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In response to mandate Decision 15/CP.25, paragraph 2

Information on steps taken by global museums to implement the Doha work programme and in relation to Action for Climate Empowerment, including activities and results, best practices, lessons learned, and emerging gaps and needs

I welcome the opportunity to contribute this submission, which is offered to help Parties as they develop the successor programme to the Doha Work Programme (DWP) and in relation to ACE.

Process of development

This submission draws on responses to an online survey run between 18 Sept 2019 – 27 Jan 2020. The survey was completed by many of the leading workers dealing with climate change and museums, and individuals and institutions who are either at the beginning of their work on museums and climate change (see appendix); eighty-one responses were received. I take responsibility for summary points. The 81 survey respondents survey have been involved in programmes relating to the six elements of ACE that have reached tens of millions of people during 2016–19, and they represent a tiny proportion of the global museum and museum-related sector. Responses do not necessarily reflect the global spread of climate related activity in museums. This submission has been drafted in consultation with the co-ordinating group of ECOS, the Education, Communication and Outreach Stakeholders, of which I am a member.

Context and background

There are an estimated 55,000 museums worldwide (estimates range to 80,000).¹ They reach hundreds of millions of people each year, supporting formal, informal and non-formal education, and in many cases co-operating internationally, and so covering all six areas of the UNFCCC Article 6 and the Doha Work Programme (DWP). In summary:

- Museums represent an existing global infrastructure that could contribute to significant levels of activity supporting climate empowerment.²
- As climate change will impact everywhere and all aspects of life, all museums are relevant to climate change, and climate change is relevant to all museums.

¹ https://en.unesco.org/themes/museums

² An overview of museums' current and potential contribution to climate change education and empowerment was submitted to the Talanoa Dialogue in 2018 (see https://unfccc.int/documents/182150). Museums and the Doha Work Programme were explored at the 7th ACE Dialogue in 2019

- Museums are prime sites to build concern and empathy for people, cultures, places and wildlife beyond where people live themselves, and to support them to make and take personal and local actions for a sustainable future.
- Museums can help bring together the public, policy workers, researchers and others, to shape and implement locally relevant and effective strategies and plans for climate change mitigation and adaptation.
- The key importance of museums (and a range of other subnational actors) in supporting Article 6 of the UNFCCC was recognized by their specific inclusion in the Paris Agreement Work Programme/Katowice Package at COP24.³

1. <u>Summary of activity by museums and museum networks related to the Doha Work</u> Programme and Action for Climate Empowerment 2016–19

1a. What has worked:

Education and awareness: Increasing numbers of museums are running exhibitions or events that feature climate change. Public participation and access to information: Some museums and museum workers are working in networks with policy makers, community groups and other partners to advance local climate action. Training: Increasingly, museum networks and societies are supporting their members through conferences, workshops and training to support them to implement climate action in their own work. International cooperation: Increasingly, museums and museum networks (at institutional, national and international levels) are making commitments to advance and accelerate climate action. The formal inclusion recognition of museums, and others, in the Paris Agreement Workplan has served to encourage and empower many in the museum sector that this policy agenda is something that they can play a part in. Further, concrete developments to help empower subnational actors are likely to accelerate and enhance activity.

1b. What has not worked:

There is almost no awareness or understanding of the Doha Work Programme (DWP) across museums or museum networks. National focal points for ACE have not made an impact on museums. Activity that supports the DWP has been developed in museums without a connection to that programme, meaning that the impact is not communicated or recognized as part of the DWP or featuring in national reporting on climate action, and there is no coordinated mechanism for large-scale sharing, or including action by subnational actors in national reporting. Museums' climate change activity is, in many cases, unco-ordinated and not reported consistently, and in many cases could be more effective. While significant progress has been made, the potential for capacity-building and to build momentum has yet to be fully realized.

2. Activities and results by museums and museum networks related to the Doha Work Programme and Action for Climate Empowerment 2016–19

While activities are presented here in relation to the six elements of the DWP/ACE, in practice, many museum activities covered multiple elements of DWP/ACE. This is a strength

³ https://unfccc.int/sites/default/files/resource/cp24 auv L.3 edu.pdf (accessed 28 Jan 2020).

⁴ See https://mccnetwork.org/exhibitions for details of many climate change exhibitions.

of museums, in that activities reach multiple stakeholder groups and are a relatively costeffective way of reaching different groups, rather than having six separate programmes. This approach also builds potential for lifelong learning and interaction between different user groups in a highly flexible manner. Institutions such as museums in fact offer significant potential for UNFCCC and other policy agendas.

To give some examples, in the USA, the Blue Planet Action Center at the New England Aquarium has been visited by approximately 5 million people during 2016-19. The 'Climate Wall', launched in 2018, is available to all visitors to the American Museum of Natural History, which has c.5 million visitors a year. The Anchorage Museum's SEED (Solutions for Energy and Equity Through Design) lab explores sustainable solutions through design. In Europe, in Norway, the Climate For Change exhibition explores climate change through energy use. The Climate House in Oslo staged an outdoor photographic exhibition linked to the schools' climate strikes. In Germany, The Klimahaus in Bremerhaven takes visitors on a journey round the world to explore climate change impacts. The Danish Museum of energy put on a travelling exhibition to eight towns reaching hundreds of thousands of people. Aboa Vetus (Finland) staged a school project and exhibition, 'The Weather and I'. The Natural History Museum's Wildlife Photographer of the Year exhibition reached c.1.5 million people. In Brazil, The Museum of Tomorrow in Rio de Janeiro had c.4 million visitors to its main exhibition about future scenarios and c.200,000 visitors to an exhibition on climate refugees. In Hong Kong the Jockey Climate Museum 'Climate Change and Me' exhibit in 2019 reached c.75,000 people. The Australian Museum in Sydney and the National Museum of Australia in Canberra are running programmes to document the recent Australian bushfires, gathering examples of challenges and possible solutions to addressing climate change.

2a. Education

Formal education: Most (65%) respondents to the online survey had supported educational programmes for schools or colleges on climate change, with each respondent typically reaching hundreds (33% of respondents to the question) or thousands (31%) of learners during 2016-19. Informal education and lifelong learning: More (85%) survey respondents had supported informal or non-formal educational activities relating to climate change, typically reaching hundreds (42%) or more (48%) people; 15% of respondents to the question had reached hundreds of thousands of people during 2016-19. 18% of respondents had run programmes aimed at women, typically reaching hundreds (45%) of people. Significantly more respondents, 73%, had run programmes aimed at youth, typically reaching hundreds (35%) or more (40%) people during 2016-19.

2b. Training

Museum conferences and workshops increasingly feature sessions on climate change. In the US, the National Ocean and Climate Change Interpretation programme has been particularly successful at supporting educators to draw on critically informed educational methods (see below under best practices), and has worked with many museums. Museums have used COP events to catalyse training among local museum workers. For example at the time of COP 25, the National Museum of Decorative Arts in Madrid organised a workshop for Spanish museum workers to help empower them to address climate change through their work.

36% of respondents to the online survey had been involved in schemes for the exchange or secondment of staff. These typically reached small numbers of staff (1-9, 41%), with a small number of respondents (9%) reaching thousands of staff. More respondents (58%) had developed training programmes for museum workers focussed on climate change, for a very wide range of staff roles, and for a range of institutional, sector, national and international groups of workers. These activities typically reached hundreds of staff; 8% of respondents reached thousands of staff, and 4% of respondents had reached thousands of staff. Training was provided via workshops (80%), peer-to-peer training (56%), conferences (46%), writing articles and books (44%), mentoring (36%) and online training (24%).

2c. Public awareness

81% of respondents to the online survey had encouraged personal action in addressing climate change. 76% had fostered behaviour changes to address climate change, and 67% had supported climate-friendly policies to the public. Public awareness was raised using a range of means including exhibitions (66%), public events (69%), social media (65%), outreach events (58%), and other means. Exhibitions including climate change typically reached thousands (22%), tens of thousands (29%), hundreds of thousands (24%) or millions (13%) of people during 2016-19. Social media typically reached thousands (32%), tens of thousands (33%) or more people, with one respondent alone reaching tens of millions of people during 2016-19. Public events on climate change typically reached hundreds (26%), thousands (40%) or tens of thousands (19%) of people during 2016-19. Outreach events reached smaller numbers of people, typically hundreds (35%) or thousands (41%) of people during 2016-19.

2d. Public access to information

A large proportion of respondents to the online survey had provided information on initiatives that address climate change (72%), or information on the results of actions addressing climate change (50%). Less (42%) had provided information on climate change policies. Even less (25%) sold products that raise awareness of climate change and/or personal climate action.

2e. Public participation

To provide some examples, the Nordic Museum in Stockholm held a public panel discussion with Nordic foreign ministers in October 2019, to discuss Nordic co-operation in the Arctic in the face of climate change and its impacts on local communities there. This panel discussion coincided with an exhibition, 'The Arctic – While the Ice is Melting'. The Museums for Future initiative supports staff and people involved in the Fridays for Future initiative and operates mainly in European countries; it reached 12,000 people in November 2019. The American Museum of Natural History has convened gatherings of Indigenous and local community stakeholders, and partnered with them at international meetings.

Museums have used the event of COP to catalyse local action in the museum sector and to provide opportunities to raise awareness of COP, UNFCCC and their aims. For example, at COP25, the Prado Museum partnered with WWF to highlight the impacts of climate change.

62% of respondents to the online survey had promoted partnerships between different stakeholders to promote climate change action and policy. 46% of respondents had facilitated debate between different stakeholders to promote climate change action and policy. 38% had provided opportunities for the public to meet with/and or work with decision-makers. 34% had provided opportunities for people to give feedback on climate change policies and related activity to local or international policy workers, and 30% had run initiatives that sought civil society perspectives that had been made available to policy makers. A wide variety of methods were used, including exhibitions (41%), public events including academics working with climate change research and policy (41%), public events including policy workers/makers (36%), public events (40%), outreach events (39%), social media (38%).

2f. International co-operation

The International Council of Museums (ICOM), the international body that oversees global museums, adopted a resolution in 2019 "On sustainability and the implementation of Agenda 2030, Transforming our World", 5 recommending that all members of ICOM accelerate their support for sustainability and the Paris Agreement, using the Sustainable Development Goals (SDGs) as a framework. Prior to this, in 2017, the global networks of science museums and science centres adopted a 'Tokyo Protocol', on the contribution those institutions make to the SDGs. 6 The Climate Heritage Network, formed in 2018, aims to support those working in the wider heritage sector to support the Paris Agreement.

Museums have been represented at UN Climate Change conferences since 2017, including at ACE Dialogues and a workshop to accelerate ACE in 2018. Presentations on museums as capacity builders and as 55,000 ways to address climate change featured at COP25.

Respondents to the online survey had taken part in a wide range of initiatives linked to international co-operation, with 52% attending conferences that included international perspectives on climate change, 47% speaking at conferences, 39% collaborating with international museum workers and 31% collaborating wither other relevant sectors internationally.

3. Best practices

In practice, museums often address multiple areas of DWP/ACE and this is a key strength: "We have found it effective to pursue a multi-pronged approach that trains school teachers, educates the public through events, our visitors through interactive exhibits, convenes researchers to advance research, and convenes stakeholders to increase empowerment of local communities and links them to the global policy arena." (Ana Luz Porzecanski, American Museum of Natural History)

3a. Education

Large, stored collections in museums can help people explore environmental change in a hands-one way. Lacey et al. (2017) note: "We believe that the vast digital resources (i.e., "big data") associated with natural history collections provide invaluable but underutilized

⁵ https://icom.museum/wp-content/uploads/2019/09/Resolutions_2019_EN.pdf

⁶ https://scws2017.org/tokyo protocol/

opportunities..."⁷ Many museums provide people with opportunities to participate in citizen science initiatives, bringing together education, training, access to information, public participation and international co-operation.⁸ Citizen science initiatives build capacity for research that in turn helps build adaptive capacity to climate change and its impacts, for example by tracking the spread of invasive species, or by supporting conservation management of species and habitats as they are impacted by climate change.

3b. Training

In the US, the National Network for Ocean and Climate Change Interpretation uses critically informed educational methods to empower educators and, in turn, visitors to museums: "We teach museum professionals how to discuss climate change with their visitors using Strategic Framing, to focus on hopeful, civic and solutions-focused conversations that are proven to improve understanding of climate change and empower civic behavior. This includes values-based messaging, succinct metaphors and explanation and ways to participate in local action" (Hannah Pickard, NOCCI). "Evidence-based communication strategies are very important given the complexities of climate change and how it is perceived by the public. We have based all of our efforts on a strategic framing approach, which is based in cognitive and social science research, and incorporates the use of widely held values, simple explanations of the mechanisms of climate change, and community scale solutions" (William Spitzer, New England Aquarium).

3c. Public participation

A number of studies have explored how museums can broker public participation around science-policy agendas. Bandelli and Konijns' results "suggest that science centres and museums are regarded by their visitors as potential platforms to facilitate public participation in policy, especially in countries where the general infrastructure for public participation in science is weak." Kadlec noted "As trusted, nonpartisan intermediary organizations and valued cultural institutions, museums and science centers are well positioned to frame important problems for productive public deliberation, and they may be uniquely equipped to help cultivate creative connections between policymakers, scientists and the general public... museums can impact civic issues on wide-scales without becoming politicized, and thus promote improved public problem-solving around vexing problems such as climate change, our energy future, and twenty-first century workforce development."

4. Key lessons learned by museums and museum networks 2016-19

The following 10 lessons learned have been drawn from responses to the online survey:

1. The importance of acting now

⁷ Lacey et al. (2017). Evolution: Education and Outreach, 10(1), p.2.

⁸ E.g. http://eu-citizen.science/#the-project

⁹ See also Swim *et al.* (2017). *Curator* https://doi.org/10.1111/cura.12187 for an evaluation of NOCCI programmes in nature-related museums.

¹⁰ Bandelli, A. and Konijn, E.A., 2015. Science Museum Group Journal, 3(3), pp.1-19.

¹¹ Kadlec, A., 2017. Mind the gap: Science museums as sources of civic innovation. In *Science & Civic Life* (pp. 37-54). Routledge.

- The great urgency: people who haven't already started using museums for climate education, awareness and empowerment should start now.
- There is a lot of public interest.

2. The importance of confident and competent staff

- That museum workers will gain and build their confidence in climate education and empowerment just by doing it.
- The importance of ongoing climate-change-related training for educators and other museum staff, so they are confident and competent at climate change education and communication, and can become effective climate ambassadors.
- The importance of staying positive, constructive and hopeful.
- The importance that museum workers learn from and support one another, to benefit from one another's experience and for mutual support.

3. The great importance of information

- The importance of reliable, up-to-date information and science, even basic
 information. There is a lot of good-quality information available from e.g. NASA,
 NOAA, and on approaches to climate communication and education from e.g.
 CLEAN network and Climate Outreach: museums and others can draw on this
 rather than duplicate effort.
- Recognising that science alone is not enough, and values and behavior should be incorporated into climate education, to foster constructive concern regarding climate change and concrete, meaningful personal climate action.

4. The great importance of a focus on solutions, not problems

- People are desperate for solutions, focus on providing and exploring those and providing encouragement. than focusing on problems.
- Always be constructive and encouraging, avoid being negative or solely talking about problems, include hope and solutions or suggestions for action: challenge must be matched by support.

5. The importance of making climate change and climate action personal and relevant, as well as understanding bigger pictures

- Make climate change and solutions personal and relevant to people's own lives, by starting with who they are, not who 'we' are, and speak to their interests and concerns, as well as understanding the big picture
- Help people explore systemic change, and its relationship with people's own lives.
- Recognise that people are all different and they should be provided with a menu of options to find their own entry points to climate change education and action.

6. The importance of acknowledging people's emotions and feelings

 The importance of acknowledging feelings and emotions, among museum visitors and staff, and not frightening people through climate change education and awareness programmes. Effective programmes will be stretching, without being too comfortable or too frightening.

7. The importance of community, and empowering people to participate fully in society

- The importance of promoting discussion, dialogue and active participation among visitors and groups in museums, alongside top-down information provision.
- The importance of bringing different stakeholders together, including experts, policy workers, activists, and providing opportunities for people to share their own thoughts, ideas, solutions.
- The importance of supporting and empowering groups to collaborate with climate education, awareness and action, and showcase their activity to invite and encourage others to participate.
- The importance of empowering people to participate in policy, debates and holding governments to account, to drive political will and action.

8. The importance of engaging everyone

- While ACE is most frequently associated with young people and schools, education and learning are lifelong. Engaging everyone creates many different opportunities and ensures 'no-one is left behind'.
- That the purpose of engagement is not what takes place in the museum, but how the museum supports people to engage with climate change in their lives, in the world.

9. The importance of co-ordination and collaboration between museums and partners

 On their own, each museum can only do so much, but by partnering, working with other sectors, amplifying their work through co-ordination and shared agendas/outcomes, and connecting with external/global agendas (SDGs, international observance days etc.) much more can be achieved.

10. The need for support from governments, government agencies and funders

- The importance of top down support and guidance, through climate change education policy and educational resources, and making climate change education and awareness-raising a priority.
- The need for mechanisms for museums and others to contribute their figures towards official statistics, and to monitor climate education and awareness programmes as part of other reporting schemes.
- The need for cross-sector initiatives and sharing of information, so that museums and similar institutions are not put in a 'box' of culture, but as a conduit between different sectors (science, environment, agriculture, health, housing, communities).
- The need for dedicated resources, financial or otherwise, to foster climate education and awareness programmes, notably between museums and other sectors and partners.

5. Emerging gaps that have hindered implementation of the Doha Work Programme and ACE in museums

Need for leadership at international, national, sectoral and institutional levels, and appropriate levels of committed resources (financial, staffing and time)

- 1. Many museums, or at least senior staff of museums, are more concerned with internal outcomes or the past than current or future issues. They are fearful of dealing with real-world issues for fear of appearing to be somehow 'political' or 'not neutral'. This comment came up a number of times in the consultation.
- 2. Lack of serious buy-in from museum leaders or trustees, while many other staff are more willing to engage with climate education, awareness and action.
- 3. Need for stronger leadership and co-ordination across the museum sector, notably from national governments and government departments.
- 4. Lack of prioritisation or support (direction, information or funding) from governments or agencies on national and international commitments regarding climate change, so the museum sector is unaware of the opportunities for it to contribute meaningfully, has no specified resource to support these, and isn't given a mandate or encouragement to direct its resources to do so.
- 5. Lack of budget, commitment, ambition and staff.

Need for up-skilling and confidence-building for museum staff

- 6. Many people in museums lack knowledge, motivation, confidence or skills to contribute effectively to climate education and awareness. They need to be empowered to contribute effectively to climate education, awareness and action.
- 7. Museums should embrace climate change as a social, economic and environmental problem rather than a scientific or technological one, and apply this to all museums.

Need for focusing on impactful activities

8. Focus on awareness raising in programmes does not necessarily lead to concrete action to address climate change. Greater emphasis on practical actions people can do is needed.

Need for mechanisms to amplify, share and report work

- 9. Lack of a mechanism or shared process for sharing activity across museums or with e.g. national reporting for NDCs to grow momentum. The annual ACE Dialogues have included opportunities to present a perspective on museums since 2017. This has been effective in building awareness of museums' contributions to ACE from a policy perspective, but the dialogues do not currently represent an opportunity of the style of e.g. the SDG Global Festival of Action, or Climate Week to showcase the work of multiple actors, and it would be worthwhile differentiating or clarifying the aims and intended outcomes of these various events.
- 10. Need for faster flow of information, upwards and downwards, to enable museums and others to contribute to educational and awareness raising initiatives.

Thank you for your attention and the opportunity to make this submission.

Survey respondents

Australia

George Main National Museum of Australia

Jenny Newell Australian Museum (also Pacific region)

Kate Phillips Museums Victoria

Libby Robin Independent researcher / ANU

Council of Europe member states

Rebecca Thonander NEMO - Network of European Museum Organisations

Brazil

Alfredo Tolmasquim Museum of Tomorrow, Rio de Janeiro

Canada

Barb McKean Royal Botanical Gardens

Douglas Worts WorldViews Consulting (also international)

Lorraine Bell Qualicum Beach Museum
Marie-Claude Mongeon National Gallery of Canada

Robert R. Janes Coalition of Museums for Climate Justice (also international)

Scott Marsden Participatory Arts & Engagement Specialists

Susan Maltby Maltby & Associates Inc.

Denmark

Jytte Thorndahl Danish Museum of Energy

Aalborg University and Center of Cultural Heritage Research (formed

Line Vestergaard Knudsen with 8 museums)

Estonia

Pille Runnel Estonian National Museum, Tartu

Europe

Diane Drubay We Are Museums
Jasper Visser VISSCH+STAM

Finland

Janna Jokela Aboa Vetus & Ars Nova -museum

France

Guillaume Hédouin Parc naturel régional des Marais du Cotentin et du Bessin

Global/international

Caitlin Southwick Ki Culture

Henry James Evans University of Copenhagen Henry McGhie Curating Tomorrow

Jen Kretser The Wild Center, Tupper Lake

Michael Pinsky Michael Pinsky

Paige Dansinger Better World Museum

Susanne Nawrath Klimahaus Betriebsgesellschaft mbH / Klimahaus Bremerhaven

Greece

Eleni Vasilaki Freelancer, Associate of Folklore Museum Acharavi

Hong Kong Special Administrative Region

George Ma Jockey Club Museum of Climate Change, The Chinese University of

Hong Kong

Ireland

DBN Herbarium, Naitonal Botanic Gardens of

Colin Kelleher Ireland

Italy

Michele Lanzinger MUSE. Museo delle Scienze - Trento. Italy

Paolo Legato Museo A come Ambiente - MAcA

Jordan

Sawsan Dalaq The Children's Museum Jordan

Norway

Björn Lindberg and Anja

W. Fremo Norwegian Petroleum Museum

Geir Rudolfsen The Arctic University Museum of Norway

Pål Gran Kielland The Norwegian Glacier Museum & Ulltveit-Moe climate

center

Climate House, Natural History Museum, University of

Torkjell Leira Oslo

Pacific ACP countries

Sarah Hemstock Bishop Grosseteste University

Polar regions

Henrietta Hammant Scott Polar Research Institute, Cambridge

University, UK

Renewable Energy

Portugal

Beatriz Areias LUPA

Saudi Arabia

Mishkat Interactive Center for Atomic and

Abdullah Yahya Bin Zaima

Sofie Öberg Magnusson

Sweden

The National Museums of World Culture,

Sweden

The Netherlands

Jenny Williams

Meta Knol Museum De Lakenhal

UK

Alison Bowyer Kids in Museums
Anna Bunney Manchester Museum

Anna Woodham King's College London (also Kiribati)

Anthony Morgan National Museums Liverpool

Bridget McKenzie Climate Museum UK

Camilla Tham Natural History Museum, London

Chris Jarvis Oxford University Museum of Natural History

Christian Baars National Museum of Wales
Fraser Hale Woodbridge Tide Mill Museum

Georgina Kettlewell Horniman Museum and Gardens, London

Helen Filby The Carbon Literacy Project, Manchester (also national)

Hilary Jennings Happy Museum

Isla Gladstone Bristol Museums (Bristol City Council Culture Team)

Janet Stott Oxford University Museum of Natural History

Museum of Archaeology and Anthropology, Cambridge

University, UK (also international)

Jo Beggs Manchester Museums Partnership

Joanne Robinson-Cheale Science Museum Group

Jon Radley Warwickshire Museum, Warwick
Lee Ismail Royal Pavilion and Brighton Museums

Lynsey Jones Museum Development North West

Paolo Viscardi Natural Sciences Collections Association (NatSCA)
Sarah Oxford University Museum of Natural History

Sarah Younan National Museum Wales, Cardiff

Stephen Judd National Museums Liverpool (also local and worldwide)

Steve Green Gilbert White & The Oates Collections, Selborne

Trevor Bailey National Museum Wales, Cardiff

Victoria Hands Sustainability Advisor

USA

Ana Luz Porzecanski American Museum of Natural History - Center for Biodiversity and

Conservation

Anais Reyes The Climate Museum, New York

Hannah Pickard National Network for Ocean and Climate Change Interpretation
John Anderson National Network for Ocean and Climate Change Interpretation

Julie Decker Anchorage Museum, Alaska Megan Anderson National Aquarium, Baltimore

Michelle Fitzgerald Homewood Museum, Johns Hopkins University

Nicole Heller Carnegie Museum of Natural History
Patrick Hamilton Science Museum of Minnesota, Saint Paul

Sarah W. Sutton We Are Still In, Cultural Institutions William Spitzer New England Aquarium, Boston