

# CONSTRUCTION RELATED SUSTAINABILITY INDICATORS

## Setting Targets & Monitoring Performance in the Built Environment

### BACKGROUND

The CIBW82 project **Sustainable Development and the Future of Construction**<sup>1</sup> studied the consequences of sustainable development to the construction industry in the future. That study concluded "*the next step should be to reach a more consensus vision through a global common model and to set up indicators and policies to translate this vision into reality*".

Sustainability indicators are needed to set targets and to measure the performance of the built environment. Decision-makers and policy-makers may use the indicators to evaluate economically viable and technically feasible strategies to improve the quality of life. Different actors in building processes may use the indicators as guidelines and tools to improve current practises and to improve quality of construction. The indicators can be used for measuring the sustainability of building projects, the capability of different actors and the state of different regions or nations.

### OBJECTIVES

The project aims at:

- defining and validating **construction related sustainability indicators**
- implementing the indicators in measuring the **sustainability** of building projects (buildings and the built environment) and different actors involved in creating and maintaining them at the national level
- implementing the indicators in comparing the **sustainability** of building projects, regions and nations at the international level.

The scope of the project is the following:

- sustainability *indicators* include both qualitative and quantitative issues
- *sustainability* indicators cover environmental, economic, social, cultural and institutional aspects
- *building projects* cover buildings and the built environment
- *building process* starts from initiation of the project and ends at the end of the life cycle of the facility (including demolition and possible treatment after that)
- the indicators have a common *structure* at the international level, but they may have different weights at a national level
- the indicator *framework* is compatible with the futures scenario, thus enabling the evolution of indicators and their contents along the time
- the indicators are practical and they will be *validated* in pilot cases.

### TASKS

The project consists of the following tasks:

- definition of the framework and the contents of sustainability indicators in the building sector based on the UN working list of sustainability indicators<sup>2</sup> and other known international or national lists of indicators
- implementation and validation of the indicators in national case studies
- definition of a futures scenario; linking the indicators to the scenario
- benchmarking the indicator values and targets in different regions and nations.

### DELIVERABLES

The project results in the following deliverables:

- a common framework and methodology for sustainability indicators in the building sector
- results and experiences from implementing the indicators in practise
- a full set of validated indicators with information and guidance

- a futures scenario supporting the targets and the choice of indicators
- regional, national and global targets for indicators at a prenormative level.

## **ORGANISATION**

The proposal is prepared together with the representatives from Finland<sup>3</sup>, France, Ireland, Malaysia, the Netherlands, South Africa, Spain and United States, that are already committed to the project. All other experts are now invited to join the project.

The project intends to co-ordinate the work with selected other CIB commissions, which can be expected to be able to give an input to the envisaged work, including:

- TG22 - Environmental Design Methods in Materials and Structural Engineering
- TG38 - Urban Sustainability
- TG39 - Deconstruction
- W100 - Environmental Assessment of Buildings,

and possibly also with certain joint projects of CIB with its Partner Organisations, including:

- a joint CIB - IEA project on Environmental Labelling
- a joint CIB - FIG project on Performance Indicators for the Built Environment

## **TIME SCHEDULE**

The project has the following preliminary milestones:

### **15-16.9.1999**

- presentation of the project at the CIBW82 meeting in Espoo, Finland
- national situation reports of the first countries
- further instructions to those that haven't started the work yet

### **May 2000**

- presentation of the project at the CIBW82 meeting in Atlanta
- first national draft reports given as examples to others

### **October 2000**

- presentation of the project highlights at the CIB/GBC Sustainable Building Conference in Maastricht
- first national reports and start the international synthesis

### **April 2001**

- CIB World Congress: national reports and international synthesis
- the work continues beyond the CIB World Congress.