

National Drainage and Irrigation Authority (NDIA)

THE KEY TO UNLOCKING
GUYANA'S PROSPERITY





NDIA

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The Key to Unlocking Guyana's Prosperity

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One of the many impacts of ongoing climate change has been an increase in flooding. As sea levels continue to rise, flooding events have become increasingly common in low-lying flood plains. In Guyana, where approximately 90% of the country's population resides on the coastal plain, which is typically between 0.5 and 1 metre below average sea levels. Compounding matters, the country's sea level rises have exceeded those of the global average for decades. Given this reality, it's not difficult to see why Guyana's National Drainage and Irrigation Authority (NDIA) has such an important role to play in the country. Today, together with Guyana's Ministry of Agriculture headed by Minister, Zulfikar Mustapha holds 95% of drainage responsibility in the country. Having had something of a head-start on most countries in terms of the nature of flooding events caused by climate change, the NDIA has much that we can learn from. Business Excellence decided to take a closer look at how the NDIA operates.

Background

Since its foundation by the Guyana government in 2006, the NDIA has been responsible for the management, improvement, extension, and provision of drainage, irrigation, and flood control infrastructure and services in the country. As a country whose terrain is predominantly covered in rainforest, this is

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In April 2022, the government announced that it is going to spend some GYD\$32 billion (US\$154 million) as part of a transformational plan to provide a long-term solution to the country's flooding issues

an extremely important mandate. Its work not only contributes to the living standards of Guyana's 786,000 citizens, but also to the country's economy, particularly its agriculture industry, a strategic focus area for the government.

After just 16 years in existence, the NDIA can already claim to be a world leader in innovating around flood prevention. In 2021, for example, it rolled out a National Flood Forecasting System (NFFS) in collaboration

with the Operational Satellite Applications Programme (UNOSAT) of the United Nations Institute for Training and Research (UNITAR), which it is hoped will provide Guyana with its first national flood early warning system, utilizing state-of-the art satellite data to project weather patterns around the country.

Impact

The work that NDIA conducts in Guyana is central to the country's development. Having

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first begun production of crude oil in 2019, the country is due to be a massive beneficiary of the spike in oil prices. However, to truly take advantage of the boom, Guyana needs to keep its flooding under control. Several projects rolled out across the country by NDIA show that it is making significant progress in this goal.

Government funding is central to this effort. In April 2022, the government announced that it

is going to spend some GYD\$32 billion (US\$154 million) as part of a transformational plan to provide a long-term solution to the country's flooding issues. This includes improvements to the drainage system to tackle flooding in half of Guyana's ten administrative regions, with Regions Two, Three, Five, and Six being particularly susceptible to flooding.

The works include the rehabilitation of the

in 2022 began with the NDIA launching a nationwide 'no littering' campaign









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Mahaica Creek embankment and an upgrading of existing channels to take water directly to the Atlantic Ocean. The addition of new outlets, like the one at Dantzig, together with improved pump and drainage capacity, are also contributing to better flood mitigation. The mouths of the Mahaica, Mahaicony, and Abary rivers. All of these efforts ensure that the country is more prepared for its annual rainy season.

Perhaps the most high-profile of the NDIA's project during this period has been the Hope Canal, sometimes referred to as the East Demerara Water Conservancy-Northern Relief Channel. It was designed in response to the devastating floods of 2005, and was delivered in 2013, involving a GYD\$3.6 billion investment. To this day, it enables the east coast of Demerara to release excess water via an 8-door sluice during periods of extended rainfall, and provides an indication of the importance of NDIA's projects. The NDIA has also helped vulnerable

residential areas by clearing critical drains and canals through its Community Drainage and Irrigation Project (CDIP). CDIP workers clear approximately 900 miles of canals and drains each month.

Shifting Mindsets

Since its foundation less than two decades ago, NDIA has become one of the most recognized institutions in Guyana because of its importance to the everyday lives of Guyanese. Chairman of the NDIA, Lionel Wordsworth and his team are working to change the mindset of the locals, emphasizing how better waste management can make a significant contribution to the flooding prevention efforts. Waste management begins with issues as simple as

Did you know?

Rehabilitated drainage culverts at Bartica, which included the complete reconstruction of one culvert and repair to others, benefitting over 4,500 households, in excess of 17,000 Guyanese and 250 acres of farmland.

disposing of litter properly, and in 2022 began with the NDIA launching a nationwide 'no littering' campaign.

Mindset changes also need to happen further up the ladder. The government is now close to delivering on a Disaster Risk Management Bill for the country, which will see likely see many of the NDIA's projects form part of a wider environmental and societal context. This will give the organization even more responsibility as Guyana faces up to a century in which experts say its capital city will be entirely below sea levels by as early as 2030.

Partners and Suppliers

The nature of the work conducted by NDIA is that it needs to be high-quality enough to

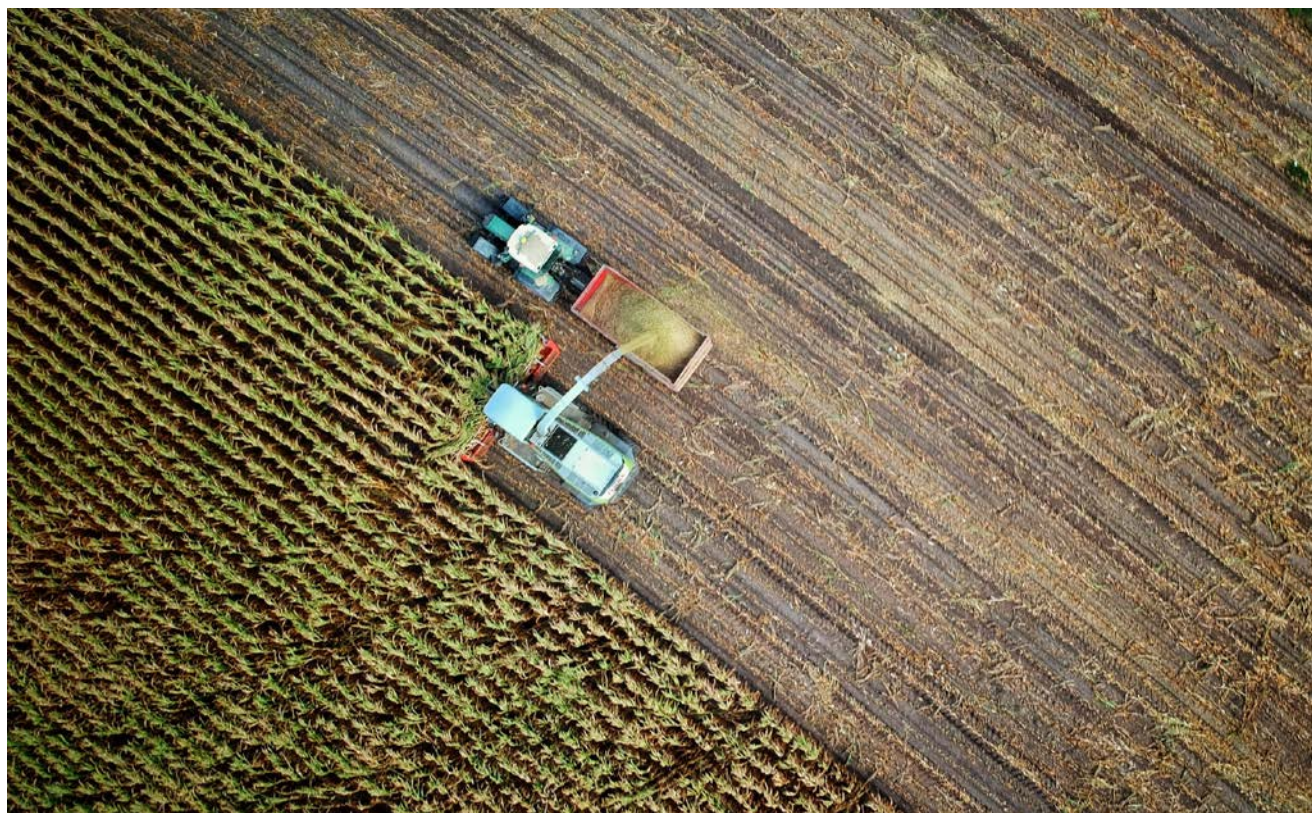


withstand the worst of what nature can offer over several years. Because of the immediate and massive cost of the damage caused by flooding, the work also needs to be carried out efficiently. This is where the NDIA's list of partners comes in, allowing it to bring together the necessary human and technical capital to get complex projects finished quickly. For example, it turned to Farm Supplies Limited, a local machinery importer, to acquire seven excavators, which will be used to de-silt primary channels and to clear secondary drains in Guyana's residential areas. Avinhas Contracting and Scrap Metal Inc. was also awarded a significant contract to repair steel sheet pile revetment at the Hubu Sluice on the East Bank Essequibo. Elsewhere, BDE Recycling has resuscitated approximately 150 acres of abandoned sugarcane lands for the cultivation of crops at West Bank Demerara, and also rehabilitated drainage culverts at Bartica, which included the complete reconstruction of one culvert

and repair to others, benefitting over 4,500 households, in excess of 17,000 Guyanese and 250 acres of farmland. Among NDIA's other valued partners, notable examples include N&A General Engineering and Contracting, which NDIA awarded the contract for completing the first lot of the concrete bridges at Mahaica, with the second and third lots being awarded to L&R Construction. Finally, Gaico Construction and General Services Inc. partnered with NDIA to dredge the mouth of the Pomeroon River, to alleviate the work of farmers there whose crops are put at risk by flooding.

Conclusion

Since the 2015 discovery of over 10 billion recoverable barrels of oil and gas - unthinkable mineral wealth for a country of less than 800,000 people - the world's media have speculated about Guyana becoming one of the world's most prosperous nations with expectation similar to that of the United Arab Emirates (UAE). However, for that to happen, the NDIA's work must continue its work and urgently so. As minister Mustafa stated "We cannot overlook the urgency of increasing the climate resilience of the agriculture sector. If we do, our objectives of enhancing productivity and production, food security, economic growth, and improving livelihoods will not be possible". He stressed the need for and a more integrated approach, a single shared vision, and coordination of efforts within agencies in Guyana and other neighboring countries in Caribbean. Perhaps more than any other organization in Guyana, the NDIA is the key to unlocking the country's prosperity.



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