

WINTER 2020

# Maplines

#COVID19

THE MAGAZINE OF THE BRITISH CARTOGRAPHIC SOCIETY

Slow Ways

Romania

Holiday gifts

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## From the Senior Editor

Welcome to *Maplines*. In this edition, we are looking at the world through a COVID-19 lens. How has this affected cartography? How has this affected cartographers? How has COVID-19 been mapped? It certainly has been a year full of statistics and working out what we value in society, such as communicating with each other.

This has definitely been the year of Zoom calls as we trialled putting the AGM online. Hopefully you were able to join in too. As well as looking back on this year, we also look forward towards the holiday period and the opportunity to buy mappy gifts for your nearest and dearest. Find them on pages 26-27. And we would like to mention that Martin Lubikowski is stepping down as Head of Publications and Vice President. Thank you for all your support with *Maplines* and good luck for the future, Martin. Have a very merry Christmas everyone!

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See our website for photos:  
www.cartography.org.uk/about/whos-who/

## What's coming next?

Maplines Spring 2021 - Networking

Request for articles:  
Monday (15) January 2021  
Article and photos: Friday (26) February 2021  
Proof-reading: Friday (12) March 2021  
Artwork date: Friday (26) March 2021  
To publisher date:  
Monday (5) April 2021  
In post boxes: Monday (19) April 2021

Summer 2021 edition - Utilities & transport

Publisher: Oxuniprint, Unit 10, Oxonian Park,  
Langford Locks, Kidlington, Oxon, OX5 1FP

With thanks to Margas Ltd for the royalty-free social media icons.

## How to get involved:

We are looking for submissions from all Members, Student Members, Corporate Members and Educational Members.

Tell us what you've been up to, your latest product or your latest adventure with maps in mind.

Contact:  
maplines@cartography.org.uk

**Would you like to give a talk at the BCS Annual Conference on 9 September 2021, hosted by the BGS in Nottingham?** Talks need to be 20 minutes long, and a further 10 minutes will be given for questions. The theme of the conference is 3D mapping, but talks are not limited to this subject. Contact Jennifer by 4 January 2021 if you are interested: jennifer.johnston@cartography.org.uk

## Corrections

Apologies for getting Gordon Petrie's name incorrect, should be minus the 's'. 'Ready for next year on 19-20 | July 2020' should of course be 2021, thanks to Dave Watt and Francis Herbert for spotting this error.

Front cover image: F. Witt, Europe circa 1690 Amsterdam.





### From the outgoing President

It seems strange that I've already reached the point of penning (if tapping away at a keyboard can be so described) my final piece for *Maplines* as your President. Three years may seem a long time stretching ahead at the start but in retrospect is just a few short moments.

Clearly though, where we are now is not what any of us expected back then. Like so many membership organisations, our activities have been severely curtailed. Nevertheless, I am pleased to say that we are very much in a good position to progress. You

should soon begin to see much more material available online – plans for which, curiously, have been both accelerated and yet delayed by the impacts of the pandemic.

It is fitting that in this edition we pause to reflect on how our industry has responded to events of the past ten months. Much has been insightful and helpful to both those needing professional understanding and to the wider public. However, I'm sure we have all seen examples that reflect less well on our industry's ability to communicate. I do hope that you gain inspiration from the articles on the theme of COVID and health mapping in this edition.

As you should have heard, entries

are now open for the 2021 BCS awards. You can find full details of categories and all the information you'll need on the awards page on our website. The closing date for entries is 27 June 2021. Any entries we had received for 2020 will be held over and included in the judging next year.

So, let me close in thanking you once again for your support over the last three years.

I hope you will join me in wishing all success to Seppe and the new team in Council.

Richard Carpenter  
BCS President 2017-2020

Main image: Henry Johns Award Winners and Richard Carpenter at BCS Conference 2019. © 2020 Martin Lubikowski





## Membership

Thank you to all our members who have renewed their membership for 2020. Your continued support for the Society is greatly appreciated.

We are also very pleased to welcome our new members who have joined us since the beginning of June.

### Full:

Ramathan Ali, Emily Ball, Jessica Baker, Michael Barnes, Kevin Bland, Barbara Bond, Peter Cotroneo, Jake Dowling, Tom Harrison,

Brian Higgins, Peter Insole, Petra Kolek, James Macdonald, Holly Price, Tanya Rose, Emma Scott, Abdul Taufik, Rebecca Watson and David Williams.

### Affiliate:

Emily Adams, Rachel Bell, Stephen Curran and Frances Livingstone and Kevin Woods.

### Student:

Lee Anderson, Morgan March and Jessica Hanney.

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Our current membership fees are as follows:

Full members: £40 (Overseas £55)

Fellows: £60 (Overseas £75)

Affiliate: £20 (Overseas £35)

Student £20 (Overseas £35)

Educational £72 inc VAT

Small Corporate £120 inc VAT

Corporate £240 inc VAT

For more details see:

[www.cartography.org.uk](http://www.cartography.org.uk)

Our subscription year runs from 1st January to 31st December. New members will receive all issues of *The Cartographic Journal* and *Maplines* for the year of joining, subject to availability.

To join or renew your subscription, please use the following methods:

- Website application:  
[www.cartography.org.uk/members/](http://www.cartography.org.uk/members/)

- Bank transfer:  
Account Number: 06753868  
Sort code: 55-50-23  
*Please include your membership number and surname in the reference.*

- Cheque made payable to:  
The British Cartographic Society  
*Please include your membership number on the back when renewing.*

The BCS Administrator is happy to help members with issues or queries they may have related to the Society or their membership.

Please contact:  
[admin@cartography.org.uk](mailto:admin@cartography.org.uk)

## David M. Irvine - Obituary

We were saddened to hear of the death in October of long-standing BCS member, David Irvine, former cartographic editor for the AA and the Readers Digest. David joined the Society in 1979 and worked tirelessly for the organisation.

He was on the Programme Committee and held the important post of Exhibitions Officer for all the BCS Annual Symposium/Conferences from 1996 to 2007. As Corporate Members' Liaison Officer he introduced a plaque that Corporate members could use on their exhibition stands to show that they were members of BCS. Our thoughts are with his family and friends.





Main image: Paul Naylor and Jim Goldsmith at BCS Conference 2019.

© 2020 Martin Lubikowski



### **From the incoming President and Vice President**

'Times they are a changing'. Everything we do in our daily lives, our work, our interests and hobbies are up for reappraisal and review as the BCS continues to fully embrace change on going forward.

Following the AGM, we now have a new and dynamic council, with fresh faces and many new ideas about the future. In our roles as President (myself, Seppe) and Vice President (Paul) are keen to make the BCS more relevant, engaged and responsive to our members' interests.

Our membership has held pretty steady this year, with many new members balanced by those who decided not to renew. The biggest casualty has been the educational membership as the pandemic stopped our Restless Earth programme.

The BCS are migrating to a new online membership renewal solution for 2021 to make this process more efficient. Help us by keeping a look out for your renewal reminders before Christmas.

For 2021 we have already put in place some new initiatives, which we think will excite you, as well as working hard on all our core activities.

### **Professional development and general interest**

#### **BCS-Forum**

We have launched a successor to the popular Carto-Soc online forum, for anyone to get advice and tips on any cartographic matters. Please use it and respond to those who ask questions. We hope it will become as valuable and widely used as its predecessor. Many thanks to Jim Goldsmith for getting it up and running. You can access it through the BCS website.

#### **Winter Lecture**

We welcomed the return of the Winter Lectures with a first event being a repeat of Barbara Bond's talk to the Royal Geographical Society.



## BCS Teatime Talks

For 2021, we are planning a regular series of short talks on a wide range of topics: projects, case studies, points of interest from historic mapping and archives, to the latest ideas on data visualisation. Put the third Thursday of each month in your diary – 5pm for a 20 min webinar. The first talk will be by John Peaty on 21 January 2021, with a ‘taster’ talk to set up the series on the 7 January 2021. Join us if you can and if you would like to do a talk contact Christopher Budas, chair of Programme Committee.

## 2021 Conference

With all the uncertainty, one thing you can be sure of, there will be a BCS Conference in 2021. Supported by the British Geological Survey, Jennifer Johnston and Henry Holbrook are planning for a virtual event with the option of an actual get together, if the rules allow. Another date for your diary – 8 to 9 September 2021.

## Better Mapping

We are planning to relaunch this initiative as *GeoViz*, with the development of an online resource centre. Many thanks to Claire Birnie for supporting this project. Keep a lookout for some exciting developments in the new year.

## Keeping in touch

### New website

We are currently working on a brand new website, which will be launched shortly. Thanks in

particular to Dominique René and Liz Bourne, our administrator, for working so hard to get this up and running.

## Social media

We will be placing more emphasis on using social media to promote what the society does. Let us know what, if any, are your preferred platforms and we will endeavour to make sure we can link to you. Thanks to Clare Seldon for taking the lead with this.

## YouTube

We are recording as many of the talks as we are permitted to do so and will put these on our YouTube channel. You can find all the talks from the 2019 conference plus some other items at [www.youtube.com](http://www.youtube.com).

## Our publications

### Maplines

Since Caroline Robinson took over as editor we have seen a refreshed format and broader content. Continue to give her and the team all your support with articles, comments and ideas.

### Cartographic Journal

Nothing particularly new to report but just to remind everyone how important the globally recognised academic journal is and the key role it has to play in maintaining our presence on the global stage. Thanks to Alex Kent for his continuing hard work as Editor.

As you can see there is so much going on behind the scenes,

and we haven't even mentioned the UK Cartographic Committee, Awards, Fellows and Corporate Members, on which we also have ideas. We will continue to be actively engaging with the broader data visualisation community.

We plan to hold a strategy meeting early in 2021. Please do get involved.

We have huge ambitions for the future of the society and look forward to your support in making this happen.

Enjoy the holiday festivities as best you can under the circumstances. Stay safe and let's look forward to 2021.

Seppe Cassettari

BCS President

[president@cartography.org.uk](mailto:president@cartography.org.uk)

Paul Naylor

BCS Vice President

[vicepresident@cartography.org.uk](mailto:vicepresident@cartography.org.uk)





## Events

We hope to make this a regular feature, especially in these difficult times. Please let us know if you are holding an event and you would like to appear on the next Events page in *Maplines* by contacting Liz Bourne: [admin@cartography.org.uk](mailto:admin@cartography.org.uk)

### GeoMob

Presented by: Ed Freyfogle and Steven Feldman.  
Date: 13 January 2021  
Time: 5pm  
Location: [thegeomob.com/post/jan-13th-2021-geomob-details](https://thegeomob.com/post/jan-13th-2021-geomob-details)  
Cost: FREE

### BCS Teatime talks

Presented by: John Peaty  
Date: 7 and 21 January 2021  
Time: 5–5.30pm  
Location: virtual event, registration via Eventbrite (details will be sent out to members via email)  
The first of a regular series of short talks on a range of topics. On 7 January 2021 there will be a 'taster' talk to introduce the series.  
Cost: FREE

### 'Bathymetric Maps of Tokyo Bay: A Transnational History'.

Presented by: Dr Radu Leca,  
Postdoctoral Research Associate,  
Heidelberg University, Germany.  
Date: 21 January 2021  
Time: 5pm  
Location: <https://warburg.sas.ac.uk/whats-on/maps-and-society-lecture-series>  
Cost: FREE

### 'Map Collecting at the National Maritime Museum: Histories and Futures'.

Presented by: Dr Megan Barford,  
Curator of Cartography, Royal Museums Greenwich, London.  
Date: 18 February 2021  
Location: <https://warburg.sas.ac.uk/whats-on/maps-and-society-lecture-series>  
Cost: FREE

### GeoMob

Presented by: Ed Freyfogle and Steven Feldman.  
Date: 23 February 2021  
Time: 5pm  
Location: [thegeomob.com/post/feb-23rd-2021-geomob-details](https://thegeomob.com/post/feb-23rd-2021-geomob-details)  
Cost: FREE

### Esri Developer Summit

For developers, by developers  
Date: 9–11 March, 2021  
Location: [www.esri.com/en-us/about/events/devsummit/overview](https://www.esri.com/en-us/about/events/devsummit/overview)  
Find out how to build cutting-edge apps using advanced mapping technology. Explore hundreds of hours of learning in one location with technical workshops and sessions, learn development best practices and get the latest on new technology. Grow your professional network with networking opportunities.  
Cost: contact org for details

### History of Cartography 2021 – 29th International Conference on the History of Cartography

ICH2021.com

Date: 4–9 July 2021 (registration – from 15 February 2021; deadline for presenting author registration – 1 June 2021)

Location: Bucharest

Cost: contact org for details

The official language of the conference will be English, and all abstracts and presentations must be in that language.

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## Social media

Find us on your favourite social media platform. Share maps and hashtags with us to share knowledge of good cartography and mapping practice.



@bcswb



@bcswb



British Cartographic Society



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The British Cartographic Society





## **From the Chair, UK Cartography Committee**

### **ICC2021, Florence**

19–20 July 2021

As I write this in early November, there is very little up-to-date information about ICC2021 in Florence, scheduled for next July. There has been no communication from the organisers or from the ICA Executive, and the website gives no information other than the fact that the submission process for contributions is postponed. With modern submissions systems, the processing of submissions can be streamlined, but it can still take a significant amount of time to allocate papers and abstract to reviewer, allow time for reviews to be carried out, collate all the responses (no doubt after some chasing emails) and make decisions about the selection and programme.

Authors then need to have time to edit their paper and upload them to the submission system, normally before the cut-off date for conference registration. If quality is to be assured this process cannot be shortcut, especially for those who require fully refereed papers to appear either in the *International Journal of Cartography*, or in *Advances in Cartography and GIScience*. While conference

abstracts can be processed more quickly, there has been an increasing demand from contributors to have fully referred outlets to justify their participation.

It would be risky at this stage to commit to a fully on-site conference in July, as reduced attendance is likely to result in a large deficit. While several other ICA activities have shifted to online format, I think that is relatively unlikely for ICC2021 as the prime organiser of the conference is the Florence-based conference organisation, rather than an academic organisation or scientific society like most ICA events.

### **UPDATE: ICC2021 is postponed from July to 13–17 December 2021.**

If you are at all thinking about contributing to ICC2021 do keep a regular eye on the website for further announcements: [www.icc2021.org](http://www.icc2021.org).

### **Petchenik Children's Map Competition**

Regardless of potential delay to the conference, details of the Children's Map Competition have been announced. Details for the UK feeder competition have been added to the BCS website including competition rules, parental permission forms, etc. [www.cartography.org.uk/awards/the-barbara-petchenik-competition-2021/](http://www.cartography.org.uk/awards/the-barbara-petchenik-competition-2021/).

UK entries should be sent to me at the University of Glasgow by 1 April 2021. It is not possible to submit entries directly to the international competition. For inspiration, many past entries,

including international winners, can be viewed at <https://childrens-maps.library.carleton.ca/>.

### **UPDATE: Petchenik Children's Map Competition is extended to end of July 2021 for UK entries.**

### **International Map Exhibition**

A significant feature of ICC is the exhibition of cartographic materials from member countries. There is currently no information available about this, but if the conference does go ahead in July, we will circulate a call for UK contributions early in 2021 with a likely deadline for submissions in late April.

### **ICA activities**

Despite the vagueness of information about the main conference for 2021, many other ICA activities are more positive, with several Commission meetings going ahead, including several postponed from 2020. For example, CartoVis21 will now go ahead in Warsaw in September 2021 having been postponed from this year. This free to attend workshop on Analytical Reasoning brings together three ICA Commissions with interests in visualisation and user issues.

More information about ICA and Commission events can be found at: <https://icaci.org/calendar/>

Best wishes to everyone for the festive season, even if the festivities have to be somewhat curtailed this year.

David Forrest

Chair, UK Cartography Committee  
[david.forrest@cartography.org.uk](mailto:david.forrest@cartography.org.uk)





Main image: RP; FORT RILEY, Kansas, PU-1918 ; 2 Army Bi-Planes

**We can't be sure of the geographical origin of the 1918-20 flu pandemic** but on 4 March 1918 Private Albert Gitchell of the US Army based at Fort Riley, Haskell County, Kansas, reported to the Camp hospital with what turned out to be one of the first known cases of what became 'Spanish Flu'.

By lunchtime that same day about a hundred of his Camp colleagues are believed to have been infected. This on its own demonstrates how infectious this virus was and explains how quickly it was to spread. There were other outbreaks in the United States including New York.

Subsequently, it is thought that US soldiers who came across to Europe to help the fight against

Germany in 1918 brought the virus with them and it spread quickly among the soldiers on both sides. In the early days of the pandemic in Europe reports of the flu were censored so as not to worry the general populations on either side of the conflict. However, Spain was a neutral at the time so there were no such reporting restrictions so the severity of the infections was reported in full and hence the disease became known as 'Spanish Flu'. It spread rapidly through the trenches, hospitals and cities killing more men than women.

During the four waves it affected every continent, some 500 million people, a third of the population causing between 17-50 million deaths. There were two places that reported no cases, St Helena in the mid-Atlantic and the island of Marajo at the mouth of the Amazon.

Peter Jolly  
peterjolly42@btinternet.com

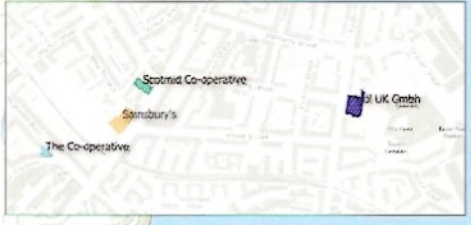


HOWLRF BOUNDARY: 

HOTELS: 

HOSPITALS: 

HOT SITES: 



Main image: *Additional Out-of-Hospital Capacity Hospital and Hotsites, April*  
 Inset Image, top: *Pavements*  
 Inset Image, bottom: *Supermarkets*  
 Ordnance Survey © Crown copyright  
 and database rights 2020



identify where 'the next nearest' pharmacist is in case of shutdowns or shortages.

Supporting:

- Route planning of scarce resources or additional transportation to hospitals by local authorities.

Visualising:

- Mapping data to reveal the context for authorities and emergency services, e.g. identifying areas with a more vulnerable ageing population
- Green spaces in towns and cities to help with efforts around mental health and physical activity during this difficult time.

A special COVID-19 licence, granting access to the Geospatial Database, was made available. The new licence was swiftly implemented and has enabled organisations, developers and individuals to use OS data, free at the point of use, for the specific purpose of supporting the response to COVID-19. The move has seen the rollout of web and mobile app solutions drawing on location data to help support essential solutions at community and national level. In the first six months, 70 organisations accessed OS data via the emergency line.

In addition to supporting the government and businesses in their response plans, OS has also inspired the nation to keep active during lockdown.

OS Maps and OS Greenspace data has been supporting the nation

to GetOutside safely during lockdown, inspiring thousands of people to discover new adventures on their doorsteps. During lockdown, use of OS's digital mapping and outdoor adventure app OS Maps increased by 78%. Views of OS Maps' National Cycle Layer Network increased by 98% and use of OS Greenspace increased by a staggering 1,728%.

When lockdown measures eased, OS and Natural England created an online tool to help the public stay safe when doing outdoor activities. [www.getoutside.co.uk/covid](http://www.getoutside.co.uk/covid) became a one-stop shop for information and advice on outdoor activities across England, Scotland, Wales and Northern Ireland.

Ordnance Survey also made its Digimap for Schools service free to students until the end of July 2020, to support home schooling. This meant teachers, parents and students could access the online geospatial mapping service – designed for all school-aged learners to use, plus free teaching resources, linked to the national curriculums of England, Scotland and Wales.

With the pandemic continuing to impact the globe, OS and its Geospatial Database continue to support the nation in its response plans.

Keegan Wilson  
Senior Press Officer, Ordnance Survey

## **The COVID-19 pandemic and the rapid speed at which it spread presented nations**

around the world with an unexpected set of problems. Great Britain's response to the situation has been supported by Ordnance Survey's (OS) trusted geospatial data and experts.

Created in the 1990s and updated daily by the OS, the Geospatial Database equips government departments with the most accurate picture of Britain for decision-making. Since the pandemic began, OS with its location data, maps and services have supported more than 200 organisations with insight and expertise.

One of the first actions was for the OS to form an Emergency Response Team to help the NHS, emergency services and local authorities strategise and plan.

Identifying:

- Supermarkets with large car parks to help with screening and/or testing locations
- Care homes in an area to identify potential healthcare demand
- Pharmacists in an area; and crucially using routing tools to



# SLOWWAYS

**In the UK we are very fortunate to have inherited a wealth of footpaths that criss-cross the country.**

Ramblers estimate that there are around 200,000km of public rights of way and that does not include the Freedom to Roam that exists across Scotland.

Our footpath infrastructure gives us connection, freedom and endless possibilities as well as space to connect with ourselves, each other and nature. For individuals and society, these paths also provide ways to move around that are good for our health, well-being, creativity, productivity and our efforts to reduce our carbon emissions.

Despite all of these benefits, our footpaths could be much better. For someone who's not done their Duke of Edinburgh Award or concentrated in their GCSE Geography class it's understandable why they might not feel invited or confident to use our paths. Unlike our road infrastructure which is highly organised, accessible, clearly signed and commonly used for multiple purposes, our footpaths can be confusing and even elusive.

In addition to that, the culture around walking has shifted over the last few generations. Our contemporary use of the paths is in some ways out of sync with their original use. Most footpaths exist because people needed to get to neighbouring and distant settlements to trade, work, see loved ones or even go on pilgrimages and adventures. Today the majority of longer distance walking is for recreational purposes and many people will go out of their way to avoid populated places.

Slow Ways is a collaborative effort to tackle these issues by creating a national network of walking



routes that connect all of Great Britain's towns and cities as well as hundreds of thousands of villages. The initiative focuses on inspiring and supporting people to walk to neighbouring settlements or combine multiple Slow Ways routes to go on longer journeys.

It was kicked off in February at GeoVation – Ordnance Survey's innovation centre in central London – when 70 people came together for a hackday to start developing the concept. Everyone was being challenged to use OS Maps to create routes between neighbouring settlements that, as far as possible, were direct, off-road, safe and accessible, connect with public transport, pass through villages with places to eat and that would be enjoyable.

The day was a great success and the plan was to organise a further series of hackdays around the country to complete the network. Just as this was being organised, the COVID-19 crisis escalated and the country went into lockdown. Instead of slowing the project down, it pivoted and went online. A call was put out on social media for people who liked walking and maps to help draft the network. Seven hundred people came forward to be trained to do so.

In a single month of lockdown, an estimated year's worth of time was invested in Slow Ways. This resulted in an initial draft of 7,000 Slow Ways routes that connected

2,500 primary destinations. Added together, these routes stretch for 100,000km which is roughly the equivalent length of lapping the equator 2.5 times.

The structure of Slow Ways network is distinctively made up of lots of triangles. This geometric form makes it easier for people to see, imagine, plan, navigate and share journeys.

Each Slow Way has its own unique name that is created by combining the first three letters of the two places it connects. This results in lots of charming Slow Way names. Salkin connects Salisbury to King's Somborne, for example. While using a Slow Way in principle, it should be possible to walk that whole journey. In the future, each Slow Way may have multiple route options depending on people's needs and desires.

While Slow Ways uses existing footpaths, in many parts of the country the initiative has revealed places where the only way to walk to a neighbouring village or town is by taking unacceptable risks or detours. There is a future where highlighting these places could result in the creation of new paths that are fit for the future.

So far, only the initial Slow Ways network has been drafted, the next challenge is to check all the routes. To help with this the Slow Ways initiative is building a website to host all of the routes and

putting a new call out, this time for 10,000 people from across Great Britain to help walk and review all 100,000km of them.

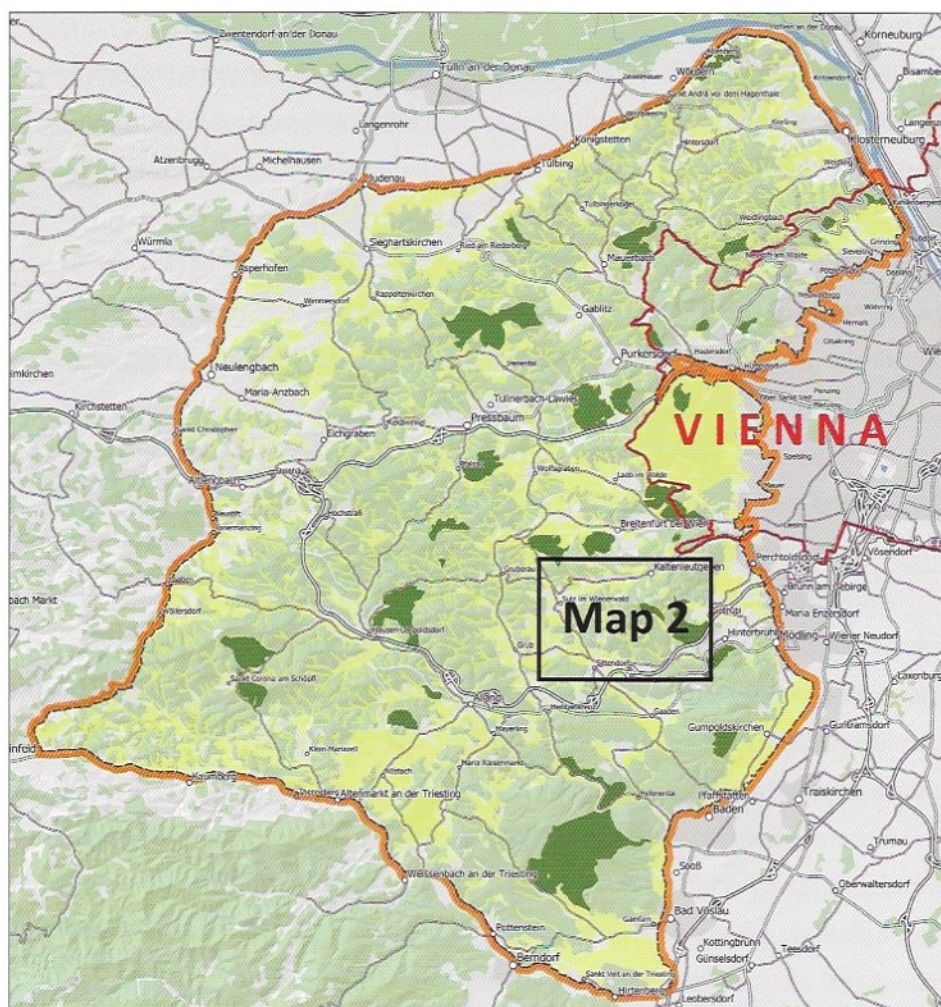
This will eventually result in a dynamic and verified network that people will be able to search, browse, analyse and use for routing. The ambition is for the Slow Ways network, just like the paths themselves, to become a creative and data 'commons' that everyone can freely make use of. While individual routes will be free to access and enjoy, the plan is to release the entire network in updated versions for people to innovate with.

The initiative currently focuses on Great Britain, but the plan is to look at the island of Ireland next and then expand into other countries as well.

Slow Ways is a giant and accessible citizen geography project that everyone can get involved with. If you like walking, maps or both you can get involved by walking, reviewing, creating or sharing Slow Ways. To find out more and get involved visit [www.slowways.uk](http://www.slowways.uk).

Dan Raven-Ellison  
Guerrilla Geography  
and Founder of Slow Ways  
[@DanRavenEllison](https://twitter.com/DanRavenEllison)





## Stressed about COVID?

## Pick up a landscape menu!

Austria's capital Vienna has 1.9 million inhabitants, about the same as Manchester. Located where the Danube breaks through the eastern tip of the Alps, much of the varied landscape around it has remained green.

Areas with a major outdoor recreation potential are:

- The Biosphere Park Vienna Woods

(Left map). Only a fraction is within city limits, but strict controls have prevented Vienna's expansion there since the early 20th century.

- The riparian forest along the

Danube, including the 100 sq km National Park Donau-Auen just downstream of the built-up area.

- The woods and farmland
- dense network of field tracks and  
olloways) due north of Vienna.

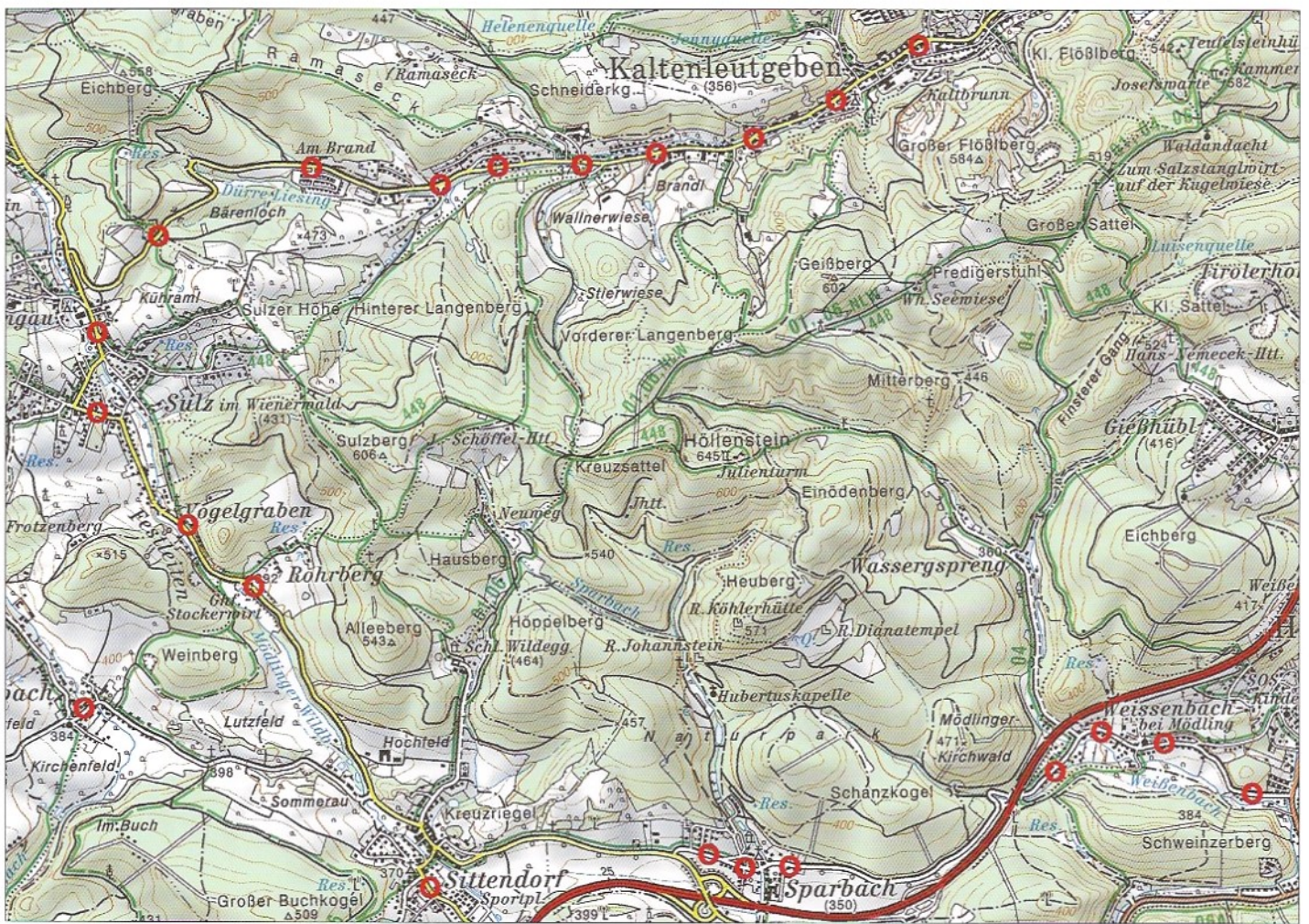
Access to the outdoors is excellent. Only small areas are off-limits and the metropolitan region's transport network makes it easy to get out of town. In this respect, those who live in 19th-century tenement blocks are as well off as anyone else.

A Vienna transport pass for a year costs a modest €365 (€235 for pensioners).

Austria went into strict lockdown in mid-March. Only essential trips were to be undertaken, but individuals and households were encouraged to exercise locally – and what is 'locally'? The resulting 'fuzziness' benefited those on Vienna's leafy edges most. The Vienna Woods and the Donau-Auen saw a great increase in outdoor recreation.

Public transport – masks compulsory  
- continued on a Sunday schedule;  
even so, car parks overflowed. This  
caused problems here and there,  
as distancing was ignored or be-  
came impossible. But such ‘choke  
points’ were easily avoided – with  
map-reading skills.





Austria is covered by a dense network of tracks; much of it is marked. Map 2 shows a section of the Vienna Woods at the south-western city limits, with marked tracks in green. Red circles are bus stops. The numerous access points allow people to spread out along marked and unmarked tracks. However, few people can read maps and even fewer will venture on unmarked tracks.

During lockdown, the outdoor club of the United Nations in Vienna (<https://www.vic-hikingclub.com/>), for which I organize walks, stopped activities. But with our maps, we had a certain freedom. Making the most of it, my wife and I explored forgotten, quiet corners of Austria near the city limits. Making the

most of our maps, my wife and I explored forgotten, quiet corners of Austria near the city limits. Apart from doing us a power of good, physically and mentally, this provided inspiration for the re-start of the club's activities in May.

At the time of writing, COVID regulations have been tightened again. But given the topographic map's vast landscape 'menu', the freedom to roam remains essentially unlimited. Guidebooks and most apps aren't quite as good for that purpose, because they pre-select. Basic map-reading skills can be learned in a weekend, as participants in my map and compass courses have discovered. The only other thing required for preserving or actually improving your health

and general well-being is a positive attitude to exploring the outdoors.

Paul Hesp  
Paul.Hesp@drei.at

Information on COVID and recreation can be found at Ministry of Social Affairs and Health: [www.sozialministerium.at/en.html](http://www.sozialministerium.at/en.html)

Left map: The Biosphere Park Vienna Woods. Yellow, grey-green and green indicate progressive protection zones. Light grey: farmland. Part of the Danube's riparian forest can be seen at the top of the map. Red: municipal boundary. © 2020 BPWW

Right map: The Vienna Woods near the 23d district. Marked tracks: green. Bus stops circled in red. © 2020 BEV, Bundesamt für Eich-und Vermessungswesen in Wien, N2020/79643

Photo below: Making the most of our maps during lockdown. © 2020 Paul Hesp.

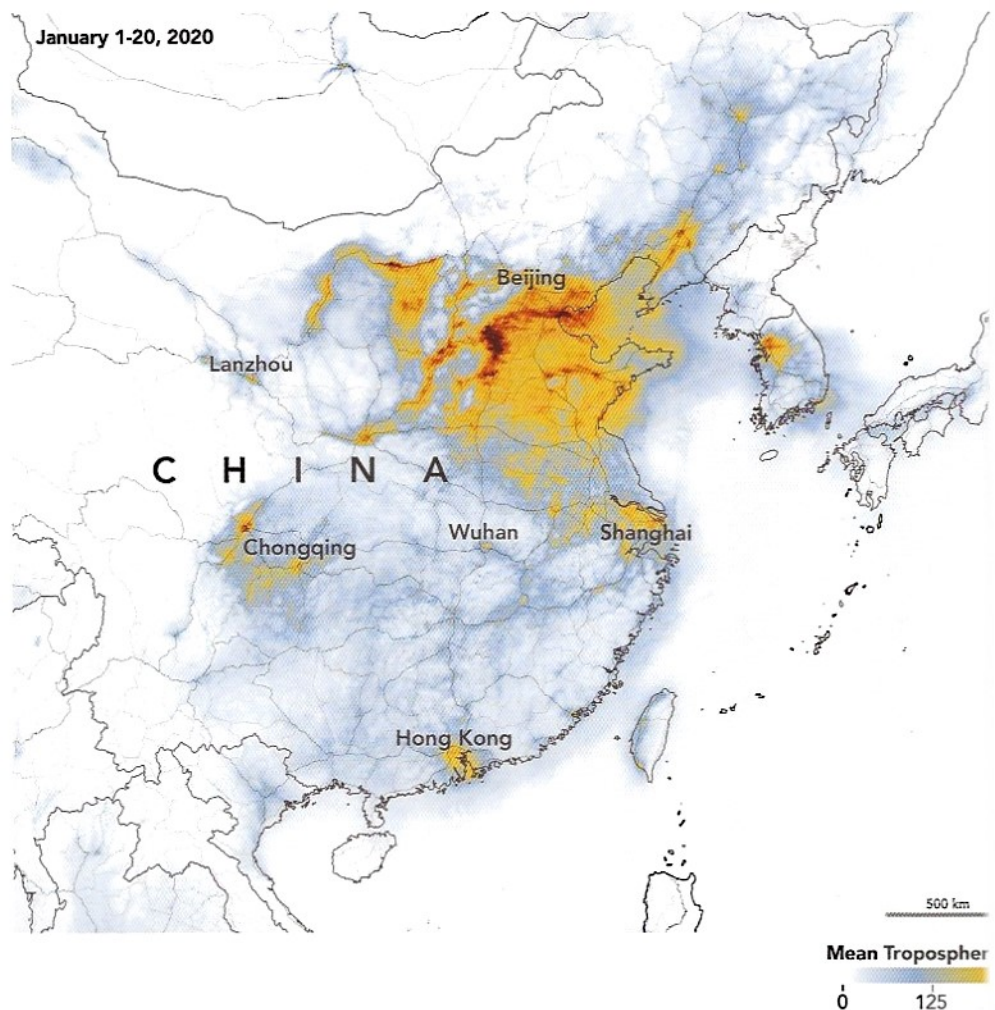




# DATAVIZ

**Earth observation has never been more necessary or available** as it is easy to look up and see evidence of our dynamic planet.

Some of these signs are obvious: clouds flowing across the sky, a sun that rises and sets, leaves falling as the seasons change, city lights reaching full brightness under the moonlight.



But what happens when we look the other way – not up, but downward, at so many changes and processes? This downward view – from orbit – is what Earth observation (EO) is all about. Such a view is not only measured in altitude but in years. Governments, scientists and universities have been putting satellites in orbit for the past six decades. Over that time, we have learned a tremendous amount about our planet and about ourselves. Scientists are connecting dots daily, filling in gaps and discovering the relationships in between.

The First Law of Geography according to Waldo Tobler which states “Everything is related to everything else, but near things are more related than distant things”,

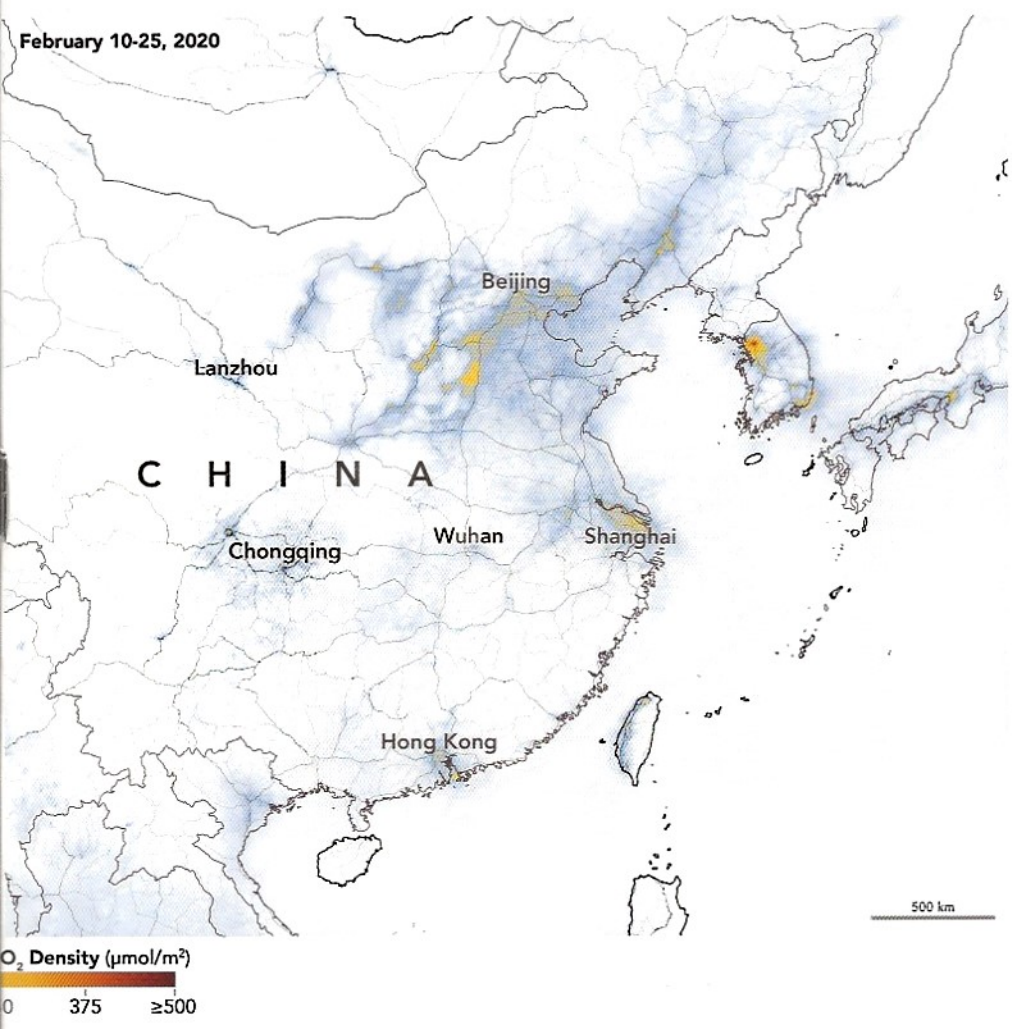
is now having a direct applicability given the countless phenomena occurring around us. Earth observation data not just enables us to discover the patterns, but allow us to better understand the ‘how’ and ‘why’ of all these relations.

The COVID-19 pandemic has become one of the best examples. As lockdown and quarantine have been imposed at national level, a lack of human activity became distinctly recognisable in the atmosphere. Once activity resumed, the atmospheric fingerprints of humanity did too.

It is particularly noteworthy that such observations are available to just about anyone. Years ago, most satellite data carried a price tag – and it had to.



February 10-25, 2020



I was not aware of GIScience (GIS) and Remote Sensing (RS) when I entered university. My early studies wandered from photography to graphic design, switching to computer science, and changed once more to fisheries and wildlife.

It was not until my junior year that I learned about GIS and RS, an accidentally perfect intersection of my previous interests. I could not have planned a better career preparation if I tried. Many of my colleagues, mentors and friends in EO have their own stories of a maze-like arrival in this new emerging field of Earth observation.

Everything is related to everything else. Space data and technology give us a new way of understanding this concept.

The processing was computationally expensive, storage was often on physical tapes, and data was sent by mail.

Today, the internet is replete with free, open data archives, combined with the growth and improved usability in open-source software, accessing and processing satellite data has never been easier. A search for 'Landsat' on GitHub will return more than one thousand code repositories. While coders have been writing software for image processing since the first satellite left the ground, hobbyist pursuits were practically non-existent just a decade ago (the entire Landsat archive was made free in 2008). Interest in EO is only limited by the availability of data. Right

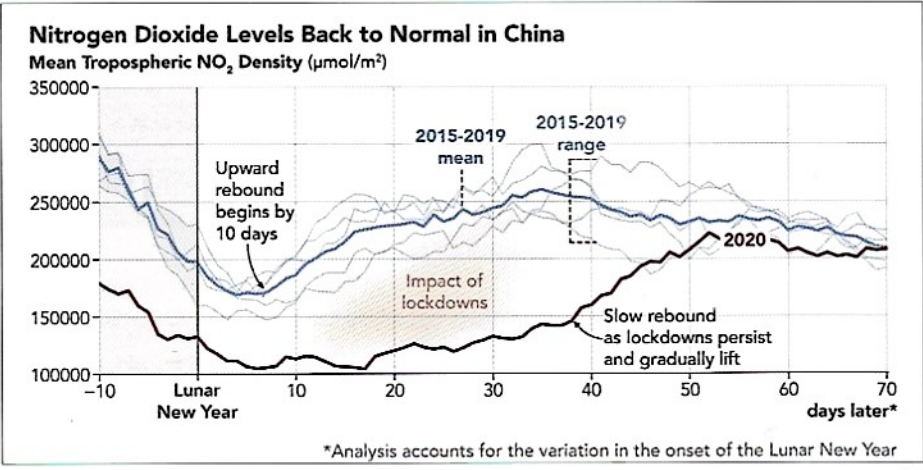
now, both are at an all-time high.

Similarly, careers making use of EO are plentiful. Career pathways to EO are also many and varied. From academia to journalism, image processing, cartography and analysis is being done by people from a wide array of backgrounds. My own journey to EO and cartography was nothing close to typical.

Joshua Stevens  
NASA

Main image: Coronavirus quarantines, the Chinese New Year and economic slowdowns are visible in satellite observations of nitrogen dioxide in the atmosphere. Image by Joshua Stevens for NASA Earth Observatory using modified Copernicus Sentinel 5P data processed by the European Space Agency.

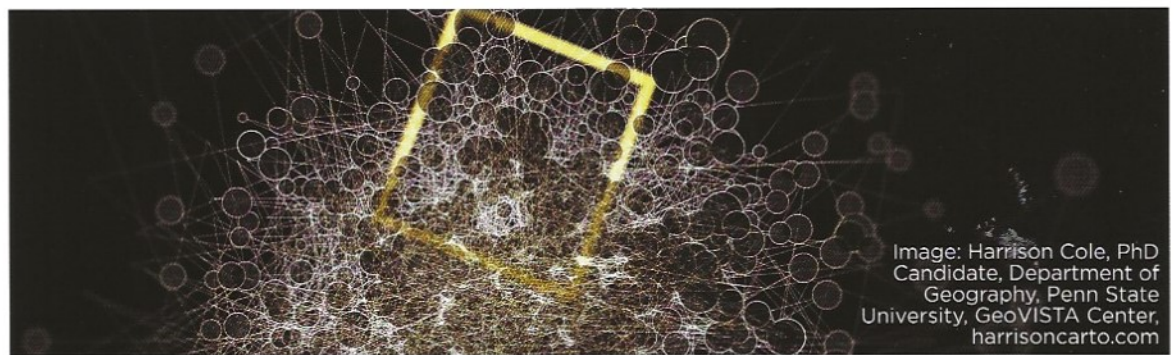
Below image: Economic activity slows during the Chinese New Year, but COVID-19 lockdowns hamstring recovery compared to recent years. Image by Joshua Stevens for NASA Earth Observatory using Ozone Monitoring Instrument (OMI) data from the NASA Goddard Earth Sciences Data and Information Services Center (GES DISC).





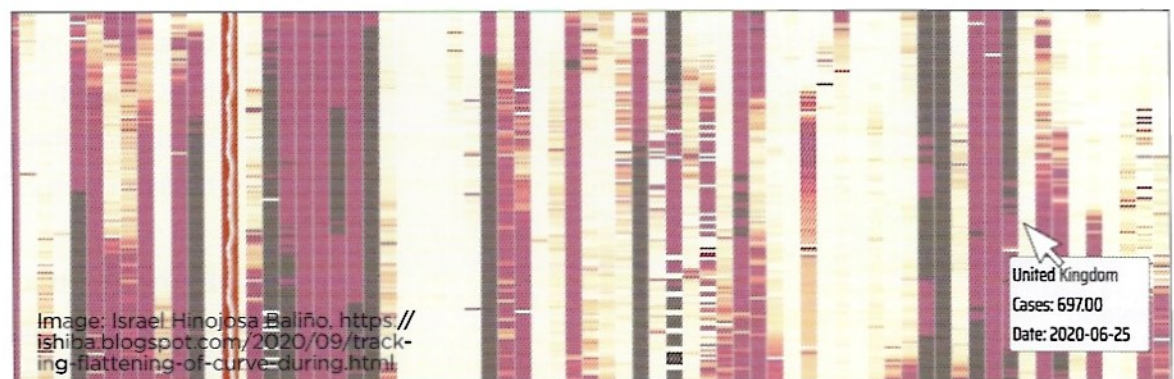


#COVID19  
maps that  
have caught  
our eyes.  
#GeoViz



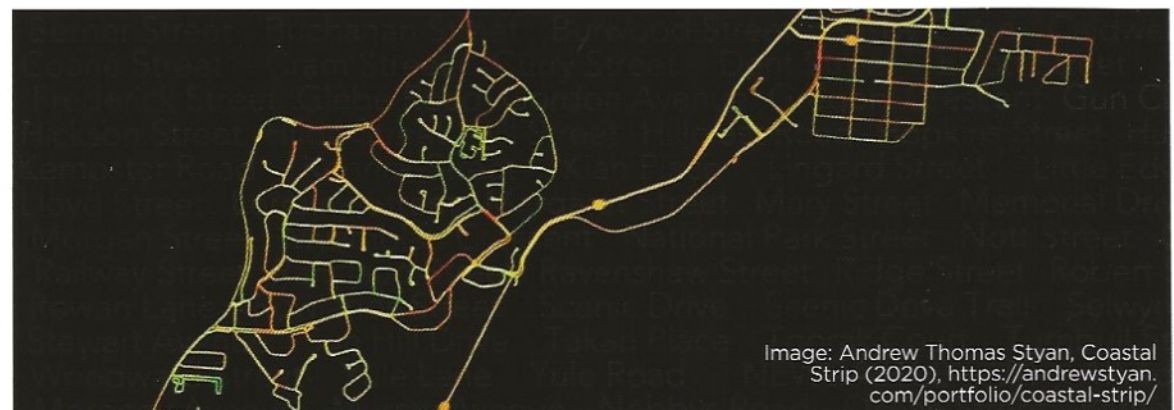
@HarrisonCarto

"The first five months of the lockdown I spent in a 450 square-foot apartment. At one point, I left a GPS app running on my phone for four days, leaving the apartment only to do laundry. The results are mostly erroneous readings, often transgressing the walls of the apartment." Harrison Cole



@ishiba

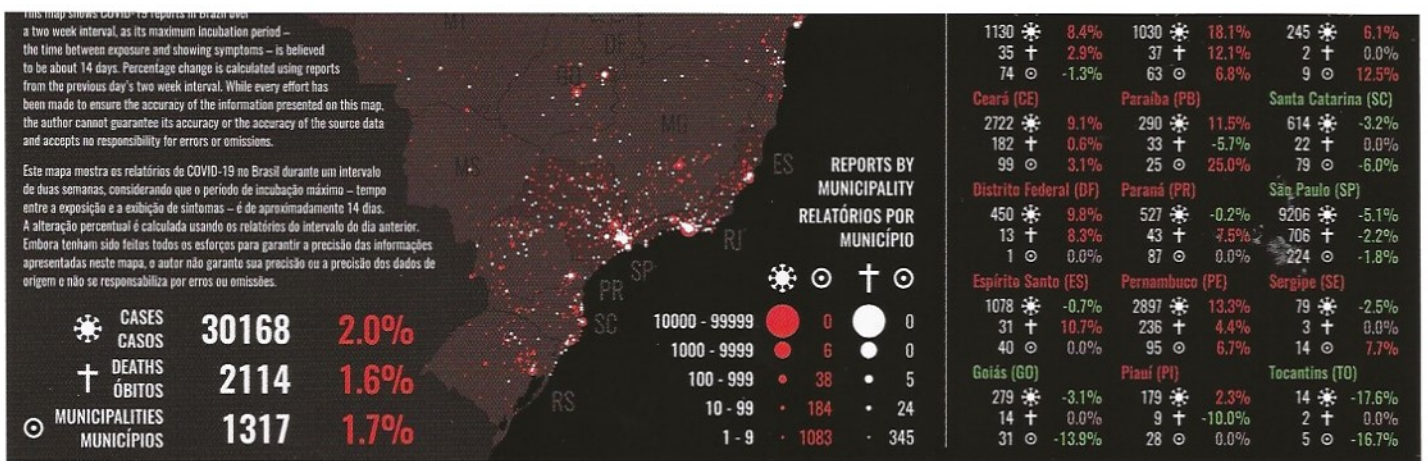
"In 2009, I produced a web-mapping application to visualise the A/H1N1 pandemic worldwide. In 2020, I could not resist to contribute with my expertise in maps and pandemic experience, and came up with this idea: COVID-19 pandemic heatmap. A darker and redder colour indicate more cases; a lighter and yellower colour represents less cases. This is a quick, reliable, and easy to read chart to analyse the global pandemic." Israel Hinojosa Baliño



@atstyan

"During the three months of our COVID lockdown we were permitted to exercise, so I did. This animated map uses GPS and heart rate data from my fitness watch to visualise the cycling of all of the roads within 10 km of my home. 800 streets. 840 km. 284,000 heart beats. 1 flat tyre." Andrew Styan



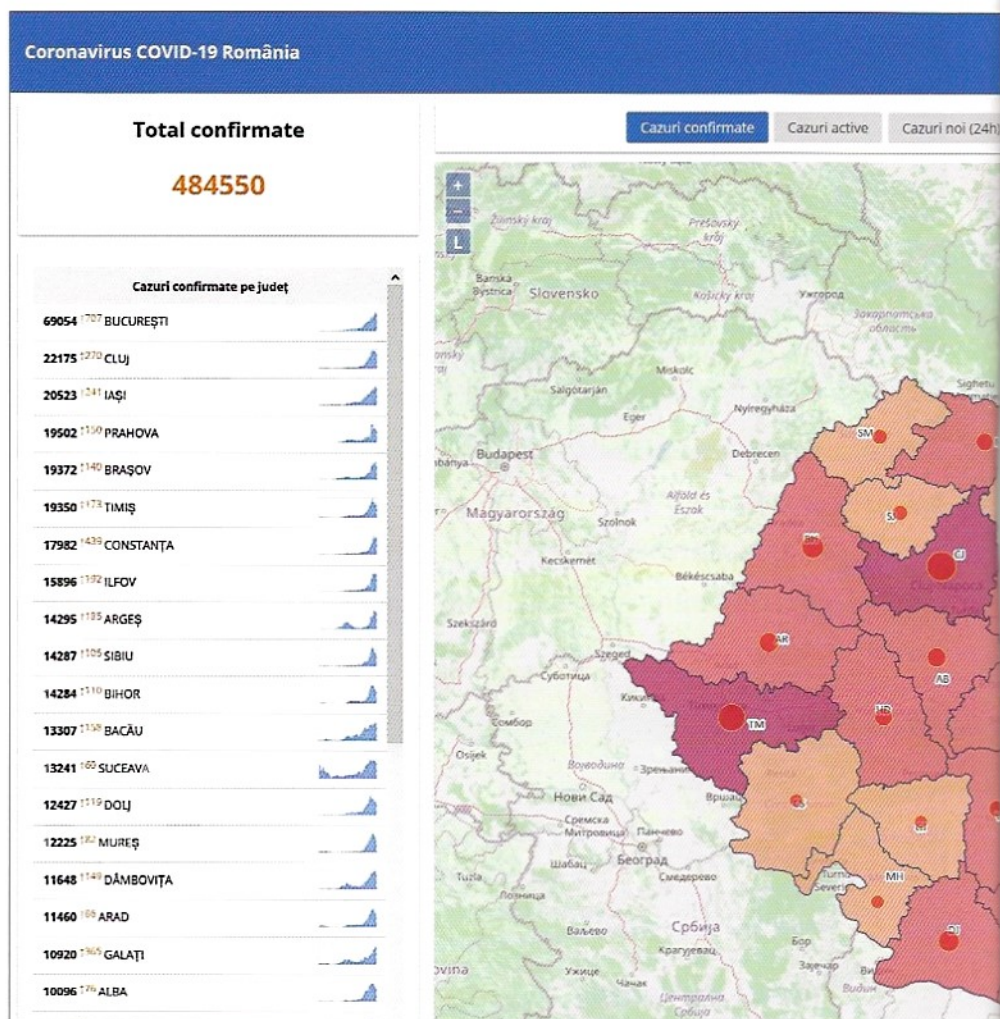




# ROMANIA

**This is not a story about a map, but a story about a community congregating around mapping.** A story about a Romanian independent initiative to provide timely and accurate information about the development of the COVID-19 pandemic in the country.

Last December, news of a deadly flu-like virus was coming from a distant part of the world and as we entered the new year, global



concern rose after the Chinese lockdown. Even so, "we had SARS and it never reached as far as Europe," as someone said to me, hence, our lives continued by the same rhythm.

However, the virus did reach us in February, savagely devastating northern Italy. With a large Romanian population inhabiting the peninsula, domestic concern was high. Soon, we had our first reported case on 26 February 2020.

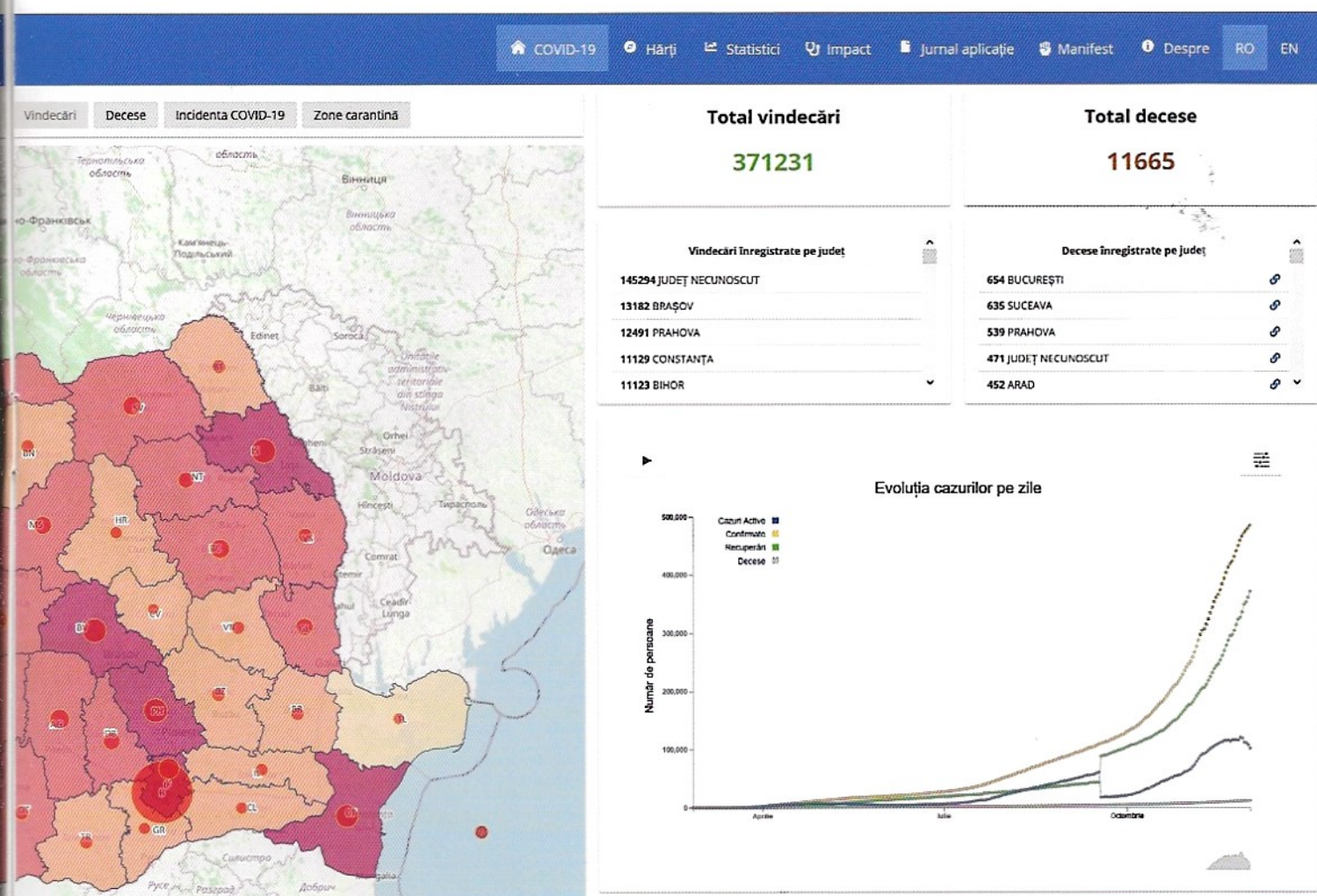
An official dashboard was set up by the Romanian authorities, however, the reality in the news was not accurately reflected by it. We, the geo-spatial.org community in Romania, decided to do what we know best: map and engage

volunteers for sharing open information about the evolution of the COVID-19 situation in Romania. Our platform was up and running on the 7 March 2020.

As the situation progressed, our task became more daunting. Initially, chaos was dominating, and information was coming from official reports by the Strategic Communication Group (SCG), the Romanian emergency coordination group and media. Names, gender, personal information, location and health status were all available to source. Then, suddenly, transparency was cut short.

SCG has decided that none of this information should reach concerned citizens and reports





were aggregated only at national level. Romanian authorities declared a state of emergency on its territory (17 March 2020) and chose secrecy over transparency in the communication with their citizens (19 March 2020). Our reaction was a *Manifest for Openness*, signed and supported by 13 other civil organisations. Unfortunately, our voice had no success.

By April, 32 volunteers from the core community and outside, had joined forces. We all scoured the internet for any bit of information, meticulously documenting every case from official reports and local news. Reported cases, deceased and recovered patients, were all carefully arranged in appropriate

graphs and maps as our volunteers searched everywhere for the missing pieces. County-level reporting returned on 2 April 2020; however, much information was lost, and new details were scarce.

To this day, the circumstances are unchanged. Official information is truncated and the volunteers behind the COVID-19 platform continue to juggle between personal life and documenting the Romanian pandemic. Our platform comprises statistics about the progress of COVID-19 in Romania (cases, deceased, recovered, tests) and other relevant information for citizens (health and social infrastructure availability). The impact of the lockdown and the aftermath has its own reflection in the environmental,

mobility and economic impact metrics we have aggregated.

We have built our platform on open-source and continue to freely and openly provide our data in maps and graphs. If we caught your attention, you can find us at: <https://covid19.geo-spatial.org>.

Cristina Vrinceanu  
Editor of *Maplines*

Geo-spatial.org is a Romanian organisation and community dedicated to promoting free and open-source geospatial solutions, open collaboration, transparency and open geospatial data. We are a charter member of the Open Geospatial Foundation (OSGeo) and have been active in the Romanian space since 2006. Our work for the COVID-19 platform has been supported by the SAGE Group (University of Timisoara) and CARTO (organisational grants for COVID-19 applications).







**The idea for this map started as an art project with my son Teddy,**

drawing our house with colored pencils. I tried for realism, but he wanted everything to be gold and rainbow.

We expanded our project to neighbours' homes and as we sketched, I thought about the deep appreciation for my neighbourhood gained by walking around the block on our twice-daily dog walks. I also thought a lot about scale. This is the largest scale map I've ever made, only a single city block.

This was not surprising, because everything during the pandemic loomed large. Even when we weren't under a lockdown, we stayed at home, away from our usual playgrounds and museums. Instead, we focused inward, and looked closer at what was right outside our front door.

On our walks, I took photos of the flowers and birds and gardens. But the heart of what we saw was really the houses. Our neighbourhood was built a hundred years ago, and while the homes were all built at the same time, by design and through decades of evolution, they are different colors and styles.

I wanted to celebrate that, and to remember everything else that gave us small joys or distraction on our walk. I thought back to how the neighbours came out to talk to us or left us small gifts like the first local strawberries or a root shaped like a person. I filled pages of my notebook with lists of all of the things we'd seen – where and when.

There was no lack of ideas about what to include on the map. More challenging was how to draw an around-the-block route. I thought about taping pieces of paper together, TripTik style, but decided to put the houses in a circle, placing our house in the center.

I originally planned to show our route with lines or footprints, but this seemed too linear once I'd drawn everything else, and I decided to instead add a small locator map and compass rose that showed the direction of our walks.

Before all this began, my most recent mapping project involved georeferencing stories from oral histories of the 4 May 1970 Kent State shooting. The shooting, where National Guard troops killed four students and wounded nine, happened less than a mile from my home.

That project made me think a lot about memory and how sense of place is influenced by tragic, disruptive events like the shooting, and now the pandemic. Like maps, these memories are by necessity simplified and distorted.

They are compacted into a highlight reel and shaped by our emotions. Just as my more professional maps do, this one uses hierarchy by drawing attention to the most important features and letting others fade into the background.

When these dark, scary days of the pandemic recede, my hope is that my mental map of this time will be heavy with these bright, saturated rainbows, seen through the eyes of a four-year-old.

Dr Jennifer Mapes

Human Geography, Qualitative Methods,  
Seminar in Geography, Cartographic Design,  
Nature & Society and Urban Sustainability  
Kent State University, USA

Main image: *Teddy's map* – September 2020.  
© 2020 Jen Mapes

# TEDDY'S WALKS





Was it a map? Was it a portrait? I started messing around and played with the idea when I had the time. Then things changed and my regular workload making maps for travel guides fell off a cliff. It was time to try something different, as I now had all the time in the world. Cartography is often described as a meeting of art and science, and while my artistic capabilities are negligible, I saw an opportunity here to combine my skills as a cartographer with a love of music. So I developed the idea and soon had eight finished 'Musicmaps'.

One creative process is to make the features of the face (the contours, if you like) resemble a landscape that could conceivably

exist. Where might the roads, towns, rivers and lakes be in this fictitious landscape? Then there is finding the references with some geographic resonance. All of the features on a 'musicmap' refer to the musician's life - place of birth, venues, song titles or lyrics, etc. And that's where the playfulness comes in. On the Lennon map there is a river simply called 'River O'. Astride the river is a town called Yoko-on-O.

So far I have done John Lennon, David Bowie, Elton John, Madonna, Bob Marley, Prince, Billie Holiday and Jimi Hendrix, with more in the pipeline.

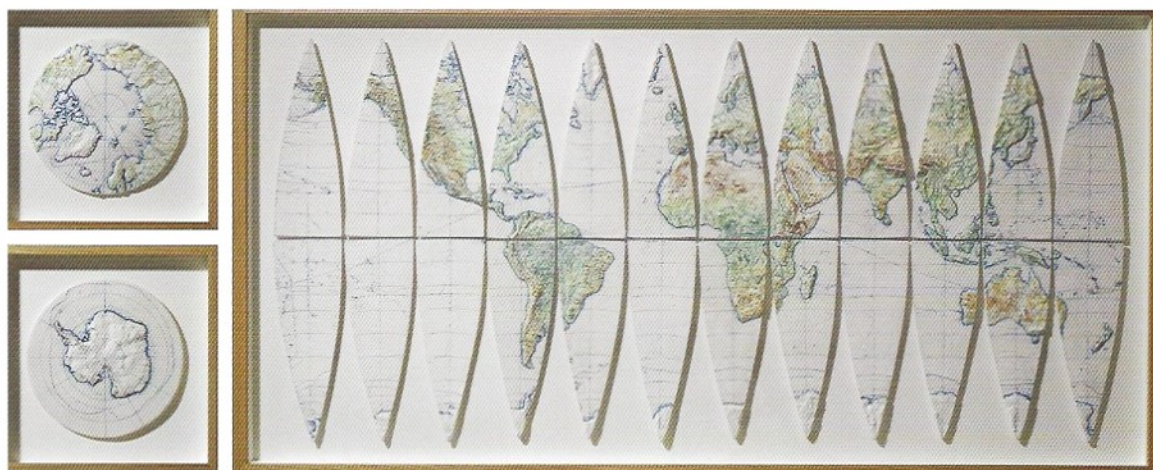
David McCutcheon FBCart.S  
david@dvdmaps.co.uk

## How David McCutcheon expresses a love for music through maps.

Two years ago I saw a 1970's album in my local Oxfam shop window. I bought the record for its cover, which got me thinking.



# CERAMICS



**My cartographic career started at Birkbeck College,** way back when analogue was the norm and digital cartography was sealed into air-conditioned rooms, silent except for the humming of large, beige computers.

I always knew I was a maker at heart, I wanted to pursue a more creative, hands-on art practice and went to study ceramics at Central

St Martins, making it inevitable to combine the two in my work.

The *Divided Globe Triptych* is a 26-piece ceramic relief map. Based on an original hand-drawn contour map, I first moulded each tile in one-millimetre layers, forming a stepped relief model. From these, I sculpted the relief detail by hand and eye, referring to ArcGIS and Google Earth. The malleable nature of porcelain lends itself well to depictions of natural topography; the fineness of porcelain particles can capture the tiniest of marks.

From plaster moulds of the original master tiles, I cast each edition in liquid clay 'slip.' I then scribed the coastlines, graticules and details by hand. After drying, I painted onto the raw clay, mindful that the metal oxide colours settle into the surface like river sediments and that washing them into this porous surface is reminiscent of the tides lapping at the shore. To finish, I fired the tiles in a kiln at over 1,200 degrees Celsius, fusing the clay and colour particles.

Although I pursue attention to detail, it is not a replica that I seek to

create. *Divided Globe Triptych* is a 1,000-hour kneejerk response to the post-truth fake news permeating contemporary newsfeeds, reflecting the modern world where regions are separating, boundaries are being erected and communities are increasingly divided. This work counters the common perception based on Mercator's 500-year-old masterpiece of the world map as rectangular. But I tried to present the world in an equal area projection, so the sizes of continents and oceans were more accurate.

I am absolutely delighted this piece has been one of the 31 maps selected for the next printed edition of *The Atlas of Design Volume 5*.

Loraine Rutt

*Divided Globe Triptych*  
72 x 200 x 4 cm  
Edition of 20  
Scale 1:26 000 000  
Vertical scale 1:500 000  
LorraineRutt.com

Image above: © 2020 Photo by Taran Wilku for Metropolitan Workshop architects.

Image below: Artist © 2020 Gareth Sambidge





# STYLING



1

## 1. Map baubles

Stanfords, the 167-year-old independent business has been supporting the world's greatest explorers and expeditions but faces its most challenging time yet during the pandemic. Support Stanfords and get your Christmas gift here.

stanfords.co.uk

£7.99

26

## 2. BGS Jigsaw puzzle

There are two 1,000-piece options to choose from; the modern Bedrock Geology map of the United Kingdom and Ireland, or the William Smith 1820 map.

shop.bgs.ac.uk/shop/

£19.99



2



5

## 5. Rotterdam Shirt

Unique Wolff Blitz Rotterdam Map print shirt. Soft-touch 100 % cotton shirt. Fairtrade manufactured. Machine wash inside-out. Modern fit.

wolffblitz.com

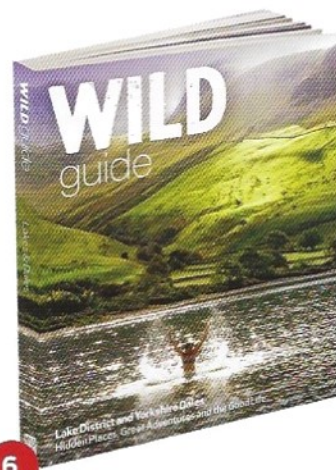
£89.00

## 3. Face mask

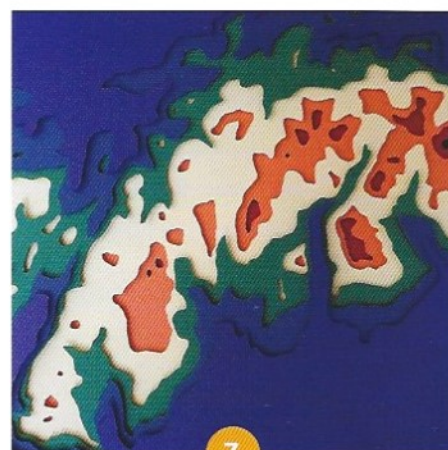
Polyester-cotton London Underground mask.

splash-maps.com

£7.49



6



7

## 6. Wild Guide Lake District and Yorkshire Dales

A new compendium of adventures, from the award-winning Wild Guide series, now released for the Lake District, Yorkshire Dales and Forest of Bowland.

wildthingspublishing.com

£15.99

## 7. Mourne Mountains art commission by Lynda Byrne

instagram.com/340north

Prices vary



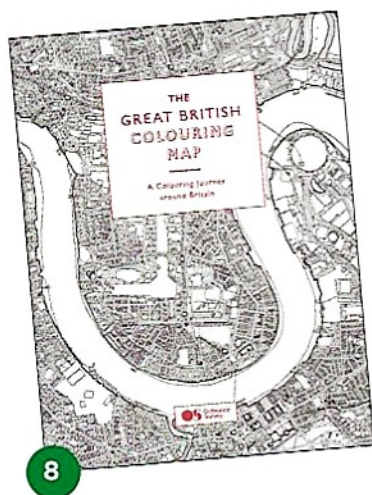


#### 4. 2021 GeoHipster Calendar

Our community of geohippers, cartographers, 'holiday' voters, and a team of judges came together to produce our best calendar yet for the 2021 edition. Sure, we say that every year... but this year we can also say it's our biggest calendar, with 14 maps!

geohipster.com

£4.93



#### 8. The Great British Colouring Map by Ordnance Survey

Based on the accurate maps of Ordnance Survey, the colouring pages explore the coasts, towns, forests and countryside of England, Scotland and Wales. Includes detailed maps of cities and other places of interest such as Britain's most recognisable tourist and historical locations, plus a stunning gatefold of London.

shop.ordnancesurvey.co.uk

£19.95



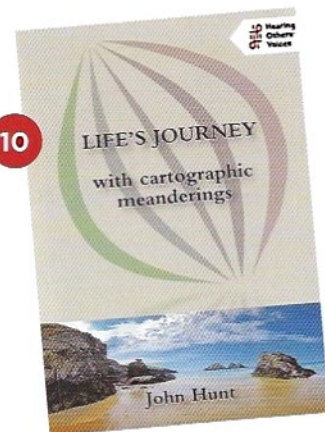
#### 9. GDAL T-shirt

The one. The only. Geospatial Data Abstraction Library (GDAL), now on a shirt. Rep your favourite translator library for raster and vector geospatial data formats everywhere you go.

Any profits from the sale of this shirt will be donated to The Open Source Geospatial Foundation (OSGeo), the non-profit that supports GDAL along with other free and open-source geospatial software projects.

teespring.com/gdal

£24.99



#### 10. Life's Journey with cartographic meanderings by John Hunt

'You are only any good at drawing maps, Hunt.' says J. Hunt's geography teacher

Past BCS Fellow and retired cartographer, John Hunt has written an insightful book about his life in cartography. This short book is a fascinating delve into how the sector was changing throughout the 1960s, 70s and 80s.

Amazon or Kindle.

£4.93

**Free prize draw:** Send us your name and address by post or email to the following address and you will have the chance to win a printed copy of **'Life's Journey with cartographic meanderings by John Hunt'** to BCS Administration  
119 Clarendon Road  
Southsea PO4 0SB  
or [admin@cartography.org.uk](mailto:admin@cartography.org.uk)



# Get kids into **SURVEY**

with Geo Ginger  
& Prof. Topo

Spot the type of  
survey and discuss!



1. Photogrammetry using drone
2. Hydrographic survey
3. Back pack scanning
4. Stake out surveys using Total Station
5. Laserscanning a building
6. Mobile mapping on a highway
7. Drone survey of utility line



**WANT TO WORK WITH  
COMPUTERS, DIGITAL PHOTOGRAPHY  
AND VIRTUAL REALITY BUT NOT  
TRAPPED IN AN OFFICE?  
GO SURVEYING!**



for the surveyors attending the conference. Through the poster the surveyors could teach their kids at home or at a local school, all about surveying and the geospatial world. It was a success.

**Get Kids into Survey:**  
**Educating the next generation of surveyors and geospatial experts.** Over 85% of UK surveyors said they have problems recruiting due to a lack of qualified applicants (RICS 2015).

In fact, "the skills shortage has now overtaken planning and regulation as the second biggest problem facing the industry", *Daily Telegraph* 2017. In the USA, POB magazine reported a shortage of surveyors, full stop! FIG and NSPS both launched young surveyor's networks to support surveyors aged up to 35, but there's a more basic challenge: to generate interest in surveying as a career while kids are still in school.

In October 2017, Elaine Ball who owns a marketing consultancy specialising in the geospatial industry, was asked to provide material for the free packs given out at The Survey Association (TSA) conference in the UK. Instead of creating promotional material about her marketing workshops, Elaine wanted to give something back to the industry and address the issues surveyor's face. With help from some of her friends in the industry to provide support for the cost of artwork and printing, Elaine created a children's poster

After the initial 500 posters were printed, Elaine then went on to produce the Antarctica poster. Interest skyrocketed and went beyond what was imagined. In 2018 Timothy Burch from National Society of Professional Surveyors (NSPS) went out of his way to visit Elaine in Florida where she was attending a conference. It was then that the NSPS took on the distribution of the posters to the Americas. With that, they went into a more regular production of posters and other educational resources including lesson plans.



In the last year, GetKidsInto Survey have gained two more distributors: the Chartered Institution of Civil Engineering Surveyors (CICES) in the UK and more recently, the NSW Surveying Taskforce in Australia, who helped to distribute the posters in their region as well as promote and support the work that GetKidsIntoSurvey do. There are also 37 Brand Ambassadors – and growing – representing GKIS in eight different countries who go above and beyond to share the free resources as well as take part

in career fairs and presentations in schools.

"Help us get children excited about geospatial careers! I'm on a mission – to raise standards and get young people into the surveying industry," says Elaine Ball

Since 2017, GetKidsIntoSurvey have gained more than 70 sponsors over 15 posters, who each support the mission and help to produce not only posters, but comic strips, colouring-in sheets, activity pages and lesson plans.



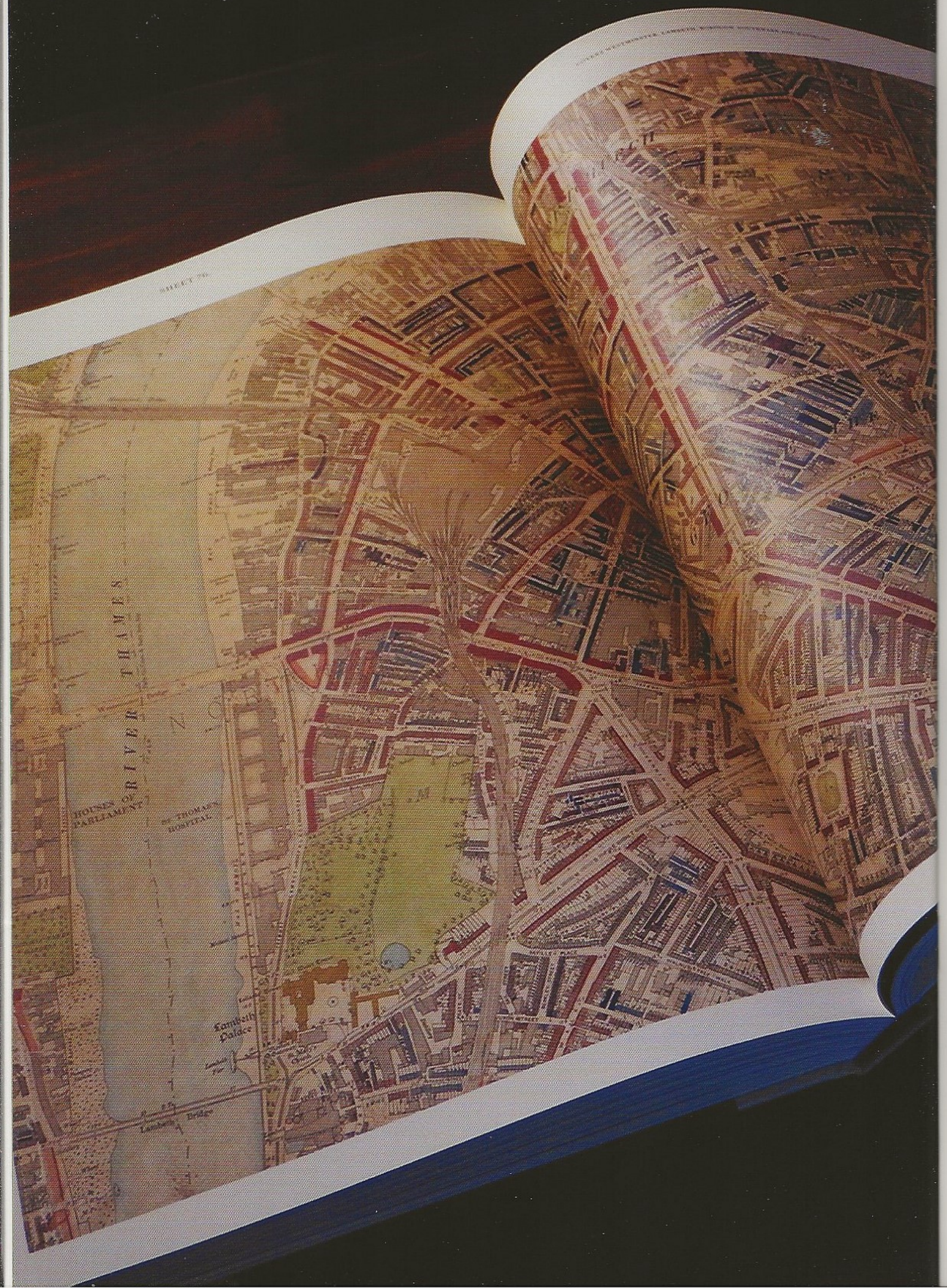
In 2021, GetKidsIntoSurvey will also be producing a full comic book complete with activities supported by our sponsors as well as a teaching curriculum that complements it. The plan is for kids not only to enjoy the comic book for fun, but so that it can be used in the classroom or as a homeschooling resource. GetKidsIntoSurvey's mission is to educate and excite the next generation of surveyors and geospatial experts, get involved.

Elly Ball

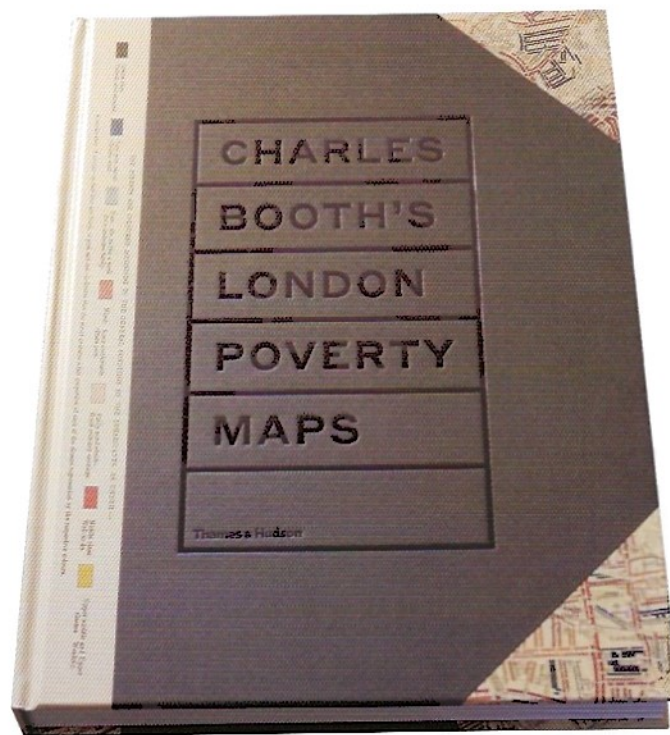
hello@getkidsintosurvey.com  
Free resources to order or download:  
[www.getkidsintosurvey.com/resources](http://www.getkidsintosurvey.com/resources)  
Main image: First poster in 2017

Left inset image: Lesson plans and worksheets  
Right inset image: Geo squad comic strip  
Images: © 2020 Copyright Elaine Ball Ltd. All Rights Reserved.









## Charles Booth's London Poverty Maps

Mary S. Morgan  
and Iain Sinclair

Published: Thames & Hudson  
ISBN: 9780500022290  
288 pp., £49.95

Over a hundred years since Charles Booth undertook his social and economic survey of London, the geography of health inequalities is still crucially important when addressing epidemiological issues. This fully illustrated book containing his 'poverty maps' comes at a time when inequalities must be addressed in order to improve everyone's health and well-being.

From 1886 to 1903 Charles Booth undertook his survey alongside his full-time job running the family's leather trade and shipping business. His team interviewed people from all backgrounds, noting their findings in 450 notebooks. These findings formed the basis of his colour-coded social mapping and his 17-volume Inquiry into the Life and Labour of the People of London.

*The 'purple of moderate comfort to the dark blue of shame.'*

This extraordinary book collates the hand-coloured maps – the result of his survey – into 12 geographical sections. Also included are pages from the original notebooks, plus photographs taken at the time. Six themed essays add context to the survey's findings, and newly rendered infographics present the raw statistics.

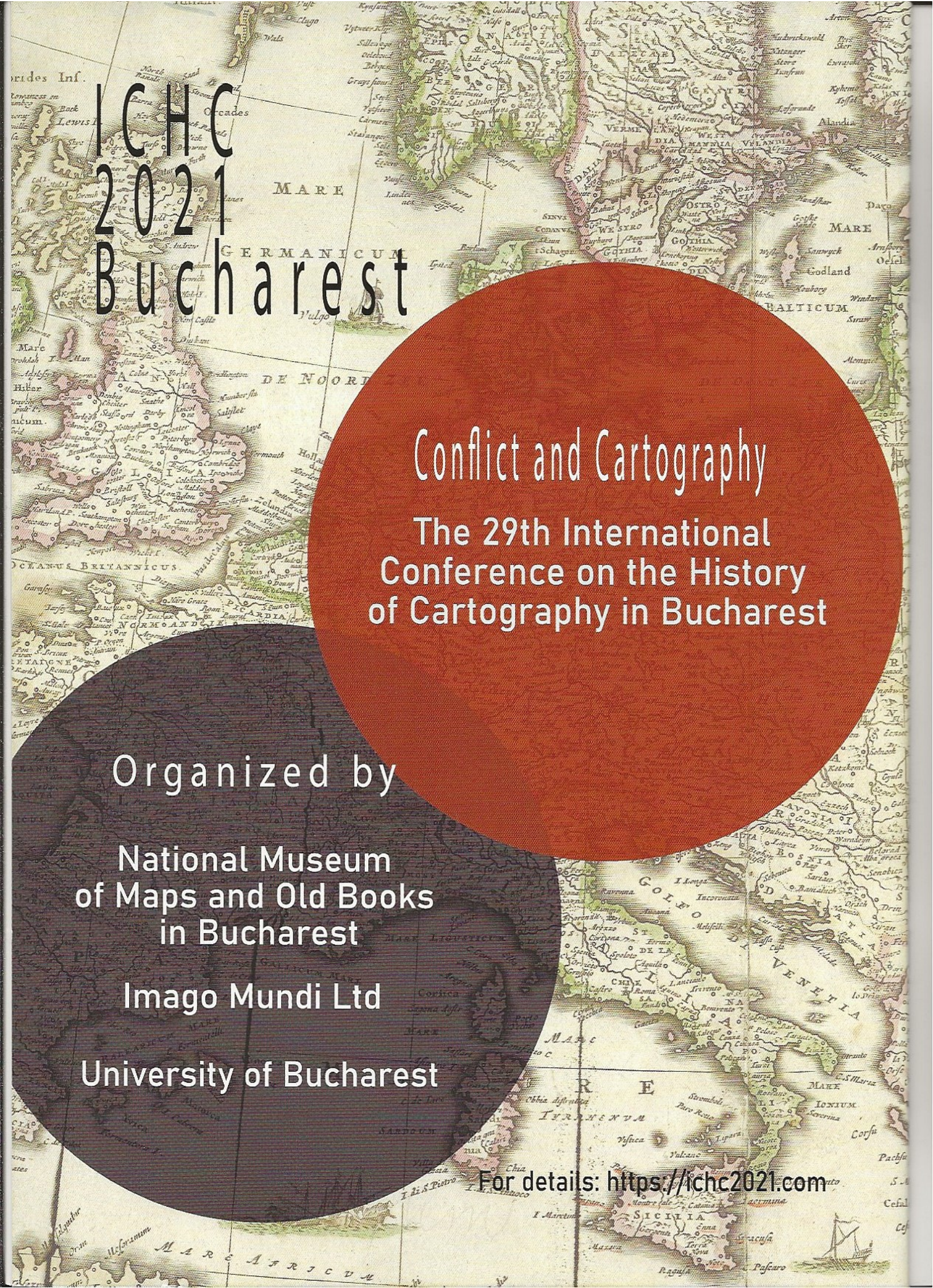
The language in the notebooks is uncomfortable at times, especially when describing immigrant communities, but the observations and experiences of the interviewers may raise a wry smile. One interviewer, for example, was mocked at Smithfield Market for wearing 'light woollen trousers'.

The absorbing book describes the methodology, the details gathered and how the categorisation – from 'vicious, semi-criminal' to 'wealthy' – was developed to create these morbidly beautiful maps.

The wealthy and the desperately poor, living side by side, could be seen as a mirror image of the capital in the 21st century.

Liz Bourne  
Administrator



A detailed historical map of Europe and the Mediterranean region, featuring various geographical labels in Latin such as 'MARE GERMANICUM', 'OCEANUS BRITANNICUS', and 'MARE AFRICUM'. The map is overlaid with two large circular graphics: a red one in the upper right and a dark purple one in the lower left.

ICHHC  
2021  
Bucharest

Conflict and Cartography  
The 29th International  
Conference on the History  
of Cartography in Bucharest

Organized by  
National Museum  
of Maps and Old Books  
in Bucharest  
Imago Mundi Ltd  
University of Bucharest

For details: <https://ichc2021.com>