


G4

SECTOR
DISCLOSURES



CONSTRUCTION
AND REAL ESTATE

The background of the lower half of the page is an abstract map. It features a light blue background with a network of lines in orange, green, and light blue. These lines intersect at various points, some marked with small white plus signs. A prominent dark blue circle with a white center acts as a central hub, with several lines radiating from it. The text "CONSTRUCTION AND REAL ESTATE" is written in a bold, dark blue, sans-serif font, slanted upwards to the right, and is positioned over the map lines.

**CONSTRUCTION
AND REAL ESTATE**

CONTENTS

Legend



Chapters with a full color flag present sector content developed following GRI's due process



The contents of chapters with an outlined flag assist reporters when using the Sector Disclosures in conjunction with the G4 Guidelines

1. HOW TO USE THE SECTOR DISCLOSURES	3
↓	
2. INTRODUCTORY SECTION FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
2.1 For whom are the Construction and Real Estate Sector Disclosures Intended?	8
2.2 What is the Context of these Sector Disclosures?	9
2.3 Other Guidance for Users of these Sector Disclosures	10
↓	
3. CONSTRUCTION AND REAL ESTATE SECTOR DISCLOSURES	
3.1 Overview of Content for the Construction and Real Estate Sector	11
3.2 General Standard Disclosures for the Construction and Real Estate Sector	12
3.3 Specific Standard Disclosures for the Construction and Real Estate Sector	15
3.4 Glossary	64
3.5 Additional Construction and Real Estate References	65
↓	
4. FULL TEXT FOR THE CONSTRUCTION AND REAL ESTATE SECTOR DISCLOSURES	
4.1 Full Text for Specific Standard Disclosures for the Construction and Real Estate Sector	66
↓	
5. ANNEX I. OVERVIEW OF LINKS WITH THE CONSTRUCTION AND REAL ESTATE SECTOR SUPPLEMENT	79
↓	
6. ANNEX II. CONSTRUCTION AND REAL ESTATE SECTOR DISCLOSURES CONTENT DEVELOPMENT	96

1

HOW TO USE
THE SECTOR
DISCLOSURES

The Construction and Real Estate Sector Disclosures document is based on the 'GRI Construction and Real Estate Sector Supplement'.

This Sector Supplement was issued in 2011 and developed based on the G3.1 Guidelines (2011). Following the launch of the G4 Guidelines in May 2013, the complete Sector Supplement content is now presented in the 'Construction and Real Estate Sector Disclosures' document, in a new format, to facilitate its use in combination with the G4 Guidelines.

The contents of the Sector Supplement have been re-organized and streamlined to fit the G4 Guidelines' content, structure and requirements. New contents have not been added.

This document has been prepared by the GRI Secretariat under the direction of the Technical Advisory Committee.

The Construction and Real Estate Sector Disclosures document contains a set of disclosures for use by all organizations in the Construction and Real Estate sector. The disclosures cover key aspects of sustainability performance that are meaningful and relevant to the Construction and Real Estate sector and which are not sufficiently covered in the G4 Guidelines.

The Construction and Real Estate Sector Disclosures should be used by all organizations in the Construction and Real Estate sector that wish to prepare a report 'in accordance' with the G4 Guidelines, either Core or Comprehensive. Please consult the 'in accordance' criteria on pages 11-14 of the [*G4 Guidelines – Reporting Principles and Standard Disclosures*](#).

The Construction and Real Estate Sector Disclosures should be used in addition to and not as a replacement of the G4 Guidelines. Together, the G4 Guidelines and the Construction and Real Estate Sector Disclosures make up the reporting framework for the Construction and Real Estate sector.

This document contains additional disclosure requirements and guidance on existing G4 content, and standalone Aspects, Indicators and guidance for the sector. The following tables summarize the types of Sector Disclosures that are found in this document:

GENERAL STANDARD DISCLOSURES FOR THE SECTOR

GENERAL STANDARD DISCLOSURES FOR THE SECTOR	
Type of Sector Disclosure	Explanation
Sector additions to G4 General Standard Disclosures	
Additional disclosure requirements for G4 General Standard Disclosures	<p>There may be additional disclosure requirements for any of the 58 General Standard Disclosures included in the G4 Guidelines.</p> <p>If an additional disclosure requirement relates to a General Standard Disclosure required under the chosen 'in accordance' option, it should be reported.</p> <p><i>(*) Reasons for omission may apply in exceptional cases.</i></p>
Additional Guidance to G4 General Standard Disclosures	<p>There may be additional sector Guidance for any of the 58 General Standard Disclosures included in the G4 Guidelines.</p> <p>This Guidance is not a requirement to be 'in accordance', for neither Core nor Comprehensive.</p> <p>Organizations should consult this Guidance when preparing a sustainability report.</p>

(*) **Please note:** If it is not possible to disclose certain information required by the Construction and Real Estate Sector Disclosures, reasons for omission may apply in exceptional cases. Please consult the reasons for omission on page 13 of the [G4 Guidelines – Reporting Principles and Standard Disclosures](#).

SPECIFIC STANDARD DISCLOSURES FOR THE SECTOR

SPECIFIC STANDARD DISCLOSURES FOR THE SECTOR	
Type of Sector Disclosure	Explanation
Sector specific Aspects	
Sector specific Aspects	<p>There may be standalone Aspects for the sector.</p> <p>Organizations should consider the sector specific Aspects in this document together with the Aspects in the G4 Guidelines when defining the content of the report. The process for selecting material Aspects is described on pages 31-40 of the G4 Guidelines – Implementation Manual.</p> <p>The final selection of material Aspects may contain Aspects from the G4 Guidelines and sector specific Aspects from this Sector Disclosures document.</p>
Sector specific Guidance for DMA	
Sector specific Guidance for DMA (Disclosures on Management Approach)	<p>For each material Aspect identified (either from the G4 Guidelines or this Sector Disclosures document), organizations should report the Generic DMA (G4-DMA), for both Core and Comprehensive 'in accordance' options. The Generic DMA (G4-DMA) can be found on page 46 of the G4 Guidelines – Reporting Principles and Standard Disclosures.</p> <p>There may be sector specific Guidance for the DMA, for either G4 Aspects or sector specific Aspects. The sector specific Guidance for the DMA is designed to provide additional detail on the information to report for the Aspect. It is not a requirement to be 'in accordance', for neither Core nor Comprehensive.</p> <p>In the G3.1 Construction and Real Estate Sector Supplement, the sector specific Guidance for the DMA is considered to be a requirement. For this reason, organizations should consult the sector specific Guidance for the DMA when preparing a sustainability report.</p>
Sector additions to G4 Indicators	
Additional disclosure requirements for G4 Indicators	<p>There may be additional disclosure requirements for any of the Indicators included in the G4 Guidelines.</p> <p>For the 'in accordance' Core option: organizations choose at least one Indicator related to each identified material Aspect in G4 to report against. Organizations should report the additional disclosure requirements for the sector, if available, related to the chosen G4 Indicator(s).</p> <p>For the 'in accordance' Comprehensive option: organizations should report all Indicators available for the identified material Aspects in G4. Organizations should report all additional disclosure requirements for the sector, if available, related to the chosen G4 Indicators.</p> <p>(*) <i>Reasons for omission may apply in exceptional cases.</i></p>
Additional Guidance to G4 Indicators	<p>There may be additional sector Guidance for any of the Indicators included in the G4 Guidelines. It is not a requirement to be 'in accordance', for neither Core nor Comprehensive.</p> <p>Organizations should consult this Guidance when preparing a sustainability report.</p>

(*) **Please note:** If it is not possible to disclose certain information required by the Construction and Real Estate Sector Disclosures, reasons for omission may apply in exceptional cases. Please consult the reasons for omission on page 13 of the [G4 Guidelines – Reporting Principles and Standard Disclosures](#).

↓ SPECIFIC STANDARD DISCLOSURES FOR THE SECTOR CONTINUED

SPECIFIC STANDARD DISCLOSURES FOR THE SECTOR	
Type of Sector Disclosure	Explanation
Sector specific Indicators	
Sector specific Indicators located under G4 Aspects	<p>There may be standalone sector specific Indicators added to existing G4 Aspects.</p> <p>Indicators are reported for material Aspects only as follows:</p> <p>For the 'in accordance' Core option: for each of the G4 Aspects identified as material, organizations should report at least one Indicator from the G4 Guidelines and (if available) one Indicator from the Sector Disclosures document related to the material Aspects.</p> <p>For the 'in accordance' Comprehensive option: for each of the G4 Aspects identified as material, organizations should report all the Indicators from the G4 Guidelines and (if available) all the Indicators from the Sector Disclosures document related to the material Aspects.</p> <p>These Indicators are labeled CRE1, CRE2, CRE3, etc.</p> <p><i>(*) Reasons for omission may apply in exceptional cases.</i></p>
Sector specific Indicators located under sector specific Aspects	<p>There may be standalone sector specific Indicators located under sector specific Aspects.</p> <p>Indicators are reported for material Aspects only as follows:</p> <p>For the 'in accordance' Core option: organizations should report at least one Indicator related to the sector specific Aspects identified as material.</p> <p>For the 'in accordance' Comprehensive option: organizations should report all the Indicators related to the sector specific Aspects identified as material.</p> <p>This Indicator is labeled CRE5.</p> <p><i>(*) Reasons for omission may apply in exceptional cases.</i></p>

(*) **Please note:** If it is not possible to disclose certain information required by the Construction and Real Estate Sector Disclosures, reasons for omission may apply in exceptional cases. Please consult the reasons for omission on page 13 of the [G4 Guidelines – Reporting Principles and Standard Disclosures](#).

NOTES FOR EXPERIENCED GRI REPORTERS

GRI has made available a series of resources to help GRI sector reporters in their transition from G3/G3.1 to G4:

- [*G4 Frequently Asked Questions*](#)
- [*Overview of changes in Standard Disclosures from G3.1 to G4 Guidelines*](#)
- [*Overview of changes in Standard Disclosures from G3 to G4 Guidelines*](#)

The naming conventions of the GRI Standard Disclosures (including Indicators) have changed in G4. Consult the above tables for an overview of the changes in Standard Disclosures.

Annex I of this document provides an overview of how the Sector Disclosures have been re-organized to fit the new structure of the G4 Guidelines and includes references to the original disclosures' location in the Construction and Real Estate Sector Supplement (2011). For ease of reference, the Sector Disclosures' labels used in the Sector Supplement (CRE1, CRE2, CRE3, etc.) have been retained.

NOTES FOR FIRST-TIME REPORTERS

First-time reporters are advised to consult and familiarize themselves with the contents of the G4 Guidelines before they start using the Sector Disclosures.

It is not necessary for first-time reporters to consult the Construction and Real Estate Sector Supplement (2011).

Note to users of an electronic version of this document:

Throughout Section 3, page references to Section 4 are hyperlinked. Clicking on these page references takes the user to the relevant page. To return to the previous page, please click "alt" + left arrow.

2

INTRODUCTORY SECTION FOR THE CONSTRUCTION AND REAL ESTATE SECTOR

2.1 FOR WHOM ARE THE CONSTRUCTION AND REAL ESTATE SECTOR DISCLOSURES INTENDED?

The Construction and Real Estate Sector Disclosures are intended for companies that:

- invest in, develop, construct, or manage buildings; and
- invest in, develop or construct infrastructure.

The lifecycle diagram below describes the activity areas covered within these Sector Disclosures:



* Management and occupation only apply to Real Estate and not to Infrastructure assets

Several activities associated with construction and real estate are implicit within one or more of the lifecycle stages in the diagram. For example, 'design' is an activity relevant for each stage of the lifecycle. Similarly, activities associated with 'acquisition and disposal' and 'planning'/'regulatory approval' can apply to different stages of the lifecycle.

The scope of these Sector Disclosures includes companies included in the following Global Industry Classification Standard (GICS) codes: 201030 Construction & Engineering, 404030 Real Estate Management & Development, 404020 Real Estate Investment Trusts (REITs).

Occupation

The occupation of buildings is potentially relevant to almost all sectors. Several Construction and Real Estate Indicators are designed for use by any reporting organization that occupies buildings (either as an owner occupier, or under multi-let or single-let landlord/tenant arrangements). In particular, Indicators CRE1, CRE2 and CRE3 can be used by organizations that would not define their core activities as construction and real estate, but occupy buildings to carry out their core activities.

Infrastructure

For the purpose of these Sector Disclosures, infrastructure assets relate to new construction, and demolition and redevelopment of infrastructure only. Management and occupation of infrastructure is not included in the scope of these Sector Disclosures. Infrastructure asset types include:

- Transport infrastructure (e.g., roads, tunnels, bridges, airports);
- Social infrastructure (e.g., hospitals, schools, courts, correctional facilities);
- Environmental infrastructure (e.g., water treatment, waste and recycling facilities, desalination plants);
- Energy infrastructure (e.g., power generation, renewable installations, gas storage, transmission distribution, combined heat and power); and
- Other infrastructure (e.g., fixed or mobile telecommunication networks, broadcast facilities).

2.2 WHAT IS THE CONTEXT OF THESE SECTOR DISCLOSURES?

This Sector Disclosures document provides Standard Disclosures that are important or unique to the construction and real estate sector.

The sector has significant positive and negative impacts on the economy, environment and society.

The United Nations Environment Programme (UNEP) Sustainable Buildings & Climate Initiative reports that buildings are responsible for more than 40 percent of global energy use and over one third of global greenhouse gas (GHG) emissions. Reducing GHG emissions in the built environment is widely recognized as the least expensive way to mitigate impacts. The construction and real estate sector has the potential to play a significant role in the response to climate change.

Activities associated with constructing, managing, occupying and demolishing buildings and infrastructure also deplete natural resources and lead to many kinds of pollutants in land, air and water. Resources like water and natural materials, which are vital to the survival of all species, are consumed on a significant scale by activities associated with the built environment. The UNEP Sustainable Buildings & Climate Initiative estimates that the built environment is responsible for 30 percent of raw material use and 25 percent of water use globally.

The built environment can also significantly affect natural ecosystems, and transform or eradicate long standing habitats, as it is responsible for 12 percent of land use globally. The construction and real estate sector also produces large quantities of waste. UNEP estimates that the built environment contributes to 25 percent of total solid waste generation globally.

In socio-economic terms, the built environment has significant direct and indirect impacts on social wellbeing and the livelihoods and prosperity of local communities and individuals. The lasting community impacts of the sector, both positive and negative, are known as 'legacy'.

Through its various activities as a major employer with a diverse and complex supply chain, the sector can positively impact local economies by providing jobs, training and industry. It provides homes, education and recreational facilities for communities, yet it can also be responsible for displacing people.

2.3 OTHER GUIDANCE FOR USERS OF THESE SECTOR DISCLOSURES

The construction and real estate sector is heavily regulated in many parts of the world. As a consequence, laws, standards, and contemporary reference documents are evolving rapidly. There is also much regional variance of regulation. Reporting organizations and users of these Sector Disclosures should be aware that references cited in these Sector Disclosures may date or be superseded quickly.

Similarly, because of the degree of regulation across the sector, some content in these Sector Disclosures makes a distinction between mandatory performance required by law or contract and voluntary performance beyond normal compliance levels. These distinctions should be made clear by reporting organizations when relevant.

The Guidance provided in these Sector Disclosures often includes examples. The examples are not intended to be definitive or exclusive. They are included to offer a sector specific reference that is meaningful for users.

One of the ten GRI Reporting Principles is on balanced reporting: Including both positive and negative impacts is important to keep in mind when using these Sector Disclosures.

For some Indicators, comparing results year-on-year may not be particularly relevant or meaningful. Some results will be highly variable depending on economic activity in the sector; for example, the consumption of recycled content in building materials during the reporting period. Another example would be the acquisition or disposal of property during the reporting period. Consequently, care should be exercised if undertaking trend or performance analysis of a reporting organization's performance over time, or if comparisons are being made between reporting organizations. Depending on global economic activity and the geography of reporting organizations, some results will not be comparable year-on-year, or between reporting organizations.

Given the long-term characteristics of real estate, reporting organizations are encouraged to report legacy impacts and initiatives.

Some construction and real estate Indicators represent absolute performance (e.g., total GHG emissions, total water use), which is not normalized by factors such as floor area or building users. However, where it is practical to do so and will be helpful in interpretation, reporting organizations should consider using 'like-for-like' analysis for absolute Indicators to enable comparability over a defined period of time (e.g., two years). Certain Indicators should also be reported by meaningful segmentation to facilitate interpretation, for example by portfolio, fund, geographic location, or asset type.

3

CONSTRUCTION AND REAL ESTATE SECTOR DISCLOSURES

3.1 OVERVIEW OF CONTENT FOR THE CONSTRUCTION AND REAL ESTATE SECTOR





GENERAL STANDARD DISCLOSURES				
<ul style="list-style-type: none">• Strategy and Analysis +• Organizational Profile +• Identified Material Aspects and Boundaries +• Stakeholder Engagement +			<ul style="list-style-type: none">• Report Profile• Governance• Ethics and Integrity	
SPECIFIC STANDARD DISCLOSURES				
Category	Economic		Environmental	
Aspects ¹	<ul style="list-style-type: none">• Economic Performance +• Market Presence +• Indirect Economic Impacts +• Procurement Practices		<ul style="list-style-type: none">• Materials +• Energy +• Water +• Biodiversity +• Emissions +• Effluents and Waste +• Products and Services +• Compliance• Transport +• Overall• Supplier Environmental Assessment• Environmental Grievance Mechanisms• Land Degradation, Contamination and Remediation ++	
Category	Social			
Sub-Categories	Labor Practices and Decent Work	Human Rights	Society	Product Responsibility
Aspects ¹	<ul style="list-style-type: none">• Employment +• Labor/Management Relations• Occupational Health and Safety +• Training and Education +• Diversity and Equal Opportunity +• Equal Remuneration for Women and Men +• Supplier Assessment for Labor Practices• Labor Practices Grievance Mechanisms	<ul style="list-style-type: none">• Investment• Non-discrimination +• Freedom of Association and Collective Bargaining• Child Labor +• Forced or Compulsory Labor +• Security Practices +• Indigenous Rights• Assessment• Supplier Human Rights Assessment +• Human Rights Grievance Mechanisms	<ul style="list-style-type: none">• Local Communities +• Anti-corruption +• Public Policy +• Anti-competitive Behavior +• Compliance• Supplier Assessment for Impacts on Society• Grievance Mechanisms for Impacts on Society	<ul style="list-style-type: none">• Customer Health and Safety +• Product and Service Labeling +• Marketing Communications• Customer Privacy• Compliance

1) The word **topic** is used in the Guidelines to refer to any possible sustainability subject. The word **Aspect** is used in the Guidelines to refer to the list of subjects covered by the Guidelines.






+ G4 General Standard Disclosures and G4 Aspects where sector specific content has been added.

++ Sector specific Aspects.






3.2 GENERAL STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR

GENERAL STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Section	Sector Disclosures
Strategy and Analysis	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES</p> <p>G4-2  Additional disclosure requirements Describe the approach to the construction of new assets versus retrofits, upgrades, and refurbishments, and the effect this has on impacts, risks, and opportunities.</p> <p> See entire G4-2 in the G4 Implementation Manual p. 24</p>
Organizational Profile	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES</p> <p>G4-9  Additional disclosure requirements Report additional information, for example:</p> <ul style="list-style-type: none"> • Gross lettable area for assets under construction and management. • Vacancy rate (real estate). <p> See entire G4-9 in the G4 Implementation Manual p. 26</p>

↓ GENERAL STANDARD DISCLOSURES FOR THE SECTOR CONTINUED

GENERAL STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Section	Sector Disclosures
Organizational Profile (cont.)	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES (CONT.)</p> <p>G4-10  Additional disclosure requirements</p> <p>Supervised workers include contractors and sub-contractors delivering projects and building services.</p> <p>Report the total workforce by other diversity groups, and contract type (full-time and part-time workers).</p> <p>Construction companies should also break down workforce figures by employment contract for those working on projects in insecure areas.</p> <p> Additional Guidance</p> <p>Relevance</p> <p>This Indicator is particularly relevant for the sector because of its labor intensive nature and because of the dependence on contractors and sub-contractors to deliver projects and building services (and the potential use of vulnerable workers).</p> <p>In some geographical contexts, there are different practices in employment types and contracts (e.g., use of agents or intermediaries, seasonal employment, gender issues) that may be considered when reporting on this Indicator.</p> <p>Compilation</p> <p>Include contractors and sub-contractors that deliver projects and building services (i.e., excluding others in the supply chain such as building materials providers), as part of the total workforce.</p> <p>Note: The DMA Guidance for the employment of construction workers in insecure areas can be found in the Security Practices Aspect.</p> <p> See entire G4-10 in the G4 Implementation Manual pp. 26-27</p>
Identified Material Aspects and Boundaries	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES</p> <p>G4-20  Additional Guidance</p> <p>Different lease types can affect the approach to reporting emissions under the Greenhouse Gas Reporting Protocol. Reporting organizations with real estate portfolios should report single-let and multi-let lease arrangements (typically financial lease or operating lease) across the portfolio.</p> <p> See entire G4-20 in the G4 Implementation Manual p. 41</p>

↓ GENERAL STANDARD DISCLOSURES FOR THE SECTOR CONTINUED

GENERAL STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Section	Sector Disclosures
Identified Material Aspects and Boundaries (cont.)	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES (CONT.)</p> <p>G4-21  Additional Guidance</p> <p>Different lease types can affect the approach to reporting emissions under the Greenhouse Gas Reporting Protocol. Reporting organizations with real estate portfolios should report single-let and multi-let lease arrangements (typically financial lease or operating lease) across the portfolio.</p> <p> See entire G4-21 in the G4 Implementation Manual p. 41</p>
Stakeholder Engagement	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES</p> <p>G4-24  Additional disclosure requirements</p> <p>Identify and report those stakeholder groups that are engaged at the organizational level and those that are engaged at a project or asset level.</p> <p> Additional Guidance</p> <p>Customers refers to end users (e.g., occupants and visitors), and end users to customers.</p> <p> See entire G4-24 in the G4 Implementation Manual p. 43</p>

3.3 SPECIFIC STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR


IMPORTANT NOTE

This section is organized by (sub-)Category and Aspect. For each (sub-)Category, G4 Aspects are presented first and the sector specific Aspects are presented last. Only G4 Aspects that contain sector additions are presented in this section.





The following Aspects and related disclosures should only be reported if they have been identified as material. The Reporting Principles for Defining Report Content have been designed to assist organizations in identifying material Aspects. (The description of these Principles, as well as Guidance on how to apply them, can be found in the [G4 Implementation Manual](#) on pp. 9-13 and pp. 31-40.)

CATEGORY: ECONOMIC



ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR

Aspects	Sector Disclosures
G4 Aspects	
Economic Performance	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <div>  Additional Guidance </div> <ul style="list-style-type: none"> • Policies and practices for assessing, addressing and managing corporate, operational, regulatory and strategic risk that might impact financial performance. <p>For example: risk management frameworks; asset valuation risk.</p> <ul style="list-style-type: none"> • Policies and practices for mitigating economic risks. <p>For example: capital structure; cash; stability of income; occupancy rate (real estate); order book (construction); counterparty risk (customers and suppliers).</p> <ul style="list-style-type: none"> • Policies and practices regarding maintenance and capital expenditure in plant equipment or property. This will enable reporting organizations to demonstrate the extent to which they, as property owners, are investing in assets to reduce obsolescence, including market, physical, or functional obsolescence. • Include the time horizon against which the reported risks are assessed.




↓ ECONOMIC DISCLOSURES FOR THE SECTOR CONTINUED

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Economic Performance (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EC1 DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED</p> <p> Additional disclosure requirements</p> <p>Report payments to government broken down by:</p> <ul style="list-style-type: none"> • Payments direct to government; and • Payments to government as agent, e.g., taxes paid to government but recharged to a third party (such as property or land taxes recharged to tenants or land owners). <p> Additional Guidance</p> <p>Compilation</p> <p>Report data requested by Indicator G4-EC1 (except for community investments) according to financial information from relevant financial documents (e.g., audit report, financial statements).</p> <p>The Financial Services Sector Disclosures (G4-EC1) include a methodology for calculating community investment.</p> <p>Infrastructure investment should include one off mandatory contributions (e.g., payments as part of planning approvals to enhance infrastructure, or investment in community facilities). Infrastructure investment should be distinct from payments to government and operating costs.</p> <p>References</p> <ul style="list-style-type: none"> • International Accounting Standard (IAS) 40 on Investment Properties, 2009. <p> See entire G4-EC1 in the G4 Implementation Manual pp. 69-70</p> <p>G4-EC2 FINANCIAL IMPLICATIONS AND OTHER RISKS AND OPPORTUNITIES FOR THE ORGANIZATION'S ACTIVITIES DUE TO CLIMATE CHANGE</p> <p> Additional disclosure requirements</p> <p>Report other sustainability risks and opportunities, for example:</p> <ul style="list-style-type: none"> • Natural resource scarcity, particularly energy sources, water and building materials; • Indirect risks and opportunities to business through customers and stakeholders (i.e., counterparty risk); • Supply chain risks and opportunities, including health and safety; • Demographic risks and opportunities (e.g., local population changes, migration, migrant worker risk); and • Liability risk, including delivery/non-delivery of design performance for occupied buildings, and management of potential degradation and contamination. <p>Report estimated quantitative financial implications due to climate change and other sustainability risks and opportunities on the valuation process, by:</p> <ul style="list-style-type: none"> • Impact on revenue; • Impact on yield; and • Costs incurred to mitigate obsolescence risks.



↓ ECONOMIC DISCLOSURES FOR THE SECTOR CONTINUED

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Economic Performance (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-EC2  Additional Guidance</p> <p>Relevance</p> <p>(cont.) This Indicator includes financial and reputational risks and opportunities related to climate change, in addition to other sustainability issues. This corresponds with the growing trend towards integrated reporting and an increasing recognition that sustainability impacts other than climate change can have financial implications for reporting organizations.</p> <p>Definitions</p> <p>Quantitative financial implications</p> <p>Includes, for example:</p> <ul style="list-style-type: none"> • Operating utility costs: Electricity and water prices and back-up power costs during times of shortage. • Non-utility operating costs: Maintenance costs, unexpected repair/replacement costs (due to damage from weather events not covered by insurance); depreciation; and insurance premiums (due to increased frequency of extreme weather events). • Construction costs: Project and permitting delays (since delays increase financing costs)/regulatory compliance costs (with new building code requirements); and materials and import prices (for buildings that source imported materials and/or materials that need to travel long distances). • Contingency funds: Funds to cover liabilities and unexpected costs. • Obsolescence: <ul style="list-style-type: none"> • Functional obsolescence: an asset that is no longer useful for a required purpose. This usually occurs due to poor, obsolete or outmoded design based on the standards of a given industry, market segment, or region. • Economic, or external, obsolescence: an asset that is no longer competitive in a particular economy or market, and may involve changes to the local area/environment after the building or physical infrastructure property is built. Examples include changing location parameters for industrial warehouses, loss of or changes in major transportation routes, or improvements in other transportation routes making different locations more competitive, loss of a major employer contributing to economic decline, or changes in land use zoning negatively affecting certain uses. <p>References</p> <ul style="list-style-type: none"> • International Accounting Standard (IAS) 40 on Investment Properties, 2009. • International Integrated Reporting Council (IIRC), www.theiirc.org. • Carbon Disclosure Project (CDP) and CDP Water Disclosure, www.cdproject.net, updated annually. <p> See entire G4-EC2 in the G4 Implementation Manual pp. 71-72</p>


↓ ECONOMIC DISCLOSURES FOR THE SECTOR CONTINUED

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Market Presence	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EC6 PROPORTION OF SENIOR MANAGEMENT HIRED FROM THE LOCAL COMMUNITY AT SIGNIFICANT LOCATIONS OF OPERATION</p> <p> Additional disclosure requirements Report all direct employees, contractors and sub-contractors (as reported in G4-10) from the local community in significant locations of operation.</p> <p> Additional Guidance</p> <p>Relevance This Indicator is particularly relevant because of the labor intensive nature of the sector, particularly with manual and low skilled workers. For this reason, the scope of this Indicator is extended to include all direct employees, contractors and sub-contractors from the local community in significant locations of operation.</p> <p>Compilation In certain geographical regions, and particularly for the construction industry, hiring of overseas and immigrant labor is common. Reporting on overseas and immigrant labor issues should, however, be addressed in G4-10, not in this Indicator.</p> <p>Definitions</p> <p>Contractors See definition of 'Contractors' in the <i>G4 Implementation Manual</i> p. 253.</p> <p>In the context of these Sector Disclosures, it refers to groups or individuals that hold the primary contract with another organization or individual (the owner) for the new construction, management, redevelopment or demolition of a real estate or infrastructure asset.</p> <p>Sub-contractors See definition of 'Sub-contractors' in the <i>G4 Implementation Manual</i> p. 253.</p> <p>In the context of these Sector Disclosures, it refers to groups or individuals that enter into a subcontract with a primary contractor to perform part or all of the obligations of another's contract for the new construction, management, demolition or redevelopment of a real estate or infrastructure asset.</p> <p> See entire G4-EC6 in the <i>G4 Implementation Manual</i> p. 77</p>





↓ ECONOMIC DISCLOSURES FOR THE SECTOR CONTINUED

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Indirect Economic Impacts	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <p>The economic legacy of real estate and infrastructure assets can extend over tens or even hundreds of years, and can have significant indirect economic impacts that benefit local communities. These impacts may include, for example, employment, improved student retention at local schools, safer labor forces, improved community health and wellbeing, greater numbers of re-skilled workers (e.g., in clean energy jobs), and crime reduction. The impacts will be even greater in places or among communities of greater disadvantage.</p> <ul style="list-style-type: none"> • Policies and practices to encourage positive, and minimize negative, economic legacy impacts from activities. Distinguish between mandatory and voluntary legacy impacts. <p>For example: job creation and training opportunities for local and national workforces (related to G4-EC8 ‘Significant indirect economic impacts, including the extent of impacts’); financial support for, or construction of, community centers, healthcare facilities and education facilities; infrastructure providing greater access and mobility between residential and employment areas, such as transport nodes, road upgrades (related to G4-EC7 ‘Development and impact of infrastructure investments and services supported’).</p> <ul style="list-style-type: none"> • Policies and practices to measure economic legacy impacts. <p>For example: procedures to evaluate the social and economic impacts of activities (such as socio-economic due diligence, net job creation studies); research and development investment to promote positive economic legacy.</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 78</p>


↓ ECONOMIC DISCLOSURES FOR THE SECTOR CONTINUED

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Indirect Economic Impacts (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EC7 DEVELOPMENT AND IMPACT OF INFRASTRUCTURE INVESTMENTS AND SERVICES SUPPORTED</p> <p> Additional disclosure requirements</p> <p>Explain significant infrastructure investments made by the reporting organization in relation to the following:</p> <ul style="list-style-type: none"> • Affordable and social housing; • Preservation and restoration of historic assets; • Publicly accessible open/recreation space; and • Community education and health facilities. <p>Reporting organizations should distinguish between voluntary investment and mandatory investment (i.e., obligations associated with building rights allocation or planning permission).</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Useful cross references for this Indicator include:</p> <ul style="list-style-type: none"> • Indicator G4-EC1 on community investment – infrastructure investment; and • Indicators G4-SO1, G4-SO2 and G4-SO8 which address social legacy impacts from construction and real estate projects. <p>Definitions</p> <p>Infrastructure</p> <p>See definition of 'Infrastructure' in the G4 Implementation Manual p. 249.</p> <p>Infrastructure should include social infrastructure. For example:</p> <ul style="list-style-type: none"> • Affordable housing: Dwelling units whose total housing costs are deemed "affordable" to those that have a modest income. Different countries will define the thresholds of affordability in different ways, often according to median household income. • Social housing: A form of housing tenure in which the property is owned by a government authority (which may be central or local) or community organizations, to assist low income families. • Green spaces: Any piece of land covered with vegetation. It usually refers to parks, sports fields, community gardens and food cultivation areas, and other open land within built up areas. • Spaces accessible to the public: Public space between private buildings including sidewalks, streets, squares and parks. Also referred to as public domain. <p> See entire G4-EC7 in the G4 Implementation Manual p. 79</p>




↓ ECONOMIC DISCLOSURES FOR THE SECTOR CONTINUED

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Indirect Economic Impacts (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p> SIGNIFICANT INDIRECT ECONOMIC IMPACTS, INCLUDING THE EXTENT OF IMPACTS</p> <p> Additional disclosure requirements</p> <p>Examples of the significant identified positive and negative indirect economic impacts the organization has may also include:</p> <ul style="list-style-type: none"> • Enabling industry-wide innovation and increased productivity in the medium- to long-term, through technology transfer and research and development. <p> Additional Guidance</p> <p>Compilation</p> <p>For example: absolute amount spent on research and development and expressed as a percentage of profit; number of patents held in clean/eco-efficient technologies and materials; and opportunities created for new technologies and materials, such as providing access to roof space for wind and solar distributors and manufacturers.</p> <p> See entire G4-EC8 in the G4 Implementation Manual pp. 80-81</p>




CATEGORY: ENVIRONMENTAL

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Materials	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <div>  Additional Guidance </div> <ul style="list-style-type: none"> • Policy and practices to reduce and optimize raw material extraction purchased for direct use. <p>For example, research and development on material substitution; new construction approaches and methods that change the way in which materials are used; policy on refurbishment (or reuse) instead of new construction; sourcing from local markets.</p> <ul style="list-style-type: none"> • Policy and practices for selecting materials and engaging suppliers, including specifications for certifications, or utilization of preferred or prescribed lists of products and materials. <p>For example, material selection and engagement with suppliers on the following issues: renewable content; recycled content materials; materials reused; re-usability of materials used; modularity and other design attributes of materials; and toxicity of materials.</p>



↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Materials (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN1 MATERIALS USED BY WEIGHT OR VOLUME</p> <p> Additional disclosure requirements</p> <p>Report either total weight, volume or value, broken down by significant categories of raw materials used (e.g., aluminum, gypsum, sand), renewable materials used (e.g., timber) and manufactured products used (e.g., brick, cement, concrete, carpet, glass, insulation products, steel).</p> <p>Report percentage of these materials procured or used that have been certified by a third party for their sustainability qualities.</p> <p> Additional Guidance</p> <p>Relevance</p> <p>The construction and real estate sector consumes considerable amounts of materials.</p> <p>This Indicator refers only to materials purchased by the reporting organization for direct use.</p> <p>For reporting organizations (in particular those involved in new construction and redevelopment/retrofit activities), this Indicator is intended to measure raw material consumption and connects with Indicator G4-EN2.</p> <p>Definitions</p> <p>Renewable materials</p> <p>See definition of 'Renewable materials' in the G4 Implementation Manual p. 251.</p> <p>Examples include bamboo, wool and other harvested and natural materials.</p> <p> See entire G4-EN1 in the G4 Implementation Manual p. 86</p>


↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Materials (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-EN2 PERCENTAGE OF MATERIALS USED THAT ARE RECYCLED INPUT MATERIALS</p> <p> Additional disclosure requirements</p> <p>Include reused input materials as part of the percentage of recycled input materials used to manufacture the organization's primary products and services.</p> <p>Break down the percentage of materials used that are recycled and reused input materials by significant categories of raw materials (e.g., aluminum, gypsum, sand), renewable materials (e.g., timber) and manufactured products (e.g., brick, cement, concrete, carpet, glass, insulation products, steel).</p> <p> Additional Guidance</p> <p>Relevance</p> <p>This Indicator refers only to materials purchased by the reporting organization for direct use.</p> <p>For reporters (in particular those involved in new construction and redevelopment/ retrofit activities), this Indicator is intended to measure use of recycled input materials and/or reused input materials.</p> <p>Compilation</p> <p>Data may be reported as estimated volume or mass of raw materials.</p> <p>Definitions</p> <p>Reused input materials</p> <p>Materials that replace virgin materials and originate from by-products of the reporting organization's operations, and which are subsequently reused by the reporting organization. Examples include window frames, structural elements, aggregates, heating or blended cement. In the case of retrofit or refurbishment, reused input materials include those that would otherwise be disposed.</p> <p>Non-product outputs (NPO)</p> <p>All material, energy and water that is used in the production process but does not end up in the final product.</p> <p>References</p> <ul style="list-style-type: none"> • ISO 14021: Environmental labels and declarations, 1999. <p> See entire G4-EN2 in the G4 Implementation Manual p. 87</p>






↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Energy	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <ul style="list-style-type: none"> • Policy and practices on energy management through all relevant stages of the life cycle. <p>For example, approaches to metering, procurement, avoidance, reduction, onsite generation (including use of incentives such as feed-in-tariffs), export and security.</p> <ul style="list-style-type: none"> • Report existing initiatives to reduce the energy requirements of sold products and services, including: <ul style="list-style-type: none"> • Organization-wide energy efficiency initiatives in place to design new assets (buildings and infrastructure), and redevelop/retrofit existing assets (buildings only) to such standards. <p>For example: procurement and installation of efficient lighting; HVAC; security systems; high efficiency motors; ICT systems.</p> • Organization-wide energy management initiatives to manage existing buildings and construction sites efficiently. <p>For example: commissioning and re-commissioning plant and equipment; building management system (BMS) optimization; tenant sub-metering.</p> • Organization-wide end user engagement initiatives (e.g., occupants and visitors) as implemented by design professionals, building or construction personnel and building operators. <p>For example: employee training and education; green leases; end user manuals (such as occupiers).</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 88</p>





↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Energy (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN3 ENERGY CONSUMPTION WITHIN THE ORGANIZATION</p> <p>Additional disclosure requirements</p> <p>Report onsite production of electricity from renewable sources (e.g., fixed photovoltaic panels, wind turbines, solar thermal), by meaningful segmentation.</p> <p>Report total energy consumption by meaningful segmentation.</p> <p>Reporting organizations involved in new construction and redevelopment should report known or metered energy consumption in addition to listing non-metered sources.</p> <p>Additional Guidance</p> <p>Compilation</p> <p>Total energy consumption should be identified by meaningful segmentation, for example by portfolio, fund, geographic location, or asset type.</p> <p>If a reporting organization leases space for onsite renewable energy installations but does not own the system, energy generated by a third party should not be included in this Indicator. However, initiatives relating to leasing space should be reported under the DMA for the Energy Aspect.</p> <p>Note that differing regulatory frameworks in different regions may affect the approach a reporting organization can take, such as feed-in tariffs, onsite renewables, market deregulation and the procurement of certified sources of renewable electricity.</p> <p>Companies involved in new construction and redevelopment should identify known or metered energy consumption in addition to listing non-metered sources.</p> <p>Reporting organizations may itemize energies reallocated (preferably recharged according to metered consumption) to other parties who are the end users.</p> <p>References</p> <ul style="list-style-type: none"> • UNEP SBCI Common Carbon Metric and Protocols – Protocol for Measuring Energy Use and Reporting Greenhouse Gas Emissions from Building Operations, 2010. • ISO 14064-1:2006 Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, 2006. <p> See entire G4-EN3 in the G4 Implementation Manual pp. 89-90</p>



↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Energy (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-EN6 REDUCTION OF ENERGY CONSUMPTION</p> <p> Additional disclosure requirements</p> <p>Report actual energy savings for all assets using recognized conversion factors.</p> <p>Report relevant financial data, actual or estimated, such as money invested in conservation and efficiency improvements, and money saved through energy reduction initiatives. State methodology for calculations and estimations.</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Calculate energy savings using like-for-like analysis, based on absolute consumption, as reported in G4-EN3.</p> <p>For construction companies energy savings may be more qualitative than quantitative and should be reported under G4-EN7. Year-on-year comparison of energy savings from some measures may not be appropriate due to the temporary nature of activity on construction sites, for example site offices and workers' accommodation.</p> <p>Reporting organizations involved in redevelopment should use internationally recognized standards, tools, and protocols for measuring and verifying energy savings from retrofit projects. Energy savings (against a defined baseline) that are expected as a result of improved design should be reported separately from savings actually achieved.</p> <p>Definitions</p> <p>Like-for-like</p> <p>A comparison of attributes and qualities between similar but distinct things.</p> <p>In this context, like-for-like analysis involves selecting a consistent set of assets between a base and target year, to take account of changes in the size and composition of a portfolio.</p> <p>Documentation</p> <p>Documentation can also be obtained from internal or external project management teams.</p> <p> See entire G4-EN6 in the G4 Implementation Manual p. 94</p> <p>G4-EN7 REDUCTIONS IN ENERGY REQUIREMENTS OF PRODUCTS AND SERVICES</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Reductions should refer to the extent to which initiatives to construct, manage and redevelop assets have been successful in improving energy efficiency during the reporting period.</p> <p> See entire G4-EN7 in the G4 Implementation Manual p. 95</p>

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Energy (cont.)	<p>SECTOR SPECIFIC INDICATORS</p> <p> BUILDING ENERGY INTENSITY See  disclosure requirements and  Guidance on pp. 66-67</p>
Water	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <ul style="list-style-type: none"> • Policy and practices on water use management through all relevant stages of the life cycle. For example, approaches to metering, procurement, avoidance, reuse, reduction, export including quantified reductions in the water requirements of assets. • Policy and practices on the management of water quality through all relevant stages of the lifecycle. For example, practices to improve water quality (including through treatment) and access (including security) inside or outside the reporting boundary. Include the nature or type of improvements to water quality (e.g., reductions in nitrogen, phosphorus and suspended solids, and reduced pollutant loads as water exits the reporting boundary). • Policy and practices on drainage and discharge of water. For example: Sustainable Urban Drainage Systems; enabling reuse of discharged water.

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Water (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN8 TOTAL WATER WITHDRAWAL BY SOURCE</p> <p> Additional disclosure requirements</p> <p>The total volume of water withdrawn should be itemized according to the different water sources reported (whether they originate from external or onsite sources), and broken down by country.</p> <p>The total volume of water withdrawn should be linked to metered or measured utility data. Construction companies should disclose known or metered water withdrawal (consumption) in addition to listing non-metered sources (e.g., seepage of ground water in tunnels).</p> <p>Report the total volume of water withdrawn from the following additional sources:</p> <ul style="list-style-type: none"> • Greywater; • Blackwater; • Treated waste water; • Desalination plant; and • Other water sources. <p>Report the total volume of water distributed after withdrawal (consumption).</p> <p>Report actions to mitigate and reduce water consumption, including reuse and recycling solutions, and quantify water savings as a result of these actions.</p> <p>Report relevant financial data (actual and estimated), such as money invested in conservation and efficiency improvements, and money saved through energy reduction initiatives. State methodology for calculations and estimations.</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Total water withdrawal (consumption) by source should be consistent with the reporting organization's reporting boundary for water. This should cover all water purchased and sourced, and the reporting organization may itemize water reallocated (preferably metered) to other parties who are the end user.</p> <p>Definitions</p> <p>Greywater</p> <p>Water from hand basins, showers and other water-using devices and equipment.</p> <p>Blackwater</p> <p>Water from toilets.</p>






↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Water (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-EN8 <i>Greywater recycling</i> (cont.) Collecting water that was previously supplied from hand basins, showers and other water using devices and equipment. This water is then filtered, treated and re-circulated for reuse, including for toilet flushing and irrigation for watering of plants and flowers. The advantage of recycling greywater is that it replaces potable water use.</p> <p><i>Blackwater recycling</i> The treatment of waste water, including water from toilets. Treatment typically involves the construction of a mini on-site waste-water treatment plant. The treated water can then be used for toilet flushing and irrigation for watering of plants and flowers.</p> <p>References</p> <ul style="list-style-type: none"> • UNDP. Human Development Report “Beyond Scarcity: Power, poverty and the global water crisis”, 2006. • The United Nations Millennium Development Goals, www.un.org/millenniumgoals/, 2000. • United Nations Global Compact CEO Water Mandate, 2011. • Carbon Disclosure Project (CDP) Water Disclosure, www.cdproject.net, updated annually. <p>See entire G4-EN8 in the G4 Implementation Manual p. 97</p> <p>G4-EN9 WATER SOURCES SIGNIFICANTLY AFFECTED BY WITHDRAWAL OF WATER</p> <p>Additional disclosure requirements Reporting organizations should differentiate withdrawal from groundwater sources that are recharged and non-recharged.</p> <p>Additional Guidance</p> <p>Definitions</p> <p><i>Groundwater recharge</i> A hydrologic process where water moves downward from surface water to groundwater, also known as deep drainage or deep percolation. Groundwater recharge is typically supplied by rain, snowmelt, rivers, lakes, and streams. Recharge may be impeded by human activities, including paving and other development.</p> <p>See entire G4-EN9 in the G4 Implementation Manual p. 98</p>



↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Water (cont.)	SECTOR ADDITIONS TO G4 INDICATORS (CONT.) <p>G4-EN10 PERCENTAGE AND TOTAL VOLUME OF WATER RECYCLED AND REUSED</p> <p> Additional disclosure requirements Report the total volume of water recycled and reused by the organization linked to metered utility data.</p> <p> Additional Guidance</p> <p>Relevance Water is used throughout the asset lifecycle. Reusing and recycling water within organizational boundaries reduces reliance on external potable water sources.</p> <p>Compilation Examples of water recycling and reuse include rainwater collected directly and stored by the reporting organization, and greywater and blackwater recycling.</p> <p> See entire G4-EN10 in the G4 Implementation Manual p. 99</p>
	SECTOR SPECIFIC INDICATORS <p>CRE2 BUILDING WATER INTENSITY See  disclosure requirements and  Guidance on pp. 68-69</p>
Biodiversity	SECTOR SPECIFIC GUIDANCE FOR DMA <p>G4-DMA  Additional Guidance</p> <ul style="list-style-type: none"> • Policy and practices on mitigation of adverse biodiversity impacts including, among others, new construction and management activities. <p>For example: purchasing timber and quarried products; approaches to community engagement regarding biodiversity impacts; provision of green roofs and walls; enabling wildlife migration corridors; preserving and enhancing wood lots and other habitats; habitat restoration; use of biodiversity offsets as part of the overall policy, and approach to habitat protection and restoration.</p> <ul style="list-style-type: none"> • Policy and practices on avoiding selection of biologically diverse sites. <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 100</p>







↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Biodiversity (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN12 DESCRIPTION OF SIGNIFICANT IMPACTS OF ACTIVITIES, PRODUCTS, AND SERVICES ON BIODIVERSITY IN PROTECTED AREAS AND AREAS OF HIGH BIODIVERSITY VALUE OUTSIDE PROTECTED AREAS</p> <p> Additional disclosure requirements</p> <p>Report the nature of significant direct and indirect impacts on biodiversity with reference to the following:</p> <ul style="list-style-type: none"> • Light pollution and reflection <p> Additional Guidance</p> <p>Compilation</p> <p>When identifying significant positive and negative impacts on biodiversity associated with activities, products and services of the organization, include marine and aquatic biodiversity as well as land biodiversity.</p> <p>Examples of light pollution and reflection include: spilled light from construction zones and parking lots which may impact breeding grounds or resting areas; highly reflective towers which may affect bird flight.</p> <p>Definitions</p> <p>Light pollution and reflection</p> <p>Excessive or obtrusive artificial light, especially in or near urban areas, also known as photo pollution or luminous pollution.</p> <p> See entire G4-EN12 in the G4 Implementation Manual p. 102</p> <p>G4-EN13 HABITATS PROTECTED OR RESTORED</p> <p> Additional disclosure requirements</p> <p>Protected or restored habitats should also include:</p> <ul style="list-style-type: none"> • Habitats that are not owned or controlled by the reporting organization (e.g., adjacent areas of open space or parkland which may be owned by a public authority). • The enhancement (e.g., reintroduction of species) and creation (e.g., green roofs or replanting vegetation on site) of diverse and biodiversity sensitive habitats. <p> See entire G4-EN13 in the G4 Implementation Manual p. 103</p>










↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Emissions	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <ul style="list-style-type: none"> • Policy on carbon management, including policy position on carbon offsetting. • Policy and practices on reducing fugitive emissions. <p>For example, dust.</p> <p>For other fugitive emissions refer to G4-EN15 'Direct greenhouse gas (GHG) emissions (Scope 1)'.</p> <ul style="list-style-type: none"> • Report corporate and project initiatives that result in greenhouse gas emissions reductions, including: <ul style="list-style-type: none"> • Direct GHG emissions (G4-EN15). <p>For example, initiatives to improve or reduce: gas and oil consumption; fuel efficiency of generators and construction equipment owned by the reporting organization; owned fleet transport emissions.</p> • Energy indirect and other indirect GHG emissions (G4-EN16 and G4-EN17). <p>For example, initiatives to improve or reduce: electricity consumption; embodied carbon in construction materials, such as fly ash and blast furnace slag; fuel efficiency of contractor generator and construction equipment; contractor fleet transport emissions; local sourcing of materials.</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 106</p>





↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Emissions (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN15 DIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 1)</p> <p> Additional disclosure requirements</p> <p>Provide a breakdown of the gross direct (Scope 1) GHG emissions in metric tons of CO₂ equivalent by meaningful segmentation, for example, portfolio, fund, location, asset type.</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Greenhouse gas emissions from transport are also reported under G4-EN17 and G4-EN30.</p> <p>Common fugitive emissions from real estate include refrigerant gas from HVAC equipment, for example R22.</p> <p>References</p> <ul style="list-style-type: none"> • UNEP SBCI Common Carbon Metric and Protocols – Protocol for Measuring Energy Use and Reporting Greenhouse Gas Emissions from Building Operations, 2010. • ISO 14064-1:2006 Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, 2006. <p> See entire G4-EN15 in the G4 Implementation Manual pp. 107-109</p> <p>G4-EN16 ENERGY INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 2)</p> <p> Additional disclosure requirements</p> <p>Provide a breakdown of the gross energy indirect (Scope 2) GHG emissions in metric tons of CO₂ equivalent by meaningful segmentation, for example, portfolio, fund, location, asset type.</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Greenhouse gas emissions from transport are also reported under G4-EN17 and G4-EN30.</p> <p>References</p> <ul style="list-style-type: none"> • UNEP SBCI Common Carbon Metric and Protocols – Protocol for Measuring Energy Use and Reporting Greenhouse Gas Emissions from Building Operations, 2010. • ISO 14064-1:2006 Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, 2006. <p> See entire G4-EN16 in the G4 Implementation Manual pp. 110-111</p>




↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Emissions (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-EN17 OTHER INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 3)</p> <p> Additional disclosure requirements</p> <p>Provide a breakdown of the gross other indirect (Scope 3) GHG emissions in metric tons of CO₂ equivalent by meaningful segmentation, for example, portfolio, fund, location, asset type.</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Emissions arising from the end users of assets (e.g., travel to assets and contractor activities) can often be significant, but difficult to measure accurately on an ongoing basis.</p> <p>Greenhouse gas emissions from transport are also reported under G4-EN30.</p> <p>References</p> <ul style="list-style-type: none"> • UNEP SBCI Common Carbon Metric and Protocols – Protocol for Measuring Energy Use and Reporting Greenhouse Gas Emissions from Building Operations, 2010. • ISO 14064-1:2006 Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, 2006. <p> See entire G4-EN17 in the G4 Implementation Manual pp. 112-114</p> <p>G4-EN19 REDUCTION OF GREENHOUSE GAS (GHG) EMISSIONS</p> <p> Additional Guidance</p> <p>Compilation</p> <p>Where reporting organizations are generating energy, or working in partnership with electric utilities companies, greenhouse gas emissions reductions from renewable energy generation should also be reported.</p> <p> See entire G4-EN19 in the G4 Implementation Manual pp. 116-117</p> <p>SECTOR SPECIFIC INDICATORS</p> <p>CRE3 GREENHOUSE GAS EMISSIONS INTENSITY FROM BUILDINGS</p> <p>See  disclosure requirements and  Guidance on pp. 70-71</p> <p>CRE4 GREENHOUSE GAS EMISSIONS INTENSITY FROM NEW CONSTRUCTION AND REDEVELOPMENT ACTIVITY</p> <p>See  disclosure requirements and  Guidance on pp. 72-73</p>


↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Effluents and Waste	SECTOR SPECIFIC GUIDANCE FOR DMA <div>  Additional Guidance <ul style="list-style-type: none"> • Policy and practices that promote waste avoidance as the first step in the waste hierarchy. <p>For example, material waste avoidance through design, procurement, site management and extensive fit-out (such as shell and core).</p> </div>
	SECTOR ADDITIONS TO G4 INDICATORS <div>  TOTAL WATER DISCHARGE BY QUALITY AND DESTINATION <div>  Additional Guidance <p>Relevance</p> <p>Construction sites may be the source of pollution from surface runoff. The quality of surface runoff discharges is particularly relevant for users of water who are outside of the reporting boundary (e.g., waters used for irrigation of crops; water that flows to sensitive natural systems such as wetlands).</p> <p>Compilation</p> <p>Discharged water may be treated by means other than a “facility” (which implies mechanical treatment). For example, passing water through naturally vegetated systems can improve heavy metal pollutant loads.</p> <p>Information reported under this Indicator should correspond with the information reported under G4-EN26 ‘Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization’s discharges of water and runoff’.</p> <p> See entire G4-EN22 in the G4 Implementation Manual p. 122</p> </div> </div>



↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Effluents and Waste (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-EN23 TOTAL WEIGHT OF WASTE BY TYPE AND DISPOSAL METHOD</p> <p> Additional disclosure requirements</p> <p>When reporting the total weight of hazardous and non-hazardous waste by the different disposal methods, include waste where final destination is unknown (e.g., Materials Recovery Facility) or where waste is mixed and final destination is not known or cannot be classified.</p> <p>Report percentage of waste by significant waste type and waste diverted from landfill. Construction companies should report significant waste types (hazardous and non-hazardous) from construction, demolition and excavation (CD&E) activities.</p> <p> Additional Guidance</p> <p>Definitions</p> <p>Waste types</p> <p>There are three major types of wastes: solid, liquid and gaseous. Wastes are often broadly categorized as hazardous (waste that poses substantial or potential threats to public health or the environment) or non-hazardous (waste that does not fall within the hazardous waste classification).</p> <p>Demolition waste</p> <p>Unwanted material arising from the demolition or strip out of an existing structure.</p> <p>Excavation waste</p> <p>Unwanted material resulting from excavation activities, such as reduced level dig and site preparation and leveling, and the excavation of foundations, basements, tunnels, and service trenches, typically consisting of soil and stones.</p> <p>Construction waste</p> <p>Any other unwanted material produced at the construction site, which is not classified as Demolition or Excavation waste.</p> <p> See entire G4-EN23 in the G4 Implementation Manual p. 123</p>


↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Products and Services	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <ul style="list-style-type: none"> • Policies and practices to mitigate environmental and end user human health impacts during all stages of the lifecycle. <p>For example, indoor air and water quality standards, use of low Volatile Organic Compounds (VOC) paints, contaminant management, management and disposal of hazardous substances, mold management, waste management.</p> <ul style="list-style-type: none"> • Organization-wide environmental initiatives in place to design new assets (buildings and infrastructure) which minimize environmental and end user human health impacts, and to redevelop/retrofit existing assets (buildings only) to such standards. <p>For example: new construction or redevelopment/retrofit initiatives to manage occupant health (such as indoor air quality, indoor potable water quality, use of low VOC paints, contaminant management, management and disposal of hazardous substances, mold management, waste management); initiatives focusing on lifecycle impact, analysis and assessment; use of construction manuals; initiatives to adapt buildings for climate change; procurement and installation of efficient water devices.</p> <ul style="list-style-type: none"> • Organization-wide environmental management initiatives to manage existing buildings and construction sites efficiently. <p>For example: commissioning and recommissioning plant and equipment; building management system (BMS) optimization; tenant sub-metering.</p> <ul style="list-style-type: none"> • Organization-wide end user engagement initiatives (e.g., occupants and visitors) as implemented by design professionals, building or construction personnel, and building operators. <p>For example: employee training and education; green leases; end user manuals (such as occupier).</p> <p>The DMA Guidance for the Customer Health and Safety Aspect also addresses the management approach related to new construction, management, redevelopment/retrofit and demolition which may impact end user safety and security.</p>



↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Products and Services (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN27 EXTENT OF IMPACT MITIGATION OF ENVIRONMENTAL IMPACTS OF PRODUCTS AND SERVICES</p> <p> Additional Guidance</p> <p>Relevance</p> <p>“Products and services” should be read as “real estate and infrastructure assets”.</p> <p>Good asset design and redevelopment/retrofit can mitigate environmental and end user human health impacts. The effective management of existing buildings is also fundamental to mitigate impacts on the environment and end users.</p> <p>Compilation</p> <p>The following impacts are excluded since they are covered in other Environmental Indicators:</p> <ul style="list-style-type: none"> • Energy saving (G4-EN6, G4-EN7); • GHG emissions saving (G4-EN19). <p>Note: Light pollution and reflection should be reported under G4-EN12.</p> <p>Note: Noise from vehicle movements should be reported under G4-EN30.</p> <p>Quantified reductions should refer to the extent to which initiatives to design, construct, manage and redevelop/retrofit assets have been successful in improving efficiency during the reporting period.</p> <p> See entire G4-EN27 in the G4 Implementation Manual p. 128</p>



↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Transport	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <div>  Additional Guidance </div> <ul style="list-style-type: none"> • Policy and practices to avoid or reduce transport of materials and people to and from assets. <p>For example, remote or home-working; use of materials available locally, or low maintenance products.</p> <ul style="list-style-type: none"> • Policy and practices to promote more sustainable transport to and from assets. <p>For example, monitoring modal patterns and shifts of workers or building users or materials as a result of sustainable transport strategies (such as green travel plans); surveys of the number and proportion of journeys to and from assets.</p> <ul style="list-style-type: none"> • Policy and practices on the management of transport impacts during construction. <p>For example, traffic management measures during construction; minimizing heavy goods deliveries to construction sites and the service or maintenance trips associated with operational assets.</p>

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED



ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Transport (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN30 SIGNIFICANT ENVIRONMENTAL IMPACTS OF TRANSPORTING PRODUCTS AND OTHER GOODS AND MATERIALS FOR THE ORGANIZATION'S OPERATIONS, AND TRANSPORTING MEMBERS OF THE WORKFORCE</p> <p> Additional Guidance</p> <p>Relevance</p> <p>The impacts of transportation occur throughout all lifecycle stages of assets, for example: traffic disruption and management during construction and operation; transportation of materials, workers, occupants and visitors to and from assets.</p> <p>Compilation</p> <p>Note: Greenhouse gas emissions from transport are also reported under G4-EN15 and G4-EN17.</p> <p>Significant environmental impact of transportation also includes the transportation of construction materials and equipment, which may, additionally, give rise to community impacts such as traffic disruption and congestion. Such impacts and associated mitigation measures should be reported under G4-SO2.</p> <p>Transportation impact mitigation can include, for example, green travel plans, and tracking modal patterns and modal shifts which result from transport impact mitigation initiatives.</p> <p>Definitions</p> <p>Modal pattern</p> <p>The current pattern of use of modes of transport for journeys, including but not limited to motor vehicle usage, public transport, walking and cycling.</p> <p>Modal shift</p> <p>Changes in the use of modes of transport for journeys, including but not limited to changes in motor vehicle usage, public transport, walking and cycling.</p> <p>Green travel plans</p> <p>A package of measures provided by organizations to encourage staff to use alternatives to single occupancy car use. For example: car sharing schemes; a commitment to improve cycling facilities; a dedicated bus service or restricted car parking allocations; promotion of flexible working practices such as remote access home working and video conferencing.</p> <p> See entire G4-EN30 in the G4 Implementation Manual p. 133</p>

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED




ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
Sector specific Aspects	
Land Degradation, Contamination and Remediation	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <p>Land is sometimes adversely affected or made unproductive due to contamination. The contamination may occur as a result of the activities of the reporting organization, or as a result of prior use or activities by an unrelated organization. Contamination may also be of natural origin. Contamination may affect soil quality, water quality, human health or other environmental or ecological receptors. Contamination may be solid, liquid or gas, in, on, or under the land or in buildings and structures.</p> <p>In cases where contamination has occurred as a result of prior activities, entities in this sector frequently conduct assessment, risk management and/or remediation activities to make the land suitable for existing or proposed uses. Sometimes land previously assessed as uncontaminated for its present use may be judged to be contaminated if the land use changes to a more sensitive use, for example from industrial to residential.</p> <ul style="list-style-type: none"> • Policy on planning for, and/or managing, land assessment and remediation. <p>For example, the use of third party auditors to assure appropriate identification of potentially contaminated land, risk management strategies, and remediation to appropriate compliance/standards.</p> <ul style="list-style-type: none"> • Policy on management and/or remediation of contamination or harmful materials such as asbestos, lead, chromium, mercury and man-made mineral fibers. <p>For example: the general nature of potentially contaminating prior land uses (such as general agriculture, intense agriculture, industrial activity, slums, landfill) including the standard to which land is proposed to be assessed, managed and/or remediated (such as residential, industrial, open space); the potential for natural contamination (such as radon, naturally occurring asbestos, land gases or elevated background concentrations of metals or hydrocarbons).</p> <ul style="list-style-type: none"> • Policy and practices to identify risk of contamination and the containment or remediation strategies deployed. <p>SECTOR SPECIFIC INDICATORS</p> <p> LAND REMEDIATED AND IN NEED OF REMEDIATION FOR THE EXISTING OR INTENDED LAND USE, ACCORDING TO APPLICABLE LEGAL DESIGNATIONS</p> <p>See  disclosure requirements and  Guidance on p. 74</p>

CATEGORY: SOCIAL



SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Employment	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <ul style="list-style-type: none"> • Policy and practices on outsourcing of work to contractors and subcontractors and recruitment of employees and supervised workers. <p>For example, the recruitment of workers from the local community, specifically women.</p> <ul style="list-style-type: none"> • Policy for increasing direct contribution to overall economic development and improvements for the workforce (local and national). <p>For example, efforts made by the company to maintain or increase employment. Reporting organizations should note cross-over with G4-EC8 which addresses indirect economic impacts.</p> <ul style="list-style-type: none"> • Policy and practices on employment of daily workers and casual workers who are employed without a formal (written) contract. <p>For example, how the company avoids employees not having a formal (written) contract by ensuring that all employees and contractors receive a written contract in a language and format they understand, as well as mechanisms in place to ensure that illiterate employees and contractors, and those with disabilities, are able to understand the conditions of contract.</p> <ul style="list-style-type: none"> • Policy regarding costs and logistics for the return of foreign workers to their place of origin. • Policy on worker accommodation and amenities provision (where necessary), and the organizational responsibility for this provision. <p>For example, where regulatory requirements for the provision of accommodation have been exceeded.</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual pp. 144-145</p>



↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Employment (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-LA2 BENEFITS PROVIDED TO FULL-TIME EMPLOYEES THAT ARE NOT PROVIDED TO TEMPORARY OR PART-TIME EMPLOYEES, BY SIGNIFICANT LOCATIONS OF OPERATION</p> <p> Additional disclosure requirements</p> <p>Report benefits provided to permanent and temporary employees, on a regional or country basis.</p> <p>Report benefits provided beyond compliance, including the monetary value of these benefits and the quality of benefits provided.</p> <p>Benefits also include, as a minimum, provisions such as food, housing, fresh drinking water and sanitation.</p> <p> Additional Guidance</p> <p>References</p> <ul style="list-style-type: none"> • ILO Convention 159, 'Vocational Rehabilitation and Employment (Persons with Disabilities)'; 1983. • IFC & EBRD: Workers' accommodation: processes and standards public guidance note, 2009. <p> See entire G4-LA2 in the G4 Implementation Manual p. 147</p>


↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Occupational Health and Safety	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <p>For all the policy and procedures outlined below, report whether these form part of the health and safety management system.</p> <ul style="list-style-type: none"> • Policy and procedures for the procurement, transport, handling, use and disposal of all hazardous materials. <p>For example, MDF; Volatile Organic Compounds; mold, herbicides and pesticides; mercury; asbestos.</p> <ul style="list-style-type: none"> • Policy and procedures for assisting employees with mental health issues, substance and alcohol addiction, and HIV / AIDS. • Policy on compensation and benefits for employees for work-related injuries or fatalities. <p>For example, those due to the dangerous nature of work and high incidence rates of injuries and fatalities in the sector.</p> <ul style="list-style-type: none"> • Policies and procedures for the commissioning, operation and decommissioning of equipment. • Policies and procedures with regard to the provision of health and safety requirements in agreements for contractors and subcontractors. • Policies and procedures requiring prequalification of suppliers and contractors relating to health and safety, and including the existence of formal agreements and health and safety due diligence for new projects and investments. • Report whether education and training related to assisting workforce members, their families, or community members regarding serious diseases is provided in a manner which is understood by all program recipients, for example in appropriate languages or pictorial format. <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 151</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Occupational Health and Safety (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-LA6 TYPE OF INJURY AND RATES OF INJURY, OCCUPATIONAL DISEASES, LOST DAYS, AND ABSENTEEISM, AND TOTAL NUMBER OF WORK-RELATED FATALITIES, BY REGION AND BY GENDER</p> <p> Additional disclosure requirements</p> <p>Provide a breakdown of injuries, injury rate (IR), occupational diseases rate (ODR), lost day rate (LDR), and absentee rate (AR) by employees and supervised employees. Include in the calculation dangerous occurrences, injuries, occupational diseases and fatalities arising from operations on-site, building maintenance, and worker commuting to and from their workplace(s), if required by law.</p> <p>Report for injury rate (IR) and occupational diseases rate (ODR) the nature of the injury or diseases by type, and the circumstances of the accident or dangerous occurrence, or circumstances resulting in exposure to a health hazard, as listed in ILO Protocols (see References).</p> <p>Report dangerous occurrences in the reporting period by gender, using an absolute number, not a rate. Dangerous occurrences should also be broken down by employees, supervised employees and independent contractors.</p> <p> Additional Guidance</p> <p>Relevance</p> <p>This Indicator is of particular relevance to the sector due to the dangerous nature of project construction work, and some building services work, that can lead to high incident, injury, occupational diseases and fatality rates.</p> <p>For real estate reporting organizations, this Indicator is of particular relevance due to the use of contractors and sub-contractors for potentially hazardous activities such as interior building and façade cleaning, as well as handling potentially hazardous materials.</p> <p>Compilation</p> <p>Injuries and fatalities to non-workers on or off a reporting organization's site or assets (including visitors to an asset or site, and members of the public), and relevant non-compliance relating to public health impacts on building users, such as exposure to chemicals and other hazardous substances, should be reported under G4-PR2.</p>





↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Occupational Health and Safety (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-LA6 Definitions <i>Dangerous occurrences</i> (cont.) A work related event with the potential to cause injury, disability or disease to workers or the public. Sometimes referred to as 'near misses'</p> <p><i>Incidents, injuries or fatalities</i> Hazardous and harmful events: Dangerous occurrences (including near misses), injuries, occupational diseases, occupational disabilities and fatalities arising from operations on-site, building maintenance, and worker commuting to and from their workplace(s). Include contractors, visitors and members of the public.</p> <p><i>Occupational disease</i> See definition of 'Occupational disease' in the G4 Implementation Manual p. 250.</p> <p>Disease may also arise from exposure to materials such as asbestos.</p> <p>References</p> <ul style="list-style-type: none"> • ILO Convention 155 'Protocol on recording and notification of occupational accidents and diseases', 1981. • ILO Convention 155 'R194 List of Occupational Diseases Recommendation', 2002 (for the internationally recognized list of occupational diseases). • ILO Convention 155, 'Occupational Health & Safety Convention' and Protocol 155, 1981 (for details on reporting of commuting accidents). • ILO Convention 159, 'Vocational Rehabilitation and Employment (Persons with Disabilities)', 1983. <p> See entire G4-LA6 in the G4 Implementation Manual pp. 153-154</p>


↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Occupational Health and Safety (cont.)	SECTOR ADDITIONS TO G4 INDICATORS (CONT.) <div>  G4-LA7 WORKERS WITH HIGH INCIDENCE OR HIGH RISK OF DISEASES RELATED TO THEIR OCCUPATION  Additional disclosure requirements For workers who are involved in occupational activities with a high incidence or high risk of specific diseases, breakdown by employees, supervised employees (contractors and subcontractors) and independent contractor. Report preventative measures in place where there is high incidence or high risk of specific diseases.  Additional Guidance Relevance For construction companies, this Indicator is of particular relevance due to the reliance on migrant and moveable labor in the industry, and the need to engage migrant workers on relevant health and safety issues. It is also of particular relevance because construction companies' activities are more hazardous than those of the real estate sector.  See entire G4-LA7 in the G4 Implementation Manual p. 155 </div>
	SECTOR SPECIFIC INDICATORS <div>  CRE6 PERCENTAGE OF THE ORGANIZATION OPERATING IN VERIFIED COMPLIANCE WITH AN INTERNATIONALLY RECOGNIZED HEALTH AND SAFETY MANAGEMENT SYSTEM See  disclosure requirements and  Guidance on p. 75 </div>
Training and Education	SECTOR SPECIFIC GUIDANCE FOR DMA <div>  G4-DMA  Additional Guidance <ul style="list-style-type: none"> Explain the context in terms of skills level available for key areas of activity and shortages of skills/competencies in certain high risk roles, jobs and locations. For example, strategy to address specific skills shortages; the organization's involvement in apprenticeship schemes for construction related jobs; the up skilling and retraining of existing workers. Policies and programs for re-employability after a project has ended, or after any occupational disability has occurred. Refer to G4-EC8, which focuses on economic impact post-construction, including impact on workers' community of origin. </div>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED





LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Training and Education (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p> AVERAGE HOURS OF TRAINING PER YEAR PER EMPLOYEE BY GENDER, AND BY EMPLOYEE CATEGORY</p> <p> Additional disclosure requirements</p> <p>Report relevant categories of training, including vocational training, apprenticeships and occupational health and safety training provided to workers (especially site management), either within or additional to a health and safety management system (see also CRE6).</p> <p> Additional Guidance</p> <p>Definitions</p> <p><i>Training</i></p> <p>See definition of 'Training' in the G4 Implementation Manual p. 253.</p> <p>Vocational training includes apprenticeships (with on-the-job training).</p> <p> See entire G4-LA9 in the G4 Implementation Manual pp. 158-159</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Diversity and Equal Opportunity	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <p>Report the following²:</p> <ul style="list-style-type: none"> • Policy on gender equality including how gender is incorporated into procurement policy and plans. • Policies and practices regarding gender equality in the workplace. <p>For example, management approach to flexible work schedules; initiatives to provide child-care support and/or facilities to employees; initiatives to promote equal opportunities at the workplace; initiatives to provide information, education and training on sexual harassment in the workplace; available channels within the organization for filing gender-based discrimination grievances.</p> <ul style="list-style-type: none"> • Policies and practices regarding gender equality in the community. <p>For example, initiatives, including donations and grants to address equality in the community; management approach to the consultation of local women in devising community engagement/investment programs; management approach to determining community engagement/investment activities, including policy and criteria; management approach to addressing gender-related community impacts, including gender impact assessments.</p> <ul style="list-style-type: none"> • Policies and practices regarding gender equality in relation to customers. <p>For example, policy and mechanisms in place to avoid gender discrimination in marketing and advertising materials; management approach to Gender Equality Certification by third party.</p> <ul style="list-style-type: none"> • Policies and practices regarding gender equality in relation to investment. <p>For example, policy for investment decision making, including consideration of gender criteria.</p>






2) Derived from the 2009 GRI publication Embedding Gender in Sustainability Reporting: A Practitioners Guide.

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED





LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Diversity and Equal Opportunity (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-LA12 COMPOSITION OF GOVERNANCE BODIES AND BREAKDOWN OF EMPLOYEES PER EMPLOYEE CATEGORY ACCORDING TO GENDER, AGE GROUP, MINORITY GROUP MEMBERSHIP, AND OTHER INDICATORS OF DIVERSITY</p> <p> Additional Guidance</p> <p>Relevance</p> <p>This Indicator is of particular relevance due to cultural norms and workforce participation rates that feature lower levels of women and members of minority groups in decision-making roles across a variety of functions, and on governance bodies.</p> <p>References</p> <ul style="list-style-type: none"> • Embedding Gender into Sustainability Reporting: A Practitioners' Guide, GRI & IFC, 2009. <p> See entire G4-LA12 in the G4 Implementation Manual pp. 163-164</p>
Equal Remuneration for Women and Men	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-LA13 RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN BY EMPLOYEE CATEGORY, BY SIGNIFICANT LOCATIONS OF OPERATION</p> <p> Additional Guidance</p> <p>Relevance</p> <p>Due to differences in cultural norms and workforce participation by gender, wage gaps in the sector by gender are particularly relevant.</p> <p>References</p> <ul style="list-style-type: none"> • Embedding Gender into Sustainability Reporting: A Practitioners' Guide, GRI & IFC, 2009. <p> See entire G4-LA13 in the G4 Implementation Manual p. 166</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

SUB-CATEGORY: HUMAN RIGHTS

HUMAN RIGHTS DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Non-discrimination	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <ul style="list-style-type: none"> • In male dominated industries, there is a risk of gender discrimination. • Policies and practices for recruitment and career development to avoid discrimination. <p>For example, training and awareness programs and grievance mechanisms aimed to combat discrimination.</p>
	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p> TOTAL NUMBER OF INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN</p> <p> Additional disclosure requirements</p> <p>Provide a breakdown of the total number of incidents of discrimination during the reporting period by gender, disability, age and sexual orientation.</p> <p> Additional Guidance</p> <p>Relevance</p> <p>There is a risk of gender discrimination in the sector. This Indicator can demonstrate the effectiveness of policies, training and awareness, and grievance mechanisms aimed to combat discrimination.</p> <p>Compilation</p> <p>Incidents of discrimination should also be identified by gender, disability, age and sexual orientation.</p> <p> <i>See entire G4-HR3 in the G4 Implementation Manual p. 179</i></p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED






HUMAN RIGHTS DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Child Labor	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p>G4-DMA  Additional Guidance</p> <ul style="list-style-type: none"> Policy and practices for screening and monitoring of child labor risks by contractors and subcontractors in all stages of the lifecycle (including construction materials). <p>For example: risks identified to children on or near construction sites (such as risk of injury, exploitation); employee screening by a medical practitioner to determine age; including child labor clauses in contracts with suppliers/vendors to allow for auditing.</p> <ul style="list-style-type: none"> Practices in regards to workers' children. <p>For example: education and health and safety monitoring; child protection, mother and child health; on site crèche and child minding facilities.</p>
	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-HR5 OPERATIONS AND SUPPLIERS IDENTIFIED AS HAVING SIGNIFICANT RISK FOR INCIDENTS OF CHILD LABOR, AND MEASURES TAKEN TO CONTRIBUTE TO THE EFFECTIVE ABOLITION OF CHILD LABOR</p> <p> Additional Guidance</p> <p>Relevance</p> <p>There is risk of child labor in the manufacture of building materials (e.g., brick kilns and quarry mines), and in the building services industry.</p> <p>References</p> <ul style="list-style-type: none"> Global report under the follow up to the ILO Declaration on the Fundamental Principles and Rights at Work, ILO Conference 90th Session, 2002, Report I (B). <p> See entire G4-HR5 in the G4 Implementation Manual p. 183</p>
Forced or Compulsory Labor	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p>G4-DMA  Additional Guidance</p> <p>There is a risk of bonded labor in the sector, including practices such as the removal of passports and identification papers, withholding pay and compulsory overtime.</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

HUMAN RIGHTS DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Security Practices	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <p>Companies in the sector generally outsource security services. Working in insecure environments, militarized zones, and in post war reconstruction raises issues for the sector not only in relation to the rights of those being protected (the workers) but also the human rights of the individuals in the local community where operations are based. There are other environments (for example, shopping centers, office buildings) where security personnel training is also needed.</p> <p>Describe awareness raising and training provided to security personnel, in relation to respect and dignity and human rights.</p>
Supplier Human Rights Assessment	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <p>There is a risk of human rights violations in the supply chain during the investment and procurement of goods and services (including labor), due to the complexity of the supply chain and the reliance on contractors and sub-contractors.</p> <ul style="list-style-type: none"> • Policy and criteria for the screening of contractors and sub-contractors. <p>For example, details of any monitoring and follow up activity, and the mechanisms in place to address incidences of non-compliance against legal requirements and screening criteria; screening on whether hiring fees (visa, transportation) are passed on to the supervised workers or contractors recruited, withholding of and infrequent payment of wages and withholding of identification documents; mechanisms in place to address incidences of non-compliance against these legal requirements and screening criteria; grievance complaints mechanisms (rights violations).</p> <ul style="list-style-type: none"> • Practices to monitor (e.g., audits) and train employees and contractors in compliance with labor and international human rights standards (including enforcement). <p>For example, training of employees managing building services and investment processes in screening for labor and human rights standards (such as gender, ethnic and disability sensitivity).</p> <p> See entire Aspect-specific Guidance for DMA in the <u>G4 Implementation Manual</u> pp. 192-193</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

SUB-CATEGORY: SOCIETY

SOCIETY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Local Communities	SECTOR SPECIFIC GUIDANCE FOR DMA <div>  Additional Guidance Including resettlement and displacement, and how responsibilities relating to resettlement are shared with other organizations.  See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 199 </div>
	SECTOR ADDITIONS TO G4 INDICATORS <div>  PERCENTAGE OF OPERATIONS WITH IMPLEMENTED LOCAL COMMUNITY ENGAGEMENT, IMPACT ASSESSMENTS, AND DEVELOPMENT PROGRAMS  Additional disclosure requirements Report the engagement approach throughout lifecycle stages to ensure successful project delivery and community acceptance and/or satisfaction. Outcomes of legacy studies and surveys should be reported under G4-PR5.  See entire G4-SO1 in the G4 Implementation Manual pp. 200-201 </div>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

SOCIETY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Local Communities (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-SO2 OPERATIONS WITH SIGNIFICANT ACTUAL AND POTENTIAL NEGATIVE IMPACTS ON LOCAL COMMUNITIES</p> <p> Additional disclosure requirements</p> <p>Report quantifiable positive legacy impacts and quantifiable impacts from a pre-development benchmark, and disclose improvements over time.</p> <p> Additional Guidance</p> <p>Relevance</p> <p>The activities of construction and real estate organizations can also result in a variety of positive impacts, including: economic improvement for the community and the region; environmental benefits; individual, organizational and cultural changes in attitudes and behaviors; market transformation; contribution to new knowledge and understanding; maintaining heritage; and cultural impacts.</p> <p>Compilation</p> <p>Identify the exposure of the local community to the organization's operations due to higher than average use of shared resources or impact on shared resources through:</p> <ul style="list-style-type: none"> • Land degradation, contamination and remediation (see also CRE5). • Traffic disruption and congestion. <p>Identify positive legacy impacts on local communities and their rights from all significant activities.</p> <p>Examples of quantifiable legacy impacts are measures of community wellbeing, accessibility improvements, and indicators of crime reduction.</p> <p>Definitions</p> <p>Land Degradation</p> <p>The reduction or loss of economic or biological productivity, diversity and complexity of land, topsoil, vegetation and/or water resources through natural processes, land uses or other human activities, and habitation patterns (e.g. land contamination, soil erosion, and destruction of vegetation cover).</p> <p>Legacy impacts</p> <p>Long-term positive and negative economic, environmental and social outcomes and impacts from construction and real estate activities. Such outcomes and impacts may be temporary or prolonged. In some circumstances, the reporting organization may have relinquished control or ownership of the asset or project.</p> <p> See entire G4-SO2 in the G4 Implementation Manual pp. 202-203</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

SOCIETY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Local Communities (cont.)	<p>SECTOR SPECIFIC INDICATORS</p> <p> NUMBER OF PERSONS VOLUNTARILY AND INVOLUNTARILY DISPLACED AND/OR RESETTLED BY DEVELOPMENT, BROKEN DOWN BY PROJECT See  disclosure requirements and  Guidance on pp. 76-77</p>
Anti-corruption	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance There is risk of corruption in the sector, particularly in relation to obtaining regulatory approval, procurement, inspection and certification processes.</p> <ul style="list-style-type: none"> • Policies and practices to mitigate corruption risks, within the reporting organization and/or the supply chain. <p>For example, transparency through cost plus contracts; auditing of risk management processes; the implementation of sector specific codes of conduct related to corruption; the use of integrity pacts or subscription to sector specific anti-corruption policy; disclosure of corruption cases in each country where the reporting organization is active.</p> <ul style="list-style-type: none"> • Policy or screening process in place to mitigate incidents of money laundering, bribery and corruption through real estate valuations and transactions. <p>For example, screening criteria and training during tender processes for partners, suppliers, contractors and sub-contractors; initiatives to address corruption in the sector at the governmental level (local, national and international), and company level.</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 205</p>
Public Policy	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance Report public policy participation that results in positive contribution to public policy development, and risks related to conflict of interest on regulatory and/or advisory organizations (e.g., those that approve planning and land use applications).</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 209</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

SOCIETY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Anti-competitive Behavior	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <div>  Additional Guidance </div> <p>There is a risk of anti-competitive bidding practices within the construction sector through collusion to set tender prices, cover pricing and cartel price fixing.</p> <ul style="list-style-type: none"> • Policies and procedures to identify and avoid anti-competitive behavior, within the reporting organization and/or the supply chain. <p>For example, employee 'ethics training'; company code of conduct; establishing an ethics committee or similar; making business ethics part of balanced score cards for managers.</p>



↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

SUB-CATEGORY: PRODUCT RESPONSIBILITY





Introduction

In the context of construction and real estate, 'product' relates to the asset constructed (building or infrastructure) and managed (buildings only) during its lifecycle. 'Responsibility' in the context of construction and real estate relates to the impacts of assets and activities on people and communities.


End users in the context of construction differ from end users in the context of buildings. In construction, the end user, the customer, is typically both the future owner(s) engaging with the construction contractor and the eventual occupant of the asset. In the case of buildings, end users are primarily the occupants or those who visit the building.

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Customer Health and Safety	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p> Additional Guidance</p> <ul style="list-style-type: none"> • Policies, practices and training relating to end user health, safety and security during all stages of the lifecycle. <p>For example, operational health and safety policies including fire and elevator safety; disabled access; use of established standards such as OHSAS 18001; end user training on health, safety and security practices, including asset and site security arrangements; disaster management and emergency procedures.</p> <ul style="list-style-type: none"> • 'Products and services' should be read as real estate and infrastructure assets. This Indicator relates to end user impacts for all stages of the lifecycle. • For construction and real estate, the life cycle stages should be read as follows: <ul style="list-style-type: none"> • New Construction • Management • Development/Redevelopment • Reporting organizations should consider the health and safety impacts of procurement under each of the lifecycle stages stated above, including other relevant activities (e.g., acquisition and disposal, design and planning/regulatory approvals). <p>See also the DMA Guidance for the Products and Services Aspect in the Environmental Category, and G4-EN27.</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 222</p>







↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Customer Health and Safety (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-PR1 PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES FOR WHICH HEALTH AND SAFETY IMPACTS ARE ASSESSED FOR IMPROVEMENT</p> <p> Additional Guidance</p> <p>Compilation</p> <p>'Products and services' should be read as real estate and infrastructure assets. This Indicator relates to end user impacts for all stages of the lifecycle.</p> <p>Assessing for compliance should include mandatory and voluntary assessments, as well as internal and external audits/re-assessments.</p> <p> See entire G4-PR1 in the G4 Implementation Manual p. 223</p> <p>G4-PR2 TOTAL NUMBER OF INCIDENTS OF NON-COMPLIANCE WITH REGULATIONS AND VOLUNTARY CODES CONCERNING THE HEALTH AND SAFETY IMPACTS OF PRODUCTS AND SERVICES DURING THEIR LIFE CYCLE, BY TYPE OF OUTCOMES</p> <p> Additional disclosure requirements</p> <p>Report incidents of non-compliance with regulations and voluntary codes.</p> <p>Report the total number of dangerous occurrences, reportable injuries and fatalities to non-workers on or off a site or assets (including visitors to an asset or site, and members of the public) as a result of non-compliance with regulation and voluntary codes.</p> <p> Additional Guidance</p> <p>Compilation</p> <p>'Products and services' should be read as real estate and infrastructure assets. This Indicator relates only to operation, refurbishment and demolition of assets.</p> <p>Examples of incidents of non-compliance with regulations and voluntary codes include: fire codes and standards; mechanical systems (such as elevator and escalator maintenance and prevention of bacterial infections including Legionnaire's disease); pest, insect and rodent control; accessibility standards (including during normal operation, and in the case of emergency); indoor air quality standards, including Volatile Organic Compounds (VOC) and mold; indoor water quality standards; hazardous substances and contaminants, including asbestos, PCBs, pesticides, herbicides, formaldehyde; disease control and pandemic management; materials standards.</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Customer Health and Safety (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS (CONT.)</p> <p>G4-PR2 Definitions <i>Dangerous occurrences</i> (cont.) An event with the potential to cause an injury, disability or disease to non-workers, or the public. Sometimes referred to as 'near misses'.</p> <p><i>Reportable injuries</i> Injuries and accidents, as defined by national laws, which must be reported to relevant government agencies in a timely manner. Such incidents and injuries may include, for example:</p> <ul style="list-style-type: none"> • Fracture other than to fingers, thumbs or toes. • Amputation. • Dislocation of the shoulder, hip, knee or spine. • Loss of sight (temporary or permanent). • Chemical or hot metal burn to the eye or any penetrating injury to the eye. • Injury resulting from an electric shock or electrical burn leading to unconsciousness or requiring resuscitation or admittance to hospital for more than 24 hours. • Any other injury: leading to hypothermia, heat induced illness or unconsciousness; or requiring resuscitation; or requiring admittance to hospital for more than 24 hours. • Unconsciousness caused by asphyxia or exposure to harmful substance or biological agent. • Acute illness requiring medical treatment, or loss of consciousness arising from absorption of any substance by inhalation, ingestion or through the skin. • Acute illness requiring medical treatment where there is reason to believe that this resulted from exposure to a biological agent or its toxins or infected material. <p><i>Members of the public</i> Non-workers who may be involved in a dangerous occurrence or incident resulting in a reportable injury, as a result of the reporting organization's activities on or off site, or assets.</p> <p> See entire G4-PR2 in the G4 Implementation Manual p. 224</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Product and Service Labeling	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p>G4-DMA  Additional Guidance</p> <ul style="list-style-type: none"> • Policies with respect to the application of voluntary and mandatory sustainable building standards, certification, rating and labeling schemes. <p>For example; certification schemes used in given geographical regions and reasons for choosing the certification/rating/labels.</p> <ul style="list-style-type: none"> • Practices with regards to customer surveys. <p>For example, approach to, desired outcomes and follow up with respect to surveys undertaken; selection process for stakeholders involved in customer surveys.</p> <p> See entire Aspect-specific Guidance for DMA in the G4 Implementation Manual p. 225</p>
	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-PR3 TYPE OF PRODUCT AND SERVICE INFORMATION REQUIRED BY THE ORGANIZATION'S PROCEDURES FOR PRODUCT AND SERVICE INFORMATION AND LABELING, AND PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES SUBJECT TO SUCH INFORMATION REQUIREMENTS</p> <p> Additional Guidance</p> <p>Relevance</p> <p>This Indicator covers product and service information (e.g., building and infrastructure components and materials). CRE8 specifically covers labeling and certification for new construction, management and redevelopment of assets.</p> <p> See entire G4-PR3 in the G4 Implementation Manual p. 226</p> <p>G4-PR4 TOTAL NUMBER OF INCIDENTS OF NON-COMPLIANCE WITH REGULATIONS AND VOLUNTARY CODES CONCERNING PRODUCT AND SERVICE INFORMATION AND LABELING, BY TYPE OF OUTCOMES</p> <p> Additional Guidance</p> <p>Compilation</p> <p>In this context voluntary products and service information means widely accepted and adopted national and international codes of conduct, or specification regarding display or provision of product or service information, as opposed to the actual certification, rating or labeling attained, which should be reported according to CRE8.</p> <p> See entire G4-PR4 in the G4 Implementation Manual p. 227</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Sector Disclosures
G4 Aspects	
Product and Service Labeling (cont.)	SECTOR ADDITIONS TO G4 INDICATORS (CONT.)
	<div> <div>G4-PR5</div> <div> RESULTS OF SURVEYS MEASURING CUSTOMER SATISFACTION </div> <div> <div> Additional disclosure requirements </div> <p>Report who the reporting organization's customers are (referencing 'clients' and 'end users' as described below under 'Relevance').</p> <p>Report the results or key conclusions of customer satisfaction surveys (based on statistically relevant sample sizes) conducted in the reporting period relating to information about:</p> <ul style="list-style-type: none"> Customer satisfaction trends over time <p>Include conclusions from legacy studies and surveys, specifically client and end user's long-term satisfaction with construction or real estate projects.</p> <div> Additional Guidance </div> <p>Relevance</p> <p>'Customers' should be read as clients and end users (including occupants and visitors) who may have an interest in all stages of the lifecycle.</p> <p>Compilation</p> <p>Process and outcomes of public consultation should be covered under community Indicators (G4-SO1, G4-SO2 and G4-SO8).</p> <p>See entire G4-PR5 in the G4 Implementation Manual p. 228</p> </div> </div>
	SECTOR SPECIFIC INDICATORS
	<div> <div>CRE8</div> <div> TYPE AND NUMBER OF SUSTAINABILITY CERTIFICATION, RATING AND LABELING SCHEMES FOR NEW CONSTRUCTION, MANAGEMENT, OCCUPATION AND REDEVELOPMENT </div> <div> See disclosure requirements and Guidance on p. 78 </div> </div>

3.4 GLOSSARY

- **Asset:** In terms of construction or real estate, asset refers to a building or physical infrastructure.
- **Contractors:** See definition of 'Contractors' in the *G4 Implementation Manual* p. 253. In the context of these Sector Disclosures, it refers to groups or individuals that hold the primary contract with another organization or individual (the owner) for the new construction, management, redevelopment or demolition of a real estate or infrastructure asset.
- **Efficiency:** As it relates to buildings, efficiency refers to design, construction, management or operating measures taken to maximize return on investment, or human productivity, or to reduce resource use. For example, materials, water, or energy.
- **Legacy:** Long-term positive and negative economic, environmental and social outcomes and impacts from construction, management, occupation, redevelopment and demolition. Such outcomes and impacts may be temporary in nature, or prolonged. In some circumstances, the reporting organization may have relinquished control or ownership of the asset or project.
- **Lifecycle:** Includes the following construction and real estate activities (for buildings and infrastructure), either as discrete stages or as part of a continuous process:

New construction	<ul style="list-style-type: none"> • The creation of a single building, or a number of linked buildings and other structures.
Management & Occupation*	<ul style="list-style-type: none"> • Management: Policies and procedures implemented on behalf of the building owner to optimize building performance, maintain building systems and structure, and contribute to organizational programs ensuring they achieve their intended results, especially with regard to resource efficiency, health and safety, and occupant wellbeing. • Occupation: The act of using a building or structure for its intended purpose, typically by entities who either own the building directly (owner occupier) or have contractual lease arrangements with the owner/ landlord (tenant).
Demolition & Redevelopment	<ul style="list-style-type: none"> • Demolition: The complete removal of a single building, or a number of linked buildings and other structures or part thereof. Demolition contrasts with deconstruction, which involves taking a building apart while carefully preserving valuable elements for reuse. • Redevelopment: Any new construction of single buildings, or a number of linked buildings and other structures, on a site that has pre-existing uses.

*Stage not relevant for infrastructure.

Refer to the diagram in section 2.1 'For whom are the Construction and Real Estate Sector Disclosures Intended?' for a visual representation of the lifecycle stages.

- **PPE (property, plant and equipment):** Also known as fixed assets, these are tangible assets that are held for use or for rent by others, vital to business operations but not easily liquidated. Examples include land, buildings, machinery, furniture, and tools.
- **Product and service information and labeling:** See definition of 'Product and service information and labelling' in the *G4 Implementation Manual* p. 251. Product and service information/labeling relates to voluntary and mandatory asset labels and certificates (including sustainable building certification, rating and labeling schemes) and health and safety certificates.
- **Sub-contractors:** See definition of 'Sub-contractors' in the *G4 Implementation Manual* p. 253. In the context of these Sector Disclosures, it refers to groups or individuals that enter into a subcontract with a primary contractor to perform part or all of the obligations of another's contract for the new construction, management, demolition or redevelopment of a real estate or infrastructure asset.
- **Supervised worker:** See definition of 'Supervised worker' in the *G4 Implementation Manual* p. 252. Supervised workers include contractors and sub-contractors.

3.5 ADDITIONAL CONSTRUCTION AND REAL ESTATE REFERENCES

These references do not have their origin in internationally-adopted documents, conventions or protocols as those cited as formal references in the main text; they may however be useful sources of guidance to reporters when compiling indicators.

CATEGORY: ENVIRONMENTAL

G4 Aspect: Energy

Indicator CRE1 Building energy intensity

- EPRA Best Practices Recommendations: Sustainability Reporting (2011)
- Establishing the Ground Rules for Property: Industry-wide Sustainability Metrics (Green Property Alliance, UK 2010)
- REALpac Energy Normalization Methodology v1.02 (July 2010)
- Property Council of Australia – A Guide to Corporate Responsibility Reporting in the Property Sector (2009)
- REALpac – A Guide to Corporate Responsibility and Sustainability Reporting in the Canadian Real Property Sector (April 2010)
- British Council of Offices' Guide to Specification (2009)
- IPD Space Code (2008)

G4 Aspect: Water

Indicator CRE2 Building water intensity

- EPRA Best Practices Recommendations: Sustainability Reporting (2011)
- Establishing the Ground Rules for Property: Industry-wide Sustainability Metrics (Green Property Alliance, UK 2010)
- REALpac – Water Benchmarking Report (May 2011)
- Property Council of Australia – A Guide to Corporate Responsibility Reporting in the Property Sector (2009)
- REALpac – A Guide to Corporate Responsibility and Sustainability Reporting in the Canadian Real Property Sector (April 2010)
- British Council of Offices' Guide to Specification (2009)
- IPD Space Code (2008)

G4 Aspect: Emissions

Indicator CRE3 Greenhouse gas emissions intensity from buildings

- EPRA Best Practices Recommendations: Sustainability Reporting (2011)
- Establishing the Ground Rules for Property: Industry-wide Sustainability Metrics (Green Property Alliance, UK 2010)
- REALpac Energy Normalization Methodology v1.02 (July 2010)
- Property Council of Australia – A Guide to Corporate Responsibility Reporting in the Property Sector (2009)
- REALpac – A Guide to Corporate Responsibility and Sustainability Reporting in the Canadian Real Property Sector (April 2010)
- British Council of Offices' Guide to Specification (2009)
- IPD Space Code (2008)

Indicator CRE4 Greenhouse gas emissions intensity from new construction and redevelopment activity

- ENCORD Construction CO₂ Measurement Protocol

G4 Aspect: Effluents and Waste

Indicator G4-EN23 Total weight of waste by type and disposal method

- ENCORD Waste Measurement Protocol

4

FULL TEXT FOR THE
CONSTRUCTION
AND REAL
ESTATE SECTOR
DISCLOSURES4.1 FULL TEXT FOR SPECIFIC STANDARD DISCLOSURES FOR THE
CONSTRUCTION AND REAL ESTATE SECTOR

CATEGORY: ENVIRONMENTAL

G4 Aspect: Energy

Indicators

CRE1

BUILDING ENERGY INTENSITY

1. Relevance

Building energy intensity is a useful measure of an asset owner or occupier's aggregated energy consumption during the management and occupation phase of the building lifecycle. This Indicator focuses on groups of buildings and is primarily intended to track changes in reporter's assets over time.

2. Compilation

2.1 Identify the number and type of buildings, total annual energy consumption (in kWh) and corresponding floor area (in m²), or number of persons using or visiting the buildings.

2.2 Identify the method used to ensure that annual energy consumption and floor area, or numbers of persons, are consistent and accurate, thereby taking account of different landlord and tenant metering scenarios. In particular, where the reporting organization does not have all energy consumption data for a building, it is important to ensure that the result of the calculation of

energy intensity by building is consistent and accurate, for example by:

- excluding such properties from the aggregation;
- defining the floor area to cover only the building area serviced by known energy consumption; or
- revising the overall consumption data to take account of unknown data.

2.3 Calculate, using data from 2.1:

$$\text{Building energy intensity} = \frac{\Sigma (\text{sum of}) \text{ annual kWh energy consumption}}{\Sigma (\text{sum of}) \text{ floor area (m}^2\text{) or number of people}}$$

2.4 Report energy intensity of buildings in use (on unadjusted basis), based on calculation in 2.3:

- kWh/m²/year; or
- kWh/person/year.

↓ CRE1 CONTINUED

Energy intensity should be reported by meaningful segmentation, for example by building type, geographic location, portfolio and fund. Separately, adjustments consistent with a recognized methodology can also be applied to any of the following factors:

- hours of operation or working days per week;
- vacancy;
- occupant density;
- heating and cooling (weather correction); or
- special uses.

2.5 Report the methodology used to calculate the energy intensity of the building in use and any adjustments.

3. Definitions

Building types

Categorization based on the function or form of a building, for example: offices, shopping centers, retail warehouses, industrial, multi-family housing, hotels.

Energy intensity

The amount of energy used per unit of an appropriate denominator (e.g., floor area, persons).

Floor area

The extent of a floor surface. Codes for defining floor areas (leasable, salable or occupied) vary by location, building type and landlord-tenant arrangement, for example: common parts area, lettable/leasable area, internal area, usable area, occupied area, conditioned/treated area.

Heating and cooling (weather correction)

Adjustment to energy consumption to take account of hotter and colder prevailing weather over time and different locations. Degree-days relative to a selected location may be used for such adjustments.

Location

The geographical position of buildings, including climatic zones.

Occupant density

The amount of floor area per person.

Number of persons

The average number of persons using or visiting the building. For example, number of visitors to shopping centers, number of workers in offices and industrial buildings, number of residents in multi-family housing, number of guests in hotels.

Special uses

Extraordinary energy consuming activities within a building. For example, energy-consuming industrial processes, car parks, server rooms, call centers.

Total annual energy consumption

Annual consumption of electricity, fuels and thermal energy (such as steam and chilled water) for the management and occupation of buildings.

Vacancy

The percentage of lettable/leasable area that is unoccupied.

4. Documentation

Metering is the prime source for energy consumption data. Floor area data is measured by surveyors for leasing, taxation, statutory planning and insurance purposes. Architectural plans are a further source of floor area data. Documentation on the numbers of persons may vary, but could include surveys of workstations, HR records for numbers of workers, reception and security gate records, counts of retail visitors.

5. References

- UNEP-SBCI Common Carbon Metric and Protocols – Protocol for Measuring Energy Use and Reporting Greenhouse Gas Emissions from Building Operations, 2010.

G4 Aspect: Water

Indicators

CRE2

BUILDING WATER INTENSITY

1. Relevance

Building water intensity is a useful measure of an asset owner or occupier's aggregated water consumption during the management and occupation phase of the building lifecycle. This Indicator focuses on groups of buildings and is primarily intended to track changes in reporters' assets over time.

2. Compilation

2.1 Identify the number and type of buildings, total annual water consumption (in liters or m³) and corresponding floor area (in m²), or number of persons using or visiting the buildings.

2.2 Identify the method used to ensure that annual liters or m³ of water consumption and floor area (m²), or number of persons, are consistent and accurate, thereby taking account of different landlord and tenant metering scenarios. In particular, where the reporting organization does not have all energy consumption data for a building, it is important to ensure that the result of the calculation of water intensity by building indicator is consistent and accurate, for example by:

- excluding such properties from the aggregation;
- defining the floor area to cover only the building area serviced by known energy consumption; or
- revising the overall consumption data to take account of unknown data.

2.3 Calculate, using data from 2.1:

$$\text{Building water intensity} = \frac{\Sigma (\text{sum of}) \text{ annual liters or m}^3 \text{ water consumption}}{\Sigma (\text{sum of}) \text{ floor area (m}^2\text{) or number of persons}}$$

2.4 Report water intensity of buildings in use (on unadjusted basis), based on calculation in 2.3, by:

- liters/person/year; or
- m³/m²/year.

Water intensity should be reported by meaningful segmentation, for example by building type, geographic location, portfolio and fund.

Separately, adjustments consistent with a recognized methodology can also be applied to any of the following factors:

- hours of operation or working days per week;
- vacancy;
- occupant density;
- evaporative cooling (weather correction); or
- special uses.

2.5 Report the methodology used to calculate the water intensity of the building in use and adjusted intensity indicator.

3. Definitions

Building types

Categorization based on the function or form of a building, for example: offices, shopping centers, retail warehouses, industrial, multi-family housing, hotels.

Evaporative cooling (weather correction)

Adjustment to water consumption for evaporative cooling to take account of hotter and colder prevailing weather over time and in different locations. Degree-days relative to a selected location may be used for such adjustments.

Floor area

The extent of a floor surface. Codes for defining floor areas (leasable, salable or occupied) vary by location, building type and landlord-tenant arrangement, for example: common parts area, lettable/leasable area, internal area, usable area, occupied area, conditioned/treated area.

Location

The geographical position of buildings, including climatic zones.

Occupant density

The amount of floor area per person.

↓ CRE2 CONTINUED

Number of persons

The average number of persons using or visiting the building. For example, number of visitors to shopping centers, number of workers in offices and industrial buildings, number of residents in multi-family housing, number of guests in hotels.

Special uses

Extraordinary water consuming activities within a building. For example, water-consuming industrial processes, landscaping irrigation, food courts, hairdressing salons and barber shops, gymnasiums and sports clubs, building showers, swimming pools.

Vacancy

The percentage of lettable/leasable area that is unoccupied.

Water intensity

The amount of water used per unit of an appropriate denominator (e.g., persons, floor area).

4. Documentation

Metering is the prime source for water consumption data.

Documentation on the numbers of persons may vary, but could include surveys of workstations, HR records for numbers of workers, reception and security gate records, counts of retail visitors. Floor area data is measured by surveyors for leasing.

5. References

- See section 3.5 'Additional Construction and Real Estate References' for further regional or country specific references.

G4 Aspect: Emissions

Indicators

CRE3

GREENHOUSE GAS EMISSIONS INTENSITY FROM BUILDINGS

1. Relevance

Greenhouse gas emissions intensity is a useful measure of an asset owner or occupier's aggregated greenhouse gas emissions during the management and occupation phase of the building lifecycle. This Indicator focuses on groups of buildings and is primarily intended to track changes in reporters' assets over time.

2. Compilation

2.1 Identify the number and type of buildings, total annual greenhouse gas emissions (kilograms CO₂ equivalent), and corresponding floor area (in m²) or number of people using the building.

Greenhouse gas emissions reported here should include Scope 1 (e.g., fuels, refrigerants), Scope 2 (e.g., electricity, imported heat) and Scope 3 (e.g., waste) of the GHG Protocol. Greenhouse gas emissions reported here should not include organizational Scope 3 emissions that do not relate to buildings (e.g., employee air travel).

2.2 Identify the method used to ensure that the annual kilograms CO₂ equivalent and floor area (m²), or numbers of persons, are consistent and accurate, thereby taking account of different landlord and tenant metering scenarios. In particular, where the reporting organization does not have all energy consumption and associated greenhouse gas emissions data for a building, it is important to ensure that the intensity indicator is consistent and accurate, for example by:

- excluding such properties from the aggregation;
- defining the floor area to cover only the area serviced by known building energy consumption (and associated greenhouse gas emissions); or
- revising the overall consumption data to take account of unknown data.

2.3 Calculate, using data from 2.1:

$$\text{Greenhouse gas emissions intensity} = \frac{\Sigma (\text{sum of}) \text{ annual kilograms CO}_2 \text{ equivalent}}{\Sigma (\text{sum of}) \text{ floor area (m}^2\text{) or number of people}}$$

2.4 Report greenhouse gas emissions intensity of buildings in use (on unadjusted basis), based on calculation in 2.3, by:

- kg CO₂e/m²/year; or
- kg CO₂e/person/year.

Greenhouse gas emissions intensity should be reported by meaningful segmentation, for example by building type, location, portfolio, fund.

2.5 Report the methodology used to calculate the greenhouse gas emissions intensity from buildings.

3. Definitions

Building types

Categorization based on the function or form of a building for example: offices, shopping centers, retail warehouses, industrial, multi-family housing, hotels.

Floor area

The extent of a floor surface. Codes for defining floor areas (leasable, salable or occupied) vary by location, building type and landlord-tenant arrangement, for example: common parts area, lettable/leasable area, internal area, usable area, occupied area, conditioned/treated area.

Greenhouse gas emissions intensity

The amount of greenhouse gas emissions per unit of an appropriate denominator (e.g., floor area, persons).

↓ CRE3 CONTINUED

Location

Describes the geographical position of buildings, including climatic zones.

Number of persons

The average number of persons using or visiting the building. For example, number of visitors to shopping centers, number of workers in offices and industrial buildings, number of residents in multi-family housing, number of guests in hotels.

Scope 1

A reporting organization's direct GHG emissions. Direct GHG emissions occur from sources that are owned or controlled by the company. For example: emissions from combustion in owned or controlled boilers, furnaces, vehicles; emissions from chemical production in owned or controlled process equipment.

Scope 2

A reporting organization's emissions associated with the generation of electricity, heating/cooling, or steam purchased for own consumption or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity, heating/cooling, or steam is generated.

Scope 3

A reporting organization's indirect emissions other than those covered in Scope 2. Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions. Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. Some examples of Scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services.

4. Documentation

Metering is the prime source for energy consumption data. The greenhouse gas emissions associated with energy consumption can come from: default data from the International Energy Agency (IEA); reports submitted by governments to the United Nations Framework Convention on Climate Change (UNFCCC); official national government databases (e.g., eGRID in the USA); information gathered from each individual energy supplier. Floor area data is measured by surveyors for leasing, taxation and insurance purposes. Architectural plans are a further source of floor area data. Documentation on the numbers of persons may vary, but could include surveys of workstations, HR records for numbers of workers, reception and security gate records, counts of retail visitors.

5. References

- The Greenhouse Gas Protocol (GHG) Initiative – A corporate accounting and reporting standard (Revised Edition, 2004) of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).
- UNEP-SBCI Common Carbon Metric and Protocols – Protocol for Measuring Energy Use and Reporting Greenhouse Gas Emissions from Building Operations, 2010.
- Carbon Disclosure Project, www.cdproject.net, updated annually.
- See section 3.5 'Additional Construction and Real Estate References' for further regional or country specific references.
- Additional references.³

3) The Greenhouse Gas Protocol (GHG) Initiative – The Corporate Value Chain (Scope 3) Accounting & Reporting Standard, 2011.

CRE4

GREENHOUSE GAS EMISSIONS INTENSITY FROM NEW CONSTRUCTION AND REDEVELOPMENT ACTIVITY

1. Relevance

Construction activity contributes to greenhouse gas emissions globally, and increasing attention is being paid to the part the sector can play in helping to reduce emissions.

This Indicator applies to organizations involved in construction projects and is intended to identify greenhouse gas emissions from Scope 1, Scope 2 and Scope 3 of the GHG Protocol.⁴

2. Compilation

2.1 Identify annual turnover (millions) and total annual greenhouse gas emissions (tonnes CO₂ equivalent).

Greenhouse gas emissions reported here should include Scope 1 (e.g., fuels, refrigerants) and Scope 2 (e.g., electricity, imported heat). Reporting organizations may find it helpful to report Scope 3 emissions (e.g., contractor fuel and electricity, off site material manufacture, emissions from waste). State the extent of Scope 3 emissions reported.

2.2 Calculate, using data from 2.1:

$$\text{Greenhouse gas emissions intensity} = \frac{\Sigma (\text{sum of}) \text{ annual CO}_2 \text{ equivalent emissions (tonnes)}}{\Sigma (\text{sum of}) \text{ annual turnover from the construction activities (millions)}}$$

2.3 Report greenhouse gas emissions intensity of construction activities:

- tonnes CO₂e/monetary value (either by turnover or spend or value/year); and
- other relevant greenhouse gas emissions intensity measures (e.g., per employee hour).

Greenhouse gas emissions intensity should be reported by meaningful segmentation, such as:

- Sector (e.g., infrastructure, construction (non-residential) and construction (residential));
- Project type (e.g., roads, rail, residential, commercial offices, retail, education, healthcare, leisure, public, buildings, utilities, marine projects, refurbishments, new builds); and
- Geographic location (e.g., country, region).

2.4 Report how monetary value was identified.

2.5 Report the methodology used to calculate the greenhouse gas emissions intensity.

3. Definitions

Scope 1

A reporting organization's direct GHG emissions. Direct GHG emissions occur from sources that are owned or controlled by the company. For example: emissions from combustion in owned or controlled boilers, furnaces, vehicles; emissions from chemical production in owned or controlled process equipment.

Scope 2

A reporting organization's emissions associated with the generation of electricity, heating/cooling, or steam purchased for own consumption, or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity, heating/cooling, or steam is generated.

Scope 3

A reporting organization's indirect emissions other than those covered in Scope 2. Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions. Scope 3 emissions are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. For example: extraction and production of purchased materials; transportation of purchased fuels; use of sold products and services.

4. Documentation

Suppliers of energy and related services are the most important information source for this Indicator. Other information can be obtained from invoices, measured (or calculated) heat/fuel accounting, estimations, defaults, etc. Besides default data drawn from the International Energy Agency (IEA), information can be obtained from the annual reports submitted by governments to the United Nations Framework Convention on Climate Change (UNFCCC). These reports will detail country energy use and associated emissions for country specific defaults, etc.

⁴) This indicator is broadly based on the Construction CO₂ Measurement protocol developed by ENCORD (The European Network of Construction Companies for Research and Development).

↓ CRE4 CONTINUED

5. References

- The Greenhouse Gas Protocol (GHG) Initiative – A corporate accounting and reporting standard (Revised Edition, 2004) of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).
- See section 3.5 'Additional Construction and Real Estate References' for further regional or country specific references.
- Additional references.⁵

5) The Greenhouse Gas Protocol (GHG) Initiative – The Corporate Value Chain (Scope 3) Accounting & Reporting Standard, 2011.

Sector specific Aspect: Land Degradation, Contamination, and Remediation

Indicators

CRES

LAND REMEDIATED AND IN NEED OF REMEDIATION FOR THE EXISTING OR INTENDED LAND USE, ACCORDING TO APPLICABLE LEGAL DESIGNATIONS

1. Relevance

Land is sometimes adversely affected or made unproductive due to contamination. Contamination may occur as a result of construction and real estate activities, or may have occurred as a result of prior use or activities by an unrelated entity. Contamination may also be of natural origin. Contamination may affect soil quality, water quality, human health or other environmental or ecological receptors. Contamination may be solid, liquid, or gas.

In cases where contamination has occurred as a result of prior activities, entities in this sector frequently conduct assessment, risk management and/or remediation activities, which make the land suitable for existing or new purposes and uses. Sometimes previously uncontaminated land may be judged to be contaminated due to a proposed change to a more sensitive use, or the introduction of more sensitive environmental receptors. Sometimes construction activities can cause sufficient disturbance to render the existing condition of the land contaminative through the introduction of new types of pollution.

When remediation occurs, it is typically to a standard suitable for the existing or nominated end use of the land, for example, residential, industrial or commercial use. The type and extent of contamination reported under this Indicator is influenced by the core business of the reporting organization.

This Indicator allows report readers to assess the stock of potentially contaminated land and that which is currently being assessed, managed and/or remediated to an appropriate standard, and the annual changes in both of these.

2. Compilation

2.1 This Indicator refers to:

- Land contaminated by the company's operations or that of another entity prior to ownership, leasing or management by the reporting organization.
- Land that is owned, leased or managed for construction and real estate activities, or is being held for future development (such as land banks).
- Sea, lakes or river beds.

2.2 Report in square metres or hectares for the current reporting year:

- Total area of land decontaminated and remediated to intended use.
- Total area of land assessed for remediation but not yet remediated.
- Total area of land that is potentially contaminated but level of contamination is not known or assessed.

2.3 Reporting organizations should also disclose if land has become contaminated as a consequence of their own actions or the actions of a third party.

3. Definitions

Remediation

Actions taken to prevent or minimize, or remedy or mitigate, the effects of unacceptable risks associated with contaminated land. This can range from containment to treatment (either in situ or ex-situ), or removal of pollution or contaminants from soil, sediment or from a brownfield site intended for redevelopment, for the general protection of human health and the environment. Remediation may include the long term management and monitoring of existing contamination, sometimes referred to as monitored natural attenuation. Treatment may include chemical, biological, thermal or physical techniques.

Brownfields

Sites that have been potentially contaminated due to historical, industrial, or commercial land use practices, and that are under-utilized, derelict, or vacant, and that may be economically or functionally obsolete.

4. Documentation

Sources of information will include the company's land holdings data (purchases and leases), together with site-level records of land management, and may include reports filed with regulatory authorities on compliance with environmental management plans specified in the regulator's approval for the development.

5. References

None.

CATEGORY: SOCIAL

SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK

G4 Aspect: Occupational Health and Safety

Indicators

CRE6

PERCENTAGE OF THE ORGANIZATION OPERATING IN VERIFIED COMPLIANCE WITH AN INTERNATIONALLY RECOGNIZED HEALTH AND SAFETY MANAGEMENT SYSTEM

1. Relevance

The construction and real estate sector is increasingly focused on defining how occupational health and safety risks are identified and managed to prevent incidents, injuries or deaths.

The development of forward looking ("lead") indicators requires an organization to establish operational controls and to track the satisfactory implementation of these controls, through internal or external verification processes, to eliminate or mitigate the risks associated with its activity.

The development and implementation of health and safety management systems provides organizations with key processes to mitigate the health and safety risks associated with its operations. Review of the management system, by internal and/or external parties, provides assurances that health and safety risks are adequately identified, as a minimum, and addressed in a consistent manner.

2. Compilation

2.1 Identify health and safety management system(s) used, for example OHSAS 18001, or equivalent.

2.2 Identify the percentage of the organization, by percentage of employees, supervised employees and independent contractors, operating under the health and safety management system(s), for example OHSAS 18001, or equivalent.

2.3 Identify the percentage of the organization internally, by percentage of employees, supervised employees and independent contractors, and the proportion externally verified to be operating in compliance with the health and safety management system(s), for example OHSAS 18001, or equivalent.

2.4 Report the percentage of the organization, by percentage of employees, supervised employees and independent contractors, internally verified to be operating in compliance with the health and safety management system(s), for example OHSAS 18001, or equivalent.

2.5 Report the percentage of the organization, by percentage of employees, supervised employees and independent contractors, externally verified to be operating in compliance with the health and safety management system(s), for example OHSAS 18001, or equivalent.

3. Definitions

OH&S Management System

An Occupational Health & Safety (OH&S) management system is a business approach to minimize occupational health and safety risks. The system defines procedures, practices and policies to manage occupational health and safety.

OHSAS 18001

OHSAS 18001 is an internationally recognized assessment specification for occupational health and safety management systems. It was developed by a selection of leading trade bodies, international standards and certification bodies to address a gap where no third-party certifiable international standard existed.

4. Documentation

Potential sources of information include internal audit reports, external audit reports, and records of certification.

5. References

None.

SUB-CATEGORY: SOCIETY

G4 Aspect: Local Communities

Indicators

CRE7

NUMBER OF PERSONS VOLUNTARILY AND INVOLUNTARILY DISPLACED AND/OR RESETTLED BY DEVELOPMENT, BROKEN DOWN BY PROJECT

1. Relevance

Construction and real estate activities can result in the displacement and resettlement of people. Whether voluntary or involuntary, potential impacts may include loss of productive land, loss of employment and income, loss of housing, loss of access to common resources and public services, and social fragmentation.

In addition to construction companies and developers, other players such as governments and banks can be responsible for displacement and resettlement; this Indicator can nevertheless indicate the social impact of a construction and real estate company.

2. Compilation

- 2.1** Identify project sites where displacement and resettlement of people occurred and how responsibilities relating to this displacement and resettlement are shared with other organizations (e.g., governments, banks).
- 2.2** Identify the actual number, or if unavailable an informed estimate, of people voluntarily or involuntarily resettled, for each project. For the purposes of this Indicator, “persons voluntarily or involuntarily resettled” includes all the classifications of displaced persons identified in the definition of ‘Displaced Persons’.
- 2.3** Report total number of people resettled, broken down by those who were voluntarily or involuntarily resettled. Women and other vulnerable groups can be disproportionately affected by displacement and resettlement. Therefore, include breakdown of those displaced by characteristics such as gender, or membership of vulnerable groups (such as disabled people).

- 2.4** Report the number of people involuntarily resettled and break this number down by membership of vulnerable groups.

3. Definitions

Displaced Persons

Displaced persons may be classified as persons: (i) who have formal legal rights to the land that they occupy; (ii) who do not have formal legal rights to land that is recognized or is recognizable under the national laws; or (iii) who have no recognizable legal right or claim to the land that they occupy.

Involuntary Resettlement

Involuntary resettlement refers both to physical displacement (relocation or loss of shelter) and to economic displacement (loss of assets or access to assets that leads to loss of income sources or means of livelihood as a result of project related land acquisition). Land acquisition includes both outright purchases and/or expropriation of property and purchases of access rights such as rights of way.

Resettlement is considered involuntary when affected individuals or communities do not have the right to refuse land acquisition that results in their displacement. This occurs in cases of (i) lawful expropriation or restrictions on land use based on eminent domain, and (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail.

Voluntary Resettlement

Voluntary resettlement refers both to physical displacement (relocation or loss of shelter) and to economic displacement (loss of assets or access to assets that leads to loss of income sources or means of livelihood as a result of project related land acquisition).

↓ CRE7 CONTINUED

Resettlement is considered voluntary when affected individuals or communities have the right to refuse land acquisition that results in their displacement.

Compensation

Compensation could include cash compensation, replacement housing, land, or commercial sites (e.g., shops), and additional support such as infrastructure in new resettled sites, training, credit and job opportunities.

4. Documentation

Legal department or planning department.

5. References

- IFC Performance Standard 5: Land Acquisition and Involuntary Resettlement, February 2006.

SUB-CATEGORY: PRODUCT RESPONSIBILITY

G4 Aspect: Product and Service Labeling

Indicators

CRE8

TYPE AND NUMBER OF SUSTAINABILITY CERTIFICATION, RATING AND LABELING SCHEMES FOR NEW CONSTRUCTION, MANAGEMENT, OCCUPATION AND REDEVELOPMENT

1. Relevance

Sustainable construction, management and redevelopment certification and labeling schemes exist worldwide for building and infrastructure assets, and vary from market to market. Each scheme usually provides a consensus-based framework, tailored to individual markets, to rate a particular building on its overall level of sustainability. Schemes often look at issues regarding energy and water use, indoor air quality, materials use, and accessibility, among other factors.

Certificates, ratings and labels can be mandatory, as in the case of Energy Performance Certification labeling currently required in Europe, and the Building Energy Efficiency Certificate in Australia. The labels can also be voluntary labels, certified by private organizations or governments through voluntary programs.

The voluntary and mandated use of certification schemes has reached sufficient levels that many actors now use them as one approach to interpret the sustainability of a particular asset or company. Thus, provision of certification information may be of relevance to some report readers.

2. Compilation

2.1 Report the type and number of mandatory and voluntary sustainability certification, rating or labeling schemes in at least one of the following ways:

- Total number of assets that have achieved a certification, rating or labeling within a portfolio (buildings and construction projects), and level of certification attained; or
- Percentage of assets certifications, ratings or labels achieved within a portfolio.

2.2 Report building operational performance improvements that result from the introduction of the certification, rating or labeling schemes compared to the design specification using any of the criteria of the certification, rating or labeling schemes.

3. Definitions

None.

4. Documentation

Potential information sources include certificates issued by certification organizations (government and commercial), and internal management or consultant reports detailing achievement of certification, rating or label standards at various stages of the lifecycle (namely new construction, management, occupation and redevelopment).

5. References

None.

5

ANNEX I. OVERVIEW OF LINKS WITH THE CONSTRUCTION AND REAL ESTATE SECTOR SUPPLEMENT





Annex I provides an overview of how the Construction and Real Estate Sector Supplement (2011) contents have been re-organized to fit the new structure of the G4 Guidelines and includes references to the original contents' location in the Sector Supplement.

Legend:

The following references correspond to the different chapters of the *G3.1 Construction and Real Estate Sector Supplement* as follows:

- RG & CRESS → Sustainability Reporting Guidelines & Construction and Real Estate Sector Supplement
- IP: EC & CRESS → Indicator Protocols Set Economic (EC)
- IP: EN & CRESS → Indicator Protocols Set Environment (EN)
- IP: LA & CRESS → Indicator Protocols Set Labor Practices and Decent Work (LA)
- IP: HR & CRESS → Indicator Protocols Set Human Rights (HR)
- IP: SO & CRESS → Indicator Protocols Set Society (SO)
- IP: PR & CRESS → Indicator Protocols Set Product Responsibility (PR)

GENERAL STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR

GENERAL STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Section	Original location of the Sector Disclosures in the Sector Supplement (2011)
Strategy and Analysis	SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES  Additional disclosure requirements See Sector Supplement RG & CRESS, p. 31
Organizational Profile	SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES  Additional disclosure requirements See Sector Supplement RG & CRESS, p. 32  Additional disclosure requirements See Sector Supplement IP: LA & CRESS, p. 4  Additional Guidance See Sector Supplement IP: LA & CRESS, p. 4

↓ GENERAL STANDARD DISCLOSURES FOR THE SECTOR CONTINUED



GENERAL STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Section	Original location of the Sector Disclosures in the Sector Supplement (2011)
Identified Material Aspects and Boundaries	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES</p> <p> G4-20  Additional Guidance See Sector Supplement RG & CRESS, p. 33</p> <p> G4-21  Additional Guidance See Sector Supplement RG & CRESS, p. 33</p>
Stakeholder Engagement	<p>SECTOR ADDITIONS TO G4 GENERAL STANDARD DISCLOSURES</p> <p> G4-24  Additional disclosure requirements See Sector Supplement RG & CRESS, p. 35</p> <p> Additional Guidance See Sector Supplement RG & CRESS, p. 35</p>

SPECIFIC STANDARD DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR

CATEGORY: ECONOMIC

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Economic Performance	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 37
	SECTOR ADDITIONS TO G4 INDICATORS  DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED  Additional disclosure requirements See Sector Supplement IP: EC & CRESS, p. 5  Additional Guidance See Sector Supplement IP: EC & CRESS, pp. 4-6  FINANCIAL IMPLICATIONS AND OTHER RISKS AND OPPORTUNITIES FOR THE ORGANIZATION'S ACTIVITIES DUE TO CLIMATE CHANGE  Additional disclosure requirements See Sector Supplement IP: EC & CRESS, pp. 7-8  Additional Guidance See Sector Supplement IP: EC & CRESS, pp. 7-8
Market Presence	SECTOR ADDITIONS TO G4 INDICATORS  PROPORTION OF SENIOR MANAGEMENT HIRED FROM THE LOCAL COMMUNITY AT SIGNIFICANT LOCATIONS OF OPERATION  Additional disclosure requirements See Sector Supplement IP: EC & CRESS, p. 13  Additional Guidance See Sector Supplement IP: EC & CRESS, p. 13















↓ ECONOMIC DISCLOSURES FOR THE SECTOR CONTINUED

ECONOMIC DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Indirect Economic Impacts	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 37
	SECTOR ADDITIONS TO G4 INDICATORS  DEVELOPMENT AND IMPACT OF INFRASTRUCTURE INVESTMENTS AND SERVICES SUPPORTED  Additional disclosure requirements See Sector Supplement IP: EC & CRESS, p. 14  Additional Guidance See Sector Supplement IP: EC & CRESS, p. 14  SIGNIFICANT INDIRECT ECONOMIC IMPACTS, INCLUDING THE EXTENT OF IMPACTS  Additional disclosure requirements See Sector Supplement IP: EC & CRESS, p. 15  Additional Guidance See Sector Supplement IP: EC & CRESS, p. 15

CATEGORY: ENVIRONMENTAL

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Materials	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 39
	SECTOR ADDITIONS TO G4 INDICATORS  MATERIALS USED BY WEIGHT OR VOLUME  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 5  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 5  PERCENTAGE OF MATERIALS USED THAT ARE RECYCLED INPUT MATERIALS  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 6  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 6
Energy	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 39 See Sector Supplement IP: EN & CRESS, p. 15
	SECTOR ADDITIONS TO G4 INDICATORS  ENERGY CONSUMPTION WITHIN THE ORGANIZATION  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, pp. 7-11  Additional Guidance See Sector Supplement IP: EN & CRESS, pp. 7-11

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Energy (cont.)	SECTOR ADDITIONS TO G4 INDICATORS (CONT.)
	<div>  G4-EN6 REDUCTION OF ENERGY CONSUMPTION </div> <div>  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 14 </div> <div>  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 14 </div>
	<div>  G4-EN7 REDUCTIONS IN ENERGY REQUIREMENTS OF PRODUCTS AND SERVICES </div> <div>  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 15 </div>
Water	SECTOR SPECIFIC INDICATORS
	<div>  CRE1 BUILDING ENERGY INTENSITY See Sector Supplement IP: EN & CRESS, pp. 12-13 </div>
	SECTOR SPECIFIC GUIDANCE FOR DMA
	<div>  G4-DMA </div> <div>  Additional Guidance See Sector Supplement RG & CRESS, p. 40 </div>
	SECTOR ADDITIONS TO G4 INDICATORS
	<div>  G4-EN8 TOTAL WATER WITHDRAWAL BY SOURCE </div> <div>  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 17 </div> <div>  Additional Guidance See Sector Supplement IP: EN & CRESS, pp. 17-18 </div>
	<div>  G4-EN9 WATER SOURCES SIGNIFICANTLY AFFECTED BY WITHDRAWAL OF WATER </div> <div>  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 19 </div> <div>  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 19 </div>

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Water (cont.)	SECTOR ADDITIONS TO G4 INDICATORS (CONT.) <div>  G4-EN10 PERCENTAGE AND TOTAL VOLUME OF WATER RECYCLED AND REUSED  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 20  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 20 </div>
	SECTOR SPECIFIC INDICATORS <div>  CRE2 BUILDING WATER INTENSITY See Sector Supplement IP: EN & CRESS, pp. 21-22 </div>
Biodiversity	SECTOR SPECIFIC GUIDANCE FOR DMA <div>   Additional Guidance See Sector Supplement RG & CRESS, p. 40 </div>
	SECTOR ADDITIONS TO G4 INDICATORS <div>  G4-EN12 DESCRIPTION OF SIGNIFICANT IMPACTS OF ACTIVITIES, PRODUCTS, AND SERVICES ON BIODIVERSITY IN PROTECTED AREAS AND AREAS OF HIGH BIODIVERSITY VALUE OUTSIDE PROTECTED AREAS  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 24  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 24  G4-EN13 HABITATS PROTECTED OR RESTORED  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 26 </div>
Emissions	SECTOR SPECIFIC GUIDANCE FOR DMA <div>   Additional Guidance See Sector Supplement RG & CRESS, p. 40 See Sector Supplement IP: EN & CRESS, p. 36 </div>



↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Emissions (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN15 DIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 1)</p> <p> Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 29</p> <p> Additional Guidance See Sector Supplement IP: EN & CRESS, pp. 29-30</p> <p>G4-EN16 ENERGY INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 2)</p> <p> Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 29</p> <p> Additional Guidance See Sector Supplement IP: EN & CRESS, pp. 29-30</p> <p>G4-EN17 OTHER INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 3)</p> <p> Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 31</p> <p> Additional Guidance See Sector Supplement IP: EN & CRESS, p. 31</p> <p>G4-EN19 REDUCTION OF GREENHOUSE GAS (GHG) EMISSIONS</p> <p> Additional Guidance See Sector Supplement IP: EN & CRESS, p. 36</p> <p>SECTOR SPECIFIC INDICATORS</p> <p>CRE3 GREENHOUSE GAS EMISSIONS INTENSITY FROM BUILDINGS See Sector Supplement IP: EN & CRESS, pp. 32-33</p> <p>CRE4 GREENHOUSE GAS EMISSIONS INTENSITY FROM NEW CONSTRUCTION AND REDEVELOPMENT ACTIVITY See Sector Supplement IP: EN & CRESS, pp. 34-35</p>

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED


ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Effluents and Waste	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 40
	SECTOR ADDITIONS TO G4 INDICATORS  TOTAL WATER DISCHARGE BY QUALITY AND DESTINATION  Additional Guidance See Sector Supplement IP: EN & CRESS, p. 39  TOTAL WEIGHT OF WASTE BY TYPE AND DISPOSAL METHOD  Additional disclosure requirements See Sector Supplement IP: EN & CRESS, p. 41  Additional Guidance See Sector Supplement IP: EN & CRESS, pp. 41-42
Products and Services	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 41 See Sector Supplement IP: EN & CRESS, pp. 48-49
	SECTOR ADDITIONS TO G4 INDICATORS  EXTENT OF IMPACT MITIGATION OF ENVIRONMENTAL IMPACTS OF PRODUCTS AND SERVICES  Additional Guidance See Sector Supplement IP: EN & CRESS, pp. 48-49
Transport	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 41

↓ ENVIRONMENTAL DISCLOSURES FOR THE SECTOR CONTINUED

ENVIRONMENTAL DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Transport (cont.)	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-EN30 SIGNIFICANT ENVIRONMENTAL IMPACTS OF TRANSPORTING PRODUCTS AND OTHER GOODS AND MATERIALS FOR THE ORGANIZATION'S OPERATIONS, AND TRANSPORTING MEMBERS OF THE WORKFORCE</p> <p> Additional Guidance See Sector Supplement IP: EN & CRESS, pp. 52-53</p>
Sector specific Aspects	
Land Degradation, Contamination and Remediation	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p>G4-DMA  Additional Guidance See Sector Supplement RG & CRESS, pp. 40-41</p> <p>SECTOR SPECIFIC INDICATORS</p> <p>CRE5 LAND REMEDIATED AND IN NEED OF REMEDIATION FOR THE EXISTING OR INTENDED LAND USE, ACCORDING TO APPLICABLE LEGAL DESIGNATIONS See Sector Supplement: IP: EN & CRESS, pp. 46-47</p>

CATEGORY: SOCIAL


SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Employment	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 45
	SECTOR ADDITIONS TO G4 INDICATORS  BENEFITS PROVIDED TO FULL-TIME EMPLOYEES THAT ARE NOT PROVIDED TO TEMPORARY OR PART-TIME EMPLOYEES, BY SIGNIFICANT LOCATIONS OF OPERATION  Additional disclosure requirements See Sector Supplement IP: LA & CRESS, p. 7  Additional Guidance See Sector Supplement IP: LA & CRESS, p. 8
Occupational Health and Safety	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, pp. 45-46 See Sector Supplement IP: LA & CRESS, p. 17
	SECTOR ADDITIONS TO G4 INDICATORS  TYPE OF INJURY AND RATES OF INJURY, OCCUPATIONAL DISEASES, LOST DAYS, AND ABSENTEEISM, AND TOTAL NUMBER OF WORK-RELATED FATALITIES, BY REGION AND BY GENDER  Additional disclosure requirements See Sector Supplement IP: LA & CRESS, pp. 13-14  Additional Guidance See Sector Supplement IP: LA & CRESS, pp. 13-15






↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Occupational Health and Safety (cont.)	SECTOR ADDITIONS TO G4 INDICATORS (CONT.) <div>  G4-LA7 WORKERS WITH HIGH INCIDENCE OR HIGH RISK OF DISEASES RELATED TO THEIR OCCUPATION <div>  Additional disclosure requirements See Sector Supplement IP: LA & CRESS, p. 17 </div> <div>  Additional Guidance See Sector Supplement IP: LA & CRESS, p. 17 </div> </div>
	SECTOR SPECIFIC INDICATORS <div>  CRE6 PERCENTAGE OF THE ORGANIZATION OPERATING IN VERIFIED COMPLIANCE WITH AN INTERNATIONALLY RECOGNIZED HEALTH AND SAFETY MANAGEMENT SYSTEM See Sector Supplement IP: LA & CRESS, p. 16 </div>
Training and Education	SECTOR SPECIFIC GUIDANCE FOR DMA <div>   Additional Guidance See Sector Supplement RG & CRESS, p. 46 </div>
	SECTOR ADDITIONS TO G4 INDICATORS <div>  G4-LA9 AVERAGE HOURS OF TRAINING PER YEAR PER EMPLOYEE BY GENDER, AND BY EMPLOYEE CATEGORY <div>  Additional disclosure requirements See Sector Supplement IP: LA & CRESS, p. 19 </div> <div>  Additional Guidance See Sector Supplement IP: LA & CRESS, p. 19 </div> </div>
Diversity and Equal Opportunity	SECTOR SPECIFIC GUIDANCE FOR DMA <div>   Additional Guidance See Sector Supplement RG & CRESS, p. 46 </div>
	SECTOR ADDITIONS TO G4 INDICATORS <div>  G4-LA12 COMPOSITION OF GOVERNANCE BODIES AND BREAKDOWN OF EMPLOYEES PER EMPLOYEE CATEGORY ACCORDING TO GENDER, AGE GROUP, MINORITY GROUP MEMBERSHIP, AND OTHER INDICATORS OF DIVERSITY <div>  Additional Guidance See Sector Supplement IP: LA & CRESS, pp. 22-23 </div> </div>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

LABOR PRACTICES AND DECENT WORK DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Equal Remuneration for Women and Men	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-LA13 RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN BY EMPLOYEE CATEGORY, BY SIGNIFICANT LOCATIONS OF OPERATION</p> <p> Additional Guidance See Sector Supplement IP: LA & CRESS, p. 24</p>






SUB-CATEGORY: HUMAN RIGHTS

HUMAN RIGHTS DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Non-discrimination	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p>G4-DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 49</p>
	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-HR3 TOTAL NUMBER OF INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN</p> <p> Additional disclosure requirements See Sector Supplement IP: HR & CRESS, p. 6</p> <p> Additional Guidance See Sector Supplement IP: HR & CRESS, p. 6</p>
Child Labor	<p>SECTOR SPECIFIC GUIDANCE FOR DMA</p> <p>G4-DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 49</p>
	<p>SECTOR ADDITIONS TO G4 INDICATORS</p> <p>G4-HR5 OPERATIONS AND SUPPLIERS IDENTIFIED AS HAVING SIGNIFICANT RISK FOR INCIDENTS OF CHILD LABOR, AND MEASURES TAKEN TO CONTRIBUTE TO THE EFFECTIVE ABOLITION OF CHILD LABOR</p> <p> Additional Guidance See Sector Supplement IP: HR & CRESS, p. 9</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

HUMAN RIGHTS DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Forced or Compulsory Labor	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 49
Security Practices	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 50
Supplier Human Rights Assessment	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 49

SUB-CATEGORY: SOCIETY

SOCIETY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Local Communities	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 53
	SECTOR ADDITIONS TO G4 INDICATORS  PERCENTAGE OF OPERATIONS WITH IMPLEMENTED LOCAL COMMUNITY ENGAGEMENT, IMPACT ASSESSMENTS, AND DEVELOPMENT PROGRAMS  Additional disclosure requirements See Sector Supplement IP: SO & CRESS, p. 3
	 OPERATIONS WITH SIGNIFICANT ACTUAL AND POTENTIAL NEGATIVE IMPACTS ON LOCAL COMMUNITIES  Additional disclosure requirements See Sector Supplement IP: SO & CRESS, p. 6  Additional Guidance See Sector Supplement IP: SO & CRESS, pp. 5-6


↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

SOCIETY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Local Communities (cont.)	SECTOR SPECIFIC INDICATORS  NUMBER OF PERSONS VOLUNTARILY AND INVOLUNTARILY DISPLACED AND/OR RESETTLED BY DEVELOPMENT, BROKEN DOWN BY PROJECT See Sector Supplement IP: SO & CRESS, pp. 8-9
Anti-corruption	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 53
Public Policy	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement IP: SO & CRESS, p. 13
Anti-competitive Behavior	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 53






SUB-CATEGORY: PRODUCT RESPONSIBILITY

Introduction

See Sector Supplement RG & CRESS, p. 56

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Customer Health and Safety	SECTOR SPECIFIC GUIDANCE FOR DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 56 See Sector Supplement IP: PR & CRESS, p. 3

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Customer Health and Safety (cont.)	SECTOR ADDITIONS TO G4 INDICATORS
	<p>G4-PR1 PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES FOR WHICH HEALTH AND SAFETY IMPACTS ARE ASSESSED FOR IMPROVEMENT</p> <p> Additional Guidance See Sector Supplement IP: PR & CRESS, p. 3</p> <p>G4-PR2 TOTAL NUMBER OF INCIDENTS OF NON-COMPLIANCE WITH REGULATIONS AND VOLUNTARY CODES CONCERNING THE HEALTH AND SAFETY IMPACTS OF PRODUCTS AND SERVICES DURING THEIR LIFE CYCLE, BY TYPE OF OUTCOMES</p> <p> Additional disclosure requirements See Sector Supplement IP: PR & CRESS, p. 4</p> <p> Additional Guidance See Sector Supplement IP: PR & CRESS, pp. 4-5</p>
Product and Service Labeling	SECTOR SPECIFIC GUIDANCE FOR DMA
	<p>G4-DMA  Additional Guidance See Sector Supplement RG & CRESS, p. 56</p>
	SECTOR ADDITIONS TO G4 INDICATORS
	<p>G4-PR3 TYPE OF PRODUCT AND SERVICE INFORMATION REQUIRED BY THE ORGANIZATION'S PROCEDURES FOR PRODUCT AND SERVICE INFORMATION AND LABELING, AND PERCENTAGE OF SIGNIFICANT PRODUCT AND SERVICE CATEGORIES SUBJECT TO SUCH INFORMATION REQUIREMENTS</p> <p> Additional Guidance See Sector Supplement IP: PR & CRESS, p. 6</p> <p>G4-PR4 TOTAL NUMBER OF INCIDENTS OF NON-COMPLIANCE WITH REGULATIONS AND VOLUNTARY CODES CONCERNING PRODUCT AND SERVICE INFORMATION AND LABELING, BY TYPE OF OUTCOMES</p> <p> Additional Guidance See Sector Supplement IP: PR & CRESS, p. 8</p> <p>G4-PR5 RESULTS OF SURVEYS MEASURING CUSTOMER SATISFACTION</p> <p> Additional disclosure requirements See Sector Supplement IP: PR & CRESS, p. 9</p> <p> Additional Guidance See Sector Supplement IP: PR & CRESS, p. 9</p>

↓ SOCIAL DISCLOSURES FOR THE SECTOR CONTINUED

PRODUCT RESPONSIBILITY DISCLOSURES FOR THE CONSTRUCTION AND REAL ESTATE SECTOR	
Aspects	Original location of the Sector Disclosures in the Sector Supplement (2011)
G4 Aspects	
Product and Service Labeling (cont.)	<div><div>SECTOR SPECIFIC INDICATORS</div><div><div>CRE8</div><div>TYPE AND NUMBER OF SUSTAINABILITY CERTIFICATION, RATING AND LABELING SCHEMES FOR NEW CONSTRUCTION, MANAGEMENT, OCCUPATION AND REDEVELOPMENT</div><div>See Sector Supplement IP: PR & CRESS, p. 7</div></div></div>

6

ANNEX II. CONSTRUCTION AND REAL ESTATE SECTOR DISCLOSURES CONTENT DEVELOPMENT

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The Construction and Real Estate Sector Supplement Working Group was responsible for developing the set of new, sector-specific disclosures and performance indicators, as well as commentary on the G3.1 Guidelines content. The Working Group process ran from October 2009 through August 2011. The Working Group was formed by volunteers from construction and real estate companies, investors, labor and non-governmental organizations.

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