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COVID-19: Yet another trigger for an Urgent Paradigm Shift in the

Agricultural and Food System

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Colaboradores

Permaculture Tribe of Trinidad and Tobago (</taxonomy/term/58>)



Wa Samaki Ecosystems, Trinidad and Tobago

For decades, CARICOM countries have pursued seemingly elusive national policies to achieve **agricultural sustainability** and **food and nutrition security**. They have also tied these national agendas to regional policy frameworks and the global community, the latter driven by **the need for alignment with the United Nations Sustainable Development Goals (SDGs)**. At the end of 2019, the agricultural sustainability and food and nutrition security goals remained largely that – **goals waiting to be converted into tangible results through strategic actions**.

“In developing countries, paradigm shifts can be difficult to achieve without the imminent pressures of a calamitous socio-economic event”

The Permaculture Tribe of Trinidad and Tobago (PTTT) acknowledges that the COVID-19 pandemic has exposed many weaknesses in the present agricultural, food production and distribution systems in Trinidad and Tobago. The same can reasonably be said about the other CARICOM countries. In developing countries, **paradigm shifts** can be difficult to achieve without **the imminent pressures of a calamitous socio-economic event**. **Climate change**, which has been wreaking havoc on the environment, has apparently, not yet created enough pressure to force this shift. **COVID-19 seems to have that potential; at least while it lasts.**

In **Trinidad and Tobago**, some creative responses to the initial demands of survival during the COVID-19 pandemic suggest **a maturing of the population**, an essential prerequisite to usher in a paradigm shift. **For the agriculture and food sector**, some of these positives include an **increased number of startups** and **household kitchen gardens**, increased **farmers’ agricultural outputs** and **innovative food delivery systems**. The latter is seen in individuals who became service providers to collate, package and deliver fresh produce to homes via online orders (WhatsApp and other means) and many large **supermarket chains** which **adapted to online ordering** and social distancing rules through curbside pick-up.

“Regenerative agriculture as a way forward, factors in the urgent need to responsibly manage ecological resources on the road to achieving lasting agricultural growth and development”

For the agricultural sector, the **PTTT connects** both the need for a **response to** the immediate **COVID-19** socio-economic event and to the longer-duration **climate change** impacts. **Regenerative agriculture** as a way forward, factors in the urgent need to **responsibly manage ecological resources** on the road to achieving lasting agricultural growth and development. It embraces a variety of **farming principles** specifically appropriate for each site, which ameliorates the factors of food production, **soil health**, **biodiversity, watersheds and ecosystems** (Carbon 2020). Embracing a regenerative agriculture model that is **environmentally responsible, highly productive** and **socially inclusive**, will lead to an evolution in the ways in which Trinidad and Tobago feeds itself.

The weaknesses in the domestic agricultural, food production and distribution system - high dependence on imported food, vulnerability to the vagaries of the international commodities market and reliance of a vast number of citizens on (often relatively nutritionally deficient) cheap 'fast food' - are well-known. COVID-19, extreme containment measures and the suddenness and depth of food supply chain disruptions only brought them into an immediate and stark reality.

“Trinidad and Tobago’s vulnerability to food inaccessibility has increased”

At both the household and the national scale, many families’ disposable **income** is largely **devoted to food purchases**. Even before the COVID-19 pandemic, the savings of a large portion of the population was slowly diminishing. As economic activity was suspended due to stay-at-home COVID-19 measures, **without jobs** and a secure source of income, households’ **savings** are being **rapidly depleted**. Similarly, with the reduced national revenues as a result of the plunge in **oil and gas prices** and critical **foreign exchange limitations**, Trinidad and Tobago’s **vulnerability to food inaccessibility has increased**.

“If climate change has not yet triggered the need for an evolution in agricultural and food production practices, then this current COVID-19 pandemic provides a wake-up call”

To prepare our nation for a **prosperous future** and move towards full **economic and environmental sustainability**, we need to discover and remediate **the root causes of the problem**. Among these is conventional '**chemical farming**' which actively depletes the natural fertility of the land. This places farmers on an economic treadmill of continued **dependency on external inputs**, prone to global fluctuations, to produce food. Additionally, the associated **environmental degradation** directly causes health issues to our populace, reduces the capacity of natural systems to stabilize our environment and generally foments to the **degradation of our social fabric**.

PTTT envisions a regenerative, thriving, robust national agricultural system, even in times of environmental and economic instability. We believe that Regenerative Agriculture methodologies supported by **appropriate policies** will replenish our **aquifers** and protect our **forests, wildlife** and

topsoil while increasing our local production of food towards our national self-sufficiency goals. Methodologies to incorporate **social responsibility** and increase opportunities will create an environment where **private entrepreneurial activities can flourish**.

“Permaculture Design, Agroforestry and Syntropic Farming significantly reduce and eventually eliminate the need for chemical fertilizers, pesticides, herbicides and animal feed imports”

We propose application of the following **Regenerative Agriculture methodologies** - Permaculture Design, Agroforestry and Syntropic Farming methods:

- **Permaculture** refers to the planned design and maintenance of ecosystems that are economically and agriculturally productive as well as **diverse, stable and resilient** (Mollison 1991).
- **Agroforestry** is system incorporating both **agriculture and the use of forests** and is gaining increased recognition as a holistic food production system with social, economic and environmental benefits (Elevitch 2018).
- While **Syntropic farming** is an agricultural system developed within recent decades that **utilizes natural succession and process-based agroforestry** (Damant 2018).

All three of the aforementioned principles significantly reduce and **eventually eliminate the need for chemical fertilizers, pesticides, herbicides and animal feed imports**.

“With regenerative agriculture, the ultimate goals of sustainable agriculture and a resilient, food secure nation will be well on the way to possible”

If climate change has not yet triggered the need for an evolution in agricultural and food production practices, then this current **COVID-19 pandemic** provides a **wake-up call** to make this **paradigm shift** towards forms of **regenerative agriculture**. **The benefits** that will be realized are wide-ranging:

- **improved nutrition and health**, through **fresh agricultural commodities** produced **free of hazardous** pesticides, herbicides and synthetic fertilizers residues, and through **improved access**

to (higher quality) foods, with fewer barriers to low income demographics accessing quality nutrition.

- **increased social inclusion**, especially for **women** and **at-risk youth**, through training and building their capacity to undertake regenerative agriculture, which will enhance self-employment and income earnings and importantly, the ability to provide food for their households thus freeing up their limited incomes for other essential purchases.
- **increased resiliency of farmers** and their community in times of environmental, economic and social disruption and generally, to **adapt to and mitigate effects of climate change** within a small island developing state context.

If only these three, among a longer list of benefits are realized, then the **ultimate goals of sustainable agriculture and a resilient, food secure nation** will be well on the way to possible. It will be built on **natural resources** that have been **regenerated**, specifically air quality, soil fertility, water availability and biodiversity and land use efficiency. This also sets a firm **national platform** for the agricultural sector to **contribute** more consistently and meaningfully to **economic growth, job creation and foreign exchange earnings**. The latter will be achieved through both exports of high quality fresh agricultural and processed food products and reduction in expenditures on imports of similar products which can now be produced competitively, locally.

The Wa Samaki Ecosystems, a flagship demonstration site in Trinidad and Tobago, serves as a model for adopting Regenerative Agriculture (<https://www.wasamakipermaculture.org/> (<https://www.wasamakipermaculture.org/>)).

As indicated at the introduction of this perspective, **making and sustaining the paradigm shift to regenerative agriculture** will require policy and governance maturity. Existing policies, which govern land use, waste/refuse collection and environmental protection, must be absolutely revamped. Adopting regenerative agriculture will create **healthier lifestyle practices** and **stronger communities**, as envisaged in the UNSDG 2 - Zero Hunger, 3 - Good Health and Wellbeing, 11 - Sustainable Cities and Communities and 13 - Climate Action. **The Wa Samaki Ecosystems**, (<https://www.wasamakipermaculture.org/>) a flagship demonstration site in Trinidad and Tobago, serves as a **model for adopting Regenerative Agriculture**. Since its creation in 1997, it has been sustained on principles that are ancient, yet continually re-tooled for modern requirements of output that have proven themselves locally, regionally and internationally. It has also served as an **inspiration for a whole generation of youth** serious about long-term food security and environmental conservation and stewardship.

* **The Permaculture Tribe of Trinidad and Tobago (PTTT)** is a community of experienced organic farmers,

parents, artists, teachers, students and professionals across various disciplines, rooted in ways of living that promote resilience and environmental sustainability. PTTT, through its membership, brings together a vast knowledge in regenerative practices. It can provide experienced consultants, trainers, instructors and implementers in various fields encompassing but not limited to regenerative agriculture. By including art, music, conservation and community in a holistic approach to food production, we believe that the youth engagement will increase significantly and offer all walks of our population many choices in employment associated with this movement. We are ready to engage. Contact us at PermacultureTribeTT@gmail.com

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Rosalina Jarolin es distinguida por el @IICAnoticias como #LíderDeLaRuralidad por su tarea en favor de una mejor calidad de vida de los agricultores familiares paraguayos.

Conozca su historia    bit.ly/39INdjz



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