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A Conceptual and Adaptable Model for Disaster Management in the Caribbean

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A CONCEPTUAL AND ADAPTABLE MODEL FOR DISASTER MANAGEMENT IN THE CARIBBEAN·

As islands develop, their vulnerabilities are increasing. Consequently, death tolls have also been increasing. Hazard impacts are more devastating and are beyond what communities and organizations have ever experienced, can cope with, or have even imagined. Interestingly enough, the incorporation of large-scale technology and the scientific advances have proven to be more vulnerable to the impacts of hazards. Added to this, Disaster Relief and Recovery has not been adequately combined with mitigation measures and Economic Development.

Caribbean nations struggling to recover from the impacts are told to build back better without a clear format outlining how to achieve this. It is inconceivable to expect Small Island Developing States (SIDS,) with severely indebted economies and particularly susceptible to Climate Change and other natural hazards, to have resources to *"build back better".* Without a well-defined plan that includes financing options, Caribbean islands will not be able to advance their recovery efforts at any significant pace and with infrastructural enhancements, considering the overwhelming damage left by the recent disasters we face today.

Recovery plans and strategies must therefore reflect the new realities of SIDS which are: limited re-construction resources, scarce financial resources, high costs of rebuilding, harsh environments and outdated codes and standards.

· Prepared for the Pan American Health Organization by Sharleen DaBreo.

During the early stages of development, Disaster Management Programmes activities were classified in two separate components. The first being pre-disaster (Disaster Risk-Reduction) and second post-disaster (Recovery). Pre-disaster activities included prevention, mitigation and preparedness while post disaster included activities involving response, rehabilitation and reconstruction. Over the years several attempts have been made to expand the model further to allow for greater emphasis of the implementation of all elements of Disaster Management.

There are many other models that exist, yet none have been able to incorporate all the key concepts i.e. critical hazard identification baseline data, vulnerable elements, and the stages of Disaster Management.

PAHO's (Pan American Health Organization) SMART Model (Safe + Green = Smart) emerged out of a need to provide safe and efficient working environments in health facilities. In 2012 the concept was introduced and sought to provide a step by step guide to achieving resiliency, efficiency and a positive impact on the environment within health care facilities. The focus was on connecting the issues of resilience and Climate Change Mitigation to provide a means for making health care facilities safe and "green".

The concept has evolved and emerged into one that illustrates how the different phases of the Disaster Management Cycle can be facilitated and how major activities of Disaster Management can be encapsulated within a single framework. The SMART Model also incorporates the use of evaluation and analysis data that will help to drive future development decisions. It strives to sustain existing strengths, while rebuilding what has been damaged or destroyed in an affordable and sequential manner.

In the Virgin Islands, this Model identified techniques (Sustained Mitigation, Adaptation and Resilient Techniques) applicable to achieving Safe, Healthy and Green environments or programmes. This approach is relevant to all sectors, which is demonstrated in the Virgin Islands, in the creation of the SMART Schools Initiative and the SMART Communities programme. Simple and intelligible; no expert knowledge is needed for the application of this Model, and it is easily adapted to any sector.

The PAHO SMART Model specifically serves to define a management structure that

- Incorporates the four fundamental phases of disaster management and segregates these into four main components: Capturing the baseline information, defines the areas of vulnerability, manages the risk, provides Monitoring and Evaluation
- Demonstrates how the four main components are further divided into various activities carried out in a sequential manner
- Promotes the need for the constant reviewing and assessments of the measures and actions taken
- Includes the changing effects of the environment.
- Ensures that Standards are applied

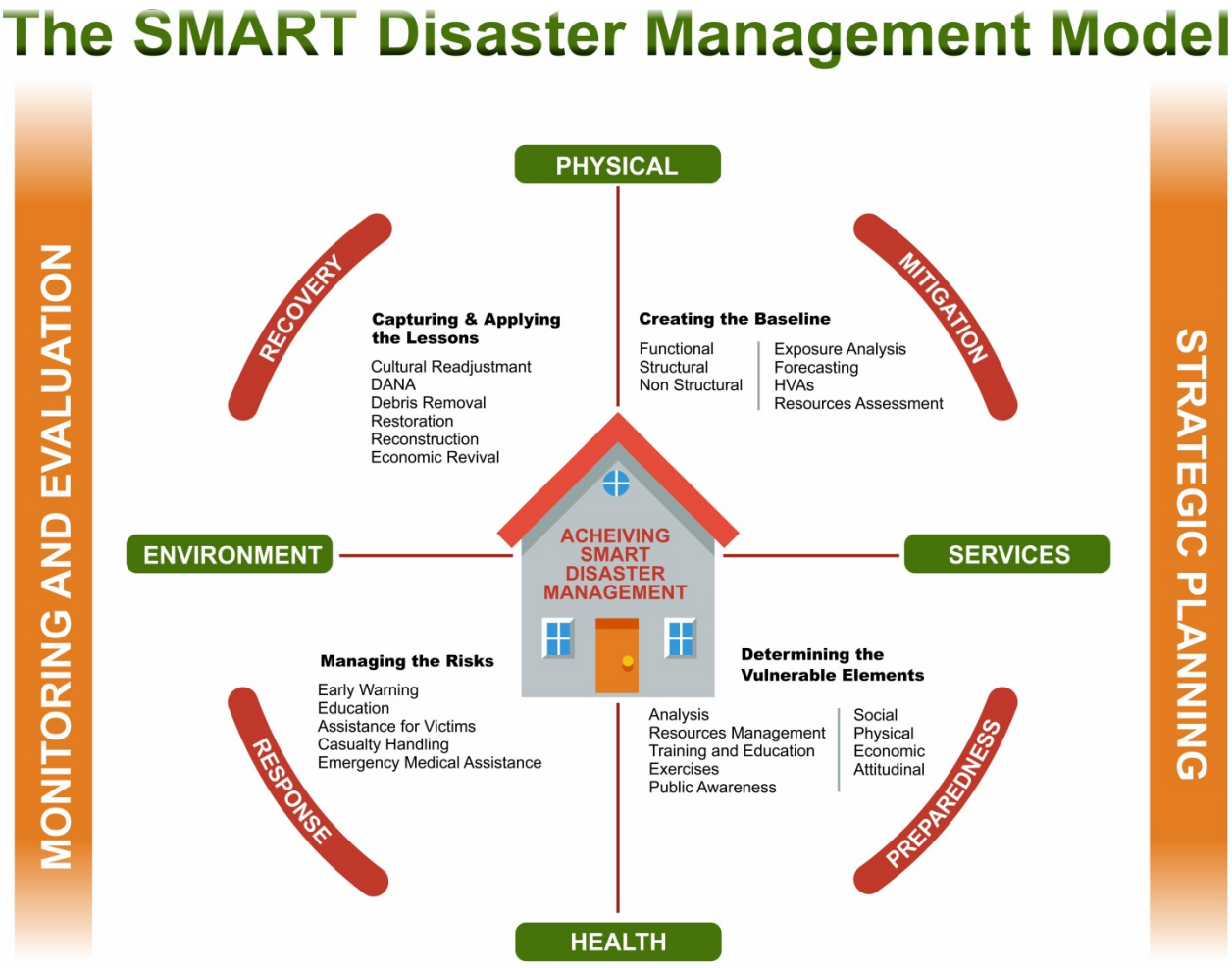

Figure 1: Achieving Smart Disaster Management

In illustrating how this model can be adapted specifically for the health sector Figure 2 aims to provide a series of activities that can contribute to the reduction in downtime and operating costs in health care facilities and how this can be achieved through improved safety and the incorporation of green measures. The SMART Health Care Facilities Model is adaptable to any facility that wishes to achieve similar outputs.

In order to achieve the desired deliverable, the model is dependent on the use of good baseline data on which the vulnerable elements will be assessed. Once the

vulnerabilities' known measures are taken to address the deficiencies (through the use of tools such as the Hospital Safety Index and the Green Checklist), this will help to specifically define the standards and interventions that will be needed in the areas of Mitigation and Preparedness. These actions, if adequately applied, will help to alleviate the burden that facilities face in responding to and recovering from disasters or major hazard impacts.

The Monitoring and Evaluation aspects of the Model are also included and can be performed on a regular basis through an appropriate maintenance/monitoring plan. Of particular importance is the fact that these elements of the Model can be incorporated at any stage of the life of the facility, whether during the design and construction of new facilities of during upgrades, expansions, maintenance and even during emergency repairs.

Linking Safe and Green Elements Within Healthcare Facilities

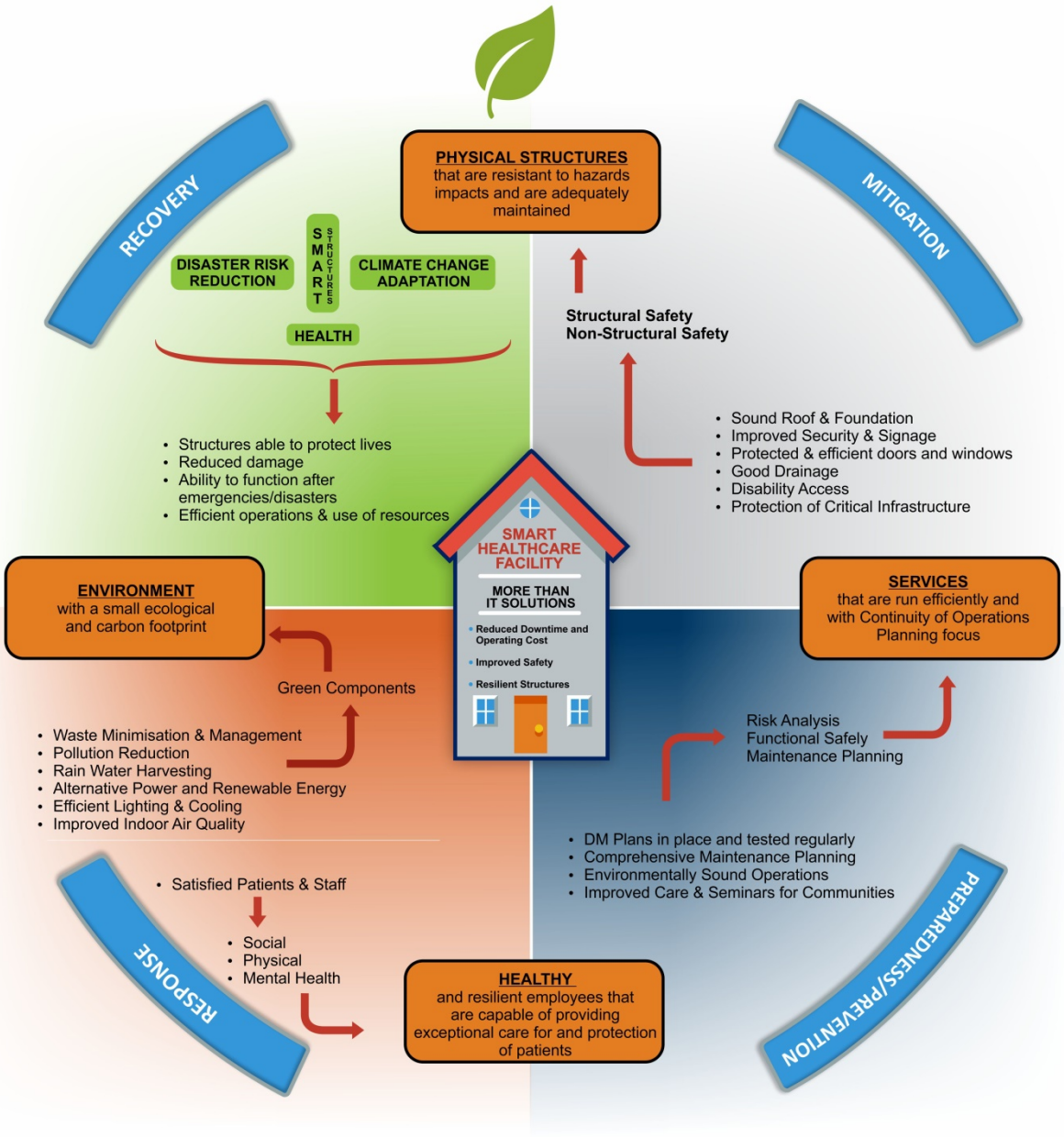

Figure 2: Linking Essential Elements with Health Facilities