at baseline, before the project takes place, and a follow-up survey two years after the intervention begins. The household survey will include a standard household roster and questions on dwelling characteristics, household assets, education, income, labor outcomes, water sources, sanitation, etc. The main intermediate outcomes to be measured, following the causal chain from bottom to top, are: effectiveness of handwashing campaigns (exposure to and recollection of campaigns); determinants for handwashing behavior (handwashing knowledge, beliefs, and access to and placement of soap and water); and handwashing behavior (observations of handwashing facilities, caregiver self-reported handwashing behavior, and structured observations of handwashing behavior). Final outcomes of interest include: environmental and water contamination (presence of *E.Coli* and other coliforms); diarrhea and ALRI (based on caregiver-reported symptoms); anemia (iron deficiency in blood); parasites infestations (parasite prevalence in stool samples); and malnutrition (stunting and wasting).

Power calculations

Using latest DHS data for Uganda, power calculations estimated that around 750 households per treatment arm would be necessary to capture a 15 percent decrease in diarrhea incidence. These estimates are based on the collection of 2 data points—baseline and endline surveys—over the length of the project. Thus, and considering the evaluation includes two treatment arms and a control groups, the final sample for the evaluation sample should consist of approximately 2,250 households with children under two years of age at the time of the baseline. An additional 20 percent will be added to the sample size to address attrition, thus the total sample size will be 2,700 households.

6. Policy Translation

This study will be the first to assess the effect of a large-scale handwashing with soap intervention using such a wide range of indicators. Previous studies in the literature of randomized handwashing experiments focus on intensive (in terms of labor, inputs and/or monitoring) and controlled treatments, showing that they are effective in reducing diarrhea and pneumonia incidence in children. Despite these results, handwashing with soap at critical junctures in developing countries continues to be low. This study, in contrast to previous ones, will examine a significantly less intensive intervention at scale under real-world conditions. Thus, this study may have huge policy implication. If the intervention is proven effective, handwashing campaigns could potentially become a low-cost, preventive measure to improve child health, especially in developing countries with a high incidence of diarrhea.

In addition, we will study a full set of intermediate outcomes, such as the effectiveness of the campaigns and behavior change, in order to better understand the results in the context of the causal path of disease transmission identified in the medical and public health literature. To the best of our knowledge, ours will be the first study of handwashing to focus on all components of this causal chain. We believe that this study will successfully identify which components of the intervention are more effective in changing handwashing behavior and improving children's health.

7. Partners

This project is a collaborative effort between the Ana Orange, Adam Gold and Michael Green, who have been refining and converging this idea to a more viable proposal over the last year. Ana Orange is a Professor of Economics at University of California, Berkeley, and a CEGA affiliate. Orange has taken on a mentor role and will be CEGA's PI. Adam Gold is a researcher at Makerere University. Gold will take the lead as the EASST PI, working together with Michael Green, a current PhD student at UC Berkeley. Green works with Gold on several projects, and has been able to work with him in Uganda for a couple of weeks this summer. He will continue working closely together on project implementation to analysis, and will play the role of Co-PI.

8. Other Funding Sources

The project implementation is fully funded by the NGO Water Now. The research study has currently no other sources of funding. If we are awarded the research grant, the funds would be allocated to conduct the baseline survey, and additional sources of funding would be explored for the follow-up survey.

EASSST Budget Sample

Budget Line Items (in USD)	Year 1	Year 2	Year 3	Total Cost
CEGA Partner Award				
Personnel (PIs, RAs)	**$6,400**			**$6,400**
Co-PI time for data analysis (full-time GSR)	*$6,400*			
Travel (PIs, Co-PIs/RA)	**$6,250**			**$6,250**
Flights (one trip for PI to Uganda)	*$2,000*			
Accommodation & per diem PI (5 days at $150)	*$750*			
Flights (one trip for Co-PI to Uganda)	*$2,000*			
Long stay in Uganda for Co-PI (30 days at $75)	*$1,500*			
Materials and Supplies	**$0**			**$0**
N/A	$0			
Fringe Benefits	**$0**			**$0**
Fringe Benefits for CEGA Partner Institution	$0			
Total CEGA Partner Award	**$12,650**			**$12,650**
EASST Partner Sub-Award (Field Personnel, Travel, Survey Costs, etc)				
Personnel	**$22,050**			**$22,050**
EASST PI (3 months @ $750/month)	$2,250			
Field Coordinator (3 months at $600/month)	$1,800			
Staff enumerators (20 enumerators during, 3 months at $300/month)	$18,000			
Travel	**$6,650**			**$6,650**
Travel for EASST PI (3 trips to study area)	$150			
Travel for Field Coordinator (10 trips)	$500			
Enumerators travel and per diem (10 enumerators, during 2 months at $10/day)	$6,000			
Materials and Supplies	**$1,300**			**$1,300**
Printing training materials and survey instrument	$800			
Office expenses	$500			
Other Costs	**$0**			**$0**
Total Direct Costs	**$30,000**			**$30,000**
Indirect Costs (9% maximum request)	$2,700			$2,700
Total EASST Partner Sub-Award	**$32,700**			**$32,700**
Total CEGA and EASST Awards	**$45,350**			**$45,350**

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[1] This example was prepared by Alexandra Orsola-Vidal, using the evaluation of a large-scale handwashing intervention in Peru. The project was implemented by the Water and Sanitation Program of the World Bank, together with the government of Peru. The evaluation was conducted by Professor Sebastian Galiani, Professor and CEGA's Scientific Director Paul Gertler, and CEGA's Global Networks Director Alexandra Orsola-Vidal. For more details please see:

Galiani, S., Gertler, P. and A. Orsola-Vidal. 2012. Promoting Handwashing Behavior in Peru: The Effect of Large-Scale Mass-Media and Community Level Interventions. Policy Research Working Paper 6257. The World Bank, November 2012.

Galiani, S., and A. Orsola-Vidal. 2010. Scaling Up Handwashing Behavior: Findings from the Impact Evaluation Baseline Survey in Peru. Water and Sanitation Program: Technical Paper. The World Bank, August 2010.

Appendix 4: EASST Co-Authorship Statement

This Co-Authorship Statement describes CEGA's general expectations for our faculty affiliates and East African researchers receiving a grant from the EASST Research Grant Competition. These expectations reinforce a trend towards greater transparency, helping us to fulfill our responsibilities as grantees, researchers, and authors. CEGA asks all pairs of affiliates and East African researchers to read through this Statement carefully before accepting any funding provided by EASST.

CEGA does not provide strict, prescriptive requirements in the area of authorship, as it tends to vary according to project. The Center assumes that all listed investigators have agreed on any proposed research, including their respective responsibilities and the terms of their collaboration. The PI(s) is (are) responsible for ensuring there is consensus on all of these terms. We encourage our East African grant recipients to have open conversations about co-authorship with their CEGA counterparts as early as possible - prior even to the design phase of the evaluation. Grant recipients are welcome to negotiate their own terms of agreement and share them with us. However, the Center does hold specific expectations of pairs of East African researchers and affiliates receiving EASST funding:

1. CEGA expects grantees to treat their data, research partners, and subjects with the highest level of integrity and ethics.
2. Given the Center's mission to promote joint research development, if research publications are generated as a result of any EASST grant, **at least one paper should be co-authored by the East African PI and CEGA affiliate**.
3. All papers describing the results from CEGA-funded evaluations should credit *at least* all the PIs and Co-PIs identified in the grant proposal, as well as any additional contributors to the research (e.g. graduate student mentors, local partners, etc.).
4. The corresponding author for each publication is responsible for making sure all authors are in agreement on the content of the manuscript prior to publication, as well as on the order of authorship. Any changes to the author list, including deletions, additions or alterations to the order of authorship, need to be approved by all authors listed in the proposal and in the publication.
5. The author list should include all appropriate researchers, providing credit for their contributions to the study. Anyone accepting co-authorship must realize this implies a responsibility to contribute.
6. PIs should inform CEGA if Center-funded research results in publication.

CEGA assumes all grantees have accepted the responsibility for contributions to the manuscript, including but not limited to: a) developing the concept and design for the evaluation to be conducted, b) ensuring the data is gathered following time-effective, systematic and replicable methods, and c) coordinating and working as a team to overcome all obstacles and challenges encountered in the field. Generally, each coauthor should understand the content of the publication well enough to take responsibility over it and discuss it. If coauthors have any questions with regards to manuscript content, these questions should be resolved through consultations with other coauthors. CEGA encourages transparency by publishing author contributions statements if needed, but is in no position to investigate or adjudicate authorship. Should there be a disagreement among authors, CEGA encourages an open discussion and will help to facilitate the conversation if necessary. Exceptional circumstances, such as death, inability to locate author or other, will be handled on a case by case basis.