

**Enhancing the Impact of Research for Development: A Pilot Competitive Grants Program
to support innovative partnerships and projects**

Concept Note

I. Contact Information

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Organization Name	The RUAF Foundation (International Network of Resource Centres on Urban Agriculture and Food security)
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Organization website	www.ruaf.org
Organization type	Foundation
Telephone/ Fax	+31.33.4326000 / +31.33. 4940791
Organization description and date established	The RUAF Foundation was established in 2004. Its overall goal is to contribute to urban poverty reduction, urban food security, and improved urban environmental management. The RUAF Resource Centers are based in India (SE Asia), Ghana (Anglophone W-Africa), Senegal (Francophone W-Africa), Zimbabwe (SE Africa), Peru (Latin America), China, Lebanon (MENA Region) and The Netherlands. The RUAF partners bring together City coalitions of local government, research/training institutes, NGOs and groups of urban and peri-urban farmers to jointly implement activities to increase the official recognition and support for urban and peri-urban agriculture (UPA), and its contribution to urban food supply and livelihoods, including: capacity development of the various stakeholders; analysis of actual potentials and constraints of UPA, planning of main intervention strategies; design of policies; exchange of experiences and implementation of pilot projects on UPA.

II. Project Details

Title of Proposal	Institutionalizing and Out Scaling of Food Safety Measures Related to Wastewater Irrigation Across the Rural-Urban Divide
Project Duration using Grant	2008-2009
Funds (in month)	24 months US\$330,000 (Grant request: US\$230.000)
Countries of Implementation	Ghana, India, Senegal

III. Primary CGIAR Center Partner

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CGIAR Center Name	IWMI
Position at Center	Global Theme Leader
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Country	Ghana

IV. Other Partners

Name of other Partner Organization	Ministry of Food and Agriculture, Ghana
Type of Organization	Government
Name of partner	Ms. Adzorkor Doku Metropolitan Director of Ministry of Food and Agriculture
e-mail address	odadokh@yahoo.com
Name of other Partner Organization	Health Department, Accra Metropolitan Assembly, Ghana

Type of Organization	Government
Name of partner	Mr. William Lomo Tettey, Health Officer
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Name of other Partner Organization	Kwame Nkrumah University of Science and Technology (KNUST), Ghana
Type of Organization	University
Name of partner	Prof. Dr. Robert Abaidoo
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Name of other Partner Organization	University of Development Studies (UDS), Ghana
Type of Organization	University
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V. Project Questions

1) PROBLEM DEFINITION: Describe the specific challenge you will try to address and why it is significant. Include causes of the problem and estimates of the number of people affected in your target area.

The use of highly polluted stream water for vegetable irrigation in urban and peri-urban areas is common throughout Sub-Saharan Africa (Drechsel et al., 2006). The reason is that most urban centres have no means of treating wastewater and most untreated wastewater, mainly from domestic sources, ends up in urban drains and water bodies used for various purposes including irrigation in and downstream of the cities. This water forms reliable sources of irrigation water for urban vegetable farmers in Ghana allowing them to grow perishable but high-value crops all-year-round. For the city of Accra, it was estimated that on daily basis 280,000 urban dwellers consume raw vegetables from urban sources. Compared to other cities in West Africa, the urban vegetable production area in Accra is less than the average (Drechsel et al., 2006). The large group of urban consumers is not only the beneficiary group of urban farming but also the group at risk from pathogen infections as there is hardly any safe vegetable in the urban markets (Amoah et al., 2005; Obuobie et al., 2006). The WHO is well aware of this situation and refined in 2006 their joint WHO, FAO and UNEP guidelines for safe wastewater irrigation. These new guidelines accept that it is difficult to implement wastewater treatment standards in low-income countries and offer a range of alternative options for health risk reduction, which also address possible post-harvest contamination especially in markets (Amoah et al., 2005, 2006). In Ghana, two projects supported by the CGIAR Challenge Program on Water & Food (PN 38 and 51) conducted between 2005 and 2007 assessments and tested a range of possible non-treatment options at farm, market and kitchen level. These projects were carried out by two NARES (the universities in Kumasi (KNUST) and Tamale (UDS)) and the CGIAR centre IWMI (Africa Office in Accra). The results from this action research on safer irrigation water application techniques such as water fetching and irrigation methods, cessation of irrigation before harvest and other post-harvest measures such as sanitary washing methods indicate significantly reduced microbiological contamination of wastewater irrigated vegetables. In addition, results from studies on general perceptions of wastewater use in vegetable production indicate that there is divergence in the knowledge, attitudes and behavior exhibited by the farmers, vegetable sellers, street food vendors with regards to associated health risks. However, the challenge is now the institutionalization of these health risk reducing options in the complex urban institutional environment and across the rural-urban divide. Multi-stakeholder processes, capacity building, adoption studies, incentive analysis, development of regulations, and awareness raising are the next required steps. To address this challenge UDS and KNUST requested the assistance of the RUAF Foundation which initialized and is facilitating multi-stakeholder processes and capacity building related to urban and peri-urban agriculture. RUAF is operating a global network of 8 resource centers on urban agriculture in various regions that are facilitating capacity development, multi-stakeholder platforms and joint planning and policy

processes in 12 cities in various countries, amongst others in Ghana's capital Accra, through its programme Cities Farming for the Future. In these processes, the RUAF partners are specifically also supporting capacity building and organization of urban and peri-urban farmers towards improved management and full participation in city policy making. This proposed project is supported by the designated National Irrigation Policy in Ghana which encourages research on safe irrigation practices for irrigated urban and peri-urban agriculture as well as the WHO and FAO which are currently supporting corresponding adoption studies of KNUST and UDS in Ghana, to locally test the applicability of their new global guidelines. The project will also seek collaboration with and co-financing from other projects in which IWMI and RUAF participate. *[all references available on request]*

2) OBJECTIVE: List the specific objectives of your project

To support the institutionalization of the new WHO-FAO-UNEP guidelines on safe use of wastewater in urban and peri-urban agriculture via non-treatment options through:

- a) the facilitation of multi-stakeholder platforms in Ghana at city and national level,
- b) awareness creation and capacity building of affected stakeholders (farmers, food caterers, authorities)
- c) the organization of Farmer Field Schools in Kumasi, Tamale and Accra.
- d) out-scaling of the process via ongoing RUAF multiple stakeholder platforms in India and Senegal

3) PROJECT IMPLEMENTATION: How will you implement your idea? List and describe the specific steps you will take to meet your objective(s). Explain the status of the project: is it a new project or a new phase of an ongoing project? Describe what is new and how it differs from previous phase? Have you already tested the idea on the ground?

The project will strengthen the efforts of national and international research (KNUST, UDS, IWMI) to test and institutionalize the new Guidelines on the Safe Use of Wastewater in Agriculture by linking them to the ongoing multi-stakeholder (MS) processes and policy dialogue, as is facilitated by RUAF since 2005 in various countries. The RUAF activities have so far been following the broad objective of enhancing recognition and institutionalization of urban and peri-urban agriculture. The here suggested project aims at using and expanding these CSO led platforms from city level to national level, and at out scaling of the new WHO-FAO-UNEP guidelines to stakeholders in other cities in other countries through the RUAF network at the international level. It builds on CGIAR tested options for health risk reduction with producers and consumers, and links these to the CSO network and advocacy for institutionalization and dissemination. In this regard, the project will facilitate the organization of multi-stakeholder (MS) processes and train farmers, food caterers and authorities.

Year 1:

- Broadening the existing MS Platform in Accra (to include attention for safe waste water use issues) and establishing new MS platforms (capacity building of local groups in MPAP¹ and facilitation in Kumasi and Tamale and facilitating an interlinked national umbrella platform (via stakeholder platforms, consultations and workshops) on food safety, wastewater use and urban agriculture.
- Assisting the CGIAR-NARES projects in transforming their outputs into training modules for the affected farmers, food caterers and authorities (Food and Drugs Board, MoFA, etc.)
- Set up of Farmer Field Schools (with MoFA, FAO and IWMI) in Kumasi, Tamale and Accra and revision of Ministry of Agriculture extension service curricula.
- Institutionalizing food safety guidelines developed by CGIAR and NARES via improved curricula of food catering schools in these three cities.

Year 2:

- Continuation of Farmer Field Schools in Ghana.
- Outscaling the process (awareness creation, capacity building) to at least two cities (in India and Senegal) with similar wastewater and food safety challenges. In the mentioned cities, RUAF is already facilitating MS platforms and policy dialogue and will now with IWMI introduce the WHO-FAO-UNEP Guidelines and CGIAR risk reduction approaches. As IWMI has an office in Hyderabad and works with WHO also in Dakar, the process will allow a further mutual step and gain of joint CSO-CGIAR experience
- Joint systematization and documentation of experiences for further out scaling through the RUAF network and IWMI's knowledge sharing program.

¹ Until now, RUAF's approach of "Multi-stakeholder Policy making and Action Planning" (MPAP) has been initiated in 20 cities in 17 countries in Asia, Africa and Latin America. It brings together city coalitions of local government, research/ training institutes, CBOs, NGOs, farmer groups, traders and media.

-International workshop linking RUAF network and CGIAR partners to exchange experiences.

4) INNOVATION: How is your project idea innovative or unique?

In several ways:

- a. The focus on the nexus between environmental pollution and food safety, the urban-rural divide and the agriculture-sanitation interface, which have so far only received limited attention in the CGIAR.
- b. The complementary strength of “research” (CGIAR) and “process” (CSO) oriented partners is further developed, by joint development and application of Multi-Stakeholder processes and e.g. Farmer Field Schools (FFS).
- c. The CSO focus on multi stakeholder processes, policy development, knowledge sharing and action planning, which adds value to the traditional approaches of the CGIAR. And vice versa the experimentation with participatory research and technology development (FFS), which assists in further activities of the RUAF Partners in other cities.
- d. Support of IWMI’s research and knowledge sharing activities e.g. through jointly organised international workshops, electronic conference, and IWMI’s contribution of research results into RUAF’s Urban Agriculture Magazine (translated in six languages), training and policy dialogue.
- e. In organizational form: The partnership between IWMI and the RUAF Foundation goes beyond a project-based cooperation or independent activities. IWMI is one of the constituting members of this global initiative and hence part of its Executive Board and all decision-making processes.

The RUAF-IWMI strategic collaborative partnership is aligned with CGIAR System priorities (e.g. 3A, 4CD and 5C) but also adds a new geographical dimension to them with its focus on rural-urban linkages. Its focus on pathogens adds an important food safety component to priority 2C (Enhancing nutritional quality and safety), which is so far not considered in the current version of the CGIAR Priorities.

5) RELEVANCE and INNOVATIVENESS of PARTNERSHIP: How is each partner contribution critical for achieving the overall project objectives? Describe how the partnership embraces principles of joint decision-making, inclusiveness, knowledge-sharing.

The partnership is a win-win situation due to the complementary strength and roles of the partners:

- The Ministries of Agriculture and Health are represented at the national and city level and approached KNUST, UDS and IWMI for help to assist them to address the challenge of wastewater use in food production. They are also key institutions for the institutionalization of food safety measures at farm, market and kitchen level, besides the Food & Drug Board, catering schools etc.
- The NARES partners (Kwame Nkrumah University of Science and Technology (KNUST) and the University of Development Studies in Tamale (UDS)) are executing the research activities of the CPWF projects and leading the WHO-FAO-IDRC funded project on testing the new wastewater use guidelines.
- IWMI provides KNUST and UDS with related backstopping on innovative and advanced research on the safe use of wastewater in the rural-urban interface (an area where IWMI is one of the leading institutions worldwide). IWMI will assist FAO/MoFA in the preparation of farmer field schools.
- RUAF is the leading CSO experienced in catalyzing multi-stakeholder processes, platform building, lobbying for policy support/change and facilitating capacity development in the complex institutional urban and peri-urban agricultural environment. RUAF also constitutes a global learning alliance allowing exchange of experiences across Africa, Asia and South America. IWMI is one of the constituting members of this global initiative and hence represented on its Executive Board. IWMI is also supporting the local platform building under the RUAF guidance and leadership.
- WHO & FAO are formally assisting the process of institutionalizing the guidelines through their support of a related project executed by KNUST in Kumasi and UDS in Tamale with IWMI as advisor. FAO, with its Africa office in Ghana, is representing both UN organization and its staff is actively joining the team in decision making.

6) EXPECTED RESULTS: (a) Please state the expected results of your project and its contribution to achieving sustainable food security and reducing poverty; (b) How will you measure your results?

Please be as precise and quantitative as possible.

Outputs: -Two new City Multi-stakeholder platforms on food safety, reuse of waste water and urban agriculture established (Kumasi, Tamale) and three existing platforms on urban agriculture (Accra, Dakar, Hyderabad) broadened to address the WHO guidelines on the safe use of wastewater in agriculture;

-One national policy dialogue platform established in Ghana;

- Three Farmer Field Schools organized in Accra, Tamale and Kumasi (farmers' capacity enhancement on safer irrigation practices, institutional capacity building for extension service);
 - Training of trainers for at least 10 Food Catering Schools provided;
 - Curricula of farmer training and catering schools revised;
 - Policy recommendations on best practices documented;
 - International Workshop (linking RUAF network and CGIAR projects on wastewater use);
 - Feedback documentation on the process of institutionalizing the WHO-FAO guidelines to WHO and FAO.
- Outcomes:**
- City coalitions capable of reducing health risks significantly via non-treatment options;
 - WHO and FAO capable of assessing the institutionalization potential of their guidelines;
 - RUAF network strengthened through CSO capacity development for the implementation of training on safe use of wastewater in urban and peri-urban agriculture for stakeholders in the RUAF-CFF pilot cities
- Impacts:**
- Reduced health risks for consumers and farmers;
 - Contribution to food safety (as part of food security) and savings on health costs (urban poverty reduction);
 - Increased support of urban farming leading to improved urban food security and diets;

7) REPLICABILITY: What is the scaling-up potential of your project idea? What is the possibility of implementing your project idea in a different region or globally?

RUAF is currently facilitating multi-stakeholder city platforms on urban and peri-urban agriculture in 20 cities of 17 countries. In all these countries similar health risks related to polluted irrigation water exist and have been identified as major issues by the city MS platforms on UPA. In fact, according to IWMI (2006), wastewater is used worldwide on at least 3.5 million ha and around 3 of 4 cities in the developing world. In the second year of this project, the project will aim to repeat the process in two different countries where RUAF and IWMI are active to test its out scaling potential in practice. Other RUAF regional and city partners will be informed on this development. The close and direct collaboration and exchange with FAO and WHO and the planned contribution to their guidelines will in any case be of crucial benefit for any follow-up project or application of the guidelines. The linkages between project cities and other cities is supported via international knowledge and information sharing (through the Urban Agriculture Magazine and the RUAF and IWMI websites and networking).

8) SUSTAINABILITY: What characteristics of your project will ensure that it is sustainable? How will your project continue beyond the phases funded by the CGIAR grant?

The multi-stakeholder platforms are initialized and coordinated by local RUAF partners, and its organization and long-term funding are explicitly aimed at independent functioning and commitment by the participating institutions. This is already taking place in a number of cities (a.o. the cities suggested to operate in under this project). The initial capacity building work and set up of MS platforms in the project countries is supported till at least 2010. This gives sufficient time and matching funds to support the multi-stakeholder platforms and institutionalization process.

VI. Proposed Budget

Item	Proposed budget (in US\$)
Personnel	90,000
Research supplies and services	10,000
Equipment	0
Training and other knowledge-sharing activities	170,000
Travel	30,000
Communication	10,000
General Administrative Expenses	20,000
TOTAL Project Cost	330,000
Co-Financing (no less than 30% of total project cost)	100,000
Grant Funding Request (no more than 70% of total cost)	230,000
Details of co-financing and funding sources	RUAF II 2005-2008 (DGIS): 15,000 RUAF III 2009-2010 (DGIS): 15,000 FAO-WHO project 2007-2008 (IDRC, FAO): 40,000 Other projects (including Core Funding): 30,000