

**ASSESSMENT OF SUSTAINABLE FACILITIES
MANAGEMENT (SFM) PRACTICE IN HEALTH CARE
(HC) ORGANISATIONS IN SRI LANKA**

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ABSTRACT

Health Care is one of the most polluting industries and recognised as the second energy-intensive sector, emitting 8% out of total 40% of total carbon emissions. Integrating sustainability into Facilities Management (FM) is imperative and could significantly contribute to reduce energy consumption, waste and day-to-day operational costs. The integration of sustainability into FM practices is challenging as it depends on many varied factors such as facility type, organisational scale, characteristics, and business sector. Therefore, this research aims to develop a framework to assess the performance of sustainable FM practice with a specific focus on HC organisations.

A Delphi survey and a questionnaire survey were administered. Delphi survey conducted among 10 experts in 3 rounds, who are specialised in FM and sustainable practices in HC organisations. Whereas, questionnaire survey was conducted among 57 FM practitioners in the same HC context. Data gathered from the Delphi survey was analysed using the consensus of participants whilst descriptive method namely; mean, Relative Importance Index (RII) and a mathematical framework were used to analyse the questionnaire survey. The study found 9 FM services and 50 sustainable practices as significant. Amongst, FM services namely “building services (BS)”, “project planning (PP)” and “quality management (QM)” and sustainable practices “identify applications for energy-saving”, “renewable energy sources”, “treat infectious wastes” and “execute HC waste management plan”, were the topmost significant. Furthermore, the relevancy of the sustainable practices in achieving the principles of sustainability matched with the “concentric approach” of triple bottom line concept. Finally, the research aim was accomplished with the development of a web-based application to assess SFM practice.

There is a dearth of literature that integrates sustainable FM practices in HC organisation and this study fulfils this research gap. The study is novel in offering a framework to integrate sustainability and assess the SFM practice in HC organisations.

Keywords: *Facilities Management (FM), Sustainable FM practice (SFM), Health Care (HC) organisations*

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LIST OF ABBREVIATIONS

AHA - **A**merican **H**ospital **A**ssociation

BPO - **B**usiness **P**rocess **O**utsourcing

BREEAM - **B**uilding **R**esearch **E**stablishment **E**nvironmental **A**ssessment **M**ethod

BS - **B**uilding **S**ervices

CAFM - **C**omputer-**A**ided **F**acility **M**anagement

CHFM - **C**ertified **H**ealthcare **F**acilities **M**anager

CSS - **C**ascading **S**tyle **S**heets

FDA - **F**ood and **D**rug **A**dministration

FM - **F**acilities **M**anagement

FS - **F**inance **S**ervices

GDP - **G**ross **D**omestic **P**roduct

HC - **H**ealth **C**are

HR - **H**uman **R**esources

IEQ - **I**ndoor **E**nvironment **Q**uality

ISO - **I**nternational **O**rganization for **S**tandardisation

IT - **I**nformation **T**echnology

JC - **J**oint **C**ommission

LCC - **L**ife **C**ycle **C**osting

LEED - **L**eadership in **E**nergy and **E**nvironmental **D**esign

M – **M**ean-weight

MM - **M**arketing **M**anagement

OECD - **O**rganisation for **E**conomic **C**o-operation and **D**evelopment

OM - **O**perations **M**anagement

OPW - **O**verall **P**erformance **W**eighting

OSHA - **O**ccupational **S**afety and **H**ealth **A**dministration

PE - **P**erformance **E**valuation

PFI - **P**ublic **F**inance **I**nitiatives

PP - **P**roject **P**lanning

PPP - **P**ublic-**P**riate **P**artnerships

QM - **Q**uality **M**anagement

RE - **R**eal **E**state **M**anagement

RII - **R**elative **I**mportance **I**ndex

RM - **R**isk **M**anagement

SD - **S**tandard **D**eviation

SDG - **S**ustainable **D**evelopment **G**oals

SFM - **S**ustainable **F**acilities **M**anagement

SFP - **S**trategic **F**acility **P**lanning

SL - **S**ri **L**ankan

SP - **S**pace **P**lanning

UHC - **U**niversal **H**ealth **C**overage

UN - **U**nited **N**ations

US - **U**nited **S**tates

VOCs - **V**olatile **O**rganic **C**ompounds

W - **K**endall's **C**oefficient of **C**oncordance

WCED - **W**orld **C**ommission on **E**nvironment and **D**evelopment

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