

FORMAT		
1. Name of resource	Measuring and Reporting Greenhouse Gas Emissions: an introduction for museums and cultural institutions	
2. Location	https://curatingtomorrow236646048.files.wordpress.com/2022/10/measuring-reporting-greenhouse-gas-emissions-2022.pdf	
3. Alternative location		
4. Author[s]	H. A. McGhie, T. Black, G. Indriago, C. Kapustina and J. Chu	
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8. Languages in which available	English	
9. Geographic area resource relates to	Global	
10. Does the resource relate to a specific time frame?		
11. Type	Report	Yes
	Toolkit/Framework/Roadmap	Yes
	Sign-post to other resource (database)	
	Case studies	Yes
	Other	
12. If this is part of an initiative, what is the initiative?		
COLLECTIONS AND COLLECTIONS-BASED INSTITUTIONS		
13. Explicit links to collections	Yes	
14. Explicit links to museums/libraries/archives	Yes	
15. Types of institutions the resource covers	Museums	X
	Archives	X
	Libraries	X
	Other	X

16. Does the resource relate to specific disciplines?	Arts, humanities and social sciences: philosophy, psychology, religion, social sciences, law, politics, language, arts and recreation, architecture, literature, history, geography and ethnology, anthropology, archaeology	X
	Science, natural history, technology, medicine, engineering, manufacturing	X
17. If no explicit links to collections, justification for inclusion		

HOW IT CONTRIBUTES TO SUSTAINABLE DEVELOPMENT

18. Collections-related activities the resource relates to (mark all that apply)

Develop collections to protect and safeguard wider cultural and natural heritage more effectively , for example by targeting collecting to threatened forms of heritage in strategic ways	
Use collections to promote learning and educational opportunities that contribute to sustainable development more effectively , for example education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development and/or skills development relating to collections	
Use collections to promote cultural participation/social inclusion more effectively , for example by reducing barriers to participation, to ensure no-one is 'left behind'	
Use collections to promote sustainable tourism more effectively , for example by developing new products based on local cultural heritage, and/or considering the rights of stakeholder groups in relation to collections	
Use collections to support research that contributes to sustainable development (including all forms of personal and self-directed research at all levels that make use of stored collections) more effectively, for example by providing effective facilities, collections and information to meet researchers' needs	
Make decisions around collections that contribute to sustainable development more effectively	
i. employment (recruiting, staff training, staff safety)	
ii. energy consumption, greenhouse gas emissions, reduction, monitoring and reporting	X
iii. waste management and reduction of waste	X

iv. transport (forms of transport, energy use)	X
v. commercial activities including copyright and IP	X
vi. governance and management	X
vii. security, disaster preparedness and risk reduction	
Direct external leadership, partnerships and collaborations towards sustainable development more effectively , for example by developing impactful partnerships	
19. Does the resource relate clearly to any international conventions (mark all that apply)?	
Culture conventions:	
1952, 71 Protection of Copyright and Neighbouring Rights	
1954 Protection of Cultural Property in the Event of Armed Conflict	
1970 Fighting Against the Illicit Trafficking of Cultural Property	
1972 Protection of the World Cultural and Natural Heritage	
2001 Protection of the Underwater Cultural Heritage	
2003 Safeguarding of the Intangible Cultural Heritage	
2005 Protection and Promotion of the Diversity of Cultural Expressions	
Rio Conventions:	
Convention on Biological Diversity (CBD), Convention to Combat Desertification (UNCCD), Framework Convention on Climate Change (UNFCCC)	X
AIMS AND CONTENT	
20. What issues does the resource aim to address?	<p>“There is a lot of talk about net zero and climate action in museums and cultural institutions, including galleries, libraries, and archives (referred to as MCIs throughout this guide), but how can institutions accurately assess their environmental impact and evaluate progress towards their climate goals? This guide has been created to help you understand greenhouse gas (GHG) emissions accounting, and how you can use it to assess, calculate, and report your emissions with confidence...</p> <p>This guide shows how common activities of MCIs relate to the classes of emissions (Scopes and Categories) used in GHG accounting and aims to help you to begin your first GHG inventory, or to better understand your existing reporting and reporting requirements.” (p.9)</p>
21. Intended audience of resource	<p>“This guide is designed for any museum or cultural institution that is interested in understanding, measuring and reducing its emissions to contribute to climate action.</p> <p>Directors and managers can use this guide to understand the importance and benefits of GHG accounting and emissions reporting, and how to disclose their activities and emissions with greater confidence and ability.</p>

	<p>Building managers can increase their understanding of how buildings, energy and waste relate to the different Scope 3 Categories.</p> <p>Those involved in procurement decisions can use the guide to understand the implications of procurement options.</p> <p>Those involved in developing collections and exhibitions can use it to understand how those activities relate to the different Scope 3 Categories.</p> <p>Those involved in public education and communication, including educators and marketing teams, can use this guide to understand the principles of GHG accounting, to incorporate into public-facing activities and messages.”</p>
22. Process of development	
23. Organisation/structure/contents	<p>SECTION 1: Introduction and background 8</p> <p>What is greenhouse gas (GHG) accounting? 9</p> <p>Who is this guide for? 10</p> <p>What is climate change? 14</p> <p>What are greenhouse gases? 15</p> <p>What activities produce greenhouse gases? 17</p> <p>The UNFCCC and Paris Agreement 18</p> <p>GHG accounting as part of sustainable development 19</p> <p>Why should museums and cultural institutions measure their greenhouse gas emissions? 20</p> <p>SECTION 2: Greenhouse gas (GHG) accounting 22</p> <p>Climate neutrality, carbon neutrality and net zero 24</p> <p>How are greenhouse gas emissions categorized? 25</p> <p>Emission Factors 28</p> <p>Converting measurements 30</p> <p>Global warming potential (GWP) 32</p> <p>CO2 Equivalency (CO2e) 33</p> <p>Steps to developing your GHG inventory 36</p> <p>Ownership v. operatorship methodologies 39</p> <p>Defining GHG inventory boundaries 42</p> <p>Where to begin? 42</p> <p>SECTION 3: Understanding emissions Scopes and Categories 44</p> <p>Scope 1 Emissions – Direct Emissions 46</p> <p>Scope 2 Emissions – Indirect Emissions from Supplied Utilities 48</p> <p>Scope 3 Emissions – Indirect Supply Chain Emissions 50</p> <p>Determining applicability of Scope 3 Categories 51</p> <p>SECTION 4: How can GHG emissions be reduced in museums and cultural institutions? 88</p> <p>Illustration: How MCI activities relate to emissions Scopes and Categories 90</p> <p>Scope 1 reductions 92</p>

	Scope 2 reductions 93 Scope 3 reductions 94 SECTION 5: Reporting and communicating emissions reductions 98 Making environmental claims 100 Resources 104 Appendix A: Glossary 106 References
FRAMEWORKS	
24. Framework structure	The 3 Scopes and 15 Scope 3 Categories represent a framework for measuring and reporting emissions.
25. Relevant policy considerations	Yes
26. Resources for implementation identified	Yes
27. Specific assessment points/indicators/milestones/action plan for monitoring	Yes
28. ASPECTS OF SUSTAINABILITY COVERED BY RESOURCE (mark all that apply)	
People (social sustainability)	
Planet (environmental sustainability)	X
Prosperity (economic sustainability)	
Peace	
Partnerships	X
29. CROSS-CUTTING CONSIDERATIONS COVERED BY RESOURCE (mark all that apply)	
Gender perspectives	
North and South perspectives	
HOW THE RESOURCE CONTRIBUTES TO AGENDA 2030 AND THE SDGs	
HOW AGENDA 2030 AND THE SDGs FEATURE IN THE RESOURCE	
30. SDGs and Agenda 2030 specifically mentioned?	Yes
31. SDGs specifically mentioned?	Yes
32. SDG targets specifically mentioned?	Yes
33. SDG indicators specifically mentioned?	Yes
SDGs AND SDG TARGETS AND LINKAGES	

<p>34. Comments on SDG linkages</p>	<p>The resource can help support SDGs relating to greenhouse gas emissions measurement, reporting and reduction, including SDGs 4.4 (staff training), 7.2 (increase the proportion of energy from renewable sources), 9.4 (retrofitting infrastructure to be sustainable), 12.6 (adopting sustainable practices and sustainability reporting), 12.7 (sustainable procurement), 12.8 (lifestyles in harmony with nature) and 13.3 (education and information for climate action).</p>
<p>35. SDGs and SDG targets the resource helps advance</p>	
<p>SDG 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship</p>	<p>Number of young people and adults in skills-development activities and programmes drawing on collections, for employment, decent jobs and entrepreneurship</p> <p>Increase in number of young people and adults in such programmes</p> <p>Number and proportion of staff who have received training in the last year, to better support their contribution to the SDGs.</p> <p>Programs and processes in place to ensure the availability of a skilled workforce.</p>
<p>SDG 7. Ensure access to affordable, reliable, sustainable and modern energy for all 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</p>	<p>Proportion of energy that comes from renewable sources.</p> <p>Date to achieve net zero, and milestones towards that date.</p>
<p>SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial</p>	<p>Number and proportion of collections facilities that:</p> <ol style="list-style-type: none"> 1. make efficient use of resources, with an ongoing drive for efficiencies and reductions in energy use and waste of all forms. 2. use clean and environmentally sound technologies, including climate-friendly energy sources and materials, with an ongoing commitment to reduce greenhouse gas emissions and waste of all forms.

<p>processes, with all countries taking action in accordance with their respective capabilities</p>	<p>3. adopt and/or prioritise collections-related processes and practices to reduce greenhouse gas emissions and waste of all forms.</p>
<p>SDG 12 Ensure sustainable consumption and production patterns 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle</p>	<p>Clear visions, strategies and plans in place for all aspects of sustainability – environmental, social and economic (people, planet, prosperity)- across all areas of activity.</p> <p>Visions, strategies and plans relating to sustainability to be publicly available and incorporated into planning documents.</p> <p>Commitments to be in line with local, regional, national and/or international targets and ambitions.</p> <p>Incorporation of sustainability into reporting for funders and other stakeholders, including the public. Reporting to include commitments and progress towards targets.</p>
<p>SDG 12 Ensure sustainable consumption and production patterns 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities</p>	<p>Incorporation of sustainability considerations into procurement, in terms of advertisement and invitation to tender, contracts, and selection criteria for suppliers.</p>
<p>SDG 12 Ensure sustainable consumption and production patterns 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature</p>	<p><i>12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment</i></p> <p>Extent to which global citizenship education and education for sustainable development (including climate change education) are mainstreamed in formal, informal and non-formal education programmes and activities drawing on and related to collections.</p>
<p>SDG 13. Take urgent action to combat climate change and its impacts 13.3 Improve education, awareness-raising and human and institutional</p>	<p>Plans in place to enhance positive contributions to addressing climate change through use of collections. Plans in place to ensure collections, collections institutions and broader society can adapt effectively to climate change.</p>

capacity on climate change mitigation, adaptation, impact reduction and early warning		Plans in place for effective education and awareness raising on climate change mitigation, adaptation, impact reduction and early warning.			
		Plans in place to reduce negative contributions of collections-related functions, e.g. measuring greenhouse emissions with plans and targets in place to reduce them.			
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	