



CREATING A STRATEGIC VISION FOR A
SUSTAINABLE SCHOOL: THE BUSINESS
CASE OF THE DORSETSHIRE HILL
GOVERNMENT SCHOOL, ST. VINCENT.

Assessment 1- Report: Sustainability
Planning
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Management Practice: A Critical
Perspective

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Current Sustainability Practices and Strategies for Sustainability

Cultural Sustainability

The Dorsetshire Hill Government School (DHGS) is one of the oldest elementary schools in St. Vincent and the Grenadines. It is in the community of Dorsetshire Hill, which overlooks the capital city of Kingstown (in the south of the island). This community is well-known for its heritage. In fact, Dorsetshire Hill was the battleground for the Second Carib War in 1795. McNew explained that “during the Second Carib War the Black Caribs were inspired by many of the ideas of the French Revolution to fight the British alongside the French in attempt to establish their status as ‘citizens of a free nation’.” On March 14th, 1795, the Black Carib Chief, Joseph Chatoyer was defeated and murdered by the British. Today, there is a monument erected at the DHGS in remembrance of our first National Hero of St. Vincent and the Grenadines. Therefore, it is crucial that this school’s organisation, the DHGS, ought to be preserved as a part of the community and country’s cultural history.

Picture 1: Prime Minister, Dr. Hon. Ralph Gonsalves on National Hero’s Day at the Carib Chief, Joseph Chatoyer’s monument found at the Dorsetshire Hill Government School.



Regional Disaster Vulnerability Reduction Project: Upgrading the DHGS to an emergency shelter

In 2011, the DHGS was selected to be a part of the St. Vincent and the Grenadines' Regional Disaster Vulnerability Reduction Project (SVG RDVRP). The SVG RDVRP was financed with a budget of US \$61.52 million, which was highlighted by SVG's Economic Planning Department website. The project funds were geared towards four equally reinforcing components, which were Prevention and Adaption Investments, Regional Platform for Hazard and Risk Evaluation and Application of Improved Decision Making, Natural Disaster Response Investments and lastly, Project Management and Implementation Support. Consequently, the improvement of the DHGS fell under the SVG RDVRP first part, Prevention and Adaption Investments. It was outlined in the DHGS Resettlement Action Plan, 2017 that the aim of this part is to “reduce the physical vulnerability and limit the fiscal shock caused by adverse natural events through the piloting of adaptive measures to build resilience to current and future climatic changes”. Picture 2 and Picture 3 below displays the DHGS structure (front and rear) prior to the Regional Disaster Vulnerability Reduction Project.

Picture 2: DHGS structure (front view) before the SVG Regional Disaster Vulnerability Reduction Project that upgraded the school to an emergency shelter.



Picture 3: DHGS structure (rear view) before the SVG Regional Disaster Vulnerability Reduction Project that upgraded the school to an emergency shelter.



The retrofitting of the DHGS to meet the dual-purpose standard of school and as an emergency shelter began in September 2016 and was completed in 2018. The DHGS now is included on the list of emergency shelters in St. Vincent and the Grenadines by the National Emergency Management Organisation (NEMO). Thus, the community of Dorsetshire Hill is less vulnerable to and more prepared against disasters. In addition, such improvement to the DHGS' structure supports the teaching and learning environment for both students and teachers.

The works that were completed on the school are provided by the report DHGS Resettlement Action Plan, 2017:

- ✚ Overhauling the roof and the replacement of the windows and doors of the main school building,
- ✚ renovation of an Annex in proximity of the boundary of an escarpment,
- ✚ expansion of the washroom block and roof works to change the structurally inadequate timber framed gable roof,
- ✚ site drainage enhancement near the top of the escarpment along the west boundary by the building of a curb wall to avert water from flowing over the edge; and
- ✚ repositioning of the present septic tank's effluent soak away, near the top of the escarpment to evade saturation of the soil at the top of the slope.

With the completed works to the DHGS physical structure in 2018 as outlined within the DHGS Resettlement Action Plan, 2017, the school is now regarded as an emergency shelter. The below pictures (picture 4 and picture 5) portray the DHGS structure after such construction works. Furthermore, Picture 4 reveals a wheel-chair access ramp to the right side of the entry stairs of the main door to the school, which creates value for social sustainability. And Picture 5 shows the addition of two large water-tanks, which creates value for environmental sustainability.

Picture 4: The DHGS (front view) after the he SVG Regional Disaster Vulnerability Reduction Project that upgraded the school to an emergency shelter.



Picture 5: The DHGS (front view) after the he SVG Regional Disaster Vulnerability Reduction Project that upgraded the school to an emergency shelter.



Challenges for Sustainability at the DHGS

Alexandre Magnin's, 2015 video on *Sustainability* describes the four root causes of unsustainability, which are matters that ought to be stopped or lessened in order to become sustainable. Magnin, 2015 outlines four simple principles for businesses to take into consideration if they want to contribute to a more sustainable future. Magnin's four principles to ensure a sustainable society are described as follows:

“..nature is not subjected to systematically increasing concentrations of substances extracted from the earth's crust, concentrations of substances produced by society, degradation by physical means and in this society, people are not subject to conditions that systematically undermine their capacity to meet their needs.”

(Magnin, 2015)

Thus, organisations should reduce and/or try to eliminate unsustainable practices by; stop taking resources from the earth's crust but instead utilize renewable resources in a way that gives them time to regenerate for future purposes, seek out alternative solutions to harmful substances produced by society that depletes the ozone layer and ensure proper waste disposal management procedures are in place to reduce pollution, engage in innovative sustainable practices that leads to environmental conservation of the earth's natural resources, and lastly, ensure equity and justice for all of society by providing decent working conditions, salaries, benefits, and training etc. that allows society to meet their needs.

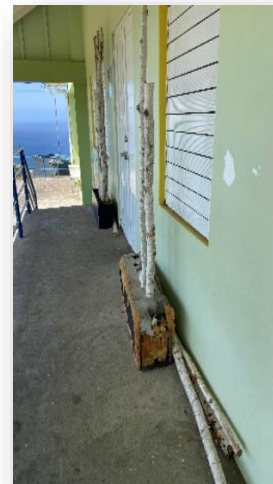
For the DHGS, there are major challenges to sustainability that will be presented going forward. Even though there were many improvements to the DHGS through the Regional Vulnerability Disaster Reduction Plan completed in 2018, there are still relatively much that can be done to ensure sustainability and limit unsustainability practices within this organisation. As such, the question of what exactly a sustainable school is ought to be considered. Derqui, et al., 2020 provides an answer to that question and asserts that a sustainable school is one that is defined as an organisation that is managed by the principles of “care for one self, care for each other and care for the environment” while incorporating sustainability matters into its day-to-day functions. Therefore, both resource management and waste management are necessary considerations for sustainable school strategies.

The DHGS at present lacks sustainable practices and programmes to care for the students, teachers (stakeholders) and its environment. This statement is based on an assessment of the school’s natural environment and the procedures in creating value for the most important stakeholders. On inspection of the school’s natural surrounding’s the following were observed and pictures taken to be a part of this report to highlight the unsustainable practices at the school.

Unsustainable Practices at the DHGS

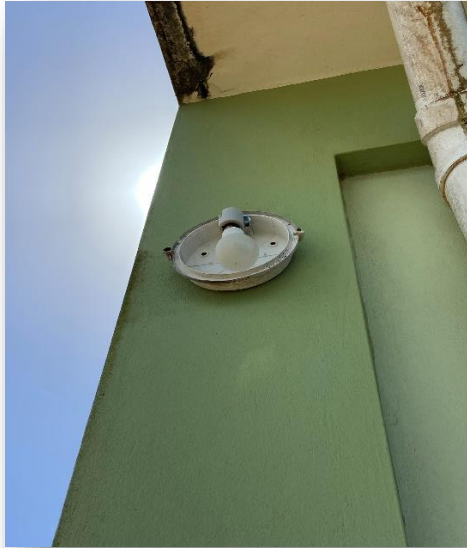
1. Poor waste disposal practices- This contributes to garbage all around the school's grounds. This includes plastic bottles, masks, plastic wrappers, old filing cabinet, destroyed organic décor and rusty drums and BBQ grill.

Pictures 6,7,8,9, & 10: Poor Waste Disposal Practices at DHGS



2. Physical hazards- This includes damaged light fixtures and exposed electrical wires on the outside walls, which may cause electric shock or fire.

Pictures 11 & 12: Exposed wires on the outer walls of the school



3. Environmental hazards- This is a clear unsafe, exposed dirt area with a slight slope. This is unsafe for children for many reasons including the dangers of falling as well as dry dust in the air that is harmful to the eyes.

Pictures 11, & 12: Unsafe, exposed dirt area on sloping land, behind school building.



4. Unhealthy snacks and food- provided to students via the ‘school feeding programme’ and the school’s canteen. As depicted in the below pictures, the snacks provided for sale at the DHGS are mainly imported and highly processed. As such, these snacks are high in sodium which can cause various health concerns.

The student pictured below, is having a canned-tuna sandwich with water. The school feeding programme meals are predominantly starchy foods such as bread, pasta, and rice. Healthy fresh vegetables, fruits and local fruit juices are not provided by the school feeding programme.

Pictures 15 & 16: Unhealthy snacks and lunch at the DHGS’ canteen and school feeding programme



(Permission was obtained by student’s parents to use the above picture of child)

Given the above evidence with regards to the organisation’s unsustainable practices and challenges, there is certainly potential opportunities for sustainable development for the DHGS to create value for all stakeholders and greater functionality. Thus, recommendations of a strategic vision for a sustainable strategy would be focused on henceforth in this report.

A Strategic Vision for a Sustainable Strategy

Why a business case for sustainability should become a focus for the Dorsetshire Hill

Government School?

A sustainable business is one that essentially partake in environmentally-friendly or green activities to warrant that all processes, products, and manufacturing activities sufficiently reflect present environmental concerns while sustaining profits, Kralj, n.d. Furthermore, education is thought a critical tool in reaching the Sustainable Development Goals as acknowledged by UNESCO, 2017. By extent, it is important to promote sustainable schools, which are those schools that “embed sustainable principles and values in school culture” as discussed by Kadji-Beltran, et al., 2013. Schools’ sustainable practices and values in school culture can be designed and implemented via academic curricula along with programs intended particularly for the given school, as no one practice will fit all schools.

Below are four propositions to help create value centered on sustainable practices that would be most advantageous for the Dorsetshire Hill Government School. This proposed strategic vision for the school reflects the opportunities for this organisation to establish greater functionality beyond its current practices and move in the direction of more logical, viable and safer practices and values. Additionally these recommendations are centered on the schools’ strengths and taking their weaknesses into account.

Recommendations of Sustainable Practices at the DGGS

1. Form an Eco-Committee
2. Zero Waste Project,
3. School Garden Initiative, and
4. Solar and/or Wind Energy Model.

Form an Eco-Committee

An eco-committee is recommended to oversee the school's environmental-friendly projects. This committee is regarded as the school's driving force behind all the projects. Moreover, the eco-committee is responsible for effective communication with stakeholders. That is, ensuring school's management, teachers, students, parents, community, investors etc. are informed of the school's projects progress. Likewise, the eco-committee is responsible for but not limited to the following tasks; construct a sustainable development audit, design action plans, monitor and evaluate projects, link projects to the curriculum, and inform along with involve stakeholders as pointed out by J'aime ma Planète, 2006.

Zero Waste Project

This recommended project should be aimed at confronting the school's waste problems. This zero waste project ought to be included in the school's curriculum. Thus, it will assist in bringing about long-term change in the school's culture with regards to litter minimisation via whole school engagement, Cutter-Mackenzie, 2010. In addition, it aims to bring about a change towards litter management and sustainability in the broader community and families.

This project is mainly about reducing, recycling, reusing resources and reproducing natural cycles. It is recommended that the school creates a waste station with the arrangement of bins used to separate different types of waste. For example, sort litter into recyclable trash such as plastic bottles, glass bottles, and paper. Another example, organic recycling of food waste for animals on community farms.

School Garden Initiative

The DHGS will benefit from a school garden initiative significantly. This is a key recommendation for the organisation for various associated purposes. According to Malberg

Dyg & Wistoft, 2018 investigations reveal that gardening unites children with nature and enriches their awareness of and enthusiasm for studying natural science because they appreciate doing pragmatic activities while learning science and mathematics. While other studies show an enhanced eagerness among children to experiment with new foods, particular preference to fruits and vegetables. An additional related advantage of this initiative is that of reduce costs and transportation because the garden is located on the school grounds.

Picture 17: Vacant lot of land located at rear of the DHGS premises.



Picture 18: Vacant lot of land located at DHGS grounds (Outside School Kitchen).



Solar and/or Wind Energy Model

This recommendation aims to deal with energy conservation measures for the dual-structural organisation ,as it acts as an elementary school and a disaster emergency shelter if required. Currently, the DHGS consumes both electricity and natural gas for lighting, and cooking purposes. The building is well ventilated in its physical structure due to its open-floor concept. Furthermore, the DGHS is located at an estimate terrain elevated at 184 feet above sea level, PeakVisor. Consequently, due to the degree of clean air at Dorsetshire Hill, the air quality is not a major concern.

Considering the location and physical attributes of the DHGS that are available (see picutres 19,20 and 21), using solar panels and/or wind turbines as an alternative to electric and natural gas use would significantly lessen carbon emissions for the school.

Pictures 19 and 20 are shown below to show the ideal conditions of the DGHS to pursue solar energy technology. Solar technologies can be placed on the rooftops of the main building along with the Annex (picture 19). These solar technologies would be able to convert sunlight into electrical energy through the use of photovoltaic panels.

Picture 19: View of the Annex at the DHGS.



Picture 20: View of the DGHS mainbuilding and surroundings.



Another alternative to electrical energy and natural gas is wind energy. According to the US Office of Energy Efficiency and Renewable Energy, wind turbines employ the wind to make electricity. It is observed that wind speed and wind patterns vary greatly throughout St. Vincent, but wind speed at Dorsetshire Hill is typically elevated. The community is known for being an ideal location for kite-flying. Thus, this method can be researched further.

Picture 21: View of vacant grounds behind DHGS mainbuilding.



Positioning the DHGS Using SWOT Analysis

SWOT ANALYSIS

1) Strengths

- ✓ Small, qualified workforce (7 teachers, 1 principal).
- ✓ Committed and supportive leadership and teachers.
- ✓ Small school population- 60 students.
- ✓ Excellent relationship with stakeholders- parents, community, education officials, students.
- ✓ School is fenced off from surrounding- provides good safety aspect.
- ✓ High quality location with green elements identified- suburban, minimal traffic, on a hill, windy and vacant land.

2) Weaknesses

- ✓ Lack of finance to fund green elements such as waste bins, solar panels and wind turbines.

3) Opportunities

- ✓ Only public structure at Dorsetshire Hill
- ✓ Can be used as a pilot project for Eco-friendly schools in St. Vincent.
- ✓ Can be used as a pilot project for Wind Turbines in St. Vincent.
- ✓ Environmental projects geared towards climate change are being encouraged and funded by international entities like the United Nations.
- ✓ Community members are mainly farmers. Thus, obtaining community help with seedlings, knowledge and equipment would be available.

4) Threats

- ✓ Relatively inflated costs associated with solar panels, and wind turbines.
- ✓ Community members may disagree with wind turbines due to the proximity of the Joseph Chatoyer monument and the traditions of kite-flying at the school.

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