

Food Security Concept Note

“Concept” Subject Matter Expert & Point of Contact:

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Title and Objective:

STRATEGIC DEVELOPMENT SCHOLARSHIP IN FOOD SECURITY
TO CREATE AN ORGANIC SOLID WASTE UPCYCLING (OSWU) PRACTICE
ENVIRONMENT FOR ELIMINATING WASTE AND POLLUTION, CIRCULATING
UPCYCLED RESOURCES TO BIOFERTILIZERS, FOOD AND FEEDS, AND
REGENERATING NATURE: A CIRCULAR ECONOMY.

1. Problem Statement

The world food crisis is getting worse. Oxfam estimates¹ as many as 323 million people are on the brink of starvation; the United Nations reckons 869 million are facing hunger. And, animal and aquaculture feeds compete for food production resources. Millions of lives are at stake. The food-feeds competition can be significantly reduced by upcycling organic solid waste to food and feeds.

Improper waste management is a source of public health and environmental crisis, economic loss, operational inefficiency and political and public reliance failure across the Sub-Saharan Africa. As a key utility service that more than 2 billion peoples currently lack, solid waste management (SWM) is a crosscutting issue that is directly linkable to 12 out of the 17 United Nations Sustainable Development Goals (SDGs).² “[SWM] is a universal issue affecting every single person in the world. Individuals and governments make decisions about consumption and waste management that affect the daily health, productivity, and cleanliness of their communities. Poorly managed waste is contaminating the world’s oceans, clogging drains and causing flooding, transmitting diseases via breeding of vectors, increasing respiratory problems through airborne particles from burning of waste, harming animals that consume waste unknowingly, and affecting economic development such as through diminished tourism. Unmanaged or improperly managed waste from decades of economic growth requires urgent action at all levels of society.”³ Compounding the SWM infrastructure problems is the usual funding mechanism, which is through Public-Private Partnerships (P3s). P3s may work somewhat for certain type of infrastructure projects (e.g., airports, railroads and ports; generating international currency), but not so well, if at all, for other types of infrastructure projects (e.g., solid waste and water; generating local currency, if at all adequate). Two of the main culprits of P3 failures are unreliable financial package, and inadequate assessment and allocation of risks through all stages of the value chain and throughout the project life cycle. Although P3 is usually kept off public agency budget, still P3 can wreck public standing and budgets when private entities walkout when the project is no longer profitable, and/or angry locals demand changes after price increases and failed services.

2. Statement of the Objectives

The supreme objective of this initiative is to create an OSWU regenerative circular economy, which involves creating an organic solid waste upcycling (OSWU) practice environment for eliminating waste and pollution, circulating upcycled resources, and regenerating nature. The supreme objective is comprised of project-service, implementation and management sub-objectives. The essence of the implementation sub-objective includes the following key components:

¹ <https://reliefweb.int/report/world/g7-failure-tackle-hunger-crisis-will-leave-millions-starve>

² Ljiljana Rodic-Wiersma and David C Wilson. 2017. Resolving Governance Issues to Achieve Priority Sustainable Development Goals Related to Solid Waste Management in Developing Countries. Retrieved on August 12, 2019 from:

https://www.researchgate.net/publication/314481905_Resolving_Governance_Issues_to_Achieve_Priority_Sustainable_Development_Goals_Related_to_Solid_Waste_Management_in_Developing_Countries

³ Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0 : A Global Snapshot of Solid Waste Management to 2050. Urban Development; Washington, DC: World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/30317> License: CC BY 3.0 IGO.

1. USSD-based Waste-Awareness and Reporting application development and implementation for awareness raising, waste-site reporting and sensitization {**Percent Effort:** 20.8% **Duration:** 12.5 months};
2. Smart Mushroom House System & Automation construction, operation and franchise-like replication elsewhere of OSWU to biofertilizers, mushroom substrates, mushrooms, animal/fish feeds, etc. {**Percent Effort:** 40% **Duration:** 24 months};
3. Establish OSWU Facilitation Center where program-services, including entrepreneurial apprenticeship application kits, grower/franchise application kits, online forms and information, blended [online/in-person] education/training, etc. are provided {**Percent Effort:** 20.8% **Duration:** 12.5 months};
4. Education/Work-Based Learning Curriculum Development and Implementation for growers and managers capacity-building and empowerment {**Percent Effort:** 5% **Duration:** 3 months}; and
5. OSWU Social Enterprise Grower/Franchise Program through which growers make use of certain technical and administrative services, benefit from a national advertising program, receive training, nonexclusive use licenses, etc., requiring tailored technical and strategic partnerships and programs {**Percent Effort:** 13.3% **Duration:** 8 months}.

3. Prescribed Method of Approach

Without holistic supportive and collaborative services, infrastructure is often not enough to end improper waste management or poor societal transformation. Education is regarded as the only instrument/resource through which the society can be transformed. It is described as "the greatest resource" in the societal transformation endeavor⁴. About innovation/transformation methods, a unique form of education, with inclusive engaging and empowering system of approach having a community-based educational program with access to outstanding practice facilities, is prescribed to be more suitable for the nature of the OSWU societal transformation. Such unique form of education combining critical analysis with positive action would not only ascertain the link between education and real-issues, but also help to solve the problems of society. This recognition has led to developing the Strategic Development Scholarship (SDS) concept for Community Sustainable Development (CSD). The SDS concept focuses on individual, organization and institution capacity-building, mapping and leveraging by like-minded collaborative stakeholders to catalyze a significant burst in mission-business hybrid, i.e., social enterprise (SE), innovation. In the context of holistic innovation, SDS involves the use of anchor projects' activities for teaching/learning, training, mentoring, conducting research, providing relevant public services, and promoting relevant policy evolution. [In this case, OSWU is the anchor project.] SDS provides chances to go beyond the goal of achieving cognitive and behavioral changes in individuals and groups, to the goal of systemic and structural changes. It's an approach to effective, collaborative, creative, innovative, and self-developed community engagement, where a shift is needed in mind-sets, paradigms, and skills for social justice and CSD. SDS shares the same characteristics with Participatory Action Learning and Action Research (PALAR). SE operates within a network of sector-stakeholders of private, public, university and civil society. The network, including SE, forms a Penta Helix Partnership (PHP), a competitiveness and resilience partnership⁵, whether

⁴ Schumacher, F., (1973). *Small is Beautiful: Economics as if People Really Mattered*, Abacus, London, p.64.

⁵ Odeyale, C.O., 2007. Balanced Vertically Integrated Sustainability Business Model for Reducing Hunger and Income-Poverty in the Shortest Time Possible. *Journal of Sustainable Development in Africa*. Volume 9, No.1., pp.207-233.

they know and/or acknowledge it or not. The method of approach is PHP supported SDS/PALAR in a Practice Environment requiring tailored technical and strategic partnerships and programs.

4. Anticipated Results: Logic Model for SDS-Based CSD

INITIATIVE	INPUTS	OUTPUTS		INNOVATIVE TRANSFORMATION		
		ACTIVITIES	PARTAKING	OUTCOMES		IMPACTS
Situation	What are invested	What are done	Who are reached	Short-Term [1-3 yrs.]	Mid-Term [3-5 yrs.]	Long-Term [5-10yrs.]
<ul style="list-style-type: none"> Poor agricultural, commercial/ industrial and municipal/ residential organic solid wastes management⁶ 	<ul style="list-style-type: none"> Culture: e.g., background, vision, values, attitudes, etc. Structure: e.g., work flow, role, team, network, etc. Resources: e.g., capital, people, information, knowledge, etc. Management: e.g., governance, planning, organizing, strategy, etc. 	<ul style="list-style-type: none"> Implement SDS/PALAR and PHP as Practice Environment: <ul style="list-style-type: none"> Awareness Training Facilitation Center Establishment Products & Services Production Mushroom Entrepreneurial Apprenticeship Curriculum Development and Implementation 	<ul style="list-style-type: none"> Unemployed Youths Farmers/ Growers Communities Consumers Organizations Governments Learners Trainers Mentees Mentors Relevant Policy Promoted Studies Promoted 	<ul style="list-style-type: none"> [Enable entities-in-situation to create support systems.] SDS/PALAR Awareness Facilitation Center Establishment Relevant SDS/PALAR data / information and skills acquisition and mapping Knowledge Creation 	<ul style="list-style-type: none"> [Creation of and access to requisite services structures.] Attitudes / Behavior / Opinion Changes Profitability and viability Solution Institutionalization Growth 	<ul style="list-style-type: none"> [Social problem reduction, alleviation, and prevention.] Good health and well-being in target communities Beyond Sustainability / Regenerative Sustainable Development

OWU = Organic Waste Upcycling. SDS = Strategic Development Scholarship. INPUTS and their complex adaptive relationships are expected to facilitate solution profitability, sustainability and institutionalization.

NOTE: The experiential or transformational learning (i.e., SDS/PALAR) is of course needed. However, without simultaneous development of personal characteristics, such as integrity, social conscience, moral framework, intrinsic motivation, self-directed learning, self-discipline, etc., people are unlikely to sustain change or use their built capacity to benefit themselves, their families and the community at large in the long term and in the appropriate manner.

5. How this Work will Help Accomplish any Humanitarian Investor’s Mission

Humanitarian investors help in transforming individuals, families, communities and countries. The prescribed method of approach for this initiative is Penta Helix Partnership supported Strategic Development Scholarship, a unique socioeconomic innovation/transformation method, for creating a practice environment to help lift lives, build communities and establish self-sufficiency. The implementation of PHP-supported SDS, in the context of organic solid waste upcycling, protects environmental human rights through the elimination of the source of environmental and public health crisis, i.e., legal and illegal organic waste dumping, whether at designated dumpsites or on road sides. Actuating the OSWU SDS concept will help accomplish any humanitarian investor’s mission in the target area in the following ways:

⁶ SWM is a crosscutting issue that is directly linkable to 12 out of the 17 United Nations Sustainable Development Goals (SDGs), (Rodic-Wiersma and Wilson, 2017).

- The PHP-supported and SDS-based OSWU Practice Environment implementation would create and/or improve enabling environments for the protection and advancement of environmental human rights;
- The Practice Environment will improve inclusive and equitable health, education and livelihood services for the marginalized and vulnerable; and
- OSWU would foster facilitating, developing, and implementing effective remedies to address environmental human rights violations and abuses to ensure non-recurrence, furthermore it would create a circular agricultural economy.