



Developing a Sustainable Buildings Protocol

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**Sustainable Buildings
and Climate Initiative**

Promoting Policies and Practices for Sustainability

SB Protocol

Introduction

UNEP-SBCI provides a common platform to all buildings and construction stakeholders for addressing sustainability issues of global significance, especially climate change

A Sustainable Buildings Protocol (**SB Protocol**) will assist public and private sector organisations with jurisdiction over building stock to monitor and report on whether a building sector is:

- Reducing its total environmental impact;
- Increasing its resource efficiency;
- Achieving its full potential for mitigating energy-related greenhouse gas emissions; and
- Contributing to social and economic development.

SB Protocol

The **SB Protocol** consists of two components:

- Part I for governments / local authorities with juridical and/or regulatory control over the built environment; and
- Part II for private and public sector organisations with financial and/or operational control over a large portfolio of buildings.
- The SB Protocol does not apply to the assessment or reporting of indicators of individual buildings or to the design of new buildings.
- Rather, the SB Protocol provides a framework, and has been developed to support the generating of annual reports on progress made by jurisdictions in improving the sustainability of its building stock



SB Protocol

SB Protocol is intended to provide a ***common language*** for reporting on sustainability issues for buildings. It is limited mainly to guidance and recommendations on aspects of the impact and benefits of buildings for the stages of materials production and building operations with regards to the following issues:

- Energy use and greenhouse gas (GHG) emissions;
- Water use;
- Soil, water and air pollution; and
- Building and construction materials.

SB Protocol: Providing guidance for reporting

Indicator	Measure	Policy Instrument	Scope
Energy Use: Building Operation	Minimum requirement: <ul style="list-style-type: none"> • kWhr/yr Optional requirement: <ul style="list-style-type: none"> • kWhr/UNIT/yr, where UNIT = <ul style="list-style-type: none"> • per area (gross floor area; m², precinct area; km², etc.) • per capita (occupants, households, etc.) • per economic unit (GDP, GGP, etc.) 	<ul style="list-style-type: none"> • Mandatory policy instruments (national or local authority) e.g.: <ul style="list-style-type: none"> • energy efficiency building regulations • requirements for solar water heaters, etc. • energy-efficiency obligations and quotas 	Purchased energy for building operations: <ul style="list-style-type: none"> • electricity • coolth/ steam/ heat • on-site generated power • Biomass: <ul style="list-style-type: none"> • on-site consumed gas and oil • Clarify whether the report is considering Primary or Final Energy or both? Please state the assumption • Policy and regulatory impacts on energy use arising from the building operations



SB Protocol: Providing guidance for reporting

Indicator	Measure	Policy Instrument	Scope
Energy Use; Materials Production	<ul style="list-style-type: none"> • kWhr/yr • kWhr/yr/UNIT/yr, where UNIT = per economic unit (GDP, GGP, etc) 	<ul style="list-style-type: none"> • Mandatory policy instruments with a likely substantive impact (national or local authority) 	<ul style="list-style-type: none"> • Energy use arising from the production of construction materials, attributable to the jurisdiction under consideration
GHG Emissions; Building Operations	<p>Minimum requirement:</p> <ul style="list-style-type: none"> • kg/CO₂e/yr <p>Optional requirement:</p> <ul style="list-style-type: none"> • kg/CO₂e/UNIT/yr, where UNIT = • per area (gross floor area; m², precinct area; km², etc.) • per capita (occupants, households, etc.) • per economic unit (GDP, GGP, etc.) 	<ul style="list-style-type: none"> • Mandatory policy instruments (e.g. carbon tax) with a likely substantive impact 	<ul style="list-style-type: none"> • GHG emissions arising from the building operations, attributable to the jurisdiction under consideration • Policy and regulatory impacts on GHG emissions arising from the building operations

SB Protocol: Providing guidance for reporting

Indicator	Measure	Policy Instrument	Scope
GHG Emissions; Materials Production	<ul style="list-style-type: none"> kg/CO₂e/yr kg/CO₂e/UNIT/yr, where UNIT = per economic unit (GDP, GGP, etc) 	<ul style="list-style-type: none"> Mandatory policy instruments with a likely substantive impact (national or local authority) 	<ul style="list-style-type: none"> GHG emissions arising from the production and transport of construction materials, attributable to the jurisdiction under consideration
Water Use; Building Operations	<p>Minimum requirement:</p> <ul style="list-style-type: none"> kl/yr or tonne/yr <p>Optional requirement:</p> <ul style="list-style-type: none"> kl/ UNIT/yr, where UNIT = per area (floor area; m², precinct area; km², etc.) per capita (occupants, households, etc.) per economic unit (GDP, GGP, etc.) 	<ul style="list-style-type: none"> Mandatory policy instruments with a likely substantive impact, e.g.: rainwater collection, grey-water recycling 	<ul style="list-style-type: none"> All water used within the building systems and water used on building sites for irrigation or other functions related to building operations (reported separately). Policy and regulatory impacts on water use arising from the building operations



SB Protocol: Providing guidance for reporting

Indicator	Measure	Policy Instrument	Scope
Water Use; Materials Production	Minimum requirement: <ul style="list-style-type: none"> • kl/yr or tonne/yr Optional requirement: <ul style="list-style-type: none"> • kl/ UNIT/yr, where UNIT = • per economic unit (GDP, GGP, etc.) 	<ul style="list-style-type: none"> • Mandatory policy instruments with a likely substantive impact (national or local authority) 	<ul style="list-style-type: none"> • Water use attributable to the production of construction materials, attributable to the jurisdiction under consideration
Soil, Water and Air Pollution; Building Operations	to be determined	<ul style="list-style-type: none"> • Mandatory policy instruments with a likely substantive impact, e.g.: <ul style="list-style-type: none"> • site specific environmental management plans (EMPs) 	<ul style="list-style-type: none"> • Scope includes soil, water and air pollution arising from the construction or operation of the building • Policy and regulatory impacts on soil, water and air pollution arising from the building operations



SB Protocol: Providing guidance for reporting

Indicator	Measure	Policy Instrument	Scope
Materials recycling and reuse	Various (to be defined as appropriate to reporting: %, volume, weight, etc.	<ul style="list-style-type: none">• Mandatory policy instruments, e.g.: requirements for recycling	<ul style="list-style-type: none">• Policy and regulatory impacts on materials recycling and reuse, attributable to the jurisdiction under consideration
Future indicators on Waste generation and recycling; Biodiversity; Social issues; and Economic considerations			



SB Protocol: A framework for reporting

There is a pressing need worldwide for government regulators and for private sector organizations to track and manage their building stock, and to enhance the sustainability of this stock.

Monitoring and reporting on sustainable buildings is a necessary requirement to both demonstrate leadership in the building sector and to prepare for future policies and regulations.

Greater understanding by national and local governments and organizations of the issues (and indicators) of sustainability to better inform policy-making and business practices.



SB Protocol: A framework for reporting

The benefits of sustainability monitoring and reporting:

- Providing a framework for monitoring trends in line with national or local sustainability targets;
- Providing a platform for informing policies and regulations;
- Providing a platform for public reporting, supporting the development of sustainability inventories and setting or refining targets;
- Providing for case studies and comparisons;
- Demonstrating leadership and encouraging accountability.



Thank you

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