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Innovative research to achieve sustainable development in a resource abundant economy: minimising the resource curse

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Innovative research to achieve

sustainable development in a resource abundant economy: minimising the resource curse

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Colaboradores

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Properly conducted and managed innovative and proactive research, in Guyana's recently attained resource abundant economy status, could result in the sustainable development of a plethora of commodities within its productive sectors, consequently, contributing significantly to social equity and minimising the possibility of the "resource curse".

This article identifies examples of the activity required (Innovative Research); the resource abundant environment (in which it will take place); and the required objective (Sustainable Development). It also uses five key takeaways, namely, informing societal action, facilitating learning, building knowledge, seeking opportunity for communication, and fostering public awareness, to support the goal of minimising the "resource curse".

In agricultural development and food and nutrition management, sustainable development is built on

four pillars: Social, Economic, Environmental and Institutional. However, achieving meaningful outcomes requires planned activities that transcend many sectors, including education, science, processing, engineering, human development, health, trade, transport and national security. Therefore, these pillars apply to nearly all of the sectors that will be crucial for Guyana's development.

“In agricultural development and food and nutrition management, sustainable development is built on four pillars: Social, Economic, Environmental and Institutional.”

The **first** pillar, Social, directs that research activities should improve the quality of life of the majority of Guyanese. The United Nations Development Programme reported that Guyana's Human Development Index (HDI) (<https://hdr.undp.org/data-center/human-development-index#/indicies/HDI>) trended positively from 0.548 in 1990 to 0.682 in 2019 to 0.714 in 2021. However, the Inequality-adjusted Human Development Index (IHDI) for the same year was 0.591: a 17.2% decline. Therefore, the three basic human indices (life expectancy, access to knowledge and possibility of a decent standard of living), were not uniformly available to Guyanese.

Guyana's realisation of its abundant economy began in 2015. Since then, almost a third of all recorded new oil discovered worldwide has been found there. This recent reality and the anticipated windfall require adept management to minimise possibilities of the “resource curse”: generally associated with increased inequality.

In September, the International Monetary Fund, whilst projecting economic growth of 57.8% for Guyana in 2022, highlighted the need to “ensure inclusive growth and intergenerational equity” and “further develop and strengthen a well targeted social safety net system”. Further, the World Bank in November 2022 stated that “poverty was around 48% in 2019, still amongst the highest in LAC”. The spectre of inequality looms.

Individual researchers may argue forcibly that they cannot fully prevent inequality. However, they could develop personal and institutional goals that could reduce the gap between the HDI and the IHDI. That is, they can contribute to improving human livelihood and informing of societal action.

The second pillar, **Economic**, directs that research produces, distributes and utilises goods and services for Guyana. Is this limiting knowledge development to a narrow geographic space and stymieing intellectual growth? No, as this doesn't prevent procedures/processes/technologies from being explored outside of this space and be adopted/adapted to realise needed goods and services. Indeed, this focus recognises the reality that charity begins at home and Guyana has a lot of catching up to do.

Guyana will now experience significant increases in goods and services required. Firstly, directly related

to the oil and gas sector. Secondly, as oil and gas revenues increase and pump considerable monies into the economy, additional opportunities for goods and services, which previously were unaffordable, will arise. These would likely be in the previously dominant sectors of agriculture, including fisheries, forestry, the extractive industries, and, collectively, their supporting infrastructure. There is also a profound need to expand research into tropical, including high altitude, crops to strengthen Guyana's agricultural lead position, in particular, and ensure that the sector is well positioned for the future.

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These goods and services must include both the Science, Technology, Engineering and Mathematics (STEM) disciplines and policy issues. A bad policy can make the most viable commercial entity non-profitable. Researchers, individually or institutionally, must visualise these “new” goods and services and produce same competitively for national and other markets. As Guyana’s resource abundant economy status is new, reasoned and logical research data should be immediately used to influence policy.

Within food security, there’s the regional initiative, to reduce food imports by 25% by 2025, which is currently spearheaded by Guyana. By nature of its size and geospatial diversity, Guyana is well placed to substantially meet selected regional commodity targets. Team based research, including agronomists, food technologists and psychologists, (to promote change in taste habits) is critical for success.

Within the area of development/debt finance, Caribbean Community (CARICOM) Heads are demanding an urgent overhaul of the international financial infrastructure to create an enabling environment for their countries, to recover from the effects of climate change etc., without increasing debt finance. Researchers can do the necessary investigative and analytical studies to develop a customised infrastructure for the region.

Guyana, with its recent wealth, may graduate out of this group. The country has already taken strides to reduce its deficits and curb dependency on debt using oil revenues. However, as a key CARICOM member, it can be a leader in pressing for a more integrated and stronger regional approach.

With increasing goods and services, issues like patents, trademarks, geographic indicators and intellectual property must be robustly considered by researchers. There mustn’t be any reoccurrence of “stolen” intellectual property as had caused the famous “Demerara Sugar” to be rebranded by Guyana to

“Demerara Gold”. The rules controlling the use of intellectual property must be thoroughly understood for, as Steve Maximay, a regional expert, states “Intellectual property is not a legal imposition but rather an economic imperative”.

The third pillar, **Environment**, needs no introduction. Climate change, caused by protracted emissions of greenhouse gases, has caused global warming, sea level rise and more intense and frequent extreme weather events. These have had inimical consequences to economic development relative to existing production elements, especially for small island (and low lying) developing States. However, recently, destruction has struck both developing and developed states.

Guyanese governments have developed instruments, most recently the Low Carbon Development Strategy 2030, to counter the effects of climate change with implementation of, primarily, adaptation measures and creation of resilience. Notwithstanding, there were extreme weather events: massive floods in 2005 and 2021 and serious droughts in 2014 and 2015.

Globally, climate change has altered the composition of existing flora and fauna. Guyana will be likewise affected. These changes require inventorising, examining, documenting, researching, analysing, planning and training. Considerable opportunities exist for facilitating learning and building knowledge with development of appropriate measures. Any new and/or exotic specimens of flora or fauna must be documented and legally protected. It is Guyana’s intellectual property.

Researchers must satisfy a critical need by prioritising existing projects and developing new ones to establish a portfolio of development and investment projects.

“For innovative research to contribute to sustainable development in Guyana, researchers must: be honest to self and subject area, yearn for excellence, possess vision to assess current and future relevant global happenings, respect for but not abuse of intellectual freedom, and embrace research as a developmental challenge.”

The fourth pillar, **Institution**, was added in October 2019 by Indian scientists, Rao and Joshi, during their study on ecological indicators. The provision of tangible goods and services requires an operational, efficient and effective Institution at various levels: the team, field or laboratory; the organisation, school or company; and, finally, the country. Total cohesiveness, unlimited collaboration and, working outside of established silos is obligatory within an all-inclusive environment. As the author recently reported, this is the pillar that “glues the other three pillars together”.

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relevant global happenings, respect for but not abuse of intellectual freedom, and embrace research as a developmental challenge.

Note: This article was first published in <https://oilnow.gy/featured/innovative-research-to-achieve-sustainable-development-in-a-resource-abundant-economy-minimising-the-resource-curse/> (<https://oilnow.gy/featured/innovative-research-to-achieve-sustainable-development-in-a-resource-abundant-economy-minimising-the-resource-curse/>).



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Note: The opinions expressed in this article are the responsibility of the author and do not necessarily reflect the opinion of IICA.

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