

Practice to be assessed and included in the Guidelines

Number/code: GOV1

Title: GHG INVENTORY

Guidelines section:

<input checked="" type="checkbox"/>	Governance	<input type="checkbox"/>	Operational management		
		<input type="checkbox"/>	<i>Context of the event</i>	<input type="checkbox"/>	<i>Procurement</i>
		<input type="checkbox"/>	<i>Event</i>	<input type="checkbox"/>	<i>Mobility and logistics</i>
		<input type="checkbox"/>	<i>Stadium management</i>	<input type="checkbox"/>	

Description:

Some major events measure and account the GHG emissions caused by their organisation through the so called GHG emissions inventory.

Since the German World Cup, Fifa has been developing “The Green Goal”, an official program aimed, among other aspects, at reducing CO2 emissions.

A GHG inventory can have different scopes and covers all or only some of an event’s life cycle phases.

More precisely, according to the international standard ISO 14064 a GHG inventory can include the following scopes:

Scope 1 > direct emissions from owned or controlled sources;

Scope 2 > indirect emissions from the generation of purchased energy;

Scope 3 > all the other indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. In scope 3, all the emissions caused by spectators’ travels to reach the event location have to be accounted: this often represents one of the main sources of GHG emissions for events.

Otherwise, some events just account the emissions generated during the actual event phase and do not take into consideration the emissions caused during the conception and planning of the event as well as those derived from the dismantling phase.

Environmental benefits:

A GHG inventory itself does not have any direct environmental impact, it is a management and monitoring tool aimed at measuring an environmental performance. However, since measuring is the

first step for managing and improving performance, a GHG inventory represents a key tool for understanding which activities are the most impactful under an emissions point of view, and thus where the reduction strategy should focus on.

Finally, the quantification of the GHG emission caused often leads to the adoption of offsetting strategies (see OM/E1).

Economic benefits:

The elaboration of a GHG inventory usually requires some time and effort: it is quite common to outsource its elaboration to an external consultant. In addition, if the event organiser wants to certify it, some additional costs, time and effort have to be taken into consideration.

However, the costs relating GHG inventory preparation and certification can be considered quite negligible in comparison to the overall investments usually required for a major sport event.

Applicability and replicability potential

GHG inventory can be elaborated for any event: according to its dimension, it can make sense to limit it only to scope 1 and 2 emissions and to the proper event implementation phase (for minor events).

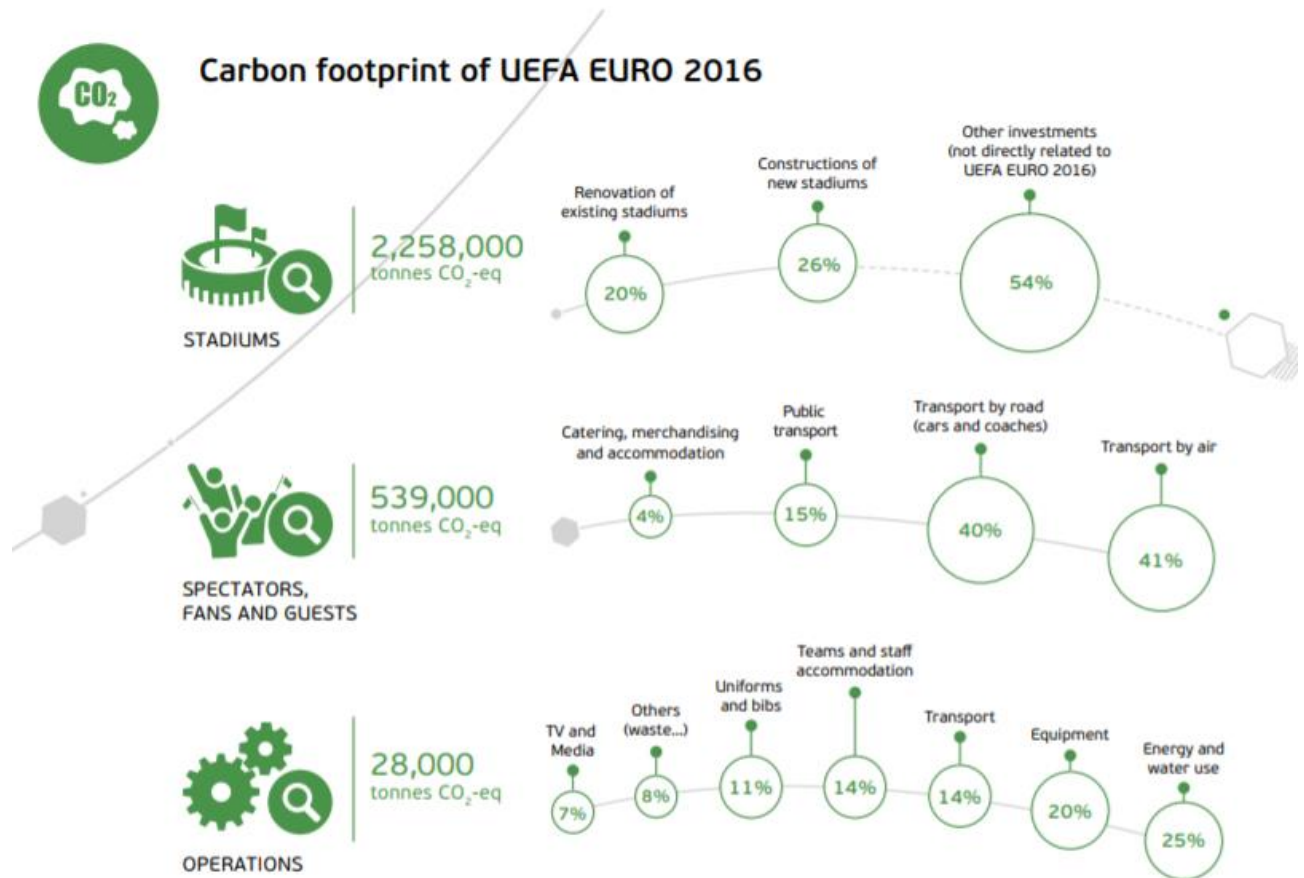
If prepared according to the international standard ISO 14064, it can also be certified: this ensures a proper level of reliability and comparability of different events' carbon management overall performance.

Examples:

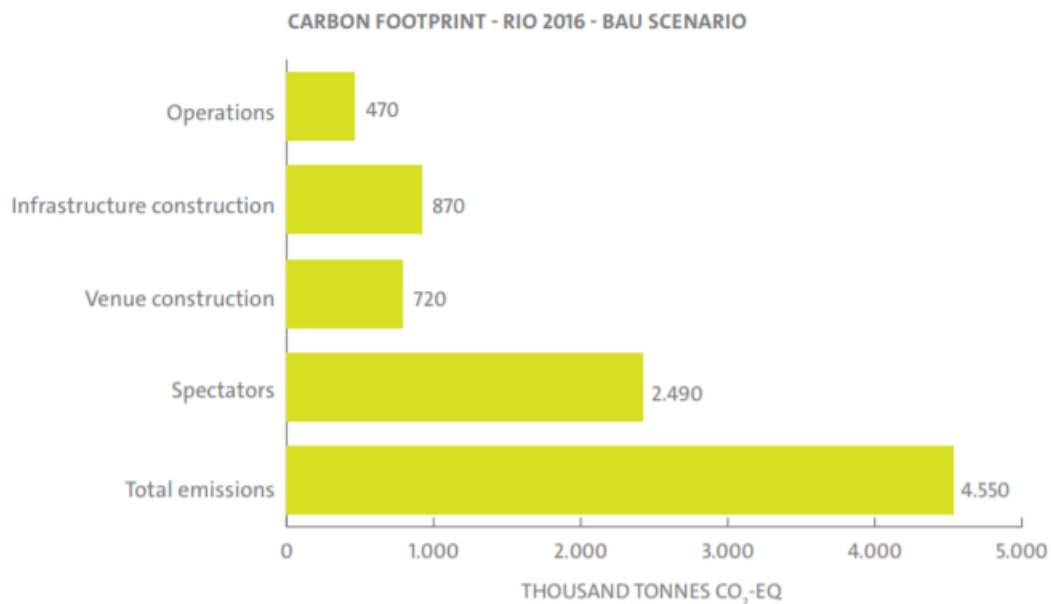
- 1) EXPO Milano 2015: firstly, certified the planning and construction phases (operating years 2012, 2013 and 2014) according to ISO 14064 and then, certified the event and dismantling phases in 2016 after the conclusion of the event. EXPO accounted 93.665 tons of CO₂eq for 2012 and 2013 and reported an overall final estimation from 120.000 to 300.000 tons of CO₂ eq for the 2012 – 2016 period.
- 2) FIFA Women World Cup Germany 2011: they did not certify the GHG inventory, however they declared to have taken into account the spectators travels related emissions (Scope 3) The total GHG emissions declared were equal to 40.000 tons of CO₂eq, of which: International transportation 51%, Transportation in Germany 33%, Organisation 5%, Stadium power 4%, hotel stays 3%, stadium construction 2%, public viewing 2%.

CALCULATING GREENHOUSE GAS EMISSIONS FROM WORLD CUP TRANSPORT
Fans' postcodes and home countries were obtained from anonymous ticket data, making it possible to calculate the distances they travelled during the World Cup. Because different modes of transport vary greatly in terms of their respective greenhouse gas emissions, the total usage of each by fans travelling to the World Cup needed to be quantified. Therefore, 810 visitors were asked for their postcodes and the type of transport they used to get to the World Cup. Traffic reports were also made available to the Organising Committee. Using this information, the Modal Split (the proportional distribution per method of travel) could be obtained. Distances and Modal Split referring to teams and officials could be established by checking data from the booking departments of the OC, FIFA and the vehicle fleet management. Emissions produced by journalists, volunteers etc. were estimated in collaboration with the OC.

- 3) UEFA EURO 2016: they accounted their GHG emissions distinguishing among:



4) Rio 2016 Olympics estimated Carbon Footprint (CF)



5) Study for 8 football tiers in England: the School of Biological Sciences of the University of Essex applied a survey research method in order to examine waste management practices and then to calculate the estimated landfill waste GHG emissions from eight football tiers in England. In collaboration with Essex FA one club was selected from each tier from 3 (League One) to 10 (2nd Regional division) to be representative of clubs at that tier. In

addition to interviews and physical observations, structured questionnaires were also used to collect data from football clubs and waste contractors. The GHG emissions were calculated by multiplying the annual waste 290 landfilled at each football tier, by using DEFRA's conversion factors of kg CO₂/1000 kg.

Source

[EXPO Milan 2015](#) (p. 17, p.114)

[UEFA EURO 2016](#) (p. 19)

[RIO 2016](#)

[London 2012](#)

[FIFA World Cup Brasil 2014](#)

[Football Tiers in England](#)