110 Wellbeing geovisualization: geographies of difference, accessibility and everyday natures.

Isabelle D Wolf, **Gordon Waitt**, **Australian Centre for Culture**, Environment, Society and Space, School of Geography and Sustainable Communities, University of Wollongong, Wollongong, NSW 2522, Australia, Australia

Introduction

Some of the benefits for people whose everyday routines are organized to incorporate interactions with places for nature are well established in the liveable cities literature. Officially designated greenspaces, including parks and reserves, for instance not only play an important role in maintaining biodiversity and socio-ecological functions; they offer urban recreationists the opportunity to exercise, socialize and relax (Torland, Weiler, Moyle & Wolf, 2015; Wolf, Stricker, & Hagenloh, 2015). And yet the multitude of benefits of urban places of nature remains largely understudied (Wolf, Ainsworth & Crowley, 2017). Also places that may be socially constituted as 'natural' beyond official categories of greenspace are often not included when researching the benefits of engagement with places for nature. This project enrolls a participatory geographic information system (PGIS) and specifically visualization to better understand the relationships between everyday natures and wellbeing.

Aims

Here, we ask four central questions in our geovisualization of wellbeing and everyday natures in Sydney, Australia: (1) Where and how do people engage with everyday natures in Sydney?; (2) What is the relationship between everyday nature spaces and wellbeing?; and (3) Which factors facilitate or constrain the attainment of wellbeing benefits?; (4) How useful is geovisualization of recreational activity patterns and wellbeing?

Methods

Theoretically, this paper is positioned within work in geography (Fleuret & Atkinson, 2007) and leisure sciences (Driver, 2008; Weiler, Moyle, Wolf, de Bie & Torland, 2017), that is thinking relationally about both the concepts of wellbeing and nature. Methodologically, the project design combined a panel survey with 800 ethnically diverse Sydney residents administering a survey questionnaire with an integrated mapping component. In the later, participants were invited to map everyday nature places that work towards and against wellbeing.

Selected findings

The preliminary findings show that:

(1) Participants mapped more than 2000 markers of places for nature important to them either in their neighbourhood or in Greater Sydney. Conversely, they also mapped about 600 places that detracted from their wellbeing.

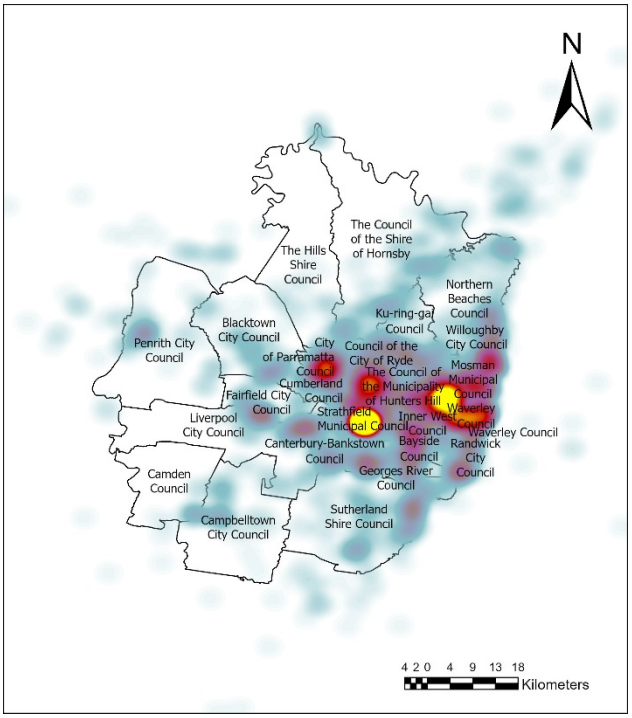

Figure 1 Greater Sydney wellbeing places for nature with yellow indicating the greatest density of places mapped by survey participants

Sydney residents mapped engagement with nature in more than 40 different activities in places both within and beyond those officially categorized as parks or reserves. At the Greater Sydney scale, engagement occurred in larger often 'iconic' parks,

national parks and beaches. At the neighbourhood scale engagement occurred in local parks, miniature reserves, beaches; but also in a cemetery, the streetscape and near greenspaces of residential buildings as well as along waterways and the harbour.

(2) Twenty-seven wellbeing benefits were identified from engaging with nature. Confirming previous research, the majority of participants emphasized the therapeutic benefits (e.g., achieving mental health benefits, physical health, escaping the city/everyday life), but also those pertaining to sociality (e.g., feeling part of the community, socializing with friends and family), a sense of security (feeling safe, feeling calm) and being enabled to lead a flourishing life (e.g., feeling positive about yourself, contributing to the happiness of others, feeling a sense of accomplishment).

(3) Specific conditions of places of nature needed to be fulfilled and facilities provided to help recreationists experience benefits. For example, places that generally worked towards wellbeing provided fresh air, quietness/piece/solitude, scenic beauty, tree cover/shade, open space with short, mowed grass, a contrast to the city; and facilities such as bathrooms, seating/rest areas, trash bins, drinking water fountains, play areas for kids and mobile phone coverage.

Conversely, 11 of 19 different factors were considered constraining by at least half of the participants. Places that worked against wellbeing cost too much too travel to, were hard to reach because of too much traffic or being too far away from home, were too crowded, noisy and lacked shade. To a lesser extent, not feeling safe, or unwelcome, fear of theft and of conflicts, being without a companion, having no time, and not knowing where to go constrained engagement with places for nature.

Also, engagement with nature places, perception of benefits and constraints depended on various socio-demographics factors including the ethno-cultural background, life stage and gender, as well as the spatial location in Sydney.

(4) Enrolling a participatory geographic information system to map wellbeing as a spatial layer with multiple dimensions enabled the visualization of wellbeing through maps for efficient communication. It also has the advantage that wellbeing (or a lack thereof) can be linked to specific physical spaces. Therefore, the concept of engagement with everyday natures becomes tangible, and constraining and facilitating factors can be managed in each locale individually.

Implications and conclusions

Here we showcased how a participatory geographic information system coupled with a survey allows to map wellbeing and better understand the conditions conducive for wellbeing. Accounting for the multiple dimensions of wellbeing spaces will allow to better focus on the range of wellbeing benefits to re-imagine more diverse places for urban nature and address the process of exclusion along socio-economic lines.

References

Driver, B.L. (2008).Why outcome-focused management is needed. In B.L. Driver (Ed.), Managing to optimize the beneficial outcomes of recreation (pp. 1-17). State College, PA: Venture Publishing. Fleuret, S., & Atkinson, S. (2007). Wellbeing, health and geography: a critical review and research agenda. New Zealand Geographer, 63(2), 106-118. Torland, M., Weiler, B., Moyle, B. D., & Wolf, I. D. (2015). Are your ducks in a row? External and internal stakeholder perceptions of the benefits of parks in New South Wales, Australia. Managing Sport and Leisure, 20(4), 211-237. Weiler, B., Moyle, B. D., Wolf, I. D., de Bie, K., & Torland, M. (2017). Assessing the efficacy of communication interventions for shifting public perceptions of park benefits. Journal of Travel Research, 56(4), 468-481. Wolf, I. D., Stricker, H. K., & Hagenloh, G. (2015). Outcome-focussed national park experience management: transforming participants, promoting social well-being, and fostering place attachment. Journal of Sustainable Tourism, 23, 358-381. Wolf, I. D., Ainsworth, G. B., & Crowley, J. (2017). Transformative travel as a sustainable market niche for protected areas: a new development, marketing and conservation model. Journal of Sustainable Tourism, 25(11), 1650-1673.