

Museums Facing a Planetary Emergency



Reihe: Beiträge zur Museologie, Band 12

Die Reihe versammelt analytische Aufsätze ebenso wie Praxisbeispiele und bietet somit vielfältige Perspektiven auf die Museumsarbeit. Sie richtet sich an erfahrene Museumswissenschaftler:innen und -praktiker:innen sowie an Berufseinsteiger:innen, die ihre Kenntnisse in den musealen Kernaufgaben Sammeln, Bewahren, Ausstellen und Forschen erweitern möchten. Student:innen der Museumskunde erhalten einen Einblick in die Berufspraxis. Die Schriftenreihe erscheint seit 2010 in unregelmäßigen Abständen.

The series brings together analytical essays as well as practical examples and thus offers diverse perspectives on the work of museums. It is aimed at experienced museum scholars and -practitioners as well as at newcomers who want to broaden their knowledge of the museum's core tasks, collecting, preserving, exhibiting and researching. Students of museology will gain a valuable insight into professional practice. This series has been published at irregular intervals since 2010.

Herausgeber der Reihe: ICOM Deutschland e.V.

ICOM Deutschland e.V. ist das deutsche Nationalkomitee des Internationalen Museumsrates ICOM. Mit seinen mehr als 7.000 Mitaliedern ist ICOM Deutschland die mitaliederstärkste Organisation von Museen und Museumsfachleuten in Deutschland und auch innerhalb von ICOM. Er vertritt im Dialog und Zusammenwirken mit anderen Kultur- und Museumsorganisationen die Interessen der Museen und der Museumsfachleute im öffentlichen Leben.

ICOM Germany e.V. is the German national committee of the International Council of Museums ICOM. With more than 7,000 members, ICOM Germany is the largest organisation of museums and museum experts in Germany as well as within ICOM. In dialogue and collaboration with other cultural and museum organisations, it represents the interests of museums and museum professionals in public life.

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Museums Facing a Planetary Emergency

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The recording of the conference – including the contributions not published in these proceedings – is available on the following link: https://www.youtube.com/watch?v=SNe-t_hM_k&ab_channel=ICOMDeutschland

Opening remarks Despina Pilides, chair of ICOM Cyprus

It is a great pleasure for me to address this online conference jointly organised by ICOM Germany, ICOM Greece and ICOM Cyprus entitled *Museums Facing a Planetary Emergency*. Such a discussion is indeed timely: the issue of climatic change requires our urgent attention and immediate enforcement of appropriate measures. Our world is changing rapidly, as we are currently witnessing, living amidst an unprecedented situation with the Covid-19 pandemic. Along with the effects on our lives in general, museums and museum collections around the world are also affected. It is, therefore, imperative that we set up strategies to protect the cultural heritage of humanity so that it can be passed on intact to future generations.

Climate change, the loss of biodiversity, shifts in migratory patterns and habitats, increased health risks from pollutants, social unrest, amongst many other factors, have far-reaching repercussions that go beyond the equally dramatic effects of extreme weather phenomena. We therefore need to examine first how to protect the physical existence of museums and their collections and which new requirements may be necessary in view of environmental changes. Weather patterns and temperature fluctuations affect the long-term preservation of the world's cultural treasures, a perennial source of inspiration in our daily lives. The delicate and fragile nature of museum collections are susceptible to such conditions. Often, they are housed in museums which are themselves monuments and in need of protection from environmental risks, requiring necessary interventions to protect both their settings and contents. Thus, risk assessment is a first necessary step to define the nature of possible threats in each case and enable the development of strategic plans to be applied. ICOM

and the supervising authorities of museums can certainly play a decisive role in sensitising museums about the need to put such plans in effect. I am certain that the presentations and discussion to follow will lead the way forward and show how new methodologies can mitigate risks.

On another level, museums as mediators of social change can also have a role in raising public awareness on the risks that museums and society are facing. With focused exhibitions, conferences and other events, they can initiate a dialogue that can be mutually beneficial in the long term.

With regard to museums in Cyprus, the Covid-19 pandemic and consequent closure had a detrimental effect but, on the other hand, the situation precipitated the introduction of alternative actions and activities so as to reach the public at these times of restriction and has shown that the public responds positively. After all, culture does seem to have a positive effect with its healing qualities in situations of stress. Virtual visits of museums, story-telling around selected collections or objects on particular days, connected to thematic celebrations or occasions, online lectures and workshops have sustained the interest of the public, even though, inevitably, closure has had its impact on museums, particularly on privately funded ones.

The contribution of digital technologies has proven valuable in these difficult times, indicating and stressing the need for further applications. 3D object or site representations trigger the public's interest. They can be used in educational programmes and they can add to people's knowledge and strengthen commitment towards saving and preserving cultural heritage in general, while digitisation is in itself the most important tool in safeguarding museums' collections. Technological applications are likely to provide innovative ways of approaching the issue of accessibility to museum collections and will have to be put into wider use, especially at times such as the current situation. In conclusion, I would like to welcome all the participants and to thank them in advance for their contributions. The proceedings will, I am sure, provide ideas for the future and will undoubtedly prove beneficial for the management of museums and museum collections.

Opening remarks Beate Reifenscheid, chair of ICOM Germany

Good morning everyone and kalimera to Greece.

In a way, we are very glad to gather for this conference at least online, because of course when we started planning this joint meeting with ICOM Greece and ICOM Cyprus, we thought that we would actually meet in Athens. This would have been a great chance, not only to be there, share our topics, concerns and visions, but also to visit the museums on-site and to meet physically our, I would like to say, ICOM family.

These days are very difficult for each and every one of us personally, but even more so for the museums, for culture. We are facing the pandemic and all its concomitant problems, but we are also facing tremendous discussions about the value of culture nowadays. To close a museum, what does it mean with all consequences? And what does it mean for those who are less or no longer involved into cultural activities anymore? The only thing we can do is going online. But this should not be the future for us. So, looking at today's conference, the topic couldn't be more precise and more actual than it is right now. We had no idea that we would be acting within a pandemic for real when we chose the subject and considered how to deal with pandemics, how to stop the loss of biodiversity and how to improve sustainability especially in museums. That *was* our task, and now, stronger than ever, it *is* our task to effectively act. Therefore, I am very grateful that we managed to come together today, at least online.

I hope we will draw good conclusions out of our very important keynotes for today. They reflect parts of the current planetary crises which are affecting museums as well. We were also thinking about ways to deal with physical collections and how to present them in a broader and open way digitally. What we experience these days is that digital tools and digital communication are the only opportunities left to share our thoughts – and the good side of all this is that we can share even more than we ever have done before. This is one of the few good points arising from the experiences we go through at the moment. At the end of this day, I hope we will find some answers – if we have the chance to develop them, and I'm quite sure that we shall find methods on how to reinvent the museums in the face of planetary emergency. I believe that the crucial question is how to deal with those answers.

In times of multiple crises, not only the crisis of nature but also of the social changes, of numerous refugee influxes, religious differences and terrorist conflicts, the problems for our global community are growing exponentially. We need to develop common strategies for handling them and to find out how we want to strengthen our museums for the future. As museums, we are part of the answer, since we are eager to address the challenges and problems and serve as a think tank for the societies. More than ever before, we are faced with the urgent task of protecting our museums and their collections, and preparing them conscientiously for the coming difficulties and challenges. Moreover, we have to develop answers for future crises and changes. I believe we need to get closer, to learn from each-other, and to join more directly, thus strengthening our museums for the society. We have to serve the society, but we also have to deal with the answers. I'm very hopeful that we will find some future ideas and strategies in order to face these problems. I'm really keen on listening to the next contributors to the conference. I would like to thank once again my colleagues from Greece and Cyprus and thank you as well to the moderators to bring us through the whole day.

Opening remarks Teti Hadjinicolaou, chair of ICOM Greece

On behalf of the Hellenic National Committee of ICOM, I would like to welcome you to today's conference that was initiated by ICOM Germany with the participation of ICOM Cyprus.

We had planned this conference in a totally different way, under different circumstances and conditions: our plan was to host it at the Acropolis Museum in Athens with the support of the Hellenic Ministry of Culture and other research organisations. This is why you see an image of the Acropolis in the conference publication material.

In addition, to complement the conference, we were going to host a special two-day masterclass in the ICOM premises in Athens. The *Masterclass on Integrative Security, Emergency and Disaster Management in Museums* will now take place online on 26 and 27 November 2020.

The Covid-19 pandemic forced us to change our plans. At the same time, the consequences of the pandemic force us to think differently about the operation of museums in the immediate future and in the longer term. The pandemic is not the only emergency that we are called to respond to. Climate change, natural disasters, armed conflicts, the demographic boom, mass immigration, food sustainability and social issues are global emergencies that demand global solutions. Hence, international meetings such as this one are very important.

Climate change is a serious challenge for both tangible and intangible cultural heritage. It does impact on the museums' microenvironments, and transforms their energy needs. Under these circumstances, the museum community has to grapple with issues such as digital collections management, conservation, audience mobilisation, skills development and lifelong learning, the dialogue between international organisations, emergency planning tailored to local and regional needs, etc.

At the same time, social disruptions demand the redefinition of the social role of museums, while the consequences of the pandemic make us realise that the museums of tomorrow will be different than those of the past. The digital turn is rapidly materialising, however the quest for balance between reality and digital reality is ongoing. We, as museum professionals, have to negotiate the dynamics of the material and virtual worlds.

It is obvious that the aforementioned issues necessitate interdisciplinary partnerships for the strengthening of environmental sustainability, as well as the protection of human rights.

We started planning and preparing this conference over two years ago with a great enthusiasm about this collaborative venture. We have a long-standing and fruitful cooperation with our German colleagues in the context of many International Committees. With our Cypriot partners, we share deep cultural heritage bonds. The pandemic may have deprived us from seeing our colleagues in person this time, but will not stop us from working together in the future. Thanks to the digital technology, today we have the opportunity to operate as an ICOM community.

I would like to cordially thank ICOM Germany Chair Prof. Dr. Beate Reifenscheid for the initiative to organise this Conference, ICOM Cyprus Chair Dr. Despina Pilides for her cooperation, Dr. Klaus Staubermann, Mrs Beate von Toerne and all ICOM Germany Board members for the organising, and all speakers for their participation.

Last but not least, I would like to extend my gratitude to the Goulandris Museum of Natural History, an award-winning organisation with high environmental credentials, for its assistance in today's event.

I wish the conference every success and I do hope that next time we meet in person.

Sustainability is key

Brad Irwin

Reframing the Natural History Museum in the context of a planetary crisis

Keynote presentation by Brad Irwin

Text based on the script of the presentation by Brad Irwin, edited by Stéphanie Wintzerith

The Natural History Museum in London is a museum with a very long tradition. Nevertheless, it is undergoing a thorough process of change and reframed itself in the context of a planetary crisis. This contribution presents how the museum reforms itself towards sustainability, advocacy for the planet and an urgent need for visitors to change their behaviour.

Context

Let us first start with some background and context about the museum: the Natural History Museum in London first opened its doors in 1881. It was very much framed as:

- a cathedral to nature,
- a place to house collections,
- a place to do research, and

• a place to inspire audiences about the awe and wonder of the natural world.

In more than 140 years, some things have changed. The Museum soon became an iconic place, both nationally and internationally. Its collection has grown manifold to hold now over 80 million items from all over the world. As a place of research, the science that is conducted both within its walls and in partnership with other institutions and scientists has led to countless discoveries and new ways of thinking. The Natural History Museum holds a really special place in a lot of people's hearts – it's the place people go to as children, and the place they go back to as adults to show it to their own children.

It has become a place that is incredibly popular. In 2019, we reached approximately 21 million people through our onsite, online, national and international programmes. Indeed, it is the most visited science attraction in the UK and the most visited natural history museum in Europe. The family audience is huge, amounting to around 2.7 million a year. The international visitorship has grown massively: up to 70% of the museum's audiences come from outside the UK.

Whilst those changes are pretty significant, the original framing has proved to be long-lasting. It is still a place to house and care for the collections, a place to do research and a place to inspire audiences about the awe and wonder of the natural world. The core of the museum remains unchanged, but the world around it has changed dramatically, though.

We are now living in a critical time of biodiversity loss, habitat destruction, climate breakdown and disease outbreak – this will be no news to you. Humans have become the most dominant species on the planet, disrupting the balance of Earth's natural systems on which we and all other species depend. The crises we face are global in scale and require an immediate, collective response.

If we are to contain these threats, we need the knowledge and understanding that emerges from scientific discovery. While this knowledge is necessary, it isn't sufficient. We also need to ensure it reaches decision-makers and it informs and engages large public audiences, so that they demand and support change and adapt their own behaviour.

We know that: extraordinary change requires extraordinary engagement and action. However, the public often feels overwhelmed by negative messages on climate and the environment and feels powerless to be part of the solution. This really limits the impact of scientific knowledge and ideas that could be the drive for change.

This is where the Natural History Museum or other trusted institutions must be bolder and louder to talk about the planet. It is both needed and expected: our audiences absolutely demand it, as we know from internal research carried out with our visitors. We've found out that the audiences trust us, but they want greater relevance and innovation. We've also found out – and this is key – that younger generations absolutely expect us to have a broader role in society and most of all expect us to tackle global planetary issues.

We also know that our visitors, when leaving the museum, have appreciated the things they've seen as well as the natural world, but they don't feel empowered to act for it. Taking this into account, at the beginning of 2020, we declared a "Planetary Emergency" and revealed¹ a new *Vision and Strategy to 2031*.

A new strategy for taking action

This new strategy marks an important shift in emphasis, from a museum which reports on the world to one that actively participates in shaping solutions to global challenges. It includes a renewed focus on the impact we have, through our public engagement and science activities, in raising awareness of, and finding solutions to, the biggest

¹ Available at: https://www.nhm.ac.uk/content/dam/nhmwww/about-us/our-vision/strategy-to-2031.pdf



Fig. 1: Cover page of the new *Vision and Strategy 2031* and its symbol, the blue whale called Hope to embody the new strategy. Source: NHM.

challenges facing humanity and the planet. We want to do more than to be an observer and commentator on the natural world. We have to be more proactive and inspire action.

Our new vision is a future where both people and planet thrive. For us, this is a vision which is really different from the vision we had in the past, it makes a big and wonderful change. We are no longer just talking about ourselves, our collections, our science: we are placing what we do in the context of the world and of what's happening today.

Our mission is to "create advocates for the planet". Here again, our mission is no longer about preserving the collection or "inspiring people". It is 100% about action!

As part of this strategic review, it was crucial for us to figure out what these advocates for the planet might be. Here's our answer: an advocate for the planet is someone who speaks up on behalf of nature, and ultimately will take action to prevent damaging it, respectively to protect it. It is so fundamental that we really need to weave this into everything we do. In order to achieve this, we have used psychological and sociological insights to create an "advocate engagement model" that will direct all of our public programming.

In order to create an advocate for the planet,

- we need to inspire a connection with nature, so we must create memorable and emotional experiences;
- we need to inform audiences about the natural world, so we will share stories that help people place themselves in the narrative of our planet;
- we need to get our audiences to act for the natural world, thus we will empower people so they can make informed decisions about their own behaviour and actions.

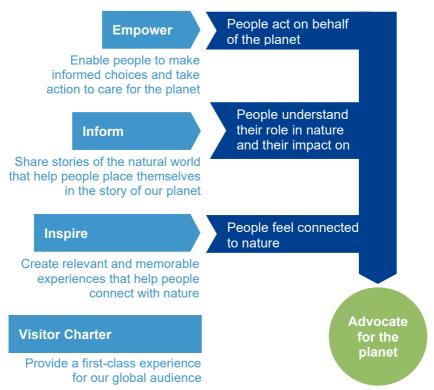


Fig. 2: Advocate engagement framework, chart: adapted from NHM/ Brad Irwin

We identified five key priorities to drive our activity for the next 12 years:

1) Engage and involve the widest possible audience

This means reaching out nationally and globally, onsite and online, to create advocates for the planet.

2) Develop our gardens and galleries

This is an urgent requirement for us. We need to create new spaces that speak to that narrative, inside and out, combining heritage and experience to connect to nature. 3) Secure the future of our collection

We still have much work to do to ensure our collection is safe, accessible and – really quite importantly – digitally available, for future innovations and generations.

4) Transform the study of natural history

We want to apply technological innovations to our collections, collecting and science, bringing benefits to people and planet. We also acknowledge the need to think about training of the future generations of scientists.

5) Create a resilient and sustainable organisation

We definitely need to invest in people, in technology and in our estate. We also need to be striving towards financial and environmental sustainability.

This last point has become incredibly important, particularly now. It is crucial that we live what we profess and take action to become a sustainable organisation ourselves. How to turn hose words into reality then? Formulating nice sentences is easy, but implementing those changes and holding on to these concepts is a much harder task. Experience showed over the years that other attempts to reform the Museum, other exciting words which sounded wonderful and raised enthusiasm, brought little change to the institution itself. Taking a radically different direction was never going to be easy.

And yet this time, change happens and we have made some huge strides forward.

Reframing the museum: concrete changes, collaborations and future plans

The first reshape was made in the area of the digital platforms. That was the easiest to start with, a place where we could see the change immediately. We think of our website in two ways. On the one hand, it plays a key role in helping (potential) visitors to understand what's on in the museum etc. On the other hand, it is also a news hub for our science: our "Discover Hub" shows daily news and articles that unlock and share our scientific research. You'll also find on our website a huge section dedicated to the Anthropocene – with loads of articles that explain the issues, how our science is becoming more solutions focused, as well as ideas for the public to take action in their daily lives.

The second concrete step was to set a focus on biodiversity. Biodiversity is often seen as something found in rainforests or African savannahs. Urban biodiversity in the UK is particularly unrecognised and undervalued. With more and more people living in towns and cities, this means we risk an even greater disconnect with the nature on our doorstep.

To combat this, we've announced a big flagship initiative, the "Urban Nature Project". This project will transform the Museum's five-acre outdoor space into an exemplar of urban wildlife research, conservation and awareness. The aim is to help engaging the nation with urban biodiversity. The ambitious project also convenes a UKwide partnership which will tackle challenges facing urban natural heritage and hopefully reconnect people to nature across the country. Comprising a coalition of museums and wildlife organisations, it will develop the tools and skills urgently needed to understand urban nature and inspire diverse audiences to make a lifelong connection with the natural world, learn about its value, and take action to protect it.



Fig. 3: Urban Nature Project: a vision to reshape the outdoor space of the museum. Source: NHM.

We made changes to existing exhibitions, like the "Wildlife Photographer of the year" to address the narrative around people and planet and the Anthropocene. In many ways, it is not about making everything new. Actually, we rather take existing assets and turn them to make sure they are addressing our overarching strategic narrative.

Apart from what visitors might see in the museum, we are also broadening our partnership work. This year, we have created a new network called "The Global Alliance: For People and Planet". It gathers many "science in culture" organisations which are implementing similar approaches around the planetary crisis, but which up to now have rarely talked to one another or worked together in a collaborative, coordinated and mission-led way. About 35 museums, science centres and organisations all over the world have now convened to work together. The premise of the group is to learn from one another and be a support network. The most exciting part of this network is to find projects that all partners could collaborate on with the view that, if we can work together and amplify ideas that are important to us, then the global reach and impact of that activity would be huge.

We are also working hard to have an influence on policy and decision making. For example, we had a presence at the World Economic Forum's Annual Meeting 2020 in Davos, as odd as it may seem for a museum to be there. We took our collections, our scientists and some Wildlife Photography images there to spark conversations with world leaders who make decisions about the state of the planet. It gave us a great opportunity to do what we do best, which is to use objects, use stories, and use an informal approach to influence people understand the planet today.

And there will be much more of such actions. 2020 was going to be a huge year for us – but Covid-19 has obviously affected so many of our plans. On the other hand, it has also fired us up. 2021 and the following years will be even bigger and better: very soon we will announce a year-long season of work that will weave all this together in a way that will be another big step change for the organisation. That season 2021 will have physical components, digital components, a massive international events programme and will tap into some of the big things that are happening during the year, global events like COP15 on biodiversity in China and COP26 on climate change in the UK.

The process of creating the new Strategy 2031

At this point, it may be useful to mention a few notions about the process of creating a new strategy. The following list sums up five different aspects and thoughts I have about the process held in the Natural History Museum. Even though they might seem independent from one another at first sight, they nevertheless are important factors for the development of our new *Vision and Strategy 2031*.

First of all, the strategic process took a really long time. I think we started this process at the end of 2018 – it took about a year of thinking, discussing, sharing, writing, redrafting, checking, peer reviewing etc. It was a long process in itself. As a reminder: the new Strategy was revealed at the beginning of 2020.

Second: it came – and this is crucial – at a time of significant leadership change in the museum. I don't think you can understate what a new voice and new perspective on the Executive Board can do to an organisation.

Third: the process that we went through was incredibly open, transparent and collaborative with all staff. It felt like the organisation as such was truly embraced throughout this process – which has really helped to turn those words into reality. There were so many different meetings, so many opportunities to reflect, critique, discuss, share, etc. and I feel that, as an organisation, we actually really committed for this going on.

Fourth: there were also a lot of bumps along the way. There were times I thought the Trustees were not going to sign off that new direction, because they felt it too different from what we had done in the past. The overwhelming support of staff really helped to push it through.

Fifth: I think we were really aware that this was happening at a time where organisations like ICOM for instance were also wrangling with their purpose and the much-contested definition of what a museum is. For us, the peer review process of sharing our vision with other organisations and getting feedback was really important. It gave us the confidence to move forward as it was unanimously supported. In fact, if anything, our peer review group wanted us to be even bolder.

Finally, I'd like to finish with a quote that has driven this strategic thinking. Here are the words of the legendary Sir David Attenborough:

"The future of the natural world, on which we all depend, is in your hands." This is a powerful reminder that it will require everyone to work together to create a sustainable future, both for the planet and human civilisation.

Three questions answered after the presentation

Question

How do you, as an institution, reflect on your own carbon footprint? What tools can be used to analyse a museum's resource and energy accounts?

Brad Irwin's answer

This is something we have talked about for quite a while during the process. We created a whole new internal sustainability framework to think about how we use energy, how we fly around the world etc. We wanted to make sure that, as an institution, we are really living the values that we're talking about. Historically, we're an institution that has toured many exhibitions, that has travelled a lot both for scientific research and for partnership building. This new sustainability framework will make us think about it *really* differently. Having a close look at all our supply chains is one of the big changes we make: we want to make sure where we source food for our café from, we want to make sure we source products of our shop from a sustainable supply chain. We now closely look at things like heating and energy use within the building, and we're also thinking about new travel policies so that we really reduce that.

Question

How do you think museums are themselves part of a global structure which contributed to the crisis in the first place?

Brad Irwin's answer

That question is a tricky one... The Natural History Museum is in a very privileged position considering the huge number of scientists who have used or can use our collections to research the natural world. Therefore, we have many scientists doing research on the world and about the world. It is an important source of knowledge. So much of that research is now being used on global studies and reports. Thus, we have this background, this kind of fundamental underpinning that gives us, I think, a huge amount of credibility to launch off from.

But how do museums create the crisis itself? That might sound a little controversial, but I think museums have been pretty complacent for a long time. Museums, and particularly natural history museums, are just waking up to this type of thinking, and I think it's a shame. For such a long time, we've been so used to just presenting objects or creating conversations about objects, but we have somehow forgotten the bigger global picture. In my eyes, it is this complacency – if anything – that has been slightly problematic.

The whole world around museology has sifted, over a really long period of time and in many ways. Museums started off as "places to put stuff". They were places where you could come to look at things. Maybe you learned something, maybe you didn't, they were very didactic. A paradigm shift occurred which is much more oriented around engagement, learning, inclusion, discussion, etc. in a much more two ways conversation. That great paradigm shift has been important for us, I think, as a collective, to be more connected to society, more relevant, more interesting. But I see another paradigm shift coming, i.e. that we absolutely have to engage with the big critical issues. This engagement has to feel authentic to you institutionally. For us at the Museum, it absolutely does, because we have the science, we have the collections, we're building from a base where it's all underpinned by authenticity, science etc. So, I think yes, a big paradigm shift is coming for us at the Natural History Museum.

Question

How do you think museums can foster behaviour change in our visitors?

Brad Irwin's answer

This is something that we are still trying to figure out ourselves. The key here is that we find a sort of behavioural change scientist to help us, an expert who would really understand the move from just inspiring people towards getting them to act. I hope that the model that I shared briefly [advocates for the planet] is a step in that right direction. That model is to help us think of how to build up with the visitors so that they can act. For us, it's about inspiring, informing and then getting them to act. The great thing is that this is a topic that more and more institutions are really trying to grapple with. I am convinced that this is the very issue we need to focus on, and share that learning as soon as possible, because it really is all about getting people to change behaviour and I don't think we're quite there yet.

Phoebe Koundouri

Sustainable recovery from Covid-19 pandemic

A triple tsunami of crises

Currently, the world is facing three major crises at the same time. First, the Covid-19 Pandemic, which is controlled with measures like social distancing, and has triggered a huge effort in biological research for the launching of vaccines and cures that can protect the world population from this virus. Then, a huge economic recession emerged as a result of the pandemic and the closing down of the economy. Governments need to channel financial support to public and private institutions, safeguard the small and medium sized enterprises against bankruptcy, support vulnerable citizens and ensure job positions. Moreover, appropriate policies are required to protect the financial system from mounting non-performing loans and of course, fiscal packages, comparable to the crisis-related loss of GDP, are needed and should be financed by the national debt.

The third crisis is climate change, which is being faced for the last few decades, but now the effects are becoming more frequent and more extensive and intense. Climate change is the mother of all crises and affects both human and economic lives. There is intensive scientific speculation that the pandemic is one of the effects of the climate crisis because deforestation and the loss in biodiversity have brought humans very close to the wild life and this has made it easier for zoonotic viruses to make the cross-species leap. No country all over the world is not experiencing the drastic effects of climate change. The average annual economic losses of climate-related disasters are estimated in hundreds of billions. Further, geophysical disasters, of which 91% are climate-related, have cost 1.3 million human lives and 4.4 billion injuries between 1998 and 2017.

In 2015 in Paris, 197 countries signed an agreement to try to keep the increase of the average global temperature below 2°C. But now we know that 2° is too much. The temperature increase must be limited to below +1.5°C. Beyond this increase in temperature, both the risk of extreme weather events and poverty for hundreds of millions of people will significantly increase. Currently, there is neither technology available to help human beings survive in increasing temperature conditions, nor the means to face the consequences of such a situation. We are still far from the +1.5°C and the UNEP Emissions Gap Report 2019¹ has indicated that global emissions need to be cut by 7.6% per year, to achieve this target. It has been calculated that this cut is translated to a global reduction of CO₂ emissions by at least 68% by 2030. In Europe, the ambition for limiting CO₂ was 41% until September 2020. But then, the President of the European Commission announced an increase to the European ambition to at least 55% reduction in greenhouse gas emissions compared to 1990.

¹ UNEP: Emission Gap Report 2019, Nairobi: UNEP 2019, online available at https://www.unep.org/resources/emissions-gap-report-2019.

Sustainability policy framework

Generally, there is a lot of top-down mobilisation that can allow us to at least have a blueprint for identifying the pathway towards recovering from the three simultaneous crises we are facing.

The existing Sustainability Policy framework is what we have right now to build on and face the triple-crisis and try for a sustainable recovery from the pandemic. In 2015, the UN Agenda 2030 with the 17 Sustainable Development Goals (SDGs) was launched², covering of broad range of issues for the planet, people, and their prosperity. Also, in 2015 the Paris Agreement³, another global agenda to limit the global temperature increase to less than 2°C, was signed by 197 countries. In 2018, the Intergovernmental Panel on Climate Change (IPCC)⁴ announced that a 2°C increase is too much and that humanity can only afford +1.5°C compared to pre-industrial levels⁵, which implies zero-net emissions globally by 2050.

² United Nations: Transforming our world: the 2030 Agenda for Sustainable Development, 2015. Online available at: https://sdgs.un.org/2030agenda.

³ Paris agreement. In: Report of the Conference of the Parties to the United Nations Framework Convention on Climate Change (21st Session, 2015: Paris). December 2015, online available at: https://unfccc.int/resource/docs/2015/cop21/eng/10.pdf.

⁴ The Intergovernmental Panel (IPCC) is a United Nations interdisciplinary group dedicated to promoting research on human-caused climate change, see https://www.ipcc.ch/.

⁵ IPCC: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Eds. Valérie Masson-Delmotte, Panmao Zhai, Hans-Otto Pörtner, Debra Roberts, Jim Skea, Priyadarsh R. Shukla, Anna Pirani, Wilfram Moufouma-Okia, Clotilde Péan, Roz Pidcock, Sarah Connors, J.B. Robin Matthews, Yang Chen, Xiao Zhou, Melissa I. Gomis, Elisabeth Lonnoy, Tom

In 2019, the United Nations Sustainable Development Solutions Network (UN SDSN) announced six major transformations to achieve the SDGs, in the fields of 1) education, gender and inequality; 2) health, well-being and demography; 3) energy decarbonisation and sustainable industry; 4) sustainable food, land, water and oceans; 5) sustainable cities and communities; and 6) digital revolution for sustainable development⁶. This is an operationalisation framework for the 17 SDGs because 17 goals are too many to be efficient governmental goals. Politicians need fewer goals and they need them in a structure similar to the way that government is.

In December 2019, the European Green Deal (EGD) entered the picture⁷, comprising a global leadership example for pathways towards sustainability. The EGD is developed in four general axes: 1) CO₂ neutrality by 2050, 2) European clean-tech leadership, 3) protection of biodiversity and human health and reduction of pollution and 4) just transition, namely an inclusive transition that leaves no one behind. The EGD is accompanied by C1 trillion of a budget to support it. 50% will come from the European Multi-Annual Financial Framework (the EU budget) and the other 50% is aspired to be mobilised by public-private partnerships.

In 2020, the Covid-19 pandemic emerged, which means that flattening the infections curve steepens the macroeconomic recession

Maycock, Melinda Tignor, and Tim Waterfield. IPCC 2018. Online available at:

https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SR15_F ull_Report_LR.pdf

⁶ Sachs, Jeffrey D.; Guido Schmidt-Traub; Marina Mazzucato; Dirk Messner; Nebojsa Nakicenovic; Johan Rockström: Six transformations to achieve the sustainable development goals. In: Nature Sustainability, 2(9) (2019), pp. 805-814.

⁷ European Commission: The European Green Deal. Brussels, 11.12.2019. Online available at: https://eur-lex.europa.eu/legalcontent/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A64 0%3AFIN.

curve and Europe. To deal with this macroeconomic recession, the European Commission established a Recovery and Resilience Facility⁸ which amounts to an additional \bigcirc 750 billion to be invested to the recovery of the 27 European Member States.

Despite the Covid-19 outbreak, the vision of the EGD was not lost. On the opposite, this vision was further enhanced due to the recovery fund. Any funds that are going to be derived from Recovery and Resilience Facility should be invested in climate and digital-streamlined investments by 37% and 20% respectively. This is very important, because it identifies the roadway towards the recovery and identifies the structure of the future, namely to build green and digital, but also just societies that will be inclusive and allow everybody to take part in this transition.

The European example of the EGD showed a huge effect on the rest of the world and several countries followed this paradigm. Canada has announced a pact for a Green New Deal, South Korea announced in 2020 a Green New Deal, Israel a Green Recovery Plan and the United States, especially after the election of President Joe Biden, is willing to implement the US Green New Deal. In addition, a significant moment was in September 2020, when China committed to carbonneutrality before 2060.

The top-down mobilisation of the aforementioned international policies is important, but a bottom-up mobilisation is necessary, too. The EGD includes a Climate Pact⁹ where systems are supposed to be transformed via co-design and co-development of stakeholders. All the stakeholders, the business, the policymakers, the politicians, the

⁸ European Commission: Recovery and Resilience Facility, see https://ec.europa.eu/info/business-economy-euro/recoverycoronavirus/recovery-and-resilience-facility_en.

⁹ European Commission: European Climate Pact COM(2020) 788 final, December 2020. Online available at: https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=COM%3A2020%3A788%3AFIN

civil society, the non-governmental organisations, the researchers, the technology developers, education and everybody else should codesign a new system to allow change that will be fundamental and will trigger exponential pace towards decarbonisation, biodiversity protection, climate mitigation and adaptation. Thinking linearly only brings incremental changes, but to transform the economic, social and financial systems in a way that will trigger exponential change, a systems-thinking is required. As IPCC explicitly says¹⁰: "rapid, farreaching and unprecedented changes in all aspects of society" to face the crisis of climate change and safeguard our way of being.

The UN SDSN has created a Senior Working Group to study the pathways that will allow Europe to implement the European Green Deal with its nine policies: 1) Biodiversity, 2) From Farm-to-Fork, 3) Sustainable Agriculture, 4) Clean Energy, 5) Sustainable Industry, 6) Building and Renovating, 7) Sustainable Mobility, 8) Eliminating Pollution, and 9) Climate Action.

The first report, published in February 2021, constructs pathways¹¹ that allow the simultaneous implementation of the Sustainable Development Goals, the Paris Agreement, the European Green Deal Policies and the Recovery and Resilience Plans. It identifies technological and political pathways as well as financial portfolios that will support their implementation. At the same time, it sketches out measures for

¹⁰ Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments — IPCC. (2019). Ipcc.ch; IPCC. Available at: https://www.ipcc.ch/2018/10/08/summary-forpolicymakers-of-ipcc-special-report-on-global-warming-of-1-5capproved-by-governments/

¹¹ Sachs, Jeffrey; Phoebe Koundouri; et al.: Transformations for the Joint Implementation of Agenda 2030 for Sustainable Development and the European Green Deal - A Green and Digital, Job-Based and Inclusive Recovery from the COVID-19 Pandemic. Report of the UN Sustainable Development Solutions Network. 2021. Available at: https://irpcdn.multiscreensite.com/be6d1d56/files/uploaded/SDSN_EGD%20 Mapping%20Study_2021_final.pdf.

implication for job creation and employment and just transition. The results are at the country level, but also upscale at the European level. They aim at giving politicians and decision-makers a blueprint to facilitate identification of investments and absorption of funds at the national level and to create cross-country alliances for a sustainable recovery. It also facilitates public-private partnerships that will mobilise private resources for the implementation of the EGD. Ultimately, it creates a Climate Pact Manifesto to engage, together with politicians and policymakers, business, the financial sector and civil society (Systems Innovation Approach).

Decarbonisation

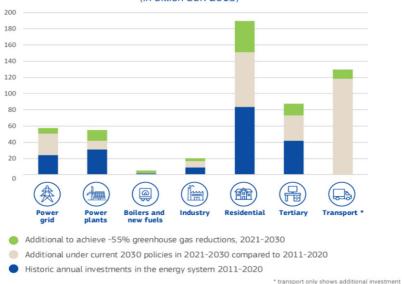
Major efforts for decarbonisation are required. Achieving 55% of greenhouse gas emissions reduction requires an additional investment of €350 billion per year in Europe. It's a huge budget but the EGD will support the mobilisation of these funds.

The European Member States stand at different stages with regards to phasing out coal. Some of them, like Estonia, Latvia, Lithuania, Belgium, Malta, Luxembourg and Cyprus, are coal-free. Some others have either committed, or are considering phasing out coal, whereas a number of them, like Poland, Romania, Bulgaria and Croatia, have not yet planned to phase out coal.

In the transition to decarbonisation, we need to identify the technological alternatives to fossil fuels. The European Commission's Annual Sustainable Growth Strategy 2021 includes seven flagships with regards to reforms and investments¹²:

¹² European Commission: Annual Sustainable Growth Strategy 2021 COM(2020) 575 final, 17 September 2020. Online available at: https://eur-lex.europa.eu/legal-

content/EN/TXT/?uri=CELEX%3A52020DC0575&qid=164231964 8572



Average annual investment 2011-2020 and additional investment 2021-30 under existing policies and to achieve -55% greenhouse gas emission reductions (in billion EUR 2015)

Fig. 1: 2030 energy and climate targets to drive investments across the economy. Source: PRIMES Model $^{\rm 13}$

1) Power-up, 2) Renovate, 3) Recharge and Refuel, 4) Connect, 5) Modernise, 6) Scale-up, and 7) Reskill and Upskill. The last one is crucial because the world is not only going through three simultaneous crises, it also goes through the fourth industrial revolution. The rate of technological change is huge and unprecedented. Human skills can be updated at a large pace only if the countries take education, training, reskilling and upskilling aspects of socioeconomic life seriously and invest in it. Most countries need to streamline current

¹³ Retrieved from the presentation of webinar: Green transition under the European recovery and resilience facility, Adela Tesarova. Online available at: https://www.secom/wetch?w_FPIUmVV/www.secom/web.ac/ https://www.secom/wetch?w_FPIUmVV/www.secom/web.ac/ https://www.secom/webca/ https://

https://www.youtube.com/watch?v=7RlUmVYzwos&ab_channel=I nterregEurope

education with the needs of the labour market, and then build capacity to have a pace of retraining and reskilling that will keep up with the pace of technological advancement. This is not just an economic aspect. It is a very basic social aspect of the transition, because to have a transition that is inclusive and leaves no one behind, people must be equipped with the capacity to work in the new technological green and digital era.

Drivers for sustainability

There are various drivers for the transition to sustainability. First of all, circular economy is a major driver for cancelling out pollution, using efficiently natural resources and raw materials and optimising waste management. Circular economy is a win-win situation, as it creates savings to businesses, it creates jobs, it reduces the environmental footprint and creates the opportunity of public-private partnerships at all business levels, namely from small and middle-sized enterprises level to multi-national company level.

Another major driver is the climate change adaptation infrastructure. Adaptation programs, such as early warning systems, the resilience of infrastructure, improvement of dryland agriculture and optimal water resources management, generate a triple dividend: avoided losses due to climate change; economic benefits from the investment programs; social and environmental benefits.

Of course, sustainable ways of finance comprise a significant driver, too. All net-zero transition programmes and initiatives need to incorporate measures to counterbalance the regressive effects of decarbonisation policies, while at the same time they should ensure that the financial system is on a pathway towards becoming sustainable. In late 2019, the EU has issued the EU Taxonomy, which helps to the characterisation of projects and investments as being sustainable

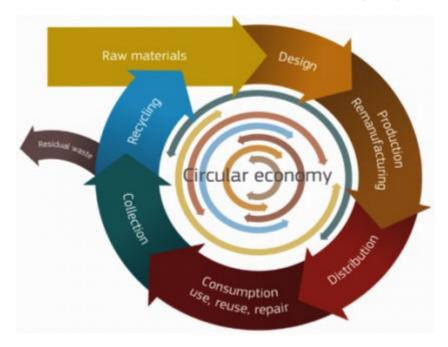


Fig. 2 A circular economy model. Source: O. Ungerman and J. Dědková¹⁴.

or not. At the same time, the European Investment Bank announced that they are not going to fund any unsustainable or fossil-fuel investment anymore. This paradigm was followed by the European Central Bank, The European Bank for Reconstruction and Development, as well as many national and commercial banks. Green bonds are a very effective and easy to use tool to mobilise the transition towards sustainable recovery.

¹⁴ Ungerman, Otakar; Jaroslava Dědková: Model of the circular economy and its application in business practice. In: Environment, Development and Sustainability: A Multidisciplinary Approach to the Theory and Practice of Sustainable Development, 22(4), (2020), pp. 3407-3432.

Lancet Commission Task Force for Job-based Green Recovery

The Lancet Commission for the Covid-19¹⁵, a prestigious commission that includes scientific leaders and practitioners from around the world, aims to identify the pathway towards recovery from the pandemic. Its Task Force for Job-based Green Recovery emphasises the need for a green recovery at the global level to support a transition towards sustainable and inclusive societies, on the pace of the 17 SDGs and the Paris Climate Agreement. Also, the Task Force explicitly states¹⁶ that private investments should be re-oriented towards sustainable industries as well as the digital economy, and should bear complementary private investments. It also stresses the need for an unprecedented commitment to reskilling and upskilling people, mentioning the EGD as a relevant leadership example.

The Alliance of Excellence for Research and Innovation on Aephoria (AE4RIA)

AE4RIA is a collaborative initiative that brings together research institutions, innovation accelerators, and science-technology-policy interface networks with a primary focus on advancing sustainable development. Founded and led by Prof. Phoebe Koundouri, AE4RIA's core mission is to drive a science-driven and human-centric transition towards achieving the SDGs outlined in the UN Agenda 2030,

¹⁵ https://covid19commission.org/green-recovery

¹⁶ The Lancet Covid-19 Commission, Task Force on Green Recovery: Transforming Recovery into a Green Future, Statement of the Lancet Covid-19 Commission Task Force on Green Recovery, March 2021. Onine available at:

 $[\]label{eq:https://static1.squarespace.com/static/5ef3652ab722df11fcb2ba5d/t/60a3cae4eff4662023cfc88a/1621347052333/Green+Recovery+TF+March+Statement.pdf$

implementing the Paris Agreement on Climate Change, and aligning with the objectives of the EGD.

AE4RIA operates as a dynamic e-network, incorporating various research and innovation centers such as the Research Laboratory on Socio-Economic and Environmental Sustainability (ReSEES) at Athens University of Economics and Business, the Sustainable Development Unit (SD.U) at ATHENA Information Technology Research Center, and the Stochastic Modeling and Applications Laboratory at Athens University of Economics and Business, among others. Additionally, AE4RIA collaborates with a range of innovation acceleration hubs, including BRIGAID Connect Association, MENA Maritime Accelerator, Black Sea Accelerator, SDSN Global Climate Hub, and EIT Climate KIC Hub Greece. Moreover, AE4RIA lends its support to several significant scientific associations and science-policy networks, including the Sustainable Development Solutions Network (SDSN), SDSN Europe, SDSN Greece, the European Association of Environmental and Resource Economists (EAERE), Water Europe, and the NEXUS Cluster.

The Goulandris Natural History Museum

The work done at the Goulandris Natural History Museum¹⁷ is another important private initiative in the effort to tackle the climate crisis. At the moment, there is a three-year programme on climate change and its impact on the planet. The programme is very rich with a series of seminars, events, open discussions, public speeches and conferences, interactive games and interactive exhibitions for young people. So, it's one of the research programmes around Europe but also the richest and most interactive in Greece.

¹⁷ https://www.gnhm.gr/en/home-page/

At the same time, the museum is upgrading GEOSPHERE, a hemispherical dome-monitor showing the rotating planet in highresolution images, to support educational activities. This is an amazing 3D exposition of the history and the effects of the interaction between humans and nature on each other. Also, the museum hosts the GAIA Centre, a permanent exhibition focusing on the current environmental problems and especially climate change.

At the same time, the Goulandris Museum develops new educational programmes on climate change in collaboration with the UN SDSN and the climate change committee at the Bank of Greece. One of the existing educational programmes, designed for primary school and kindergarten students, is How we change the climate, a fairy tale presenting in a very simple way what climate change is. Climate Change-EARTH is an impressive projection on the museum's GEOSPHERE presenting global warming, extreme weather phenomena and their effects on man. All the natural catastrophes, except earthquakes, are affected by climate change and their frequency and intensity increase because of it. Young children are experiencing extreme weather events, like floods and wildfires, in their everyday life and they are interested to learn more about it. Seas and Oceans is a fairy tale that shows in a very simple way, how great the value of the oceans is for our planet, how they affect climate change and what we can do to protect them. Oceans & Climate Change, similar to Climate Change-EARTH, is an impressive projection on the museum's GEOSPHERE presenting the importance of the oceans for our planet and consequently for man.

In times of a pandemic

Anastasia Chourmouziadi, Elli Karkazi, Anna Papatheodorou, Polyna Xiradakis

From physical to digital: the Covid-19 challenge in Greek museums

Introduction

Apart from the obvious technological renovation that they have been facilitating, digital technologies are offering to the museums a radically new way of communicating with their potential audiences. Even if we do not take into consideration the frantically evolving field of social media, the easily navigable world of the internet makes museums' digital "headquarters", i.e. their websites, an effortlessly – even if accidentally – accessed destination. The burden of planning and supporting large scale promotional campaigns using the wide spectrum of traditional communication tools – poorly undertaken by the majority of museums as relevant research has established – is being replaced by the creation and support of just one website. Although this kind of digital presence seems an old story already, only recently, most museums have decided to seriously invest in it. The continuously changing image of the museum websites' field makes it very difficult to undertake solid observations that can retain their value for long.

Still, we can say that some of the major problems of museum websites stressed by relevant research have been successfully faced: aesthetic quality, originality, and overall attractiveness have significantly ameliorated, content is being enriched, and technical problems are rather uncommon. To put it in another way, all factors that websites' evaluation models maintain as critical for a website's quality have been taken into consideration by museum site developers.

However, we can argue that all these praiseworthy efforts are based on a more or less unchanged assumption: that physical visit to the museum is a paramount and indispensable experience, and consequently the digital visit is either a useful preparatory stage or an acceptable substitute when a physical visit is out of the question. The latter being a sort of "charity" addressed to those who cannot afford the physical visit. Previous studies^{1,2,3,4} have shown that the online visitors prior to a museum visit are mostly interested in acquiring practical information related to a physical museum visit (opening hours, entrance fees etc.), if the website itself has persuaded

 ¹ Fillippini Fantoni, Silvia; Rob Stein; Gray Bowman: Exploring the Relationship between Visitor Motivation and Engagement. Online Museum Audiences. In: Museums and the Web (2012). Online available at: http://www.museumsandtheweb.com/mwa012/papers/exploring_the_rola

http://www.museumsandtheweb.com/mw2012/papers/exploring_the_rela tionship_between_visitor_mot.html (accessed 17 February 2022).

² Marty, Paul: Museum Websites and Museum Visitors: Before and After the Museum Visit. In: Museum Management and Curatorship, 22(4) (2007), pp. 337–360.

³ Goldman, Kate Haley; David Schaller: Exploring Motivational Factors and Visitor Satisfaction in On-line Museum Visits. In: Museums and the Web (2004). Online available at:

http://www.archimuse.com/mw2004/papers/haleyGoldman/haleyGoldma n.html (accessed 17 February 2022).

⁴ Marty, Paul; Michael Twidale: Lost in gallery space: A conceptual framework for analyzing the usability flaws of museum Web sites. In: First Monday, 9(9) (2004). Online available at:

https://firstmonday.org/ojs/index.php/fm/article/download/1171/1091 (accessed 17 February 2022).

them that such a visit is worth the pain. In some cases, after the visit, people return to the website in an effort to delve into online artefacts' images, collections data and research materials². On the other hand, the blurry term "virtual museum", used for a great variety of endeavours, promoted the idea that a museum visit realised in the digital world is always rooted in the physical one; the "virtual" is regarded as the opposite of the "real" and, consequently, a virtual visit can be nothing but a simulation. Nevertheless, nowadays, numerous transactions, education programmes and many other activities digitally accomplished show us that very real things can happen in the internet world as well.

The reluctance of the museums to systematically explore this field and offer self-contained digital experience in their websites can be related to the fear in the prospect of losing potential physical visitors/ clients. Nevertheless, according to Marty's study (although it was not largely verified), online museums rather drive physical museum presence instead of discouraging physical visits. On the other hand, the audience's mistrust of digital museum products is certainly stemming from the belief that the quality of a museum experience is mainly based on the authentic objects' aura. Interestingly enough, the Louvre Museum has launched a virtual reality application related to *Mona Lisa*⁵, having observed that the physical visitors could not even slightly enjoy the painting, standing in front of it for a few seconds, squeezed in a crowd of tourists, and deafened by hundreds of camera clicks.

The Covid-19 pandemic made physical access to museums' exhibitions difficult or even impossible for everyone, for the time being. Almost 90% of museums worldwide had closed their doors to the public during the first months of the pandemic⁶. The bright side of

⁵ 'Mona Lisa: Beyond the Glass' (accessed 17 February 2022).

⁶ UNESCO Report 2020: Museums around the world in the face of Covid-19. Online available at: https://unesdoc.unesco.org/ark:/48223/pf0000373530 (accessed 19 February 2022).

this unexpected situation is that it can make us think, among other dystopian scenarios, of a future with no physical museums. So, considering the lockdown as a "dress rehearsal", we decided to examine whether Greek museums were ready to present a satisfactory digital self. In other words, we examined whether Greek museums used digital tools and products to keep the relationship with their visitors alive or even reach a wider audience. Furthermore, we addressed the question of how they used them, providing an insight into the ways that Greek museums rose to the challenge of Covid-19 lockdown.

Materials and Methodology

In order to answer the research questions, we referred to the Hellenic National Cultural Portal Odysseus⁷, developed by the Greek Ministry of Culture. Data have been retrieved concerning 272 Greek institutions that are officially acknowledged as museums, including archaeological museums and archaeological collections, Byzantine, post-Byzantine and Christian museums, diachronic museums, historical and folklore, art, theatre, cinema, music, photograph, maritime, science and technology, natural and history museums, museums of Asian art and museums with topics of special interest. We focused on the first lockdown period in Greece, namely from 20 March – the date when museums closed all their onsite operations – until 4 May 2020.

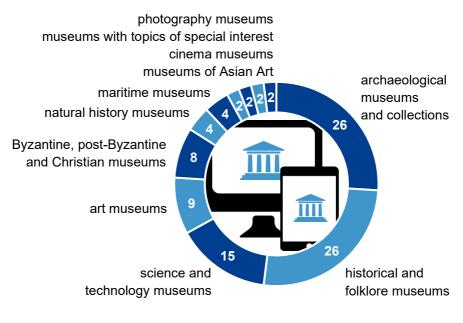
This official list helped us build the general image and trace potential differentiation among museums, as far as their digital activities are concerned. Since the Odysseus portal offers minimal information and does not include multimedia and interactive content, we checked whether the above-mentioned museums had their own official website as a prerequisite for our research. Those that fulfilled this criterion

⁷ http://odysseus.culture.gr/h/1/gh12.jsp (accessed 15 February 2022).

underwent further analysis concerning online activities during the lockdown period. Social media were excluded from our research, since they constitute a different means of online communication, which will be approached in a future research effort. Activities housed in the museums' websites were further categorized on the basis of qualitative traits, as follows: simple announcements concerning the museums' closure, general announcements (mainly Easter wishes and cancellation of events due to Covid-19), online participatory events, educational programs, virtual tours and pre-existing or new multimedia content. Excel and SPSS Statistics software have been used for descriptive data analyses.

Results

Key findings emerged from our research. The majority (n=176, 64%) of museums of our sample (n=272) lacks its own website. Of those possessing a website (n=96), only 54% (n=52) were engaged to digital visitors through any kind of activities. Among them, ten (10%) museums provided multimedia material and six (6%) provided digital educational programs. An at any time accessible digital narration tour concerning the museum exhibition was performed by only five archaeological museums (5%). Three museums (3%) created participatory digital events for their website visitors and only one museum (1%) openly invited its visitors to a Live Streaming Tour (Archaeological Museum of Thessaloniki) allowed open access to its publications.



no online activity: theatre museums music museums

Fig. 1: Type of Greek museums with online activities during the quarantine (in % of responding museums with website, n=96). Source: research by the authors, chart⁸ Stéphanie Wintzerith.

Our results demonstrated that the archaeological, the historical and folklore and the science and technology museums were the most active in terms of online activity (see figure 1). The most active online engagement with multiple activities during the quarantine was undertaken by the Acropolis Museum, the Greek National Archaeological Museum, the Archaeological Museum of Thessaloniki, the Byzantine and Christian Museum of Athens, the Museum of Byzantine Culture of Thessaloniki, the Diachronic Museum of Larissa

⁸ Icons: screen from icon-icons.com, smartphone from flaticon.com

and the Archaeological Museums of Aiani, Heraklion, Igoumenitsa and Pella.

Discussion

During the pandemic, 94.7% of the museums worldwide were closed between 7 April and 7 May 2020, including 97.1% of European ones⁹. The sudden and unexpected Covid-19 lockdown undoubtedly has had, and apparently will have, a great impact, not only from an economic point of view, but also on the bond between museum and visitor. Ironically, it also created a challenging opportunity for museums to develop and deploy the significant potential of digital applications.

According to the ICOM global survey⁵, digital communication activities, including online collection, online exhibitions, live events, newsletters, podcasts, quizzes, contests and social media, increased in at least 15% of the museums. However, this concerned mostly activities on social networks that increased or started after the lockdown for almost 50% of the museums surveyed – a field not included in our research – which was rather expected due to the preponderance of social media as a powerful communications medium, with widespread influence. Four out of five (most of them European) museums have increased their digital services according to the Network of European Museum Organisations survey¹⁰. Interestingly, two out of five museums reported an increase in online visits, ranging between 10%

⁹ ICOM - International Council of Museums: Museums, museum professionals and Covid-19: survey results. 2020. Online available at: https://icom.museum/wp-content/uploads/2020/05/Report-Museumsand-Covid-19.pdf (accessed 18 February 2022).

 ¹⁰ NEMO: Survey on the impact of the Covid-19 situation on museums in Europe

 Final report. 2020. Online available at: https://www.nemo.org/fileadmin/Dateien/public/NEMO_documents/NEMO_COVID19_

Report_12.05.2020.pdf (accessed 19 February 2022).

to 150% during the reporting time (between 24 March and 30 April 2020), corroborating the urge for digitisation. The significant role of new technologies referred to in the 2015 *UNESCO Recommendation on Museums* has been affirmed during the Covid-19 lockdown¹¹.

Our research results show that, as a whole, Greek museums were inadequately prepared for this challenge. *Ad hoc* digital material is not easy to build up, especially under pressure. Instead, it has to be established in time depth and demands a long-term investment and relative experience.

The majority of Greek museums lacks its own website; therefore, museums with a sole presence in the Odysseus catalogue (i.e. without own website) were shut down in every sense during the lockdown. However, the existence of a website, although necessary, is not a sufficient condition for the development of online activities. Indeed, only half of those possessing a website took action, mainly informing the public about the mandatory closure¹², along with other general announcements, Easter wishes being the most popular theme.

Our research showed that only a small group tried something more: ten museums provided multimedia content¹³, six educational

¹¹ Mairesse, François: Report on the Implementation of the UNESCO 2015 Recommendation on Museums & Collections: Recommendation concerning the Protection and Promotion of Museums and Collections, their Diversity and their Role in Society. UNESCO: Paris 2019. Online available at: https://unesdoc.unesco.org/ark:/48223/pf0000371549 (accessed 17 February 2022).

¹² For example announcements informing the public about the provisional closure of the National Archaeological Museum, online available at: https://www.namuseum.gr/en/new/provisional-closure-of-the-exhibitionareas-of-the-national-archaeological-museum/ (accessed 19 February 2022); the Metropolitan Organisation of Museums of Visual Arts of Thessaloniki (MOMus), online available at:

https://www.momus.gr/en/news/momus_suspension (accessed 19 February 2022).

¹³ For example multimedia material (in Greek) provided by the Heraklion Archaeological Museum (accessed 19 February 2022).

programmes, five archaeological museums offered a pre-existing virtual tour¹⁴, and one museum invited its visitors to a live streaming tour. Needless to say that we are referring here to well-known archaeological museums with large audiences, rather stable revenues and funding, permanent staff and external collaborators with expertise in digital media. Most digital content pre-existed when the Covid-19 closure occurred, and only a few museums, such as the Acropolis Museum, developed new multimedia content during the quarantine.

Only three museums created online participatory events for their website visitors. For instance, the Thessaloniki Archaeological Museum organised two open online actions¹⁵. Although appealing and original, these activities cannot be considered as an alternative to museum visits¹⁶. They remind us of the music playing during a phone call waiting time: their role is to keep the audience warm until the end of the lockdown. The fact that the same museum allowed open access to its digital publications, during the pandemic restrictions, shows that even if a museum is willing to exploit digital affordances, lack of systematic work in this direction leads to rather awkward actions.

Our research results ascertain that museum websites' principal aim is to attract physical visitors. However, the Covid-19 closure seems to have significantly affected museums' communication with their

¹⁵ "Poetry in the shape of things". (in Greek). Online available at: https://www.amth.gr/news/i-poiisi-sto-shima-ton-pragmaton-psifiakiekthesi (accessed 19 February 2022); "Everything changes in time and all remain the same". (in Greek). Online available at: https://www.amth.gr/news/ola-ston-hrono-allazoyne-ki-ola-ta-idiamenoyn-psifiaki-ekthesi (accessed 19 February 2022).

¹⁴ For example virtual tours of the: Archaeological Museum of Igoumenitsa, online available at: http://epirustreasures.gr/?p=2499&lang=en (accessed 19 February 2022); Diachronic Museum of Larissa, online available at: http://dml.culture.gr/Virtual_Tour_DML/Virtual_Tour.html (accessed 19 February 2022).

¹⁶ Similar initiatives, although in a significantly larger scale, are the "Getty Museum Challenge" and the "Museums Unlocked" by the Pitt-Rivers Museum.

audiences in the short and long term. We argue that it is time for museums to develop comprehensive digital experiences, not only as a reaction to social crises like the present one or for other cases that definitely deserve our attention, such as people with disabilities or people from remote areas. There are many institutions worldwide that think beyond their established modus operandi, catch the spirit of the times, bring into play innovative technological applications, and develop alternative experiences in the digital world. They invest time and resources for the digitisation of their collections, they offer virtual tours, they even create virtual reality exhibitions. This foresight demonstrated its value during the Covid-19 lockdown. But is this enough, or will the user just change a routine scroll down in Facebook with a scroll down in the Louvre? A fundamental question then arises: is a digital experience capable of offering an equally integrated experience than a physical visit does? Referring to all the criticism digital initiatives have provoked so far is beyond the scope of this research, but we can argue that technical affordances are evolving disproportionally to the evolution of museums' theoretical frames and methodological tools. We are still breathlessly running to catch up with technological innovation, hoping that digital wonders incorporated in our traditional practice will be enough.

So far, most Greek museums have been reluctant to digitally share their collections. Therefore, during the pandemic, even the already digitised museum objects were not used. And when used, the digital product is, in fact, an online catalogue. But let us for a moment move our focus from the self-contained artefact and its inherent significance to the potential multiple narratives in which this artefact can be entangled. Then, as Lev Manovich¹⁷ argued twenty years ago, this digital database can constitute the ideal starting point for numerous alternative open-ended narratives. In this vein of

¹⁷ Manovich, Lev: The Language of New Media. Ed. Lev Manovich. Cambridge, Massachusetts & London, England: The MIT Press 2001.

thought, the distancing from physical objects, caused by the pandemic, offers an advantageous situation that allows museums to explore digital narratives without the burden of material objects' agency. In the familiar environment of their home, digital visitors can perhaps overcome the usual awe and become critical; they can turn their exclamation points into questions, thoughts, objections, even anger.

Having said that, we do not claim that physical exhibitions or physical interaction with the collections are useless. What we are trying to say is that, by functioning for a while without them, we can discover what is missing from our suspended physical normality: active cultural artefacts and active audience.

We believe that the awkward response of Greek museums to the pandemic situation will be bequeathed to the future as an awkward use of digital affordances. The example of the Acropolis Museum a museum with ample funding and adequate resources -, is quite enlightening. Its recent digitisation project produced more than twenty applications that exploit a limited spectrum of digital possibilities and show remarkable lack of content originality, when children are not the target group. The 360° tour offered to online visitors is, once more, a poor substitute of the physical visit, and certainly not an experience one would expect from a museum with worldwide fame. In our opinion, we have to do, at least, with a problematic strategic plan. Thus, the problem, if we believe that there is actually a problem, won't be solved when Greek museums will obtain, somehow, the necessary substructure, financial means, and digitally informed personnel. It will be faced when a different way of thinking will be adopted.

Hopefully, the pandemic will soon be over, leaving us with significant psychological issues, and the realisation that, locked or not, we live in a hybrid world. Museums should, therefore, review and restructure their web strategies, as they constitute a promising field offering extra time and space to fruitfully interact with their audiences. What is really challenging is to determine the activities that can differentiate the digital from the physical museum experience and enhance, not just support, the already established museum's social role. Caterina Ruscio

From mass tourism to no tourism: museums and tourism in Rome at the time of the pandemic

Introduction

In the past, cultural tourism was considered a niche activity. It soon became part of every trip, as many sites of cultural interest have been included in the tourist itineraries answering a growing demand. Mass tourism has often impacted the more famous historic sites. Though the way of reducing the risks of overtourism has been much discussed for many years, tourism policies have failed to overcome the addition to tourism revenues. The pandemic might represent an opportunity to critically analyse the touristic organisation for places of cultural interest. In the city of Rome, there are numerous museums, archaeological sites, churches and monuments; but too often the same tourist routes are promoted, creating a quite unbalanced tourism. Even before the pandemic, the possibility of diversifying the touristic offer on the territory of Rome and its province has been much discussed, through agreements with various tourist bodies, special deals between museum institutions as well as a process of promotion and museums digitisation complementary to on-site activities. The pandemic has revealed the absence of digitisation of so many cultural institutions: only some museums constantly worked during the first months of the lockdown, using social media too as a means of dialogue with the public.

Cultural tourism definitions

Cultural heritage, whether tangible or intangible, is an important stimulus to tourists' demand¹. Cultural tourism started to be considered a new category in the late 1970s, when researchers realised that some people were travelling to experience more of the cultural heritage of their destination². Stebbins³ stated that "cultural tourism is a genre of special interest tourism based on the search for and participation in new cultural and deep experiences, whether aesthetic, intellectual, or psychological". There are as many classifications of cultural tourism as types of visitors, and as ICOMOS observed⁴, "cultural tourism means many things to many people and herein lies its strength and its weakness". People interested in touring a place might be interested in different aspects depending on the time available, how far they are from home and the whole purpose of a journey. Cultural tourism

¹ Mc Kercher, Bob; Hilary Du Cros: Cultural tourism – The partnership between tourism and cultural heritage management. New York: Haworth Hospitality Press 2002.

² Tighe, Anthony J.: The Arts/Tourism Partnership. In: Journal of Travel Research vol. 24, issue 3 (1986), pp. 2-5.

³ Stebbins, Robert A.: Cultural Tourism as Serious Leisure. In: Annals of Tourism Research 23/4 (1996), pp. 948-950. Here: quotation p. 948.

⁴ ICOMOS: The Declaration of San Antonio: Authenticity in the Conservation and Management of the Cultural Heritage. 1996. Online available at https://www.icomos.org/en/resources/charters-and-texts/179-articles-enfrancais/ressources/charters-and-standards/188-the-declaration-of-sanantonio.

is part of tourism and as such embraces the different values of a country along with lifestyle, history, art, architecture or religion, in a context where people live and have formed their culture over time⁵.

Mass tourism and overtourism in Rome's cultural heritage sites

Academics and tourism professionals have reported the danger of an excess of tourism in different locations around the world. The mass tourism phenomenon affects specific sites and reveals the difficulty of managing numerous visitors. Overtourism arises from mass tourism in sites of various kind: urban contexts, museums, religious places etc. It consists in an excess of tourists present on one site at the same time. The issue of overtourism involves both physical and psychological limit and needs to be managed on the basis of an appropriate evaluation of each case.

Tourism in Rome has rapidly grown and visitors often chose to visit the cultural heritage of the city. The Pantheon, the Colosseum and the Vatican Museums were the three most visited sites in Rome⁶ in 2019. Although this is a profitable result, the presence of so many people in the same places leads to crowd management and conservation issues. Mass tourism became overtourism. Highly visited cultural institutions looked for the suitable measures to adopt: time slots allocation, a quota of visitors per day or even regulation of queues at the entrance on site.

⁵ Flutur, Lavinia Mădălina; Alexandru Mircea Nedelea: Cultural Tourism. In: Revista de turism – studii și cercetări în turism No 25 (2018).

⁶ Statistiche culturali – Anno 2019. Istat 2019, online available at https://www.istat.it/it/archivio/251882.

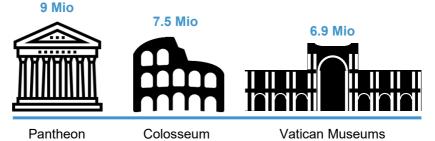


Fig. 1: The most visited sites of Rome in 2019 (number of visitors per year). Source: Istat⁷, chart⁸ Stéphanie Wintzerith.

In the case of the Pantheon, the Municipality of Rome discussed a symbolic entrance fee of 1.50 € – the site is a historical State monument managed by the Ministry of Italian Culture as well as a church. The Vatican Museums experienced difficult crowd management due to a very high demand for access. The Vatican is a State with a surface area of only 0.44 km² with a daily concentration⁹ of 68,490 visitors per km². In the last decade, visitors to the Vatican Museums increased¹⁰ by more than 20%, reaching 6.9 million visits in 2019 (Figure 1). Saint Peter Basilica in the Vatican also experiences a critical

⁷ Op. cit., see footnote 6.

⁸ Icons Pantheon and Colosseum: flaticon.com, Vatican Museums: Stéphanie Wintzerith

⁹ Peeters, Paul M.; Stefan Gössling; Jeroen Klijs; Claudio Milano; Marina Novelli; Corné Dijkmans; Eke Eijgelaar; Stefan Hartman;Jasper Hessel Heslinga; Rami K. Isaac; Ondrej Mitas; Simone Moretti; Jeroen Nawijn; Bernadett Papp; Albert Postma: Research for TRAN Committee – Overtourism: impact and possible policy responses. European Parliament, Directorate General for Internal Policies, Policy Department B: Structural and Cohesion Policies, Transport and Tourism (2028). https://doi.org/10.2861/919195.

¹⁰ Antoniutti, Arianna : Musei Vaticani troppo affollati, preoccupazioni per la sicurezza. Esposto del codacons. In: Il Giornale dell'Arte, 18.10.2017. Online available at http://www.ilgiornaledellarte.com/articoli/2017/10/128338.html.

situation¹¹ as praying pilgrims are disturbed by big crowds entering the church. Moreover, crowd issues increase during major catholic holidays¹².

The situation requires careful planning and a constant crowd monitoring. Fostering important cultural heritage sites is not only a tangible conservation problem, it also puts the cultural identity at risk while favouring a standardisation of cultural paths which do not give a realistic image of the visited place. As the Istat annual report 2019¹³ pointed out, there is a large gap between tourist flows in different sites: some museums and archaeological areas, while rich in history, are far less visited than the most famous sites.

The audience difference between the most famous sites and the rest of Rome's cultural heritage is high. Academic and government institutions highlighted interesting aspects such as the inconvenience in reaching a site – which is connected to a broader planning of the urban transport network that needs strengthening -, insufficient promotional campaign for museums, reduced reception skills. Moreover, museums are often self-referenced places where the management only dialogues with a more educated part of the general public. Most museums focus their communication campaigns on temporary exhibitions or short-time special events. It is also crucial for a museum to be outreaching, interactive and inclusive. Museums still find it difficult to survive with their low income due to small entrance fees and the lack of funding from the government. Furthermore, museums and cultural institutions in Italy are managed under various statuses: they can be State-owned, municipal, private or with religious collections. These dissimilar management structures certainly do not help, neither to build up a consistent promotion, nor

¹² Op. cit., see footnote 6.

¹¹ Timothy, Dallen J.: Cultural Heritage and Tourism: An Introduction. Aspects of Tourism Texts. Bristol/Buffalo/Toronto: Channel View Publications 2011.

¹³ Op. cit., see footnote 6.



Fig. 2: Queuing at the entrance of the Saint Peter Basilica. Photograph: Caterina Ruscio.

to develop a common strategy for museums. On top of this, numerous State museums are allocated in concession to external companies, which decide independently over the management and promotion of the site¹⁴.

Proposals for the promotion of cultural tourism in Rome

Covid-19 could be an opportunity to reduce addiction to tourism in many historical cities where tourist activities are vital. Post-crisis tourists might choose to travel to destinations closer to their place of residence as it is safer and cheaper. The need for cultural tourism to peripheral centres, spread throughout the year, is an even closer

¹⁴ The management issues of Italian museums would need an in-depth analysis which would be desirable for future research work.

possibility in this specific circumstance. Smaller and less known museums might develop a new strategy to respond to the needs of an increasingly varied "omnivorous" public, which is over-exposed to a lot of information¹⁵. Cultural heritage should no longer be only places to visit, but spaces and opportunities to be shared with the communities living there¹⁶. A new model of "visitor spreading" to many more destinations is increasingly important, given the situation created by the pandemic. The ideal tourist flow has to be better distributed and tourists have to be trained to become visitors¹⁷. The World Tourism Organisation outlined¹⁸ the importance to engage various stakeholders to re-create and co-create local tourism offers in safety. Re-opening museums, churches or historical buildings in general with the pandemic still circulating, requires new strategies and actions to distribute visitors in different areas with the promotion of new sites to make.

The Municipality of Rome has examined a strategic plan for the city where a new tourist offer is needed to guarantee greater quality in reception and services, through a constant dialogue and in collaboration with consortia of travel agencies or hotels. The promotion of the "old paths" to the public no longer works because it reduces the intensity of the visitor's experience, creating more distance between the public and culture. In Rome, the promotion of cultural activities combined

¹⁵ Cerquetti, Mara: La componente culturale del prodotto turistico integrato: la creazione di valore per il territorio attraverso i musei locali. In: sinergie n. 73-74/07 (2007), p.421-438. Here p. 423-425. Online available at https://u-pad.unimc.it/bitstream/11393/37234/1/Cerquetti_Sinergie_73-74_2007.pdf.

¹⁶ Bonomi, Aldo; Roberto Masiero; Filiberto Zovico: Dalla Smart city alla smart land. Venice: Marsilio 2014.

¹⁷ Burgen, Stephen; Angela Giuffrida: Un'Alternativa al Turismo di Massa. In: the Guardian, 5 August 2020.

¹⁸ Cultural tourism & Covid-19. Website of the World Tourism Organisation UNWTO. https://www.unwto.org/cultural-tourism-covid-19 (accessed September 2021).

with the public transport system, the so-called "city cards", was a success. The city card system worked well, allowing the public to visit as many museums as possible. Existing relevant cards are the following:

The *MIC* card (Musei in Comune of Rome¹⁹) has been sponsored in 2018 by the Municipality of Rome: it is valid for one year for people who live, work or study in Rome and allows visiting the museums of the circuit of the Municipality of Rome at a reduced price of $5 \in$. In the first two months of 2018, some 10,000 cards were sold, reaching 60,000 cards by October 2019. Beginning of 2020, the *MIC* card was extended to those who live in the province of Rome.

The *Roma Pass* card is mainly used by tourists and allows entry to various museums and archaeological areas in Rome, including free public transport for the entire validity of the Card (48 hours at $32 \in$ and 72 hours at $52 \in$). The *omnia card* also gives opportunity to tour the city attractions and particularly religious sites such as the Vatican Museums and the Basilica of Saint Peter along with other churches. Moreover, the 72-hours *omnia card* can be combined with the *Roma Pass*.

Sustainability of tourism is a long and complex process in Rome. The pandemic put aside any issue of overtourism, at least temporarily, and opened new perspectives for a more balanced and diversified tourism in the urban context. Responsible tourism promotion and diversification of cultural offers have become recurring objectives for a relaunch of cultural heritage in the post-pandemic era. In addition, numerous Tourist Info Points have been scattered throughout the city to inform visitors on more cultural heritage sites of Rome. The information on the spot became, in a context as wide as that of the city of Rome, valuable in this pandemic era with last minute cancellation threats. More recently, the Municipality of Rome reorganised the website dedicated to entertainment and culture in the capital. Furthermore, the Municipality has launched the *Rome Safe Tourism*

¹⁹ https://museiincomuneroma.it.

campaign²⁰, which provides for the certification of some places of hospitality and culture that follow the rules of distance and sanitation.

The round table "Promotion of Sustainable Tourism and Proximity Tourism" held on 16 June 2021, highlighted in a specific guideline the different points to be considered in order to relaunch a more balanced and less destructive tourism for the future. The first aspect addressed during the conference was the assessment of tourist carrying capacity²¹ - i.e. the maximum number of tourists acceptable without causing damages - of sites in connection with the distribution of visitors over various parts of the city and over different periods, trying to beat seasonal tourism. The second point dealt with the offer of guided tours in lesser-known areas of the city by promoting more museums itineraries at arrival places such as airports or railway stations. Diversification seems an adequate strategy to increase tourist arrivals through the offer of multiple activities and it improves the image of the destination by promoting new and distinctive expertise. The regulation of access to the main sites, in particular for large groups (for example by establishing the maximum size of a group or the maximum number of visitors who can visit a site at the same time) was an aspect discussed in depth during the meeting.

Another fundamental point is the importance of identifying the tourist targets that have less negative impact on the city, creating contact between external visitors and the local community. Tour operators often propose standardised events with the replication of identical mass activities to undifferentiated customers. The round

²⁰ https://www.comune.roma.it/web/it/informazione-di-servizio.page?contentId =IDS620229 (accessed December 2021).

²¹ The "tourism carrying capacity" is defined by the World Tourism Organisation UNWTO as "the maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, and sociocultural environment and an unacceptable decrease in the quality of visitors' satisfaction." It is a key challenge for tourism developers and managers alike (UNWTO, 2006).

table emphasised the need to promote events or itineraries that allow the participation of both local communities and visitors.

Furthermore, a significant aspect is the possibility of extending the opening hours of the museums. Last but not least, the round table showed the importance of a constant monitoring of data of cultural sites: every sector related to tourism and cultural heritage should exploit new technologies to monitor and evaluate the performance of the city and the impact of tourism. The dialogue between all the actors in cultural tourism with the involvement of the main stakeholders, allow the tourist to be considered a visitor who benefits from as many cultural sites as possible²².

Promotion of cultural heritage through museums' digitisation

Culture offers economic and social benefits. Museums are places of culture symbolising history and cultural identity. The definition of museum²³ formulated by ICOM encompasses all the significant aspects of the role of museums for a society:

"A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing."

Learning, promoting culture within communities and interacting with the audiences are fundamental standards to keep in mind the

²² The material of the round table is not completed and is partially available on the portal of the Municipality of Rome: https://culture.roma.it/

²³ ICOM 2022. Statutes, online available at https://icom.museum/wp-content/uploads/2022/09/Statutes_2022_EN.pdf

way of perceiving a museum. An important aspect of promotion and support to the various cultural institutions is represented by the digitisation process. Digitisation has the potential to reach an everwider audience. It establishes a new dialogue with the public and it enhances participation. Many museums promote their collections through the web, achieving visibility along with an increasing public interest. Some of the elements characterising museum objects can easily be conveyed to the user through multimedia and in particular through the web. Media learning includes elements that work in favour of a total immersion in learning: sounds, videos or texts help the interactivity of the virtual visitor, who becomes as sort of a co-editor²⁴ of the museum.

Technologies contribute to sustain the relationship between cultural institutions and communities. But the digital space remains mostly unknown and the professional skills required for digital communication are still scarce. The Covid-19 pandemic has accelerated an already persistent virtual reality process, which has its own role of inclusiveness through the use of numerous tools: virtual tours, app installations, more interactive websites, online storytelling, daily social media bulletins etc. An effective communication with the virtual public is now a continuation of the activities in presence²⁵. The University of Milan Politecnico produced a report²⁶ on the online reputation of museums, archaeological parks, institutes and places of Italian culture on behalf of Ministry for Cultural Heritage and Activities and Tourism. The disruption of the on-site museum activities has increased the

²⁴ Di Pietro, Irene: La nuova frontiera dei musei: digitalizzazione, comunicazione culturale, coinvolgimento, [Dissertation thesis], Alma Mater Studiorum Università di Bologna. Dottorato di ricerca in Arti visive, performative, mediali, 29 Ciclo. 2017. DOI 10.6092/unibo/amsdottorato/8245.

²⁵ Terras, Melissa: The Rise of Digitalization – An overview. In: Digital Libraries. Ed. R. Rukowski. Sense Publishers 2010, pp. 3-20.

²⁶ Op. cit., see footnote 26.

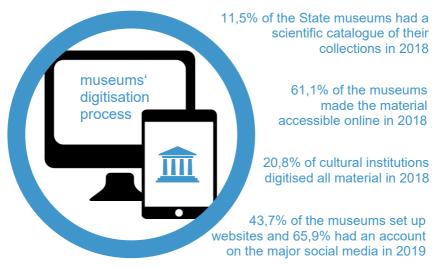


Fig. 3: Museum digitisation in Italy. Source: Politecnico di Milano²⁷, chart²⁸ Stéphanie Wintzerith.

presence of museums on social media channels: the number of publications doubled compared to the pre-Covid period.

Museum management in times of Covid-19: the social media experience

The first phase of the pandemic from March to May 2020 saw many initiatives to promote the museum collections through a constant dialogue with the public. The directors of various museums in Italy and in the world opened a "virtual window" on their collections with

²⁷ Politecnico di Milano. A report on behalf of the Ministery for Cultural Heritage and Activities (2020), online available at http://musei.beniculturali.it/wp-content/uploads/2020/07/Report-Reputazione-Online-dei-Musei Maggio-2020 sintesi.pdf.

²⁸ Icons: screen from icon-icons.com, smartphone from flaticon.com

special visits: the Colosseum as well as the Vatican Museums have recorded their own guided tours through YouTube channels, showing the museums exclusively behind closed doors.

The municipal museums of Rome "Musei di Roma" and two of the autonomous national museums, the National Roman Museum and the Etruscan Museum of Villa Giulia, organised many online events and never stopped working during the lockdown in 2020. They continued to monitor the interest of the public online and offline after re-opening in May 2020.

Musei di Roma publicised their activities and collections both via their websites and social media. These museums have in fact collaborated in the development of a common communication strategy to engage the public during the lockdown. They are all part of the web portal *museiincomunediroma.it*, which facilitated the audience participation in as many activities as possible inside the museum system. In total, Musei di Roma recorded 39,161 Instagram followers during the first three months of the lockdown. Its Twitter account has significantly increased the number of followers on a national scale, as reported by Istat data²⁹, mainly following the MuseumWeek2020 campaign held on 11-17 May 2020. 5,379,000 visitors attended the first free Sunday of the municipal museums of Rome³⁰, re-opened after the lockdown in 2020. Among the most visited sites of the municipal museums were the Capitoline Museums, the Imperial Forum and Trajan's Market.

The importance of the web with social media and interaction with the visitor is a concept of major importance for the two autonomous Roman institutions: the National Roman Museum (MNR) and the Etruscan Museum of Villa Giulia. The MNR is an Italian State museum; it houses collections concerning the history and culture of the city in

²⁹ Op. cit., see footnote 26.

³⁰ Musei Capitolini 2020 http://www.museicapitolini.org/it/notizie/oltre-5mila-visitatori-la-prima-domenica-gratuita-dei-musei-civici.

antiquity. Owned by the Ministry for Cultural Heritage and Activities since 2016, it is now one of the museum institutions with particular autonomy. The MNR manages four museums: Palazzo Massimo alle Terme, Terme di Diocleziano, Palazzo Altemps, Crypta Balbi. The MNR³¹ strengthened its relationship with the public during the 69 days of the lockdown. Its main objective was to present the museum as an open and active place during a difficult historical period. The public became an active user and took part in the renovation process. Dr. Agnese Pergola, head of the communication office of the MNR, argued that the constant and almost daily dialogue with the public through social media has helped the museum to increase the number of users: families, adults, students, professionals etc.

The museum has launched a campaign called "MNRconte" and "MNRconteKids" through their social media channels like Facebook. The campaign message at the beginning of the lockdown explained the intention to tell stories by showing the works of the MNR collections. Families and kids were the first audiences addressed. From 10 March to 18 May 2020, the museum recorded an increase of 11.5% in the interaction with the public via Facebook. Instagram showed a great potential and the feedback obtained in this social media generated a virtuous circle of attention and "likes" towards the museum. Users started to contact the museum directly as if people have crossed the screen barrier without feeling the cultural distance from the institution. The MNR has established a relationship of exchange and dialogue with users that persists even after the lockdown, precisely because such a rich museum institution has developed a personal narrative.

According to Agnese Pergola, the basis for creating specific content on a social page and for increasing the effectiveness of a content is to constantly monitor the level of satisfaction and the quality of the

³¹ Source of the data reported about the NRM: Interview of Dr. Agnese Pergola by the author, information kindly provided by the MNR Communication Office, and data report from the Politecnico di Milano (see footnote 26).

interaction by the user. The lockdown experience contributed to the creation of a new MNR website, completely renewed in graphics and contents. The new site was designed with a modern layout, conceived to give users a fast, simple and intuitive browsing experience. Inclusiveness is the new key word to define the post-lockdown renovation. Through the website, visitors can contextualise the collection by exploiting the interactivity and multimedia characteristics typical of social networks. Visitors integrate and deepen information collected and become participants in the process, protagonists of a fluid transmission of knowledge.

The Etruscan Museum of Villa Giulia in Rome offers an interesting case study of communication in a museum context, implementing an efficient strategy for relations and communication with the public via the web well before the pandemic. The Villa Giulia Museum is a State museum which, like the RMN, is also autonomous. It is located in a residential area of the city, outside of the usual tourist trails. The challenge of managing this site³² was to make the museum a multifunctional place. The director Dr. Valentino Nizzo has been working on the museum website and social media activities since 2018. He has highlighted the importance of communication with the public. The dialogue with various audiences has given greater importance to the museum as a place of culture where the outstanding Etruscan collection and the offers such as concerts, culinary events and guided tours coincide. The main target groups are academics, students, cultural organisations and families.

Paradoxically, the pandemic further strengthened communication with the public. Since the beginning of the lockdown, the museum updated its Facebook page daily with various activities that the

³² The data for the Museum of Villa Giulia was kindly provided by Dr. Anna Tanzarella, Communication Office of the museum. It was analysed by the author with the access credentials granted by the Etruscan Museum of Villa Giulia for this specific research.

public has appreciated and supported through their comments. The level of attention of visitors on social media in general seemed very high in the first weeks of March 2020. The posts were quite regular as they were published in the morning, late afternoon and more often on evenings, when people were more frequently online. Facebook followers went from 17,988 in March to 21,325 in June; Instagram had 9,456 followers on 10 March and 15,363 on 30 June.

Videos seem to be a tool that reached more people and was most engaging. During the lockdown, Valentino Nizzo often used the YouTube channel for live tours of the closed museum: the public could interact with the director who guided the users through the galleries and collections. On social networks such as Facebook, the interest of adult audiences has been reiterated. Young people and students followed especially Instagram and YouTube. Many academics and intellectuals had to admit the efficiency of YouTube, which is not only a frivolous digital tool, but can also be used as an effective communication instrument. The activities advertised on social media reached their peak in September and October, with an increase of followers by 14%. Interestingly, the public continued to follow the museum's activities when it re-opened and responded with great interest to the events on-site.

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Fig. 4: Implementing outdoor cultural activities in the post-lockdown period (Courtesy of Sinopie association).

May 2020: the response of visitors to the activities of cultural organisations in Rome

Museums re-opened their doors after 69 days lockdown. Many religious places, museums or archaeological sites opened, giving as much information as possible on safety and distance rules. Especially the local public seized the opportunity to visit the cultural heritage of the city of Rome. During this delicate phase of attempts to return to normality, the numerous cultural organisations operating in the Roman territory played an important role. Cultural associations are private non-profit organisations, using their financial resources for cultural, didactic and educational purposes. They are a significant symbol of cultural model within the Roman context, since they act as intermediaries between the public and museum institutions. The promotion of sites through cultural associations is very common, and these special non-profit bodies became very active in Rome. They generally promote a model of culture where their members – the Roman public – feel part of an exclusive group where they find cultural skills and proper organisation of activities for groups of adults, families and children.

The Sinopie Cultural Organisation, founded by Dr. Marina Gatti and Dr. Mileto Benvenuti, has been promoting the city of Rome as a living museum with programmes of guided tours and on-site lectures with specialised staff. Since 2008, Sinopie developed activities to raise knowledge and enhance the Italian artistic heritage for all kinds of users: cultural heritage experts, local communities, tour operators and schools. Sinopie is a perfect example of the efforts many of these organisations undertake to make everyone aware of history and to "inculturate" the communities. Marina Gatti, also CEO of the association, has maintained the communication with the public while opening a YouTube channel during the lockdown. It recorded 479 users and 2,415 views.

Sinopie analysed the management of its activities after the 2020 lockdown³³. The most relevant aspects identified as the key factors for the promotion of cultural heritage in the post-lockdown experience are the following:

- the importance of promoting niche sites along with the major tourist cultural heritage sites (such as the Colosseum and the Vatican Museums);
- people living in Rome tend not to visit tourist sites, as professionals working with cultural heritage and tourism outlined;
- increased activities and visits with small groups;
- greater social interaction/follow up of the on-site activities (pictures, video or posts and likes that make the visitors' experience more realistic),

³³ Sinopie information is kindly provided by Sinopie, with the help of Dr. Silvio Faraone, Sinopie Culture designer.



Fig. 5: Guided tours for members of the Sinopie association are organised according to the health and safety emergency regulations (Courtesy of Sinopie association).

• the value of all cultural heritage as a means of inclusion and cultural identity.

Being member of a cultural organisation offers opportunities for learning through the guidance of experts. The importance of associations in the Roman context has grown over time as a model for simplifying access to culture. The pandemic triggered a further step towards the awareness of the advantages of culture to be educated in beauty and knowledge.

Conclusions

This article outlines issues related to cultural heritage and museums promotion in Rome. Cultural tourism is indeed an activity that has rapidly developed towards many destinations around the world. The number of visitors to the city of Rome has grown exponentially over the years. Experts pointed out the danger of a mass tourism moving on standardised paths: some of the museums in Rome have recorded so many visitors that it became difficult to manage. Numerous conferences, proposals and projects looked for solutions to solve the problem of overtourism in the most famous heritage sites. One element that could and should be improved, is a model of visitors spreading to various sites. The pandemic accentuated many problems related to the management of heritage sites in Rome, where the numerous museums face very different situations, some with too many, others with too few visitors. Tourism and museum professionals continue to talk about promotion and a diversification process that would help rebalance the museums' audiences.

An interesting starting point comes from the definition of a museum as a place of culture, dialogue and therefore inclusiveness; a place where everyone can develop a common identity. The pandemic has highlighted the role played by the digitisation of the cultural sector: it is one of the solutions for opening up a dialogue with the public. The virtual world that the public saw in the months of the lockdown in 2020 must be a complementary tool to the experience of museums on-site. Not all museums have been able to develop a virtual dialectic due to the absence of digital skills, but some of them did, and did it well. Two examples were presented in this article, showing the benefits of virtual promotion in a professional and systematic way.

The potential for the post-lockdown strategies looked promising and many museums saw a growing public interest. Nevertheless, the path is long and complex due to numerous issues in museums' management in Rome.

As for the promotion of cultural heritage in the Roman context, the role of cultural organisations is significant – and there are many of them in Rome. Their activities are mostly addressing the local community, which in the very first phase of the re-opening after the lockdown, actively took part to the events. One of those cultural organisations received many positive responses in recent years and provided interesting thoughts for the future of cultural heritage in general: continue to dialogue with the public and promote the city of Rome as much as possible as a living museum with more options.

At the moment we do not know how the pandemic situation will evolve; but it is certainly important to re-open museums, archaeological sites and all cultural institutions and make them available as places of education and memory.

It's all about people

Michael H. Faber

Protecting people in the museum

Aspects and desiderata of prevention, risk and emergency management

Disastrous examples

On a Monday in May 2019, thousands of tourists were standing in front of the Louvre's closed doors. Security personnel were on strike against the "unprecedented worsening of conditions": not only the treasures on display, but also visitors and staff were at risk. "The Louvre is suffocating", the newspapers wrote.

We remember the terrorist attack on the Bardo Museum in Tunis in 2015, where 24 people were killed. We also remember the Jewish Museum in Brussels in 2014, where another attack caused the death of four people. Terrorist attacks targeting cultural heritage visitors are disasters without warning. So are earthquakes. In these cases, there is little chance to find security.

However, we also had disasters with injuries to people that could possibly have been prevented, had there been more sophisticated security concepts. As an example, 13 people were seriously injured by lightning at a Festival in the Archaeological Park Xanten in Germany in 2009. Two of the guests needed to be revived. This is an example of a disaster with a warning time of several hours, giving chances for an evacuation in good time, but those chances were not used in an appropriate way.

Another case happened in 2010 in my open-air museum: at its traditional fair, hundreds of spectators witnessed a high-wire artist fall off a rope. Before the rescue helicopter reached the spot, a television team had already arrived – by helicopter! Visitors filmed the accident with their smartphones as well. It was important not only to take care of a traumatized artist, but also to keep visitors, fair people and the press under control.

A year later, visitors to the British open air museum Beamish were in shock: a seven-year-old boy, member of a Living History group, was run over by a steam engine in front of his father and the public. He died. There were no safety precautions. The museum had to be evacuated.

A lack of security concepts for assets and people

Given the many events in the destruction of cultural assets in museums and other cultural institutions all over the world, organisations like ICOM and ICOMOS are increasingly concerned with the protection of cultural heritage at international level. At a more local level, preventive cooperation between cultural institutions and security forces, civil protection and fire departments is increasing in many countries. However, we still miss an adequate examination of the protection of people in cultural institutions.

It is absolutely necessary and crucial to have integrated security concepts which relate to cultural assets *as well as* to people (visitors and staff) at cultural sites. In February 2020, the Greek Minister of Culture and Sports called for a security conference. The topic was a revision of risk management for the Acropolis – for its treasures, of course, but also for its 5 million visitors every year. The example of the Acropolis shows that integrative concepts, tailored to the particularities of a cultural institution, must either be optimized, or have to be developed completely.

In most European countries, guidelines for occupational safety apply to museum employees. For the respective design of these guidelines by member states of the European Union, the European Framework Directive (1989/391/EEC) is the most important legal act. But it remains "just" a framework, establishing general principles for managing safety and health, such as responsibility of the employer, using risk assessments to improve company processes, workplace health and safety representation.

Basic safety measures for visitors are not standardized by the EU. Even at the national level, there are no unified provisions. Following the catastrophy of the Love Parade in Duisburg in 2010, regulations have been developed in Germany, at the state level, for highly frequented sites and open-air events. However, these regulations remain too vague in their definition of the requirements for a security concept. The concrete development of concepts, tailored to the respective risk situation, is left to the institutions, organizers and local authorities involved.

Therefore, museum organisations like ICOM must give efficient support in this: they are required to make recommendations for an integrative security concept, or even better to develop "operating instructions". An enormous task.



Fig. 1: Security and emergency equipment for large events at the museum. Source: Michael Faber.

The HSSE security concept

Such an integrative security concept has long been established in large companies and should inspire us to adapt, further develop and apply in the museum world as well. It's called HSSE. The accronym stands for Health, Safety, Security and Environment. The concept thus implements four essential areas that are closely interrelated:

H = Health

This is basically about the well-being of employees, contributors and guests. Examples of implementation include:

• the fulfilment of operational and occupational medical requirements, e.g. appropriate work aids for employees;

- a sufficient number of benches for visitors, measures to reduce barriers for visitors with disabilities;
- the protection of visitors to an open-air museum with animal husbandry from zoonosis (infectious diseases transmitted between animals and persons).

The aspects of safety and environment are also addressed here. In contrast to German, where the word *Sicherheit* covers both notions, the English language has two terms to designate (and distinguish) two aspects: safety and security.

S = Safety

Safety means protecting the environment and people from "intrinsic" dangers that can arise from an object, for example from the operation of a historical machine or the use of a horse and cart. Safety also means the installation of measures protecting people: the automatically self-closing fire protection door, the escape route etc.

S = Security

Security refers to protection against wrongdoing by other people. An example of wrongdoing could be when the self-closing fire protection door is open and jammed with a wedge due to the high frequency of people passing. Security also means an appropriate and safe use of security systems and objects.

E = Environment

Finally, museums are not disconnected from their environment – in many senses of the term. As the recent discussion about a redefinition of museums led by and within ICOM stated, museums have to participate in environmental protection and sustainability wherever they can do so. For example, open-air museums are not allowed to use pesticides in the maintenance of their historic gardens and fields. Likewise, when preserving or restoring objects, environmentally

harmful substances must be avoided. In the context of security concepts, environment as physical surroundings of the museum also have to be taken into account: what are the (potential) dangers arising from the environment? For example, what could be the dangers coming from the vicinity of a chemical factory next to the museum, or a temporary civil engineering site in the neighbourhood? Since the collapse of the Cologne City Archives, we have to be aware that there must be better prevention here.

A cycle of measures to be taken

The following cycle of measures results from the HSSE concept. First there is a need to identify and quantify the potential risks. The next step is to plan the possible response to those identified risks, followed by the implementation of the risk prevention measures and the appropriate training of staff. Finally, those measures have to be monitored and controlled. Then the cycle starts again with risks that have been under-evaluated in the previous round.

Identification of risks: Qualitative and quantitative risk analysis The risk analysis has to be both qualitative and quantitative. In the qualitative risk analysis, the type and effects of a damaging event are assessed. For example, what could be the effects on the visitors of a strong storm sweeping over an open-air museum with forest areas? In the second step, the quantitative analysis is carried out, evaluating the frequency or probability of occurrence. In our example: how often did such storms sweep over the museum in the past five years? I remember from my museum: we have two to three strong storms a year!

Another example: Many older people and those with reduced mobility use the elevator of a multi-storey museum. What is the risk

of vulnerability, what dimension can it have if the elevator cannot be used – in the event of a fire for instance – and people have to be evacuated via a staircase? Added to this would be the probability of such an event. This can be classified as low, but the general risk remains.

Disaster research offers methods to record the spatial-temporal probability of a damaging event with the damage potential or vulnerability in a matrix. This is basically helpful for the risk assessment, but with regard to the protection of each individual also problematic. The quantitative analysis may therefore only serve as an additional risk assessment.

Different methods of so-called "crowd management" make it possible to simulate the mobility behaviour of large numbers of visitors, flows and bottlenecks in real or virtual terms. To this end, consultant companies offer services, which are very expensive. I recommend that you first think about your visitor behaviour, refer to your experience, and then simulate it yourself.

An indispensable criterion for risk assessment is the assessment of the visitors: their expected number, demographic composition and their possible behaviour.

All this can be shown in a table with percentage subsets and respective hazard potential. This assessment is particularly necessary when we expect a high number of visitors at the same time.



Fig. 2: The risk management chain. Chart: Michael Faber, 2020

Risk response planning

After the hazard analysis, prevention planning begins. This includes determining the required rescue services. In Germany, two algorithms are used for this. Both work with a system of points.

With the so-called "Maurer algorithm", developed by the former chief of the Hamburg fire brigade Klaus Maurer, a point value is assigned to the expected number of people. This value is multiplied by a factor that results from the risk potential due to the type of event. The result can be used to determine whether and how many paramedics, emergency doctors and ambulances have to be on site. The "Cologne Fire Brigade's algorithm" is more complicated but more precise, as it also evaluates weather conditions, possible inadequacies of the location, public behaviour, time needed for the arrival of rescue equipment etc. Normally, the Maurer model should be sufficient for our calculations.

Implementation of risk measures and trainings

The signposting of escape routes and shelters, the provision of first aid kits, defibrillators, megaphones, radios, high-visibility vests for the museum staff designated as helpers to a set with privacy and barrier material: all of these belong to the range of tools to be implemented. For large events, an operational site plan may be required, showing the location of such material, but also directions for ambulances, areas for a mobile accident assistance station, or the landing of a rescue helicopter.

Also necessary is the training, to be repeated at regular intervals, by <u>all</u> museum personnel as well as joint exercises with the fire brigade, emergency services and the museum staff. The museum's switchboard may have, like in my museum, the special task of communicatively coordinating all risk analysing and all emergency measures. Accordingly, its staff must be specially trained.

Monitoring and control

Monitoring and control relate to the review of training results, operational readiness of the equipment and the assessment of implemented measures. It also takes into account all debriefing and lessons learnt from specific events in the museum.

Identification of insufficiently recognised risks

Monitoring and control can also show which risks have been underestimated up to that point. From these learnings, the last point in the chain of risk management can be derived: the identification of insufficiently recognised or underestimated risks. Once identified, the process starts again with the risk analysis etc.

Finally, let me add the following: the Covid-19 pandemic and the subsequent lockdowns have shown how complicated the process of restarting museum operations can be when it has been shut down. Damaging events can also make a lockdown or temporary closure necessary. Considerations leading to find the way back to normal after a disaster event should also be part of an all-encompassing risk management. Donatella Biagi Maino, Giuseppe Maino, Isber Sabrine

Museums as a tool for intercultural dialogue with refugees and migrants

Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits. Article 27 of the Universal Declaration of Human Rights

Introduction

In today's society, migratory and reception/inclusion phenomena require the awareness that the individual no longer has a well-defined identity. Faced with the risk of losing it and no longer having any, the migrant can and must assume multiple identities, from that of origin to those of the new reality of which he/she is a guest and to which he/she can usefully contribute with his/her own experience of life and knowledge. In the same way, the citizen of the host society can and must enrich him/herself culturally and not only by contact with other cultural realities, thus acquiring new identities in addition to and complement his/her own.

More than fifty years ago, in April 1968, the Club of Rome was founded by the Italian industrialist Aurelio Peccei and the Scottish chemist and scientific advisor Alexander King, bringing together a small international group of people from the fields of academia, civil society, diplomacy and industry at Villa Farnesina in Rome. Central to the initiative was Peccei's concept of the "problematic", namely that facing the problems of mankind-environmental deterioration, poverty, endemic ill-health, urban blight, criminality, in isolation or as "problems capable of being solved in their own terms", was doomed to failure, since all of them are strongly interrelated. In Peccei's opinion, "it is this generalized meta-problem (or meta-system of problems) which we have called and shall continue to call the 'problematic' that inheres in our situation"¹.

In 1972, the first report to the Club of Rome was released about the *Limits to Growth*², facing the exponential economic and population growths with a finite supply of world resources. It is one of the first attempts to deal with planetary emergencies, to bring these problems to the public's attention and to raise awareness of them.

On another side, in 2000, the biologist Eugene Stormer and the chemist Nobel prize winner Paul Crutzen introduced the concept of the Anthropocene³ to define the Earth's most recent geological period as being human influenced. This is based on overwhelming evidence that atmospheric, geologic, hydrologic, bio-spheric and other earth

¹ Peccei, Aurelio; Hasan Özbekhan; Erich Jantsch; Alexander Christakis: The predicament of mankind. Quest for structured responses to growing worldwide complexities and uncertainties: the PROPOSAL, Club of Rome report 1970, p. 31.

² Meadows, Donatella H.; Dennis L. Meadows; Joergen Randers; William W. Behrens III: The Limits to Growth. A Report for the Club of Rome's project on the Predicament of Mankind. New York: Universe Books 1972.

³ Crutzen, Paul. J.; Eugene F. Stoermer: The "Anthropocene". In: IGBP Global Change Newsletter 41 (May 2000), pp. 17-18.

system processes are now altered by humans. In 2016, the Anthropocene Working Group (including historians for the first time) of the International Union of Geological Sciences agreed that it differs from the Holocene and began in the year 1950.

These two major issues – i.e., the limited availability of resources on our planet and the continuing, unpredictable consequences on the global climate, on the supply of food and water, modification of the environment by man – are, among other things such as poverty and economic inequalities, wars, and terrorism, the original cause of the massive migratory phenomena of these last decades.

Therefore, migration represents nowadays a planetary emergency. It is amplified by the demographic problem that sees a continuous decreasing of births and a negative evolution of the European population, whereas in Asia and above all in Africa, an exponential demographic increase leads to a dramatic situation related to the scarce resources and the enormous social and economic difficulties.

According to the *World Migration Report 2020*⁴, in 2019 the number of international migrants was globally 272 million (3.5% of the world's population); the total refugee population was 25.9 million in 2018, of which 20.4 million refugees were under the mandate of the United Nations High Commissioner for Refugees (UNHCR) and 5.5 million were refugees under the mandate of the United Nations Relief and Works Agency for Palestine Refugees in the Near East. It is worth noting that 52% of the global refugee population was under 18 years of age.

The number of internally displaced persons due to violence and conflict reached 41.3 million, which is the highest number on record since the Internal Displacement Monitoring Centre began monitoring in 1998. The Syrian Arab Republic had the highest number of people

⁴ McAuliffe, Marie; Binod Khadria: World Migration Report 2020. International Organization for Migration (IOM), Geneva 2019. Online available at: https://publications.iom.int/system/files/pdf/wmr_2020.pdf.

displaced (6.1 million), followed by Colombia (5.8 million) and the Democratic Republic of the Congo (3.1 million).

Prior to the disruptions to migration flows caused by the Covid-19 pandemic in 2020, the number of international migrants had grown robustly over the past two decades. The United Nations estimate in the report on *International Migration 2020 - Highlights⁵* that the number of persons living outside of their country of origin reached 281 million in 2020; between 2000 and 2010, the number of international migrants increased by 48 million, with another 60 million added between 2010 and 2020. Much of this increase was due to labour or family migration. Humanitarian crises in many parts of the world also contributed, with an increase of 17 million in the number of refugees and asylum seekers between 2000 and 2020. In 2020, the number of persons forcibly displaced across national borders worldwide reached 34 million, twice as much as in 2000.

Europe was the region with the largest number of international migrants in 2020, amounting to 87 million people. These are impressive and significant numbers of epochal changes. Those changes require innovative approaches and solutions to encourage the reception of migrants and to achieve an authentic intercultural dialogue. These approaches and solutions are crucial to avoid social conflicts, the rise of racism and intolerance, the creation of a fertile ground for religious and political fanaticisms and therefore proselytism for terrorist organisations. They are also meant to avoid a seemingly easy integration or assimilation bringing no solution to the problems which then recur in the second or third generations of migrants.

Cultural heritage can be one of the possible keys to answer to this challenge.

⁵ United Nations, Department of Economic and Social Affairs: International Migration 2020 – Highlights. New York: United Nations Publication 2020. Online available at: https://www.un.org/en/desa/international-migration-2020-highlights.

Identity and migration

Since cultural heritage is fundamental to defining identity, it is also an important element for the promotion of an intercultural dialogue. Knowing and appreciating the creations of other people and different cultural traditions is important for a positive welcome of migrants and for mutual understanding between old and new citizens. Museums, as places of cultural cross-fertilisations and encounters, must play a major role in the integration of immigrants through knowledge and understanding of cultural heritage.

The definition of identity is a crucial aspect in the personal and social definition of oneself. It is deeply linked to the museum's institution where histories of civilisations, people, cultural assets, and traditions are presented and preserved also for future generations.

The sociologist and philosopher Zygmunt Bauman has always focused his studies on the uncertainty and precariousness that characterise postmodern society, which he summarises with the metaphor of the "liquid (fluid) society". Bauman reminds us that we all live on one planet, we belong to an only humanity and calls for the rejection of xenophobia, racism, and nationalism⁶. He points out that, whatever the obstacles, and their apparent enormity, mutual knowledge and the fusion of horizons remain the main way to achieve peaceful and beneficial, collaborative and supportive coexistence for all people. There are no viable alternatives: the "migration crisis" reveals the current state of the world, the destiny we have in common. From the very beginning of modernity, refugees have been knocking on the door of peoples, fleeing the bestiality of wars and despotisms or the ferocity of a life whose only prospect is hunger. For those who live behind that door, refugees have always been foreigners. Those nomads - not by choice, but by the verdict of an inclement destiny -

⁶ Bauman, Zygmunt: Liquid Modernity, Cambridge (UK): Polity Press 2000.

remind us in an irritating, infuriating and gruesome way of how vulnerable our position in society and how fragile our well-being are.

Proceeding from a different point of view, the anthropologist and ethnologist Marc Augé arrives at similar considerations and to a definition of the concept of identity central to the migratory problem: humanity is now in the grip of a strong fear of the future, due to the vast expansion of the world's population and the considerable migratory phenomena affecting the Western world, as the French scholar outlines7. Social balance, security and confidence in the future are thus threatened in the perception of many. Migration, a founding anthropological element of human civilisation, now also takes on the characteristics of revenge against the colonising states. It is opposed to the phenomenon of relocation and mass tourism, which reverses the movement of people and capital. By virtue of this, in our globalised world, governed by unbridled capitalist consumerism, migrants appear as true heroes of the world who uproot themselves from their culture to enter another. The question of identity, both individual and plural, is therefore central: no individual can live in isolation. Political action must therefore guarantee both individual freedoms and relations, in order to avoid a descent into either anarchy or totalitarianism.

Finally, the philosopher and sinologist François Jullien spurs us to frame the real conditions of the possibility of intercultural dialogue⁸ by making a decisive conceptual shift from the notion of identity, which leads to a sterile contrast, to the notion of deviation, which instead activates a fruitful tension between cultures allowing to grasp their respective cognitive resources.

For example, how should we nowadays understand the need for universality historically pursued by Europe? Does it show purely

⁷ Augé, Marc: Migrazioni. Dialogo con Anna Mateu e Domingo Pujante González. Rome: Castelvecchi Editore 2018.

⁸ Jullien, François: L'identità culturale non esiste. Torino: Einaudi 2018.

Western ethnocentrism, or is it the regulatory ideal of the reason that undergoes the plan of rights and the possibility of living together? It is therefore well established that similarities and analogies cannot be the basis for the sense of the common. Or rather, there is no "common basis" or "minimum element" of consent which can provide a guarantee of mutual recognition and care among human beings. Jullien's desired common position does not stem from an agreement on differences concluded upstream or downstream, but from a willingness to open our prospects, to make them permeable to other influences without renouncing the own positions, but by marking themselves against their one-sidedness.

Museums and cultural identity

The above-mentioned considerations led us to confirm our hypothesis, namely the fundamental role that culture and cultural heritage can have in terms of the reception and inclusion of migrants in a different social, historical and economic context. Only through a cultural approach and knowledge of their cultural heritage can new arrivals understand the values and ways of life of the host country. Furthermore, when immigrants rediscover heritage elements from their own countries that are on display in the Western museums, it can help them to recover a self-esteem that is often lost due to their situation of helplessness.

Museums are thus called upon to take up new functions, both informative and formative, towards not only migrants – who become a large new catchment area – but also towards the local population, invited to revisit the traditional museum in a different original perspective of a cultural melting pot.

In the academic year 2019-2020, the Institute of Advanced Studies (ISA) of the University of Bologna promoted the ISA topic "Identity: one, none, one hundred thousand", a cycle of initiatives dedicated to

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Fig. 1: A session of the International Conference on Hospitality and Cultural Heritage, organized by the Institute of Advanced Studies of the Bologna University, Bologna, Italy, 24 October 2019.

the problem of the continuous definition and redefinition of the different identities that characterise people, society, and knowledge. This cycle opened with an international conference⁹ entitled *ABC* – *Accoglienza e Beni Culturali* – *Hospitality and Cultural Heritage* held in Bologna on 24 October 2019.¹⁰

This conference was the starting point for an ISA research project entitled "Fluid identities, historical and current representations and

⁹ This conference was organized by Donatella Biagi Maino and Giuseppe Maino.

¹⁰ The proceedings of the conference have been recently published: Hospitality and Cultural Heritage. Eds. Donatella Biagi Maino, Giuseppe Maino. Rome: Tabedizioni 2021.

perspectives", to which many participants to the Bologna workshops contributed. This project led to the establishment of a multidisciplinary working group as well as an interdisciplinary laboratory set up by the University of Bologna in collaboration with Heritage for Peace¹¹, an NGO chaired by Isber Sabrine, which aimed to demonstrate how cultural heritage can act as a tool for social integration and how it has already served this purpose in the past.

Two projects have been implemented: one is called "Multaka" and is carried out by museums in Berlin, Germany, the other is called "Abuab" and was initiated in Girona, Spain.

Let us first consider the Multaka project. Salma Jreige of the Museum of Islamic Art in Berlin, spoke¹² about "Multaka: Museum as Meeting Point and the Europe-Wide Multaka Network". The following museums participate in the Multaka project:

- Deutsches Historisches Museum (German Historical Museum),
- Pergamonmuseum,
- Museum für Islamische Kunst (Museum for Islamic Art) and Vorderasiatisches Museum (Near East Museum), and
- Bode-Museum.

The complete name of the project¹³ is "Multaka: Museum as Meeting Point – Refugees as Guides in Berlin Museums". On a concrete basis, Syrian and Iraqi refugees are trained to become museum guides, so that they can provide free guided tours of Berlin's museums for Syrian and Iraqi refugees in their native language. *Multaka* is the Arabic word for "meeting place" and represents the exchange of various cultural and historical experiences.

¹¹ https://www.heritageforpeace.org/

¹² Her talk to the International Conference on Hospitality and Cultural Heritage, Bologna, Italy, 24 October 2019.

¹³ Weber, Stefan: Pulling the Past into the Present: Curating Islamic Art in a Changing World, a Perspective from Berlin. In: International Journal of Islamic Architecture 7 (2018), pp. 237-261.

The programme seeks to exchange different cultural and historical experiences. The Deutsches Historisches Museum, in particular, wants to present to refugees the history and culture of Germany and to provide an overview of its educational crises and processes of historical renewal. Guided tours focus mainly on the years after 1945 and the period of national reconstruction after the trauma of World War II. Every first, second and third Wednesday of the month, Syrian guides provide tours in German and Arabic, every fourth Wednesday in English and Arabic. Multaka-tours are free.

The title of the project is programmatic: the Deutsches Historisches Museum wants to allow refugees to get closer to German culture and history along with their crises and renewal movements. This is a central aspect in the training and preparation of the guides and their following presentations to the museum's visitors.

On the other hand, the objects preserved in the Museum of Islamic Art show the combination and coexistence of different cultures.

Though cultural heritage is essential for defining identity, it is also an element of intercultural dialogue. Knowing and appreciating the wealth of others is important for a positive reception and mutual understanding. Those who arrive can better understand the culture and lifestyle of the destination country through their knowledge of art. Seeing their own culture valued in European countries is important for immigrants, who thus rediscover their roots. As ICOM outlines, "museums have no borders, they have a network"¹⁴, and further, "museums are democratising, inclusive and polyphonic spaces for critical dialogue about the past and the futures"¹⁵.

The second project mentioned here is called "Abuab", the Arabic word for "doors". The main idea of cultural heritage as a much needed and important tool for social inclusion in our society nowadays, is also the root motivation of this project.

¹⁴ ICOM slogan, www.icom.museum.

¹⁵ Excerpt from the first proposal for a new museum definition, ICOM 2019.

Designed by Isber Sabrine with the NGO Heritage for Peace, Abuab has been proposed by the Milà y Fontanals Institution (part of the Spanish National Research Council CSIC) and the University of Girona, Spain, with the participation of museums in different European cities. It is a project that aims to work on the use of cultural heritage as an instrument for social integration and for intercultural dialogue with refugees and immigrants from the Near East and North Africa. Initially, it provides for visits in Arabic for immigrants in Spanish museums, including training for guides. Above all, its main aim is to integrate women of Islamic culture who are unlikely to integrate into the destination culture. It also aims at carrying out guided tours together with the local population and thus increasing the range of action. Furthermore, a pilot project includes visits in little-known rural areas, i.e., going outside the reference cities such as Madrid, Barcelona and Girona.

As an example, the pilot project led the participants to a rural area of the Catalan Pyrenees, where a group of immigrants living in Barcelona visited the Valls d'Aneu (Aneu Valley), starting from the Ecomuseum of the Aneu Valley in Esterri d'Aneu.

The activities of the project consisted in:

- visiting the romanesque Church of Santa Maria,
- visiting a local fabric of cheeses,
- visiting the village of Esterri d'Aneu,
- conferences about the importance of this project, the immigration in history, presenting the work of some immigrants' associations,
- intercultural concert between immigrants and local people,
- visiting the local Ecomuseum of Esterri d'Aneu.



Fig. 2: Isber Sabrine and participants of the Abuab project in Girona, a project about the use of museums for intercultural dialogue with refugees and immigrants from the Near East and North Africa.

The main objectives of the Abuab project are the following:

- to use the heritage sites in different cities in Spain and Italy as a place where immigrants/refugees can discover the cultural reality of the host society,
- to help and promote intercultural dialogue amongst immigrants/ refugees and between them and local society,
- to promote affective and cultural links of immigrants/refugees with the cultural heritage of the host countries,
- to know the feelings of immigrants towards the culture and history of Catalonia and Italy,
- to collaborate in the promotion of associations between immigrants/refugees, facilitating contact with existing associations,

- to contribute to the emancipation of women in the immigrant population, to promote women's access to culture and to promote their network of social interaction,
- to increase the capacity to use cultural heritage as an argument contrary to Islamic fundamentalism and xenophobia in host countries,
- to experiment the use of cultural heritage in the social integration of communities exposed to fundamentalist discourses,
- to strengthen the theoretical and methodological framework of the use of cultural heritage as a tool for the social inclusion of immigrants/refugees.

Conclusions

Culture must question itself on the main themes of the new millennium: poverty, immigration, war, identity. So, what is a museum? A public space! To define it means to take a social and political position, which is very complicated, as the Multaka and Abuab initiatives have shown. This is a task that museums and institutions in charge cannot avoid in this 21st century of planetary emergencies.

Culture is the most important factor for peace and stability of the world and constitutes the set of values that give meaning to the community. Therefore, culture includes all aspects through which a nation dialogues with other cultures.

The reason why it is necessary is as follows: the phenomenon of immigration has become increasingly important in Europe in recent years. The integration of newcomers into their host societies is currently one of the main challenges for governments and civil society. The cultural contrast between immigrants and locals is often a source of tension for both communities. Cultural heritage can be a powerful tool for social integration. In the first two decades of the 21st century, museums are faced with many difficulties and problems, from pandemics to measures for protection and safeguard of the cultural heritage against both natural and man-made disasters – wars, terrorism, industrial accidents and damage to the environment and climate changes.

In addition, museums have to meet new needs of the public, from eco-museums to the respect towards different cultures. Together with libraries and historical archives, they remain the places for the preservation and transmission to future generations of our knowledge, and above all of our histories. Faced with a global emergency such as exponential population growth and huge migratory phenomena – due to many causes, economic, social, historical, conflicting, etc. – however, museums can represent an invaluable heritage and a unique opportunity for intercultural dialogue, social integration, and enrichment not only for migrants but also for local population.

From this point of view, starting from the 2019 workshop and the comparison of experiences, with the collaboration of the scholars involved, arises the following proposal: to create a network to track down and survey the city of Bologna – which has always been a crossroads of multicultural and international experiences thanks to the presence of the University and the Institute of the Academy of Sciences – the testimonies and the presence of other cultures, in collaboration with the Bologna Museums Institution ruled by the local municipality.

From our personal side, we propose a joint scientific collaboration among museums and research institutes aiming to implement a kind of meta-museum: a network of real and virtual museums on 1) migration, 2) climate change, and 3) risk prevention and management, including multimedia databases in order to share and produce information and resources on these and other topics relevant to planetary emergencies.

In conclusion, we think that a goal is to raise awareness about the essential interdependence between natural and anthropic environment

and cultural heritage. The perception of the historical and social importance of cultural heritage in the face of its vulnerability and cultural differences is crucial. This awareness will help empower all citizens, including the immigrants, and involve them, wherever possible, in protection, conservation and preventive maintenance of the cultural heritage through an active role of museums.

Looking ahead

Etienne Denk, Michael H. Faber, Molly Fannon, Michael John Gorman, Giuseppe Maino

What next for museums in a time of planetary crisis?

Discussion panel moderated by Michael John Gorman

Transcription and editing: Stéphanie Wintzerith

Michael John Gorman: introduction

After a long and stimulating day, we are now going to talk about what could come next for museums in a time of planetary crisis. We began the day with Brad Irwin from the Natural History Museum in London, who quoted Sir David Attenborough saying that: "The future of the natural world, on which we all depend, is in our hands." We also just heard Molly Fannon from UN Live tell us that the only way to change mindsets and to change behaviour is through culture. It seems that museums have a particular opportunity to be this interface between nature and culture as we face very uncertain times.

We will be exploring some of these topics in this panel. We are, as you all know and as has been discussed during the day, facing a number of crises, not just a single crisis. On the one hand we have the global environmental crises: the climate crisis and the biodiversity crash, both topics that occupy us at Biotopia are particularly occupied with. These are crises where museums arguably have an opportunity to be trusted platforms for educational activities and for public engagement at a time of uncertainty. This is a really important role of the museum. On the other hand, as has been mentioned by several speakers today, museums and their collections are themselves under threat through the pandemic keeping away visitors and sadly causing a great number of museums around the world to close their doors, but also through natural disasters caused by climate change and other factors. I'm hoping that at the end of this intense day, we will now have an opportunity to find some inspiration amidst these many challenges that we face, and that we can be hopeful as we go back to our museums or our home-offices, however it may be at the moment.

Let me introduce the panelists. We have Molly Fannon joining us – we've just heard her wonderful keynote about UN Live, the Museum for the United Nations in Copenhagen. We also have the nuclear physicist and imaging expert Giuseppe Maino from the University of Bologna. Giuseppe Maino has been working very closely with Isber Sabrine, whom we've heard from this afternoon, and Donatella Biagi on very important projects on migrant/refugee communities and museums, among many other things. We also have Michael Faber, our risk management expert, who gave that rather frightening talk earlier on about catastrophes that may befall museums. And finally, coming from outside the museum world, we have Etienne Denk, a student in Philosophy at the Munich University. Etienne Denk is an activist involved in the Fridays for Future movement here in Germany.

Molly, you gave us a huge amount of food for thought in your presentation and also a call to action. The "Count Us In" project that you were talking about might be a truly interesting opportunity for museums. What I find particularly exciting about your vision for UN Live and a museum *for* the UN, as you pointed out, rather than *about* the UN, is this idea of a distributed museum and a museum being a platform for activism as well as a catalyst for change, including behaviour change. Could you please tell us how you see the role of museums in triggering change in behaviour?

Molly Fannon: the role of museums in triggering change

I think that we as institutions have the capacity to really be a catalyst for further change, but that requires that we get out of our comfort zone. There are few institutions in the world certainly that are doing that, like Biotopia for example, institutions that are really taking risks and stepping out of educational missions and into advocacy – just what I can imagine Etienne would urge us to do. I do think it basically requires that we take greater risks faster, and that we jump in first and figure it out later.

I've told you just before that I moved from Washington DC to Copenhagen to help build our museum UN Live, but not to build an institution for Copenhagen and for Denmark. It was to build an institution that enables museums and cultural organisations all over the world to work together in ways that they couldn't before, and in order to trigger people into change. One of the ways that we can most effectively do that, I think, is to work with the behaviour change scientific community and to bring the leading findings from that discipline into our organisation, so that we can engage in new ways with our audiences. We also have the responsibility to share those new ways with the wider cultural sector, to be radically generous in the way that we learn and fail with each-other. We have to share those datasets that our audiences offer and give them back to the scientific community. We could thus create a new commons, a public good of behaviour change in action, so that ten years from now, we would be able to say "we did something differently and this is how humanity responded".

This is particularly important because we can't just rely on people like Etienne who are already convinced that action is needed. We need the 60% to 70% of humanity that are essentially the "swing voters" on these issues, who do care deeply about the planet, who do want a better world but who feel relatively isolated and alone, and that we as institutions probably already have connections to. So, if we can figure out how to speak to this group that hasn't yet become activist in all of these issues, and help them understand how they can do that in their everyday lives, we then start to echo up that everybody can make their mark collectively: that is the goal. We can't do it alone, we have to work with other institutions around the world. I think that's the only way, because how to do so, how to move people to care is going to be different in different cultural contexts.

Michael John Gorman

Answering a question after your session, you spoke briefly about some aspects of the Covid-19 experience. Some people have talked about the response to the pandemic as being like a giant global behaviour change experiment. While obviously it's been causing huge challenges on many different levels, some people have pointed to possible learnings or even silver linings from the pandemic. Is there anything you can point to from your experience? Can you give us interesting examples of the pandemic actually triggering responses which we can learn from?

Molly Fannon: learning from the Covid-19 pandemic

Well, we're able to be human beings and think differently about our lives now. Actually, Covid-19 is a terrible thing happening to the world. But it also shows us what we're capable of, and the vast majority of humanity is taking individual action in the service of others with an empathy and a compassion for others. We heard from the head of behavioural economics at Princeton that if you can leverage culture to create new social norms, you can fast forward cultural change. For example, we've seen how different forms of celebrities in all sorts of cultural genres have begun to take up the notion of basic public health measures, which had for the most part a very positive impact. In my own home country, the United States, there also have been some celebrities who have done the opposite, showing their power to influence change of social norms, but not for good. Thus, we need to be aware they can be used in both ways.

We are experiencing environmental issues, as I already said in my last session. I am convinced it is an imperative that we have all people understand this, because there still are people who do not understand that our own health is connected to the health of the planet. It is for the most part an incredibly good news story of what we are capable of as humanity. And I think we should be celebrating that and look into how we can take that capability and take it forward into other issues.

Michael John Gorman

Following up on that: Michael, your work really deals with the worstcase scenarios in museums and you told us a number of quite terrifying stories in that regard. Following the pandemic, do you think that visitors' expectations around safety in museums have fundamentally changed? Can we really expect that visitors' attitude and approaches to safety in museums and their expectations will be different in the future?

Michael Faber: visitors' attitude towards security

It still is a little bit critical to examine the situation while using a new tool. I'm not sure if the visitors – meaning the physical visitors onsite – are now expecting more concerning safety security in the museums. I think that the museums have experienced three points where they still have to learn more. First, of course, there is the documentation, the communication of the interrelation of culture, nature, environment. The second point is, in my opinion, the design of all work and operating processes, all activities in the museum, which have to be designed according to the criteria of environmental compatibility and sustainability. The third factor is the protection of the cultural property as well as the protection of all people during their stay or their work in the museum against negative influences from the environment.

I can speak a little bit from my museum, or rather my former museum, the big open-air museum in Kommern near Cologne in Germany. We had started with the HSSE standards of security management eight years before. People have seen what we have done. They have seen for example the benches for the visitors, they have seen the automatic doors, the elevators, the rescue equipment like automatic defibrillator in the space. Many visitors have seen on their own the interventions done by members of the staff. I don't know if there is a change of recognition by the visitors or an expectation for more.

Michael John Gorman

This is interesting. We are both in Germany, and Etienne as well, and we just had to close our museums about two weeks ago because of the new lockdown here. I'm not sure if open-air museums also had to close. What about your open-air museum, Michael, did you also have to close?

Michael Faber: lockdowns in an open-air museum

Of course, we also had a lockdown. It was a total lockdown in the first weeks, then we had the chance to open again, particularly in the

summer months, with reduced entrance fees and a very different safety programme for the audiences. The visitors were introduced to this programme by our website, where they usually go for preparing the visit to the museum. The security staff in the museum also gave all visitors the information needed to safely manage their visit.

Michael John Gorman

This is quite interesting: here in Bavaria for example, we have these rules where museums all have to close for the moment, but out-of-school learning places can be open. This leads to the point that museums maybe need to be perceived more as these, as platforms for education – and, as Molly was saying, as platforms for activism as well. I also see something very interesting at this point about the new focus that people have about health. If one links environmental issues to health issues, maybe we have a chance to make these more relevant and more urgent to people.

Now let's turn to Giuseppe Maino, who is speaking to us from Bologna. We greatly enjoyed hearing from your colleague Isber Sabrine about this important work on the cultural integration of migrants into museum activities. I know that you yourself have worked very much in the Middle East, in Asia, in Africa around the question of integrating migrant perspectives into museums. You have thoughts about how museums could work better to integrate migrant and refugee perspectives, as we face these future crises of migration which are also deeply linked to environmental problems as well as war. Climate change as well will produce many millions of refugees in the coming years.

Giuseppe Maino: integrating migrant perspectives into museum activities

We are faced of course with a planetary emergency having different causes all linked together. Environmental food crises determine migration. War and the subsequent destruction of cultural heritage, as in Palmyra or Mosul, create migrants and induce the problem of their inclusion in our western societies. The demographic aspect of the problem has been well-known by demographers and statisticians for many decades now. Another crucial aspect of the problem is that we are facing difficulties of communication between the two cultures, as was found out also many years ago.

Scientists generally ignore historians, conservators, restorers, and more broadly the humanities as a whole. The reverse is also true. For instance, 50 years ago, the Club of Rome, a non-profit organisation founded by Aurelio Peccei and the Scottish scientist Alexander King, realised a report on the limits of growth, where – of course with many mistakes in the predictions – many of the problems we are now faced with were already discussed and presented. Let me mention another very recent fact: we are no more in the Holocene era. Actually, we entered the Anthropocene era in 1950. The concept of the Anthropocene means a geological time period influenced by human activities. This concept was introduced by a biologist, Eugene Stoermer, and by a chemist, a Nobel-prize winner for his studies on the ozone diffusion and effects on the atmosphere, Paul Crutzen.

We can afford this situation. Now we have new technologies, as discussed by many speakers today, which can provide some solutions or some ways to face this planetary emergency. Covid-19 is one of those dramatic emergencies, but it can also be a huge opportunity to develop a real collaboration between people, between different cultures – including the cultures of science and humanities, or the western and eastern cultures, and so on – to promote new initiatives.

I would like to suggest three possible aims that can be reached by means of new technologies, namely digital technologies and the worldwide web. The first one is that we can have a real network of museums and provide a kind of meta museum. By that, I mean a digital museum that collects all information about real and virtual museums, for instance about climate change or about migrations. We have many, many museums dedicated to migration all around the world. We also have the possibility to have museums on the destruction of cultural heritage by natural catastrophes, by wars, by terrorism. Thus, we can realise a meta museum that collects all this information as well as interviews with the migrants about their history, their experience etc. For this, young people can provide a very valuable help. Young people are now very concerned with planetary emergencies and the needs, and I think for instance Fridays for Future can provide a very valuable support to this initiative.

A second possibility, in my eyes, is to develop the study of history. History now is a neglected discipline. It is sad, it is disturbing, but so it is. We see it since for instance physicists or other scientists neglect the history of their disciplines in their own publications. This is a matter of concern for all the people like me, but the younger researchers are not interested in history. Even in the field of humanities, history became quite a "bad" word. My colleagues art historians in the University of Bologna, for example, don't use the word "history" in the names of their teaching any more. "History of art literacy" is no more used, only "art literacy". It is considered as a sort demoniac word nowadays – which causes a real damage: if we lose our history, we lose all our knowledge. I think history is important for migrants, but also for young people as well as for old people as I am.

Finally, my third proposal would be the following: I am on the editorial board of a scientific journal called *Atmosphere*, and I would like to propose a special issue on climate change and cultural heritage and museums. If you agree, we could realise such an issue on a scientific journal but with the contribution of historians, of conservators, of

restorers, and present a common handbook for teaching and for diffusion.

Michael John Gorman

It sounds like a wonderful idea. That kind of interdisciplinary approach to climate change and cultural institutions will be very valuable.

Now last and not least, I want to turn to Etienne Denk. Giuseppe already mentioned Fridays for Future. Etienne, could you start with saying a little bit about what you are doing with Fridays for Future? Do you feel that museums can be more relevant to the Fridays for Future generation?

Etienne Denk: Fridays for Future and the relevance of museums

First of all, I would like to take the opportunity to thank Molly Fannon for her wonderful keynote, she said nearly everything I wanted to share here with you. It's really amazing to see that the process is already going, so thank you for that.

Let's start with some thoughts about Fridays for Future. I suppose many of you have heard about Fridays for Future or generally the movement of the youth. It grew out of a feeling: we all are kids or in the youth, and we trust the adults that they have everything under control. We grew up and we didn't give much thoughts on planetary emergency or anything like that. And then some day, we realised there's nothing, the adults don't have it under control, especially not the adults with responsibilities, i.e. the politicians. So, in that moment, we all felt very much fear, anger and frustration. The situation is totally overwhelming to us all and the youths because of those strong feelings. Our protest, or what we are mainly doing is striking and going on the streets, telling everyone about these feelings, about our anger, our frustration, our fear concerning our future. We are all seeing that the politicians are not addressing climate change as they should. That's what we've been doing since 2018 now. We managed to grow very big in about 150 countries or something like that. It took a dimension that is really exciting. For example, on 20 September 2019, we had a global climate strike with over 4 million people. We are mainly addressing the different conflicts that emerge from climate crisis, like the conflict between First Nations and the most effective people in areas around the world, or the conflict between my generation and the older generations.

Now let's go away from all the conflicts and protest, and back to the museum, more precisely to the role of museums. The first important point concerns the knowledge and the real understanding of what the climate crisis is. This is a difficult point, since in society in general, we don't have the knowledge we need to address climate change in the way we should. That's the part of the museum you know better than me with its educational role. Unfortunately, we realise now that the education system in schools and universities is a great failure in addressing the topic of climate change. Museums can be a part of the solution to address it.

But far more important is another aspect: to give room for discourse. I just mentioned the conflicts inside society, and we need spaces for the society, for the different bubbles and the different generations who don't meet much in political discourses. We need spaces for them to meet, spaces where the discourse is not just a conflict, or not just hate or anger or frustration. We need rooms where the discourse, the debate can be a bit moderated, a bit guided by science. We simply don't have enough of these rooms. Museums can be one of those spaces. Maybe they have to consider themselves not just as communicators on their own by their education, but also as someone who guides the communication of others and be a space for it. This would be a main topic for me for the museums, and I want to address a point that Molly Fannon already said: in the political debate, museums are

institutions that can communicate *as* institutions and not just with the people who visit the museum. Museums can participate in the debate as political beings. Taking over that role and really positioning themselves in the debate would mean a great deal to all the climate movement. It makes sure we really have science backing our action and that science communicates offensively, saying "hey, we *need* this change". That would be my great prayer to museums.

Michael John Gorman

The two ideas you just expressed are really important to me. It means first of all that museums should be unafraid to engage in these debates, to come out from behind the walls of the museum and be vocal. It also means that we have the weight of expertise and the science to back us up. We have seen recently that museums are incredibly trusted institutions by the public, so we really do have an amazing resource that we can use if we wish. I really love the other point that you made as well, Etienne: we need to think of museums as a way to get people outside of their echo chamber. We need to think of museums as places where people from different communities can come together, and also come together with experts in a stimulating social environment where these kinds of discussions can be had. I think you're right, it's hard to find those places. Museums really have an opportunity to satisfy thirst for these places.

Finally, I would like to ask all of you if you could share one hope that you have for museums that are trying to reinvent themselves in this time of planetary crises?

Etienne Denk: the process has already started and a unique way of communication

I'm a bit cheating, I have two hopes. Events like this conference today are showing me that the process is already going, so that this is not a fight we have to take on again, which is my first hope. Actually, events like this are a support for the climate movement, and this is a hope for itself. The second, very big hope is about communication. Looking at the way of communicating that museums are able to do, with all senses, with seeing, really putting the human being back in the centre of the debate, this way of communicating is unique. Whenever those ways of communication are a support for the climate movement, that is really truly hopeful.

Michael Faber: museums make a link between past and future

You know that the word "culture" derives from Latin and means celebration and cultivation of nature and lands. Museums are cultural institutions and they do address this interdependence, especially against the background of existential emergency situations. I think many of the museums are doing so, they are well in-between. Take for example open-air museums which are showing contemporary history: they are inclusive and involving old people as well as young people in discussions about the change of living conditions and so on. They are documenting this physically in workshops, in the museum – if the museum is open and not closed - or they do it online. We had a lot of very good results documented in the open-air museum Kommern and we present these results to the public. I think that we are on a good way and of course many museums, such as natural history museums, medical history museums, museums of cultural anthropology and so on, offer good opportunities. My hope is that they will use these chances of communicating about our future.

Giuseppe Maino: hope for the future development of the museum

Despite of the objects it concerns, the museum is a very young boy. It was born in the Enlightenment century, so he has less than three centuries of life. I don't know what the future will be for the museum. It has to increase, to grow, and I think there are many surprises for us in the future of the museum, in its organisation, in the presentation and in the teaching of history.

Molly Fannon: change our institutions in order to make a positive impact

Out of many hopes, there is one I want to share, one that is a little bit more helpful, and in a way more urging to you. When I was getting ready to move my three young daughters to Copenhagen, my oldest at the time was just seven. She said: "Mummy I don't want to move. I don't want to leave my friends." I answered: "We really have to go, it's very important." She looked up at me and said: "OK, because you're going to fight global warming and you're going to fix it, right?", and I said "Yes, Catherine, that's what Mummy's going to do." And that is what we have. Whether or not to take action is a false choice. We are all taking action, we're either taking positive action in a way that Etienne is asking us to, or we're abdicating our responsibility, which is an action in itself. I think we need to push our institutions and I really would like to echo to Giuseppe: we need to bring history in, because history shows the power of how we can do really big things together and what could happen if we don't. My hope is that we demonstrate to my young daughter and to all of the young people in the world that we care enough to get out of our echo chambers and to change institutions, so that we can make a positive impact and leave the world a better pace.

Michael John Gorman

Thank you so much to you all. First of all, I would like to thank our hosts, ICOM Germany, ICOM Greece and ICOM Cyprus, for organising today's event. I would also really like to thank our wonderful panelists, Molly Fannon, Giuseppe Maino, Etienne Denk and Michael Faber for this discussion. I hope you all feel, as I do, inspired to rethink how we create museums – also for our own project in Munich, I'm full of ideas now about how we can make it a sociable engaging space. Thank you all for these fantastic insights.

Further thoughts

Beate Reifenscheid

How much longer? Planetary emergency: look away or take action?

Our planet is threatened in many ways and is on the brink of an ecological collapse. Those who deny it are not only blind, but also ignorant.

Yet very few people are concerned with averting this state of affairs and reversing the conditions. Some people don't act because they see no reason to do so, mostly due to profit maximisation as they are only focused on the present and disregard future-oriented developments. Others – by far the larger part of humanity – don't act because they have no chance to deal with it at all: their living conditions are so poor or threatened that they cannot develop any perspectives for improvement, as war, terror, famine or destitution dominate their everyday lives. For their part, the respective acting governments often see no reason to correct seemingly profitable paths that have been taken. These diverging life realities seem to make a common direction almost impossible with regard to a longer-term survival strategy for people, nature itself and thus for our planet. Nevertheless, we can observe year after year that the climate is changing significantly. More and more storms and environmental disasters are threatening not only parts of humanity, but also natural reserves, cultural assets, and museums. It is high time to be more active in safeguarding cultural institutions and to achieve a rethink towards more sustainability.

Instead, we are moving along old, well-trodden paths. We seldom dare to think in new ways and to abandon what we are used to, all the good old habits of ours. Actually, we continue unabated with the overexploitation of natural resources and there is probably no area that has remained untouched: the soil is depleted and heavily polluted by pesticides; the oceans are littered and full of plastic particles; the animal populations that were still healthy in the last century are being massively decimated or have already been wiped out by permanent overfishing or overproduction. Agrarianism and massive deforestation have led to depleted, parched soils and contributed to climate change on many continents. The entire ecological system of the planet has been wilfully thrown into imbalance. The permanent exploitation and decimation of valuable raw materials and elements is intended to help satisfy the countless needs for a "better life" and to guarantee the energy supply for an increasingly demanding world population. The exploitation of nature and people that began with the Industrial Revolution has become a global problem.

Climate change is the keyword under which almost all these problems and phenomena are subsumed. Increasingly, climate change also means that disasters have amplified significantly in the last two decades: "The balance of natural disasters since the beginning of the 20th century: more than eight million deaths and over seven trillion US dollars in economic damage. Behind these bare figures is a Sisyphean task. James Daniell: 'The data comes from everywhere. We have evaluated more than 30,000 sources in more than 90 different languages. We searched microfilm archives and those of newspapers. Only verified information went into the database and factors such as consumer price indices or population trends went into the analysis. We dug through a tremendous mountain of data from all over the world'." (Dagmar Röhrlich¹)

Isn't it amazing, no, isn't it frightening and infuriating that as early as the 1980s, Greenpeace's climate report predicted what climate catastrophes could be expected if no countermeasures were taken? At that time, this was largely dismissed as crankery, or at least irrational alarmism. There was almost no serious perception of the crises, no working through of the problems and no orientation towards sustainability in the solutions. The first awareness of the finite nature of resources was triggered by the two so-called oil crises that threatened the world economy in 1973 and 1979. They led to the first measures to achieve economic independence, the development of other resources, but also to the construction of nuclear power plants². The question of how to deal with energy resources and energy needs for humanity has rightly been heating up people's minds for decades and has become more than urgent since the reactor accidents at Chernobyl (1985) and Fukushima (2011). In addition to the reactor accident, Japan had to face earthquakes and a tsunami that devastated large parts of the country. This is only one of the many natural disasters that humanity has to deal with more and more frequently: heat waves, blizzards, tsunamis, hurricanes, spring floods, earthquakes, volcanic eruptions, widespread fires (like the one in California and the particularly frightening one in Australia³ in the summer of 2020,

¹ Röhrlich, Dagmar: Naturkatastrophen – Erschreckende Statistik mit positivem Hintergrund. Deutschlandfunk, post 19.04.2016. Online available at: https://www.deutschlandfunk.de/naturkatastrophen-erschreckendestatistik-mit-positivem-100.html

² Fraune, Burkhard: 1973 – Ölkrise bremst Deutschland ab. DW, post 17.10.2013. Online available at: https://www.dw.com/de/1973-%C3%B6lkrise-bremst-deutschland-aus/a-17164884

³ More than 20% of the country's forests burnt down. According to the WWF, an estimate of 3 billion animals were killed in the fires or cast out of their familiar habitat between August 2019 and March 2020. Reptilians were the most impacted species. See Read, Paul; Richard Denniss: With costs approaching

which destroyed large areas of the country) or the devastating flood wave in the Ahr valley⁴ (Germany) in 2021.

The excessive overexploitation, climate change as well as armed conflicts and acts of terrorism threaten both cultural and natural landscapes, but ultimately also world-class cultural-historical sites as well as museums and collections. For the cultural landscape and especially for museums, the provoked crises as well as climate change can only mean to face the constantly increasing demands and to better position themselves so that exhibits and collections can be sustainably and permanently protected, preserved and researched. The extent to which the consequences of climate change, in particular, directly threaten cultural assets and museums can now be experienced almost daily⁵. The lack of appropriate research into its effects on cultural assets, and thus also on museums, must give food for thought. There is an urgent need for action and for the research gaps to be closed

^{\$100} billion, the fires are Australia's costliest natural disaster. The Conversation, post 17.01.2020. Online available at:

https://theconversation.com/with-costs-approaching-100-billion-the-firesare-australias-costliest-natural-disaster-129433

⁴ Umweltbundesamt: Weltweite Temperaturen und Extremwetterereignisse seit 2010. URL:

https://www.umweltbundesamt.de/themen/klima-

energie/klimawandel/weltweite-temperaturen-extremwetterereignisseseit#das-jahr-2019;

Statista: Statistiken zu Naturkatastrophen. URL:

https://de.statista.com/themen/551/naturkatastrophen/#dossierKeyfigures;

⁵ A special recommendation goes to the video published on Arte: Lépine, Fanny; Véronique Barondeau: Kultur durch Klimawandel bedroht. Arte, post 07.12.2018. Online available at: https://www.arte.tv/de/videos/086718-000-A/kultur-durch-klimawandel-bedroht/;

See also Landsberg, Torsten: Klimakrise bedroht berühmte Kulturgüter. DW, post 24.11.2020. Online available at: https://www.dw.com/de/klimawandelbedroht-kulturg%C3%BCter-weltkulturerbe-baudenkm%C3%A4ler/g-55662901;

Deutsche Bundesstiftung Umwelt: Wegen Klimakrise lauert auch Gefahr für das Kulturerbe. IDW, post 11.05.2021. Online available at:

https://idw-online.de/de/news768578;

Völzke, Daniel: Klimawandel. "Wir werden nicht das gesamte Kulturerbe erhalten können". Monopol, post 29.07. 2021. Online available at: https://www.monopol-magazin.de/kulturerbe-klimawandel;

here. Research is a prerequisite to better protecting museums, but also to manage energy resources more sustainably. For here, too, the top priority should be to re-equip museums and cultural venues in such a way that energy consumption is reduced, and, above all, insulation is geared towards sustainability. Too many museums still consume too much energy every day due to air conditioning or inadequate building insulation. Last but not least, the sometimes excessive transports to new venues for exhibitions and art fairs will certainly have to be questioned in the coming years. Here, too, it will be necessary to choose other transportation means technically adapted for a better climate balance. Sustainability must also be taken seriously in this sector.

Within the museum world, and with ICOM International at its forefront, many relevant organisations are in favour of a strategy on how to deal with these problems in a measured and sustainable way. Nevertheless, there is a lack of coordination of those many different actors. All active interest groups urgently need to come together and join forces more effectively than they have done until now. ICOM International created a Working Group on Sustainability (WGS) to deal with urgent issues here. Its president Alberto Garlandini has emphatically called for this necessity in his speech⁶ given at the G20 Summit in 2021. Other worldwide associations like ICOMOS and the Climate Change and Heritage Working Group (CCHWG) are also looking for solutions and answers to the problems in the museum sector⁷.

ICOM Germany intensively fosters the exchange in the international museum world. The most recent example thereof is the conference

⁶ ICOM, post 02.08.2021. Online available at: https://icom.museum/en/news/the-g20-recognises-the-role-of-museumsand-icom-in-addressing-the-climate-crisis/

⁷ ICOMOS: New ICOMOS Focal Point for Climate Change and Cultural Heritage. Online available at: https://www.icomos.org/on/focus/climate.change/04222.new.icomos.

https://www.icomos.org/en/focus/climate-change/94222-new-icomos-focal-point-for-climate-change-and-cultural-heritage

Museums Facing a Planetary Emergency, which was held digitally together with ICOM Greece and ICOM Cyprus in autumn 2020. Important contacts in this context are also the German section of Blue Shield and the Club of Rome⁸. However, it is not enough for individual associations or organisations to develop programmes and perspectives on their own, it also needs the involvement of each and every decision-maker. Cultural organisations have the duty to direct the attention of politicians on the consequences of inaction or only half-hearted implementation of urgent tasks. There must be no more "business as usual".

The decisive goal is to counteract global warming according to all the laws of physics and biochemistry. The permanent extension of time limits set for achieving environmental goals, as provided for in the Paris Climate Agreement, is unacceptable. Taking time to wait until 2045, or beyond, means irreversibly destroying the planet by then. A global action plan to reach the goals set must be drawn up and implemented. Every individual can participate in this and every cultural institution, every museum, is called upon to be a pioneer here. Every museum can actively take part in this master plan and contribute to raising awareness – and join in action.

This includes, as basic measures, carrying out initial self-evaluations and integrating resilience and sustainability into one's own corporate philosophy:

1) Evaluate problem areas within the institutions in order to protect them against climate disasters such as floods, heat, snow and

⁸ "Initiated by The Club of Rome and Potsdam Institute for Climate-Impact Research, with initial partners WWF and Nature4Climate, the Planetary Emergency Partnership now consists of over 350 scientists, policymakers, business leaders, youth representatives and NGOs. The Partnership supports the Leaders Pledge for Nature, the Global Goal for Nature, UNFCCC Race to Zero and Race to Resilience campaigns and the 50×30 Coalition." The Club of Rome. URL https://www.clubofrome.org/impact-hubs/climateemergency/planetary-emergency-partnership/

ice, or fire; have evacuation and emergency plans ready and simulate emergency situations with staff and civil protection.

2) Retrofit museums to make them more climate-neutral, which requires appropriate dialogue with politicians (thermal insulation, minimise energy consumption).

3) Museums must actively promote the reduction of energy consumption, make climate damage clearly visible in their exhibition programmes, deal with the crises of the globe, which are consistently provoked by humans, and make them a topic (an exhibition topic) in the museum.

4) Make climate neutrality visible to everyone in everyday working life.

Joint rethinking and joint action must be closely interwoven at local, national and ultimately international level. Only in this way can we counter the global threat of climate damage and the loss of natural resources. Only then will we succeed in protecting and preserving cultural assets and keeping museums open as living places for humanity.

About the authors

Donatella Biagi Maino is Professor of History of Art and Theory and History of Restoration at the University of Bologna. She is author of over one hundred publications among monographs, essays, articles, and conference proceedings on these subjects. She has led international research projects. Member of ICOM-Italy, she deals with sacred art museums and is aggregated to the Italian Society of Studies on the 18th century and the ISECS.

Anastasia Chourmouziadi is Associate Professor of Museology at the University of the Aegean, and Director of Museolab – Research Laboratory of Museology, Department of Cultural Technology and Communication, University of the Aegean, Mytilene (Greece). Her main research interests are theory and methodology of museum practice, exhibition design, public archaeology, as well as the impact of digital technologies on the above.

Etienne Denk is a student in Philosophy at the Munich University (Germany). He is one of the leading activists of the Munich branch of Fridays for Future, a youth movement that demands more efficient (political) action to prevent climate change.

Michael H. Faber is a cultural anthropologist. As state museum director (retired), he was, *inter alia*, responsible for the implementation of large events and risk management for the Open-air Museum Kommern (Germany). His guidelines on *Danger prevention and damage management* have been adopted by other German museums. As volunteer, Faber was Chief of Civil Protection Units of the German "Malteser Hilfsdienst" of the Order of Malta. He is President of AVICOM.

Molly Fannon is CEO of the Museum for the United Nations – UN Live in Copenhagen, Denmark. Before joining UN Live, she was

Director of the Smithsonian Institution's Office of International Relations and Global Program (Washington DC). She has profound experience with largescale international development programmes funded by institutions like USAID or the World Bank.

Michael John Gorman is the Founding Director of Naturkundemuseum Bayern – BIOTOPIA Lab, a new museum linking life sciences, art and design in Munich (Germany). He is also professor in Life Sciences at the Ludwig-Maximilians-University in Munich. His past achievements as the Founding Director of Science Gallery in Trinity College Dublin (Ireland) and the founder of the Science Gallery International were to bring science gallery experiences to a broad audience and foster creativity and discovery at the junction of art and science. He is member of the board of ICOM Germany.

Teti Hadjinicolaou is a historian and ethnologist. She is Honorary Director of the Hellenic Ministry of Culture and Sports and has been elected as chair of the Hellenic National Committee of ICOM.

Brad Irwin is a museum professional with over 20 years' experience of leading, devising and delivering programmes across a rich spectrum of cultural contexts in both the UK and abroad. He is currently the Natural History Museum's Head of Global Engagement where he is responsible for global advocacy, partnerships and touring exhibitions. He has a Doctorate in Education from Kings College London exploring the international work of UK national museums. Brad was recently appointed as ECSITE's annual conference chairperson and in 2021 BlooLoop included him as one of their top 50 Museum Influencers.

Elli Karkazi is an archaeologist and museologist. She is currently a postdoctoral researcher at the Museolab – Research Laboratory of Museology, Department of Cultural Technology and Communication,

University of the Aegean, Mytilene (Greece). With a strong background in archaeology and museology, she has been involved in a number of research projects. Her research interests mainly focus on the exhibition design, the study of the Palaeolithic Era and the dissemination of scientific knowledge to the public.

Phoebe Koundouri is Professor in Economics and Director of ReSEES Laboratory at the Athens University of Economics and Business. She is also part-time Research Professor at the Department of Technology, Management and Economics at the Technical University of Denmark and Director of the Sustainable Development Unit at ATHENA Information Technology Research Center. She is recognized as a pioneer in innovative, human-centric, interdisciplinary systems for the sustainable interaction between nature, society and the economy. Working within numerous scientific academies and international committees, she is currently chairing the World Council of Environment and Natural Resource Economist Association (WCERE). She is the Director of the Alliance of Excellence for Research and Innovation on Aeiphoria (AE4RIA) and chair of the UN Sustainable Development Solutions Network (SDSN) Global Climate Hub.

Giuseppe Maino, theoretical physicist, has been Research Director at the Italian National Agency for New Technologies, Energy and Environment and Professor at the University of Bologna, and supervisor of 140 graduate and Ph.D. theses. He directed international research projects funded by EU. He is author of five books and more than 400 scientific papers and organized 39 international conferences. He is affiliated to the New York Academy of Sciences (New York, USA), and to the Società Italiana per la Protezione dei Beni Culturali (Italy). **Anna Papatheodorou** is an archaeologist, historian of arts and museologist. Since 2019, she has collaborated as a researcher with Museolab – Research Laboratory of Museology, Department of Cultural Technology and Communication, University of the Aegean, Mytilene (Greece). Her research interests are focused on digital applications in museums.

Despina Pilides studied archaeology at the Institute of Archaeology, University of London and got her doctorate at University College, London. She worked for the Department of Antiquities, Cyprus and from 2010 to 2021, she was Curator of Antiquities, in charge of the Cyprus Museum and all government archaeological and ethnological museums. She reorganised, upgraded and created new museums, while she also organised exhibitions in Cyprus and abroad amongst many other archaeological research projects, including studies of archaeological material and excavations. She is chair of ICOM Cyprus.

Beate Reifenscheid is an art historian and Director of the Ludwig Museum Koblenz (Germany) since 1997. She teaches as a Professor for Arts Sciences at the University Koblenz-Landau. Member of the board of ICOM Germany since 2010, she became its chair in 2017 until 2022. She was also elected, among others, as member of the Deutsches Kulturrat (2017-2022) and as member of the Deutsches Kunstrat, where she is vice-chair of the committee "Handling of colonial heritage". Her main focus lays on contemporary arts.

Caterina Ruscio graduated in classical archaeology at the "Sapienza" University of Rome and completed an MA at University College of London in Managing archaeological sites. She is an archaeologist and lecturer of Early Christian art in the American University of Rome IES. She is a PhD candidate at University of Malta, faculty for the Built Environment, and her research focus is management of

tourism on religious sites. She cooperates with the Vatican Museums and the archaeological area underneath Saint Peter's Basilica for educational tours. Caterina has collaborated with the Pontifical University of Saint Thomas Aquinas in Rome for interfaith dialogue courses.

Isber Sabrine is a Syrian archaeologist specialized in cultural heritage management. He has been involved in the protection of the Syrian cultural heritage since the beginning of the conflict and is currently chair and co-founder of the Spanish NGO Heritage for Peace, (Barcelona). He is member of the Spanish National Research Council (CSIC) since 2005. Since 2015 he has also been involved in cultural initiatives for the refugees in Germany.

Polyna Xiradakis is a cultural manager. She collaborates, as a researcher, with Museolab – Research Laboratory of Museology, Department of Cultural Technology and Communication, University of the Aegean, Mytilene (Greece). Her interests are exhibition design and the use of new technologies in cultural environments. She is the founder and project manager of Urban Layers, an initiative that aims to preserve street art through time.

Conference programme

136 Programme

The recording of the conference is available on the following link: https://www.youtube.com/watch?v=SNe-t_hM_k&ab_channel=ICOMDeutschland

Moderators: Froso Nomikou, ICOM Greece Klaus Staubermann, ICOM Germany

Opening Remarks

10:00-10:20 Despina Pilides, Chair of ICOM Cyprus Beate Reifenscheid, Chair of ICOM Germany Teti Hadjinicolaou, Chair of ICOM Greece

Climate change

10:20-10:50	Keynote
	Reframing the Natural History Museum in the
	context of a planetary crisis
	Brad Irwin, Natural History Museum, London (UK)
10:50-11:20	Talks
	Climate change in the Ethnological Museum.
	Exploring local impacts and agency in the South
	Pacific with Augmented Reality
	<i>Cristina Navarro</i> , Ethnological Museum, Berlin (D)
	Anna Wiese, Ethnological Museum, Berlin (D)
	Climate change in Antiquity, climate change in modern times, how museums tell the story <i>Zomenia Zomeni</i> , Cyprus Geological Survey (CY)

Epidemics and pandemics

11:20-11:50 Keynote Epidemics and pandemics in Central Europe from 543 to 1948 *Hans-Rudolf Bork*, University of Kiel (D)

11:50-12:20 Talks

From mass tourism to no tourism: museums and tourism in Rome at the time of the pandemic *Caterina Ruscio*, University of Malta (M)

From physical to digital: the Covid-19 challenge in Greek museums Anastasia Chourmouziadi, University of the Aegean, Mytilene (GR) Elli Karkazi, University of the Aegean, Mytilene (GR) Anna Papatheodorou, University of the Aegean, Mytilene (GR) Polyna Xiradakis, University of the Aegean, Mytilene (GR)

Break /

Young Professionals meeting: project-slam, zoom discussion

Recovery and looking after

13:20-13:50 Keynote Sustainable recovery from Covid-19 pandemic *Phoebe Koundouri*, Athens University of Economics and Business (GR) 13:50-14:30 Talks

Protecting people in the museum: aspects and desiderata of prevention, risk and emergency management *Michael H. Faber,* formerly Open-air Museum Kommern (D)

Museums as a tool for intercultural dialogue with refugees and migrants *Donatella Biagi Maino*, University of Bologna (I) *Giuseppe Maino*, University of Bologna (I) *Isber Sabrine*, Heritage for Peace, Barcelona (E)

A role in society

14:30-15:00 Keynote From awareness to action: reframing our role in society in this critical decade *Molly Fannon*, Museum for the United Nations – UN Live, Copenhagen (DK)
15:00-15:30 Closing panel discussion What next for museums in a time of planetary crisis? Chair: *Michael John Gorman*, Biotopia, Munich (D) *Etienne Denk*, Fridays for Future and Munich University (D) *Michael H. Faber*, formerly Open-air Museum Kommern (D) *Molly Fannon*, Museum for the United Nations – UN Live, Copenhagen (DK) *Giuseppe Maino*, University of Bologna (I)

Virtual museum excursions

List of publications

Publications of ICOM Germany

Museums Facing a Planetary Emergency. Proceedings of the ICOM Germany 2020 annual conference together with ICOM Greece and ICOM Cyprus. Hrsg. von Stéphanie Wintzerith. Heidelberg: arthistoricum.net 2023. 144 S. Beiträge zur Museologie, Bd. 12. e-ISBN: 978-3-98501-219-0 (PDF). DOI: https://doi.org/10.11588/arthistoricum.1275.

Winkelmann, Andreas; Holger Stoecker; Sarah Fründt; Larissa Förster: Interdisziplinäre Provenienzforschung zu menschlichen Überresten aus kolonialen Kontexten. Eine methodische Arbeitshilfe. Heidelberg: arthistoricum.net 2022. 100 S. Beiträge zur Museologie, Bd. 11. e-ISBN 978-3- 98501-028-8 (PDF). DOI: https://doi.org/10.11588/arthistoricum.893.

Chancen und Nebenwirkungen – Museum 4.0. Tagungsband der Jahrestagung von ICOM Deutschland 2019. Hrsg. von ICOM Deutschland. Heidelberg: arthistoricum.net 2021. 176 S. Beiträge zur Museologie, Bd. 10. e-ISBN 978-3-948466-08-4 (PDF). DOI: https://doi.org/10.11588/arthistoricum.620.

Museum: ausreichend. Die "untere Grenze" der Museumsdefinition. Tagungsband des Internationalen Bodensee-Symposiums 2018. Hrsg. von Markus Walz. Heidelberg: arthistoricum.net 2020. 192 S. Beiträge zur Museologie, Bd. 9. e-ISBN 978-3-947449-92-7 (PDF). DOI: https://doi.org/10.11588/arthistoricum.565.

Museums, Borders and European Responsibility – One Hundred Years after the First World War. Proceedings of the ICOM Europe conference 2018. Hrsg. von Deborah Tout-Smith. Heidelberg: arthistoricum.net 2019. 156 S. Beiträge zur Museologie, Bd. 8. e-ISBN 978-3-947449-90-3 (PDF).

DOI: https://doi.org/10.11588/arthistoricum.564.

Difficult Issues. Proceedings of the ICOM international conference 2017. Hrsg. von ICOM Deutschland. Heidelberg: arthistoricum.net 2019. 216 S. Beiträge zur Museologie, Bd. 7. e-ISBN 978-3-947449-22-4 (PDF). DOI: https://doi.org/10.11588/arthistoricum.428. ISBN 978-3-947449-23-1 (Softcover). 15,00 Euro*

Von der Weltausstellung zum Science Lab. Handel – Industrie – Museum. Tagungsband der Jahrestagung von ICOM Deutschland 2016. Hrsg. von ICOM Deutschland. Berlin: ICOM Deutschland 2017. 168 S. Beiträge zur Museologie, Bd. 6. ISBN 978-3-00-056206-8. 15,00 Euro*

Waentig, Friederike; Melanie Dropmann, Karin Konold, Elise Spiegel, Christoph Wenzel: Präventive Konservierung. Ein Leitfaden. Berlin: ICOM Deutschland 2014. 84 S. Beiträge zur Museologie, Bd. 5. ISBN 978-3-00- 046939-8. (gratis)

Zur Ethik des Bewahrens. Tagungsband der Jahrestagung von ICOM Deutschland 2013. Hrsg. von ICOM Deutschland. Berlin: ICOM Deutschland 2014. 148 S. Beiträge zur Museologie, Bd. 4. ISBN 978-3-00-045736-4. 15,00 Euro*

60 Jahre ICOM Deutschland. Ein Rückblick auf die deutsch-deutsche Geschichte von ICOM Deutschland 1953 bis 2013. Hrsg. von ICOM Deutschland. Berlin: ICOM Deutschland 2013. 56 S. (gratis)

Die Ethik des Sammelns. Tagungsband der Jahrestagung von ICOM Deutschland 2010. Hrsg. von ICOM Deutschland. Berlin: ICOM Deutschland 2011. 176 S. Beiträge zur Museologie, Bd. 3. ISBN 978-3-00-034461-9. 15,00 Euro*

^{* 10,00} Euro für Mitglieder von ICOM.

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142 Publications

Museen und Denkmäler – Historisches Erbe und Kulturtourismus. Tagungsband des Internationalen Bodensee-Symposiums 2009. Hrsg. von ICOM Deutschland. Berlin: ICOM Deutschland 2010. 176 S. Beiträge zur Museologie, Bd. 2. ISBN 978-3-00-028961-3. 15,00 Euro**

Definition des CIDOC Conceptual Reference Model. Hrsg. und übersetzt aus dem Engl. von K.-H. Lampe, S. Krause, M. Doerr. Berlin: ICOM Deutschland 2010. 208 S. Beiträge zur Museologie, Bd. 1. ISBN 978-3-00-030907-6. 10,00 Euro

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^{** 10,00} Euro für Mitglieder von ICOM und ICOMOS.

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Die Welt verändert sich rasant. Durch menschliches Verschulden sind globale Krisen von ungeheurem Ausmaß entstanden, mit dramatischen Folgen wie Klimawandel, Rückgang von Biodiversität und Pandemien. Museen gelten als Orte des Vertrauens, in denen Information vermittelt wird und Transformationsprozesse der Gesellschaft angeregt werden. Entsprechend sollten, oder gar müssen sie die dringendsten Herausforderungen unserer Zeit ansprechen. Wie können die Museen diesen Krisen gerecht werden? Welche (neue) Rolle können sie einnehmen, um die Gesellschaft bei der Wahrnehmung und Bewältigung dieser Bedrohungen zu stärken? In welcher Weise tragen die Sammlungen dazu bei, und wie können sie vor allen Gefahren der globalen Veränderungen sowie der lokalen Katastrophen geschützt werden? Wie können sich die Museen angesichts der weltweiten Notlage neu erfinden?

Our world is changing rapidly under the influence of human behaviour: climate change and biodiversity loss but also pandemics are just some of the most dramatic manifestations of global crises of unprecedented scope. As trusted sources of information and sites of transformative engagement, museums can and must play a role in addressing the most pressing issues of our times. How can museums respond to those crises, what new roles could our institutions play to strengthen the communities they serve? What is the role of our collections and how can they be protected from the dangers of global changes or local disasters? How should museums reinvent themselves in the face of a planetary emergency?

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