

Editorial

# The COVID-19 Crisis and the Case for Online GeoParticipation in Spatial Planning

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## 1. Participation, GeoParticipation and the Need for New Research

This Special Issue, titled “GIS for Spatial/Political Participation in the Decision-Making Processes of Local Administrations”, in the ISPRS International Journal of Geo-Information is aimed at analysing state-of-the-art geoparticipatory tools for citizen participation in community decision-making processes, and suggesting the effective implementation of the geoparticipatory tools available for local administrations. Nevertheless, over the last year the COVID-19 pandemic has impacted all of our daily activities, and shifted many of our actions to online forms of communication and interaction. Worldwide, work shifted to remote forms, as did education at all levels to online communication platforms. Likewise, the pandemic has impacted our daily behaviours and actions by local planning authorities: visitation rates to green areas increased during lockdown months, as shown by the Google Mobility reports, and local planning authorities have invested in sustainable mobility strategies, cycling infrastructure and pedestrianisation. At the same time, the pandemic has exacerbated inequalities, as access to green spaces across cities remains unequal, with lower-income and mixed communities being worse off than wealthier communities, whilst natural areas and urban green spaces are seen as essential infrastructure in supporting mental and physical health. In this new scenario, what is the role of online geoparticipation in spatial planning? Are we more ready than before to make use of the increasingly available online geoparticipation platform? How do we guarantee that citizens are engaged in planning green and natural areas that reflect their needs and reduce inequalities without incurring health-related risks? Many more questions arise which can only be answered through further empirical research. This editorial raises more questions than it brings answers, but we find it critical to raise these questions, especially in this Special Issue focusing on GIS for spatial/political participation in the decision-making processes of local administrations.

Public participation in planning, as a concept and in practice, has been with us for over 50 years, since the seminal works of Davidoff [1], Peattie [2] and Arnstein [3]. There are several advantages associated with public participation in planning [4–6], and there are a similar number of disadvantages [6,7]. All mature city planning systems determine by regulation or even by law that public participation in planning is a fundamental phase that takes place during the planning and approval process. This has also been acknowledged internationally through the addition of the sustainable cities agenda to the UN Sustainable Development Goals (Goal 11). Indicator 11.3.2. talks specifically about the “direct participation structure of civil society in urban planning”. Even in these difficult times, local planning authorities have either found ways to safely engage citizens, or they have had to delay their planning efforts. They have continued to involve their citizens in the planning process. In the last decade, online participatory platforms have spread around



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the world, claiming to draw more citizens to the planning process and complementing traditional face-to-face participatory practices [8–11]. The amount of available platforms is ever increasing, as is the availability of the features they provide. Some famous platforms are, for example, Maptionnaire, CitizenLab, Emotional Maps, CoUrbanize, Commonplace, Transformcity, Ushahidi, etc., but there are many more, not only as web-based applications, but also available for mobile devices or simply as digital table applications, such as CityScope or Mestometer. Features range from commenting, voting, geo-tagging, budgeting and reporting. However, their most notable features are that they are map-based and spatially defined, and sometimes in 3D, as with the platform Minstad, and sometimes even in virtual or augmented reality, as with CityScope. This main spatial feature means that we refer to them as geoparticipatory platforms. Over the last year, the COVID-19 pandemic has impacted our daily activities and shifted many of our actions to online forms of communication and interaction. What does this mean for online geoparticipation? Are we more ready than before to undertake online participation activities in planning? In this short position article, we briefly discuss the tremendous changes in citizens' spatial behavior, the increased transition to online media and the changes that have occurred in our cities during and as a consequence of COVID-19, and how these can affect the future of online geoparticipation platforms. We argue that this is an opportunity that needs to be taken in order to further develop online/virtual geoparticipation as a complement to face-to-face approaches, and that at this particular moment new research is much needed to explore the possible evolutions and uses of such geoparticipatory platforms.

## 2. What Can Be Found in the Special Issue?

Online participatory tools are promising in enhancing citizens' participation due to their efficiency and low cost. In the first paper of this Special Issue (co-authored by the editors), we [12] investigate the objectives of web-based geoparticipation while using empirical evidence from online survey responses related to 25 urban planning projects in nine countries across three continents. The findings show that geoparticipation can leverage a 'middle-ground' of citizen participation by facilitating involvement alongside consultation and/or collaboration, and that empowerment (or citizen control) is not yet a normative goal or outcome for web-based geoparticipation. The evidence also suggests that information is pursued alongside other objectives for citizen participation, and therefore functions not as a "low-hanging fruit" as portrayed in the literature, but rather as a core component of higher intensities of participation. The article by Bąkowska-Waldmann and Kaczmarek [13] points out the obstacles and unfulfilled promises of the online consultation platforms regarding urban spatial planning. It is especially necessary to involve residents in the design phase, in which the initial concepts of the project are created. If the citizens are not involved in the decision-making process, the online tools are mostly exploited as legitimising tools for the local self-government. Additionally, there are legal and organisational barriers to geoparticipatory tools. The following article by Chassin et al. [14] focuses on the crucial question of the feasibility of democratic innovations, namely the access evaluation framework. This consists of several dimensions such as accessibility, availability, adequacy, affordability, acceptability, awareness, and attractiveness. Nevertheless, the key question is how to secure the participation of those who are lacking digital skills. A general tendency from individual-level surveys of mayors and councillors is that females are more likely to support strong democracy than their male counterparts. The article by Mařkarinec [15] focuses on the regional patterns of women's representation in the Czech Republic. The levels of women's political representation and participation in local political decision-making processes are highly endogenous phenomena. A statistically significant cluster of female councillors has been found in Bohemian regions. An analysis shows that the spatial patterns are strong over time. This may have further, not yet inspected, consequences on democratic participation in those regions. The final paper of this issue by ul Hussnain et al. [16] focuses on the practicalities of planning using online platforms (namely EasyUAZ tool). It is a new promising tool that enhances the efficiency of spatial

participation and online planning. The analysis shows that the tool is more effective, as on average users took 30% fewer minutes than when using the ArcGIS and QGIS generic tools. Efficiency is one of the key tools in assessing new democratic instruments and innovations.

### 3. Examples of COVID-19's Impacts on Daily Activities

In the US, in the months April–May 2020, approximately half of those employed before COVID-19 switched to home working [17]. At the same time, people's mobility in the US decreased [18]. The results from spring 2020 COVID-19-related research in the US also show that 69.0% of respondents had either increased or greatly increased their visitation rate to their natural areas and urban forests, and 80.6% of respondents believed that the importance of these areas, and access to them, either increased or greatly increased [19]. Similarly in Norway, based on mobile tracking data, Venter et al. [20] estimated that outdoor recreational activity increased by 291% during lockdown relative to a 3-year average for the same days. Nevertheless, the increase in activity in parks and the outdoors was not a general trend. Pászto et al. [21] calculated this trend, which was based on Google Mobility Reports [22], only for countries of Northern and Central Europe. In countries of Southern and Eastern Europe, the decrease in such activities prevailed during 2020 and through the initial and stricter lockdown measures. This is in alignment with their [21] typology of European regions based on studies of the impact of the COVID-19 pandemic on travel behavior. For the period mid-March 2021 to 25th April 2021, the Google Mobility Reports [22] show a similar increasing trend in visits to parks in some Southern European countries, likely depending on lockdown measures and the closure of other activities: Greece (+73%) and Italy (+24%). On the other hand, other countries experienced a reduction over the same period: Spain (−23%) and Portugal (−28%).

In Italy, in the second quarter of 2020, in the months following the first total lockdown of March 2020, 14% of private sector employees worked from home compared with 1.5% in 2019 [23]. In the public sector in the same quarter, the number of employees working from home reached 33% [24]. Likewise, education at all levels has switched to online forms and platforms with a surge in the use and downloads of Zoom, MS Teams and Google Meet. For example, the university of Padua achieved a total of 1 million Zoom meetings as of February 2021, compared with the 12 meetings up to December 2019 [25]. In Poland, the use of public transport decreased by 70% in March and April 2020 compared with the previous year [26]. In Slovakia (Žilina region), the impact of the COVID-19 pandemic meant that in March 2020 there was a 40.2% decrease in the number of passengers using local transport systems; in April of that year the drop was 70.0%, and in May 60.2%. The decrease was mainly related to changes in the mobility of students aged 15 years (89.3%), children under 6 years (85.7%) and seniors over 65 (80.0%) [27]. The decrease in mobility was a global trend. The TomTom Traffic Index shows that in 413 world cities (out of 416 analysed) traffic congestion was less in April 2020 than in April 2019 [28]. To summarise the statistics above, we are travelling less and working from home/online more. If we do travel, we travel to the countryside or urban parks/forests. This gives us new opportunities and can change our perspective on the quality of life and on our neighbourhoods, as well as the closer urban environments. In the Czech Republic, the two largest providers of mobile applications for direct communication between municipalities and the citizens reported a 383% increase in 2020 compared with 2019 in the number of municipalities using their services. This gives us a strong indication as to how necessary online communication and possible online participation have become for our municipalities.

### 4. Need for Further Research in Geoparticipation and Planning

Online geoparticipation can be seen as part of the democratic innovations on which political scientists rely as cures for democratic malaise and backsliding [29,30]. Especially in times of pandemic, online participation can be a tool to prevent democratic governments from losing the trust of their citizens. Trust appears to be crucial in terms of the efficiency of government measures, because in societies rich in trust and social capital the pandemic was,

arguably, well-managed. Nevertheless, as stated by Paerse [31], the COVID-19 measures have received very little public scrutiny, as bills have been rushed through Parliament with minimal or no citizen engagement, participation or deliberation. Even during a public health crisis, citizens and other political actors should have a role to play in democratic life. A case study on urban housing movements during the pandemic in Lisbon [32] illustrated how the role of movements is marginal unless they are not involved in a concerted and politically integrated action. The experience with the pandemic shows that there is need for improvement in the interaction between citizens, experts and politicians. Online geoparticipation may help to develop, implement and legitimise government action and a broader (post-)COVID-19 strategy.

The COVID-19 crisis has disrupted our daily routines and the way in which daily tasks are organised and carried out. However, we have not stopped living our lives. Education has moved online, as well as some recreational activities for children. Work has, whenever possible, moved online, with a huge impact on mobility and traffic. Online shopping has seen a huge increase. Even social life and family gatherings have moved online. Land use planning is no exception. Local authorities continue to perform their planning tasks: reviewing planning applications, granting or refusing planning permission, and drafting new land use strategies and plans. Many of these activities happen partially remotely. This new reality has had a huge impact, and as far as land-use planning and citizen participation are concerned, many new research questions have arisen. Did local planning authorities stop consulting and engaging citizens? How do we guarantee that citizens are engaged and consulted without incurring health-related risks? Have online geoparticipation platforms been used more and more for these purposes? Do local authorities plan to use online participation as a currently safer means of engaging citizens? Did the number of citizens that were engaged increase? What kind of platforms have been used? Many more questions arise which can only be answered through further empirical research. This position paper raises more questions than it brings answers, but we find it critical to raise these questions, especially in this Special Issue focusing on GIS for spatial/political participation in the decision-making processes of local administrations.

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## References

1. Davidoff, P. Advocacy and Pluralism in Planning. *J. Am. Inst. Plan.* **1965**, *31*, 331–338. [[CrossRef](#)]
2. Peattie, L.R. Reflections on Advocacy Planning. *J. Am. Plan. Assoc.* **1968**, *34*, 80–88. [[CrossRef](#)]
3. Arnstein, S.R. A Ladder of Citizen Participation. *J. Am. Inst. Plan.* **1969**, *35*, 216–224. [[CrossRef](#)]
4. Agger, A. Towards tailor-made participation: How to involve different types of citizens in participatory governance. *Town Plan. Rev.* **2012**, *83*, 29–45. [[CrossRef](#)]
5. Forester, J. *The Deliberative Practitioner: Encouraging Participatory Planning Processes*; MIT Press: Cambridge, MA, USA, 1999.
6. Irvin, R.A.; Stansbury, J. Citizen Participation in Decision Making: Is It Worth the Effort? *Public Adm. Rev.* **2004**, *64*, 55–65. [[CrossRef](#)]

7. Russel, S.; Vidler, E. The Rise and Fall of Government-Community Partnerships for Urban Development: Grassroots Testimony from Colombo. *Environ. Urban.* **2000**, *12*, 73–86. [CrossRef]
8. Czepkiewicz, M.; Jankowski, P.; Zwoliński, Z. Geo-questionnaire: A spatially explicit method for eliciting public preferences, behavioural patterns, and local knowledge—An overview. *Quaest. Geogr.* **2018**, *37*, 177. [CrossRef]
9. Kahila-Tani, M.; Kyttä, M.; Geertman, S. Does mapping improve public participation? Exploring the pros and cons of using public participation GIS in urban planning practices. *Landsc. Urban Plan.* **2019**, *186*, 45–55. [CrossRef]
10. Marzouki, A.; Lafrance, F.; Daniel, S.; Mellouli, S. The relevance of geovisualization in Citizen Participation processes. In Proceedings of the 18th Annual International Conference on Digital Government Research, Staten Island, NY, USA, 7–9 June 2017.
11. Møller, M.; Olafsson, A. The Use of E-Tools to Engage Citizens in Urban Green Infrastructure Governance: Where Do We Stand and Where Are We Going? *Sustainability* **2018**, *10*, 3513. [CrossRef]
12. Babelon, I.; Pánek, J.; Falco, E.; Kleinhans, R.; Charlton, J. Between Consultation and Collaboration: Self-Reported Objectives for 25 Web-Based Geoparticipation Projects in Urban Planning. *ISPRS Int. J. Geo-Inf.* **2021**, *10*, 783. [CrossRef]
13. Bakowska-Waldmann, E.; Kaczmarek, T. The Use of PPGIS: Towards Reaching a Meaningful Public Participation in Spatial Planning. *ISPRS Int. J. Geo-Inf.* **2021**, *10*, 581. [CrossRef]
14. Chassin, T.; Cherqui, A.; Ingensand, J.; Joerin, F. Impact of Digital and Non-Digital Urban Participatory Approaches on Public Access Conditions: An Evaluation Framework. *ISPRS Int. J. Geo-Inf.* **2021**, *10*, 563. [CrossRef]
15. Maškarinec, P. Spatial Dimensions of Female Political Participation: Regional Perspective of Women’s Descriptive Representation in Czech Local Councils, 1994–2018. *ISPRS Int. J. Geo-Inf.* **2020**, *9*, 729. [CrossRef]
16. Ul Hussnain, M.Q.; Waheed, A.; Wakil, K.; Jabbar, J.A.; Pettit, C.J.; Tahir, A. Evaluating a Workflow Tool for Simplifying Scenario Planning with the Online WhatIf? Planning Support System. *ISPRS Int. J. Geo-Inf.* **2020**, *9*, 706. [CrossRef]
17. Brynjolfsson, E.; Horton, J.; Ozimek, A.; Rock, D.; Sharma, G.; Tu Ye, H.-Y. *COVID-19 and Remote Work: An Early Look at US Data*; National Bureau of Economic Research: Cambridge, MA, USA, 2020.
18. Kim, J.; Kwan, M.P. The impact of the COVID-19 pandemic on people’s mobility: A longitudinal study of the U.S. from March to September of 2020. *J. Transp. Geogr.* **2021**, *93*, 103039. [CrossRef]
19. Grima, N.; Corcoran, W.; Hill-James, C.; Langton, B.; Sommer, H.; Fisher, B. The importance of urban natural areas and urban ecosystem services during the COVID-19 pandemic. *PLoS ONE* **2020**, *17*, 2020. [CrossRef]
20. Venter, Z.S.; Barton, D.N.; Gundersen, V.; Figari, H.; Nowell, M. Urban nature in a time of crisis: Recreational use of green space increases during the COVID-19 outbreak in Oslo, Norway. *Environ. Res. Lett.* **2020**, *15*, 035001. [CrossRef]
21. Pászto, V.; Burian, J.; Mackú, K. COVID-19 data sources: Evaluation of map applications and analysis of behaviour changes in Europe’s population. *Geografie* **2020**, *125*, 171–209. [CrossRef]
22. Google Google Mobility Reports. 2021. Available online: <https://www.google.com/covid19/mobility/> (accessed on 12 November 2021).
23. De Paolo, D.; Giorgi, S. Il Lavoro da Remoto in Italia Durante la Pandemia: I Lavoratori del Settore Privato. Note COVID-19 22 gennaio 2021. Banca D’Italia, Eurosystema. Available online: [https://www.bancaditalia.it/pubblicazioni/note-covid-19/2021/Nota\\_Covid\\_1\\_DPFG.pdf](https://www.bancaditalia.it/pubblicazioni/note-covid-19/2021/Nota_Covid_1_DPFG.pdf) (accessed on 12 November 2021).
24. Colombo, D. Smart Working, Più Lavoro e Meno Rischi Alla Prova del COVID-19 il Pubblico Batte il Privato. Il Sole24 Ore. 22 January 2021. Available online: <https://www.ilssole24ore.com/art/smart-working-piu-lavoro-e-meno-rischi-prova-covid-19-pubblico-batte-privato-ADazy8EB> (accessed on 12 November 2021).
25. Pagliaro, P. Transizione Digitale il Buon Esempio del Bo. 9 Colonne. 26 February 2021. Available online: <https://www.9colonne.it/299187/transizione-digitale-br-il-buon-esempio-del-bo#.YjzowagzZPZ> (accessed on 12 November 2021).
26. Wielechowski, M.; Czech, K.; Grzęda, L. Decline in Mobility: Public Transport in Poland in the time of the COVID-19 Pandemic. *Economies* **2021**, *8*, 78. [CrossRef]
27. Konečný, V.; Brídžiková, M.; Senko, Š. Impact of COVID-19 and Anti-Pandemic Measures on the Sustainability of Demand in Suburban Bus Transport. The Case of the Slovak Republic. *Sustainability* **2021**, *13*, 4967. [CrossRef]
28. Tom, T. TomTom Traffic Index. The World has Changed, Traffic Has Changed. 2021. Available online: [https://www.tomtom.com/en\\_gb/traffic-index/](https://www.tomtom.com/en_gb/traffic-index/) (accessed on 12 November 2021).
29. Geissel, B.; Newton, K. *Evaluating Democratic Innovations. Curing the Democratic Malaise?* Routledge: London, UK, 2021.
30. Elstub, S.; Escobar, O. *Handbook of Democratic Innovation and Governance*; Edward Elgar Publishing: Cheltenham, UK, 2019.
31. Pearse, H. Deliberation, citizen science and covid-19. *Political Q.* **2020**, *91*, 571–577. [CrossRef] [PubMed]
32. Mendes, L. How can we quarantine without a home? Responses of activism and urban social movements in times of COVID-19 pandemic crisis in Lisbon. *Tijdschr. Econ. Soc. Geogr.* **2020**, *111*, 318–332. [CrossRef] [PubMed]