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Editorial

Special Issue: "Urban Agriculture, Forestry and Green-Blue Infrastructure as "Re-Discovered Commons": Bridging Urban-Rural Interface"

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This Special Issue re-explores research topics related to the relationships between urban and rural areas during the COVID-19 pandemic period in 2020 and beyond. We revisit the roles and values of the components of agricultural lands and forestlands—as well as urban ones—from the perspective of green–blue infrastructure. In doing so, we propose that the roles are redefined to reflect the transformations of lifestyles and to underpin values in this era, often referred to as the "new normal." During the pandemic period, several national governments implemented strict lockdown policies to avoid the spread of the virus, including certain democratic countries in Europe. Due to the physical and mental restrictions caused by such policies and risk of infection, citizens have become more aware of the meanings and values of green–blue infrastructure, which comprise different types of green areas and river–lake–coastal networks. As a related international process, in the current ongoing discussion of the post-2020 global biodiversity framework in the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), "access to green areas" is included as one of the targets. These components of green–blue infrastructure play essential roles in urban–rural interfaces and are changing urban–rural relationships in terms of citizens' awareness, activities, and work style. As an example, the portmanteau *workcation*—created from "work" and "vacation"—means doing work in areas traditionally used for vacation; the Japanese government is promoting this work style to curb the spread of the virus in high-density urban work environments.

This pandemic period provides us with unique opportunities to explore the changing components and possible transformations of the urban–rural interface in a relatively short period. The purpose of this Special Issue is to provide scientific evidence for the rediscovery and description of "new normal" urban–rural relationships. In the global urbanization process, rural populations have moved to urban areas; however, the status of urbanization has become more complex, as shrinking cities with depopulation and aging are increasing [1–3]. In this context, new urban–rural interfaces need to be developed, considering the new normal lifestyle. Because of the timing of the pandemic period, not all studies in this Special Issue consider the impact of COVID-19 directly; however, there are crucial topics that need to be considered and reexplored to achieve the goals of this Special Issue.

The following part of this editorial summarizes the findings and discussions of the papers included in the Special Issue that are provided.

A component of the urban–rural interface, green areas, is analyzed in terms of citizens' access, or visitation. In the United States, parks play an essential role in the pandemic period. According to Heo et al. [4], who analyzed citizens' trip data—collated by social media use—park use during this period is an essential activity for citizens. The same study analyzed the relationship between the status of vegetation in parks and individuals' park visitation. However, there was no clear correlation between the two variables. Their findings suggest that further analysis is needed to determine the detailed relationships between the status of vegetation and individuals visiting green areas. The status of vegetation might be related to people's preference of which green areas to visit. Future research is needed to verify the possible influence of vegetation status on citizens' preference for visiting green areas. There have been certain empirical explorations of the public visiting green areas, including those examining the "extinction of experiences" [5–7] over a relatively long period, based on official statistics; however, these types of changes during the COVID-19 pandemic offer new contributions to discuss.

Because of the restrictions on citizens' activities—such as going to parks—under lockdown policies, the status of green area visitation is changing. According to a study conducted by the authors [8], the frequency of visiting green areas tends to be higher for certain demographic characteristics; these include household income, gender, and age. The frequency of citizens with higher household income visiting green areas, for example, tended to be higher, and the frequency of females visiting green areas tended to be higher than that of males. The average age of respondents who frequently visited green areas was lower. The initial survey results are provided in this paper and can serve as a basis for green area management during the pandemic period. Further analysis is needed to identify the holistic characteristics of citizens and their typologies in terms of visiting green areas to determine policy targets or segments. Moreover, a comparative analysis between past trends of visiting green areas [9] and current trends is another topic for future research.

The influence of the COVID-19 pandemic on citizens' behaviors and the status of the environment can be considered using the Driver–Pressure–State–Impact–Response (DPSIR) framework. It has previously been utilized for the assessment of urban biodiversity and other local environments [10–13]. A city biodiversity index was proposed by the government of Singapore, and this index has been applied to cities in different regions of the world [14–17]. Such an index can possibly be a tool for evaluating the impact of the pandemic on biodiversity and its governance.

In the future, methodological considerations also need to be considered. Uchiyama and Kohsaka [18] evaluated the natural resources of residents using GIS-based approaches. These methods can be applied and dimensions can be added to the analysis of residents' attributes regarding their visitation to green areas. Other potential application fields are verbal communication, based on face-to-face discussions. Qualitative data, such as verbal communication data, can be utilized to complement quantitative survey results. Text mining analysis can also be used to examine the integrated analysis of qualitative and quantitative data [19,20].

As a case study to analyze the functions of green areas, Yoo et al. [21] conducted surveys and analyses on their function of reducing particulate matter. Their study identified certain positive impacts of green areas. The results imply the importance of managing the functions of green areas located between urban and rural areas, in addition to green areas' air purification functions in urban areas. In future, a comparative analysis of their functions under different conditions is necessary to obtain robust results to verify the functions of green areas.

Regarding forest management-related issues, proper management is necessary to maintain and enhance the environmental quality of the urban–rural interface. Sustainable production of forest products is one of the main elements of forest management, and scientific evidence is necessary to develop future policies for forest use and to make forest management plans with local stakeholders. Understanding local perceptions and value systems [22–24] is fundamental for participatory forest management. The interaction of all actors in forest management and their knowledge exchange process [25,26] need to be explored to enhance the quality of management in terms of urban–rural interlinkages. In 2019, the Japanese government introduced a national-level forest environment transfer tax. Such schemes related to payment for ecosystem services can possibly be an appropriate measure to facilitate urban–rural collaboration based on evidence that shows the effective use of the tax [27].

The well-being of citizens who are involved in forest management needs to be suitably evaluated, in addition to the evaluation of forest functions. Although environmental factors need to be maintained as essential factors of the urban–rural interface, the well-being of actors who contribute to environmental management must also be considered during the policy-making process. As a possible indicator of subjective well-being, Takahashi et al. [28] proposed relevant indicators by providing the results of a case study to demonstrate the applicability of the indicators. Indicator-based management of forests and evidence-based policy making are necessary to enhance the well-being of both urban and rural citizens.

Regarding the socio-ecological landscape of the urban–rural interface, materials used in buildings are elements that also need to be considered as components of the urban–rural ecosystem. Park et al. [29] point out that the traditional materials used to build houses can accommodate diverse bird species to nest, and that such residential areas can contribute to regional biodiversity management. In the gradation of urban–rural interfaces, residential areas can play an important role in terms of biodiversity and ecosystem conservation, as well as other land use categories, such as agricultural lands and forestlands.

As a component of green–blue infrastructure and river–lake–coastal networks, the blue carbon ecosystem is gaining salience in the international arena. Coastal management requires appropriate collaboration during watershed moments, including urban and rural areas. Furthermore, the blue carbon ecosystem can contribute to a global mitigation approach for climate change, based on carbon stocks. Reducing risk and providing resources for local livelihoods are also included in the functions of the blue carbon ecosystem. Quevedo et al. [30] conducted a comparative analysis of local perceptions in the coral triangle area, which has one of the largest and richest blue carbon ecosystems. Local perceptions can be a baseline for the management of the ecosystem, as their perceptions need to be considered in management as the main actors of management. As the enhancement of their awareness of the ecosystem is a key factor, their perceptions need to be analyzed to obtain scientific evidence to elaborate the schemes for their awareness enhancement [31–33]. The local perceptions of urban and rural people differ [34]; moreover, an analysis of existing policy is also needed to enhance collaboration among local actors and policy interventions [35].

The topics of the papers published in this Special Issue—green areas, forest-related ecosystems and traditions, forest management, and blue carbon—were introduced and discussed. Diverse key topics are discussed in this Special Issue, and an "evidence-based approach" to the urban–rural interface is derived as the common key topic, which can be further discussed in future issues.

Published papers in the Special Issue are:

1. Relationships between Local Green Space and Human Mobility Patterns during COVID-19 for Maryland and California, USA by Seulkee Heo, Chris C. Lim and Michelle L. Bell [4].
2. Access and Use of Green Areas during the COVID-19 Pandemic: Green Infrastructure Management in the "New Normal" by Yuta Uchiyama and Ryo Kohsaka [8].
3. Importance of Urban Green at Reduction of Particulate Matters in Sihwa Industrial Complex, Korea by Sin-Yee Yoo, Taehee Kim, Suhan Ham, Sumin Choi and Chan-Ryul Park [21].
4. Reconstruction of Resin Collection History of Pine Forests in Korea from Tree-Ring Dating by En-Bi Choi, Yo-Jung Kim, Jun-Hui Park, Chan-Ryul Park and Jeong-Wook Seo.
5. Subjective Well-Being as a Potential Policy Indicator in the Context of Urbanization and Forest Restoration by Takuya Takahashi, Yukiko Uchida, Hiroyuki Ishibashi and Noboru Okuda [28].
6. The Functional Traits of Breeding Bird Communities at Traditional Folk Villages in Korea by Chan Ryul Park, Sohyeon Suk and Sumin Choi [29].
7. How Blue Carbon Ecosystems Are Perceived by Local Communities in the Coral Triangle: Comparative and Empirical Examinations in the Philippines and Indonesia by Jay Mar D. Quevedo, Yuta Uchiyama, Kevin Muhamad Lukman and Ryo Kohsaka [30].

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